Base Load Power Hub (BLPH)

STRUCTURE WELDING LOG AND NDE REPORTS-EXTERNAL WORKSHOP

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1 INTRODUCTION AND INSTRUCTIONS FOR USE

This dossier collects the documentation issued by the external workshops that performed welding activities for the fabrication of the BLPH structure.

The document is divided into three sections:

- Scandiuzzi Dossier
- Cimolai Dossier
- Sidertaglio Dossier

This dossier shall be consulted in conjunction with the following dossiers:

- 123A90-PML-QC-DB-00002
- 123A90-PML-QC-DB-00003
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2 SCANDIUZZI DOSSIER

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WELDED BEAMS-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	RT	
90000	CWLPG001	1	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023						1
90000	CWLPG001	2	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023						1
90000	CWLPG001	7	F	FILL	58	T54	1	T44	2308-138-06	CD	18/12/2023	2308-VT-001	2308-MT-001	2308-DT-001			1
90000	CWLPG001	8	F	FILL	58	T54	1	T44	2308-138-06	CD	18/12/2023						1
90000	CWLPG001	9	F	FILL	58	T54	2	T50	2308-138-06	CD	18/12/2023						1
90001	CWLPG002	1	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023						1
90001	CWLPG002	2	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023	2308-VT-001	2308-MT-001	2308-DT-001			1
90002	CWLPG003	1	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023						1
90002	CWLPG003	2	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023	2308-VT-002	2308-MT-002	2308-DT-002			1
90003	CWLPG004	1	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023						1
90003	CWLPG004	2	F	FILL	2	T50	1	T44	2308-121-00	Y	15/12/2023	2308-VT-002	2308-MT-002	2308-DT-002			1
90004	CWLPG005	1	F	FILL	7	T21	5	T7	2308-121-00	Y	16/12/2023						1
90004	CWLPG005	2	F	FILL	7	T21	5	T7	2308-121-00	Y	16/12/2023	2308-VT-002	2308-MT-002	2308-DT-002			1
90005	CWLPG006	1	F	FILL	8	T25	6	T7	2308-121-00	Y	18/12/2023						1
90005	CWLPG006	2	F	FILL	8	T25	6	T7	2308-121-00	Y	18/12/2023	2308-VT-002	2308-MT-002	2308-DT-002			1
90006	CWLPG007	1	F	FILL	10	T19	9	T7	2308-121-00	Y	18/12/2023						2
90006	CWLPG007	2	F	FILL	10	T19	9	T7	2308-121-00	Y	18/12/2023	2308-VT-005	2308-MT-005	2308-DT-004			2
90007	CWLPG008	1	F	FILL	10	T19	9	T29	2308-121-00	Y	08/01/2024						2
90007	CWLPG008	2	F	FILL	10	T19	9	T29	2308-121-00	Y	08/01/2024	2308-VT-004	2308-MT-004	2308-DT-003			2
90008	CWLPG009	1	F	FILL	10	T18	9	T29	2308-121-00	Y	08/01/2024						2
90008	CWLPG009	2	F	FILL	10	T18	9	T29	2308-121-00	Y	08/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90009	CWLPG010	1	F	FILL	10	T18	9	T7	2308-121-00	Y	05/01/2024						2
90009	CWLPG010	2	F	FILL	10	T18	9	T7	2308-121-00	Y	05/01/2024	2308-VT-004	2308-MT-004	2308-DT-003			2
90010	CWLPG011	1	F	FILL	12	T34	11	T31	2308-121-00	Y	04/01/2024						2
90010	CWLPG011	2	F	FILL	12	T34	11	T31	2308-121-00	Y	04/01/2024	2308-VT-004	2308-MT-004	2308-DT-003			2
90011	CWLPG012	1	F	FILL	12	T34	11	T31	2308-121-00	Y	04/01/2024						2
90011	CWLPG012	2	F	FILL	12	T34	11	T31	2308-121-00	Y	04/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90012	CWLPG013	1	BW	1/2V	23	T5	13	T26	2308-136-02	H	11/01/2024						3
90012	CWLPG013	2	BW	1/2V	23	T5	13	T26	2308-136-02	H	11/01/2024				017-24		3
90012	CWLPG013	3	BW	K	24	T34	14	T51	2308-138-04	H	11/01/2024						3
90012	CWLPG013	4	F	FILL	24	T34	23	T50	2308-121-00	Y	20/12/2023						3
90012	CWLPG013	5	F	FILL	24	T34	23	T6	2308-121-00	Y	20/12/2023						3
90012	CWLPG013	6	F	FILL	14	T51	13	T26	2308-121-00	Y	20/12/2023						3
90012	CWLPG013	7	F	FILL	14	T51	13	T26	2308-121-00	Y	20/12/2023	2308-VT-006	2308-MT-006	2308-DT-005			3
90012	CWLPG013	8	F	FILL	80	T54	23	T5	2308-138-06	CD	12/01/2024						3
90012	CWLPG013	9	F	FILL	80	T54	24	T34	2308-138-06	CD	12/01/2024						3
90012	CWLPG013	10	F	FILL	80	T54	23	T5	2308-138-06	CD	12/01/2024						3
90012	CWLPG013	13	F	FILL	80	T54	13	T26	2308-138-06	CD	12/01/2024						3
90012	CWLPG013	14	F	FILL	80	T54	13	T26	2308-138-06	CD	12/01/2024						3
90012	CWLPG013	15	F	FILL	80	T54	14	T51	2308-138-06	CD	12/01/2024						3
90013	CWLPG014	1	BW	1/2V	23	T5	13	T26	2308-136-02	TO	20/12/2023						1
90013	CWLPG014	2	BW	1/2V	23	T5	13	T26	2308-136-02	TO	20/12/2023				001/24	072-24	1
90013	CWLPG014	3	BW	K	24	T34	14	T51	2308-138-04	TO	20/12/2023						1
90013	CWLPG014	4	F	FILL	24	T34	23	T52	2308-121-00	Y	19/12/2023	2308-VT-003	2308-MT-003	2308-DT-002			1
90013	CWLPG014	5	F	FILL	24	T34	23	T52	2308-121-00	Y	19/12/2023						1
90013	CWLPG014	6	F	FILL	14	T51	13	T26	2308-121-00	Y	19/12/2023						1
90013	CWLPG014	7	F	FILL	14	T51	13	T26	2308-121-00	Y	19/12/2023						1
90014	CWLPG015	1	F	FILL	20	T19	15	T29	2308-121-00	Y	05/01/2024						2
90014	CWLPG015	2	F	FILL	20	T19	15	T29	2308-121-00	Y	05/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90015	CWLPG016	1	F	FILL	20	T19	15	T7	2308-121-00	Y	05/01/2024						2
90015	CWLPG016	2	F	FILL	20	T19	15	T7	2308-121-00	Y	05/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90016	CWLPG017	1	F	FILL	20	T18	15	T7	2308-121-00	Y	05/01/2024						2
90016	CWLPG017	2	F	FILL	20	T18	15	T7	2308-121-00	Y	05/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90017	CWLPG018	1	F	FILL	20	T18	15	T7	2308-121-00	Y	08/01/2024						2
90017	CWLPG018	2	F	FILL	20	T18	15	T31	2308-121-00	Y	08/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90018	CWLPG019	1	F	FILL	19	T24	17	T5	2308-121-00	Y	08/01/2024						3
90018	CWLPG019	2	F	FILL	19	T24	17	T5	2308-121-00	Y	08/01/2024	2308-VT-006	2308-MT-006	2308-DT-005			3
90180	CWLPG019	6	BW	1/2V	CWLPG019	-	CWLNO013	-	2308-136-02	VP	15/01/2024						3
90180	CWLPG019	7	BW	1/2V	CWLPG019	-	CWLNO013	-	2308-136-02	VP	15/01/2024						3
90180	CWLPG019	8	T	K	CWLPG019	-	CWLNO013	-	2308-138-04	VP	15/01/2024	2308-VT-006	2308-MT-006	2308-DT-005	017-24		3
90180	CWLPG019	9	T	K	CWLPG019	-	CWLNO013	-	2308-138-04	VP	15/01/2024						3
90180	CWLPG019	10	T	K	CWLPG019	-	CWLNO013	-	2308-138-04	VP	15/01/2024						3
90019	CWLPG020	1	F	FILL	19	T24	17	T5	2308-121-00	Y	08/01/2024						3
90019	CWLPG020	2	F	FILL	19	T24	17	T5	2308-121-00	Y	08/01/2024	2308-VT-006	2308-MT-006	2308-DT-005			3
90180	CWLPG020	1	BW	1/2V	CWLPG020	-	CWLNO013	-	2308-136-02	VP	15/01/2024						3
90180	CWLPG020	2	BW	1/2V	CWLPG020	-	CWLNO013	-	2308-136-02	VP	15/01/2024						3
90180	CWLPG020	3	F	FILL	CWLPG020	-	CWLNO013	-	2308-138-04	VP	15/01/2024	2308-VT-006	2308-MT-006	2308-DT-005	017-24		3
90180	CWLPG020	4	F	FILL	CWLPG020	-	CWLNO013	-	2308-138-04	VP	15/01/2024						3
90180	CWLPG020	5	F	FILL	CWLPG020	-	CWLNO013	-	2308-138-04	VP	15/01/2024						3
90020	CWLPG021	1	F	FILL	19	T23	17	T5	2308-121-00	Y	18/12/2023						2
90020	CWLPG021	2	F	FILL	19	T23	17	T5	2308-121-00	Y	18/12/2023	2308-VT-004	2308-MT-004	2308-DT-003			2
90180	CWLPG021	6	BW	1/2V	CWLPG021	-	CWLNO014	-	2308-136-02	H	08/01/2024						2
90180	CWLPG021	7	BW	1/2V	CWLPG021	-	CWLNO014	-	2308-136-02	H	08/01/2024						2
90180	CWLPG021	8	T	K	CWLPG021	-	CWLNO014	-	2308-138-04	H	08/01/2024	2308-VT-004	2308-MT-004	2308-DT-003	012/24		2

WELDED BEAMS-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	RT	
90180	CWLPG021	9	T	K	CWLPG021	-	CWLNO014	-	2308-138-04	H	08/01/2024						2
90180	CWLPG021	10	T	K	CWLPG021	-	CWLNO014	-	2308-138-04	H	08/01/2024						2
90021	CWLPG022	1	F	FILL	19	T23	17	T6	2308-121-00	Y	18/12/2023	2308-VT-004	2308-MT-004	2308-DT-003			2
90021	CWLPG022	2	F	FILL	19	T23	17	T6	2308-121-00	Y	18/12/2023						2
90180	CWLPG022	1	BW	1/2V	CWLPG022	-	CWLNO014	-	2308-136-02	H	08/01/2024						2
90180	CWLPG022	2	BW	1/2V	CWLPG022	-	CWLNO014	-	2308-136-02	H	08/01/2024					072-24	2
90180	CWLPG022	3	T	K	CWLPG022	-	CWLNO014	-	2308-138-04	H	08/01/2024	2308-VT-004	2308-MT-004	2308-DT-003	012/24		2
90180	CWLPG022	4	T	K	CWLPG022	-	CWLNO014	-	2308-138-04	H	08/01/2024						2
90180	CWLPG022	5	T	K	CWLPG022	-	CWLNO014	-	2308-138-04	H	08/01/2024						2
90022	CWLPG023	1	BW	1/2V	21	T5	26	T26	2308-136-02	H	09/01/2024						2
90022	CWLPG023	2	BW	1/2V	21	T5	26	T26	2308-136-02	H	09/01/2024				012/24		2
90022	CWLPG023	3	BW	K	22	T49	27	T26	2308-138-04	H	09/01/2024						2
90022	CWLPG023	4	F	FILL	22	T49	21	T5	2308-121-00	Y	21/12/2023	2308-VT-004	2308-MT-004	2308-DT-003			2
90022	CWLPG023	5	F	FILL	22	T49	21	T5	2308-121-00	Y	21/12/2023						2
90022	CWLPG023	6	F	FILL	27	T26	26	T26	2308-121-00	Y	21/12/2023						2
90022	CWLPG023	7	F	FILL	27	T26	26	T26	2308-121-00	Y	21/12/2023						2
90023	CWLPG024	1	F	FILL	4	T25	3	T44	2308-121-00	Y	15/12/2023	2308-VT-001	2308-MT-001	2308-DT-001			1
90023	CWLPG024	2	F	FILL	4	T25	3	T44	2308-121-00	Y	15/12/2023						1
90024	CWLPG025	1	F	FILL	7	T21	5	T7	2308-121-00	Y	18/12/2023	2308-VT-002	2308-MT-002	2308-DT-002			1
90024	CWLPG025	2	F	FILL	7	T21	5	T7	2308-121-00	Y	18/12/2023						1
90025	CWLPG026	1	F	FILL	7	T21	5	T7	2308-121-00	Y	16/12/2023	2308-VT-002	2308-MT-002	2308-DT-002			1
90025	CWLPG026	2	F	FILL	7	T21	5	T7	2308-121-00	Y	16/12/2023						1
90026	CWLPG027	1	F	FILL	7	T25	5	T5	2308-121-00	Y	09/01/2024	2308-VT-006	2308-MT-006	2308-DT-005			3
90026	CWLPG027	2	F	FILL	7	T25	5	T5	2308-121-00	Y	09/01/2024						3
90026	CWLPG027	5	F	FILL	31		5		DELETED: 7/12/23								
90026	CWLPG027	6	F	FILL	31		7										
90026	CWLPG027	7	F	FILL	31		5										
90027	CWLPG028	1	F	FILL	8	T25	6	T7	2308-121-00	Y	09/01/2024	2308-VT-006	2308-MT-006	2308-DT-005			3
90027	CWLPG028	2	F	FILL	8	T25	6	T7	2308-121-00	Y	09/01/2024						3
90028	CWLPG029	1	F	FILL	4	T49	3	T44	2308-121-00	Y	15/12/2023	2308-VT-001	2308-MT-001	2308-DT-001			1
90028	CWLPG029	2	F	FILL	4	T49	3	T44	2308-121-00	Y	15/12/2023						1
90029	CWLPG030	1	F	FILL	63	T21	62	T44	2308-121-00	Y	09/01/2024						3
90029	CWLPG030	2	F	FILL	63	T21	62	T44	2308-121-00	Y	09/01/2024						3
90029	CWLPG030	7	F	FILL	58	T54	62	T44	2308-138-06	RS	15/01/2024						3
90029	CWLPG030	8	F	FILL	58	T54	62	T44	2308-138-06	RS	15/01/2024						3
90029	CWLPG030	9	F	FILL	58	T54	63	T21	2308-138-06	RS	15/01/2024						3
90029	CWLPG030	12	F	FILL	58	T54	62	T44	2308-138-06	RS	15/01/2024	2308-VT-006	2308-MT-006	2308-DT-005			3
90029	CWLPG030	13	F	FILL	58	T54	62	T44	2308-138-06	RS	15/01/2024						3
90029	CWLPG030	14	F	FILL	58	T54	63	T21	2308-138-06	RS	15/01/2024						3
90029	CWLPG030	17	F	FILL	58	T54	62	T44	2308-138-06	RS	15/01/2024						3
90029	CWLPG030	18	F	FILL	58	T54	62	T44	2308-138-06	RS	09/01/2024						3
90029	CWLPG030	19	F	FILL	58	T54	63	T21	2308-138-06	RS	09/01/2024						3
90030	CWLPG031	1	F	FILL	61	T24	60	T45	2308-121-00	Y	18/12/2023						1
90030	CWLPG031	2	F	FILL	61	T24	60	T45	2308-121-00	Y	18/12/2023						1
90030	CWLPG031	3	F	FILL	58	T54	60	T45	2308-138-06	CD	19/12/2023	2308-VT-003	2308-MT-003	2308-DT-002			1
90030	CWLPG031	4	F	FILL	58	T54	60	T45	2308-138-06	CD	19/12/2023						1
90030	CWLPG031	5	F	FILL	58	T54	61	T24	2308-138-06	CD	19/12/2023						1
90180	CWLPG031	6	BW	1/2V	CWLPG031	-	CWLNO008	-	2308-136-02	H	20/12/2023					072-24	1
90180	CWLPG031	7	BW	1/2V	CWLPG031	-	CWLNO008	-	2308-136-02	H	20/12/2023						1
90180	CWLPG031	8	K	K	CWLPG031	-	CWLNO008	-	2308-138-04	H	03/01/2024	2308-VT-003	2308-MT-003	2308-DT-002	001/24		1
90180	CWLPG031	9	K	K	CWLPG031	-	CWLNO008	-	2308-138-04	H	03/01/2024						1
90180	CWLPG031	10	K	K	CWLPG031	-	CWLNO008	-	2308-138-04	H	03/01/2024						1
90031	CWLPG032	1	F	FILL	75	T46	74	T5	2308-121-00	y	09/01/2024						3
90031	CWLPG032	2	F	FILL	75	T46	74	T5	2308-121-00	y	09/01/2024						3
90031	CWLPG032	9	F	FILL	56	T54	74	T5	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	10	F	FILL	56	T54	74	T5	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	11	F	FILL	56	T54	75	T46	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	14	F	FILL	56	T54	74	T5	2308-138-06	RS	15/01/2024	2308-VT-006	2308-MT-006	2308-DT-005			3
90031	CWLPG032	15	F	FILL	56	T54	74	T5	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	16	F	FILL	56	T54	75	T46	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	19	F	FILL	56	T54	74	T5	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	20	F	FILL	56	T54	74	T5	2308-138-06	RS	15/01/2024						3
90031	CWLPG032	21	F	FILL	56	T54	75	T46	2308-138-06	RS	15/01/2024						3
90032	CWLPG033	1	F	FILL	71	T40	70	T31	2308-121-00	Y	16/12/2023						2
90032	CWLPG033	2	F	FILL	71	T40	70	T31	2308-121-00	Y	16/12/2023						2
90032	CWLPG033	5	F	FILL	56	T54	70	T31	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	6	F	FILL	56	T54	70	T31	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	7	F	FILL	56	T54	71	T40	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	10	F	FILL	56	T54	70	T31	2308-138-06	MD	12/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90032	CWLPG033	11	F	FILL	56	T54	70	T31	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	12	F	FILL	56	T54	71	T40	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	17	F	FILL	56	T54	70	T31	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	18	F	FILL	56	T54	70	T31	2308-138-06	MD	12/01/2024						2
90032	CWLPG033	19	F	FILL	56	T54	71	T40	2308-138-06	MD	12/01/2024						2

WELDED BEAMS-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	RT	
90184	CWLPG033	1	BW	1/2V	CWLPG033	-	CWLNO011	-	2308-136-02	MD	12/01/2024	2308-VT-005	2308-MT-005	2308-DT-004	013/24		2
90184	CWLPG033	2	BW	1/2V	CWLPG033	-	CWLNO011	-	2308-136-02	MD	12/01/2024						2
90184	CWLPG033	3	BW	K	CWLPG033	-	CWLNO011	-	2308-138-04	MD	12/01/2024						2
90033	CWLPG034	1	F	FILL	73		72		2308-121-00								
90033	CWLPG034	2	F	FILL	73		72		2308-121-00								
90034	CWLPG035	1	F	FILL	71	T40	70	T6	2308-121-00	Y	16/12/2023	2308-VT-005	2308-MT-005	2308-DT-004			2
90034	CWLPG035	2	F	FILL	71	T40	70	T31	2308-121-00	Y	16/12/2023						2
90034	CWLPG035	3	F	FILL	56	T54	70	T6	2308-138-06	RS	12/01/2024						2
90034	CWLPG035	4	F	FILL	56	T54	70	T31	2308-138-06	RS	12/01/2024						2
90034	CWLPG035	5	F	FILL	56	T54	71	T40	2308-138-06	RS	12/01/2024						2
90034	CWLPG035	10	F	FILL	56	T54	70	T6	2308-138-06	RS	12/01/2024						2
90034	CWLPG035	11	F	FILL	56	T54	70	T31	2308-138-06	RS	12/01/2024						2
90034	CWLPG035	12	F	FILL	56	T54	71	T40	2308-138-06	RS	12/01/2024						2
90181	CWLPG035	1	BW	1/2V	CWLPG035	-	CWLNO012	-	2308-136-02	RS	11/01/2024						2
90181	CWLPG035	2	BW	1/2V	CWLPG035	-	CWLNO012	-	2308-136-02	RS	11/01/2024				013/24		2
90181	CWLPG035	3	BW	K	CWLPG035	-	CWLNO012	-	2308-138-04	RS	11/01/2024						2
90035	CWLPG036	1	F	FILL	71	T40	70	T6	2308-121-00	Y	08/01/2024	2308-VT-007	2308-MT-007	2308-DT-006			3
90035	CWLPG036	2	F	FILL	71	T40	70	T6	2308-121-00	Y	08/01/2024						3
90035	CWLPG036	5	F	FILL	56	T54	70	T6	2308-138-06	H	18/01/2024						3
90035	CWLPG036	6	F	FILL	56	T54	70	T6	2308-138-06	H	18/01/2024						3
90035	CWLPG036	7	F	FILL	56	T54	71	T40	2308-138-06	H	18/01/2024						3
90183	CWLPG036	6	BW	1/2V	CWLPG036	-	CWLNO010	-	2308-136-02	VP	17/01/2024	2308-VT-007	2308-MT-007	2308-DT-006	024/24		3
90183	CWLPG036	7	BW	1/2V	CWLPG036	-	CWLNO010	-	2308-136-02	H	17/01/2024						3
90183	CWLPG036	8	BW	K	CWLPG036	-	CWLNO010	-	2308-138-04	H	17/01/2024						3
90036	CWLPG037	1	F	FILL	71	T40	70	T6	2308-121-00	Y	08/01/2024	2308-VT-007	2308-MT-007	2308-DT-006			3
90036	CWLPG037	2	F	FILL	71	T40	70	T6	2308-121-00	Y	08/01/2024						3
90036	CWLPG037	5	F	FILL	56	T54	70	T6	2308-138-06	VP	18/01/2024						3
90036	CWLPG037	6	F	FILL	56	T54	70	T6	2308-138-06	VP	18/01/2024						3
90036	CWLPG037	7	F	FILL	56	T54	71	T40	2308-138-06	VP	18/01/2024						3
90181	CWLPG037	6	BW	1/2V	CWLPG037	-	CWLNO009	-	2308-136-02	H	17/01/2024	2308-VT-007	2308-MT-007	2308-DT-006	024/24		3
90181	CWLPG037	7	BW	1/2V	CWLPG037	-	CWLNO009	-	2308-136-02	VP	17/01/2024						3
90181	CWLPG037	8	BW	K	CWLPG037	-	CWLNO009	-	2308-138-04	VP	17/01/2024						3
90037	CWLPG038	1	F	FILL	61	T24	60	T45	2308-121-00	Y	18/12/2023	2308-VT-003	2308-MT-003	2308-DT-002			1
90037	CWLPG038	2	F	FILL	61	T24	60	T45	2308-121-00	Y	18/12/2023						1
90037	CWLPG038	3	F	FILL	58	T54	60	T45	2308-138-06	Y	19/12/2023						1
90037	CWLPG038	4	F	FILL	58	T54	60	T45	2308-138-06	Y	19/12/2023						1
90037	CWLPG038	5	F	FILL	58	T54	61	T24	2308-138-06	Y	19/12/2023						1
90180	CWLPG038	1	BW	1/2V	CWLPG038	-	CWLNO008	-	2308-136-02	H	20/12/2023						1
90180	CWLPG038	2	BW	1/2V	CWLPG038	-	CWLNO008	-	2308-136-02	H	20/12/2023					072-24	1
90180	CWLPG038	3	T	K	CWLPG038	-	CWLNO008	-	2308-138-04	H	03/01/2024	2308-VT-003	2308-MT-003	2308-DT-002	001/24		1
90180	CWLPG038	4	T	K	CWLPG038	-	CWLNO008	-	2308-138-04	H	03/01/2024						1
90180	CWLPG038	5	T	K	CWLPG038	-	CWLNO008	-	2308-138-04	H	03/01/2024						1
90038	CWLPG039	1	F	FILL	65	T21	64	T44	2308-121-00	Y	09/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90038	CWLPG039	2	F	FILL	65	T21	64	T44	2308-121-00	Y	09/01/2024						2
90039	CWLPG040	1	F	FILL	61	T23	60	T45	2308-121-00	Y	09/01/2024	2308-VT-007	2308-MT-007	2308-DT-006			3
90039	CWLPG040	2	F	FILL	61	T23	60	T45	2308-121-00	Y	09/01/2024						3
90181	CWLPG040	1	BW	1/2V	CWLPG040	-	CWLNO007	-	2308-136-02	CD	17/01/2024	2308-VT-007	2308-MT-007	2308-DT-006	020/24		3
90181	CWLPG040	2	BW	1/2V	CWLPG040	-	CWLNO007	-	2308-136-02	CD	17/01/2024						3
90181	CWLPG040	3	T	K	CWLPG040	-	CWLNO007	-	2308-138-04	CD	17/01/2024						3
90181	CWLPG040	4	T	K	CWLPG040	-	CWLNO007	-	2308-138-04	CD	17/01/2024						3
90181	CWLPG040	5	T	K	CWLPG040	-	CWLNO007	-	2308-138-04	CD	17/01/2024						3
90040	CWLPG041	1	F	FILL	61	T23	60	T41	2308-121-00	Y	09/01/2024	2308-VT-007	2308-MT-007	2308-DT-006			3
90040	CWLPG041	2	F	FILL	61	T23	60	T45	2308-121-00	Y	09/01/2024						3
90181	CWLPG041	6	BW	1/2V	CWLPG041	-	CWLNO007	-	2308-136-02	CD	17/01/2024	2308-VT-007	2308-MT-007	2308-DT-006	020/24		3
90181	CWLPG041	7	BW	1/2V	CWLPG041	-	CWLNO007	-	2308-136-02	CD	17/01/2024						3
90181	CWLPG041	8	T	K	CWLPG041	-	CWLNO007	-	2308-138-04	CD	17/01/2024						3
90181	CWLPG041	9	T	K	CWLPG041	-	CWLNO007	-	2308-138-04	CD	17/01/2024						3
90181	CWLPG041	10	T	K	CWLPG041	-	CWLNO007	-	2308-138-04	CD	17/01/2024						3
90041	CWLPG042	1	F	FILL	67	T39	66	T31	2308-121-00	Y	04/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90041	CWLPG042	2	F	FILL	67	T39	66	T31	2308-121-00	Y	04/01/2024						2
90184	CWLPG042	4	BW	1/2V	CWLPG042	-	CWLNO011	-	2308-136-02	MD	12/01/2024	2308-VT-005	2308-MT-005	2308-DT-004	013/24		2
90184	CWLPG042	5	BW	1/2V	CWLPG042	-	CWLNO011	-	2308-136-02	MD	12/01/2024						2
90184	CWLPG042	6	BW	K	CWLPG042	-	CWLNO011	-	2308-138-04	MD	12/01/2024						2
90042	CWLPG043	1	F	FILL	67	T39	66	T31	2308-121-00	Y	05/01/2024	2308-VT-007	2308-MT-007	2308-DT-006			3
90042	CWLPG043	2	F	FILL	67	T39	66	T31	2308-121-00	Y	05/01/2024						3
90042	CWLPG043	3	F	FILL	77	T54	66	T31	2308-138-06	VP	18/01/2024						3
90042	CWLPG043	4	F	FILL	77	T54	66	T31	2308-138-06	VP	18/01/2024						3
90042	CWLPG043	5	F	FILL	77	T54	67	T39	2308-138-06	VP	18/01/2024						3
90181	CWLPG043	1	BW	1/2V	CWLPG043	-	CWLNO009	-	2308-136-02	H	17/01/2024	2308-VT-007	2308-MT-007	2308-DT-006	024/24		3
90181	CWLPG043	2	BW	1/2V	CWLPG043	-	CWLNO009	-	2308-136-02	VP	17/01/2024						3
90181	CWLPG043	3	BW	K	CWLPG043	-	CWLNO009	-	2308-138-04	VP	17/01/2024						3
90043	CWLPG044	1	F	FILL	67	T43	66	T5	2308-121-00	Y	05/01/2024	2308-VT-007	2308-MT-007	2308-DT-006			3
90043	CWLPG044	2	F	FILL	67	T43	66	T26	2308-121-00	Y	05/01/2024						3
90043	CWLPG044	5	F	FILL	77	T54	66	T5	2308-138-06	H	18/01/2024						3

WELDED BEAMS-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	RT	
90043	CWLPG044	6	F	FILL	77	T54	66	T26	2308-138-06	H	18/01/2024						3
90043	CWLPG044	7	F	FILL	77	T54	76	T43	2308-138-06	H	18/01/2024						3
90183	CWLPG044	1	BW	1/2V	CWLPG044	-	CWLNO010	-	2308-136-02	VP	17/01/2024						3
90183	CWLPG044	2	BW	1/2V	CWLPG044	-	CWLNO010	-	2308-136-02	H	17/01/2024	2308-VT-007	2308-MT-007	2308-DT-006	024/24		3
90183	CWLPG044	3	BW	K	CWLPG044	-	CWLNO010	-	2308-138-04	H	17/01/2024						3
90044	CWLPG045	1	F	FILL	67	T43	66	T6	2308-121-00	Y	03/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90044	CWLPG045	2	F	FILL	67	T43	66	T6	2308-121-00	Y	03/01/2024						2
90181	CWLPG045	4	BW	1/2V	CWLPG045	-	CWLNO012	-	2308-136-02	RS	11/01/2024						2
90181	CWLPG045	5	BW	1/2V	CWLPG045	-	CWLNO012	-	2308-136-02	RS	11/01/2024	2308-VT-005	2308-MT-005	2308-DT-004	013/24		2
90181	CWLPG045	6	BW	K	CWLPG045	-	CWLNO012	-	2308-138-04	RS	11/01/2024						2
90045	CWLPG046	1	F	FILL	69	T39	68	T6	2308-121-00	Y	05/01/2024						2
90045	CWLPG046	2	F	FILL	69	T39	68	T31	2308-121-00	Y	05/01/2024						2
90045	CWLPG046	5	F	FILL	77	T54	68	T26	2308-138-06	SP	09/01/2024	2308-VT-004	2308-MT-004	2308-DT-003			2
90045	CWLPG046	6	F	FILL	77	T54	68	T31	2308-138-06	SP	09/01/2024						2
90045	CWLPG046	7	F	FILL	77	T54	69	T39	2308-138-06	SP	09/01/2024						2
90046	CWLPG047	1	F	FILL	69	T39	68	T6	2308-121-00	Y	05/01/2024						2
90046	CWLPG047	2	F	FILL	69	T39	68	T6	2308-121-00	Y	05/01/2024						2
90046	CWLPG047	3	F	FILL	77	T54	68	T6	2308-138-06	SP	09/01/2024	2308-VT-004	2308-MT-004	2308-DT-003			2
90046	CWLPG047	4	F	FILL	77	T54	68	T6	2308-138-06	SP	09/01/2024						2
90046	CWLPG047	5	F	FILL	77	T54	69	T39	2308-138-06	SP	09/01/2024						2
90047	CWLPG048	1	F	FILL	69	T43	68	T6	2308-121-00	Y	03/01/2024	2308-VT-004	2308-MT-004	2308-DT-003			2
90047	CWLPG048	2	F	FILL	69	T43	68	T6	2308-121-00	Y	03/01/2024						2
90048	CWLPG049	1	F	FILL	69	T43	68	T5	2308-121-00	Y	03/01/2024	2308-VT-005	2308-MT-005	2308-DT-004			2
90048	CWLPG049	2	F	FILL	69	T43	68	T6	2308-121-00	Y	03/01/2024						2
90074	CWUPG001	1	F	FILL	130	T46	129	T8	2308-121-00	Y	01/02/2024						8
90074	CWUPG001	2	F	FILL	130	T46	129	T8	2308-121-00	Y	01/02/2024						8
90074	CWUPG001	3	F	FILL	102	T20	129	T8	2308-138-06	SP	06/02/2024						8
90074	CWUPG001	4	F	FILL	102	T20	130	T46	2308-138-06	SP	06/02/2024						8
90074	CWUPG001	5	F	FILL	102	T20	129	T8	2308-138-06	SP	06/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90074	CWUPG001	8	T	1/2V	101	TT1	129	T8	2308-138-03	CD	12/02/2024				074/24		8
90074	CWUPG001	9	T	1/2V	101	TT1	129	T8	2308-138-03	CD	12/02/2024				074/24		8
90074	CWUPG001	10	T	1/2V	101	TT1	129	T8	2308-138-03	CD	12/02/2024				074/24		8
90074	CWUPG001	11	T	1/2V	101	TT1	129	T8	2308-138-03	CD	12/02/2024				074/24		8
90074	CWUPG001	12	T	1/2V	100	TT1	129	T8	**TO BE WELDED ON SITE BY ROSETTI**								8
90074	CWUPG001	13	T	1/2V	100	TT1	129	T8									8
90074	CWUPG001	14	T	1/2V	100	TT1	129	T8									8
90074	CWUPG001	15	T	1/2V	100	TT1	129	T8									8
90074	CWUPG001	16	F	FILL	101	TT1	130	T16	2308-138-06	SP	15/02/2024						8
90074	CWUPG001	17	F	FILL	101	TT1	102	T20	2308-138-06	SP	15/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90074	CWUPG001	18	F	FILL	101	TT1	102	T20	2308-138-06	SP	15/02/2024						8
90074	CWUPG001	19	F	FILL	101	TT1	130	T46	2308-138-06	SP	15/02/2024						8
90074	CWUPG001	20	F	FILL	100	TT1	130	T46	**TO BE WELDED ON SITE BY ROSETTI**								8
90074	CWUPG001	21	F	FILL	100	TT1	130	T46									8
90075	CWUPG002	1	F	FILL	130	T46	129	T8	2308-121-00	Y	01/02/2024						8
90075	CWUPG002	2	F	FILL	130	T46	129	T8	2308-121-00	Y	01/02/2024						8
90075	CWUPG002	3	F	FILL	102	T20	129	T8	2308-138-06	SP	06/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90075	CWUPG002	4	F	FILL	102	T20	130	T46	2308-138-06	SP	06/02/2024						8
90075	CWUPG002	5	F	FILL	102	T20	129	T8	2308-138-06	SP	06/02/2024						8
90075	CWUPG002	8	T	1/2V	100	TT1	129	T8	**TO BE WELDED ON SITE BY ROSETTI**								8
90075	CWUPG002	9	T	1/2V	100	TT1	129	T8									8
90075	CWUPG002	10	T	1/2V	100	TT1	129	T8									8
90075	CWUPG002	11	T	1/2V	100	TT1	129	T8									8
90075	CWUPG002	12	T	1/2V	101	TT1	129	T8	2308-138-03	CD	08/02/2024				074/24		8
90075	CWUPG002	13	T	1/2V	101	TT1	129	T8	2308-138-03	CD	08/02/2024				074/24		8
90075	CWUPG002	14	T	1/2V	101	TT1	129	T8	2308-138-03	CD	08/02/2024	2308-VT-019	2308-MT-019	2308-DT-018	074/24		8
90075	CWUPG002	15	T	1/2V	101	TT1	129	T8	2308-138-03	CD	08/02/2024				074/24		8
90075	CWUPG002	16	F	FILL	101	TT1	102	T20	2308-138-06	SP	15/02/2024						8
90075	CWUPG002	17	F	FILL	101	TT1	130	T46	2308-138-06	SP	15/02/2024						8
90075	CWUPG002	18	F	FILL	100	TT1	130	T46	**TO BE WELDED ON SITE BY ROSETTI**								8
90075	CWUPG002	19	F	FILL	100	TT1	130	T46									8
90075	CWUPG002	20	F	FILL	101	TT1	130	T46	2308-138-06	SP	15/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90075	CWUPG002	21	F	FILL	101	TT1	102	T20	2308-138-06	SP	15/02/2024						8
90076	CWUPG003	1	F	FILL	130	T46	129	T8	2308-121-00	Y	01/02/2024						11
90076	CWUPG003	2	F	FILL	130	T46	129	T8	2308-121-00	Y	01/02/2024						11
90076	CWUPG003	5	F	FILL	102	T20	129	T8	2308-138-06	SP	07/02/2024						11
90076	CWUPG003	6	F	FILL	102	T20	130	T46	2308-138-06	SP	07/02/2024						11
90076	CWUPG003	7	F	FILL	102	T20	129	T8	2308-138-06	SP	07/02/2024						11
90076	CWUPG003	8	T	1/2V	101	TT1	129	T8	2308-138-03	MD	12/02/2024				074/24		11
90076	CWUPG003	9	T	1/2V	101	TT1	129	T8	2308-138-03	MD	12/02/2024				074/24		11
90076	CWUPG003	10	T	1/2V	101	TT1	129	T8	2308-138-03	MD	12/02/2024	2308-VT-023	2308-MT-023	2308-DT-022	074/24		11
90076	CWUPG003	11	T	1/2V	101	TT1	129	T8	2308-138-03	MD	12/02/2024				074/24		11
90076	CWUPG003	16	F	FILL	101	TT1	130	T46	2308-138-06	CD	09/02/2024						11
90076	CWUPG003	17	F	FILL	101	TT1	102	T20	2308-138-06	CD	09/02/2024						11
90076	CWUPG003	18	F	FILL	101	TT1	102	T20	2308-138-06	CD	09/02/2024						11

WELDED BEAMS-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	RT	
90076	CWUPG003	19	F	FILL	101	TT1	130	T46	2308-138-06	CD	09/02/2024						11
90199	CWUPG003	1	BW	K	CWUPG003	-	CWUNO001	-	2308-136-01	VP	28/02/2024				098/24		11
90199	CWUPG003	2	BW	K	CWUPG003	-	CWUNO001	-	2308-138-04	VP	26/02/2024				098/24		11
90199	CWUPG003	3	BW	K	CWUPG003	-	CWUNO001	-	2308-136-01	VP	28/02/2024				098/24		11
90077	CWUPG004	1	F	FILL	130	T38	129	T15	2308-121-00	Y	01/02/2024						10
90077	CWUPG004	2	F	FILL	130	T38	129	T15	2308-121-00	Y	01/02/2024						10
90077	CWUPG004	5	F	FILL	102	T20	129	T15	2308-138-06	SP	07/02/2024	2308-VT-022	2308-MT-022	2308-DT-021			10
90077	CWUPG004	6	F	FILL	102	T20	130	T38	2308-138-06	SP	07/02/2024						10
90077	CWUPG004	7	F	FILL	102	T20	129	T15	2308-138-06	SP	07/02/2024						10
90077	CWUPG004	8	T	1/2V	100	TT1	129	T15									10
90077	CWUPG004	9	T	1/2V	100	TT1	129	T15									10
90077	CWUPG004	10	T	1/2V	100	TT1	129	T15				**TO BE WELDED ON SITE BY ROSETTI**					10
90077	CWUPG004	11	T	1/2V	100	TT1	129	T15									10
90077	CWUPG004	12	T	1/2V	101	TT1	129	T15	2308-138-03	CD	12/02/2024						10
90077	CWUPG004	13	T	1/2V	101	TT1	129	T15	2308-138-03	CD	12/02/2024				074/24		10
90077	CWUPG004	14	T	1/2V	101	TT1	129	T15	2308-138-03	CD	12/02/2024				074/24		10
90077	CWUPG004	15	T	1/2V	101	TT1	129	T15	2308-138-03	CD	12/02/2024	2308-VT-022	2308-MT-022	2308-DT-021	074/24		10
90077	CWUPG004	16	F	FILL	101	TT1	102	T20	2308-138-06	SP	15/02/2024						10
90077	CWUPG004	17	F	FILL	101	TT1	130	T38	2308-138-06	SP	15/02/2024						10
90077	CWUPG004	18	F	FILL	100	TT1	130	T38									10
90077	CWUPG004	19	F	FILL	100	TT1	130	T38				**TO BE WELDED ON SITE BY ROSETTI**					10
90077	CWUPG004	20	F	FILL	101	TT1	130	T38	2308-138-06	SP	15/02/2024						10
90077	CWUPG004	21	F	FILL	101	TT1	102	T20	2308-138-06	SP	15/02/2024						10
90201	CWUPG004	1	BW	1/2V	CWUPG004	-	CWUNO002	-	2308-136-02	VP	23/02/2024	2308-VT-022	2308-MT-022	2308-DT-021			10
90201	CWUPG004	2	BW	K	CWUPG004	-	CWUNO002	-	2308-138-04	VP	23/02/2024				087/24		10
90201	CWUPG004	3	BW	1/2V	CWUPG004	-	CWUNO002	-	2308-136-02	VP	23/02/2024						10
90078	CWUPG005	1	F	FILL	105	T48	104	T41	2308-121-00	Y	10/01/2024						5
90078	CWUPG005	2	F	FILL	105	T48	104	T41	2308-121-00	Y	10/01/2024	2308-VT-008	2308-MT-008	2308-DT-007			5
90079	CWUPG006	1	F	FILL	105	T35	104	T41	2308-121-00	Y	19/01/2024						5
90079	CWUPG006	2	F	FILL	105	T35	104	T41	2308-121-00	Y	22/01/2024	2308-VT-008	2308-MT-008	2308-DT-007			5
90080	CWUPG007	1	F	FILL	105	T35	104	T41	2308-121-00	Y	19/01/2024						9
90080	CWUPG007	2	F	FILL	105	T35	104	T41	2308-121-00	Y	19/01/2024						9
90198	CWUPG007	1	BW	1/2V	CWUPG007	-	CWUNO003	-	2308-136-02	RS	19/02/2024				079-24	359-24	9
90198	CWUPG007	2	BW	K	CWUPG007	-	CWUNO003	-	2308-138-04	RS	19/02/2024				079-24	359-24	9
90198	CWUPG007	3	BW	1/2V	CWUPG007	-	CWUNO003	-	2308-136-02	RS	19/02/2024	2308-VT-021	2308-MT-021	2308-DT-020	079-24	359-24	9
90081	CWUPG008	1	F	FILL	105	T48	104	T38	2308-121-00	Y	19/01/2024						9
90081	CWUPG008	2	F	FILL	105	T48	104	T38	2308-121-00	Y	19/01/2024						9
90198	CWUPG008	4	BW	1/2V	CWUPG008	-	CWUNO003	-	2308-136-02	RS	19/02/2024				079-24	359-24	9
90198	CWUPG008	5	BW	K	CWUPG008	-	CWUNO003	-	2308-138-04	RS	19/02/2024				079-24	359-24	9
90198	CWUPG008	6	BW	1/2V	CWUPG008	-	CWUNO003	-	2308-136-02	RS	19/02/2024				079-24	359-24	9
90145	CWUPG009	1	F	FILL	107	T13	106	T27	2308-121-00	Y	30/01/2024	2308-VT-008	2308-MT-008	2308-DT-007			5
90145	CWUPG009	2	F	FILL	107	T13	106	T27	2308-121-00	Y	30/01/2024						5
90144	CWUPG010	1	F	FILL	107	T13	106	T14	2308-121-00	Y	30/01/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90144	CWUPG010	2	F	FILL	107	T13	106	T14	2308-121-00	Y	30/01/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90082	CWUPG011	1	F	FILL	109	T3	108	T14	2308-121-00	Y	31/01/2024	2308-VT-008	2308-MT-008	2308-DT-007			5
90082	CWUPG011	2	F	FILL	109	T3	108	T14	2308-121-00	Y	31/01/2024						5
90083	CWUPG012	1	F	FILL	109	T3	108	T14	2308-121-00	Y	31/01/2024	2308-VT-011	2308-MT-011	2308-DT-010			5
90083	CWUPG012	2	F	FILL	109	T3	108	T14	2308-121-00	Y	31/01/2024						5
90083	CWUPG012	19	F	FILL	151		108	T14									5
90083	CWUPG012	20	F	FILL	151		109	T14				**NOT WELDED: DELIVERED TO ROSETTI TACKED ONLY**					5
90083	CWUPG012	21	F	FILL	151		108	T14									5
90084	CWUPG013	1	F	FILL	109	T4	108	T27	2308-121-00	Y	05/02/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90084	CWUPG013	2	F	FILL	109	T4	108	T14	2308-121-00	Y	05/02/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90085	CWUPG014	1	F	FILL	109	T4	108	T27	2308-121-00	Y	05/02/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90085	CWUPG014	2	F	FILL	109	T4	108	T27	2308-121-00	Y	05/02/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90146	CWUPG015	1	F	FILL	111	T33	110	T30	2308-121-00	Y	02/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90146	CWUPG015	2	F	FILL	111	T33	110	T30	2308-121-00	Y	02/02/2024						8
90143	CWUPG016	1	F	FILL	113	T22	112	T30	2308-121-00	Y	05/02/2024						8
90143	CWUPG016	2	F	FILL	113	T22	112	T30	2308-121-00	Y	05/02/2024						8
90143	CWUPG016	5	F	FILL	151	T54	112	T30	2308-138-06	SP	14/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90143	CWUPG016	6	F	FILL	151	T54	113	T22	2308-138-06	SP	14/02/2024						8
90143	CWUPG016	7	F	FILL	151	T54	112	T30	2308-138-06	SP	14/02/2024						8
90086	CWUPG017	1	F	FILL	115	T33	114	T27	2308-121-00	Y	02/02/2024	2308-VT-019	2308-MT-019	2308-DT-018			8
90086	CWUPG017	2	F	FILL	115	T33	114	T27	2308-121-00	Y	02/02/2024						8
90087	CWUPG018	1	F	FILL	117	T32	116	T27	2308-121-00	Y	31/01/2024	2308-VT-012	2308-MT-012	2308-DT-011			5
90087	CWUPG018	2	F	FILL	117	T32	116	T27	2308-121-00	Y	31/01/2024						5
90087	CWUPG018	5	F	FILL	148	T54	116	T27									5
90087	CWUPG018	6	F	FILL	148	T54	117	T32									5
90087	CWUPG018	7	F	FILL	148	T54	116	T27									5
90087	CWUPG018	10	F	FILL	148	T54	116	T27									5
90087	CWUPG018	11	F	FILL	148	T54	117	T32									5
90087	CWUPG018	12	F	FILL	148	T54	116	T27									5
90087	CWUPG018	17	F	FILL	148	T54	116	T27									5
90087	CWUPG018	18	F	FILL	148	T54	117	T32									5

WELDED BEAMS-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	RT	
90087	CWUPG018	19	F	FILL	148	T54	116	T27									5
90087	CWUPG018	22	F	FILL	146	T52	116	T27									5
90087	CWUPG018	23	F	FILL	146	T52	117	T32	**NOT WELDED: DELIVERED TO ROSETTI TACKED ONLY**								5
90087	CWUPG018	24	F	FILL	146	T52	116	T27									5
90087	CWUPG018	27	F	FILL	148	T54	116	T27									5
90087	CWUPG018	28	F	FILL	148	T54	117	T32									5
90087	CWUPG018	29	F	FILL	148	T54	116	T27									5
90087	CWUPG018	34	F	FILL	148	T54	116	T27									5
90087	CWUPG018	35	F	FILL	148	T54	117	T32									5
90087	CWUPG018	36	F	FILL	148	T54	116	T27									5
90087	CWUPG018	39	F	FILL	148	T54	116	T27									5
90087	CWUPG018	40	F	FILL	148	T54	117	T32									5
90087	CWUPG018	41	F	FILL	148	T54	116	T27									5
90088	CWUPG019	1	F	FILL	117	T32	116	T28	2308-121-00	Y	06/02/2024						11
90088	CWUPG019	2	F	FILL	117	T32	116	T28	2308-121-00	Y	06/02/2024						11
90088	CWUPG019	9	F	FILL	146	T52	116	T28	2308-138-06	CD	24/02/2024						11
90088	CWUPG019	10	F	FILL	146	T52	117	T32	2308-138-06	CD	24/02/2024						11
90088	CWUPG019	11	F	FILL	146	T52	116	T28	2308-138-06	CD	24/02/2024						11
90088	CWUPG019	14	F	FILL	148	T54	116	T28	2308-138-06	CD	24/02/2024	2308-VT-023	2308-MT-023	2308-DT-022			11
90088	CWUPG019	15	F	FILL	148	T54	117	T32	2308-138-06	CD	24/02/2024						11
90088	CWUPG019	16	F	FILL	148	T54	116	T28	2308-138-06	CD	24/02/2024						11
90199	CWUPG019	1	BW	1/2V	CWUPG019	-	CWUNO005	-	2308-136-02	CD	23/02/2024						11
90199	CWUPG019	2	BW	K	CWUPG019	-	CWUNO005	-	2308-138-04	CD	23/02/2024				087/24		11
90199	CWUPG019	3	BW	1/2V	CWUPG019	-	CWUNO005	-	2308-136-02	CD	23/02/2024						11
90089	CWUPG020	1	F	FILL	117	T36	116	T28	2308-121-00	Y	31/01/2024	2308-VT-011	2308-MT-011	2308-DT-010			5
90089	CWUPG020	2	F	FILL	117	T36	116	T28	2308-121-00	Y	31/01/2024						5
90089	CWUPG020	5	F	FILL	148	T54	116	T28									5
90089	CWUPG020	6	F	FILL	148	T54	117	T36									5
90089	CWUPG020	7	F	FILL	148	T54	116	T28									5
90089	CWUPG020	10	F	FILL	148	T54	116	T28									5
90089	CWUPG020	11	F	FILL	148	T54	117	T36									5
90089	CWUPG020	12	F	FILL	148	T54	116	T28									5
90089	CWUPG020	17	F	FILL	148	T54	116	T28									5
90089	CWUPG020	18	F	FILL	148	T54	117	T36	**NOT WELDED: DELIVERED TO ROSETTI TACKED ONLY**								5
90089	CWUPG020	19	F	FILL	148	T54	116	T28									5
90089	CWUPG020	22	F	FILL	148	T54	116	T28									5
90089	CWUPG020	23	F	FILL	148	T54	117	T36									5
90089	CWUPG020	24	F	FILL	148	T54	116	T28									5
90089	CWUPG020	29	F	FILL	148	T54	116	T28									5
90089	CWUPG020	30	F	FILL	148	T54	117	T36									5
90089	CWUPG020	31	F	FILL	148	T54	116	T28									5
90090	CWUPG022	1	F	FILL	119	T45	118	T27	2308-138-06	MD	07/02/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90090	CWUPG022	2	F	FILL	119	T45	118	T27	2308-138-06	MD	07/02/2024	2308-VT-017	2308-MT-017	2308-DT-016			6
90091	CWUPG023	1	F	FILL	121	T20	120	T15	2308-121-00	Y	23/01/2024	2308-VT-008	2308-MT-008	2308-DT-007			5
90091	CWUPG023	2	F	FILL	121	T20	120	T15	2308-121-00	Y	23/01/2024						5
90092	CWUPG021	1	F	FILL	117	T36	116	T28	2308-121-00	Y	06/02/2024						11
90092	CWUPG021	2	F	FILL	117	T36	116	T28	2308-121-00	Y	06/02/2024						11
90092	CWUPG021	5	F	FILL	148	T54	116	T28	2308-138-06	VP	26/02/2024						11
90092	CWUPG021	6	F	FILL	148	T54	117	T36	2308-138-06	VP	26/02/2024						11
90092	CWUPG021	7	F	FILL	148	T54	116	T28	2308-138-06	VP	26/02/2024						11
90092	CWUPG021	10	F	FILL	148	T54	116	T28	2308-138-06	VP	26/02/2024	2308-VT-023	2308-MT-023	2308-DT-022			11
90092	CWUPG021	11	F	FILL	148	T54	117	T36	2308-138-06	VP	26/02/2024						11
90092	CWUPG021	12	F	FILL	148	T54	116	T28	2308-138-06	VP	26/02/2024						11
90201	CWUPG021	1	BW	1/2V	CWUPG021	-	CWUNO008	-	2308-136-02	VP	26/02/2024						11
90201	CWUPG021	2	BW	K	CWUPG021	-	CWUNO008	-	2308-138-04	VP	26/02/2024				087/24		11
90201	CWUPG021	3	BW	1/2V	CWUPG021	-	CWUNO008	-	2308-136-02	VP	26/02/2024						11
90093	CWUPG024	1	F	FILL	121	T20	120	T15	2308-121-00	Y	23/01/2024	2308-VT-008	2308-MT-008	2308-DT-007			5
90093	CWUPG024	2	F	FILL	121	T20	120	T15	2308-121-00	Y	23/01/2024						5
90094	CWUPG025	1	F	FILL	121	T20	120	T15	2308-121-00	Y	22/01/2024						12
90094	CWUPG025	2	F	FILL	121	T20	120	T15	2308-121-00	Y	22/01/2024						12
90198	CWUPG025	1	BW	K	CWUPG025	-	CWUNO009	-	2308-136-01	MD	27/02/2028				098/24	452/24	12
90198	CWUPG025	2	BW	K	CWUPG025	-	CWUNO009	-	2308-138-04	MD	27/02/2024				098/24	452/24	12
90198	CWUPG025	3	BW	K	CWUPG025	-	CWUNO009	-	2308-136-01	MD	28/02/2024	2308-VT-024	2308-MT-024	2308-DT-023	098/24	452/24	12
90095	CWUPG026	1	F	FILL	121	T20	120	T15	2308-121-00	Y	22/01/2024						12
90095	CWUPG026	2	F	FILL	121	T20	120	T15	2308-121-00	Y	22/01/2024						12
90198	CWUPG026	4	BW	K	CWUPG026	-	CWUNO009	-	2308-136-01	MD	29/02/2024				105/24	452/24	12
90198	CWUPG026	5	BW	K	CWUPG026	-	CWUNO009	-	2308-138-04	MD	29/02/2024				105/24	452/24	12
90198	CWUPG026	6	BW	K	CWUPG026	-	CWUNO009	-	2308-136-01	MD	01/03/2024				105/24	452/24	12

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90052	CWLNO004	1	T	K	38	T39	37	T37	2308-138-04	TO	20/12/2023					2
90052	CWLNO004	2	T	K	38	T39	36	T37	2308-138-04	TO	20/12/2023				013/24	2
90052	CWLNO004	3	T	K	39	T1	37	T37	2308-138-04	TO	05/01/2024					2
90052	CWLNO004	4	T	K	39	T1	36	T37	2308-138-04	TO	05/01/2024					2
90052	CWLNO004	5	F	FILL	39	T1	38	T39	2308-138-06	TO	05/01/2024					2
90052	CWLNO004	6	T	K	40	T1	37	T37	2308-138-04	TO	05/01/2024				013/24	2
90052	CWLNO004	7	T	K	40	T1	36	T37	2308-138-04	TO	05/01/2024					2
90052	CWLNO004	8	F	FILL	40	T1	38	T39	2308-138-06	TO	05/01/2024					2
90052	CWLNO004	9	T	1/2V	41	TT3	37	T37	2308-138-03	CD	09/01/2024				013/24	2
90052	CWLNO004	10	F	FILL	41	TT3	36	T37	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	11	F	FILL	41	TT3	40	T1	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	12	F	FILL	41	TT3	38	T39	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	13	T	1/2V	41	TT3	37	T37	2308-138-03	CD	09/01/2024	2308-VT-005	2308-MT-005	2308-DT-004	013/24	2
90052	CWLNO004	14	F	FILL	41	TT3	36	T37	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	15	F	FILL	41	TT3	38	T38	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	16	F	FILL	41	TT3	39	T1	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	17	T	1/2V	41	TT3	37	T37	2308-138-03	CD	09/01/2024				013/24	2
90052	CWLNO004	18	F	FILL	41	TT3	36	T37	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	19	F	FILL	41	TT3	39	T1	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	20	F	FILL	41	TT3	38	T39	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	21	T	1/2V	41	TT3	37	T37	2308-138-03	CD	09/01/2024				013/24	2
90052	CWLNO004	22	F	FILL	41	TT3	36	T37	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	23	F	FILL	41	TT3	38	T39	2308-138-06	CD	09/01/2024					2
90052	CWLNO004	24	F	FILL	41	TT3	40	T1	2308-138-06	CD	09/01/2024					2
90053	CWLNO005	1	T	K	38	T39	37	T37	2308-138-04	TO	20/12/2023					2
90053	CWLNO005	2	T	K	38	T39	36	T37	2308-138-04	TO	20/12/2023				013/24	2
90053	CWLNO005	3	T	K	40	T1	37	T37	2308-138-04	TO	08/01/2024					2
90053	CWLNO005	4	T	K	40	T1	36	T37	2308-138-04	TO	08/01/2024					2
90053	CWLNO005	5	F	FILL	40	T1	38	T39	2308-138-06	TO	08/01/2024					2
90053	CWLNO005	6	T	K	39	T1	37	T37	2308-138-04	TO	08/01/2024				013/24	2
90053	CWLNO005	7	T	K	39	T1	36	T37	2308-138-04	TO	08/01/2024					2
90053	CWLNO005	8	F	FILL	39	T1	38	T39	2308-138-06	TO	08/01/2024					2
90053	CWLNO005	9	T	1/2V	41	TT3	37	T37	2308-138-03	CD	10/01/2024				013/24	2
90053	CWLNO005	10	F	FILL	41	TT3	36	T37	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	11	F	FILL	41	TT3	39	T1	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	12	F	FILL	41	TT3	38	T39	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	13	T	1/2V	41	TT3	37	T37	2308-138-03	CD	10/01/2024	2308-VT-005	2308-MT-005	2308-DT-004	013/24	2
90053	CWLNO005	14	F	FILL	41	TT3	36	T37	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	15	F	FILL	41	TT3	38	T39	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	16	F	FILL	41	TT3	40	T1	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	17	T	1/2V	41	TT3	37	T37	2308-138-03	CD	10/01/2024				013/24	2
90053	CWLNO005	18	F	FILL	41	TT3	36	T37	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	19	F	FILL	41	TT3	40	T1	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	20	F	FILL	41	TT3	38	T39	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	21	T	1/2V	41	TT3	37	T37	2308-138-03	CD	10/01/2024				013/24	2
90053	CWLNO005	22	F	FILL	41	TT3	36	T37	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	23	F	FILL	41	TT3	38	T39	2308-138-06	CD	10/01/2024					2
90053	CWLNO005	24	F	FILL	41	TT3	39	T1	2308-138-06	CD	10/01/2024					2
90055	CWLNO007	1	T	1/2V	44	TT4	157	T43	2308-138-03	TO	16/12/2023				481/23	3
90055	CWLNO007	2	F	FILL	44	TT4	46	T43	2308-138-06	TO	16/12/2023					3
90055	CWLNO007	3	F	FILL	45	T1	157	T43	2308-138-06	CD	18/01/2024	2308-VT-007	2308-MT-007	2308-DT-006		3
90055	CWLNO007	4	F	FILL	45	T1	46	T43	2308-138-06	CD	18/01/2024					3
90055	CWLNO007	5	F	FILL	45	T1	44	TT4	2308-138-06	CD	18/01/2024					3
90056	CWLNO008	1	T	1/2V	44	TT4	157	T43	2308-138-03	TO	16/12/2023				481/23	1
90056	CWLNO008	2	F	FILL	44	TT4	46	T43	2308-138-06	TO	16/12/2023					1
90056	CWLNO008	3	F	FILL	45	T1	157	T43	2308-138-06	H	04/01/2024	2308-VT-003	2308-MT-003	2308-DT-002		1
90056	CWLNO008	4	F	FILL	45	T1	46	T43	2308-138-06	H	04/01/2024					1
90056	CWLNO008	5	F	FILL	45	T1	44	TT4	2308-138-06	H	04/01/2024					1
90057	CWLNO009	1	T	K	48	T40	47	T37	2308-138-04	CD	16/12/2023				017-24	3
90057	CWLNO009	2	T	K	48	T40	47	T37	2308-138-04	CD	16/12/2023				017-24	3
90057	CWLNO009	3	T	K	49	T1	47	T37	2308-138-04	CD	12/01/2024				017-24	3
90057	CWLNO009	4	T	K	49	T1	47	T37	2308-138-04	CD	12/01/2024				017-24	3
90057	CWLNO009	5	F	FILL	49	T1	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	6	T	K	49	T1	47	T37	2308-138-04	CD	12/01/2024				017-24	3
90057	CWLNO009	7	T	K	49	T1	47	T37	2308-138-04	CD	12/01/2024				017-24	3
90057	CWLNO009	8	F	FILL	49	T1	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	9	T	1/2V	50	TT9	47	T37	2308-138-03	CD	09/01/2024				017-24	3
90057	CWLNO009	10	T	1/2V	50	TT9	47	T37	2308-138-03	CD	09/01/2024				017-24	3
90057	CWLNO009	11	F	FILL	50	TT9	47	T37	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	12	F	FILL	50	TT9	47	T37	2308-138-06	CD	12/01/2024					3

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90057	CWLNO009	13	F	FILL	50	TT9	48	T40	2308-138-06	CD	12/01/2024	2308-VT-007	2308-MT-007	2308-DT-006		3
90057	CWLNO009	14	F	FILL	50	TT9	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	15	F	FILL	50	TT9	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	16	F	FILL	50	TT9	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	17	T	1/2V	51	TT8	47	T37	2308-138-03	CD	09/01/2024				017-24	3
90057	CWLNO009	18	T	1/2V	51	TT8	47	T37	2308-138-03	CD	09/01/2024				017-24	3
90057	CWLNO009	19	F	FILL	51	TT8	47	T37	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	20	F	FILL	51	TT8	47	T37	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	21	F	FILL	51	TT8	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	22	F	FILL	51	TT8	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	23	F	FILL	51	TT8	48	T40	2308-138-06	CD	12/01/2024					3
90057	CWLNO009	24	F	FILL	51	TT8	48	T40	2308-138-06	CD	12/01/2024					3
90058	CWLNO010	1	T	K	48	T40	47	T37	2308-138-04	TO	19/12/2023	2308-VT-007	2308-MT-007	2308-DT-006	017-24	3
90058	CWLNO010	2	T	K	48	T40	47	T37	2308-138-04	TO	19/12/2023				017-24	3
90058	CWLNO010	3	T	K	49	T1	47	T37	2308-138-04	TO	15/01/2024				017-24	3
90058	CWLNO010	4	T	K	49	T1	47	T37	2308-138-04	TO	15/01/2024				017-24	3
90058	CWLNO010	5	F	FILL	49	T1	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	6	T	K	49	T1	47	T37	2308-138-04	TO	15/01/2024				017-24	3
90058	CWLNO010	7	T	K	49	T1	47	T37	2308-138-04	TO	15/01/2024				017-24	3
90058	CWLNO010	8	F	FILL	49	T1	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	9	T	1/2V	50	TT9	47	T37	2308-138-03	CD	08/01/2024				017-24	3
90058	CWLNO010	10	T	1/2V	50	TT9	47	T37	2308-138-03	CD	08/01/2024				017-24	3
90058	CWLNO010	11	F	FILL	50	TT9	47	T37	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	12	F	FILL	50	TT9	47	T37	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	13	F	FILL	50	TT9	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	14	F	FILL	50	TT9	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	15	F	FILL	50	TT9	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	16	F	FILL	50	TT9	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	17	T	1/2V	51	TT8	47	T37	2308-138-03	CD	08/01/2024				017-24	3
90058	CWLNO010	18	T	1/2V	51	TT8	47	T37	2308-138-03	CD	08/01/2024				017-24	3
90058	CWLNO010	19	F	FILL	51	TT8	47	T37	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	20	F	FILL	51	TT8	47	T37	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	21	F	FILL	51	TT8	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	22	F	FILL	51	TT8	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	23	F	FILL	51	TT8	48	T40	2308-138-06	TO	15/01/2024					3
90058	CWLNO010	24	F	FILL	51	TT8	48	T40	2308-138-06	TO	15/01/2024					3
90059	CWLNO011	1	T	K	48	T45	47	T37	2308-138-04	TO	20/12/2023	2308-VT-005	2308-MT-005	2308-DT-004	013/24	2
90059	CWLNO011	2	T	K	48	T45	47	T37	2308-138-04	TO	20/12/2023					2
90059	CWLNO011	3	T	K	49	T1	47	T37	2308-138-04	CD	10/01/2024					2
90059	CWLNO011	4	T	K	49	T1	47	T37	2308-138-04	CD	10/01/2024					2
90059	CWLNO011	5	F	FILL	49	T1	48	T45	2308-138-06	CD	10/01/2024					2
90059	CWLNO011	6	T	K	49	T1	47	T37	2308-138-04	CD	10/01/2024				013/24	2
90059	CWLNO011	7	T	K	49	T1	47	T37	2308-138-04	CD	10/01/2024					2
90059	CWLNO011	8	F	FILL	49	T1	48	T45	2308-138-06	CD	10/01/2024					2
90059	CWLNO011	9	T	1/2V	51	TT8	47	T37	2308-138-03	TO	05/01/2024				013/24	2
90059	CWLNO011	10	T	1/2V	51	TT8	47	T37	2308-138-03	TO	05/01/2024					2
90059	CWLNO011	11	F	FILL	51	TT8	47	T37	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	12	F	FILL	51	TT8	47	T37	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	13	F	FILL	51	TT8	48	T45	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	14	F	FILL	51	TT8	48	T45	2308-138-06	CD	10/01/2024					2
90059	CWLNO011	15	F	FILL	51	TT8	48	T45	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	16	F	FILL	51	TT8	48	T45	2308-138-06	CD	10/01/2024					2
90059	CWLNO011	17	T	1/2V	50	TT9	47	T37	2308-138-03	TO	04/01/2024				013/24	2
90059	CWLNO011	18	T	1/2V	50	TT9	47	T37	2308-138-03	TO	04/01/2024					2
90059	CWLNO011	19	F	FILL	50	TT9	47	T37	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	20	F	FILL	50	TT9	47	T37	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	21	F	FILL	50	TT9	48	T45	2308-138-06	CD	10/01/2024					2
90059	CWLNO011	22	F	FILL	50	TT9	48	T45	2308-138-06	TO	08/01/2024					2
90059	CWLNO011	23	F	FILL	50	TT9	48	T45	2308-138-06	CD	10/01/2024					2
90059	CWLNO011	24	F	FILL	50	TT9	48	T45	2308-138-06	TO	08/01/2024					2
90060	CWLNO012	1	T	K	48	T45	47	T37	2308-138-04	TO	21/12/2023				013/24	2
90060	CWLNO012	2	T	K	48	T45	47	T37	2308-138-04	TO	21/12/2023					2
90060	CWLNO012	3	T	K	49	T1	47	T37	2308-138-04	TO	10/01/2024					2
90060	CWLNO012	4	T	K	49	T1	47	T37	2308-138-04	TO	10/01/2024					2
90060	CWLNO012	5	F	FILL	49	T1	48	T45	2308-138-06	TO	10/01/2024					2
90060	CWLNO012	6	T	K	49	T1	47	T37	2308-138-04	TO	10/01/2024				013/24	2
90060	CWLNO012	7	T	K	49	T1	47	T37	2308-138-04	TO	10/01/2024					2
90060	CWLNO012	8	F	FILL	49	T1	48	T45	2308-138-06	TO	10/01/2024					2
90060	CWLNO012	9	T	1/2V	51	TT8	47	T37	2308-138-03	TO	05/01/2024				013/24	2
90060	CWLNO012	10	T	1/2V	51	TT8	47	T37	2308-138-03	TO	05/01/2024					2

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90060	CWLNO012	11	F	FILL	51	TT8	47	T37	2308-138-06	TO	09/01/2024	2308-VT-005	2308-MT-005	2308-DT-004		2
90060	CWLNO012	12	F	FILL	51	TT8	47	T37	2308-138-06	TO	09/01/2024					2
90060	CWLNO012	13	F	FILL	51	TT8	48	T45	2308-138-06	TO	09/01/2024					2
90060	CWLNO012	14	F	FILL	51	TT8	48	T45	2308-138-06	TO	10/01/2024					2
90060	CWLNO012	15	F	FILL	51	TT8	48	T45	2308-138-06	TO	09/01/2024					2
90060	CWLNO012	16	F	FILL	51	TT8	48	T45	2308-138-06	TO	10/01/2024					2
90060	CWLNO012	17	T	1/2V	50	TT9	47	T37	2308-138-03	TO	04/01/2024				013/24	2
90060	CWLNO012	18	T	1/2V	50	TT6	47	T37	2308-138-03	TO	04/01/2024					2
90060	CWLNO012	19	F	FILL	50	TT9	47	T37	2308-138-06	TO	09/01/2024					2
90060	CWLNO012	20	F	FILL	50	TT6	47	T37	2308-138-06	TO	09/01/2024					2
90060	CWLNO012	21	F	FILL	50	TT6	48	T45	2308-138-06	TO	10/01/2024					2
90060	CWLNO012	22	F	FILL	50	TT6	48	T45	2308-138-06	TO	09/01/2024					2
90060	CWLNO012	23	F	FILL	50	TT9	48	T45	2308-138-06	TO	10/01/2024					2
90060	CWLNO012	24	F	FILL	50	TT9	48	T45	2308-138-06	TO	09/01/2024					2
90061	CWLNO013	1	T	1/2V	52	TT5	53	T37	2308-138-03	TO	15/12/2023	2308-VT-006	2308-MT-006	2308-DT-005	481/23	3
90061	CWLNO013	2	F	FILL	52	TT5	53	T37	2308-138-06	CD	16/12/2023					3
90062	CWLNO014	1	T	1/2V	52	TT5	53	T37	2308-138-03	TO	15/12/2023	2308-VT-004	2308-MT-004	2308-DT-003	481/23	2
90062	CWLNO014	2	F	FILL	52	TT5	53	T37	2308-138-06	CD	16/12/2023					2
90125	CWUNO001	1	T	K	184	T41	186	T55	2308-138-04	RS	17/01/2024	2308-VT-023	2308-MT-023	2308-DT-022	074/24	11
90125	CWUNO001	2	T	K	184	T41	186	T55	2308-138-04	SP	19/01/2024				074/24	11
90125	CWUNO001	3	T	1/2V	188	TT23	186	T55	2308-138-03	TO	19/02/2024				074/24	11
90125	CWUNO001	4	T	1/2V	188	TT23	186	T55	2308-138-03	TO	19/02/2024				074/24	11
90125	CWUNO001	5	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	6	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	7	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	8	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	9	T	1/2V	188	TT23	186	T55	2308-138-03	TO	16/02/2024				074/24	11
90125	CWUNO001	10	T	1/2V	188	TT23	186	T55	2308-138-03	TO	16/02/2024				074/24	11
90125	CWUNO001	11	T	1/2V	188	TT23	186	T55	2308-138-03	TO	16/02/2024				074/24	11
90125	CWUNO001	12	T	1/2V	188	TT23	186	T55	2308-138-03	TO	16/02/2024				074/24	11
90125	CWUNO001	13	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	14	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	15	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	16	T	1/2V	187	TT11	186	T55	2308-138-03	MD	23/02/2024				074/24	11
90125	CWUNO001	17	T	1/2V	188	TT23	186	T55	2308-138-03	CD	16/02/2024				074/24	11
90125	CWUNO001	18	T	1/2V	188	TT23	186	T55	2308-138-03	CD	16/02/2024				074/24	11
90125	CWUNO001	19	T	K	185	T21	186	T55	2308-138-04	TO	15/02/2024				074/24	11
90125	CWUNO001	20	T	K	185	T21	186	T55	2308-138-04	TO	15/02/2024				074/24	11
90125	CWUNO001	21	T	K	185	T49	186	T55	2308-138-04	TO	15/02/2024				074/24	11
90125	CWUNO001	22	T	K	185	T49	186	T55	2308-138-04	TO	15/02/2024				074/24	11
90125	CWUNO001	23	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	24	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	25	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	26	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	27	F	FILL	187	TT11	184	T41	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	28	T	FILL	187	TT11	185	T21	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	29	T	FILL	187	TT11	185	T21	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	30	F	FILL	187	TT11	184	T41	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	31	F	FILL	187	TT11	184	T41	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	32	T	FILL	187	TT11	185	T49	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	33	T	FILL	187	TT11	185	T49	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	34	F	FILL	187	TT11	184	T41	2308-138-06	VP	29/02/2024					11
90125	CWUNO001	35	F	FILL	185	T49	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	36	F	FILL	185	T21	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	37	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	38	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	39	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90125	CWUNO001	40	F	FILL	188	TT23	184	T41	2308-138-06	CD	21/02/2024					11
90126	CWUNO002	1	T	K	184	T41	186	T16	2308-138-04	CS	19/01/2024				079/24	10
90126	CWUNO002	2	T	K	184	T41	186	T16	2308-138-04	CS	19/01/2024				079/24	10
90126	CWUNO002	3	T	1/2V	188	TT23	186	T16	2308-138-03	CD	02/02/2024				079/24	10
90126	CWUNO002	4	T	1/2V	188	TT23	186	T16	2308-138-03	VP	08/02/2024				079/24	10
90126	CWUNO002	5	T	1/2V	187	TT11	186	T16	2308-138-03	MD	17/02/2024				079/24	10
90126	CWUNO002	6	T	1/2V	187	TT11	186	T16	2308-138-03	MD	17/02/2024				079/24	10
90126	CWUNO002	7	T	1/2V	187	TT11	186	T16	2308-138-03	MD	17/02/2024				079/24	10
90126	CWUNO002	8	T	1/2V	187	TT11	186	T16	2308-138-03	MD	17/02/2024				079/24	10
90126	CWUNO002	9	T	1/2V	188	TT23	186	T16	2308-138-03	CD	02/02/2024				079/24	10
90126	CWUNO002	10	T	1/2V	188	TT23	186	T16	2308-138-03	CD	08/02/2024				079/24	10
90126	CWUNO002	11	T	1/2V	188	TT23	186	T16	2308-138-03	CD	01/02/2024				079/24	10
90126	CWUNO002	12	T	1/2V	188	TT23	186	T16	2308-138-03	CD	08/02/2024				079/24	10

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90126	CWUNO002	13	T	1/2V	187	TT11	186	T16	2308-138-03	MD	16/02/2024				079/24	10
90126	CWUNO002	14	T	1/2V	187	TT11	186	T16	2308-138-03	MD	16/02/2024				079/24	10
90126	CWUNO002	15	T	1/2V	187	TT11	186	T16	2308-138-03	MD	16/02/2024				079/24	10
90126	CWUNO002	16	T	1/2V	187	TT11	186	T16	2308-138-03	MD	16/02/2024				079/24	10
90126	CWUNO002	17	T	1/2V	188	TT23	186	T16	2308-138-03	CD	01/02/2024				079/24	10
90126	CWUNO002	18	T	1/2V	188	TT23	186	T16	2308-138-03	CD	08/02/2024				079/24	10
90126	CWUNO002	19	T	K	185	T49	186	T16	2308-138-04	VP	02/02/2024				079/24	10
90126	CWUNO002	20	T	K	185	T49	186	T16	2308-138-04	VP	08/02/2024				079/24	10
90126	CWUNO002	21	T	K	185	T21	186	T16	2308-138-04	VP	02/02/2024	2308-VT-022	2308-MT-022	2308-DT-021	079/24	10
90126	CWUNO002	22	T	K	185	T21	186	T16	2308-138-04	VP	07/02/2024				079/24	10
90126	CWUNO002	23	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	24	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	25	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	26	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	27	F	FILL	187	TT11	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	28	F	FILL	187	TT11	185	T49	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	29	T	FILL	187	TT11	185	T49	2308-138-06	MD	19/02/2024				079/24	10
90126	CWUNO002	30	F	FILL	187	TT11	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	31	F	FILL	187	TT11	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	32	F	FILL	187	TT11	185	T21	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	33	T	FILL	187	TT11	185	T21	2308-138-06	MD	19/02/2024				079/24	10
90126	CWUNO002	34	F	FILL	187	TT11	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	35	F	FILL	185	T21	184	T41	2308-138-06	VP	07/02/2024					10
90126	CWUNO002	36	F	FILL	185	T49	184	T41	2308-138-06	VP	07/02/2024					10
90126	CWUNO002	37	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	38	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	39	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90126	CWUNO002	40	F	FILL	188	TT23	184	T41	2308-138-06	MD	19/02/2024					10
90127	CWUNO003	1	T	K	189	T18	191	T38	2308-138-04	SP	17/01/2024				058/24	9
90127	CWUNO003	2	T	K	189	T18	191	T38	2308-138-04	SP	18/01/2024				058/24	9
90127	CWUNO003	3	F	FILL	193	TT14	191	T38	2308-138-06	VP	23/01/2024					9
90127	CWUNO003	4	T	1/2V	193	TT14	191	T38	2308-138-03	CD	23/01/2024				058/24	9
90127	CWUNO003	5	F	FILL	192	TT11	191	T38	2308-138-06	VP	01/02/2024					9
90127	CWUNO003	6	T	1/2V	192	TT11	191	T38	2308-138-03	RS	02/02/2024				058/24	9
90127	CWUNO003	7	F	FILL	192	TT11	191	T38	2308-138-06	VP	01/02/2024					9
90127	CWUNO003	8	T	1/2V	192	TT11	191	T38	2308-138-03	RS	02/02/2024				058/24	9
90127	CWUNO003	9	F	FILL	193	TT14	191	T38	2308-138-06	VP	29/01/2024					9
90127	CWUNO003	10	T	1/2V	193	TT14	191	T38	2308-138-03	CD	24/01/2024				058/24	9
90127	CWUNO003	11	F	FILL	193	TT14	191	T38	2308-138-06	VP	29/01/2024					9
90127	CWUNO003	12	T	1/2V	193	TT14	191	T38	2308-138-03	CD	24/01/2024				058/24	9
90127	CWUNO003	13	F	FILL	192	TT11	191	T38	2308-138-06	RS	02/01/2024					9
90127	CWUNO003	14	T	1/2V	192	TT11	191	T38	2308-138-03	RS	02/01/2024				058/24	9
90127	CWUNO003	15	F	FILL	192	TT11	191	T38	2308-138-06	RS	02/01/2024					9
90127	CWUNO003	16	T	1/2V	192	TT11	191	T38	2308-138-03	RS	02/01/2024				058/24	9
90127	CWUNO003	17	F	FILL	193	TT14	191	T38	2308-138-06	VP	29/01/2024					9
90127	CWUNO003	18	T	1/2V	193	TT14	191	T38	2308-138-03	CD	24/01/2024				058/24	9
90127	CWUNO003	19	T	K	190	T34	191	T38	2308-138-04	VP	29/01/2024				058/24	9
90127	CWUNO003	20	T	K	190	T34	191	T38	2308-138-04	VP	29/01/2024				058/24	9
90127	CWUNO003	21	T	K	190	T34	191	T38	2308-138-04	VP	29/01/2024	2308-VT-016	2308-MT-016	2308-DT-015	058/24	9
90127	CWUNO003	22	T	K	190	T34	191	T38	2308-138-04	VP	29/01/2024				058/24	9
90127	CWUNO003	23	F	FILL	193	TT14	189	T18	2308-138-06	VP	29/01/2024					9
90127	CWUNO003	24	F	FILL	193	TT14	189	T18	2308-138-06	VP	29/01/2024					9
90127	CWUNO003	25	F	FILL	193	TT14	189	T18	2308-138-06	CD	25/01/2024					9
90127	CWUNO003	26	F	FILL	193	TT14	189	T18	2308-138-06	CD	25/01/2024					9
90127	CWUNO003	27	F	FILL	192	TT11	189	T18	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	28	F	FILL	192	TT11	190	T34	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	29	F	FILL	192	TT11	190	T34	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	30	F	FILL	192	TT11	189	T18	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	31	F	FILL	192	TT11	189	T18	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	32	F	FILL	192	TT11	190	T34	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	33	F	FILL	192	TT11	190	T34	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	34	F	FILL	192	TT11	189	T18	2308-138-06	RS	02/02/2024					9
90127	CWUNO003	35	F	FILL	190	T34	189	T18	2308-138-06	CD	25/01/2024					9
90127	CWUNO003	36	F	FILL	190	T34	189	T18	2308-138-06	CD	25/01/2024					9
90127	CWUNO003	37	F	FILL	193	TT14	189	T18	2308-138-06	VP	30/01/2024					9
90127	CWUNO003	38	F	FILL	193	TT14	189	T18	2308-138-06	VP	30/01/2024					9
90127	CWUNO003	39	F	FILL	193	TT14	189	T18	2308-138-06	CD	25/01/2024					9
90127	CWUNO003	40	F	FILL	193	TT14	189	T18	2308-138-06	CD	25/01/2024					9
90128	CWUNO004	1	T	K	189	T35	191	T41	2308-138-04	VP	16/01/2024				059/24	5
90128	CWUNO004	2	T	K	189	T35	191	T41	2308-138-04	SP	17/01/2024				059/24	5

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90128	CWUNO004	3	F	FILL	193	TT14	191	T41	2308-138-06	VP	28/01/2024					5
90128	CWUNO004	4	T	1/2V	193	TT14	191	T41	2308-138-03	CD	23/01/2024				059/24	5
90128	CWUNO004	5	F	FILL	192	TT11	191	T41	2308-138-06	RS	02/01/2024					5
90128	CWUNO004	6	T	1/2V	192	TT11	191	T41	2308-138-03	RS	02/01/2024				059/24	5
90128	CWUNO004	7	F	FILL	192	TT11	191	T41	2308-138-06	RS	02/01/2024					5
90128	CWUNO004	8	T	1/2V	192	TT11	191	T41	2308-138-03	RS	02/01/2024				059/24	5
90128	CWUNO004	9	F	FILL	193	TT14	191	T41	2308-138-06	VP	29/01/2024					5
90128	CWUNO004	10	T	1/2V	193	TT14	191	T41	2308-138-03	CD	23/01/2024				059/24	5
90128	CWUNO004	11	F	FILL	193	TT14	191	T41	2308-138-06	VP	23/01/2024					5
90128	CWUNO004	12	T	1/2V	193	TT14	191	T41	2308-138-03	CD	24/01/2024				059/24	5
90128	CWUNO004	13	F	FILL	192	TT11	191	T41	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	14	T	1/2V	192	TT11	191	T41	2308-138-03	RS	02/02/2024				059/24	5
90128	CWUNO004	15	F	FILL	192	TT11	191	T41	2308-138-06	RS	03/02/2024					5
90128	CWUNO004	16	T	1/2V	192	TT11	191	T41	2308-138-03	RS	03/02/2024				059/24	5
90128	CWUNO004	17	F	FILL	193	TT14	191	T41	2308-138-06	CD	24/01/2024					5
90128	CWUNO004	18	T	1/2V	193	TT14	191	T41	2308-138-03	CD	24/01/2024				059/24	5
90128	CWUNO004	19	T	K	190	T49	191	T41	2308-138-04	VP	29/01/2024				059/24	5
90128	CWUNO004	20	T	K	190	T49	191	T41	2308-138-04	VP	29/01/2024				059/24	5
90128	CWUNO004	21	T	K	190	T49	191	T41	2308-138-04	VP	29/01/2024	2308-VT-013	2308-MT-013	2308-DT-012	059/24	5
90128	CWUNO004	22	T	K	190	T49	191	T41	2308-138-04	VP	29/01/2024				059/24	5
90128	CWUNO004	23	F	FILL	193	TT14	189	T35	2308-138-06	VP	29/01/2024					5
90128	CWUNO004	24	F	FILL	193	TT14	189	T35	2308-138-06	VP	29/01/2024					5
90128	CWUNO004	25	F	FILL	193	TT14	189	T35	2308-138-06	CD	25/01/2024					5
90128	CWUNO004	26	F	FILL	193	TT14	189	T35	2308-138-06	CD	25/01/2024					5
90128	CWUNO004	27	F	FILL	192	TT11	189	T35	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	28	F	FILL	192	TT11	190	T49	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	29	F	FILL	192	TT11	190	T49	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	30	F	FILL	192	TT11	189	T35	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	31	F	FILL	192	TT11	189	T35	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	32	F	FILL	192	TT11	190	T49	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	33	F	FILL	192	TT11	190	T49	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	34	F	FILL	192	TT11	189	T35	2308-138-06	RS	02/02/2024					5
90128	CWUNO004	35	F	FILL	190	T49	189	T35	2308-138-06	VP	30/01/2024					5
90128	CWUNO004	36	F	FILL	190	T49	189	T35	2308-138-06	VP	30/01/2024					5
90128	CWUNO004	37	F	FILL	193	TT14	189	T35	2308-138-06	VP	30/01/2024					5
90128	CWUNO004	38	F	FILL	193	TT14	189	T35	2308-138-06	VP	30/01/2024					5
90128	CWUNO004	39	F	FILL	193	TT14	189	T35	2308-138-06	CD	25/01/2024					5
90128	CWUNO004	40	F	FILL	193	TT14	189	T35	2308-138-06	CD	25/01/2024					5
90129	CWUNO005	1	T	K	195	T32	197	T5	2308-138-04	SP	22/01/2024				079/24	11
90129	CWUNO005	2	T	K	195	T32	198	T29	2308-138-04	SP	22/01/2024				079/24	11
90129	CWUNO005	3	F	FILL	194	TT12	197	T5	2308-138-06	VP	23/02/2024					11
90129	CWUNO005	4	T	1/2V	194	TT12	198	T29	2308-138-03	VP	23/02/2024				079/24	11
90129	CWUNO005	5	F	FILL	194	TT12	197	T5	2308-138-06	VP	23/02/2024					11
90129	CWUNO005	6	T	1/2V	194	TT12	198	T29	2308-138-03	VP	23/02/2024				079/24	11
90129	CWUNO005	7	F	FILL	199	TT15	197	T5	2308-138-06	VP	23/02/2024					11
90129	CWUNO005	8	T	1/2V	199	TT15	198	T29	2308-138-03	VP	23/02/2024				079/24	11
90129	CWUNO005	9	F	FILL	199	TT15	197	T5	2308-138-06	VP	24/02/2024					11
90129	CWUNO005	10	T	1/2V	199	TT15	198	T29	2308-138-03	VP	24/02/2024				079/24	11
90129	CWUNO005	11	F	FILL	194	TT12	197	T5	2308-138-06	VP	24/02/2024					11
90129	CWUNO005	12	T	1/2V	194	TT12	198	T29	2308-138-03	VP	24/02/2024				079/24	11
90129	CWUNO005	13	F	FILL	194	TT12	197	T5	2308-138-06	VP	24/02/2024					11
90129	CWUNO005	14	T	1/2V	194	TT12	198	T29	2308-138-03	VP	24/02/2024				079/24	11
90129	CWUNO005	15	T	K	196	T48	197	T5	2308-138-04	VP	22/02/2024				079/24	11
90129	CWUNO005	16	T	K	196	T48	198	T29	2308-138-04	VP	22/02/2024				079/24	11
90129	CWUNO005	17	T	K	196	T48	197	T5	2308-138-04	VP	22/02/2024	2308-VT-023	2308-MT-023	2308-DT-022	079/24	11
90129	CWUNO005	18	T	K	196	T48	198	T29	2308-138-04	VP	22/02/2024				079/24	11
90129	CWUNO005	19	F	FILL	194	TT12	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	20	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	21	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	22	F	FILL	194	TT12	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	23	F	FILL	194	TT12	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	24	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	25	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	26	F	FILL	194	TT12	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	27	F	FILL	196	T48	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	28	F	FILL	196	T48	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	29	F	FILL	199	TT15	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	30	F	FILL	199	TT15	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	31	F	FILL	199	TT15	195	T32	2308-138-06	VP	22/02/2024					11
90129	CWUNO005	32	F	FILL	199	TT15	195	T32	2308-138-06	VP	22/02/2024					11

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90130	CWUNO006	1	T	K	195	T36	197	T5	2308-138-04	CS	18/01/2024				060/24	5
90130	CWUNO006	2	T	K	195	T36	198	T28	2308-138-04	CS	18/01/2024				060/24	5
90130	CWUNO006	3	F	FILL	199	TT15	197	T5	2308-138-06	VP	29/01/2024					5
90130	CWUNO006	4	T	1/2V	199	TT15	198	T29	2308-138-03	CD	30/01/2024				060/24	5
90130	CWUNO006	5	F	FILL	194	TT12	197	T5	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	6	T	1/2V	194	TT12	198	T29	2308-138-03	CD	03/02/2024				060/24	5
90130	CWUNO006	7	F	FILL	194	TT12	197	T5	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	8	T	1/2V	194	TT12	198	T29	2308-138-03	CD	03/02/2024				060/24	5
90130	CWUNO006	9	F	FILL	194	TT12	197	T5	2308-138-06	CD	30/01/2024					5
90130	CWUNO006	10	T	1/2V	194	TT12	198	T29	2308-138-03	CD	03/02/2024				060/24	5
90130	CWUNO006	11	F	FILL	194	TT12	197	T5	2308-138-06	VP	30/01/2024					5
90130	CWUNO006	12	T	1/2V	194	TT12	198	T29	2308-138-03	CD	03/02/2024				060/24	5
90130	CWUNO006	13	F	FILL	199	TT15	197	T5	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	14	T	1/2V	199	TT15	198	T29	2308-138-03	CD	30/01/2024				060/24	5
90130	CWUNO006	15	T	K	196	T48	197	T5	2308-138-04	VP	29/01/2024				060/24	5
90130	CWUNO006	16	T	K	196	T48	198	T29	2308-138-04	VP	29/01/2024				060/24	5
90130	CWUNO006	17	T	K	196	T48	197	T5	2308-138-04	VP	29/01/2024	2308-VT-013	2308-MT-013	2308-DT-012	060/24	5
90130	CWUNO006	18	T	K	196	T48	198	T29	2308-138-04	VP	29/01/2024				060/24	5
90130	CWUNO006	19	F	FILL	199	TT15	195	T36	2308-138-06	VP	29/01/2024					5
90130	CWUNO006	20	F	FILL	199	TT15	195	T36	2308-138-06	VP	29/01/2024					5
90130	CWUNO006	21	F	FILL	199	TT15	195	T36	2308-138-06	VP	29/01/2024					5
90130	CWUNO006	22	F	FILL	199	TT15	195	T36	2308-138-06	VP	29/01/2024					5
90130	CWUNO006	23	F	FILL	194	TT12	195	T36	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	24	F	FILL	194	TT12	196	T48	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	25	F	FILL	194	TT12	196	T48	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	26	F	FILL	194	TT12	195	T36	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	27	F	FILL	194	TT12	195	T36	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	28	F	FILL	194	TT12	196	T48	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	29	F	FILL	194	TT12	196	T48	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	30	F	FILL	194	TT12	195	T36	2308-138-06	VP	01/02/2024					5
90130	CWUNO006	31	F	FILL	196	T48	195	T36	2308-138-06	VP	25/01/2024					5
90130	CWUNO006	32	F	FILL	196	T48	195	T36	2308-138-06	VP	23/01/2024					5
90131	CWUNO007	1	T	K	195	T35	205	T37	2308-138-04	SP	18/01/2024				061/24	5
90131	CWUNO007	2	T	K	195	T35	198	T29	2308-138-04	SP	18/01/2024				061/24	5
90131	CWUNO007	3	F	FILL	199	TT15	205	T37	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	4	T	1/2V	199	TT15	198	T29	2308-138-03	CD	29/01/2024				061/24	5
90131	CWUNO007	5	F	FILL	194	TT12	205	T37	2308-138-06	VP	29/01/2024					5
90131	CWUNO007	6	T	1/2V	194	TT12	198	T29	2308-138-03	VP	03/02/2024				061/24	5
90131	CWUNO007	7	F	FILL	194	TT12	205	T37	2308-138-06	VP	29/01/2024					5
90131	CWUNO007	8	T	1/2V	194	TT12	198	T29	2308-138-03	VP	03/02/2024				061/24	5
90131	CWUNO007	9	F	FILL	194	TT12	205	T37	2308-138-06	CD	29/01/2024					5
90131	CWUNO007	10	T	1/2V	194	TT12	198	T29	2308-138-03	VP	03/02/2024				061/24	5
90131	CWUNO007	11	F	FILL	194	TT12	205	T37	2308-138-06	VP	29/01/2024					5
90131	CWUNO007	12	T	1/2V	194	TT12	198	T29	2308-138-03	VP	03/02/2024				061/24	5
90131	CWUNO007	13	F	FILL	199	TT15	205	T37	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	14	T	1/2V	199	TT15	198	T29	2308-138-03	CD	29/01/2024				061/24	5
90131	CWUNO007	15	T	K	196	T48	205	T37	2308-138-04	VP	30/01/2024				061/24	5
90131	CWUNO007	16	T	K	196	T48	198	T29	2308-138-04	VP	30/01/2024				061/24	5
90131	CWUNO007	17	T	K	196	T48	205	T37	2308-138-04	VP	30/01/2024	2308-VT-013	2308-MT-013	2308-DT-012	061/24	5
90131	CWUNO007	18	T	K	196	T48	198	T29	2308-138-04	VP	30/01/2024				061/24	5
90131	CWUNO007	19	F	FILL	199	TT15	195	T35	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	20	F	FILL	199	TT15	195	T35	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	21	F	FILL	199	TT15	195	T35	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	22	F	FILL	199	TT15	195	T35	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	23	F	FILL	194	TT12	195	T35	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	24	F	FILL	194	TT12	196	T48	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	25	F	FILL	194	TT12	196	T48	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	26	F	FILL	194	TT12	195	T35	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	27	F	FILL	194	TT12	195	T35	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	28	F	FILL	194	TT12	196	T48	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	29	F	FILL	194	TT12	196	T48	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	30	F	FILL	194	TT12	195	T35	2308-138-06	VP	31/01/2024					5
90131	CWUNO007	31	F	FILL	196	T48	195	T35	2308-138-06	VP	30/01/2024					5
90131	CWUNO007	32	F	FILL	196	T48	195	T35	2308-138-06	VP	30/01/2024					5
90132	CWUNO008	1	T	K	206	T32	198	T26	2308-138-04	SP	19/01/2024				087/24	11
90132	CWUNO008	2	T	K	206	T32	198	T26	2308-138-04	SP	19/01/2024				087/24	11
90132	CWUNO008	3	F	FILL	194	TT12	198	T26	2308-138-06	VP	23/02/2024					11
90132	CWUNO008	4	T	1/2V	194	TT12	198	T26	2308-138-03	VP	23/02/2024				087/24	11
90132	CWUNO008	5	F	FILL	194	TT12	198	T26	2308-138-06	VP	23/02/2024					11
90132	CWUNO008	6	T	1/2V	194	TT12	198	T26	2308-138-03	VP	23/02/2024				087/24	11

BEAM-INTEGRATED NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90132	CWUNO008	7	T	FILL	199	TT15	198	T26	2308-138-06	VP	23/02/2024					11
90132	CWUNO008	8	T	1/2V	199	TT15	198	T26	2308-138-03	VP	23/02/2024				087/24	11
90132	CWUNO008	9	T	FILL	199	TT15	198	T26	2308-138-06	VP	24/02/2024					11
90132	CWUNO008	10	T	1/2V	199	TT15	198	T26	2308-138-03	VP	24/02/2024				087/24	11
90132	CWUNO008	11	F	FILL	194	TT12	198	T26	2308-138-06	VP	24/02/2024					11
90132	CWUNO008	12	T	1/2V	194	TT12	198	T26	2308-138-03	VP	24/02/2024				087/24	11
90132	CWUNO008	13	F	FILL	194	TT12	198	T26	2308-138-06	VP	24/02/2024					11
90132	CWUNO008	14	T	1/2V	194	TT12	198	T26	2308-138-03	VP	24/02/2024				087/24	11
90132	CWUNO008	15	T	K	196	T48	198	T26	2308-138-04	VP	22/02/2024				087/24	11
90132	CWUNO008	16	T	K	196	T48	198	T26	2308-138-04	VP	22/02/2024				087/24	11
90132	CWUNO008	17	T	K	196	T48	198	T26	2308-138-04	VP	22/02/2024	2308-VT-023	2308-MT-023	2308-DT-022	087/24	11
90132	CWUNO008	18	T	K	196	T48	198	T26	2308-138-04	VP	22/02/2024				087/24	11
90132	CWUNO008	19	F	FILL	194	TT12	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	20	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	21	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	22	F	FILL	194	TT12	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	23	F	FILL	194	TT12	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	24	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	25	F	FILL	194	TT12	196	T48	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	26	F	FILL	194	TT12	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	27	F	FILL	196	T48	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	28	F	FILL	196	T48	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	29	F	FILL	199	TT15	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	30	F	FILL	199	TT15	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	31	F	FILL	199	TT15	206	T32	2308-138-06	VP	22/02/2024					11
90132	CWUNO008	32	F	FILL	199	TT15	206	T32	2308-138-06	VP	22/02/2024					11

NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90049	CWLNO001	1	T	1/2V	42	TT2	158	T37	2308-138-03	TO	16/12/2023	2308-VT-003	2308-MT-003	2308-DT-002	001/24	1
90049	CWLNO001	2	F	FILL	42	TT2	156	T37	2308-138-06	TO	16/12/2023					1
90049	CWLNO001	3	F	FILL	35	T1	158	T37	2308-138-06	CD	05/01/2024					1
90049	CWLNO001	4	F	FILL	35	T1	156	T37	2308-138-06	CD	05/01/2024					1
90049	CWLNO001	5	F	FILL	35	T1	42	TT2	2308-138-06	CD	05/01/2024					1
90049	CWLNO001	6	F	FILL	35	T1	158	T37	2308-138-06	CD	05/01/2024					1
90049	CWLNO001	7	F	FILL	35	T1	156	T37	2308-138-06	CD	05/01/2024					1
90049	CWLNO001	8	F	FILL	35	T1	42	TT2	2308-138-06	CD	05/01/2024					1
90050	CWLNO002	1	T	1/2V	42	TT2	43	T37	2308-138-03	CD	16/12/2023	2308-VT-003	2308-MT-003	2308-DT-002	485/23	1
90050	CWLNO002	2	F	FILL	42	TT2	156	T14	2308-138-06	CD	16/12/2023					1
90050	CWLNO002	3	F	FILL	35	T1	43	T37	2308-138-06	CD	05/01/2024					1
90050	CWLNO002	4	F	FILL	35	T1	156	T14	2308-138-06	CD	05/01/2024					1
90050	CWLNO002	5	F	FILL	35	T1	42	TT2	2308-138-06	CD	05/01/2024					1
90050	CWLNO002	6	F	FILL	35	T1	43	T37	2308-138-06	CD	05/01/2024					1
90050	CWLNO002	7	F	FILL	35	T1	156	T14	2308-138-06	CD	05/01/2024					1
90050	CWLNO002	8	F	FILL	35	T1	42	TT2	2308-138-06	CD	05/01/2024					1
90051	CWLNO003	1	T	1/2V	42	TT2	43	T37	2308-138-03	TO	16/12/2023	2308-VT-003	2308-MT-003	2308-DT-002	001/24	1
90051	CWLNO003	2	F	FILL	42	TT2	156	T37	2308-138-06	TO	16/12/2023					1
90051	CWLNO003	3	F	FILL	35	T1	43	T37	2308-138-06	CD	05/01/2024					1
90051	CWLNO003	4	F	FILL	35	T1	156	T37	2308-138-06	CD	05/01/2024					1
90051	CWLNO003	5	F	FILL	35	T1	42	TT2	2308-138-06	CD	05/01/2024					1
90051	CWLNO003	6	F	FILL	35	T1	43	T37	2308-138-06	CD	05/01/2024					1
90051	CWLNO003	7	F	FILL	35	T1	156	T37	2308-138-06	CD	05/01/2024					1
90051	CWLNO003	8	F	FILL	35	T1	42	TT2	2308-138-06	CD	05/01/2024					1
90054	CWLNO006	1	T	1/2V	42	TT2	155	T37	2308-138-03	TO	18/12/2023	2308-VT-003	2308-MT-003	2308-DT-002	485/23	1
90054	CWLNO006	2	F	FILL	42	TT2	155	T37	2308-138-06	TO	18/12/2023					1
90063	CWLNO015	1	T	K	90	T39	94	T42	2308-138-04	TO	19/01/2024				055/24	5
90063	CWLNO015	2	T	K	90	T39	93	T16	2308-138-04	TO	19/01/2024				055/24	5
90063	CWLNO015	3	T	K	90	T39	94	T42	2308-138-04	TO	22/01/2024				055/24	5
90063	CWLNO015	4	T	K	90	T39	93	T16	2308-138-04	TO	22/01/2024				055/24	5
90063	CWLNO015	5	T	K	94	T42	89	TT10	2308-138-04	TO	22/01/2024				055/24	5
90063	CWLNO015	6	T	K	89	TT10	93	T16	2308-138-04	RS	15/01/2024				055/24	5
90063	CWLNO015	7	T	1/2V	99	T1	94	T42	2308-138-03	MD	03/02/2024				055/24	5
90063	CWLNO015	8	T	1/2V	99	T1	93	T16	2308-138-03	MD	03/02/2024				055/24	5
90063	CWLNO015	9	T	1/2V	97	TT7	94	T42	2308-138-03	RS	31/01/2024				055/24	5
90063	CWLNO015	10	T	1/2V	97	TT7	93	T16	2308-138-03	MD	31/01/2024				055/24	5
90063	CWLNO015	11	T	K	91	T1	94	T42	2308-138-04	TO	20/01/2024				055/24	5
90063	CWLNO015	12	T	K	91	T1	93	T16	2308-138-04	RS	17/01/2024				055/24	5
90063	CWLNO015	13	T	1/2V	97	TT7	94	T42	2308-138-03	MD	31/01/2024				055/24	5
90063	CWLNO015	14	T	1/2V	97	TT7	93	T16	2308-138-03	RS	31/01/2024				055/24	5
90063	CWLNO015	15	T	1/2V	99	T1	94	T42	2308-138-03	MD	03/02/2024				055/24	5
90063	CWLNO015	16	T	1/2V	99	T1	93	T16	2308-138-03	MD	03/02/2024				055/24	5
90063	CWLNO015	17	T	1/2V	92	T1	94	T42	2308-138-03	TO	19/01/2024				055/24	5
90063	CWLNO015	18	T	1/2V	92	T1	93	T16	2308-138-03	RS	17/01/2024				055/24	5
90063	CWLNO015	19	F	FILL	95	T1	94	T42	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	20	F	FILL	95	T1	90	T39	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	21	F	FILL	95	T1	93	T16	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	22	F	FILL	95	T1	94	T42	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	23	F	FILL	95	T1	90	T39	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	24	F	FILL	95	T1	93	T16	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	25	F	FILL	95	T1	94	T42	2308-138-06	MD	05/02/2024	2308-VT-014	2308-MT-014	2308-DT-013		5
90063	CWLNO015	26	F	FILL	95	T1	90	T39	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	27	F	FILL	95	T1	93	T16	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	28	F	FILL	95	T1	94	T42	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	29	F	FILL	95	T1	90	T39	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	30	F	FILL	95	T1	93	T16	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	31	F	FILL	98	T1	94	T42	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	32	F	FILL	98	T1	91	T1	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	33	F	FILL	98	T1	93	T16	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	34	F	FILL	98	T1	94	T42	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	35	F	FILL	98	T1	91	T1	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	36	F	FILL	98	T1	93	T16	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	37	F	FILL	92	T1	89	TT10	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	38	T	1/2V	99	T1	89	TT10	2308-138-06	MD	05/02/2024				055/24	5
90063	CWLNO015	39	T	1/2V	99	T1	97	TT7	2308-138-06	MD	05/02/2024				055/24	5
90063	CWLNO015	40	F	FILL	91	T1	89	TT10	2308-138-06	MD	05/02/2024					5
90063	CWLNO015	41	T	1/2V	99	T1	89	TT10	2308-138-06	MD	05/02/2024				055/24	5
90063	CWLNO015	42	T	1/2V	99	T1	97	TT7	2308-138-06	MD	05/02/2024				055/24	5
90063	CWLNO015	43	F	FILL	97	TT7	91	T1	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	44	F	FILL	97	TT7	91	T1	2308-138-06	MD	03/02/2024					5

NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90063	CWLNO015	45	F	FILL	97	TT7	91	T1	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	46	F	FILL	97	TT7	91	T1	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	47	F	FILL	90	T39	89	TT10	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	48	F	FILL	90	T39	89	TT10	2308-138-06	MD	03/02/2024					5
90063	CWLNO015	49	BW	X	89	TT10	89	TT10	N.A.						N.A.	5
90203	CWLNO015	3	T	K	89	TT10			4A	CD	03/02/2024	2308-VT-014	2308-MT-014	2308-DT-013	055/24	5
90064	CWLNO016	1	T	K	90	T45	94	T42	2308-138-04	MD	17/01/2024					4
90064	CWLNO016	2	T	K	90	T45	93	T42	2308-138-04	MD	17/01/2024					4
90064	CWLNO016	3	T	K	90	T45	94	T42	2308-138-04	MD	17/01/2024					4
90064	CWLNO016	4	T	K	90	T45	93	T42	2308-138-04	MD	17/01/2024					4
90064	CWLNO016	5	T	K	94	T42	89	TT20	2308-138-04	MD	23/01/2024					4
90064	CWLNO016	6	T	K	89	TT20	93	T42	2308-138-04	TO	11/01/2024					4
90064	CWLNO016	7	T	K	91	T1	94	T42	2308-138-04	MD	17/01/2024					4
90064	CWLNO016	8	T	K	91	T1	93	T42	2308-138-04	MD	17/01/2024					4
90064	CWLNO016	9	T	1/2V	97	TT7	94	T42	2308-138-03	MD	19/01/2024					4
90064	CWLNO016	10	T	1/2V	97	TT7	93	T42	2308-138-03	MD	19/01/2024				047/24	4
90064	CWLNO016	11	T	1/2V	99	T1	94	T42	2308-138-03	RS	26/01/2024					4
90064	CWLNO016	12	T	1/2V	99	T1	93	T42	2308-138-03	RS	26/01/2024					4
90064	CWLNO016	13	T	1/2V	92	T1	94	T42	2308-138-03	MD	17/01/2024					4
90064	CWLNO016	14	T	1/2V	92	T1	93	T42	2308-138-03	MD	17/01/2024					4
90064	CWLNO016	15	T	1/2V	99	T1	94	T42	2308-138-03	RS	26/01/2024					4
90064	CWLNO016	16	T	1/2V	99	T1	93	T42	2308-138-03	RS	26/01/2024					4
90064	CWLNO016	17	T	1/2V	97	TT7	94	T42	2308-138-03	RS	19/01/2024					4
90064	CWLNO016	18	T	1/2V	97	TT7	93	T42	2308-138-03	RS	19/01/2024					4
90064	CWLNO016	19	F	FILL	95	T1	94	T42	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	20	F	FILL	95	T1	90	T45	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	21	F	FILL	95	T1	93	T42	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	22	F	FILL	95	T1	94	T42	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	23	F	FILL	95	T1	90	T45	2308-138-06	RS	25/01/2024					4
90064	CWLNO016	24	F	FILL	95	T1	93	T42	2308-138-06	MD	24/01/2024					4
90064	CWLNO016	25	F	FILL	95	T1	94	T42	2308-138-06	MD	22/01/2024	2308-VT-009	2308-MT-009	2308-DT-008		4
90064	CWLNO016	26	F	FILL	95	T1	90	T45	2308-138-06	MD	24/01/2024					4
90064	CWLNO016	27	F	FILL	95	T1	93	T42	2308-138-06	MD	24/01/2024					4
90064	CWLNO016	28	F	FILL	95	T1	94	T42	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	29	F	FILL	95	T1	90	T45	2308-138-06	RS	25/01/2024					4
90064	CWLNO016	30	F	FILL	95	T1	93	T42	2308-138-06	MD	24/01/2024					4
90064	CWLNO016	31	F	FILL	98	T1	94	T42	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	32	F	FILL	98	T1	91	T1	2308-138-06	RS	26/01/2024					4
90064	CWLNO016	33	F	FILL	98	T1	93	T42	2308-138-06	RS	26/01/2024					4
90064	CWLNO016	34	F	FILL	98	T1	94	T42	2308-138-06	MD	22/01/2024					4
90064	CWLNO016	35	F	FILL	98	T1	91	T1	2308-138-06	MD	24/01/2024					4
90064	CWLNO016	36	F	FILL	98	T1	93	T42	2308-138-06	MD	24/01/2024					4
90064	CWLNO016	37	F	FILL	92	T1	89	TT20	2308-138-06	MD	19/01/2024					4
90064	CWLNO016	38	T	1/2V	99	T1	89	TT20	2308-138-06	RS	27/01/2024				047/24	4
90064	CWLNO016	39	T	1/2V	99	T1	89	TT20	2308-138-06	RS	27/01/2024					4
90064	CWLNO016	40	F	FILL	91	T1	89	TT20	2308-138-06	RS	25/01/2024					4
90064	CWLNO016	41	T	1/2V	99	T1	97	TT7	2308-138-06	RS	27/01/2024				047/24	4
90064	CWLNO016	42	T	1/2V	99	T1	97	TT7	2308-138-06	RS	27/01/2024					4
90064	CWLNO016	43	F	FILL	97	TT7	91	T1	2308-138-06	RS	25/01/2024					4
90064	CWLNO016	44	F	FILL	97	TT7	91	T1	2308-138-06	MD	23/01/2024					4
90064	CWLNO016	45	F	FILL	97	TT7	91	T1	2308-138-06	RS	25/01/2024					4
90064	CWLNO016	46	F	FILL	97	TT7	91	T1	2308-138-06	MD	23/01/2024					4
90064	CWLNO016	47	F	FILL	90	T45	89	TT20	2308-138-06	RS	26/01/2024					4
90064	CWLNO016	48	F	FILL	90	T45	89	TT20	2308-138-06	MD	23/01/2024					4
90064	CWLNO016	49	BW	X	89	TT20	89		N.A.							4
90204	CWLNO016	3	T	K	89	TT20			4A	CD	22/01/2024	2308-VT-009	2308-MT-009	2308-DT-008	047/24	4
90065	CWLNO017	1	T	K	90	T43	94	T42	2308-138-04	MD	22/01/2024					4
90065	CWLNO017	2	T	K	90	T43	93	T42	2308-138-04	RS	17/01/2024					4
90065	CWLNO017	3	T	K	90	T43	94	T42	2308-138-04	MD	22/01/2024					4
90065	CWLNO017	4	T	K	90	T43	93	T42	2308-138-04	RS	17/01/2024					4
90065	CWLNO017	5	T	K	94	T42	89	TT21	2308-138-04	MD	22/01/2024					4
90065	CWLNO017	6	T	K	89	TT21	93	T42	NODES-WELDING LO	TO	13/01/2024					4
90065	CWLNO017	7	T	K	91	T1	94	T42	2308-138-04	RS	17/01/2024					4
90065	CWLNO017	8	T	K	91	T1	93	T42	2308-138-04	RS	17/01/2024					4
90065	CWLNO017	9	T	1/2V	97	TT7	94	T42	2308-138-03	MD	22/01/2024					4
90065	CWLNO017	10	T	1/2V	97	TT7	93	T42	2308-138-03	MD	20/01/2024				048/24	4
90065	CWLNO017	11	T	1/2V	99	T1	94	T42	2308-138-03	MD	31/01/2024					4
90065	CWLNO017	12	T	1/2V	99	T1	93	T42	2308-138-03	MD	31/01/2024					4
90065	CWLNO017	13	T	1/2V	92	T1	94	T42	2308-138-03	MD	21/01/2024					4
90065	CWLNO017	14	T	1/2V	92	T1	93	T42	2308-138-03	RS	17/01/2024					4

NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90065	CWLNO017	15	T	1/2V	99	T1	94	T42	2308-138-03	MD	31/01/2024					4
90065	CWLNO017	16	T	1/2V	99	T1	93	T42	2308-138-03	MD	31/01/2024					4
90065	CWLNO017	17	T	1/2V	97	TT7	94	T42	2308-138-03	MD	21/01/2024					4
90065	CWLNO017	18	T	1/2V	97	TT7	93	T42	2308-138-03	RS	20/01/2024					4
90065	CWLNO017	19	F	FILL	95	T1	94	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	20	F	FILL	95	T1	90	T43	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	21	F	FILL	95	T1	93	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	22	F	FILL	95	T1	94	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	23	F	FILL	95	T1	90	T43	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	24	F	FILL	95	T1	93	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	25	F	FILL	95	T1	94	T42	2308-138-06	RS	29/01/2024	2308-VT-10	2308-MT-10	2308-DT-09		4
90065	CWLNO017	26	F	FILL	95	T1	90	T43	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	27	F	FILL	95	T1	93	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	28	F	FILL	95	T1	94	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	29	F	FILL	95	T1	90	T43	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	30	F	FILL	95	T1	93	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	31	F	FILL	98	T1	94	T42	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	32	F	FILL	98	T1	91	T1	2308-138-06	RS	29/01/2024					4
90065	CWLNO017	33	F	FILL	98	T1	93	T42	2308-138-06	MD	24/01/2024					4
90065	CWLNO017	34	F	FILL	98	T1	94	T42	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	35	F	FILL	98	T1	91	T1	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	36	F	FILL	98	T1	93	T42	2308-138-06	MD	24/01/2024					4
90065	CWLNO017	37	F	FILL	92	T1	89	TT21	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	38	T	1/2V	99	T1	89	TT21	2308-138-06	MD	31/01/2024				048/24	4
90065	CWLNO017	39	T	1/2V	99	T1	89	TT21	2308-138-06	MD	31/01/2024					4
90065	CWLNO017	40	F	FILL	91	T1	89	TT21	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	41	T	1/2V	99	T1	97	TT7	2308-138-06	MD	31/01/2024				048/24	4
90065	CWLNO017	42	T	1/2V	99	T1	97	TT7	2308-138-06	MD	31/01/2024					4
90065	CWLNO017	43	F	FILL	97	TT7	91	T1	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	44	F	FILL	97	TT7	91	T1	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	45	F	FILL	97	TT7	91	T1	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	46	F	FILL	97	TT7	91	T1	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	47	F	FILL	90	T43	89	TT21	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	48	F	FILL	90	T43	89	TT21	2308-138-06	RS	30/01/2024					4
90065	CWLNO017	49	BW	X	89	TT21	89	TT21	N.A.							4
90204	CWLNO017	3	T	K	89	TT21			4A	CD	17/01/2024	2308-VT-010	2308-MT-010	2308-DT-009	048/24	4
90066	CWLNO018	1	T	K	90	T45	94	T16	2308-138-04	TO	17/01/2024					4
90066	CWLNO018	2	T	K	90	T45	93	T42	2308-138-04	TO	19/01/2024					4
90066	CWLNO018	3	T	K	90	T45	94	T16	2308-138-04	TO	17/01/2024					4
90066	CWLNO018	4	T	K	90	T45	93	T42	2308-138-04	TO	19/01/2024					4
90066	CWLNO018	5	T	K	94	T16	89	TT22	2308-138-04	RS	23/01/2024					4
90066	CWLNO018	6	T	K	89	TT22	93	T42	2308-138-04	CD	11/01/2024					4
90066	CWLNO018	7	T	1/2V	92	T1	94	T16	2308-138-03	TO	17/01/2024					4
90066	CWLNO018	8	T	1/2V	92	T1	93	T42	2308-138-03	TO	19/01/2024					4
90066	CWLNO018	9	T	1/2V	99	T1	94	T16	2308-138-03	MD	25/01/2024					4
90066	CWLNO018	10	T	1/2V	99	T1	93	T42	2308-138-03	MD	25/01/2024				047/24	4
90066	CWLNO018	11	T	1/2V	97	TT7	94	T16	2308-138-03	RS	22/01/2024					4
90066	CWLNO018	12	T	1/2V	97	TT7	93	T42	2308-138-03	RS	22/01/2024					4
90066	CWLNO018	13	T	K	91	T1	94	T16	2308-138-04	TO	17/01/2024					4
90066	CWLNO018	14	T	K	91	T1	93	T42	2308-138-04	TO	17/01/2024					4
90066	CWLNO018	15	T	1/2V	97	TT7	94	T16	2308-138-03	TO	22/01/2024					4
90066	CWLNO018	16	T	1/2V	97	TT7	93	T42	2308-138-03	TO	22/01/2024					4
90066	CWLNO018	17	T	1/2V	99	T1	94	T16	2308-138-03	MD	25/01/2024					4
90066	CWLNO018	18	T	1/2V	99	T1	93	T42	2308-138-03	MD	25/01/2024					4
90066	CWLNO018	19	F	FILL	95	T1	94	T16	2308-138-06	MD	25/01/2024					4
90066	CWLNO018	20	F	FILL	95	T1	90	T45	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	21	F	FILL	95	T1	93	T42	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	22	F	FILL	95	T1	94	T16	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	23	F	FILL	95	T1	90	T45	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	24	F	FILL	95	T1	93	T42	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	25	F	FILL	95	T1	94	T16	2308-138-06	MD	30/01/2024	2308-VT-009	2308-MT-009	2308-DT-008		4
90066	CWLNO018	26	F	FILL	95	T1	90	T45	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	27	F	FILL	95	T1	93	T42	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	28	F	FILL	95	T1	94	T16	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	29	F	FILL	95	T1	90	T45	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	30	F	FILL	95	T1	93	T42	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	31	F	FILL	98	T1	94	T16	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	32	F	FILL	98	T1	91	T1	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	33	F	FILL	98	T1	93	T42	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	34	F	FILL	98	T1	94	T16	2308-138-06	MD	26/01/2024					4

NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90066	CWLNO018	35	F	FILL	98	T1	91	T1	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	36	F	FILL	98	T1	93	T42	2308-138-06	MD	26/01/2024					4
90066	CWLNO018	37	F	FILL	92	T1	89	TT22	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	38	T	1/2V	99	T1	89	TT22	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	39	T	1/2V	99	T1	89	TT22	2308-138-06	TO	30/01/2024				047/24	4
90066	CWLNO018	40	F	FILL	91	T1	89	TT22	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	41	T	1/2V	99	T1	97	TT7	2308-138-06	TO	30/01/2024					4
90066	CWLNO018	42	T	1/2V	99	T1	97	TT7	2308-138-06	TO	30/01/2024				047/24	4
90066	CWLNO018	43	F	FILL	97	TT7	91	T1	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	44	F	FILL	97	TT7	91	T1	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	45	F	FILL	97	TT7	91	T1	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	46	F	FILL	97	TT7	91	T1	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	47	F	FILL	90	T45	89	TT22	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	48	F	FILL	90	T45	89	TT22	2308-138-06	RS	22/01/2024					4
90066	CWLNO018	49	BW	X	89	TT22	89		N.A.							4
90203	CWLNO018	3	T	K	89	TT22			4A	CD	26/01/2024	2308-VT-009	2308-MT-009	2308-DT-008	047/24	4
90135	CWUNO011	1	T	K	312	T46	319	T35	2308-138-04	RS	14/01/2024				082/94	10
90135	CWUNO011	2	T	K	312	T46	311	T35	2308-138-04	RS	14/01/2024				082/24	10
90136	CWUNO011	4	F	FILL	312	T46	310	TT16	2308-138-06	SP	22/02/2024					10
90135	CWUNO011	5	T	K	313	T36	319	T55	2308-138-04	RS	14/01/2024				082/24	10
90135	CWUNO011	6	T	K	313	T36	311	T55	2308-138-04	RS	14/01/2024				082/24	10
90136	CWUNO011	8	F	FILL	313	T36	310	TT16	2308-138-06	SP	22/02/2024					10
90135	CWUNO011	9	T	1/2V	315	T34	319	T55	2308-138-03	RS	14/01/2024				082/24	10
90135	CWUNO011	10	T	1/2V	315	T34	311	T55	2308-138-03	RS	14/01/2024				082/24	10
90136	CWUNO011	12	F	FILL	315	T32	310	TT16	2308-138-06	SP	22/02/2024					10
90135	CWUNO011	13	T	K	314	T19	319	T55	2308-138-04	RS	14/01/2024				082/24	10
90135	CWUNO011	14	T	K	314	T19	311	T55	2308-138-04	RS	14/01/2024				082/24	10
90136	CWUNO011	16	F	FILL	314	T19	310	TT16	2308-138-06	SP	22/02/2024					10
90136	CWUNO011	17	F	FILL	317	T20	319	T55	2308-138-06	SP	22/02/2024					10
90136	CWUNO011	18	F	FILL	317	T20	312	T55	2308-138-06	SP	22/02/2024					10
90136	CWUNO011	19	F	FILL	317	T20	311	T55	2308-138-06	SP	22/02/2024					10
90136	CWUNO011	20	F	FILL	318	T47	319	T55	2308-138-06	SP	22/02/2024					10
90136	CWUNO011	21	F	FILL	318	T47	312	T46	2308-138-06	SP	22/02/2024					10
90136	CWUNO011	22	F	FILL	318	T47	311	T55	2308-138-06	SP	23/02/2024	2308-VT-022	2308-MT-022	2308-DT-021		10
90136	CWUNO011	23	F	FILL	318	T47	319	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	24	F	FILL	317	T21	313	T36	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	25	F	FILL	317	T21	311	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	26	F	FILL	317	T21	319	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	27	F	FILL	318	T47	313	T36	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	28	F	FILL	318	T47	311	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	29	F	FILL	316	T35	319	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	30	F	FILL	316	T35	314	T19	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	31	F	FILL	316	T35	311	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	32	F	FILL	316	T35	319	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	33	F	FILL	316	T35	314	T19	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	34	F	FILL	316	T35	311	T55	2308-138-06	SP	23/02/2024					10
90136	CWUNO011	35	BW	K	319	T55	310	TT16	2308-138-04	SP	23/02/2024				082/24	10
90135	CWUNO011	36	BW	K	310	TT16	311	T55	2308-138-04	RS	23/02/2024				082/24	10
90136	CWUNO011	38	T	1/2V	321	T37	310	TT16	2308-138-03	TO	06/02/2024				082/24	10
90136	CWUNO011	39	T	1/2V	321	T37	310	TT16	2308-138-03	TO	03/02/2024				082/24	10
90137	CWUNO012	1	T	K	313	T36	319	T55	2308-138-04	MD	15/02/2024				087/24	11
90137	CWUNO012	2	T	K	313	T36	311	T55	2308-138-04	MD	15/02/2024				087/24	11
90138	CWUNO012	3	F	FILL	313	T36	330	TT17	2308-138-06	RS	23/02/2024					11
90137	CWUNO012	5	T	K	312	T46	319	T55	2308-138-04	MD	15/02/2024				087/24	11
90137	CWUNO012	6	T	K	312	T46	311	T55	2308-138-04	MD	15/02/2024				087/24	11
90138	CWUNO012	7	F	FILL	312	T46	330	TT17	2308-138-06	RS	23/02/2024					11
90137	CWUNO012	9	T	K	314	T19	319	T55	2308-138-04	MD	15/02/2024				087/24	11
90137	CWUNO012	10	T	K	314	T19	311	T55	2308-138-04	MD	15/02/2024				087/24	11
90138	CWUNO012	11	F	FILL	314	T19	330	TT17	2308-138-06	RS	23/02/2024					11
90137	CWUNO012	13	T	1/2V	315	T20	319	T55	2308-138-03	MD	15/02/2024				087/24	11
90137	CWUNO012	14	T	1/2V	315	T20	311	T55	2308-138-03	MD	15/02/2024				087/24	11
90138	CWUNO012	15	F	FILL	315	T20	330	TT17	2308-138-06	MD	22/02/2024					11
90138	CWUNO012	17	F	FILL	318	T47	319	T55	2308-138-06	RS	22/02/2024					11
90138	CWUNO012	18	F	FILL	318	T47	313	T36	2308-138-06	RS	23/02/2024					11
90138	CWUNO012	19	F	FILL	318	T47	311	T55	2308-138-06	RS	23/02/2024					11
90138	CWUNO012	20	F	FILL	317	T23	319	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	21	F	FILL	317	T23	313	T36	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	22	F	FILL	317	T23	311	T55	2308-138-06	RS	26/02/2024	2308-VT-023	2308-MT-023	2308-DT-022		11
90138	CWUNO012	23	F	FILL	318	T47	319	T55	2308-138-06	RS	23/02/2024					11
90138	CWUNO012	24	F	FILL	318	T47	312	T46	2308-138-06	RS	23/02/2024					11

NODES-WELDING LOG

Drawing N.	Mark N.1	N.Weld	Type Connection	Weld Type	Pos. N.1	ID Pos. 1	Pos. N.2	ID Pos. 2	WPS N°	Welder ID	Weld Date	VT	MT	DT	UT	
90138	CWUNO012	25	F	FILL	318	T47	311	T55	2308-138-06	RS	23/02/2024					11
90138	CWUNO012	26	F	FILL	317	T23	319	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	27	F	FILL	317	T23	312	T46	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	28	F	FILL	317	T23	311	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	29	F	FILL	316	T24	319	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	30	F	FILL	316	T24	314	T19	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	31	F	FILL	316	T24	311	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	32	F	FILL	316	T24	319	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	33	F	FILL	316	T24	314	T19	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	34	F	FILL	316	T24	311	T55	2308-138-06	RS	26/02/2024					11
90138	CWUNO012	35	BW	K	330	TT17	311	T55	2308-138-04	TO	22/02/2024				087/24	11
90138	CWUNO012	36	BW	K	330	TT17	319	T55	2308-138-04	RS	22/02/2024				087/24	11
90138	CWUNO012	38	T	1/2V	321	T37	330	TT17	2308-138-03	TO	07/02/2024				087/24	11
90138	CWUNO012	39	T	1/2V	321	T29	330	TT17	2308-138-03	TO	08/02/2024				087/24	11

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-001	1 of 2	27/12/2023

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO
Joint Type	Fillet welds
Material Thickness	> 5 mm
Welding Process	121 + 138
Examination Devices	Welding gouge
Test Extension	100%

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
27/12/2023	Amoroso Moreno	ROSETTI MARINO SpA Alberto Luccini 09/01/2024		

For Items and quantities see next page(s)

Mod. VT101620A Rev 0

Mark Number	Description	Drawing	Quantity
CWLPG001	PL20x250	123A90-FDL-ST-DD-90000	1
CWLPG002	PL20x250	123A90-FDL-ST-DD-90001	1
CWLPG024	PL20x250	123A90-FDL-ST-DD-90023	1
CWLPG029	PL20x250	123A90-FDL-ST-DD-90028	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
27/12/2023	Amoroso Moreno	ROSETTI MARINO SpA Alberto Lucchi		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-002	1 of 2	22/12/2023

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO
Joint Type	Fillet welds
Material Thickness	> 5 mm
Welding Process	121
Examination Devices	Welding gouge
Test Extension	100%

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/12/2023	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 03/01/2024		

For Items and quantities see next page(s)

Mod. VT101620A Rev 0

Mark Number	Description	Drawing	Quantity
CWLPG003	PL20x250	123A90-FDL-ST-DD-90002	1
CWLPG004	PL20x250	123A90-FDL-ST-DD-90003	1
CWLPG005	PL25x250	123A90-FDL-ST-DD-90004	1
CWLPG006	PL25x250	123A90-FDL-ST-DD-90005	1
CWLPG025	PL25x250	123A90-FDL-ST-DD-90024	1
CWLPG026	PL25x250	123A90-FDL-ST-DD-90025	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/12/2023	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 09/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-003	1 of 2	08/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	**Acceptance Criteria**	EN 5817 Lev. C

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ **Accepted**
	Rejected

Welds Superficial Conditions	**As welded**
Base Material Superficial Conditions	**As rolled**
Material	**S420MLO + S355MLO + API5LX52**
Joint Type	**Fillet welds + Butt weld**
Material Thickness	**> 5 mm**
Welding Process	**121 + 138 + 136**
Examination Devices	**Welding gouge**
Test Extension	**100%**

Remarks	Mark CWLPG0031, CWLNO008 and CWLPG0038 has been checked assembled

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/01/2024	Simonetto Angelo	ROSETTI MARINO SPA Alberto Lucchi 03/01/2024		

For Items and quantities see next page(s)

Mod. VT101620A Rev 0

Mark Number	Description	Drawing	Quantity
CWLPG014	PL25x300	123A90-FDL-ST-DD-90013	1
CWLPG031	PL10x107,5	123A90-FDL-ST-DD-90030	1
CWLPG038	PL10x107,5	123A90-FDL-ST-DD-90037	1
CWLNO001	PL15x101.8	123A90-FDL-ST-DD-90049	1
CWLNO002	PL15x101.8	123A90-FDL-ST-DD-90050	1
CWLNO003	PL15x101.8	123A90-FDL-ST-DD-90051	1
CWLNO006	Ø406.4x19.05	123A90-FDL-ST-DD-90054	1
CWLNO008	Ø273.1x15.09	123A90-FDL-ST-DD-90056	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi Supply Management Dept. 08/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-004	1 of 2	10/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

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Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO + API5LX52
Joint Type	Fillet welds + Butt weld
Material Thickness	> 5 mm
Welding Process	121 + 138 + 136
Examination Devices	Welding gouge
Test Extension	100%

Remarks	Mark CWLPG0021, CWLNO014 and CWLPG0022 has been checked assembled

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
10/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept. 23/01/2024		

For Items and quantities see next page(s)

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-004	2 of 2	10/01/2024

Mark Number	Description	Drawing	Quantity
CWLPG008	PL25x400	123A90-FDL-ST-DD-90007	1
CWLPG010	PL25x400	123A90-FDL-ST-DD-90009	1
CWLPG011	PL25x400	123A90-FDL-ST-DD-90010	1
CWLPG021	PL25x300	123A90-FDL-ST-DD-90020	1
CWLPG022	PL25x300	123A90-FDL-ST-DD-90021	1
CWLPG023	PL25x300	123A90-FDL-ST-DD-90022	1
CWLPG046	PL25x400	123A90-FDL-ST-DD-90045	1
CWLPG047	PL25x400	123A90-FDL-ST-DD-90046	1
CWLPG048	PL25x400	123A90-FDL-ST-DD-90047	1
CWLNO014	Ø323.9x15.88	123A90-FDL-ST-DD-90062	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
10/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-005	1 of 2	15/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO + API5LX52
Joint Type	Fillet welds + Butt weld
Material Thickness	> 5 mm
Welding Process	121 + 138 + 136
Examination Devices	Welding gouge
Test Extension	100%

Remarks	Mark CWLP0035, CWLNO012 and CWLPG0045 has been checked assembled. Mark CWLP0033, CWLNO011 and CWLPG0042 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
15/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 23/01/2024		

For Items and quantities see next page(s)

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-005	2 of 2	15/01/2024

Mark Number	Description	Drawing	Quantity
CWLPG007	PL25x400	123A90-FDL-ST-DD-90006	1
CWLPG009	PL25x400	123A90-FDL-ST-DD-90008	1
CWLPG012	PL25x400	123A90-FDL-ST-DD-90011	1
CWLPG015	PL25x300	123A90-FDL-ST-DD-90014	1
CWLPG016	PL25x300	123A90-FDL-ST-DD-90015	1
CWLPG017	PL25x300	123A90-FDL-ST-DD-90016	1
CWLPG018	PL25x300	123A90-FDL-ST-DD-90017	1
CWLPG033	PL10x130	123A90-FDL-ST-DD-90032	1
CWLPG035	PL10x130	123A90-FDL-ST-DD-90034	1
CWLPG039	PL10x107,5	123A90-FDL-ST-DD-90038	1
CWLPG042	PL25x400	123A90-FDL-ST-DD-90041	1
CWLPG045	PL25x400	123A90-FDL-ST-DD-90044	1
CWLPG049	PL25x400	123A90-FDL-ST-DD-90048	1
CWLNO004	PL25x480	123A90-FDL-ST-DD-90052	1
CWLNO005	PL25x480	123A90-FDL-ST-DD-90053	1
CWLNO011	PL25x610	123A90-FDL-ST-DD-90059	1
CWLNO012	PL25x610	123A90-FDL-ST-DD-90060	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
15/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept. 23/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-006	1 of 2	18/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	**Acceptance Criteria**	EN 5817 Lev. C

Type of Control	✓ Internal	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ **Accepted**
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO + API5LX52
Joint Type	Fillet welds + Butt weld
Material Thickness	> 5 mm
Welding Process	121 + 138 + 136
Examination Devices	Welding gouge
Test Extension	100%

Remarks	Mark CWLPG019, CWLNO013 and CWLPG020 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
18/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 23/01/2024		

For Items and quantities see next page(s)

Mod. VT101620A Rev 0

Mark Number	Description	Drawing	Quantity
CWLPG013	PL25x300	123A90-FDL-ST-DD-90012	1
CWLPG019	PL25x300	123A90-FDL-ST-DD-90018	1
CWLPG020	PL25x300	123A90-FDL-ST-DD-90019	1
CWLPG027	PL25x250	123A90-FDL-ST-DD-90026	1
CWLPG028	PL25x250	123A90-FDL-ST-DD-90027	1
CWLPG030	PL10x107,5	123A90-FDL-ST-DD-90029	1
CWLPG032	PL12x130	123A90-FDL-ST-DD-90031	1
CWLNO013	Ø323.9x15.88	123A90-FDL-ST-DD-90061	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
18/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi 23/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-007	1 of 2	22/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO + API5LX52
Joint Type	Fillet welds + Butt weld
Material Thickness	> 5 mm
Welding Process	121 + 138 + 136
Examination Devices	Welding gouge
Test Extension	100%

Remarks	Items assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Luccai 23/01/2024		

For Items and quantities see next page(s)

Mod. VT101620A Rev 0

Mark Number	Description	Drawing	Quantity
CWLPG036	PL10x130	123A90-FDL-ST-DD-90035	1
CWLPG037	PL10x130	123A90-FDL-ST-DD-90036	1
CWLPG040	PL20x250	123A90-FDL-ST-DD-90039	1
CWLPG041	PL20x250	123A90-FDL-ST-DD-90040	1
CWLPG043	PL25x400	123A90-FDL-ST-DD-90042	1
CWLPG044	PL25x400	123A90-FDL-ST-DD-90043	1
CWLNO007	Ø273.1x15.09	123A90-FDL-ST-DD-90055	1
CWLNO009	PL25x610	123A90-FDL-ST-DD-90057	1
CWLNO010	PL25x610	123A90-FDL-ST-DD-90058	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Liccati		

The considered drawings revisions are those applicable at certificate issue date

Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-008	1 of 2	01/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO + API5LX52
Joint Type	Fillet welds + Butt weld
Material Thickness	> 5 mm
Welding Process	121 + 138 + 136
Examination Devices	Welding gouge
Test Extension	100%

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

For Items and quantities see next page(s)

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-008	2 of 2	01/02/2024

Mark Number	Description	Drawing	Quantity
CWUPG023	PL40x400	123A90-FDL-ST-DD-90091	1
CWUPG009	PL25x400	123A90-FDL-ST-DD-90145	1
CWUPG005	PL20x250	123A90-FDL-ST-DD-90078	1
CWUPG006	PL20x250	123A90-FDL-ST-DD-90079	1
CWUPG011	PL25x300	123A90-FDL-ST-DD-90082	1
CWUPG024	PL40x400	123A90-FDL-ST-DD-90093	1
CWUPG031	PL15x920	123A90-FDL-ST-DD-90100	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

The considered drawings revisions are those applicable at certificate issue date Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-009	1 of 2	01/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO + API5LX52
Joint Type	Fillet welds + Butt weld
Material Thickness	> 5 mm
Welding Process	121 + 138 + 136
Examination Devices	Welding gouge
Test Extension	100%

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

For Items and quantities see next page(s)

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-009	2 of 2	01/02/2024

Mark Number	Description	Drawing	Quantity
CWLNO016	SPD800x40	123A90-FDL-ST-DD-90064	1
CWLNO018	SPD800x40	123A90-FDL-ST-DD-90066	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

The considered drawings revisions are those applicable at certificate issue date Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-010	1 of 2	02/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	**Acceptance Criteria**	EN 5817 Lev. C

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ **Accepted**
	Rejected

Welds Superficial Conditions	**As welded**
Base Material Superficial Conditions	**As rolled**
Material	**S420MLO + S355MLO + API5LX52**
Joint Type	**Fillet welds + Butt weld**
Material Thickness	**> 5 mm**
Welding Process	**121 + 138 + 136**
Examination Devices	**Welding gouge**
Test Extension	**100%**

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-010	2 of 2	02/02/2024

Mark Number	Description	Drawing	Quantity
CWLNO017	SPD800x40	123A90-FDL-ST-DD-90065	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-011	1 of 2	02/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	**Acceptance Criteria**	EN 5817 Lev. C

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ **Accepted**
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO
Joint Type	Fillet welds
Material Thickness	> 5 mm
Welding Process	121
Examination Devices	Welding gouge
Test Extension	100%

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

Mark Number	Description	Drawing	Quantity
CWUPG012	PL25x300	123A90-FDL-ST-DD-90083	1
CWUPG020	PL25x300	123A90-FDL-ST-DD-90089	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-012	1 of 2	05/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Visual examination procedure 2308-NDE-00	Acceptance Criteria	EN 5817 Lev. C

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded
Base Material Superficial Conditions	As rolled
Material	S420MLO + S355MLO
Joint Type	Fillet welds
Material Thickness	> 5 mm
Welding Process	121
Examination Devices	Welding gouge
Test Extension	100%

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
05/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

Mark Number	Description	Drawing	Quantity
CWUPG018	PL25x300	123A90-FDL-ST-DD-90087	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
05/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. VT101620A Rev 0

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-013	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138 + 136
Material	S420MLO + S355MLO + API 5LX52	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO004	PL15x954	123A90-FDL-ST-DD-90128	1
CWUNO006	Ø406.4x12.7	123A90-FDL-ST-DD-90130	1
CWUNO007	Ø406.4x12.7	123A90-FDL-ST-DD-90131	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

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SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-014	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138 + 136
Material	S420MLO + S355MLO	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWLNO015	SPD800x40	123A90-FDL-ST-DD-90063	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-015	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	121
Material	S420MLO	Examination Devices	Welding gouge
Joint Type	Fillet welds	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUPG028	PL40x400	123A90-FDL-ST-DD-90097	1
CWUPG029	PL40x400	123A90-FDL-ST-DD-90098	1
CWUPG038	PL40x500	123A90-FDL-ST-DD-90105	1
CWUPG044	PL25x400	123A90-FDL-ST-DD-90111	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-016	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138 + 136
Material	S420MLO + S355MLO + API 5LX52	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO003	PL15x954	123A90-FDL-ST-DD-90127	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-017	1 of 1	08/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	121
Material	S420MLO	Examination Devices	Welding gouge
Joint Type	Fillet welds	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUPG010	PL25x400	123A90-FDL-ST-DD-90144	1
CWUPG013	PL25x300	123A90-FDL-ST-DD-90084	1
CWUPG014	PL25x300	123A90-FDL-ST-DD-90085	1
CWUPG022	PL12x132.5	123A90-FDL-ST-DD-90090	1
CWUPG027	PL40x400	123A90-FDL-ST-DD-90096	1
CWUPG030	PL15x920	123A90-FDL-ST-DD-90099	1
CWUPG033	PL25x400	123A90-FDL-ST-DD-90102	1
CWUPG039	PL40x500	123A90-FDL-ST-DD-90106	1
CWUPG040	PL40x500	123A90-FDL-ST-DD-90107	1
CWUPG041	PL40x500	123A90-FDL-ST-DD-90108	1
CWUPG045	PL25x400	123A90-FDL-ST-DD-90112	1
CWUPG046	PL25x400	123A90-FDL-ST-DD-90147	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-018	1 of 1	16/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138 + 136
Material	S420MLO + S355MLO	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO013	PL40x1800	123A90-FDL-ST-DD-90139	1
CWUNO014	SPD800x30	123A90-FDL-ST-DD-90141	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
16/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-019	1 of 1	16/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	121
Material	S420MLO + S355MLO + API5L X52	Examination Devices	Welding gouge
Joint Type	Fillet welds	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUPG001	Ø323.9x12.7	123A90-FDL-ST-DD-90074	1
CWUPG002	Ø323.9x12.7	123A90-FDL-ST-DD-90075	1
CWUPG015	PL12x132.5	123A90-FDL-ST-DD-90146	1
CWUPG016	PL10x132.5	123A90-FDL-ST-DD-90143	1
CWUPG017	PL25x300	123A90-FDL-ST-DD-90086	1
CWUPG032	PL25x400	123A90-FDL-ST-DD-90101	1
CWUPG047	PL25x400	123A90-FDL-ST-DD-90148	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
16/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-020	1 of 1	19/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138
Material	S420MLO + S355MLO + API5L X52	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO010	PL25x914	123A90-FDL-ST-DD-90134	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
19/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

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SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-021	1 of 1	22/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138-136-121
Material	S420MLO + S355MLO	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	Mark CWUPG007, CWUPG008 and CWUNo003 has been checked assembled. Assembly DWG 90198.

Mark Number	Description	Drawing	Quantity
CWUPG007	PL20x250	123A90-FDL-ST-DD-90080	1
CWUPG008	PL20x250	123A90-FDL-ST-DD-90081	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-022	1 of 1	26/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138-136-121
Material	S420MLO + S355MLO + API5LX52	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	Mark CWUPG004 and CWUNO002 has been checked assembled. Assembly DWG 90201.

Mark Number	Description	Drawing	Quantity
CWUNO002	PL20x914	123A90-FDL-ST-DD-90126	1
CWUNO011	SPD800x30	123A90-FDL-ST-DD-90135	1
CWUPG004	Ø323.9x12.7	123A90-FDL-ST-DD-90077	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
26/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	VISUAL AND DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-VT-023	1 of 1	29/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Visual examination procedure 2308-NDE-00	EN 5817 Lev. C

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.4| 100% Visual Examination of finished welds

Test Result	
	✓ Accepted
	Rejected

Welds Superficial Conditions	As welded	Material Thickness	> 5 mm
Base Material Superficial Conditions	As rolled	Welding Process	138-136-121
Material	S420MLO + S355MLO + API5LX52	Examination Devices	Welding gouge
Joint Type	Fillet welds + Butt weld	Test Extension	100%

Remarks	
	Mark CWUPG004 and CWUNO001 has been checked assembled (see Assembly DWG 90199). Mark CWUPG019 and CWUNO005 has been checked assembled (see Assembly DWG 90199). Mark CWUPG021 and CWUNO008 has been checked assembled (see Assembly DWG 90201).

Mark Number	Description	Drawing	Quantity
CWUNO001	PL20x914	123A90-FDL-ST-DD-90125	1
CWUNO005	Ø406.4x12.7	123A90-FDL-ST-DD-90129	1
CWUNO008	Ø406.4x12.7	123A90-FDL-ST-DD-90132	1
CWUNO012	PL40x1800	123A90-FDL-ST-DD-90137	1
CWUPG003	Ø323.9x12.7	123A90-FDL-ST-DD-90076	1
CWUPG019	PL25x300	123A90-FDL-ST-DD-90088	1
CWUPG021	PL25x300	123A90-FDL-ST-DD-90092	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
29/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-001	1 of 2	27/12/2023

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
27/12/2023	Amoroso Moreno	ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept. 09/01/2024		

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-001	2 of 2	27/12/2023

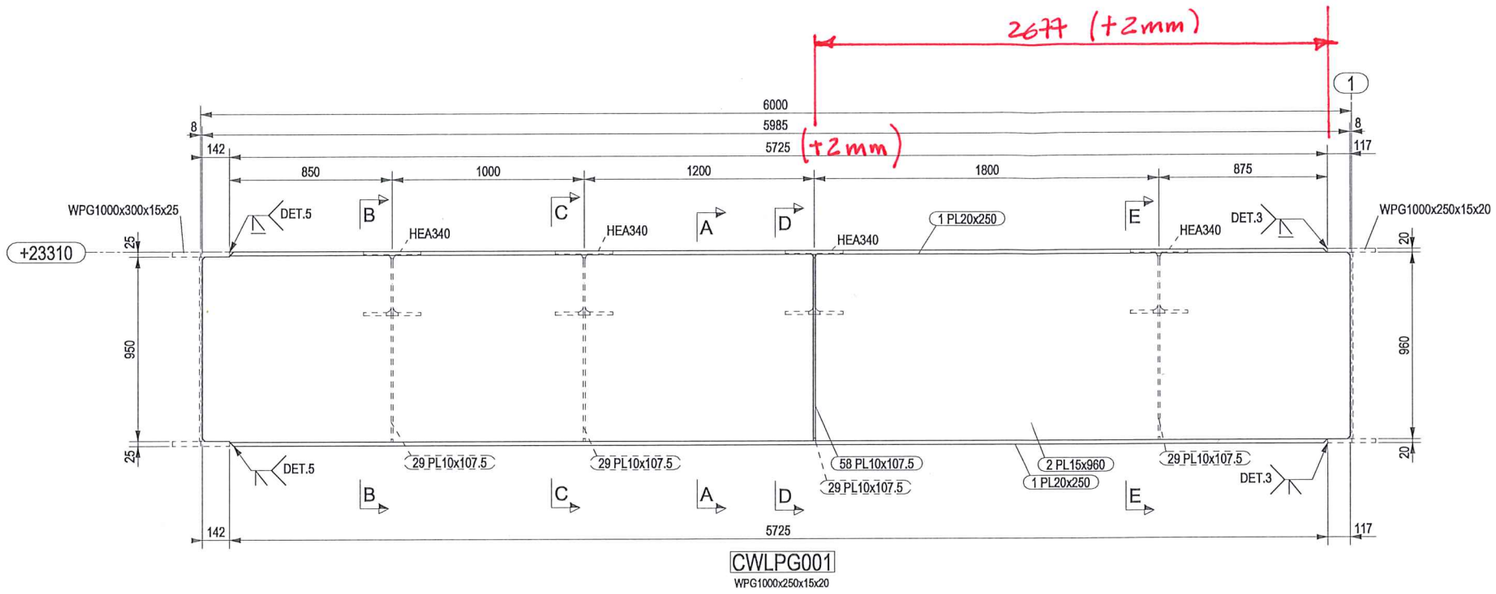
Mark Number	Description	Drawing	Quantity
CWLPG001	PL20x250	123A90-FDL-ST-DD-90000	1
CWLPG002	PL20x250	123A90-FDL-ST-DD-90001	1
CWLPG024	PL20x250	123A90-FDL-ST-DD-90023	1
CWLPG029	PL20x250	123A90-FDL-ST-DD-90028	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
27/12/2023	Amoroso Moreno	09/01/2024 ROSETTI MARINO S.p.A. Alberto Luccini Supply Management Dept.		

The considered drawings revisions are those applicable at certificate issue date

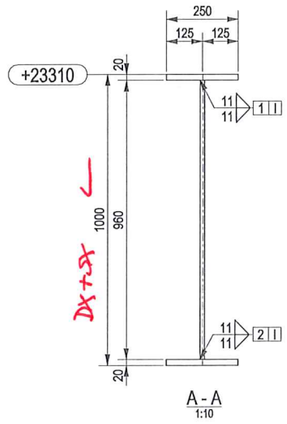
Mod. DT101620A Rev 0

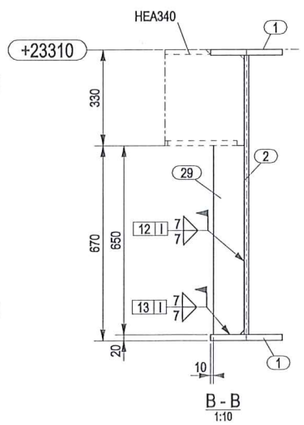
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG001	1	2	PL20x250	5719	S420MLO	2	447.7	6.18	
CWLPG001	2	1	PL15x960	5985	S420MLO	2	676.3	11.70	
CWLPG001	29	4	PL10x107.5	650	S355MLO	3	21.9	0.62	
CWLPG001	58	1	PL10x107.5	960	S355MLO	3	8.1	0.23	
						TOTALE	1154.0	18.73	

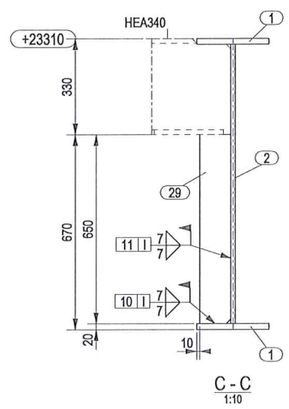


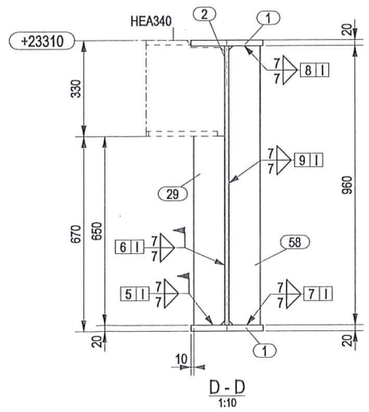
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WPG1000x250x15x20

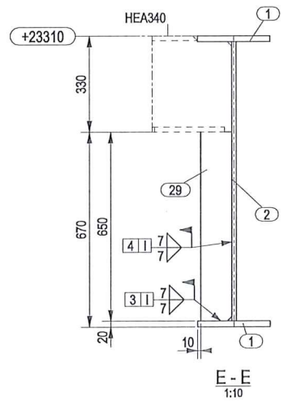
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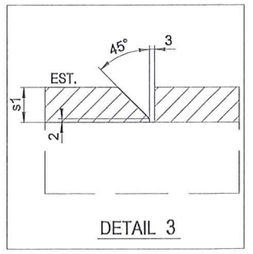




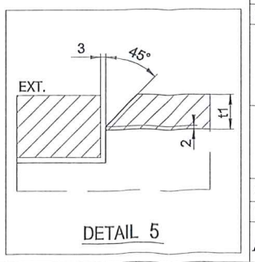








DETAIL 3

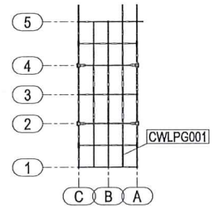


DETAIL 5

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

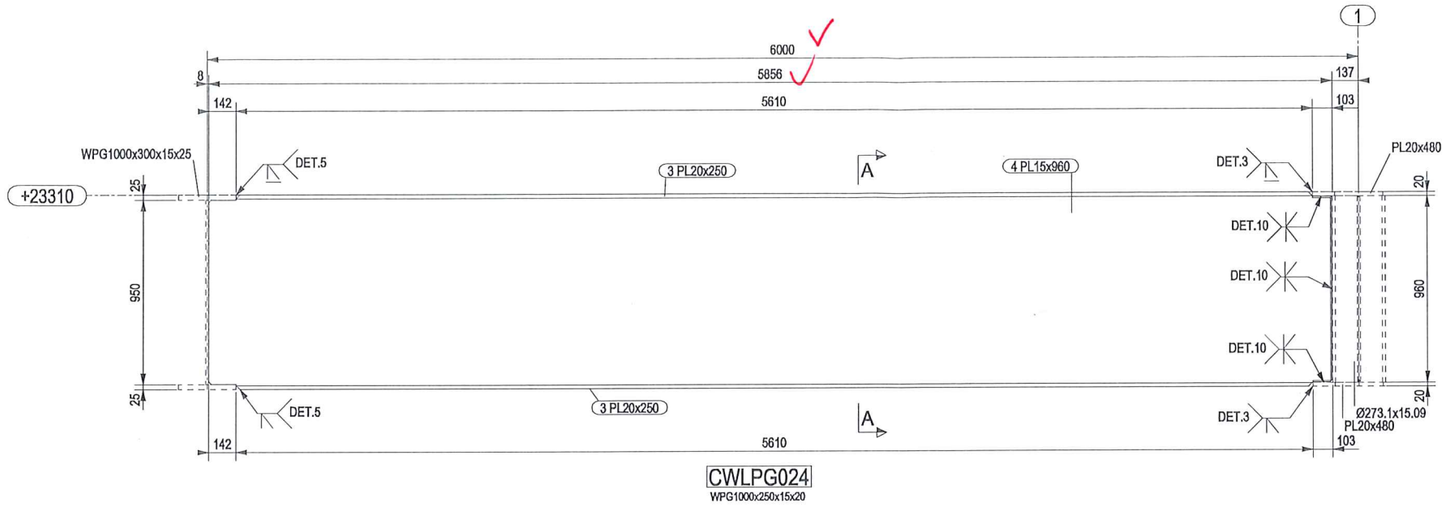
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG001

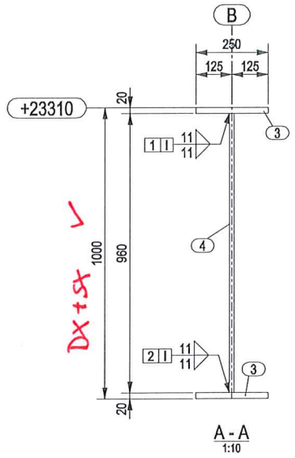
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90000		SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG024	3	2	PL20x250	5604	S420MLO	2	438.6	6.06	
CWLPG024	4	1	PL15x960	5853	S420MLO	2	661.0	11.43	
						TOTALE	1099.6	17.49	

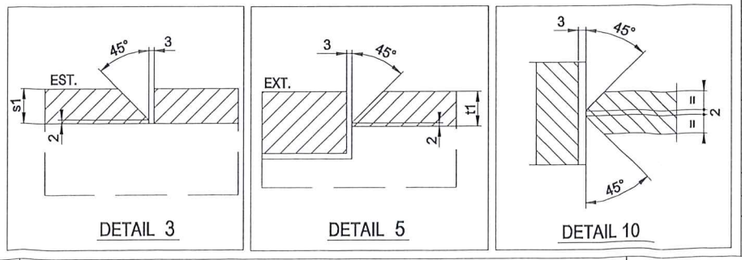
CAMBER 2 mm
SWEEP 2 mm



CWLPG024
WPG1000x250x15x20



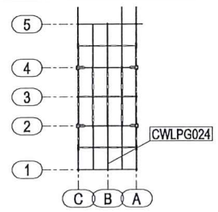
A - A
1:10



NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

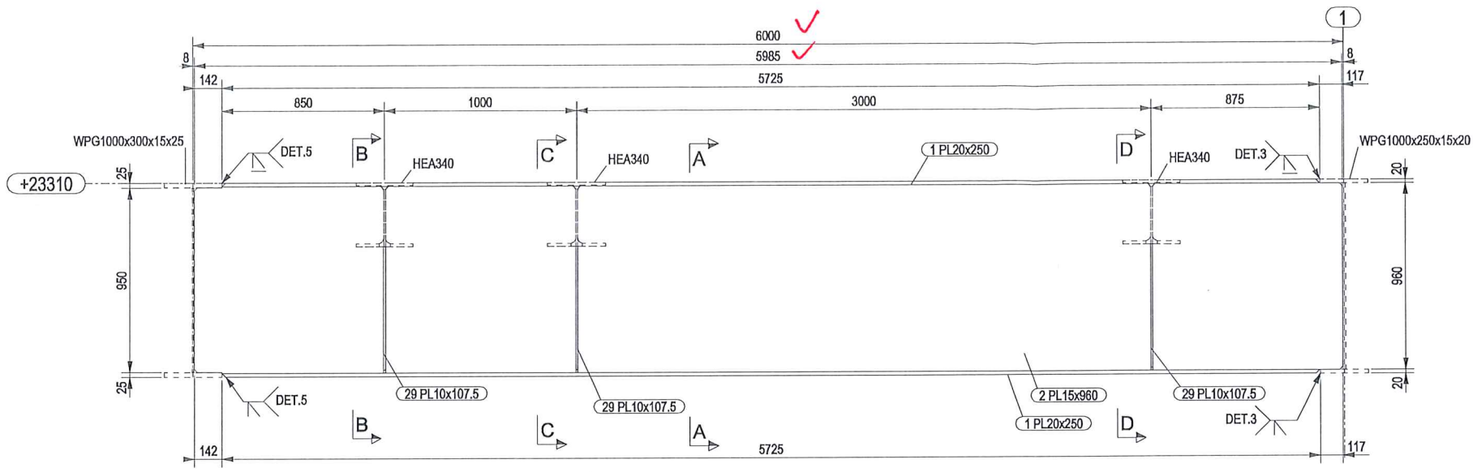
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG024

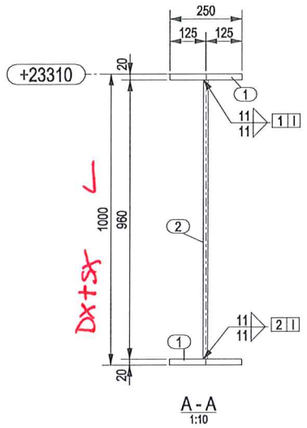
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90023	SHEET 001	REV. 0

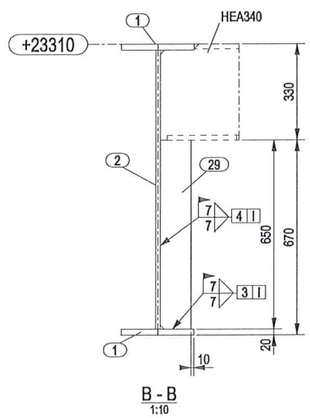
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG002	1	2	PL20x250	5719	S420MLO	2	447.7	6.18	
CWLPG002	2	1	PL15x960	5985	S420MLO	2	676.3	11.70	
CWLPG002	29	3	PL10x107.5	650	S355MLO	3	16.4	0.46	
						TOTALE	1140.4	18.34	

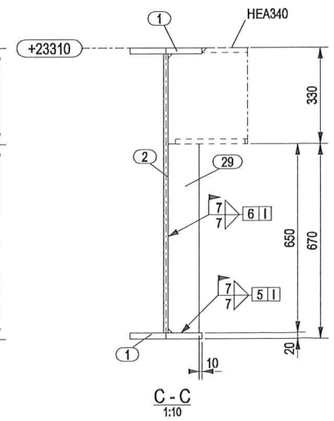
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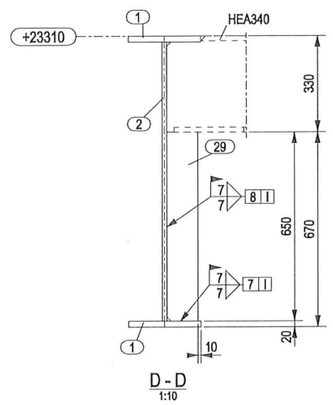


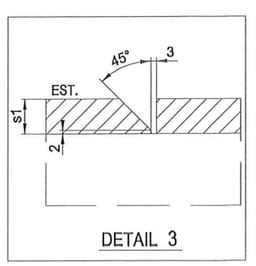
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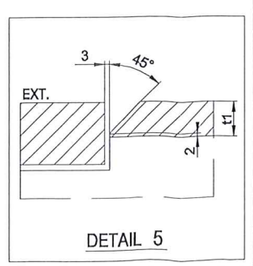








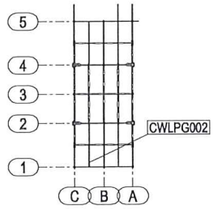




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

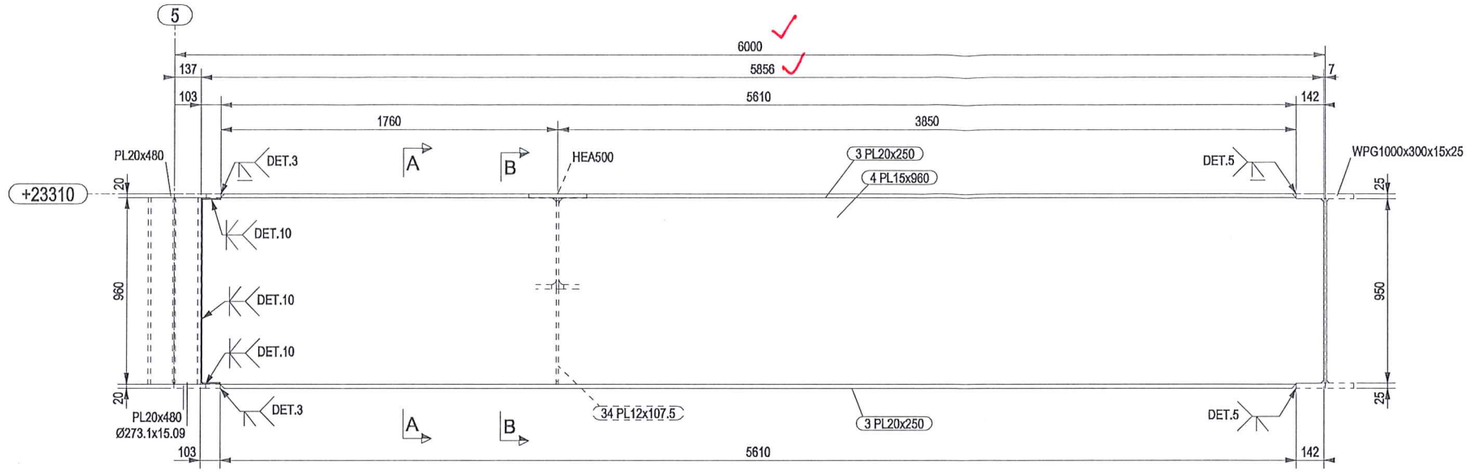
CROSSWIND
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG002

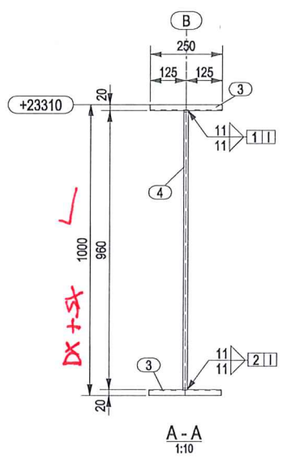
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90001	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG029	3	2	PL20x250	5604	S420MLO	2	438.6	6.06	
CWLPG029	4	1	PL15x960	5853	S420MLO	2	661.0	11.43	
CWLPG029	34	1	PL12x107.5	490	S355MLO	3	5.0	0.12	
						TOTALE	1104.6	17.61	

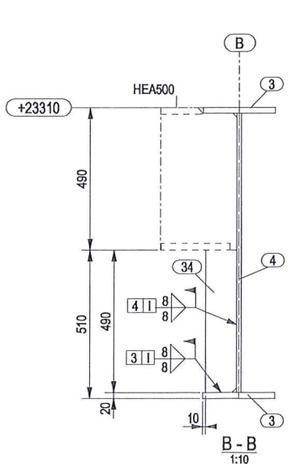
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SWEEP = 3 mm



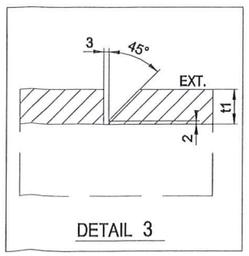
CWLPG029
WPG1000x250x15x20



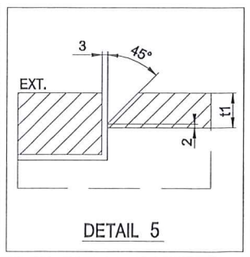
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1:10



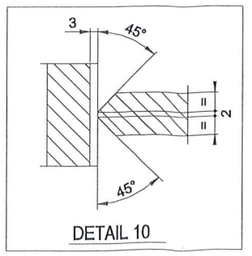
B - B
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DETAIL 3



DETAIL 5

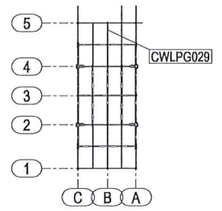


DETAIL 10

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG029

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90028	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-002	1 of 2	08/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	Mark CWLP0031, CWLNO008 and CWLPG0038 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi Quality Management Dept. 09/01/2024		

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

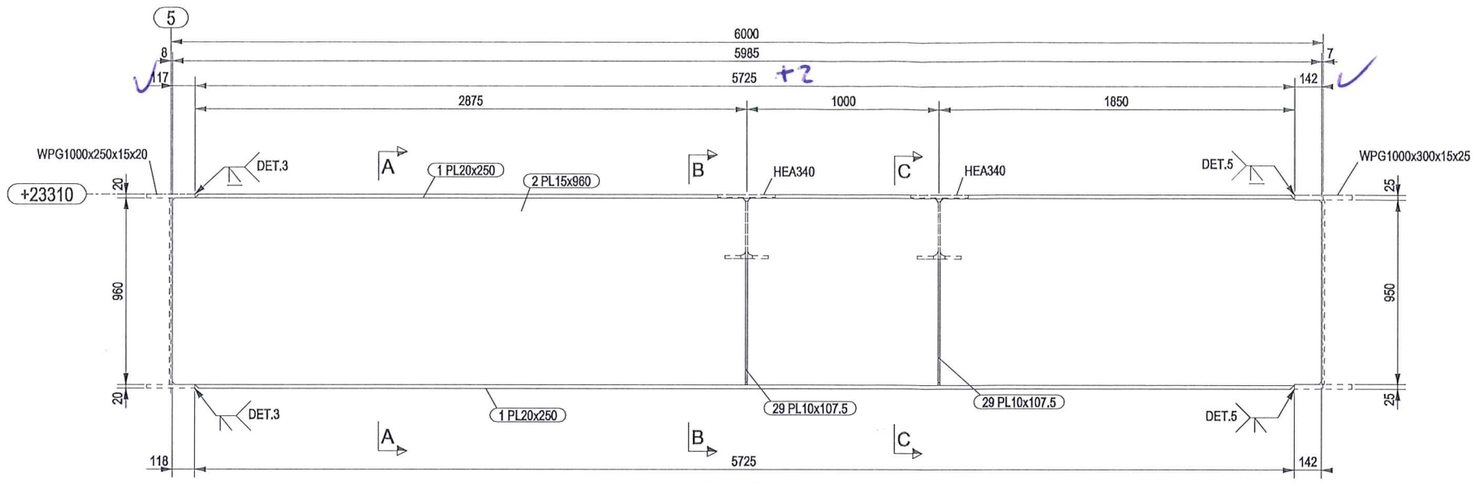
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CWLPG005	PL25x250	123A90-FDL-ST-DD-90004	1
CWLPG006	PL25x250	123A90-FDL-ST-DD-90005	1
CWLPG014	PL25x300	123A90-FDL-ST-DD-90013	1
CWLPG025	PL25x250	123A90-FDL-ST-DD-90024	1
CWLPG026	PL25x250	123A90-FDL-ST-DD-90025	1
CWLPG031	PL10x107,5	123A90-FDL-ST-DD-90030	1
CWLPG038	PL10x107,5	123A90-FDL-ST-DD-90037	1
CWLNO001	PL15x101.8	123A90-FDL-ST-DD-90049	1
CWLNO002	PL15x101.8	123A90-FDL-ST-DD-90050	1
CWLNO003	PL15x101.8	123A90-FDL-ST-DD-90051	1
CWLNO006	Ø406.4x19.05	123A90-FDL-ST-DD-90054	1
CWLNO008	Ø273.1x15.09	123A90-FDL-ST-DD-90056	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/01/2024	Simonetto Angelo	09/1/2024 ROSETTI MARINO S.p.A. Alberto Lucchi		

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG003	1	2	PL20x250	5719	S420MLO	2	447.7	6.18	
CWLPG003	2	1	PL15x960	5985	S420MLO	2	676.3	11.70	
CWLPG003	29	2	PL10x107.5	650	S355MLO	3	11.0	0.31	
						TOTALE	1134.9	18.19	

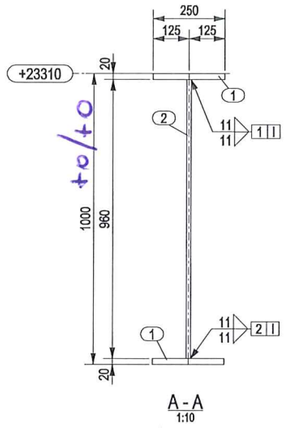


CWLPG003
WPG1000x250x15x20

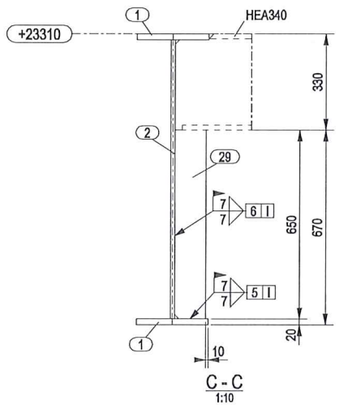
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SWEEP = 2 mm

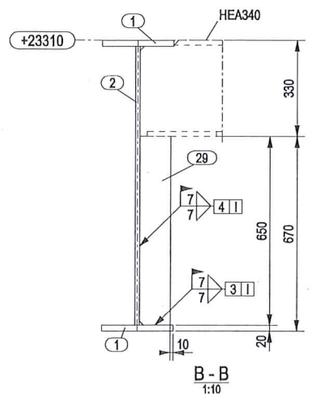
SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL



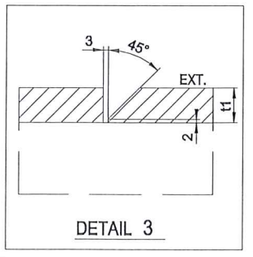
A - A
1:10



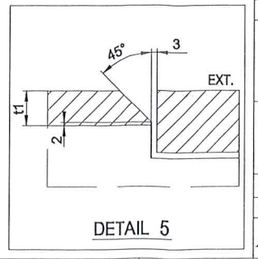
C - C
1:10



B - B
1:10



DETAIL 3

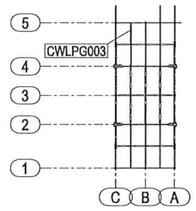


DETAIL 5

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

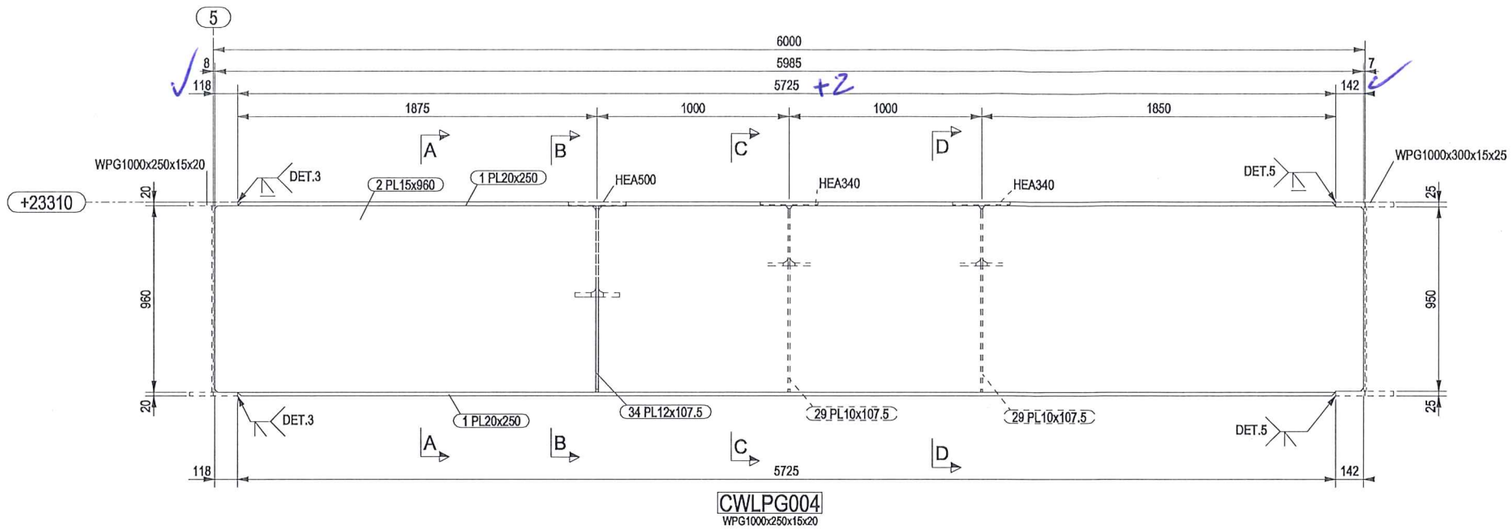
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG003

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90002	SHEET 001	REV. 0

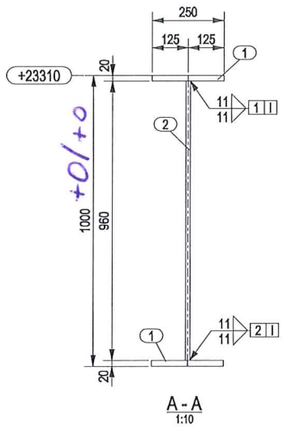
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG004	1	2	PL20x250	5719	S420MLO	2	447.7	6.18	
CWLPG004	2	1	PL15x960	5985	S420MLO	2	676.3	11.70	
CWLPG004	29	2	PL10x107.5	650	S355MLO	3	11.0	0.31	
CWLPG004	34	1	PL12x107.5	490	S355MLO	3	5.0	0.12	
						TOTALE	1139.9	18.31	



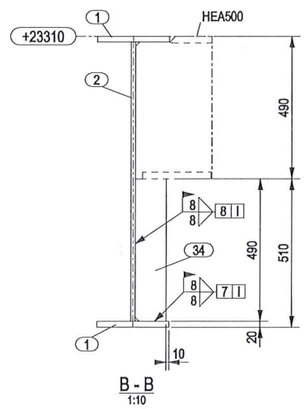
CWLPG004
WPG1000x250x15x20

CAMBER = 3 mm
SWEEP = 2 mm

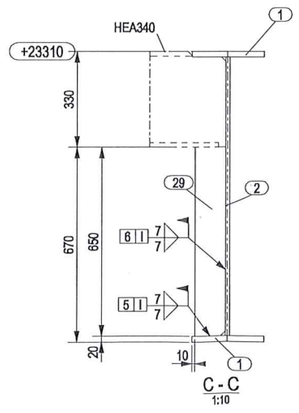
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



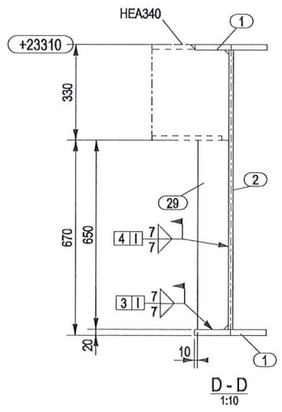
A - A
1:10



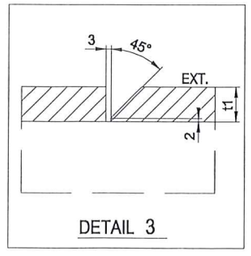
B - B
1:10



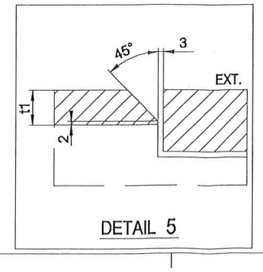
C - C
1:10



D - D
1:10



DETAIL 3

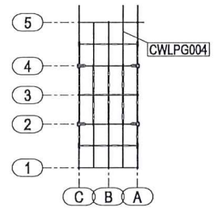


DETAIL 5

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

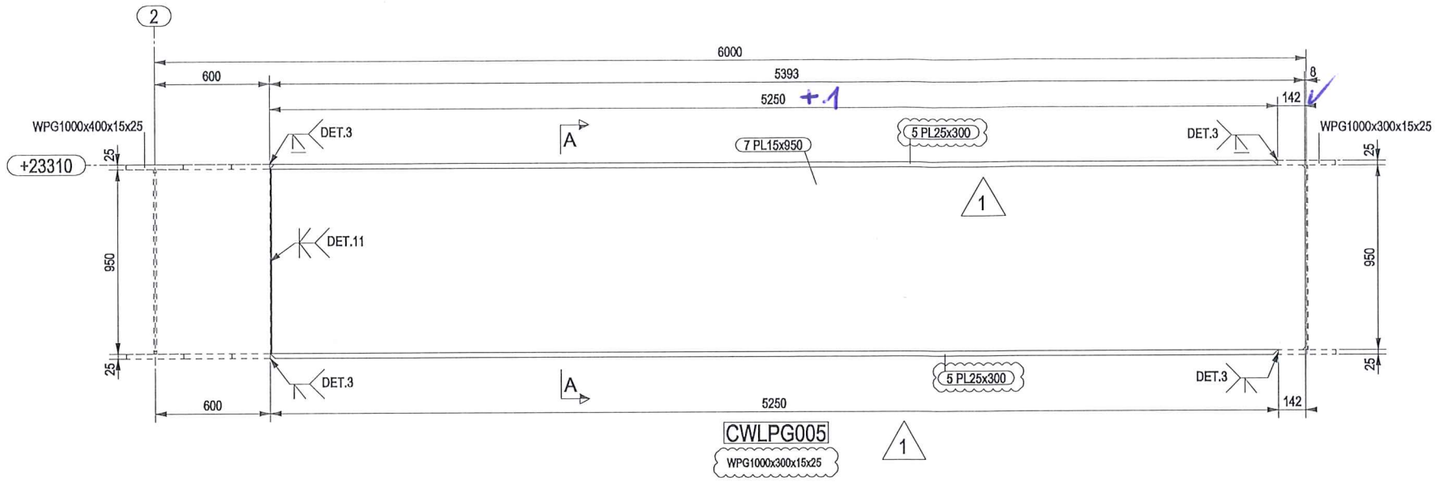
CROSSWIND

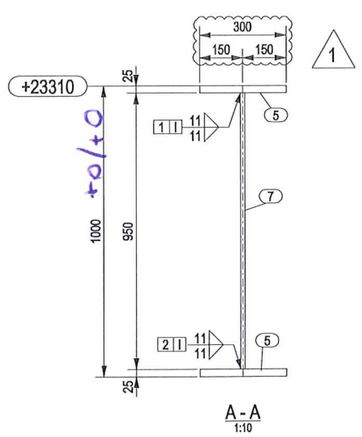
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG004

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90003	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG005	5	2	PL25x300	5244	S420MLO	2	615.0	6.83	
CWLPG005	7	1	PL15x950	5390	S420MLO	2	602.5	10.42	
						TOTALE	1217.5	17.25	





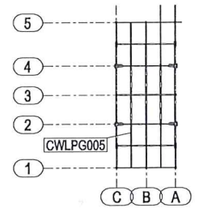
CAMBER = 3 mm
SWEEP = 1 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.r.l.A
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



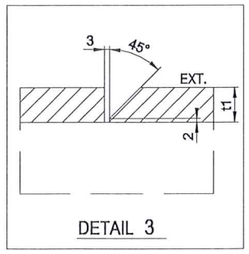
PLAN AT EL.+23310 TOS

HOLDS

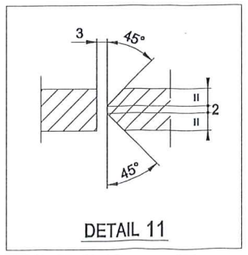
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



DETAIL 11

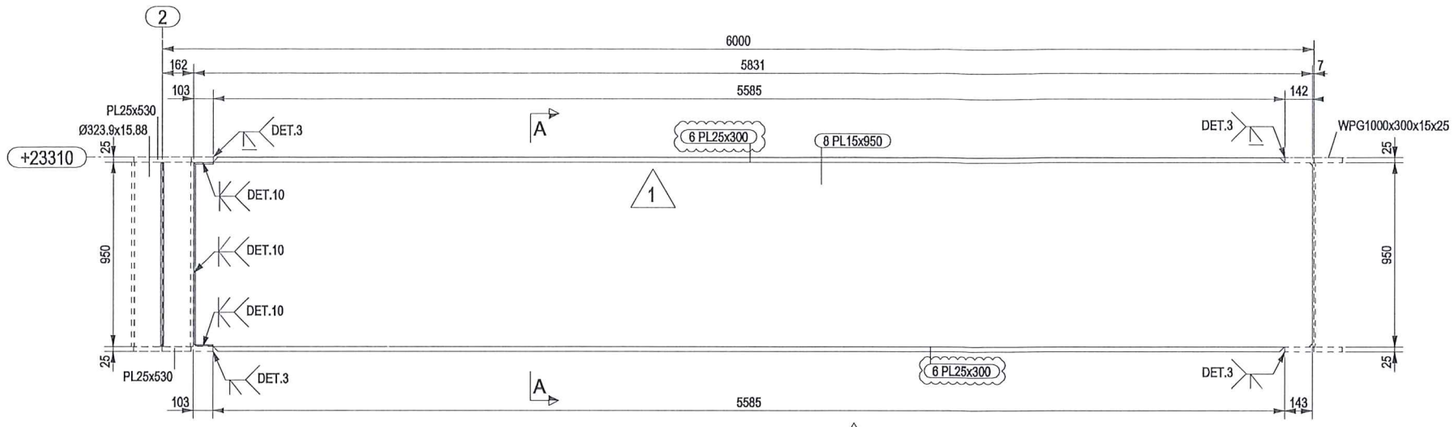
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG005

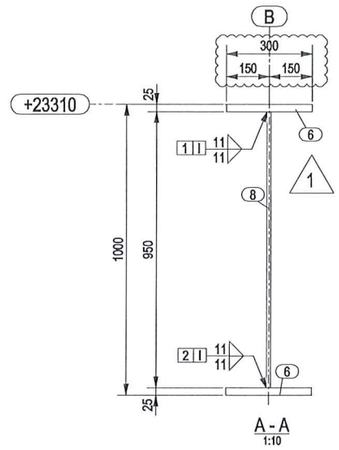
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90004		SHEET 001 / REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG006	6	2	PL25x300	5579	S420ML0	2	654.4	7.26	
CWLPG006	8	1	PL15x950	5828	S420ML0	2	651.4	11.26	
						TOTALE	1305.8	18.53	

1



CWLPG006
WPG1000x300x15x25

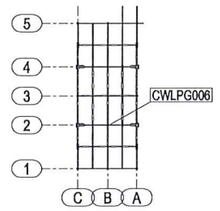


CAMBER = 3 mm
SWEEP = 2 mm

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



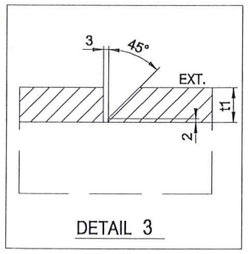
PLAN AT EL.+23310 TOS

HOLDS

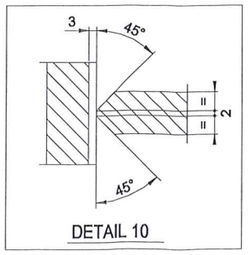
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



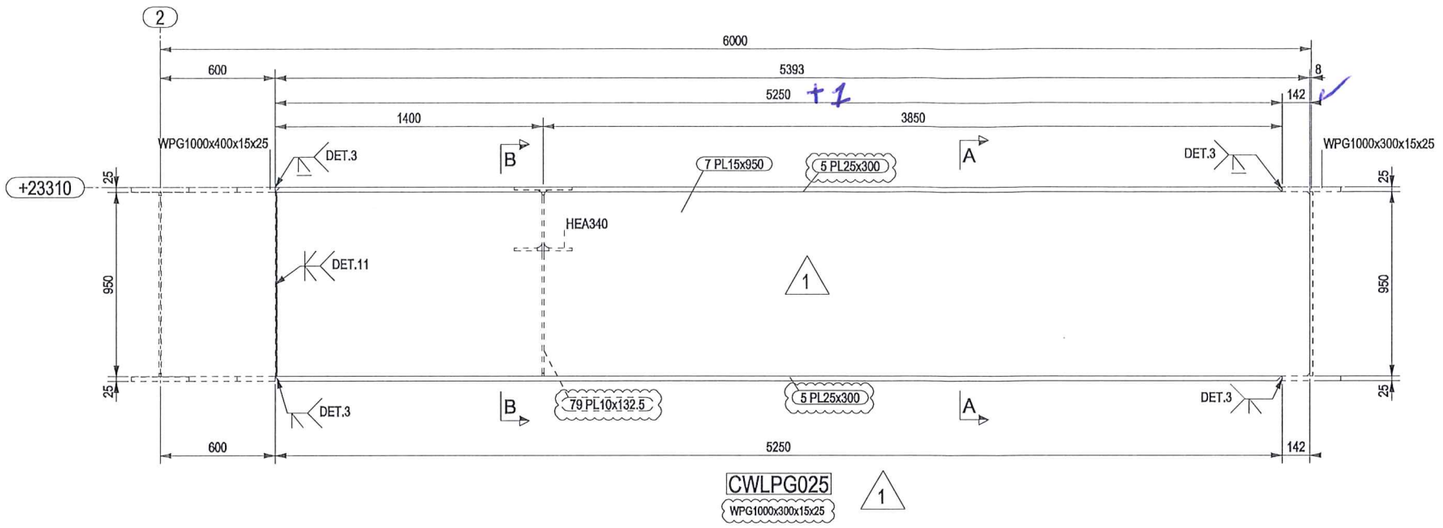
DETAIL 10

CROSSWIND | ROSETTI MARINO

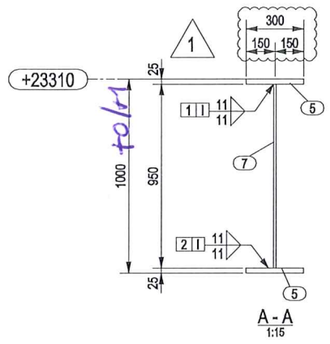
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG006

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90005	SHEET 001	REV. 1

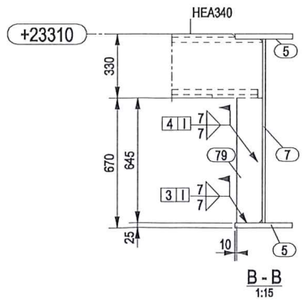
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG025	5	2	PL25x300	5244	S420MLO	2	615.0	6.83	
CWLPG025	7	1	PL15x950	5390	S420MLO	2	602.5	10.42	
CWLPG025	79	1	PL10x132.5	645	S355MLO	3	6.7	0.19	
						TOTALE	1224.2	17.44	



CWLPG025
WPG1000x300x15x25



A - A
1:15



B - B
1:15

CAMBER = 2 mm

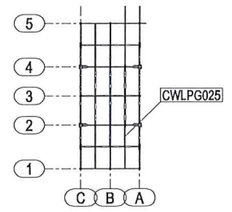
SWEEP = 1 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



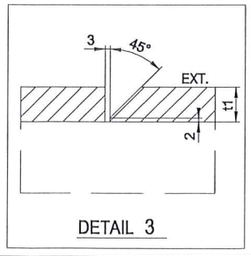
PLAN AT EL.+23310 TOS

HOLDS

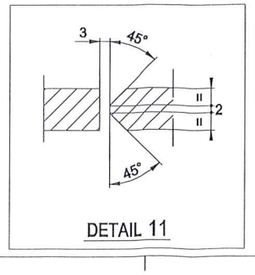
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



DETAIL 11

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG025

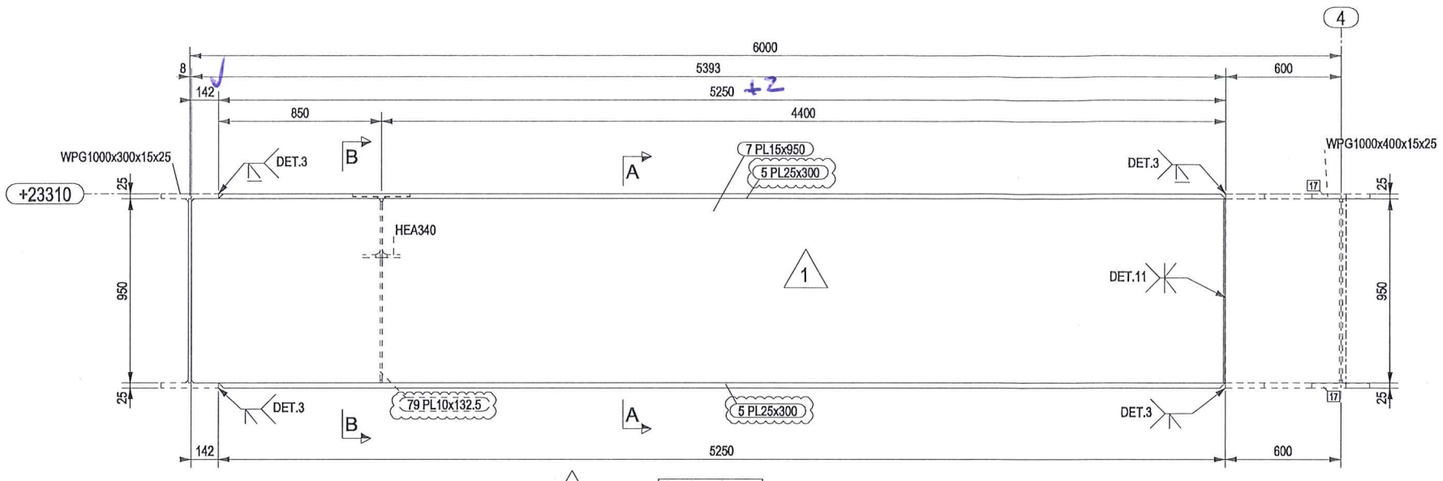
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90024	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG026	5	2	PL25x300	5244	S420MLO	2	615.0	6.83	
CWLPG026	7	1	PL15x950	5390	S420MLO	2	602.5	10.42	
CWLPG026	79	1	PL10x132.5	645	S355MLO	3	6.7	0.19	
						TOTALE	1224.2	17.44	

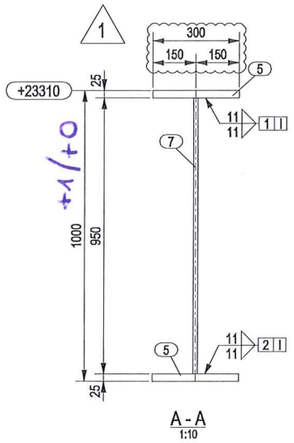
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CAMBER = 2 mm
SWEEP = 2mm

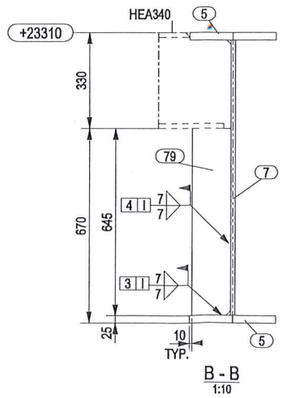
SCANDIUZZI STEEL CONSTRUCTIONS S.p.A
QUALITY CONTROL



1 CWLPG026
WPG1000x300x15x25



A - A
1:10

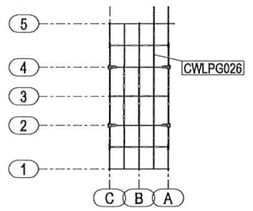


B - B
1:10

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



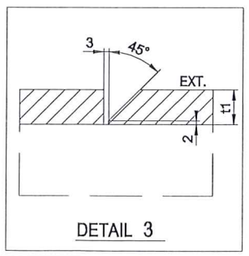
PLAN AT EL.+23310 TOS

HOLDS

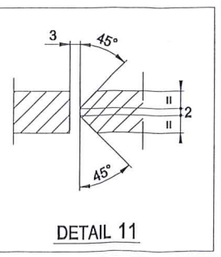
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



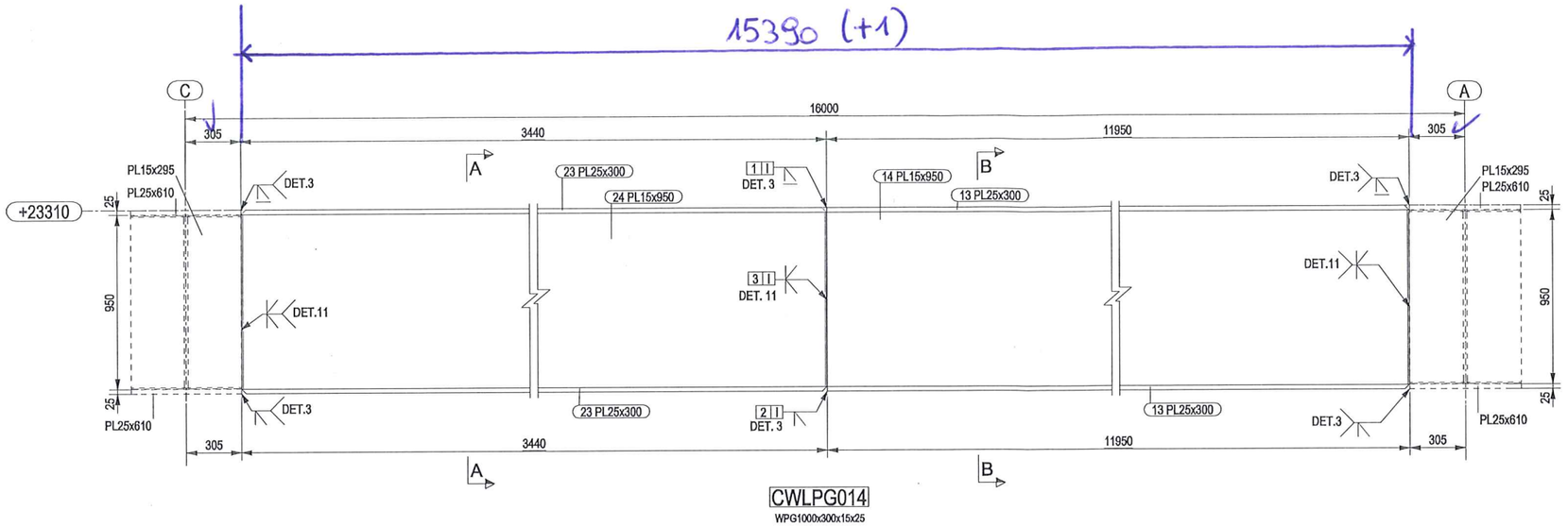
DETAIL 11

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG026

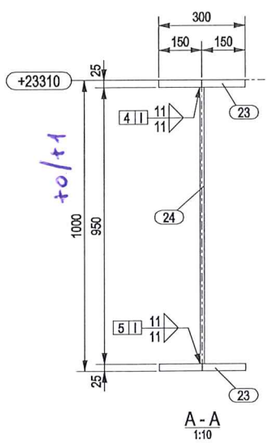
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90025	SHEET 001	REV. 1

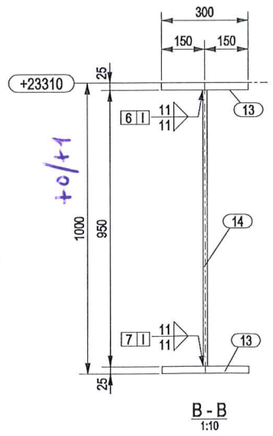
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG014	13	2	PL25x300	11947	S420MLO	2	1405.5	15.55	
CWLPG014	14	1	PL15x950	11947	S420MLO	2	1336.1	23.08	
CWLPG014	23	2	PL25x300	3434	S420MLO	2	401.9	4.48	
CWLPG014	24	1	PL15x950	3434	S420MLO	2	383.5	6.64	
						TOTALE	3527.0	49.75	



CWLPG014

WPG1000x300x15x25





CAMBER = 10 mm

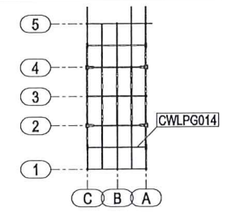
SWEEP = 2mm

SCANDINAVIA STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



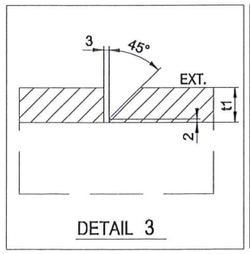
PLAN AT EL.+23310 TOS

HOLDS

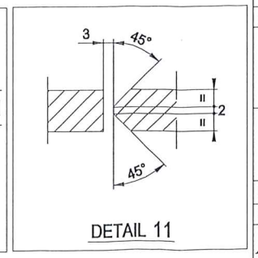
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



DETAIL 11

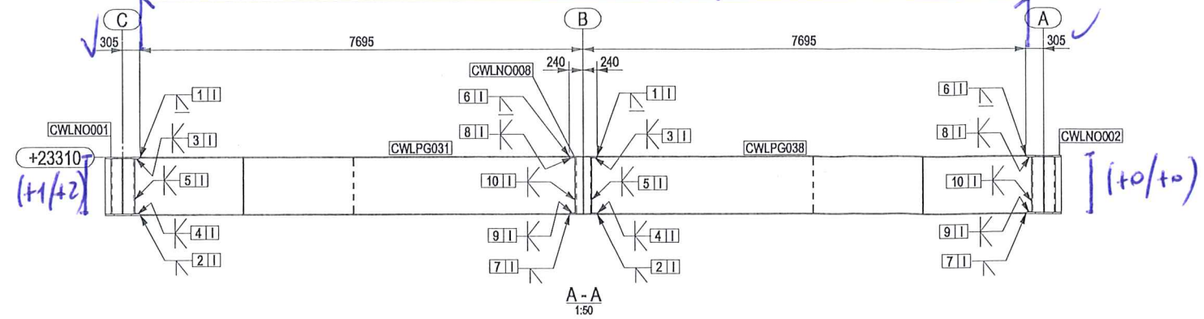
CROSSWIND

ROSETTI MARINO

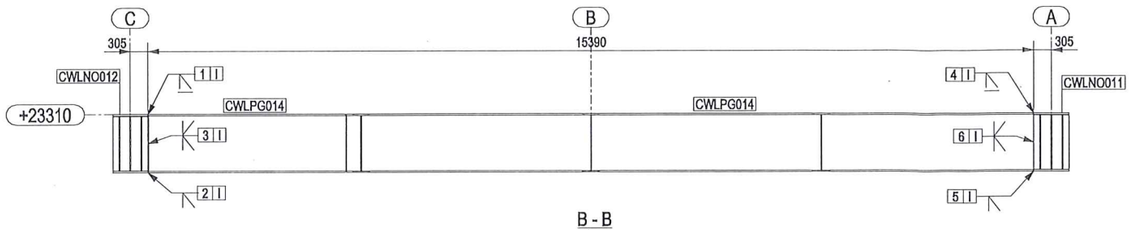
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG014

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90013	SHEET 001	REV. 0

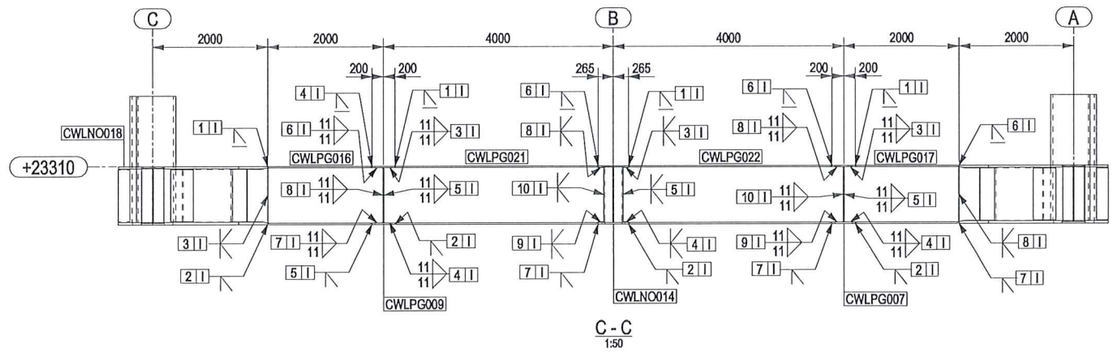
15390 (+3)



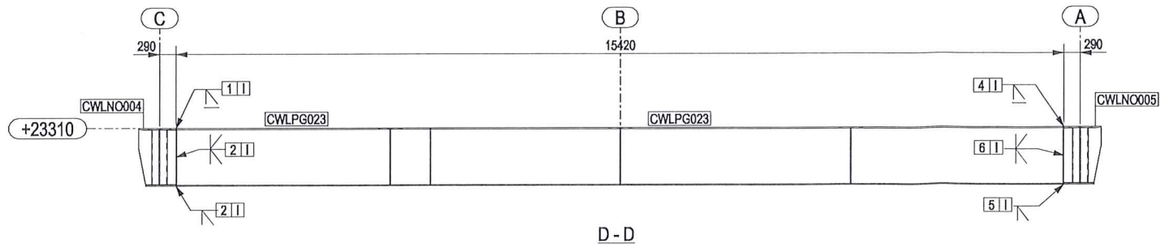
A - A
1:50



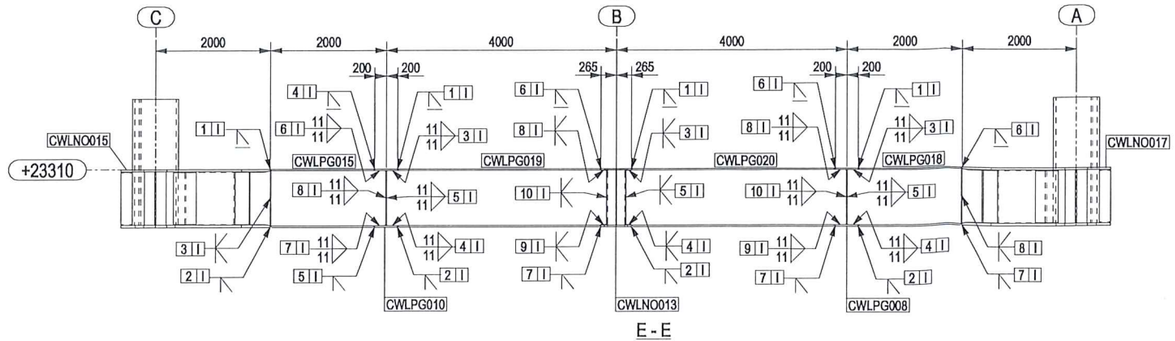
B - B
1:50



C - C
1:50



D - D
1:50



E - E
1:50

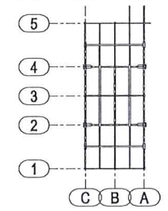
CAMBER = 8 mm
SWEEP = 2 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

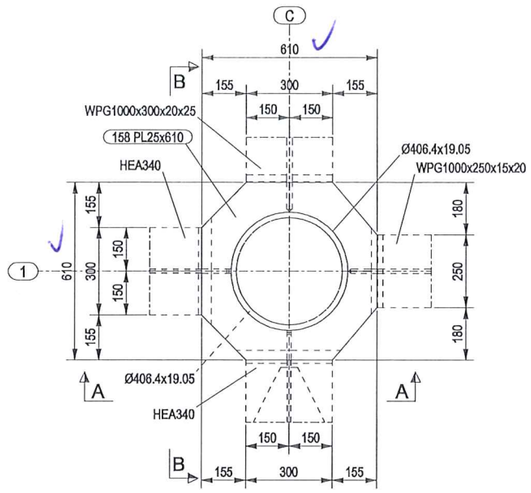
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

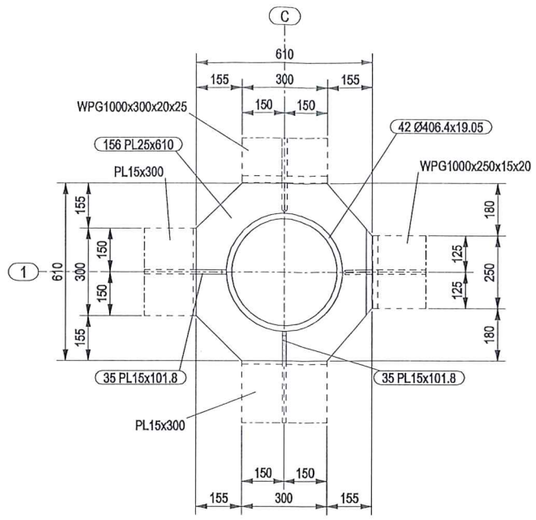
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 19/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90180		SHEET 001	REV. 0

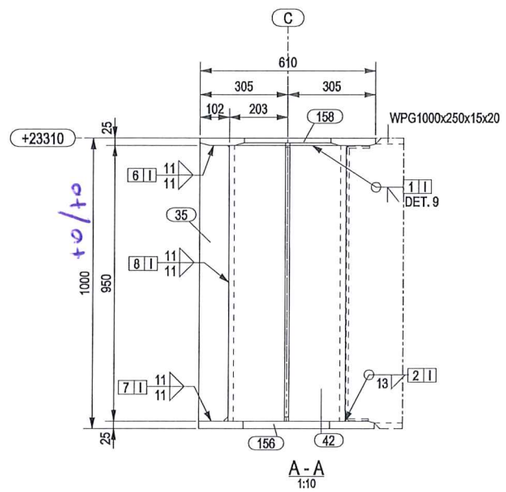
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLNO001	35	2	PL15x101.8	958	S420MLO	1	22.8	0.45	
CWLNO001	42	1	Ø406.4x19.05	950	API5LX52	1	172.4	1.24	
CWLNO001	156	1	PL25x610	610	S420MLO	1	62.7	0.69	
CWLNO001	158	1	PL25x610	610	S420MLO	1	62.0	0.69	
						TOTALE	319.9	3.06	



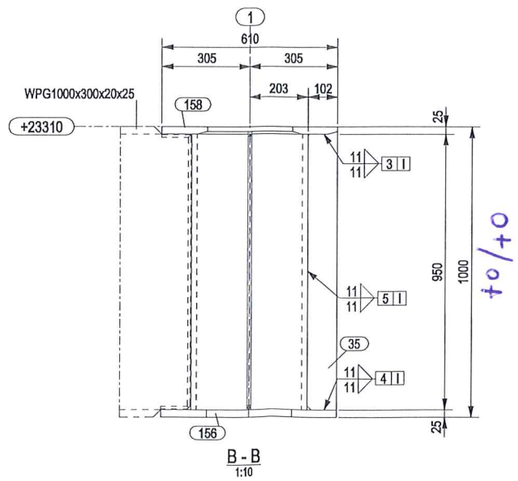
CWLNO001
TOP FLG
1:10



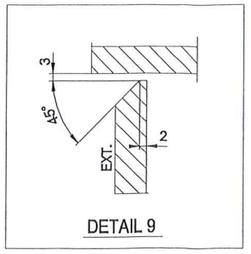
BTM FLG
1:10



A - A
1:10



B - B
1:10



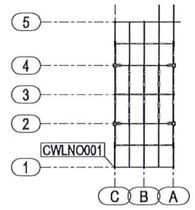
DETAIL 9

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS
123A90-DDL-ST-DD-90097	TOPSIDE-PRIMARY JOINTS LOWER DECK - JOINT - 2 & 3 - DETAIL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	24/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

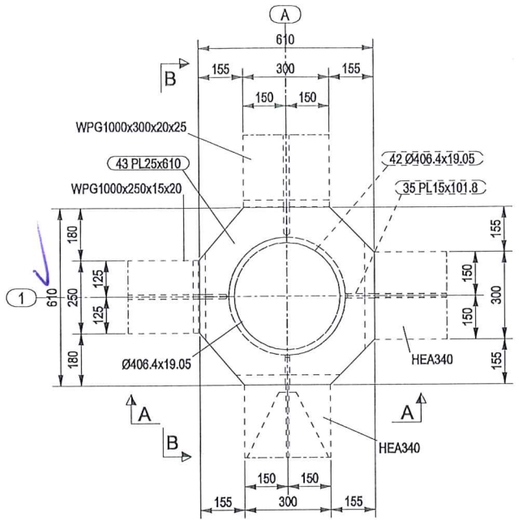
CROSSWIND

ROSETTI MARINO

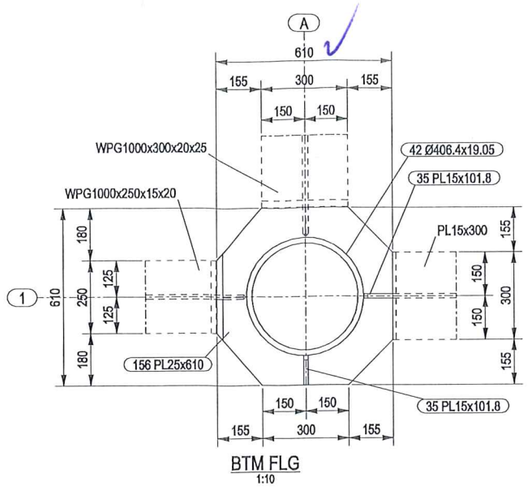
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLNO001

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 24/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90049	SHEET 001	REV. 0

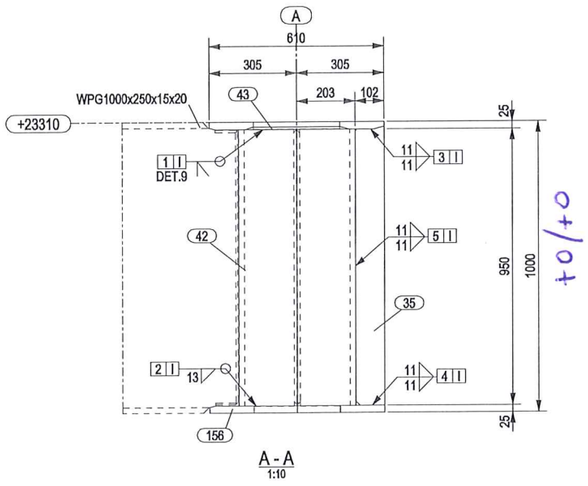
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLNO002	35	2	PL15x101.8	959	S420ML0	1	22.8	0.45	
CWLNO002	42	1	Ø406.4x19.05	950	API5LX52	1	172.4	1.24	
CWLNO002	43	1	PL25x610	610	S420ML0	1	62.0	0.69	
CWLNO002	156	1	PL25x610	610	S420ML0	1	62.7	0.69	
						TOTALE	319.9	3.06	



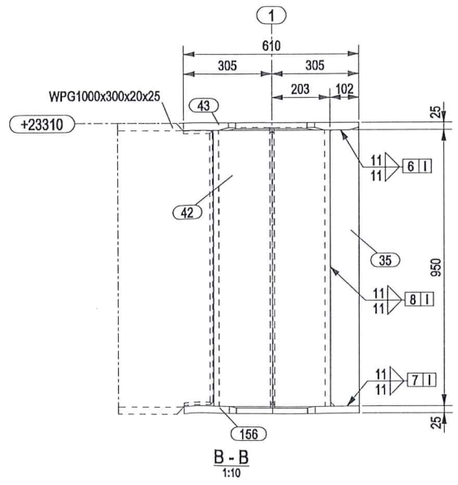
CWLNO002
TOP FLG
1:10



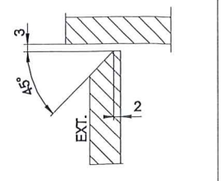
BTM FLG
1:10



A - A
1:10



B - B
1:10



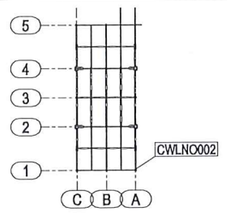
DETAIL 9

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS
123A90-DDL-ST-DD-90097	TOPSIDE-PRIMARY JOINTS LOWER DECK - JOINT - 2 & 3 - DETAIL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	24/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

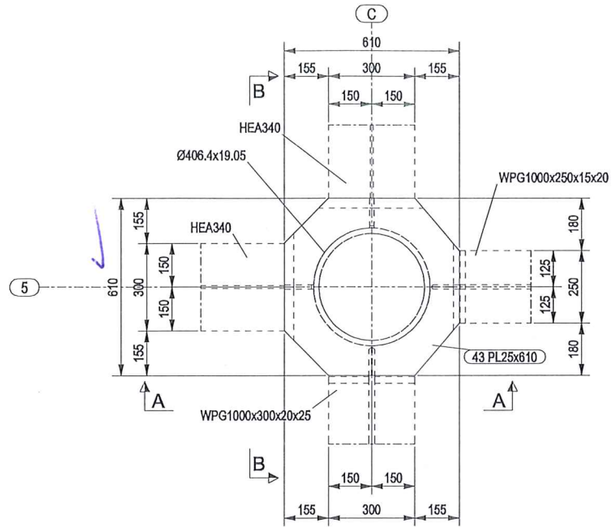
CROSSWIND

ROSETTI MARINO

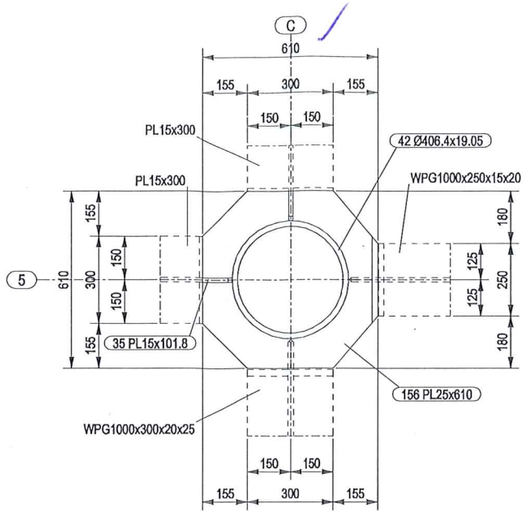
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLNO002

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 24/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90050		SHEET 001	REV. 0

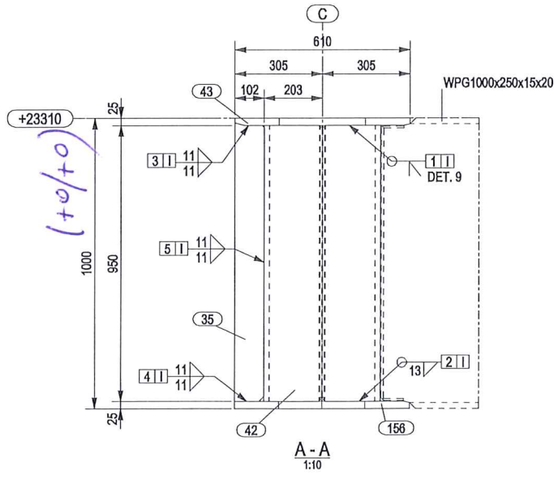
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLNO003	35	2	PL15x101.8	958	S420MLO	1	22.8	0.45	
CWLNO003	42	1	Ø406.4x19.05	950	API5LX52	1	172.4	1.24	
CWLNO003	43	1	PL25x610	610	S420MLO	1	62.0	0.69	
CWLNO003	156	1	PL25x610	610	S420MLO	1	62.7	0.69	
						TOTALE	319.9	3.06	



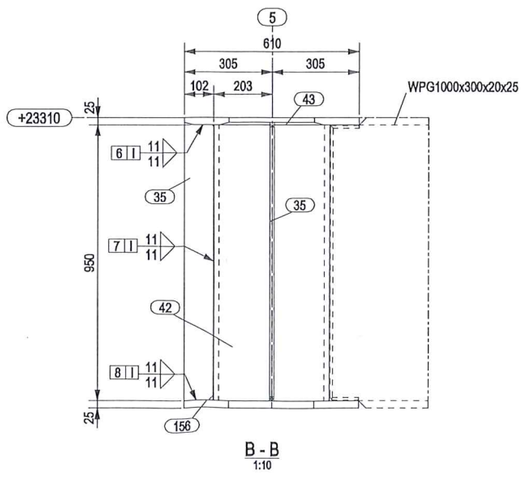
CWLNO003
TOP FLG
1:10



BTM FLG
1:10



A - A
1:10



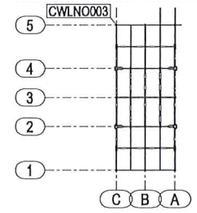
B - B
1:10

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



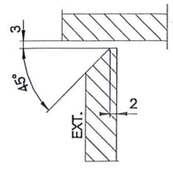
PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS
123A90-DDL-ST-DD-90097	TOPSIDE-PRIMARY JOINTS LOWER DECK - JOINT - 2 & 3 - DETAIL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	24/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 9

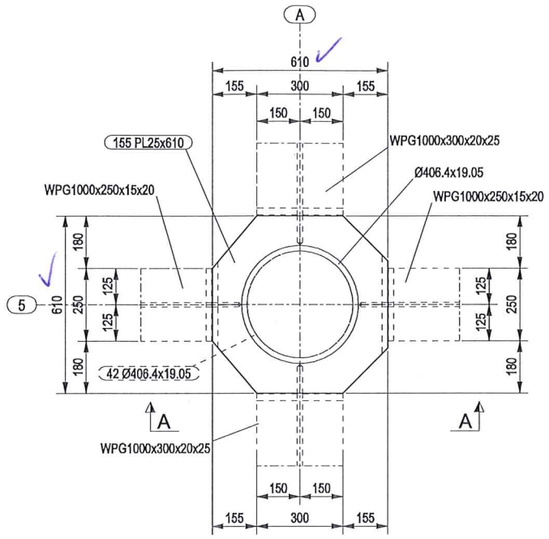
CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLNO003

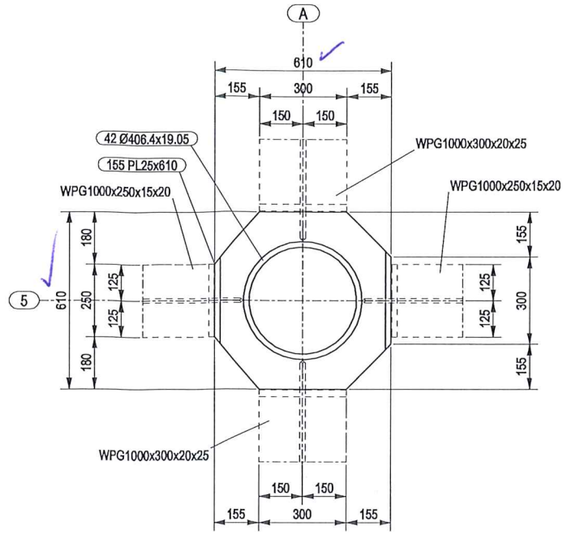
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 24/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90051	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLNO006	42	1	Ø406.4x19.05	950	API5LX52	1	172.4	1.24	
CWLNO006	155	2	PL25x610	610	S420MLO	1	125.2	1.38	
						TOTALE	297.6	2.61	

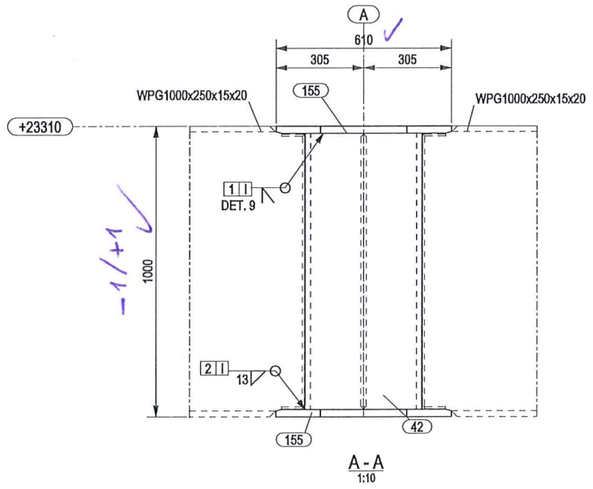


CWLNO006

TOP FLG
1:10

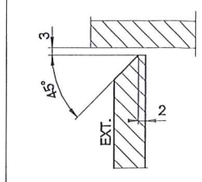


BTM FLG
1:10



A - A
1:10

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

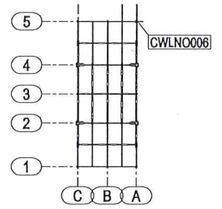


DETAIL 9

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS
123A90-DDL-ST-DD-90097	TOPSIDE-PRIMARY JOINTS LOWER DECK - JOINT - 2 & 3 - DETAIL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	24/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLNO006

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 24/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90054	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-003	1 of 2	10/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	**Acceptance Criteria**	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	Mark CWLP0021, CWLNO014 and CWLPG0022 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
10/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept. 16/01/24		

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-003	2 of 2	10/01/2024

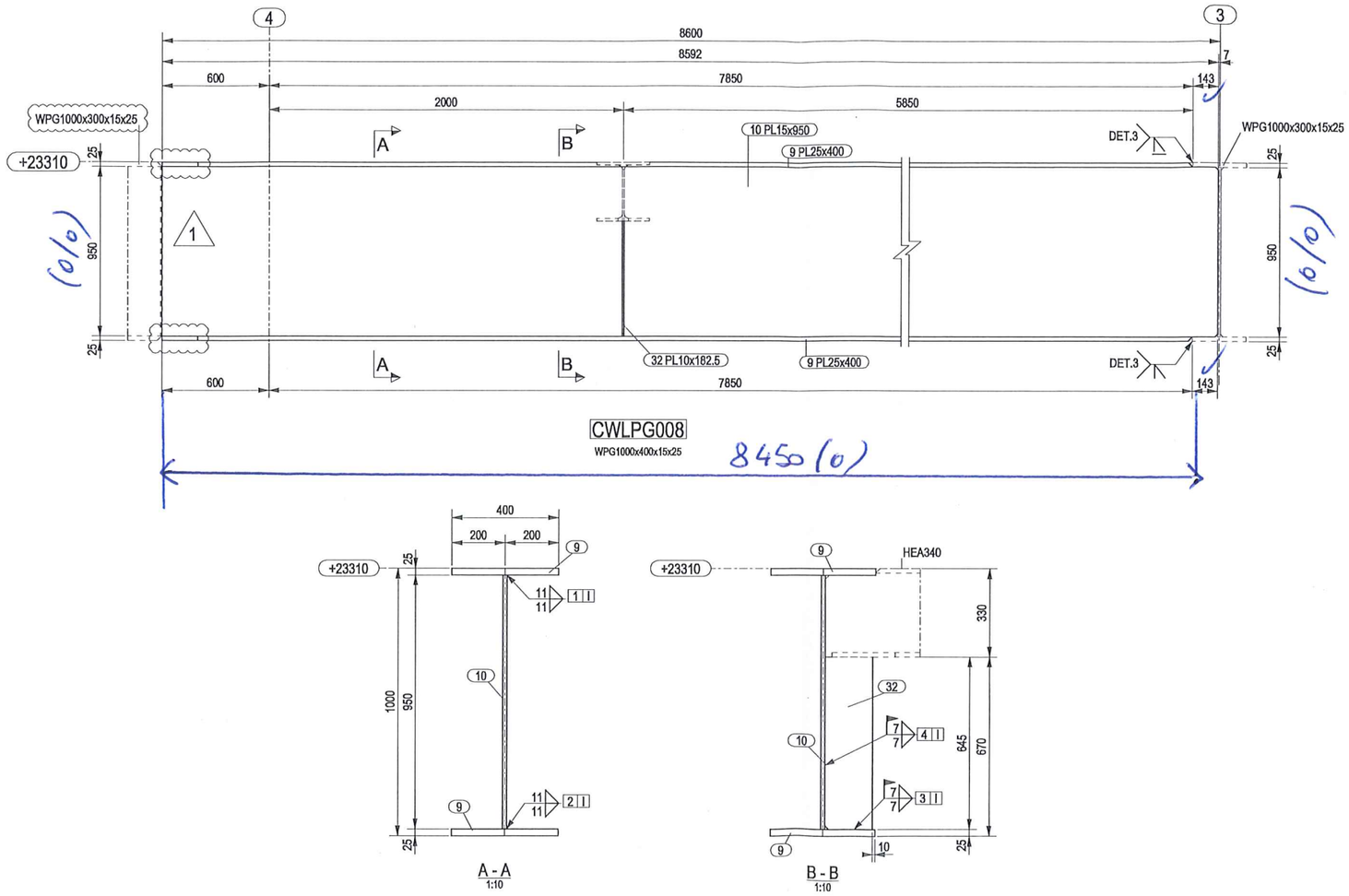
Mark Number	Description	Drawing	Quantity
CWLPG008	PL25x400	123A90-FDL-ST-DD-90007	1
CWLPG010	PL25x400	123A90-FDL-ST-DD-90009	1
CWLPG011	PL25x400	123A90-FDL-ST-DD-90010	1
CWLPG021	PL25x300	123A90-FDL-ST-DD-90020	1
CWLPG022	PL25x300	123A90-FDL-ST-DD-90021	1
CWLPG023	PL25x300	123A90-FDL-ST-DD-90022	1
CWLPG046	PL25x400	123A90-FDL-ST-DD-90045	1
CWLPG047	PL25x400	123A90-FDL-ST-DD-90046	1
CWLPG048	PL25x400	123A90-FDL-ST-DD-90047	1
CWLNO014	Ø323.9x15.88	123A90-FDL-ST-DD-90062	1

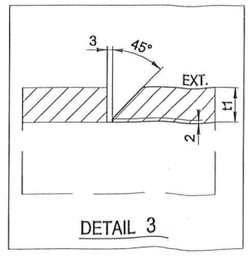
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
10/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 16/01/24		

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG008	9	2	PL25x400	8447	S420MLO	2	1320.6	14.34	
CWLPG008	10	1	PL15x950	8592	S420MLO	2	961.2	16.61	
CWLPG008	32	1	PL10x182.5	645	S355MLO	3	9.2	0.25	
						TOTALE	2291.0	31.21	





DETAIL 3

1

CAMBER = 4 mm

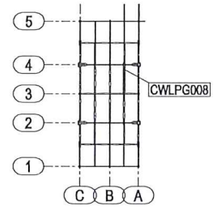
SWEEP = 0 mm

SCANDITEC STEEL CONSTRUCTIONS S.R.L. ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

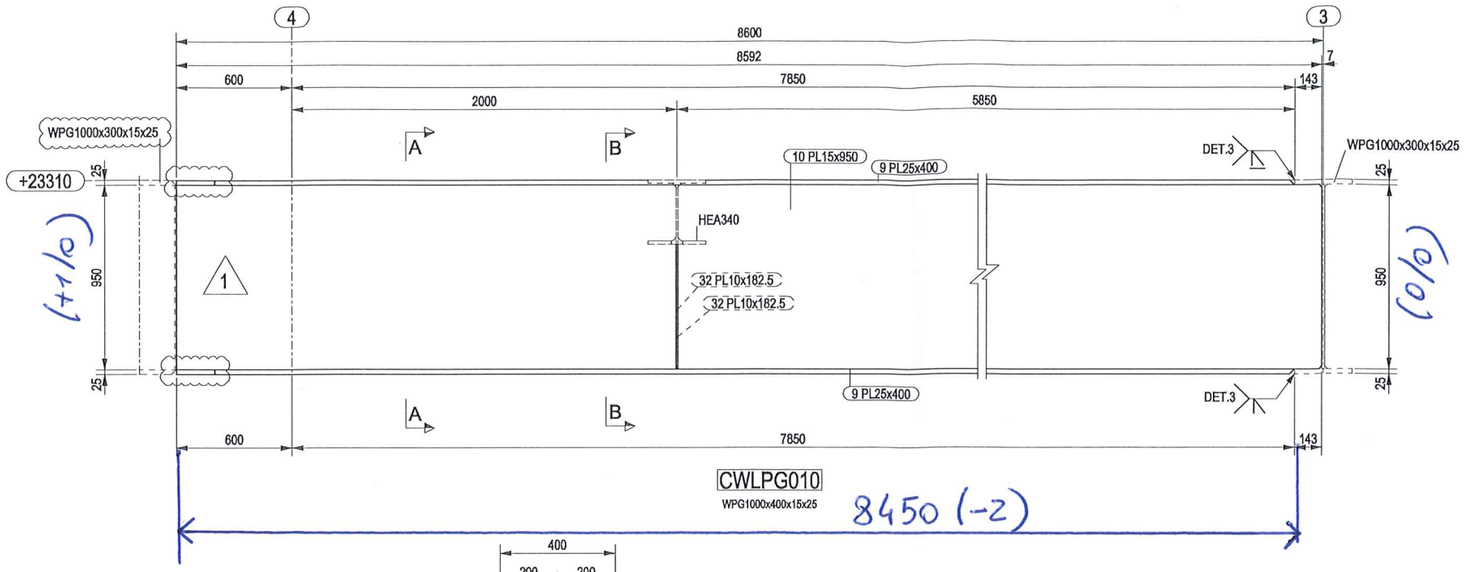
CROSSWIND | ROSETTI MARINO

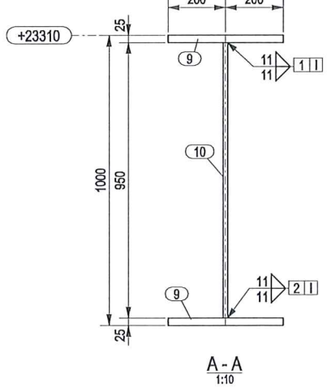
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG008

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90007	SHEET 001	REV. 1

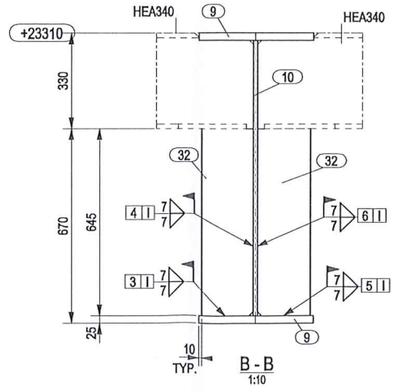
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG010	9	2	PL25x400	8447	S420MLO	2	1320.6	14.34	
CWLPG010	10	1	PL15x950	8592	S420MLO	2	961.2	16.61	
CWLPG010	32	2	PL10x182.5	645	S355MLO	3	18.5	0.50	
						TOTALE	2300.2	31.46	

1





A - A
1:10



B - B
1:10

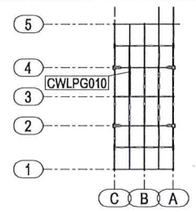
CAMBER = 3mm
SWEEP = 2mm

SCAMATTI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



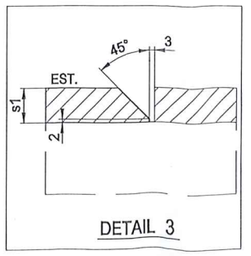
PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3

CROSSWIND | ROSETTI MARINO

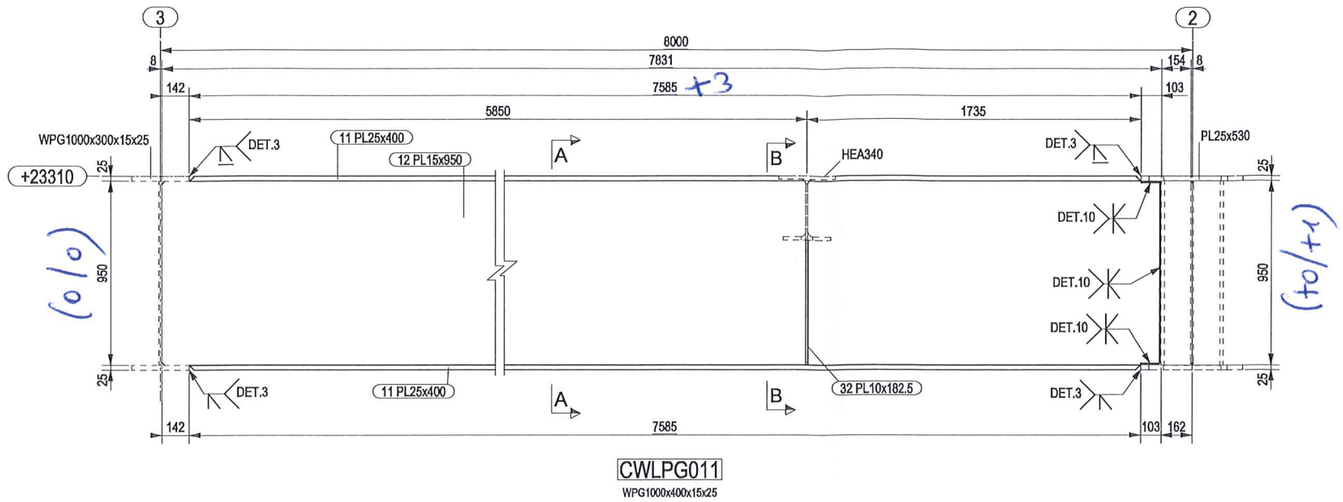
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG010

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90009	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG011	11	2	PL25x400	7579	S420MLO	2	1186.6	12.90	
CWLPG011	12	1	PL15x950	7828	S420MLO	2	875.1	15.12	
CWLPG011	32	1	PL10x182.5	645	S355MLO	3	9.2	0.25	
						TOTALE	2070.9	28.28	

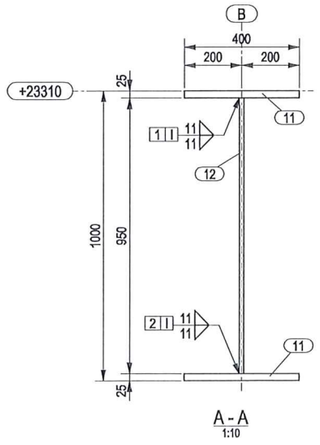
CAMBER = 2 mm

SWEEP = 2mm

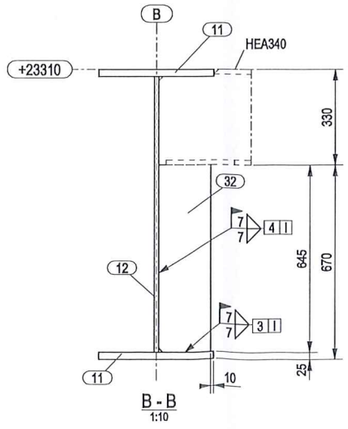


CWLPG011

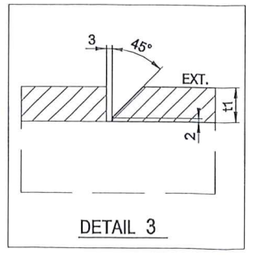
WPG1000x400x15x25



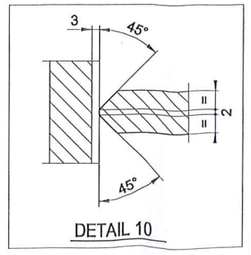
A - A
1:10



B - B
1:10



DETAIL 3



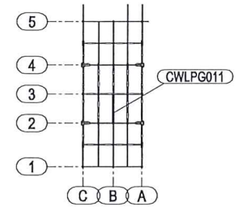
DETAIL 10

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

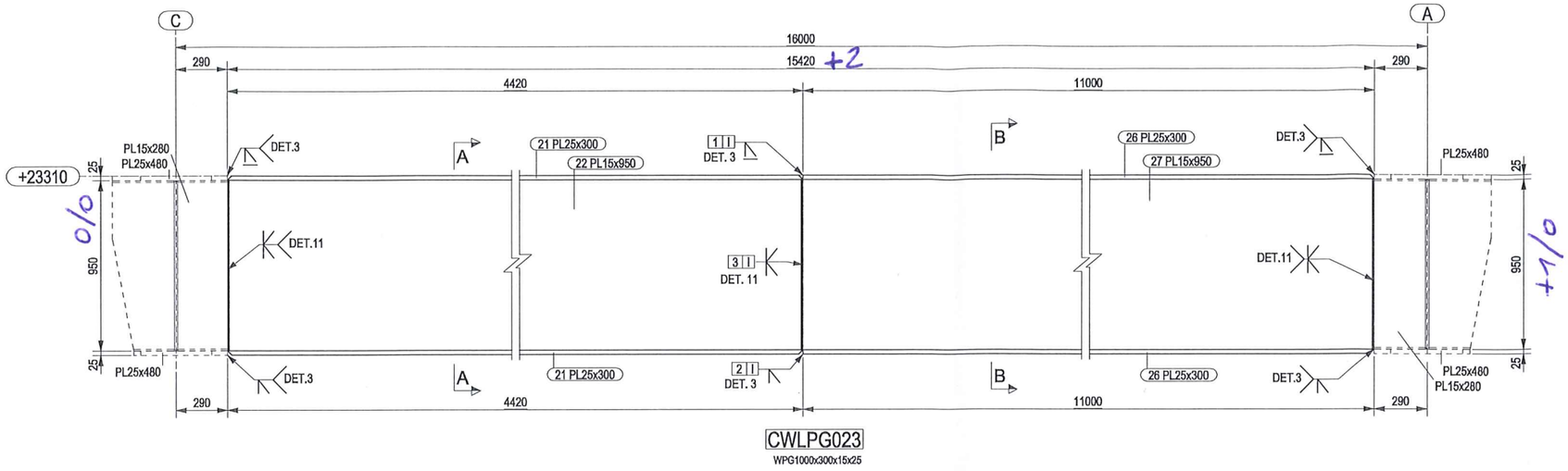
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG011

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90010	SHEET 001	REV. 0

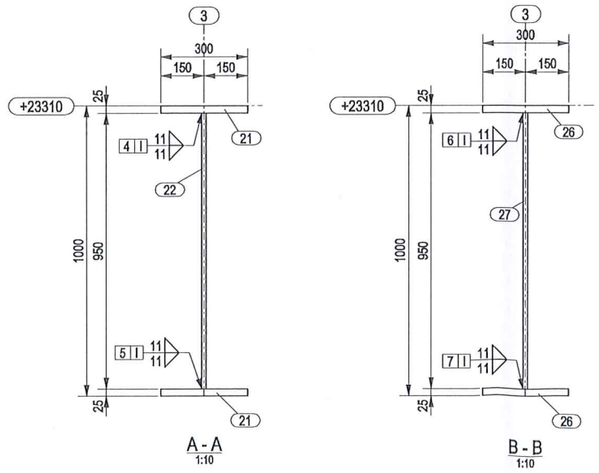
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG023	21	2	PL25x300	4414	S420MLO	2	517.3	5.75	
CWLPG023	22	1	PL15x950	4414	S420MLO	2	493.1	8.53	
CWLPG023	26	2	PL25x300	10997	S420MLO	2	1293.7	14.32	
CWLPG023	27	1	PL15x950	10997	S420MLO	2	1229.8	21.25	
						TOTALE	3533.9	49.85	

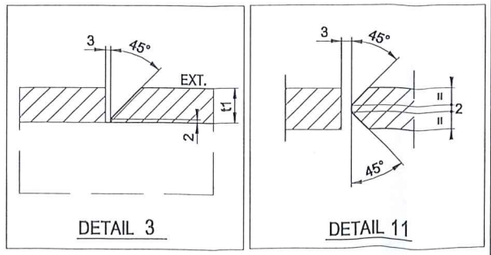
CAMBER = 8mm
SWEEP = 3mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



CWLPG023
WPG1000x300x15x25

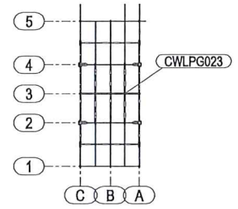




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

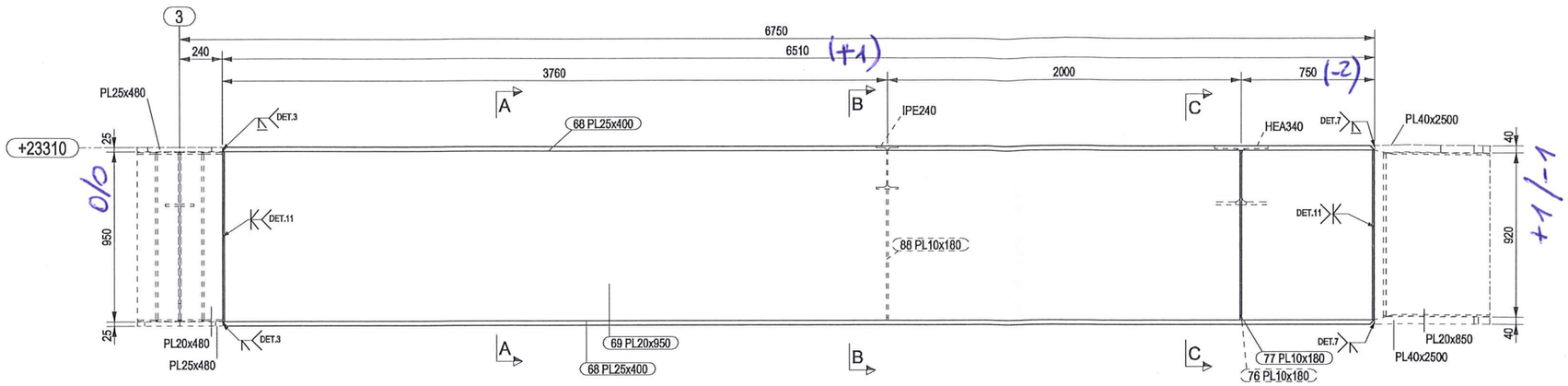
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG023

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90022	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG046	68	2	PL25x400	6504	S420MLO	2	1017.8	11.07	
CWLPG046	69	1	PL20x950	6504	S420MLO	2	968.9	12.64	
CWLPG046	76	1	PL10x180	645	S355MLO	3	9.1	0.25	
CWLPG046	77	1	PL10x180	950	S355MLO	3	13.4	0.36	
CWLPG046	88	1	PL10x180	735	S355MLO	3	10.4	0.28	
						TOTALE	2019.6	24.60	

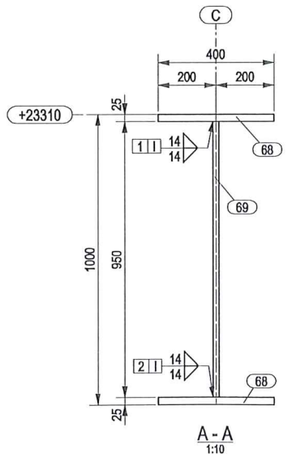
CAMBER = 4 mm

SWEEP = 1 mm

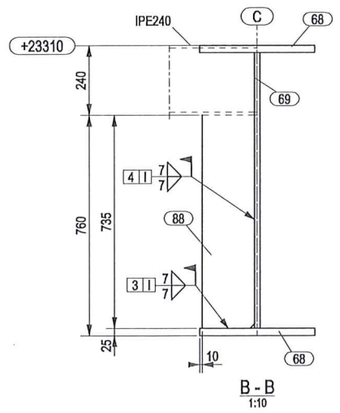


CWLPG046

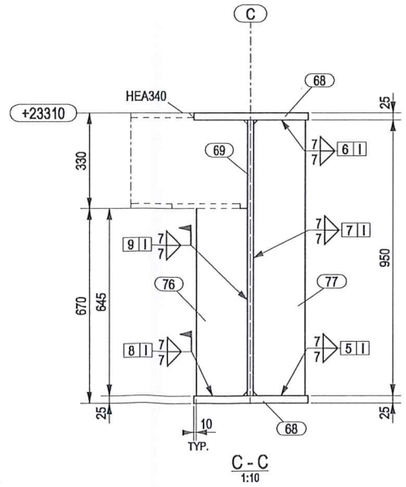
WPG1000x400x20x25



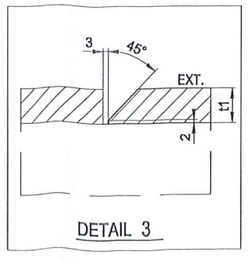
A - A
1:10



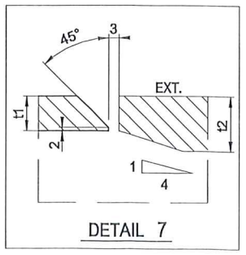
B - B
1:10



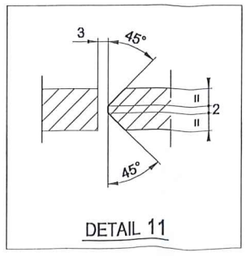
C - C
1:10



DETAIL 3



DETAIL 7



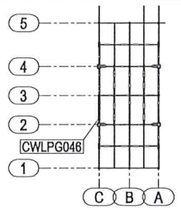
DETAIL 11

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

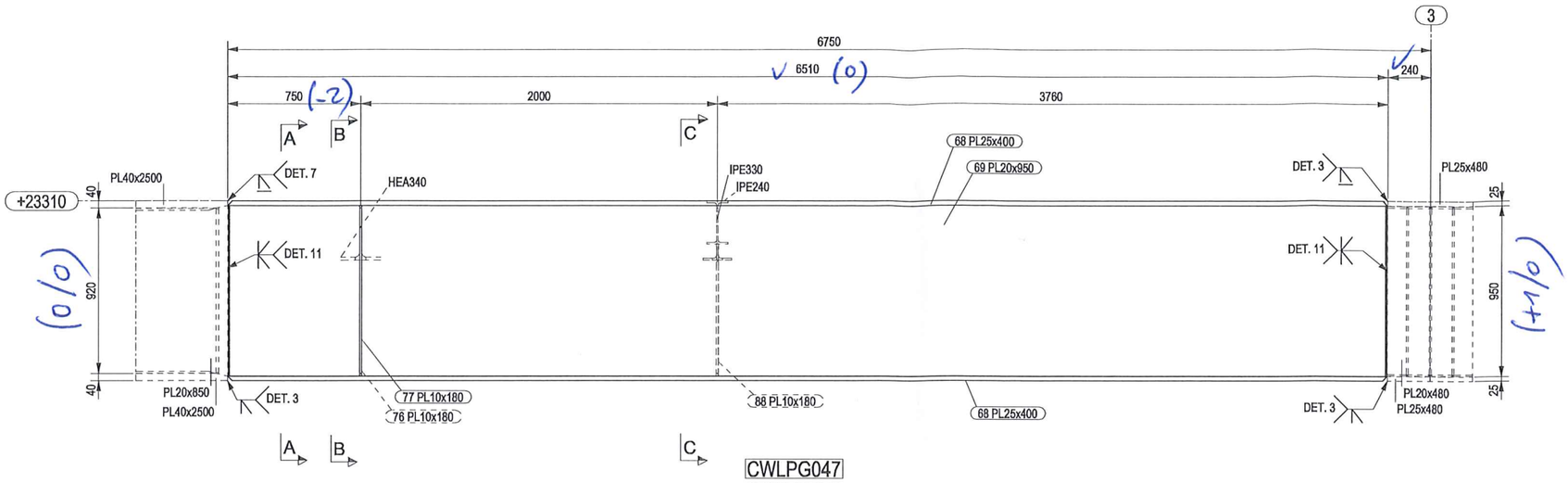
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG046

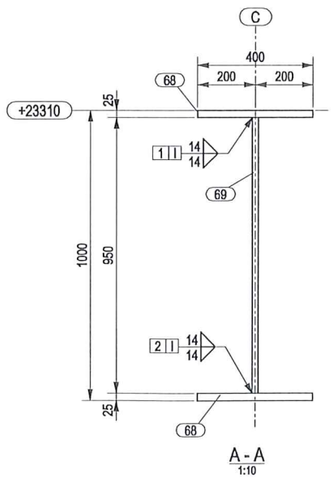
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90045	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG047	68	2	PL25x400	6504	S420MLO	2	1017.8	11.07	
CWLPG047	69	1	PL20x950	6504	S420MLO	2	968.9	12.64	
CWLPG047	76	1	PL10x180	645	S355MLO	3	9.1	0.25	
CWLPG047	77	1	PL10x180	950	S355MLO	3	13.4	0.36	
CWLPG047	88	1	PL10x180	735	S355MLO	3	10.4	0.28	
						TOTALE	2019.6	24.60	

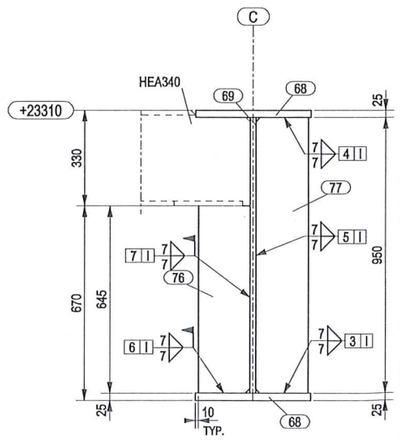
CAMBER = 2 mm
SWEEP = 0 mm



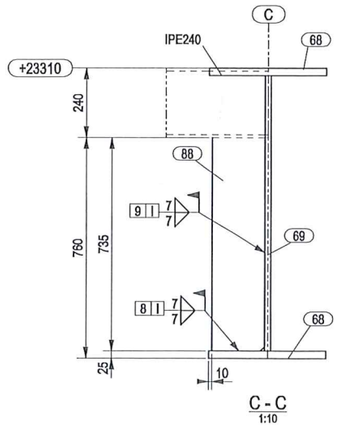
CWLPG047
WPG1000x400x20x25



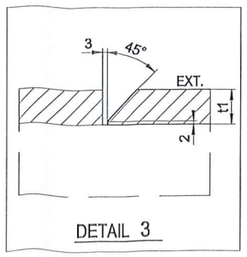
A - A
1:10



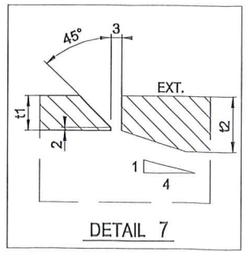
B - B
1:10



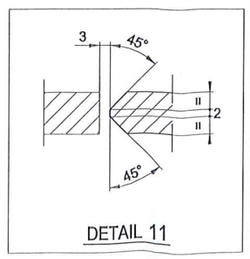
C - C
1:10



DETAIL 3



DETAIL 7



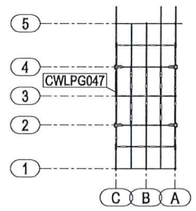
DETAIL 11

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG047

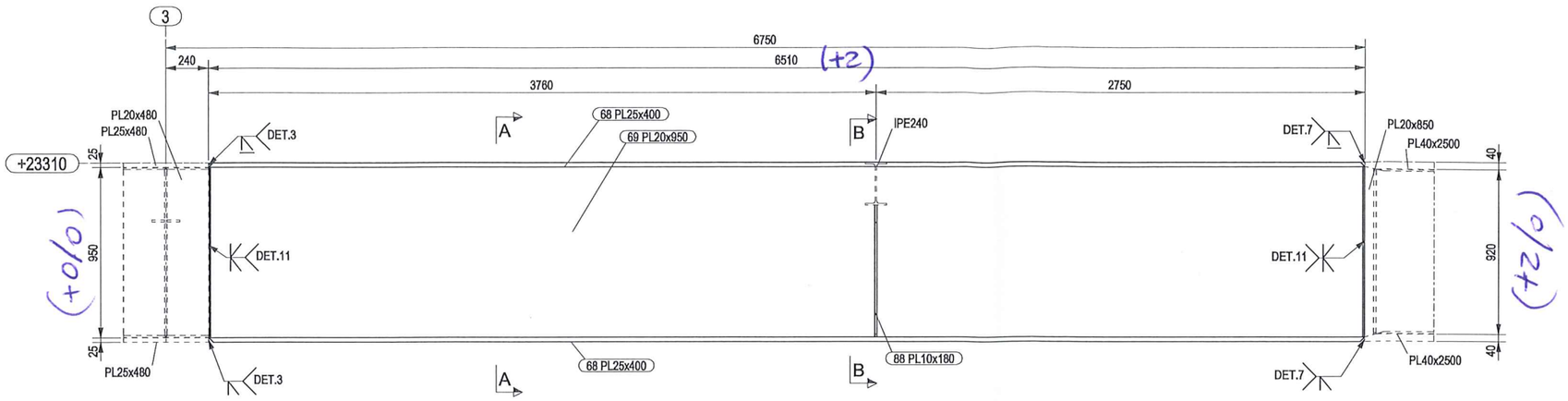
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90046	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG048	68	2	PL25x400	6504	S420MLO	2	1017.8	11.07	
CWLPG048	69	1	PL20x950	6504	S420MLO	2	968.9	12.64	
CWLPG048	88	1	PL10x180	735	S355MLO	3	10.4	0.28	
						TOTALE	1997.0	23.99	

CAMBER = 2 mm

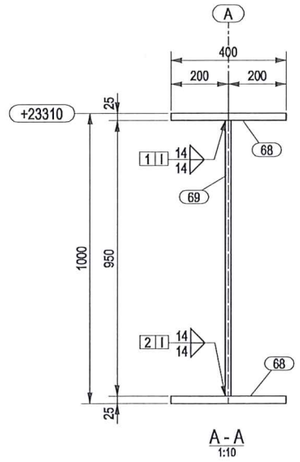
SWEEP = 2 mm

BONATTUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

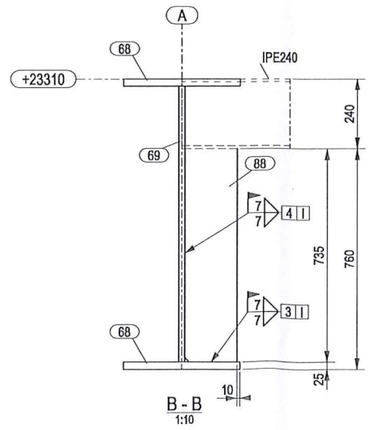


CWLPG048

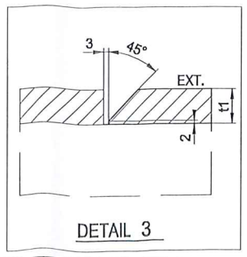
WPG1000x400x20x25



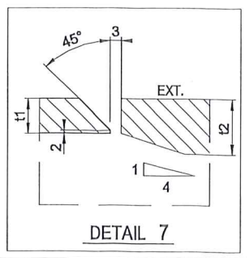
A - A
1:10



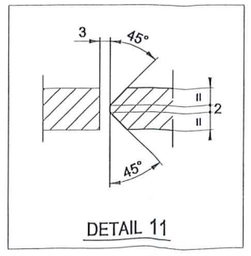
B - B
1:10



DETAIL 3



DETAIL 7

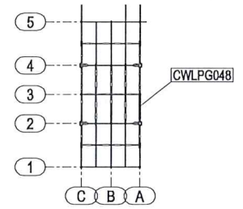


DETAIL 11

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

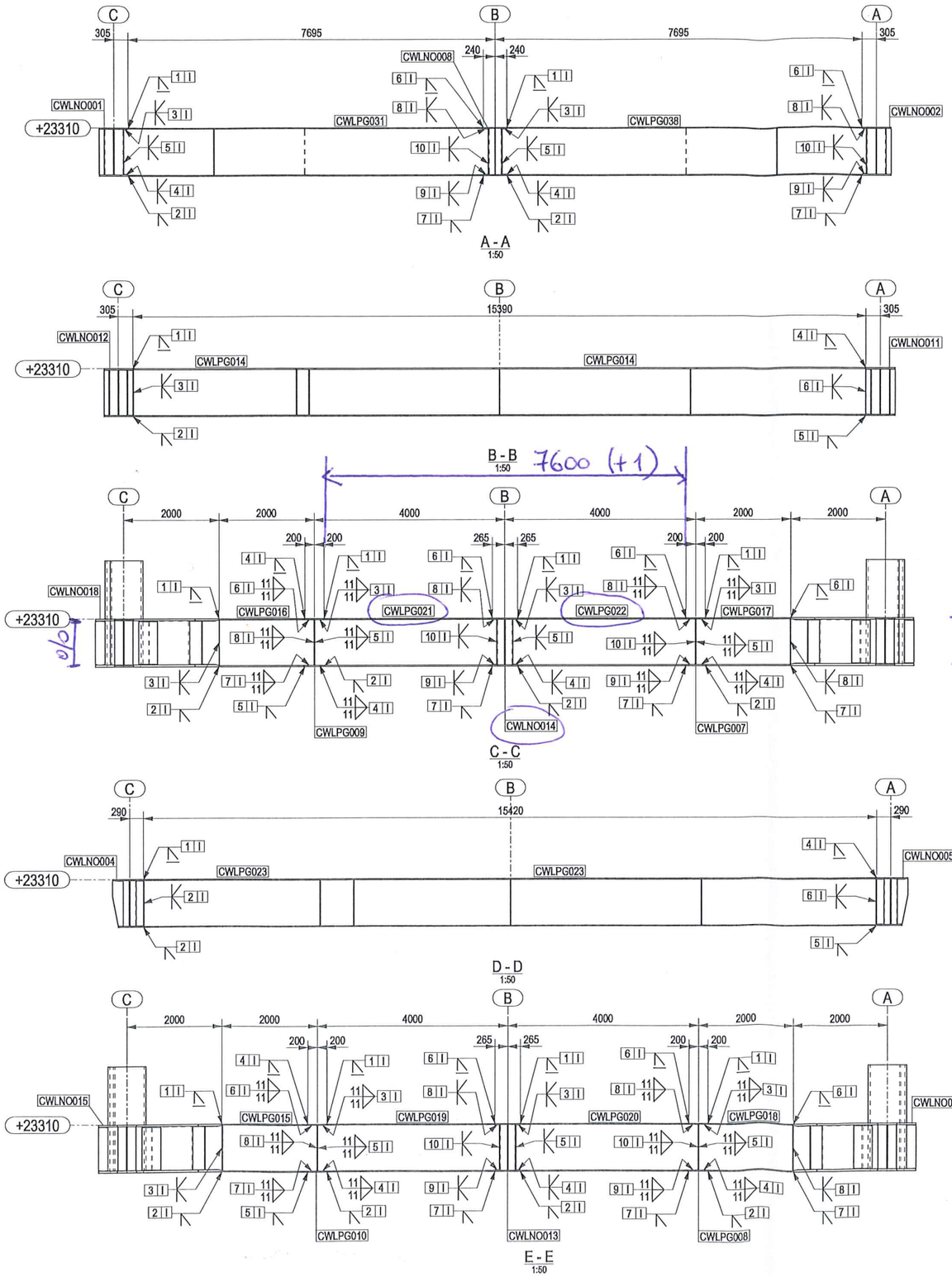
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG048

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90047	SHEET 001	REV. 0



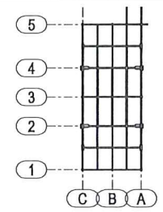
CAMBER = 5 mm
SWEEP = 2 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 19/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90180	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-004	1 of 2	15/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	Mark CWLP0035, CWLNO012 and CWLPG0045 has been checked assembled. Mark CWLP0033, CWLNO011 and CWLPG0042 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
15/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept. 16/01/24		

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-004	2 of 2	15/01/2024

Mark Number	Description	Drawing	Quantity
CWLPG007	PL25x400	123A90-FDL-ST-DD-90006	1
CWLPG009	PL25x400	123A90-FDL-ST-DD-90008	1
CWLPG012	PL25x400	123A90-FDL-ST-DD-90011	1
CWLPG015	PL25x300	123A90-FDL-ST-DD-90014	1
CWLPG016	PL25x300	123A90-FDL-ST-DD-90015	1
CWLPG017	PL25x300	123A90-FDL-ST-DD-90016	1
CWLPG018	PL25x300	123A90-FDL-ST-DD-90017	1
CWLPG033	PL10x130	123A90-FDL-ST-DD-90032	1
CWLPG035	PL10x130	123A90-FDL-ST-DD-90034	1
CWLPG039	PL10x107,5	123A90-FDL-ST-DD-90038	1
CWLPG042	PL25x400	123A90-FDL-ST-DD-90041	1
CWLPG045	PL25x400	123A90-FDL-ST-DD-90044	1
CWLPG049	PL25x400	123A90-FDL-ST-DD-90048	1
CWLNO004	PL25x480	123A90-FDL-ST-DD-90052	1
CWLNO005	PL25x480	123A90-FDL-ST-DD-90053	1
CWLNO011	PL25x610	123A90-FDL-ST-DD-90059	1
CWLNO012	PL25x610	123A90-FDL-ST-DD-90060	1

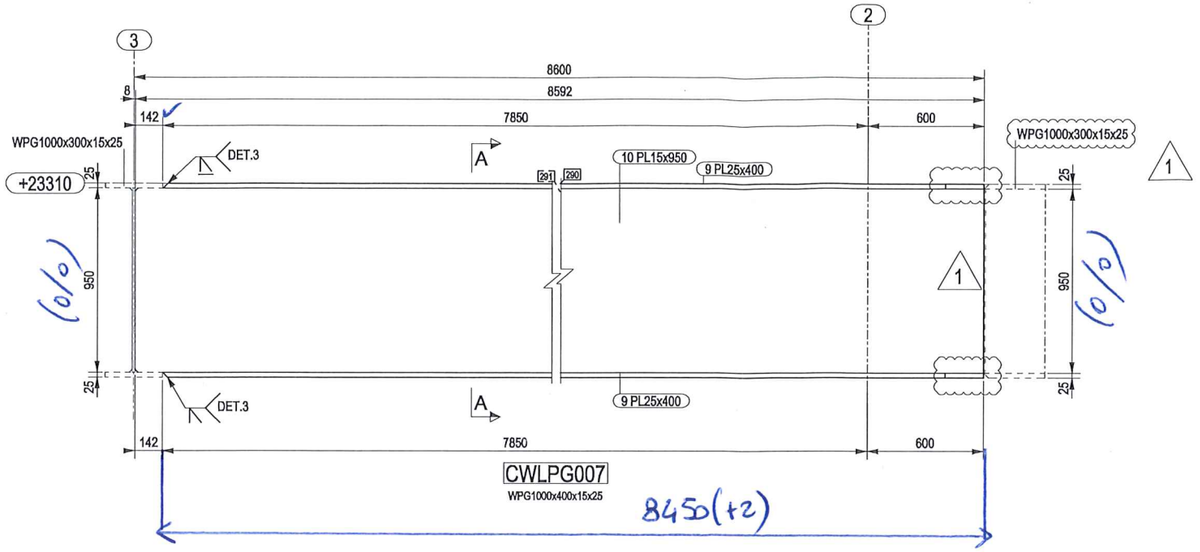
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
15/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi		

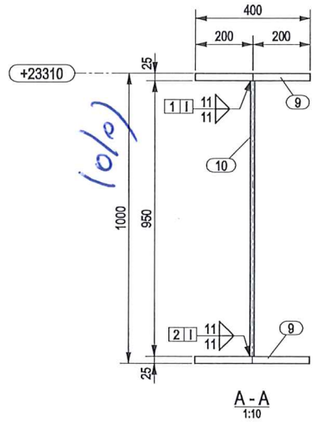
The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG007	9	2	PL25x400	8447	S420MLO	2	1320.6	14.34	
CWLPG007	10	1	PL15x950	8592	S420MLO	2	961.2	16.61	
						TOTALE	2281.7	30.95	

1





A - A
1:10

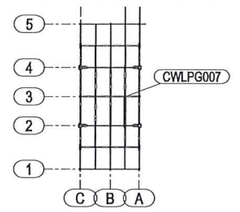
CAMBER = 3mm
SWEEP = 2mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



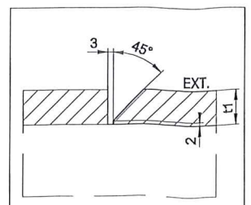
PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3

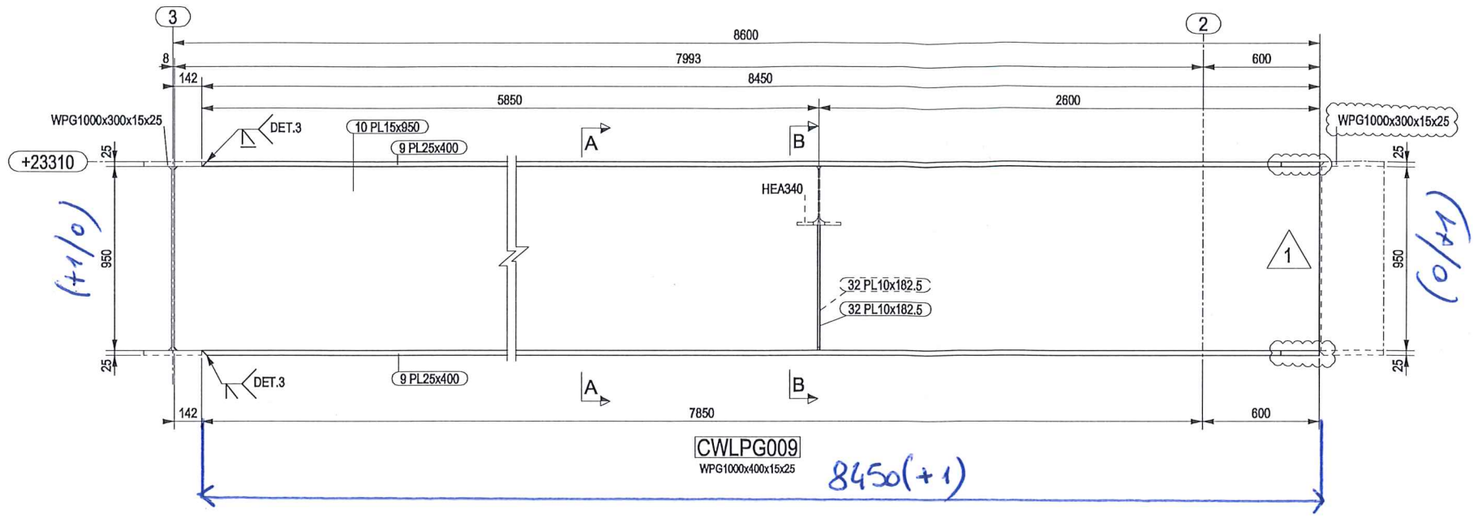
CROSSWIND

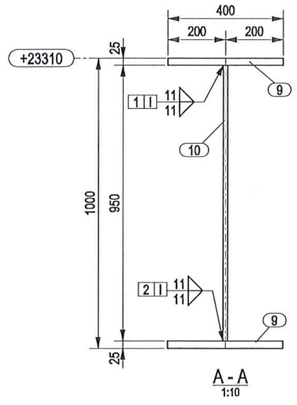
ROSETTI MARINO

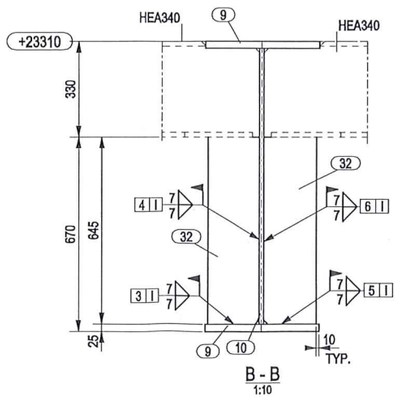
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG007

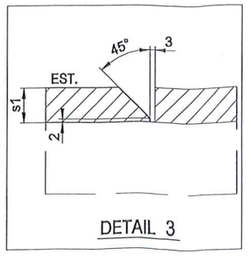
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90006	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG009	9	2	PL25x400	8447	S420MLO	2	1320.6	14.34	
CWLPG009	10	1	PL15x950	8592	S420MLO	2	961.2	16.61	
CWLPG009	32	2	PL10x182.5	645	S355MLO	3	18.5	0.50	
						TOTALE	2300.2	31.46	









1

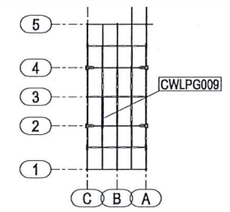
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SWEEP = 3mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

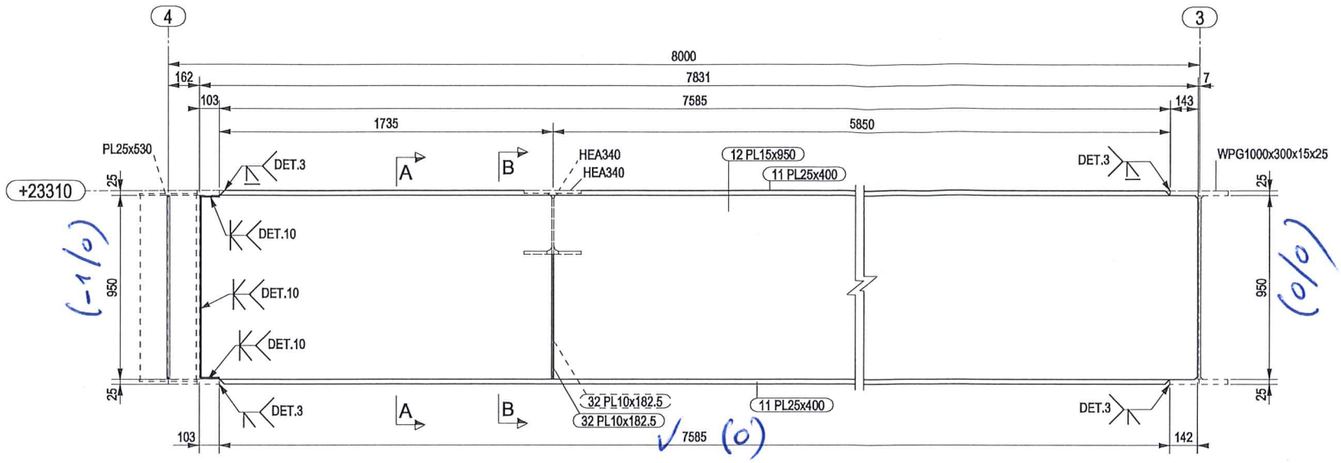
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG009

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90008	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG012	11	2	PL25x400	7579	S420MLO	2	1186.6	12.90	
CWLPG012	12	1	PL15x950	7828	S420MLO	2	875.1	15.12	
CWLPG012	32	2	PL10x182.5	645	S355MLO	3	18.5	0.50	
						TOTALE	2080.2	28.53	



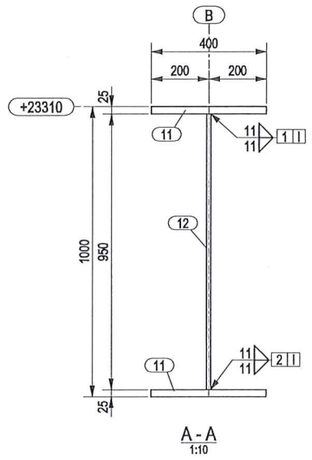
CWLPG012

WPG1000x400x15x25

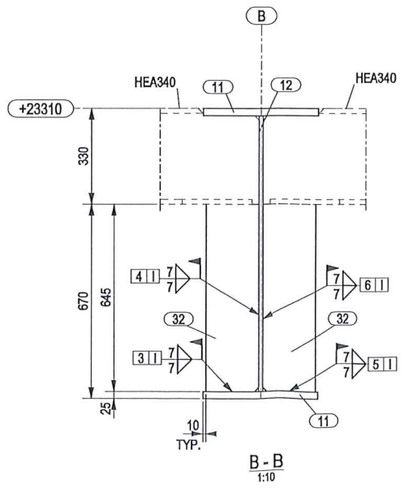
CAMBER = 2 mm

SWEEP = 1 mm

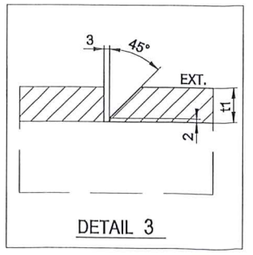
SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL



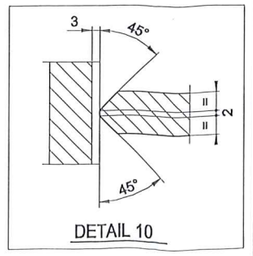
A - A
1:10



B - B
1:10



DETAIL 3

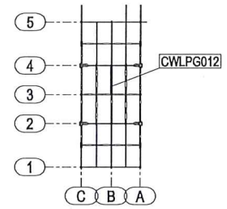


DETAIL 10

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

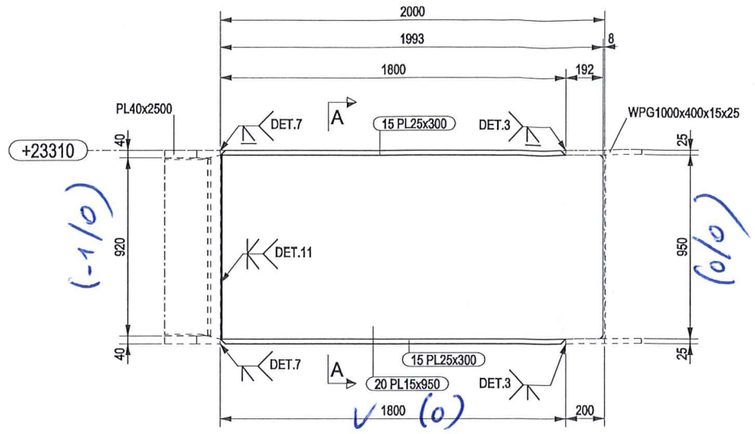
CROSSWIND

ROSETTI MARINO

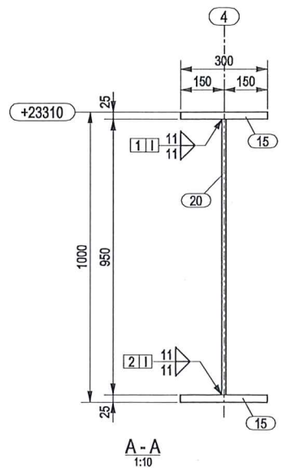
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG012

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90011	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG015	15	2	PL25x300	1794	S420MLO	2	208.8	2.34	
CWLPG015	20	1	PL15x950	1990	S420MLO	2	222.2	3.86	
						TOTALE	431.0	6.20	



CWLPG015
WPG1000x300x15x25



A - A
1:10

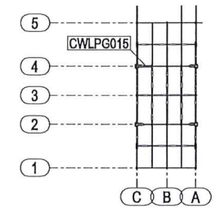
CAMBER = 0 mm
SWEEP = 0 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



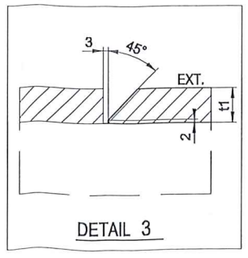
PLAN AT EL.+23310 TOS

HOLDS

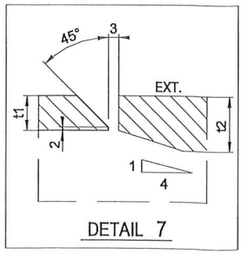
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

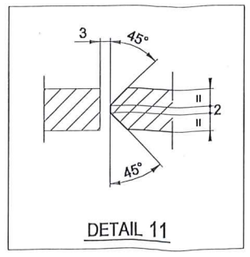
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



DETAIL 7



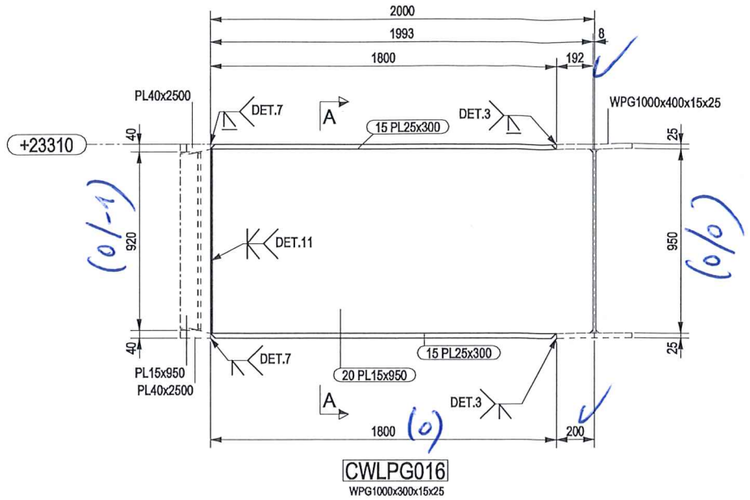
DETAIL 11

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG015

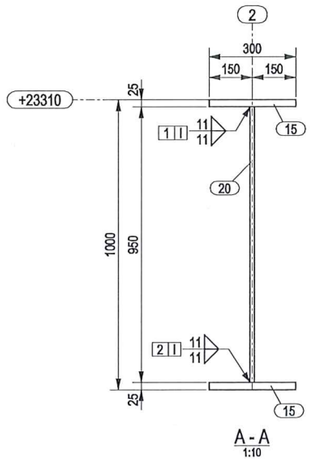
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90014	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG016	15	2	PL25x300	1794	S420MLO	2	208.8	2.34	
CWLPG016	20	1	PL15x950	1990	S420MLO	2	222.2	3.86	
						TOTALE	431.0	6.20	



CWLPG016

WPG1000x300x15x25



A - A

1:10

CAMBER = 0 mm

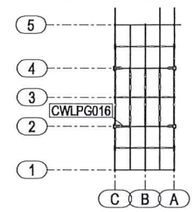
SWEEP = 0 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

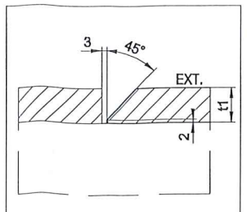


PLAN AT EL.+23310 TOS

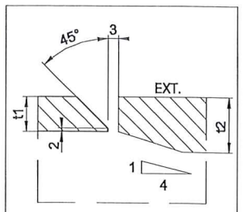
HOLDS

REFERENCE DRAWINGS

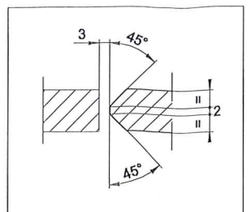
DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS



DETAIL 3



DETAIL 7



DETAIL 11

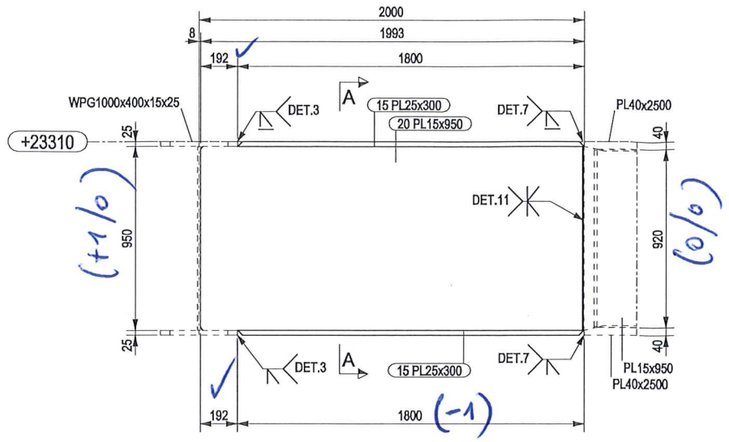
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG016

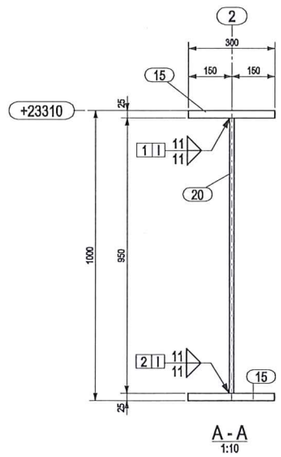
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90015	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG017	15	2	PL25x300	1794	S420MLO	2	208.8	2.34	
CWLPG017	20	1	PL15x950	1989	S420MLO	2	222.2	3.86	
						TOTALE	431.0	6.20	



CWLPG017

WPG1000x300x15x25



A-A

1:10

CAMBER = 1 mm

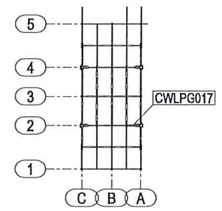
SWEEP = 0 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



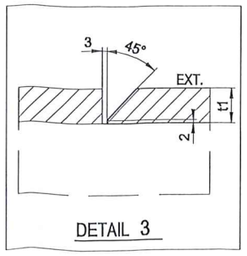
PLAN AT EL.+23310 TOS

HOLDS

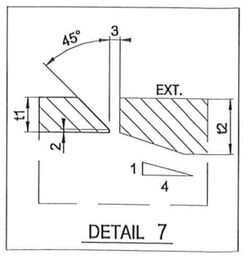
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

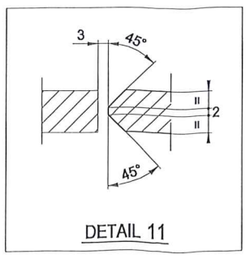
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



DETAIL 7



DETAIL 11

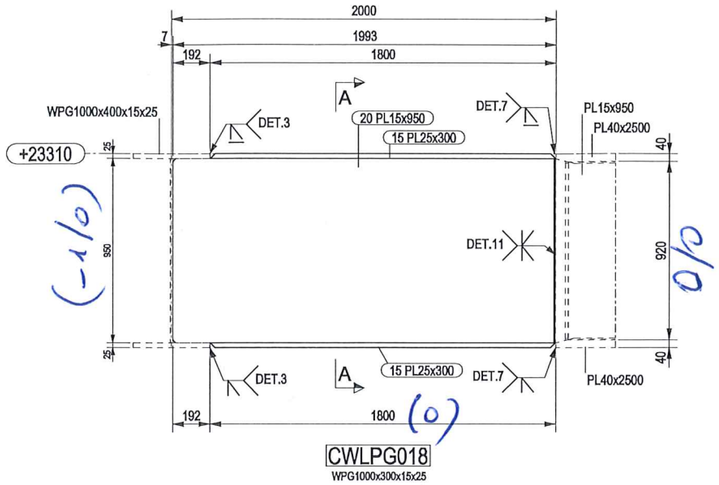
CROSSWIND

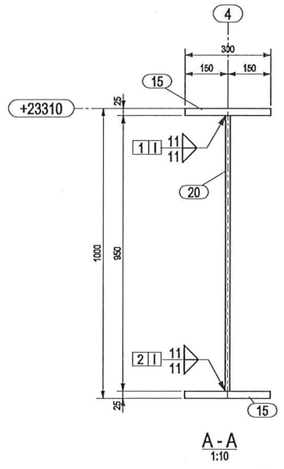
ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG017

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90016	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG018	15	2	PL25x300	1794	S420MLO	2	208.8	2.34	
CWLPG018	20	1	PL15x950	1989	S420MLO	2	222.2	3.86	
						TOTALE	431.0	6.20	





CAMBER = 0mm

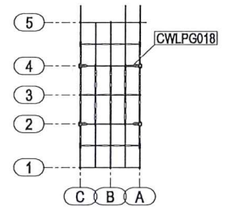
SWEEP = 0mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



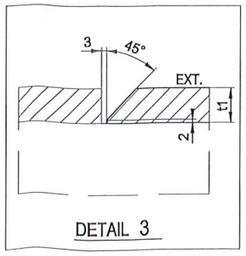
PLAN AT EL.+23310 TOS

HOLDS

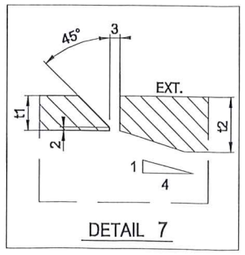
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

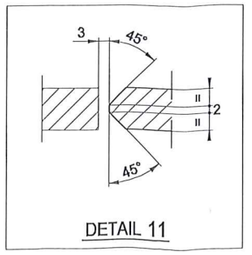
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



DETAIL 7



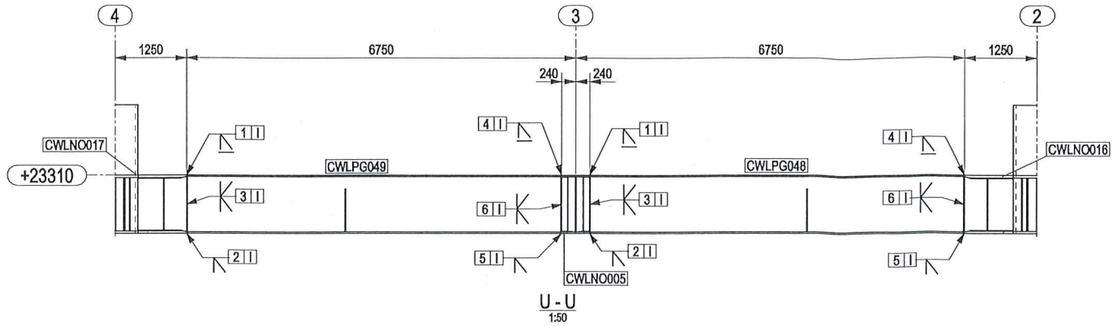
DETAIL 11

CROSSWIND

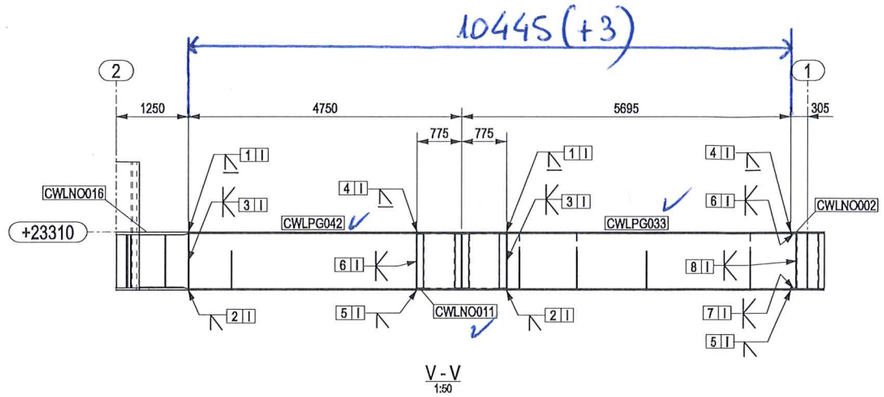
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG018

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90017	SHEET 001	REV. 0



U - U
1:50



V - V
1:50

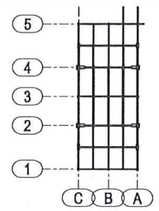
CAMBER = 7 mm
SWEEP = 3 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

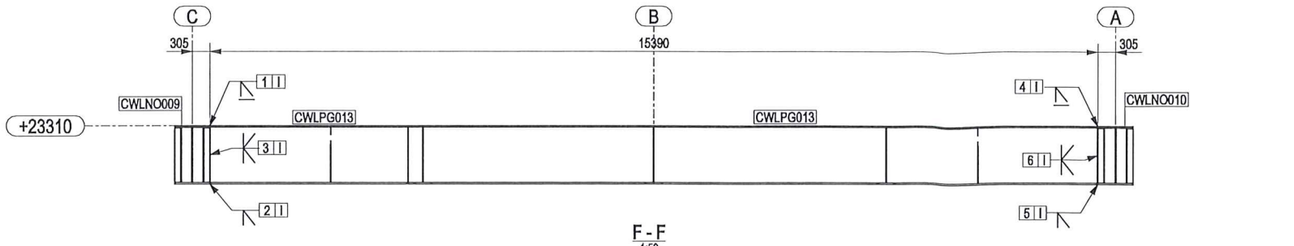
DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

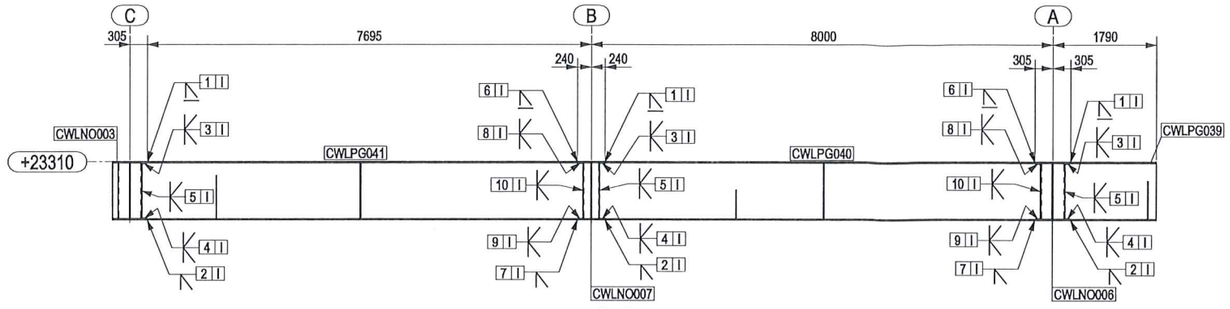
CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

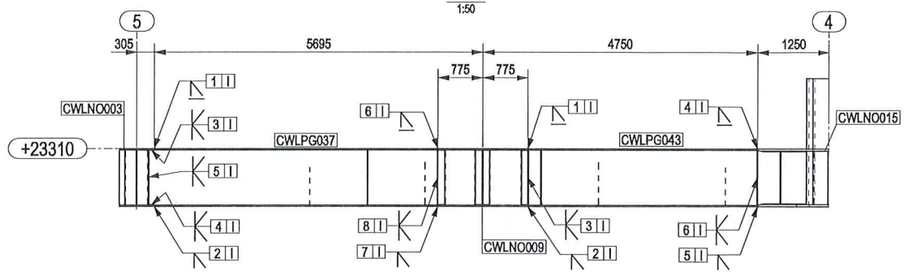
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 19/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90184	SHEET 001	REV. 0



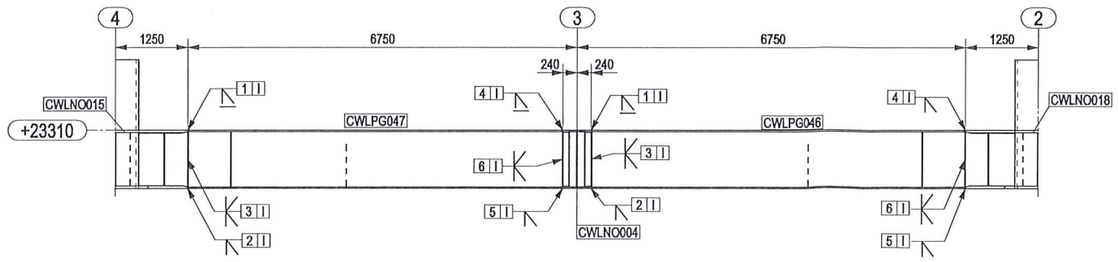
F - F
1:50



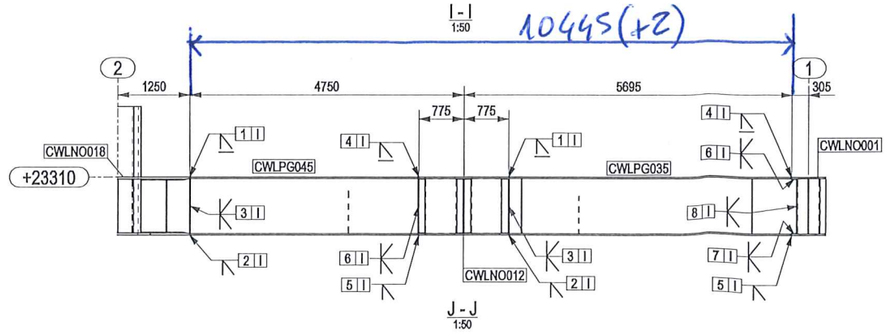
G - G
1:50



H - H
1:50



I - I
1:50



J - J
1:50

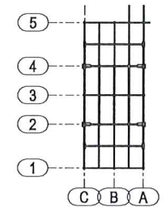
CAMBER = 8 mm
SWEEP = 4 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

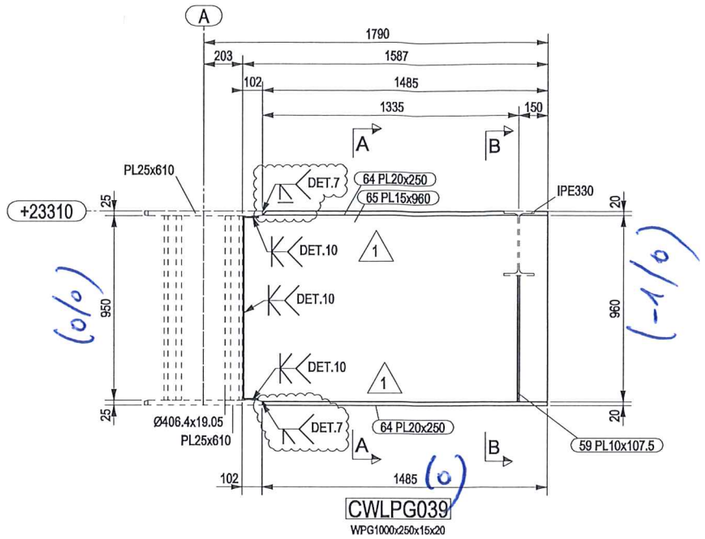
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

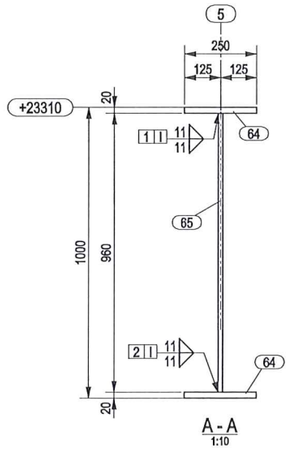
CROSSWIND | ROSETTI MARINO

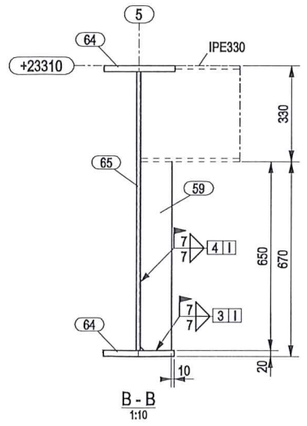
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 19/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90181	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG039	59	1	PL10x107.5	650	S355MLO	3	5.5	0.15	
CWLPG039	64	2	PL20x250	1482	S420MLO	2	115.7	1.61	
CWLPG039	65	1	PL15x960	1584	S420MLO	2	178.5	3.11	
						TOTALE	299.6	4.87	







CAMBER = 1 mm

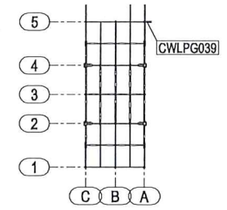
SWEEP = 0 mm

SAIPEM
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

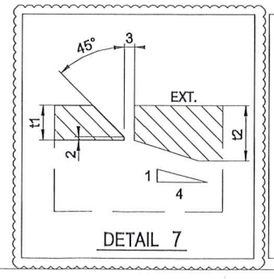


PLAN AT EL.+23310 TOS

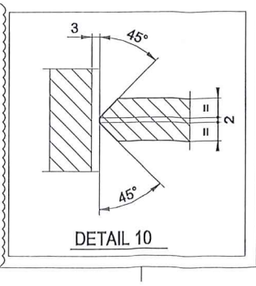
HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS



DETAIL 7



DETAIL 10

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	24/11/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

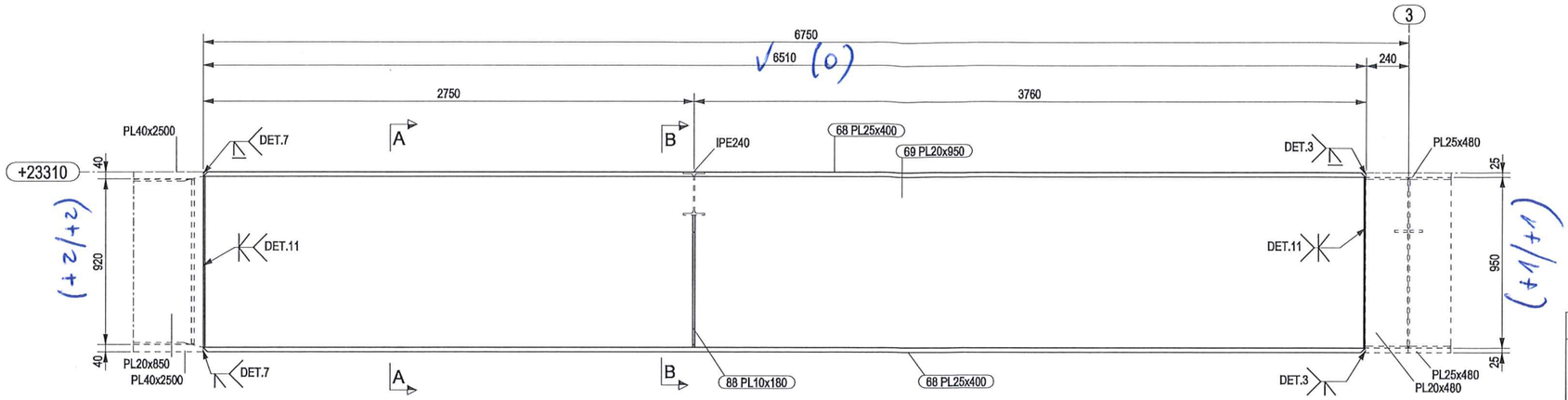
CROSSWIND

ROSETTI MARINO

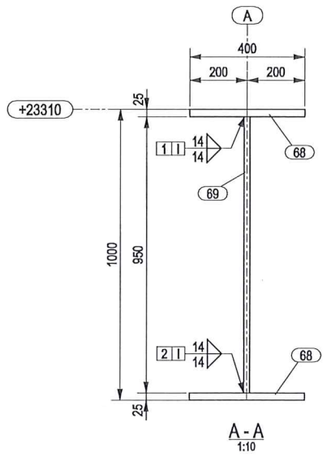
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG039

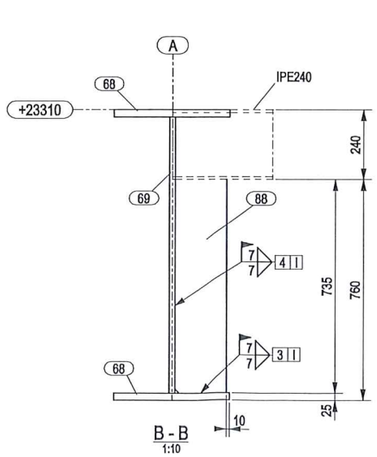
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90038		SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG049	68	2	PL25x400	6504	S420MLO	2	1017.8	11.07	
CWLPG049	69	1	PL20x950	6504	S420MLO	2	968.9	12.64	
CWLPG049	88	1	PL10x180	735	S355MLO	3	10.4	0.28	
						TOTALE	1997.0	23.99	



CWLPG049
WPG1000x400x20x25





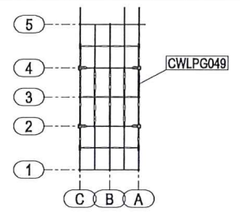
CAMBER = 1mm
SWEEP = 1mm

SCAMPATI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

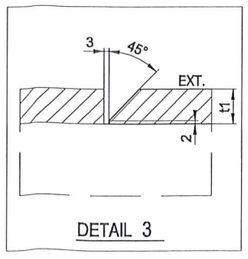


PLAN AT EL.+23310 TOS

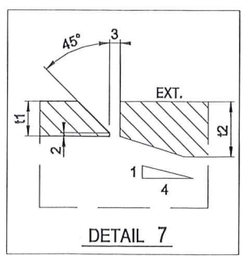
HOLDS

REFERENCE DRAWINGS

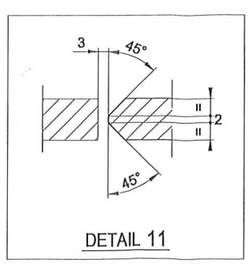
DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS



DETAIL 3



DETAIL 7



DETAIL 11

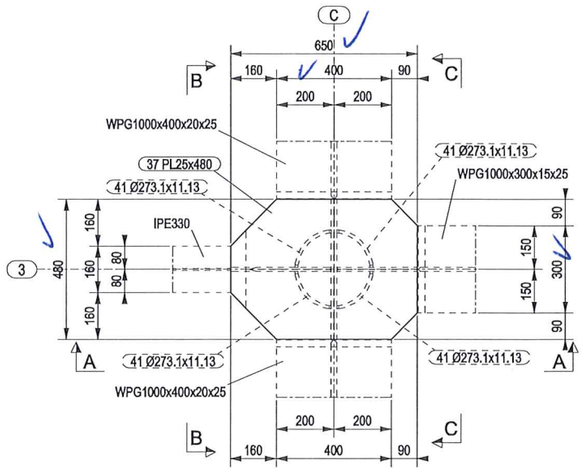
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG049

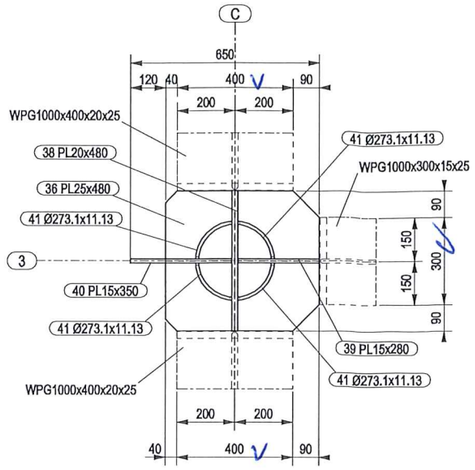
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90048	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLNO004	36	1	PL25x480	530	S420MLO	1	48.0	0.54	
CWLNO004	37	1	PL25x480	650	S420MLO	1	54.1	0.60	
CWLNO004	38	1	PL20x480	944	S420MLO	1	70.5	0.95	
CWLNO004	39	1	PL15x280	944	S420MLO	1	30.9	0.56	
CWLNO004	40	1	PL15x350	960	S420MLO	1	34.4	0.62	
CWLNO004	41	4	Ø273.1x11.13	950	API5LX52	1	62.2	0.80	
						TOTALE	300.2	4.07	

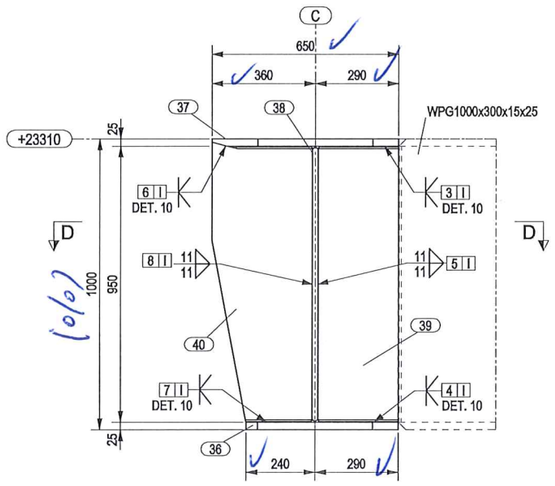


CWLNO004

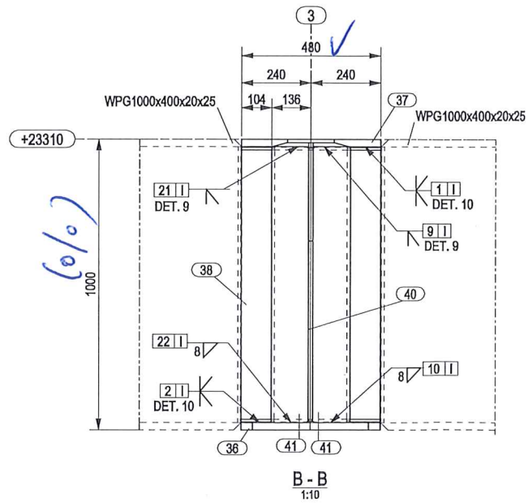
TOP FLG
1:10



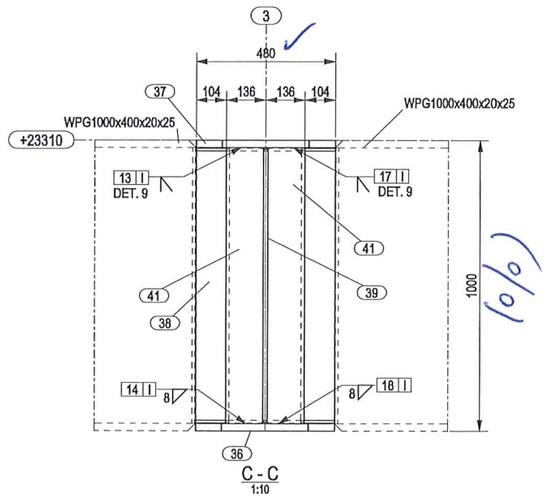
BTM FLG
1:10



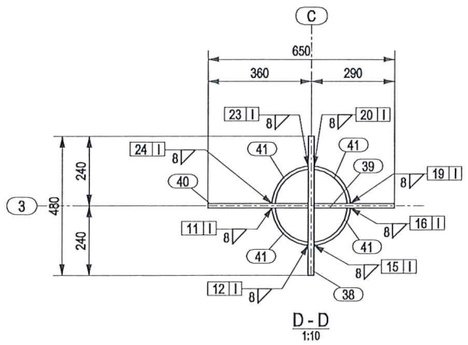
A - A
1:10



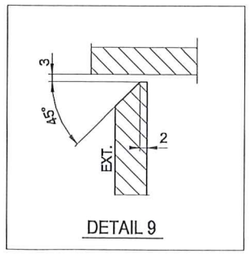
B - B
1:10



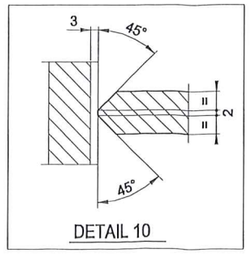
C - C
1:10



D - D
1:10



DETAIL 9

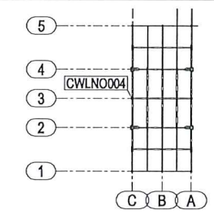


DETAIL 10

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS
123A90-DDL-ST-DD-90098	TOPSIDE-PRIMARY JOINTS LOWER DECK - JOINT - 4,5 & 6 - DE***

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	24/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

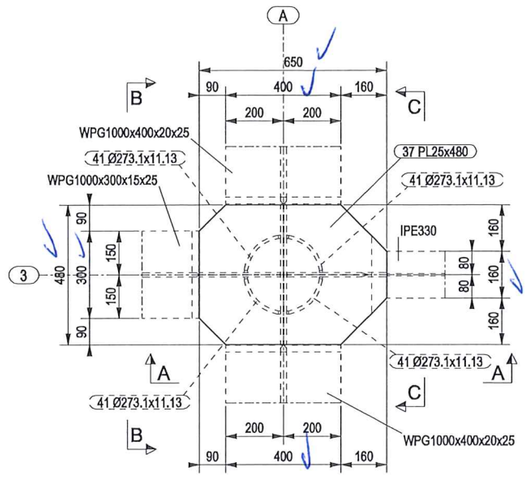
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLN0004

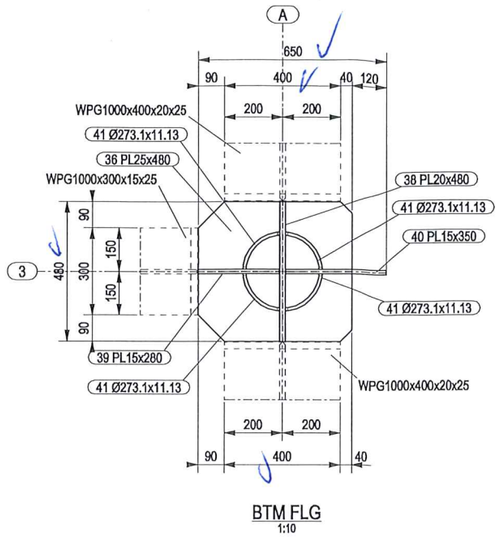
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 24/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90052		SHEET 001 / REV. 0

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

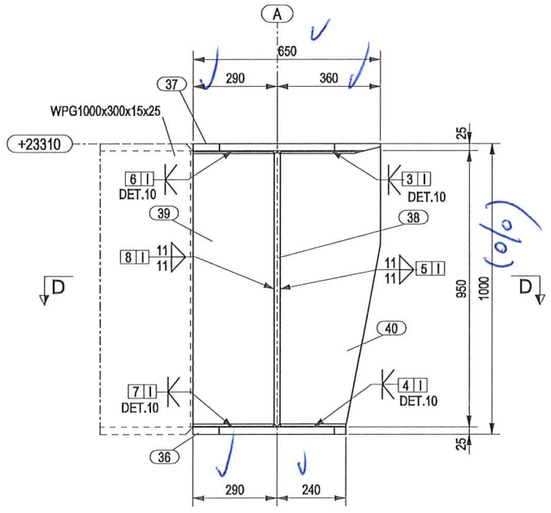
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLNO005	36	1	PL25x480	530	S420MLO	1	48.0	0.54	
CWLNO005	37	1	PL25x480	650	S420MLO	1	54.1	0.60	
CWLNO005	38	1	PL20x480	944	S420MLO	1	70.5	0.95	
CWLNO005	39	1	PL15x280	944	S420MLO	1	30.9	0.56	
CWLNO005	40	1	PL15x350	960	S420MLO	1	34.4	0.62	
CWLNO005	41	4	Ø273.1x11.13	950	API5LX52	1	62.2	0.80	
						TOTALE	300.2	4.07	



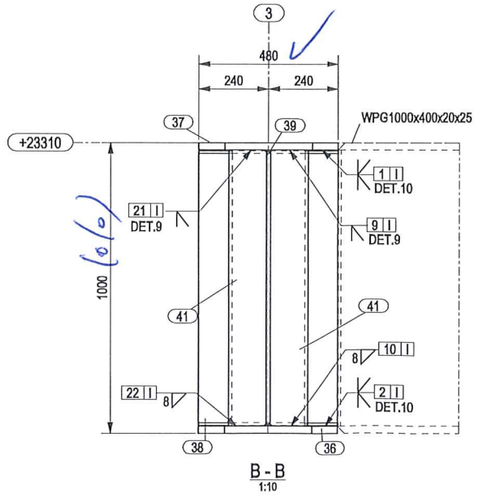
CWLNO005
TOP FLG
1:10



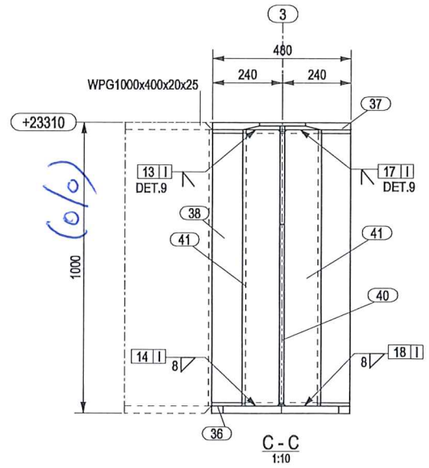
BTM FLG
1:10



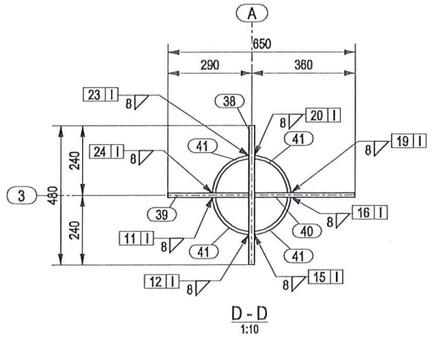
A - A
1:10



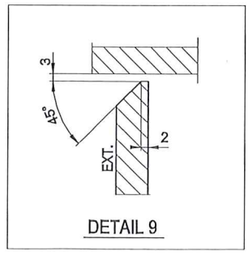
B - B
1:10



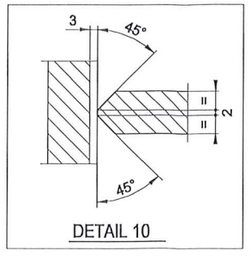
C - C
1:10



D - D
1:10



DETAIL 9



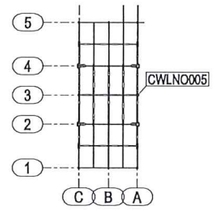
DETAIL 10

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS
123A90-DDL-ST-DD-90098	TOPSIDE-PRIMARY JOINTS LOWER DECK - JOINT - 4,5 & 6 - DE***

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	24/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTIMARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLNO005

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 24/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90053	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-005	1 of 2	18/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	**Acceptance Criteria**	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	Mark CWLPG019, CWLNO013 and CWLPG020 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
18/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi Quality Management Dept. 23/01/2024		

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

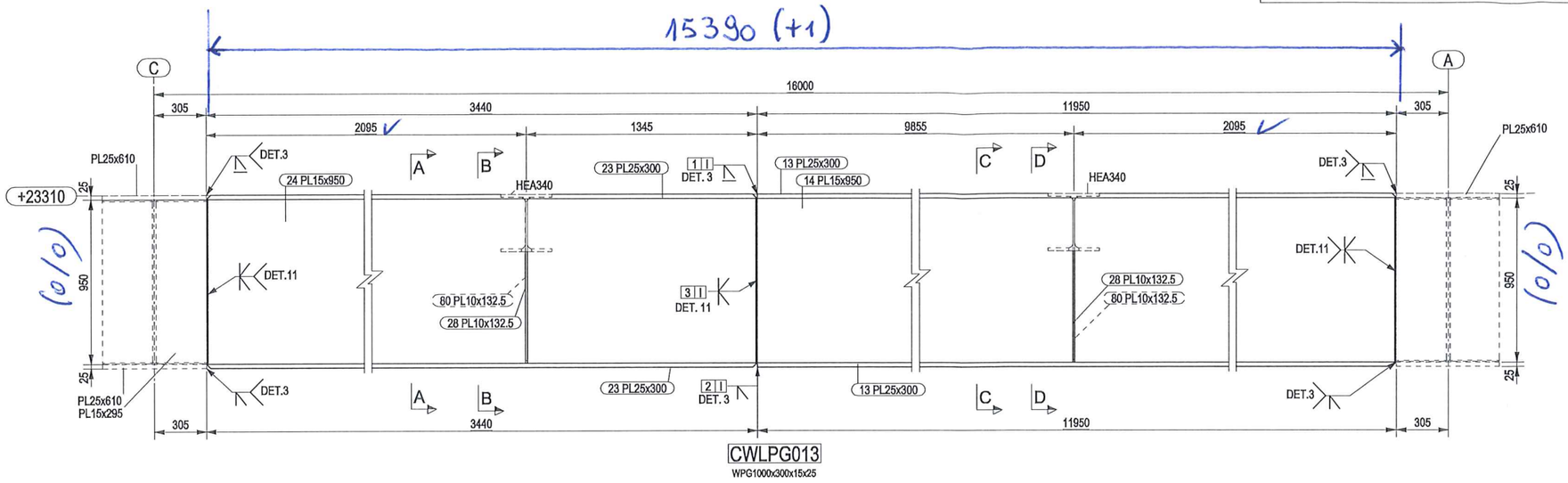
SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-005	2 of 2	18/01/2024

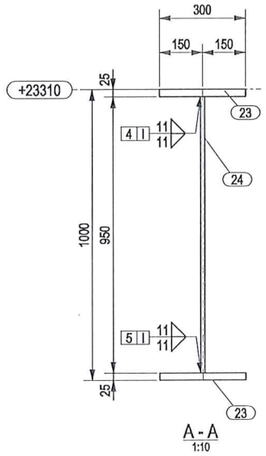
Mark Number	Description	Drawing	Quantity
CWLPG013	PL25x300	123A90-FDL-ST-DD-90012	1
CWLPG019	PL25x300	123A90-FDL-ST-DD-90018	1
CWLPG020	PL25x300	123A90-FDL-ST-DD-90019	1
CWLPG027	PL25x250	123A90-FDL-ST-DD-90026	1
CWLPG028	PL25x250	123A90-FDL-ST-DD-90027	1
CWLPG030	PL10x107,5	123A90-FDL-ST-DD-90029	1
CWLPG032	PL12x130	123A90-FDL-ST-DD-90031	1
CWLNO013	Ø323.9x15.88	123A90-FDL-ST-DD-90061	1

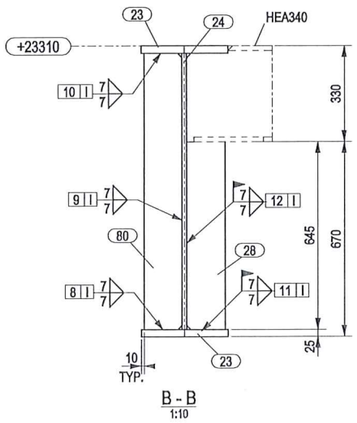
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
18/01/2024	Simonetto Angelo	23/01/2024 ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept.		

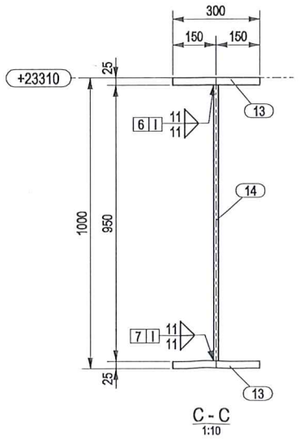
The considered drawings revisions are those applicable at certificate issue date Mod. DT101620A Rev 0

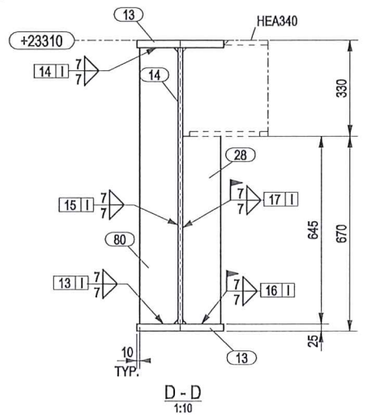
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG013	13	2	PL25x300	11947	S420MLO	2	1405.5	15.55	
CWLPG013	14	1	PL15x950	11947	S420MLO	2	1336.1	23.08	
CWLPG013	23	2	PL25x300	3434	S420MLO	2	401.9	4.48	
CWLPG013	24	1	PL15x950	3434	S420MLO	2	383.5	6.64	
CWLPG013	28	2	PL10x132.5	645	S355MLO	3	13.4	0.37	
CWLPG013	80	2	PL10x132.5	950	S355MLO	3	19.7	0.55	
						TOTALE	3560.1	50.67	

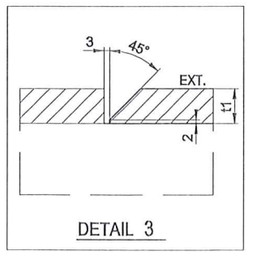


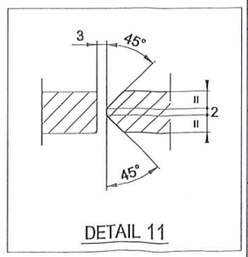












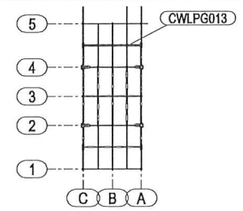
CAMBER = 11 mm
SWEEP = 5 mm

SCANNED
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

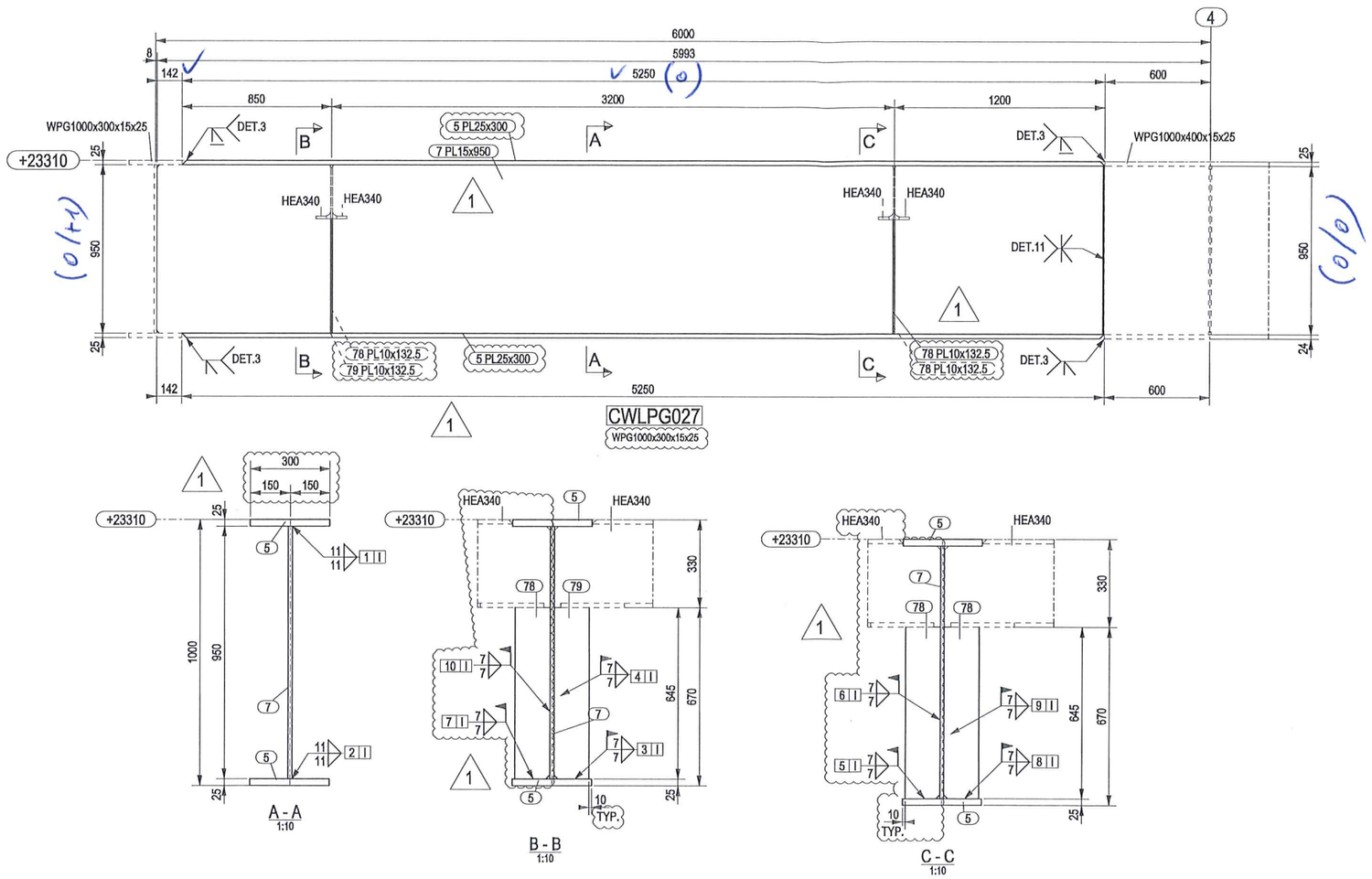
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG013

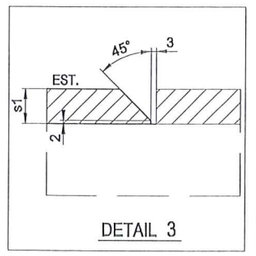
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90012	SHEET 001	REV. 0

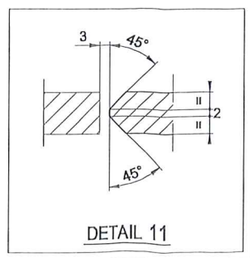
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG027	5	2	PL25x300	5244	S420MLO	2	615.0	6.83	
CWLPG027	7	1	PL15x950	5390	S420MLO	2	602.5	10.42	
CWLPG027	78	3	PL10x132.5	645	S355MLO	3	20.1	0.56	
CWLPG027	79	1	PL10x132.5	645	S355MLO	3	6.7	0.19	
						TOTALE	1244.3	18.00	

CAMBER = 2 mm (1)

SWEEP = 1 mm





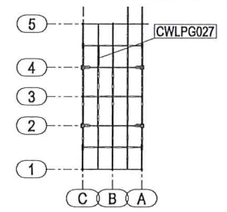


SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
D	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

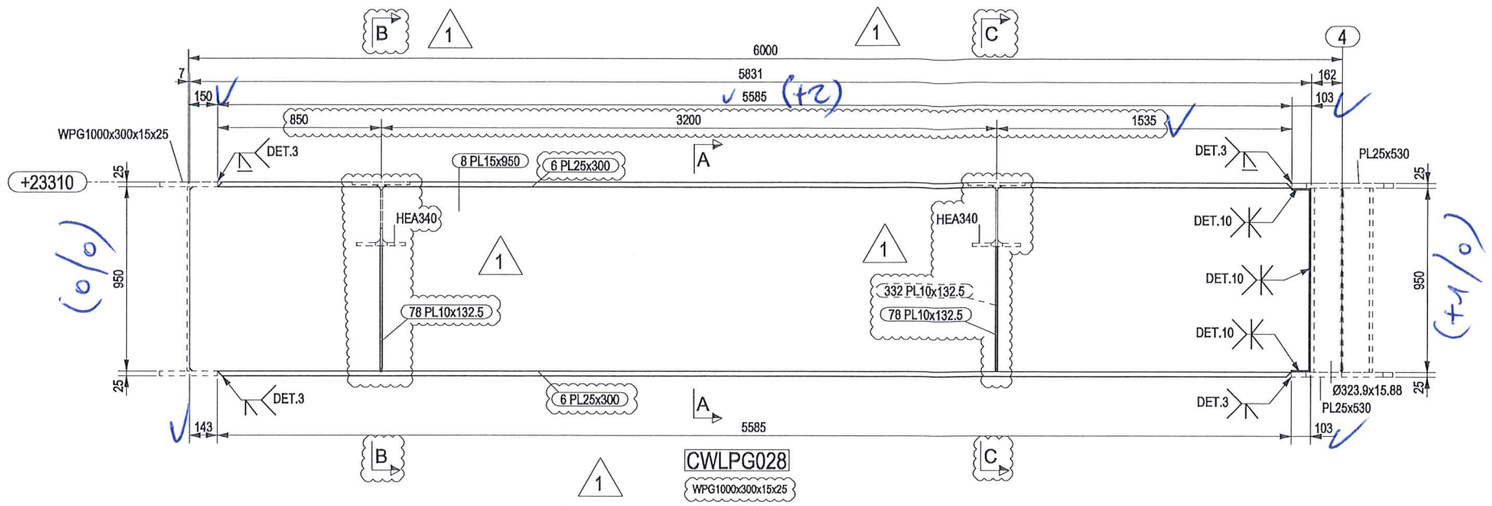
CROSSWIND

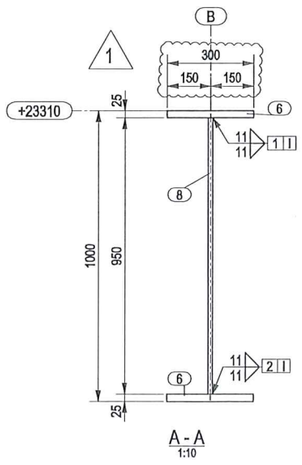
ROSETTI MARINO

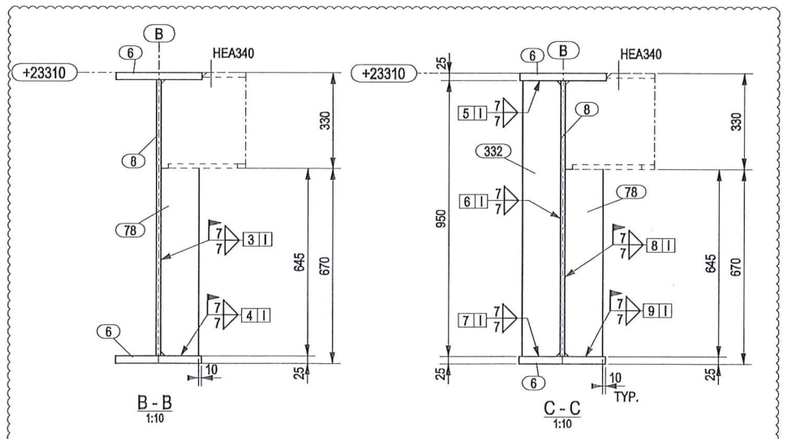
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG027

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90026	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG028	6	2	PL25x300	5579	S420MLO	2	654.4	7.26	
CWLPG028	8	1	PL15x950	5828	S420MLO	2	651.4	11.26	
CWLPG028	78	2	PL10x132.5	645	S355MLO	3	13.4	0.37	
CWLPG028	332	1	PL10x132.5	950	S355MLO	3	9.9	0.27	
						TOTALE	1329.1	19.17	







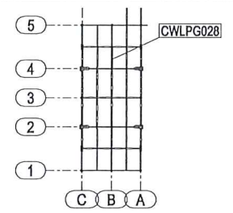
CAMBER = 1 mm
SWEEP = 0 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



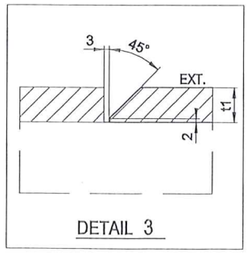
PLAN AT EL.+23310 TOS

HOLDS

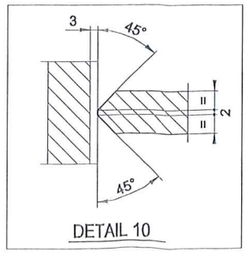
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 3



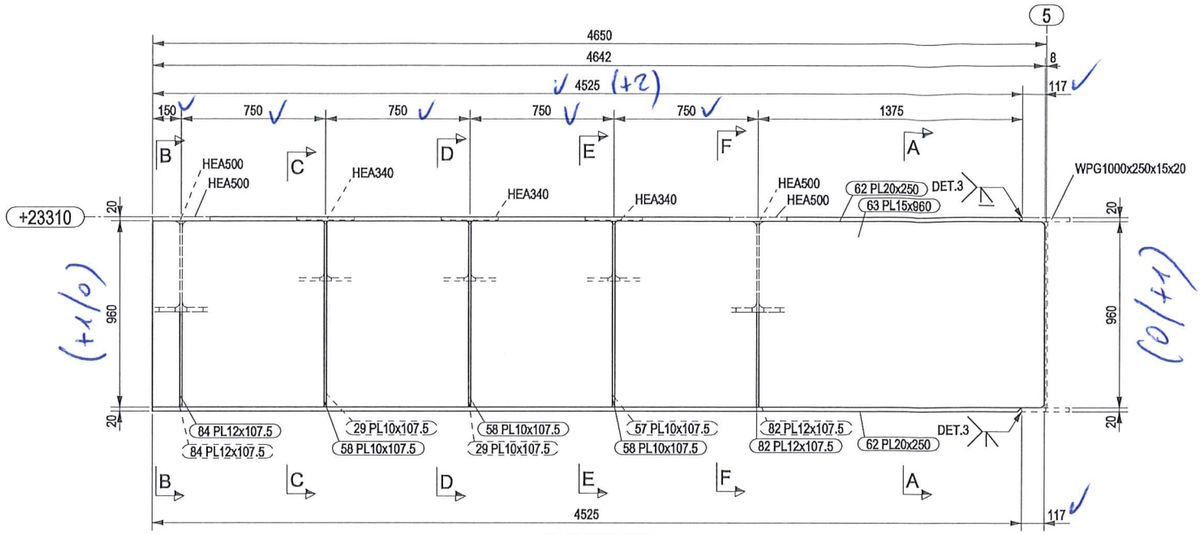
DETAIL 10

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG028

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90027		SHEET 001 / REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG030	29	2	PL10x107.5	650	S355MLO	3	11.0	0.31	
CWLPG030	57	1	PL10x107.5	650	S355MLO	3	5.5	0.15	
CWLPG030	58	3	PL10x107.5	960	S355MLO	3	24.3	0.68	
CWLPG030	62	2	PL20x250	4522	S420MLO	2	354.3	4.90	
CWLPG030	63	1	PL15x960	4642	S420MLO	2	524.8	9.08	
CWLPG030	82	2	PL12x107.5	490	S355MLO	3	9.9	0.24	
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						TOTALE	939.6	15.60	



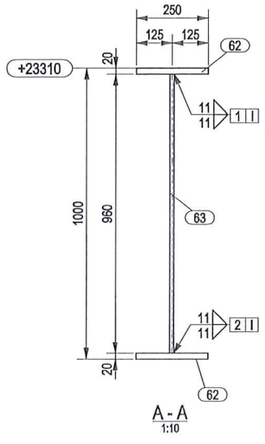
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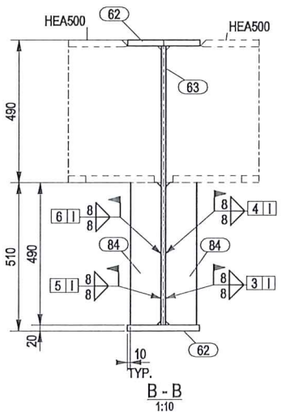
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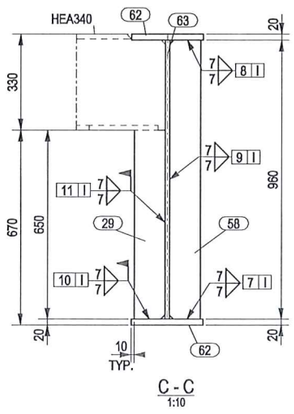
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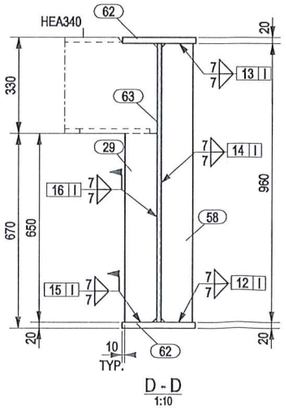
SWEEP = 3mm

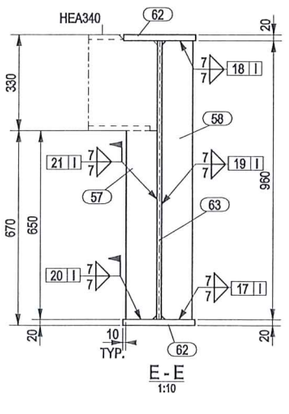
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

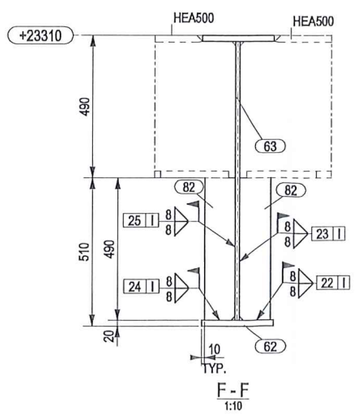


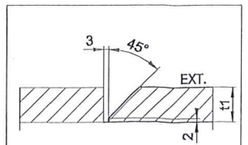










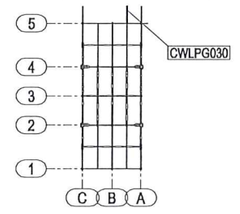


DETAIL 3

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

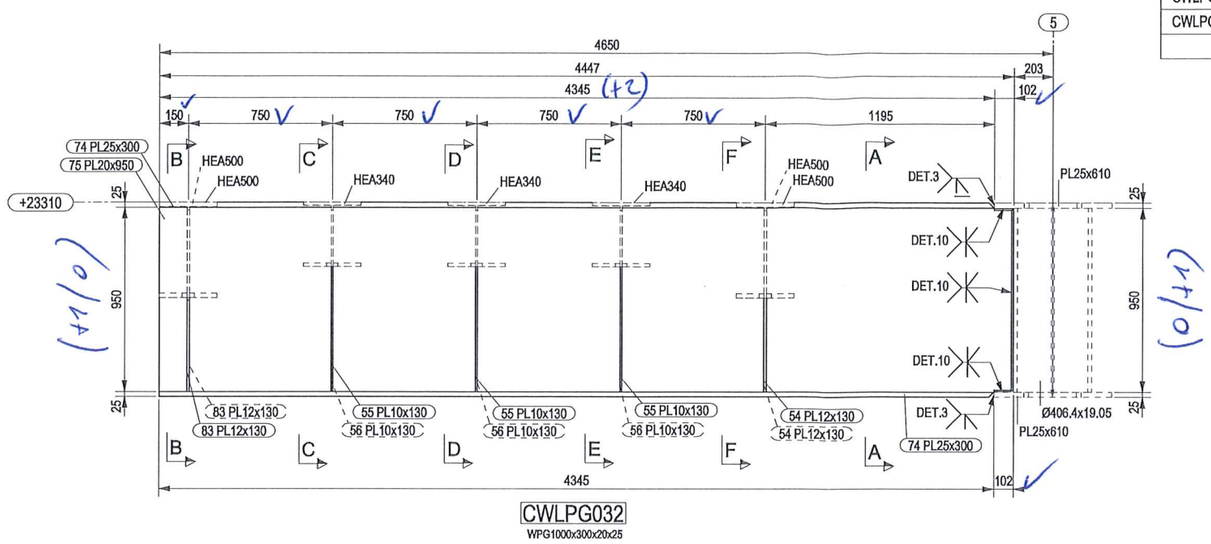
CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG030

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90029	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLPG032	54	2	PL12x130	485	S355MLO	3	11.9	0.28	
CWLPG032	55	3	PL10x130	645	S355MLO	3	19.7	0.55	
CWLPG032	56	3	PL10x130	950	S355MLO	3	29.0	0.80	
CWLPG032	74	2	PL25x300	4342	S420MLO	2	510.0	5.67	
CWLPG032	75	1	PL20x950	4444	S420MLO	2	662.0	8.65	
CWLPG032	83	2	PL12x130	485	S355MLO	3	11.8	0.28	
						TOTALE	1244.5	16.23	



CAMBER = 2 mm

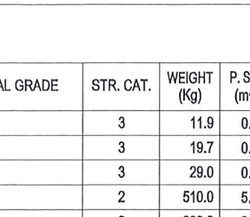
SWEEP = 2 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

NOTES

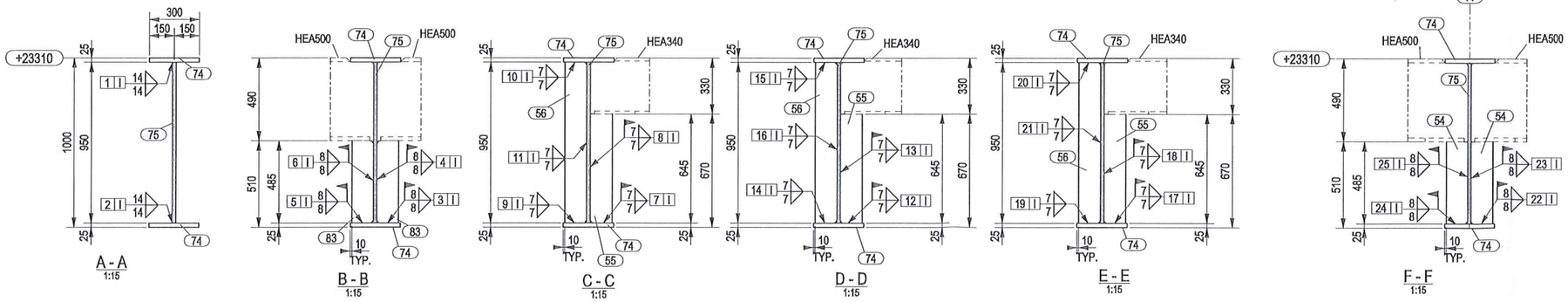
1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

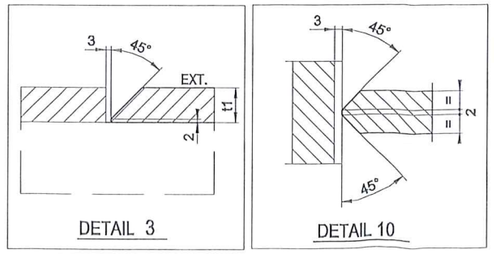
KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS





REFERENCE DRAWINGS

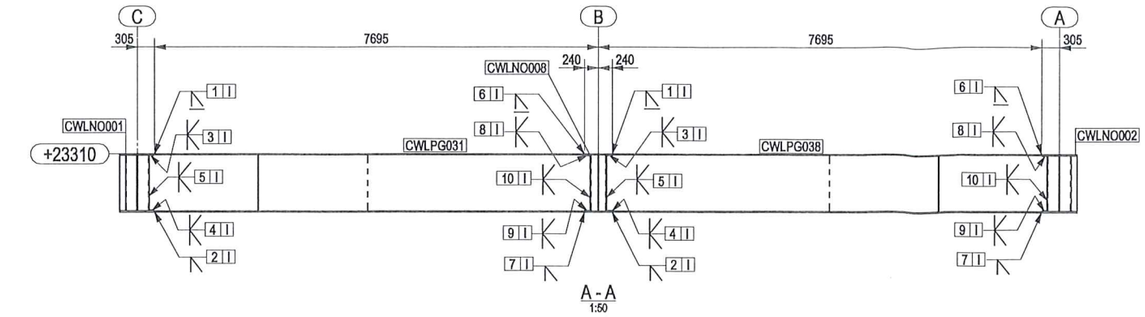
DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	17/11/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

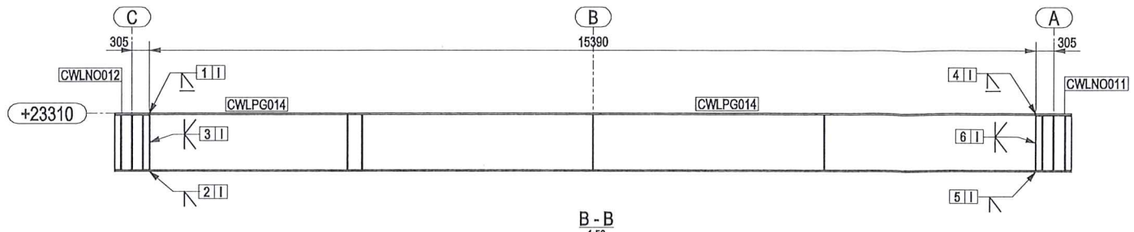
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
MARK CWLPG032

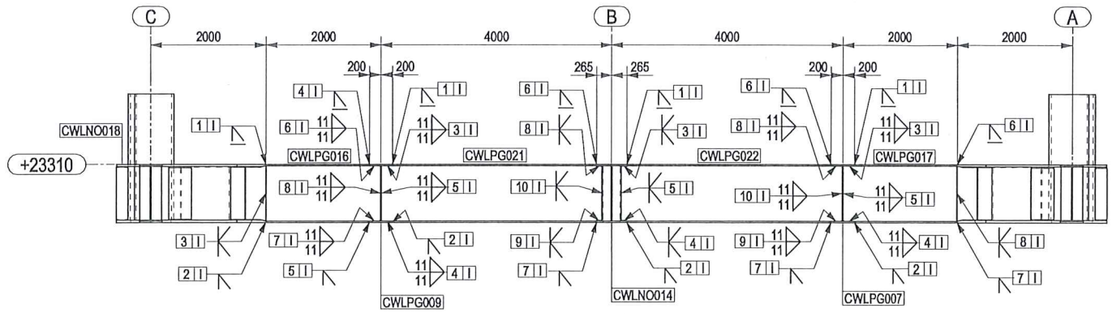
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 17/11/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90031	SHEET 001	REV. 0



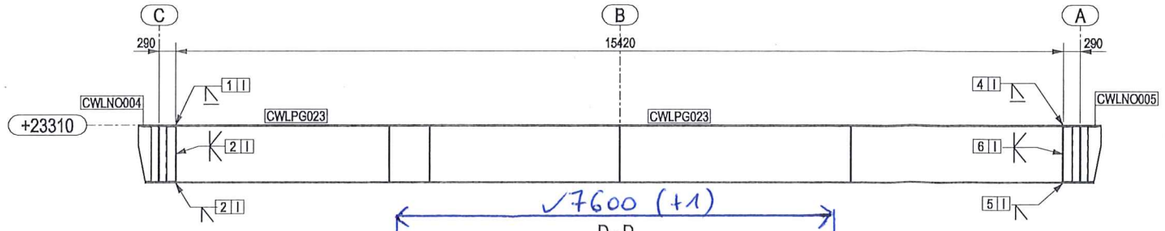
A - A
1:50



B - B
1:50

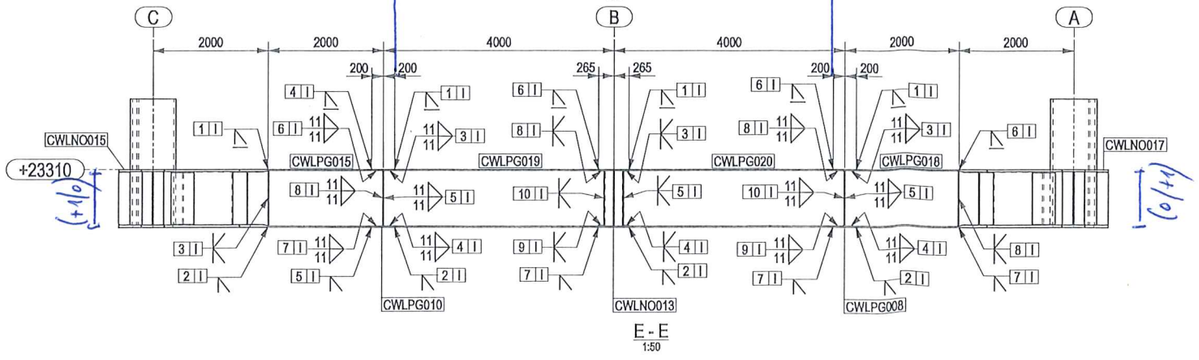


C - C
1:50



√7600 (+1)

D - D
1:50



E - E
1:50

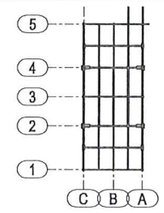
CAMBER = 3mm
SWEEP = 3mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 19/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90180		SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-006	1 of 2	22/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	**Acceptance Criteria**	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	Items assembled

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/01/2024	Amoroso Moreno	ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept. 23/01/2024		

For Items and quantities see next page(s)

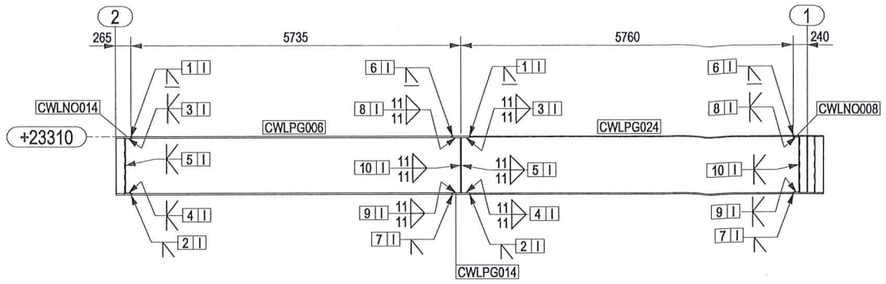
Mod. DT101620A Rev 0

Mark Number	Description	Drawing	Quantity
CWLPG036	PL10x130	123A90-FDL-ST-DD-90035	1
CWLPG037	PL10x130	123A90-FDL-ST-DD-90036	1
CWLPG040	PL20x250	123A90-FDL-ST-DD-90039	1
CWLPG041	PL20x250	123A90-FDL-ST-DD-90040	1
CWLPG043	PL25x400	123A90-FDL-ST-DD-90042	1
CWLPG044	PL25x400	123A90-FDL-ST-DD-90043	1
CWLNO007	Ø273.1x15.09	123A90-FDL-ST-DD-90055	1
CWLNO009	PL25x610	123A90-FDL-ST-DD-90057	1
CWLNO010	PL25x610	123A90-FDL-ST-DD-90058	1

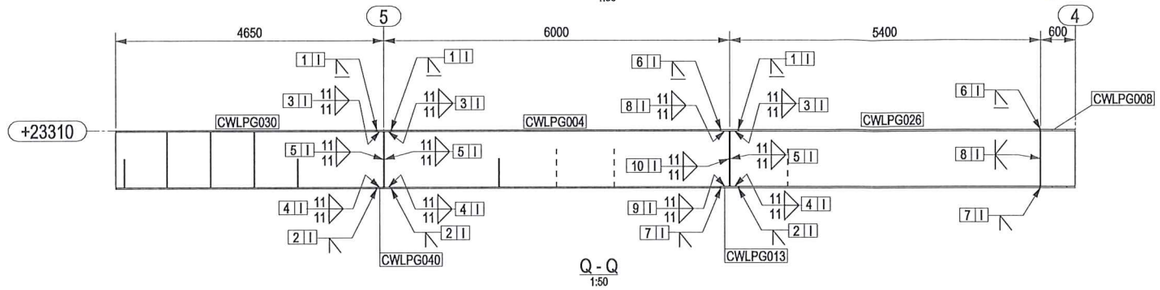
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/01/2024	Amoroso Moreno	23/01/2024 ROSETTI MARINO S.p.A. Alberto Lucchi		

The considered drawings revisions are those applicable at certificate issue date

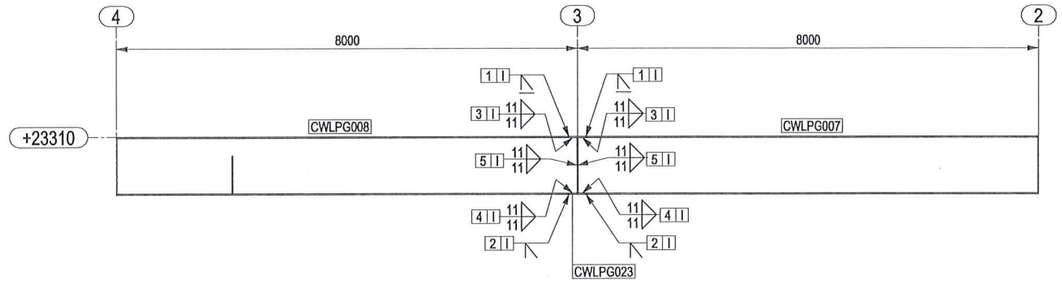
Mod. DT101620A Rev 0



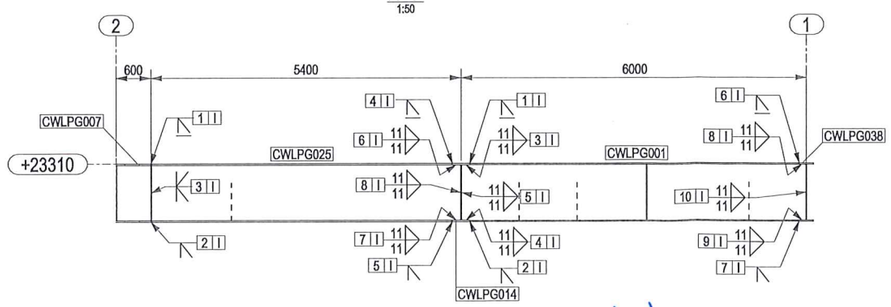
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1:50



Q - Q
1:50



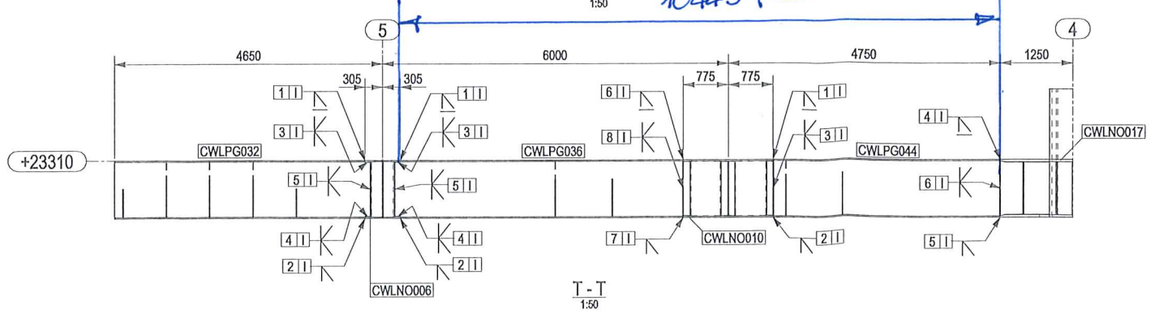
R - R
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S - S
1:50

10443 (-2)

SWEEP = 2 mm



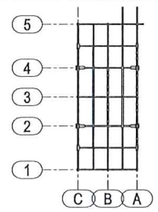
T - T
1:50

SCANDIUZZI STEEL CONSTRUCTIONS S.r.l. QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

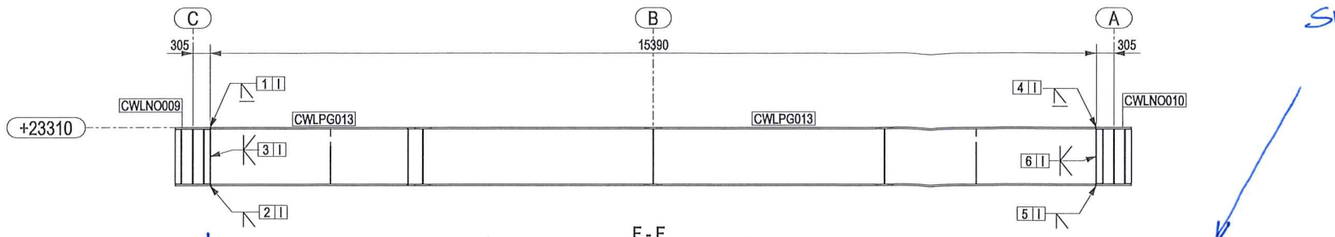
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 19/12/2023

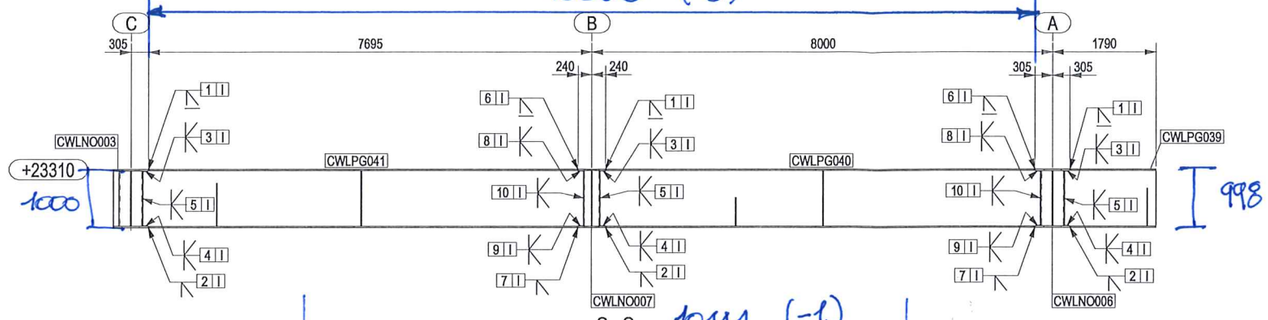
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SWEEP = 8 mm

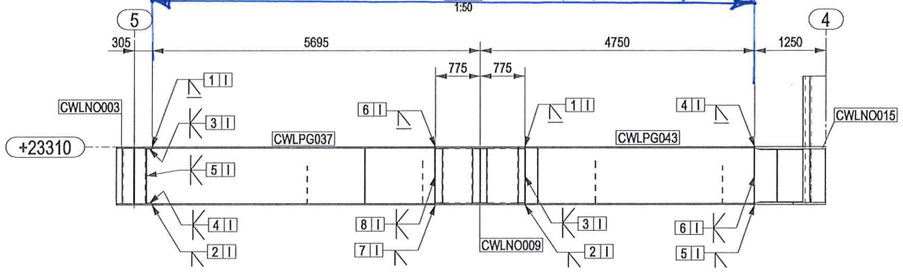
F - F
1:50

15385 (-5)

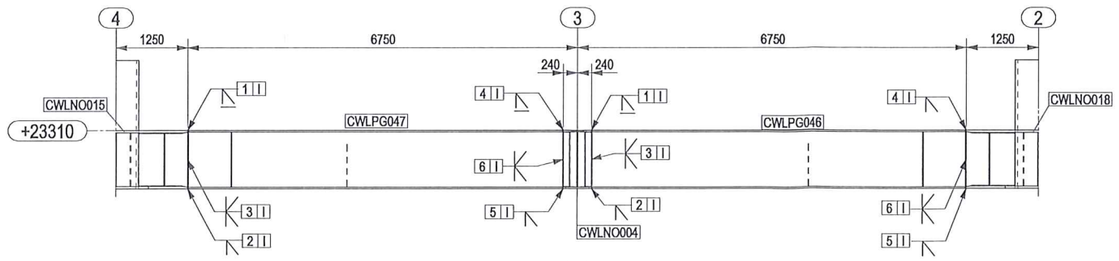


G - G
1:50

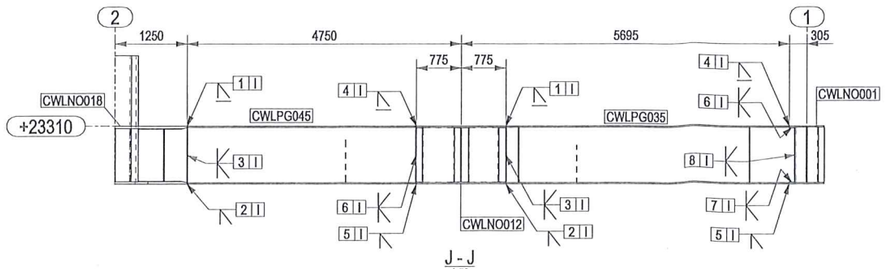
10444 (-1)



H - H
1:50



I - I
1:50



J - J
1:50

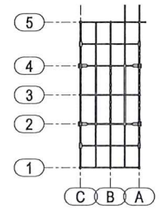
SWEEP = 3mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90179

KEY PLAN



PLAN AT EL.+23310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90049	TOPSIDE-PRIMARY STEEL PLAN AT EL.+23310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	19/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +23310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:100
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 19/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90181		SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-007	1 of 2	01/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

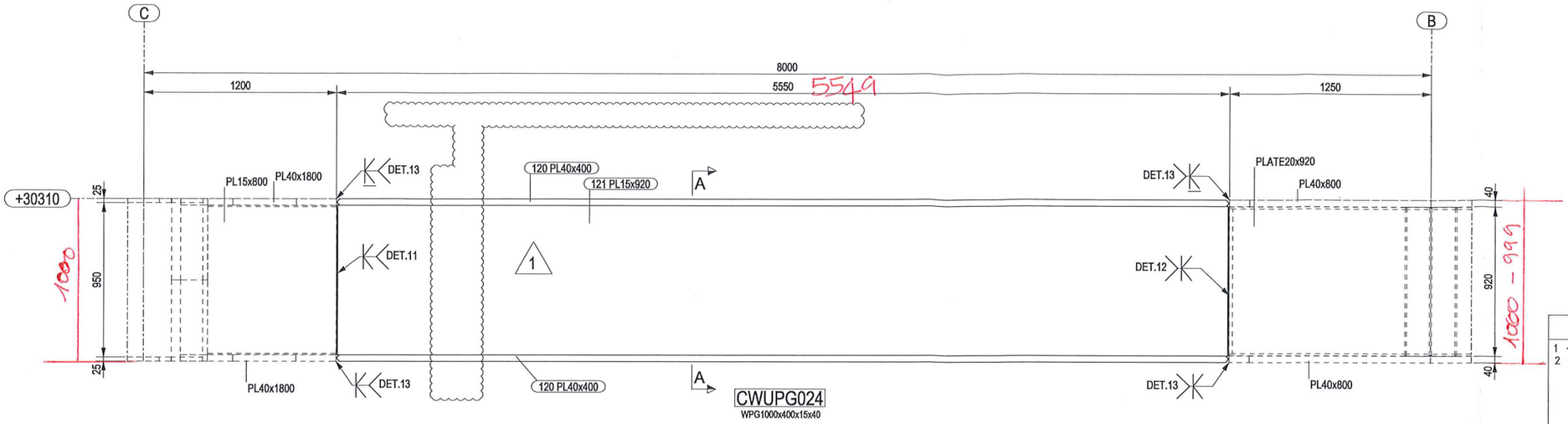
SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-007	2 of 2	01/02/2024

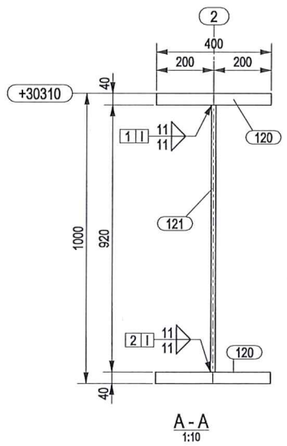
Mark Number	Description	Drawing	Quantity
CWUPG023	PL40x400	123A90-FDL-ST-DD-90091	1
CWUPG009	PL25x400	123A90-FDL-ST-DD-90145	1
CWUPG005	PL20x250	123A90-FDL-ST-DD-90078	1
CWUPG006	PL20x250	123A90-FDL-ST-DD-90079	1
CWUPG011	PL25x300	123A90-FDL-ST-DD-90082	1
CWUPG024	PL40x400	123A90-FDL-ST-DD-90093	1
CWUPG031	PL15x920	123A90-FDL-ST-DD-90100	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

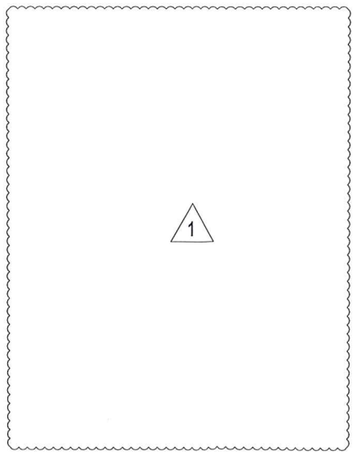
The considered drawings revisions are those applicable at certificate issue date Mod. DT101620A Rev 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG024	120	2	PL40x400	5544	S420MLO	2	1388.1	9.78	
CWUPG024	121	1	PL15x920	5544	S420MLO	2	600.0	10.38	
						TOTALE	1988.1	20.16	





A - A
1:10



SWEEP = 2 mm

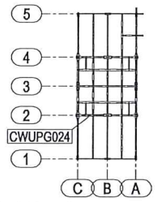
CAMBER = ∅

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



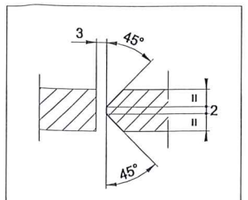
PLAN AT EL.+30310 TOS

HOLDS

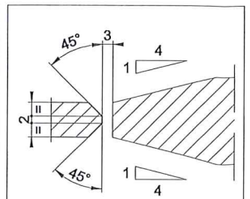
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

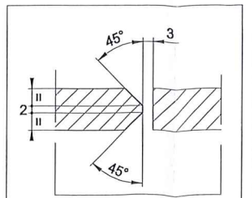
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 11



DETAIL 12



DETAIL 13

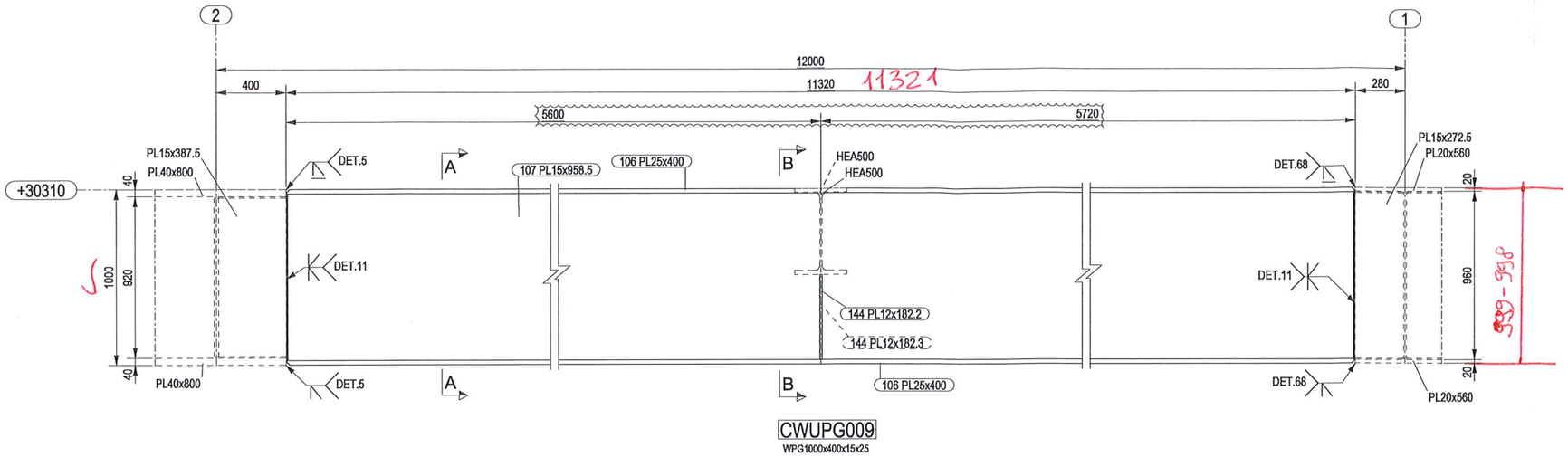
CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG024

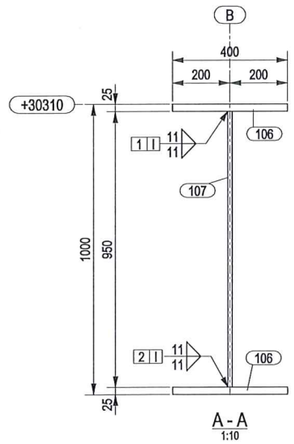
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90093	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG009	106	2	PL25x400	11314	S420MLO	2	1774.0	19.25	
CWUPG009	107	1	PL15x958.5	11314	S420MLO	2	1265.0	21.85	
CWUPG009	144	2	PL12x182.2	485	S355MLO	3	16.6	0.38	
						TOTALE	3055.6	41.49	

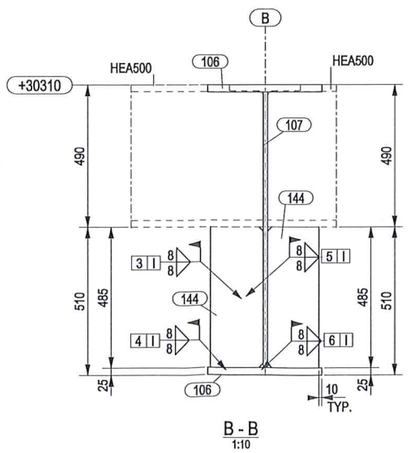


CWUPG009
WPG1000x400x15x25

SWEEP = 2 mm
CAMBER = 11 mm



A - A
1:10



B - B
1:10

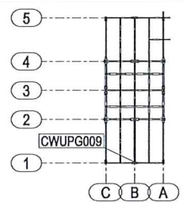
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
QUALITY CONTROL

HOLD

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



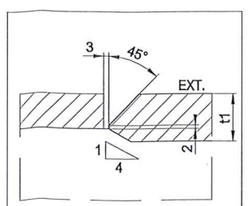
PLAN AT EL.+30310 TOS

HOLDS

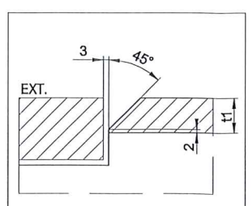
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

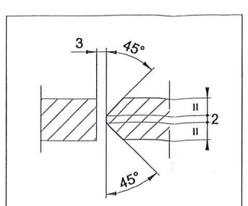
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	07/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 68



DETAIL 5



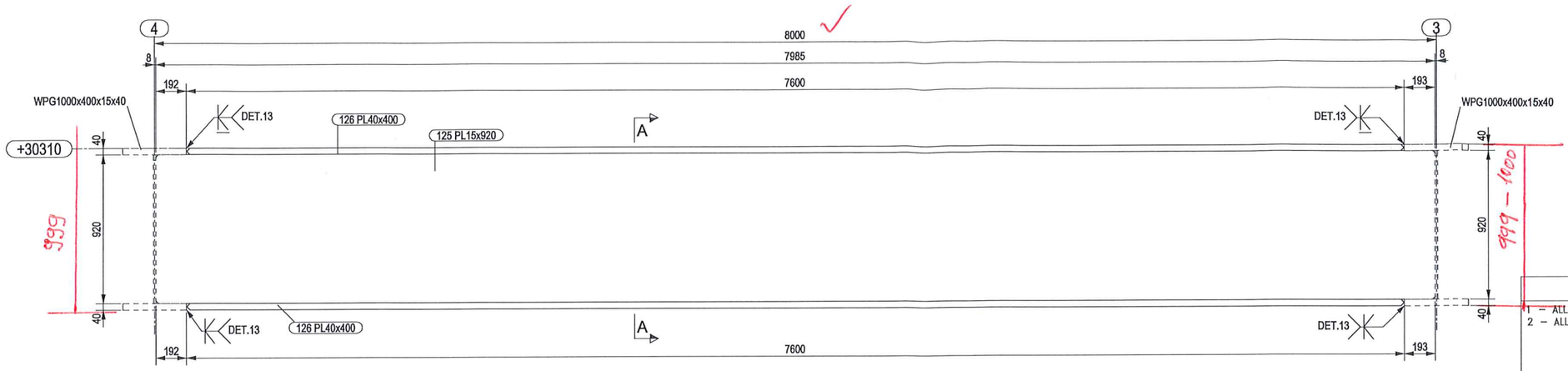
DETAIL 11

CROSSWIND | ROSETTI MARINO

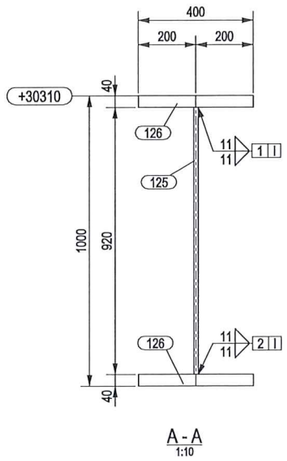
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG009

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90145	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG031	125	1	PL15x920	7985	S420MLO	2	865.0	14.96	
CWUPG031	126	2	PL40x400	7594	S420MLO	2	1903.1	13.39	
						TOTALE	2768.0	28.35	



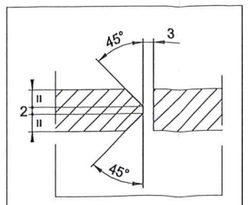
CWUPG031
WPG1000x400x15x40



A - A
1:10

SWEEP = 6 mm

CAMBER = 4 mm

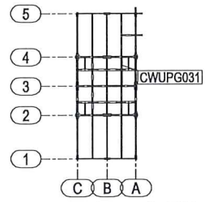


DETAIL 13

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

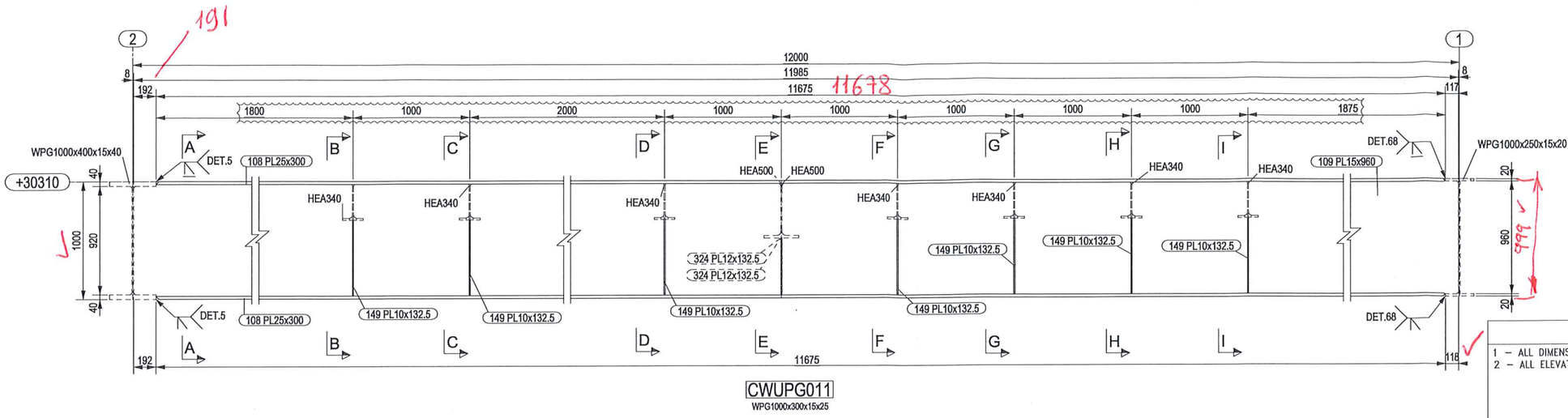
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG031

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90100	SHEET 001	REV. 0

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A

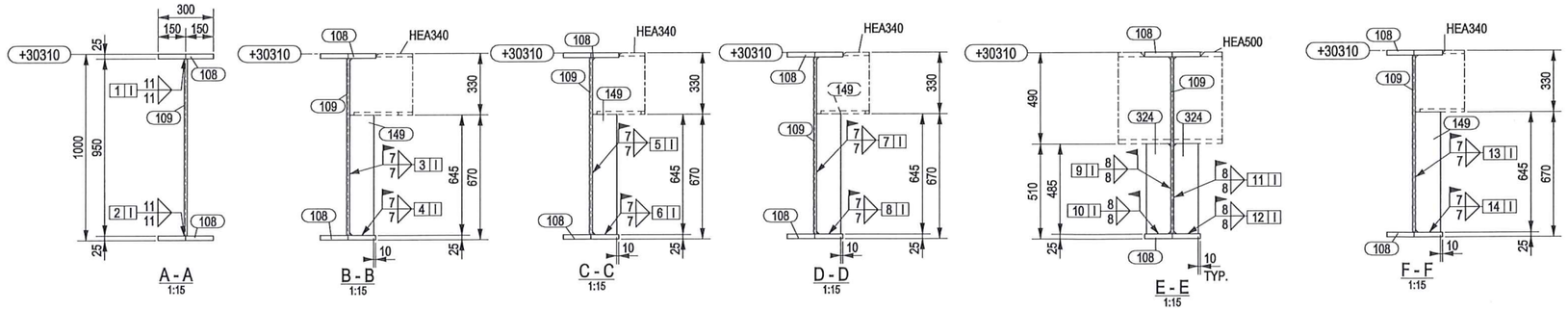
SWEEP = 2 mm
CAMBER = 8 mm

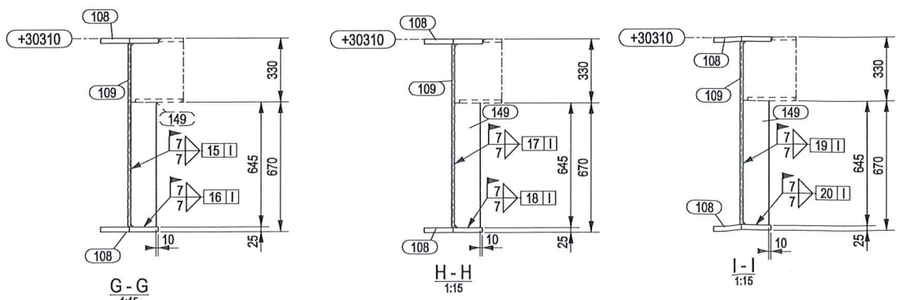
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG011	108	2	PL25x300	11669	S420MLO	2	1371.8	15.18	
CWUPG011	109	1	PL15x960	11985	S420MLO	2	1340.1	23.15	
CWUPG011	149	7	PL10x132.5	645	S355MLO	3	46.9	1.30	
CWUPG011	324	2	PL12x132.5	485	S355MLO	3	12.1	0.29	
						TOTALE	2770.9	39.92	



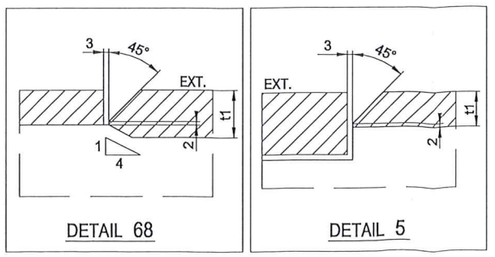
CWUPG011
WPG1000x300x15x25

HOLD





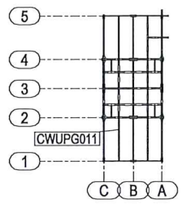
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

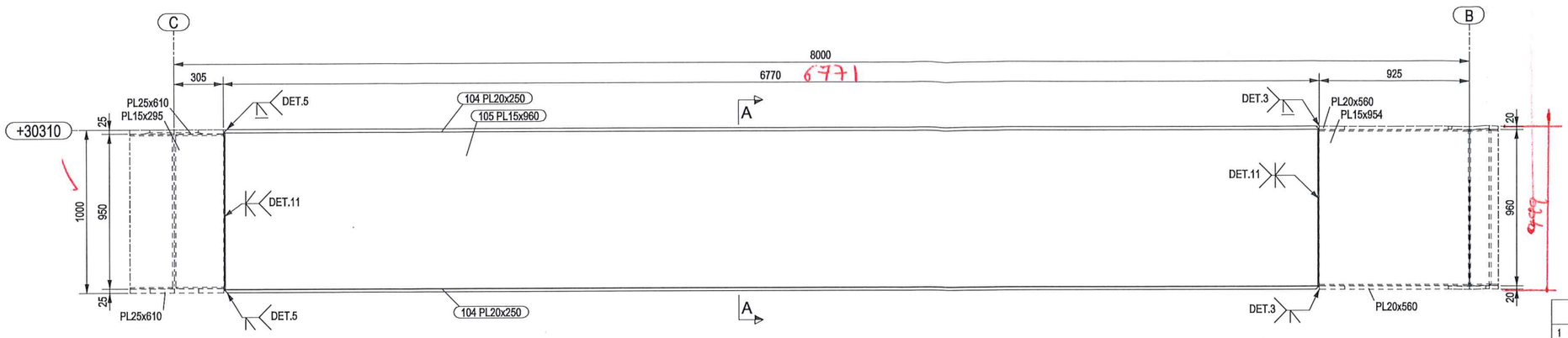
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

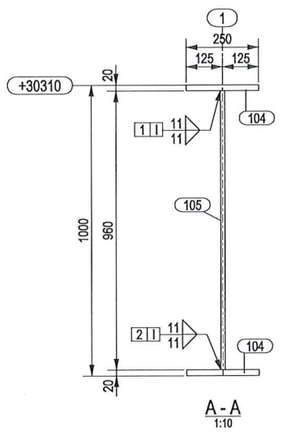
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG011

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:20
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90082	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG005	104	2	PL20x250	6764	S420MLO	2	529.7	7.31	
CWUPG005	105	1	PL15x960	6764	S420MLO	2	764.0	13.20	
						TOTALE	1293.7	20.52	



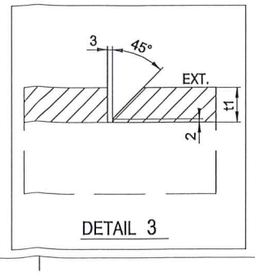
CWUPG005
WPG1000x250x15x20



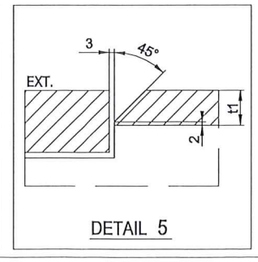
A - A
1:10

SWEEP = 5 mm
CAMBER = 6 mm

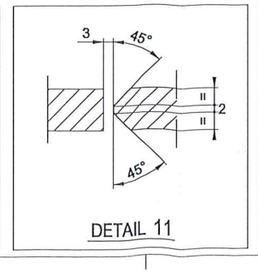
ACANDIUZZI
IDEL CONSTRUCTIONS S.p.A.
QUALITY CONTROL



DETAIL 3



DETAIL 5

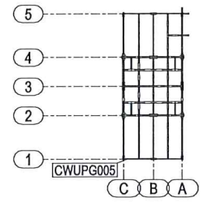


DETAIL 11

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

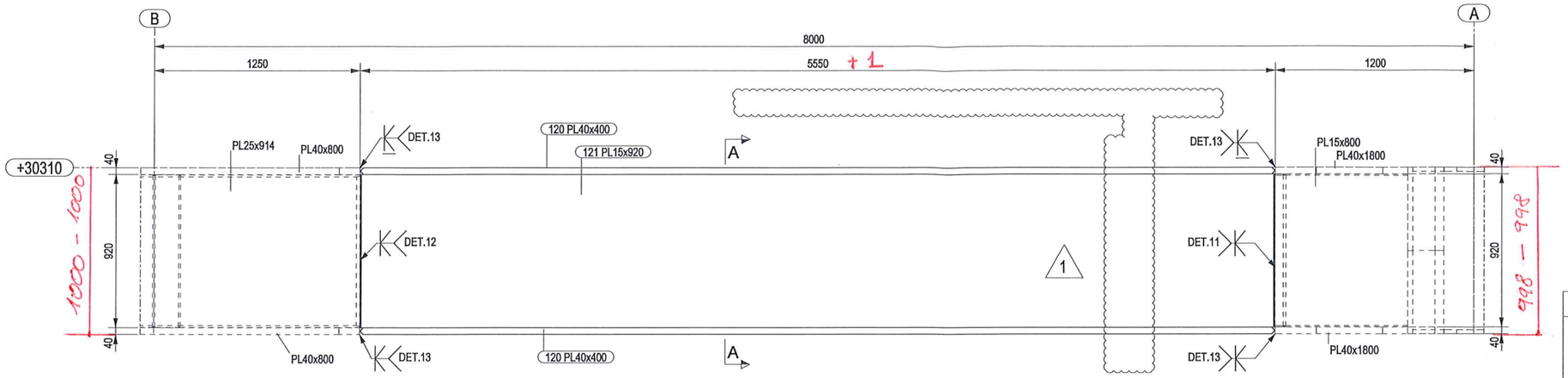
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG005

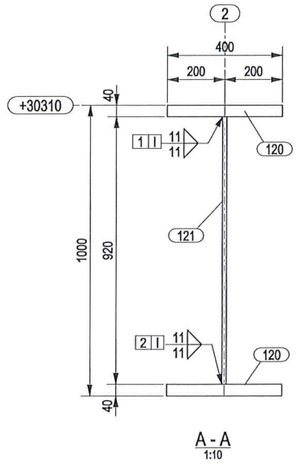
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90078	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG023	120	2	PL40x400	5544	S420MLO	2	1388.1	9.78	
CWUPG023	121	1	PL15x920	5544	S420MLO	2	600.0	10.38	
						TOTALE	1988.1	20.16	

1



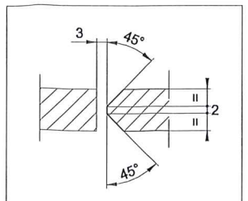
CWUPG023
WPG1000x400x15x40



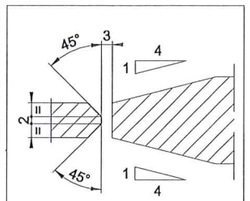
A - A
1:10

SWEEP = 1 mm
CAMBER = 5 mm

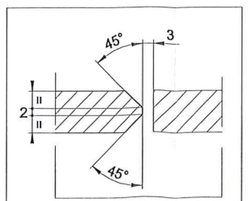
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DETAIL 11



DETAIL 12

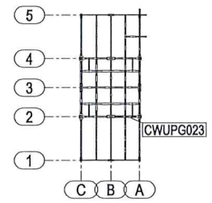


DETAIL 13

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

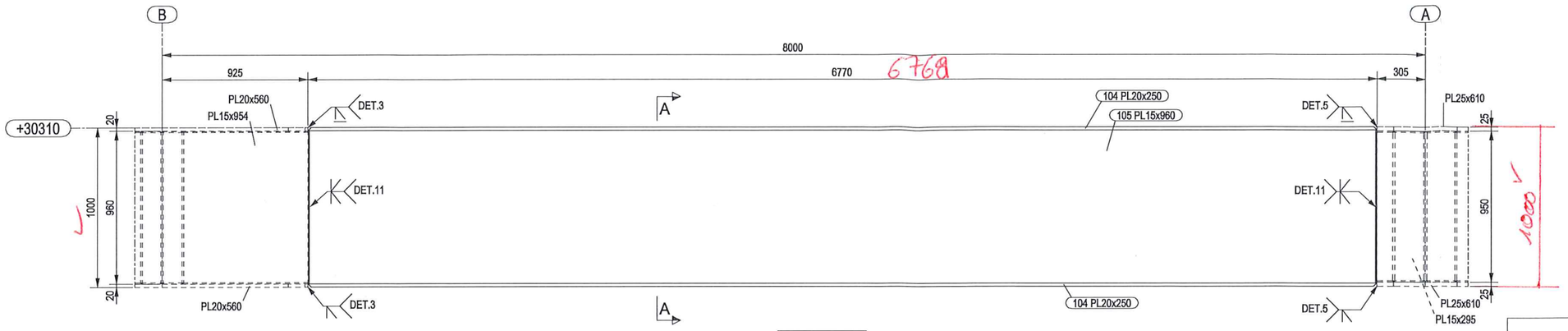
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG023

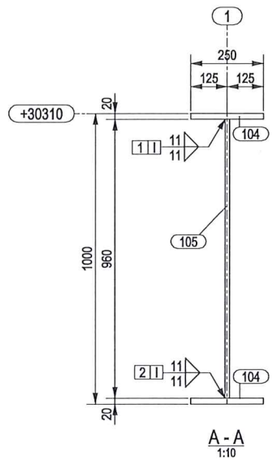
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90091	SHEET 001	REV. 1

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. QUALITY CONTROL

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG006	104	2	PL20x250	6764	S420MLO	2	529.7	7.31	
CWUPG006	105	1	PL15x960	6764	S420MLO	2	764.0	13.20	
						TOTALE	1293.7	20.52	



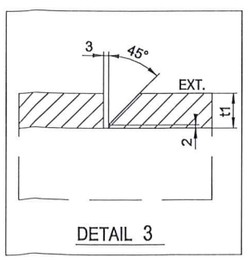
CWUPG006
WPG1000x250x15x20



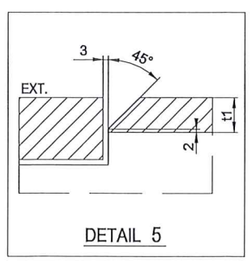
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CAMBER = 3 mm

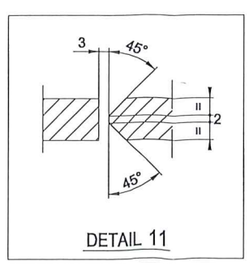
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
QUALITY CONTROL



DETAIL 3



DETAIL 5

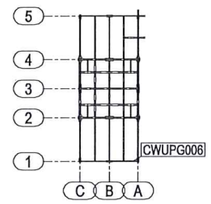


DETAIL 11

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG006

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90079	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-008	1 of 2	01/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Antonio Moreno			

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-008	2 of 2	01/02/2024

Mark Number	Description	Drawing	Quantity
CWLNO016	SPD800x40	123A90-FDL-ST-DD-90064	1
CWLNO018	SPD800x40	123A90-FDL-ST-DD-90066	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

The considered drawings revisions are those applicable at certificate issue date Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-009	1 of 2	02/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-009	2 of 2	02/02/2024

Mark Number	Description	Drawing	Quantity
CWLNO017	SPD800x40	123A90-FDL-ST-DD-90065	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-010	1 of 2	02/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	**Acceptance Criteria**	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

Mod. DT101620A Rev 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-010	2 of 2	02/02/2024

Mark Number	Description	Drawing	Quantity
CWUPG012	PL25x300	123A90-FDL-ST-DD-90083	1
CWUPG020	PL25x300	123A90-FDL-ST-DD-90089	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

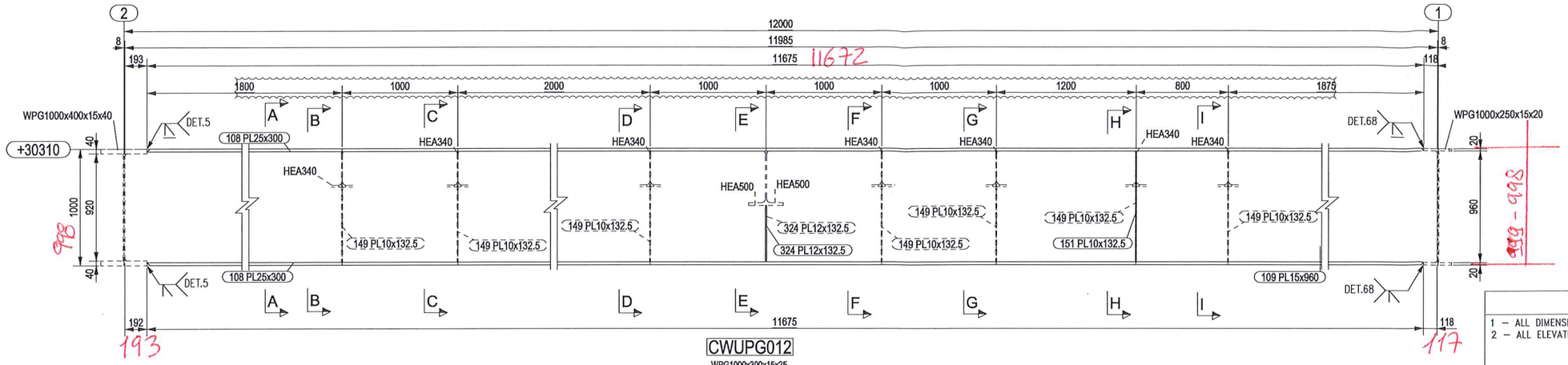
The considered drawings revisions are those applicable at certificate issue date

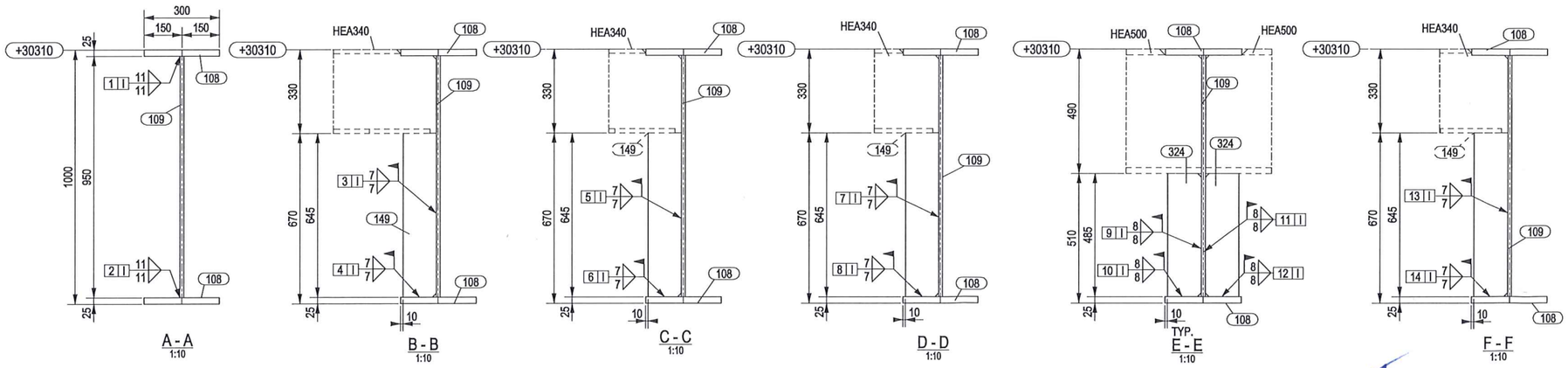
Mod. DT101620A Rev 0

CAMBER = 11 mm

SWEEP = 1 mm

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG012	108	2	PL25x300	11669	S420MLO	2	1371.8	15.18	
CWUPG012	109	1	PL15x960	11985	S420MLO	2	1340.1	23.15	
CWUPG012	149	7	PL10x132.5	645	S355MLO	3	46.9	1.30	
CWUPG012	151	1	PL10x132.5	950	S355MLO	3	9.9	0.27	
CWUPG012	324	2	PL12x132.5	485	S355MLO	3	12.1	0.29	
						TOTALE	2780.8	40.19	



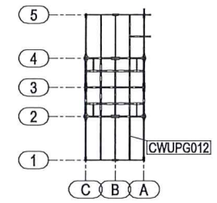


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NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

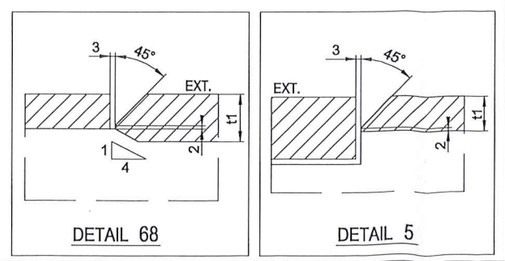


PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS



SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

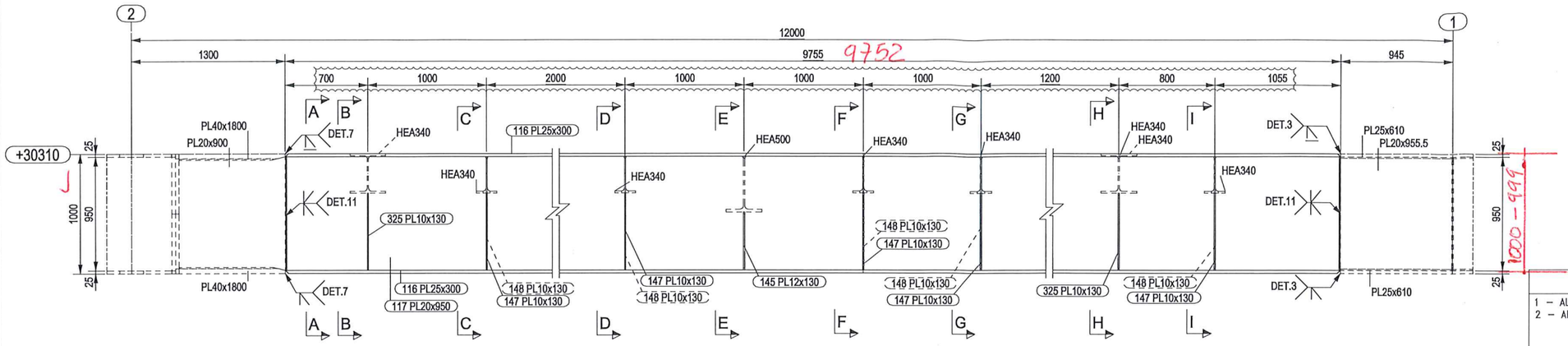
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG012

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:20
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90083	SHEET 001	REV. 0

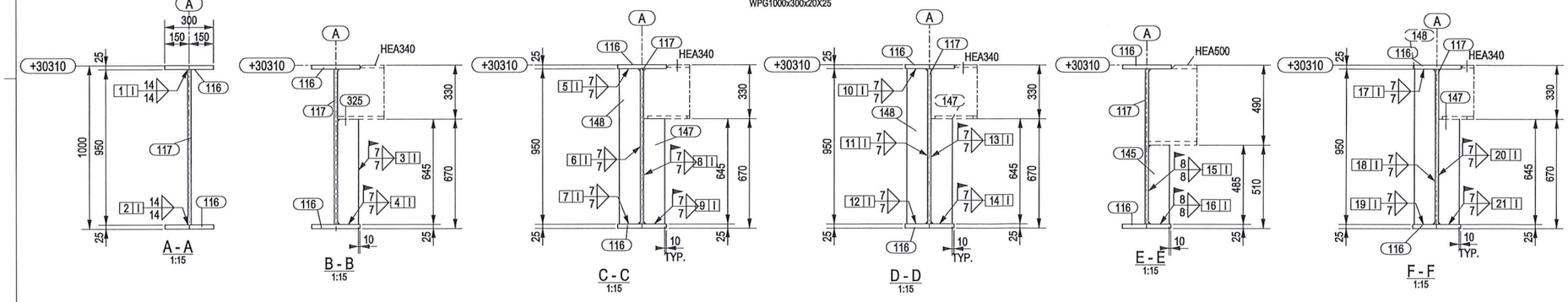
CAMBER = 4 mm
SWEEP = 3 mm

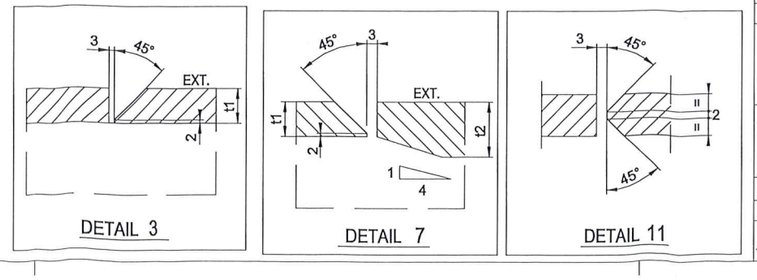
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG020	116	2	PL25x300	9749	S420MLO	2	1145.5	12.69	
CWUPG020	117	1	PL20x950	9749	S420MLO	2	1452.9	18.93	
CWUPG020	145	1	PL12x130	485	S355MLO	3	5.9	0.14	
CWUPG020	147	5	PL10x130	645	S355MLO	3	32.9	0.91	
CWUPG020	148	5	PL10x130	950	S355MLO	3	48.4	1.34	
CWUPG020	325	2	PL10x130	645	S355MLO	3	13.1	0.37	
						TOTALE	2698.6	34.38	



HOLD

CWUPG020
WPG1000x300x20X25



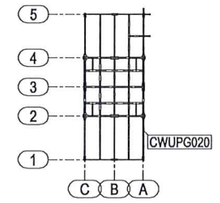


SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG020

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:20

DRAWN CM-TS | CHECKED M.ROSSI | APPROVED D.CASADIO | DATE 01/12/2023

A1 | DRAWING NO. 123A90-FDL-ST-DD-90089 | SHEET 001 | REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-011	1 of 2	05/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Acceptance Criteria	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

	Test Type
✓	VISUAL TEST
✓	DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

	Test Result
✓	ACCEPTED
	REJECTED

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
05/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-011	2 of 2	05/02/2024

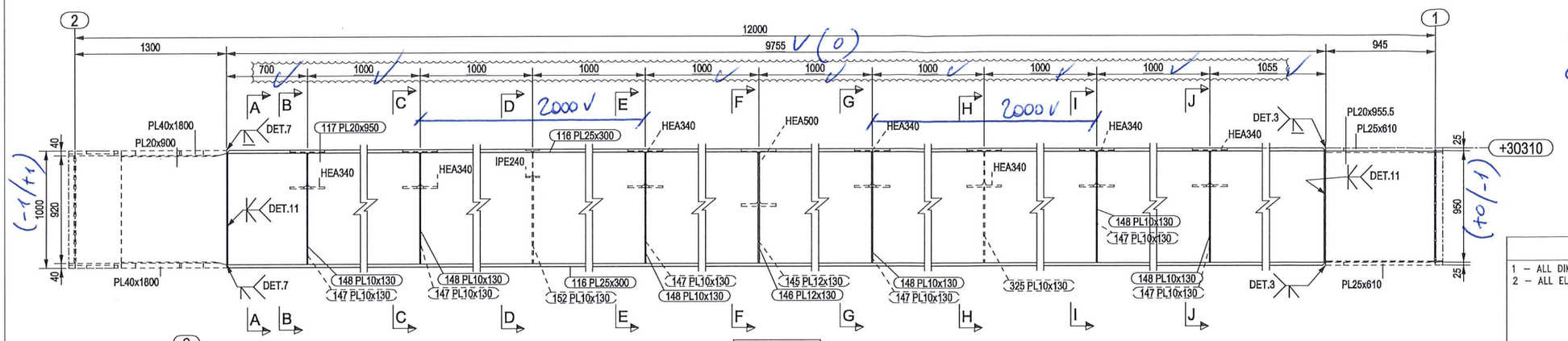
Mark Number	Description	Drawing	Quantity
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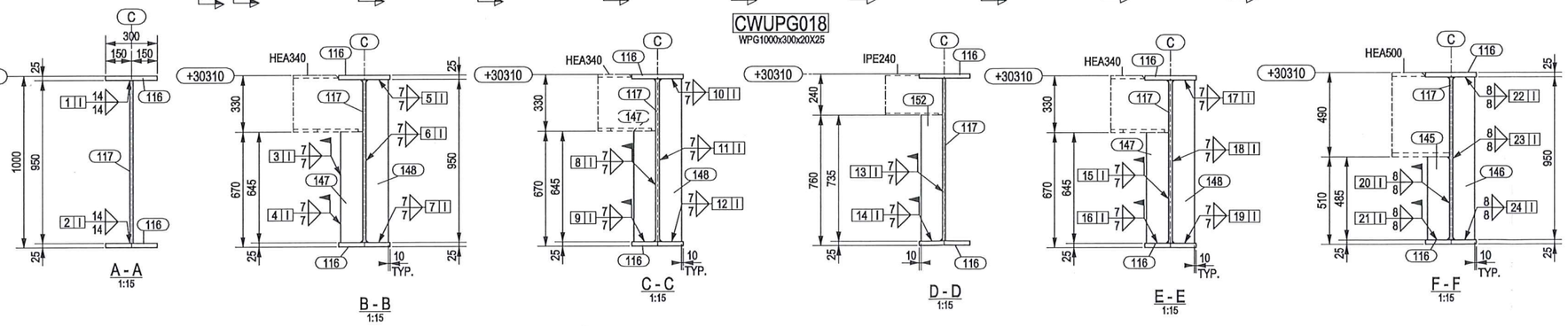
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
05/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. DT101620A Rev 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG018	116	2	PL25x300	9749	S420MLO	2	1145.5	12.69	
CWUPG018	117	1	PL20x950	9749	S420MLO	2	1452.9	18.93	
CWUPG018	145	1	PL12x130	485	S355MLO	3	5.9	0.14	
CWUPG018	146	1	PL12x130	950	S355MLO	3	11.6	0.27	
CWUPG018	147	6	PL10x130	645	S355MLO	3	39.4	1.10	
CWUPG018	148	6	PL10x130	950	S355MLO	3	58.1	1.61	
CWUPG018	152	1	PL10x130	735	S355MLO	3	7.5	0.21	
CWUPG018	325	1	PL10x130	645	S355MLO	3	6.6	0.18	
						TOTALE	2727.4	35.12	

SWEEP = 2mm
CAMBER = 5mm



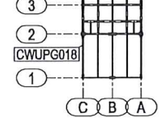


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NOTES

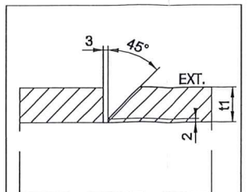
1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

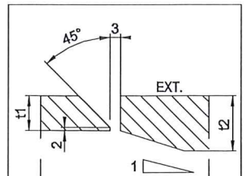


PLAN AT EL.+30310 TOS

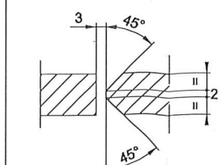
HOLDS



DETAIL 3



DETAIL 7



DETAIL 11

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG018

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:20
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90087	SHEET 001	REV. 0

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. QUALITY CONTROL

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-012	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO004	PL15x954	123A90-FDL-ST-DD-90128	1
CWUNO006	Ø406.4x12.7	123A90-FDL-ST-DD-90130	1
CWUNO007	Ø406.4x12.7	123A90-FDL-ST-DD-90131	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-013	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

Mark Number	Description	Drawing	Quantity
CWLNO015	SPD800x40	123A90-FDL-ST-DD-90063	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-014	1 of 1	07/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

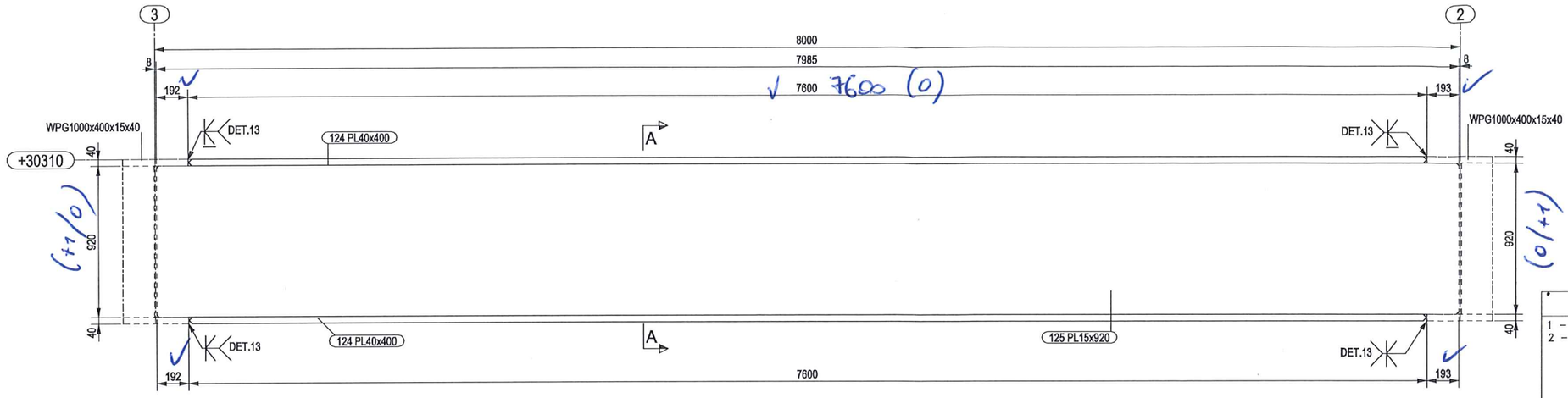
Mark Number	Description	Drawing	Quantity
CWUPG028	PL40x400	123A90-FDL-ST-DD-90097	1
CWUPG029	PL40x400	123A90-FDL-ST-DD-90098	1
CWUPG038	PL40x500	123A90-FDL-ST-DD-90105	1
CWUPG044	PL25x400	123A90-FDL-ST-DD-90111	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
07/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

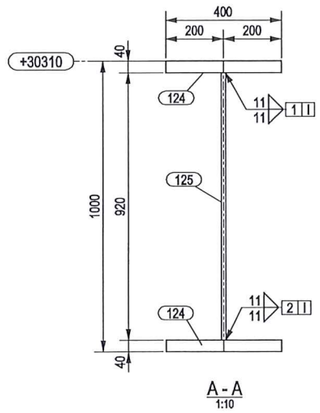
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG028	124	2	PL40x400	7594	S420MLO	2	1903.1	13.39	
CWUPG028	125	1	PL15x920	7985	S420MLO	2	865.0	14.96	
						TOTALE	2768.0	28.35	



CAMBER = 5mm
SWEEP = 3 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A
QUALITY CONTROL

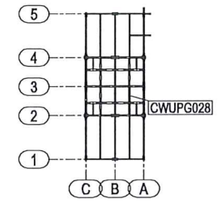
CWUPG028
WPG1000x400x15x40



NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

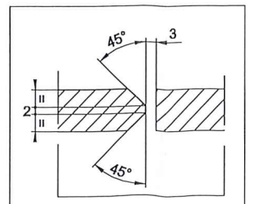


PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS



DETAIL 13

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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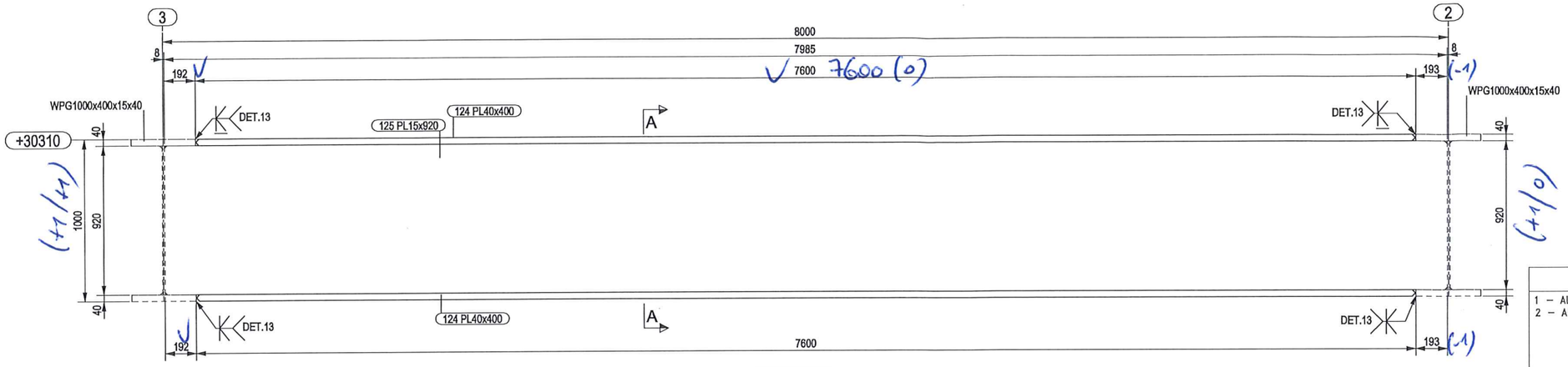
CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG028

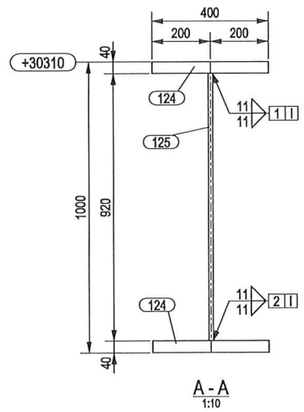
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90097	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG029	124	2	PL40x400	7594	S420MLO	2	1903.1	13.39	
CWUPG029	125	1	PL15x920	7985	S420MLO	2	865.0	14.96	
						TOTALE	2768.0	28.35	

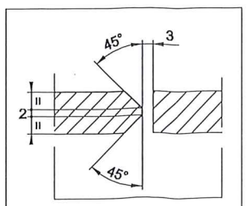
CAMBER = 2 mm
SWEEP = 1 mm



CWUPG029
WPG1000x400x15x40



A - A
1:10



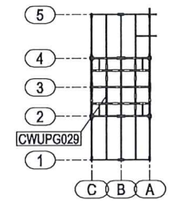
DETAIL 13

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

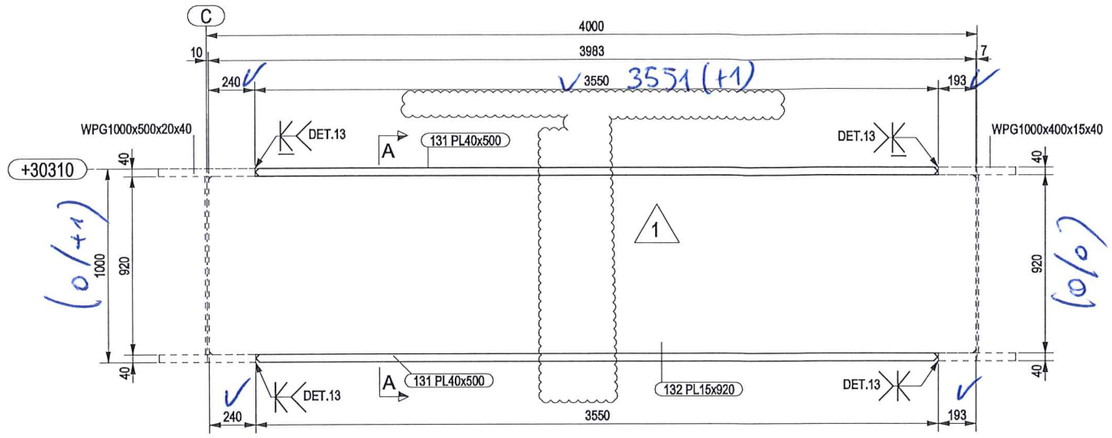
ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG029

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90098	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG038	131	2	PL40x500	3544	S420MLO	2	1107.1	7.69	
CWUPG038	132	1	PL15x920	3982	S420MLO	2	431.4	7.47	
						TOTALE	1538.5	15.16	

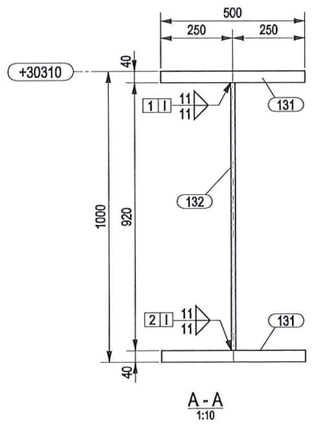
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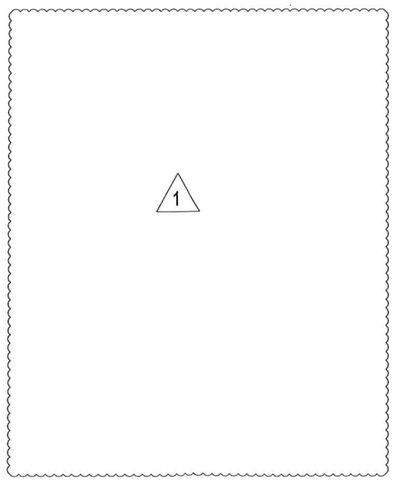
CWUPG038
WPG1000x500x15x40

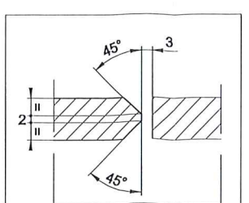
SWEEP = 0 mm
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SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL



A - A
1:10



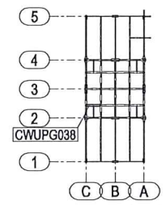


DETAIL 13

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

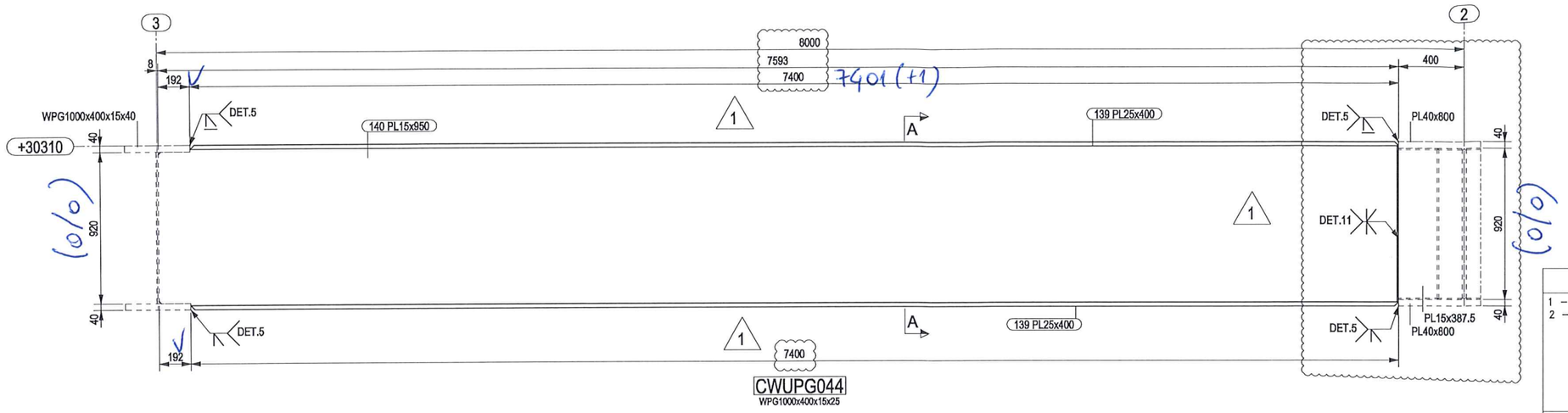
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG038

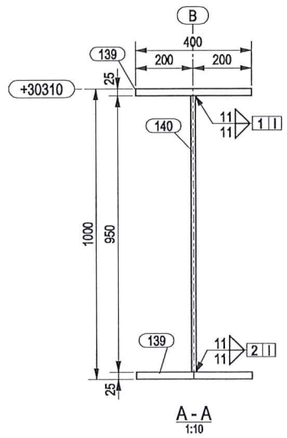
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90105	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG044	139	2	PL25x400	7394	S420MLO	2	1157.5	12.59	
CWUPG044	140	1	PL15x950	7590	S420MLO	2	848.0	14.66	
						TOTALE	2005.5	27.24	

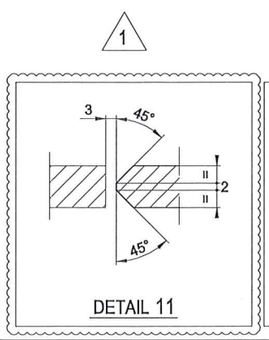


CAMBER = 3 mm
SWEEP = 2 mm

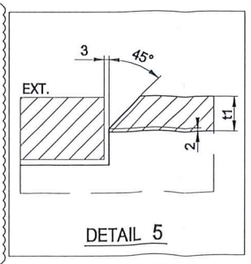
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



A - A
1:10



DETAIL 11

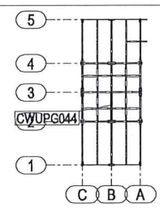


DETAIL 5

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG044

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90111	SHEET 001	REV. 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-015	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO003	PL15x954	123A90-FDL-ST-DD-90127	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-016	1 of 1	08/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

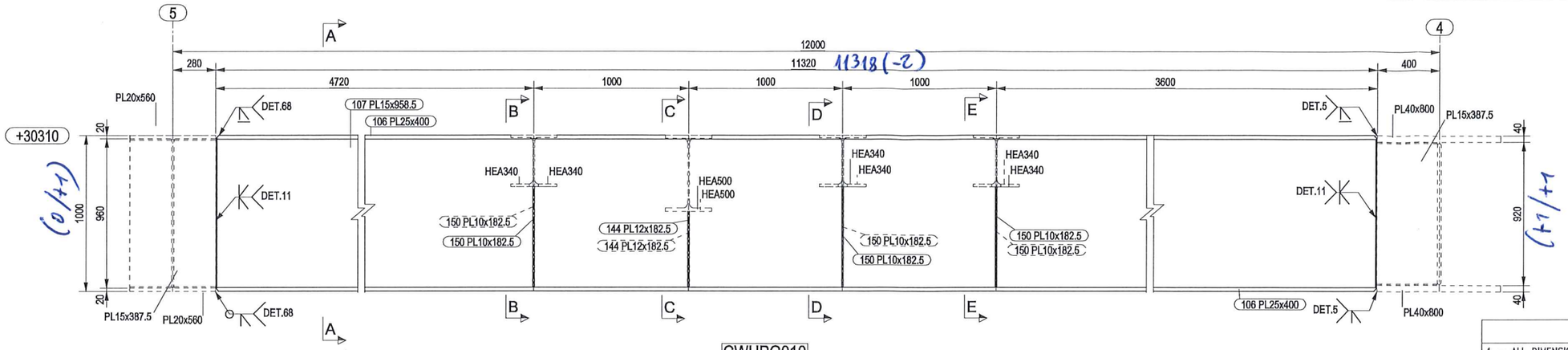
Mark Number	Description	Drawing	Quantity
CWUPG010	PL25x400	123A90-FDL-ST-DD-90144	1
CWUPG013	PL25x300	123A90-FDL-ST-DD-90084	1
CWUPG014	PL25x300	123A90-FDL-ST-DD-90085	1
CWUPG022	PL12x132.5	123A90-FDL-ST-DD-90090	1
CWUPG027	PL40x400	123A90-FDL-ST-DD-90096	1
CWUPG030	PL15x920	123A90-FDL-ST-DD-90099	1
CWUPG033	PL25x400	123A90-FDL-ST-DD-90102	1
CWUPG039	PL40x500	123A90-FDL-ST-DD-90106	1
CWUPG040	PL40x500	123A90-FDL-ST-DD-90107	1
CWUPG041	PL40x500	123A90-FDL-ST-DD-90108	1
CWUPG045	PL25x400	123A90-FDL-ST-DD-90112	1
CWUPG046	PL25x400	123A90-FDL-ST-DD-90147	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

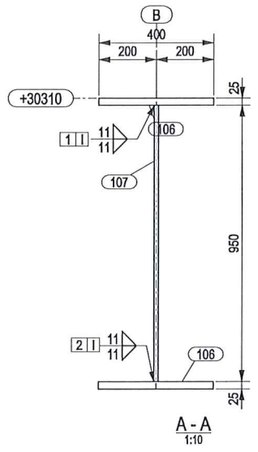
Mod. DT101620A Rev 1

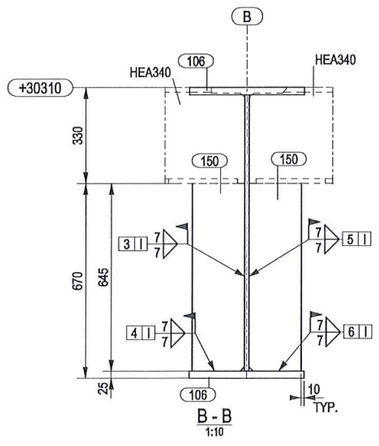
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG010	106	2	PL25x400	11314	S420MLO	2	1774.0	19.25	
CWUPG010	107	1	PL15x958.5	11314	S420MLO	2	1265.0	21.85	
CWUPG010	144	2	PL12x182.5	485	S355MLO	3	16.6	0.38	
CWUPG010	150	6	PL10x182.5	645	S355MLO	3	55.4	1.51	
						TOTALE	3111.0	43.00	

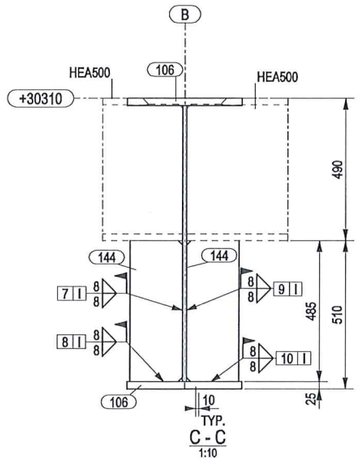


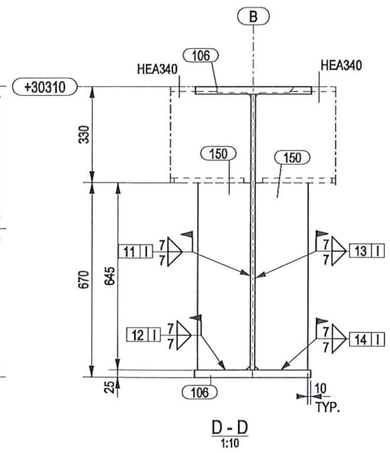
SWEEP= 6mm
CAMBER= 3 mm

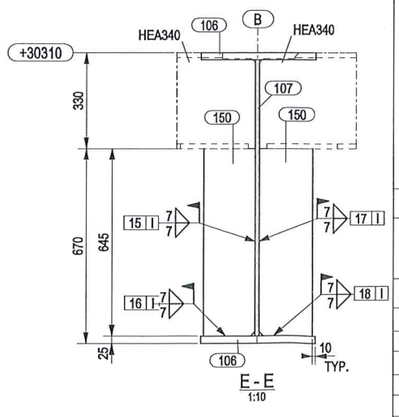
SCANDIUZZI STEEL CONSTRUCTIONS S.R.L. ITALY QUALITY CONTROL

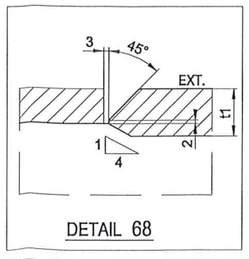


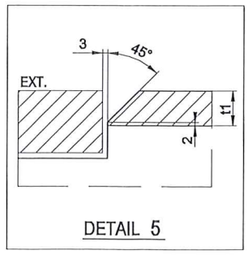


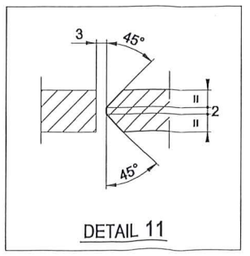








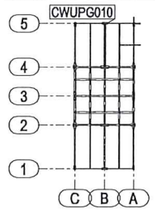




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

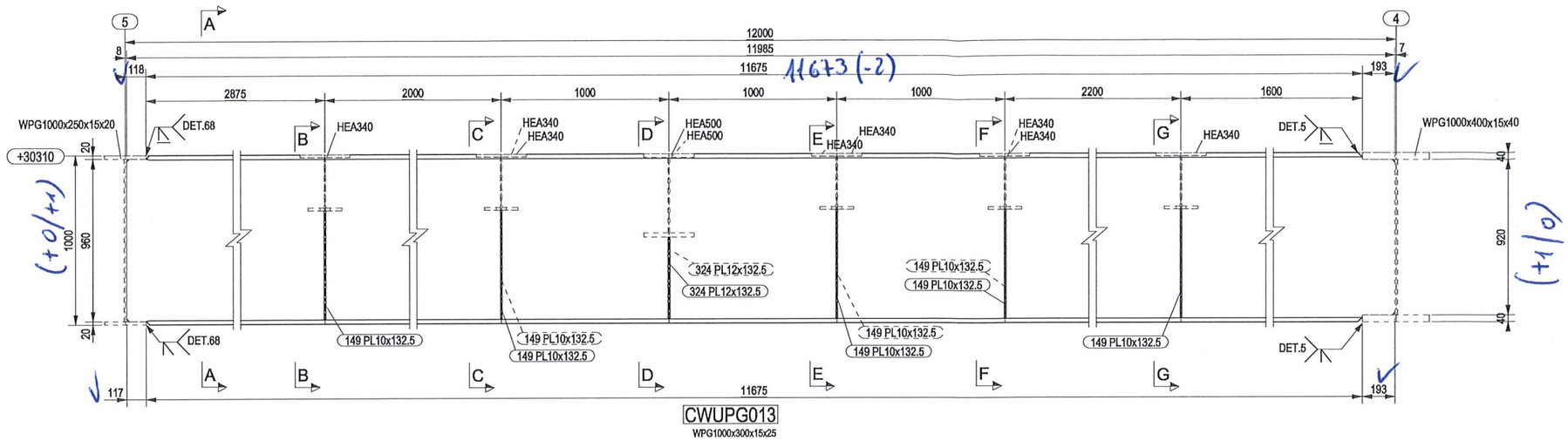
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	22/01/2024	CM-TS	MR	DC	RELEASED HOLD
0	07/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG010

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO		DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90144		SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG013	108	2	PL25x300	11669	S420MLO	2	1371.8	15.18	
CWUPG013	109	1	PL15x960	11985	S420MLO	2	1340.1	23.15	
CWUPG013	149	8	PL10x132.5	645	S355MLO	3	53.6	1.49	
CWUPG013	324	2	PL12x132.5	485	S355MLO	3	12.1	0.29	
						TOTALE	2777.6	40.11	



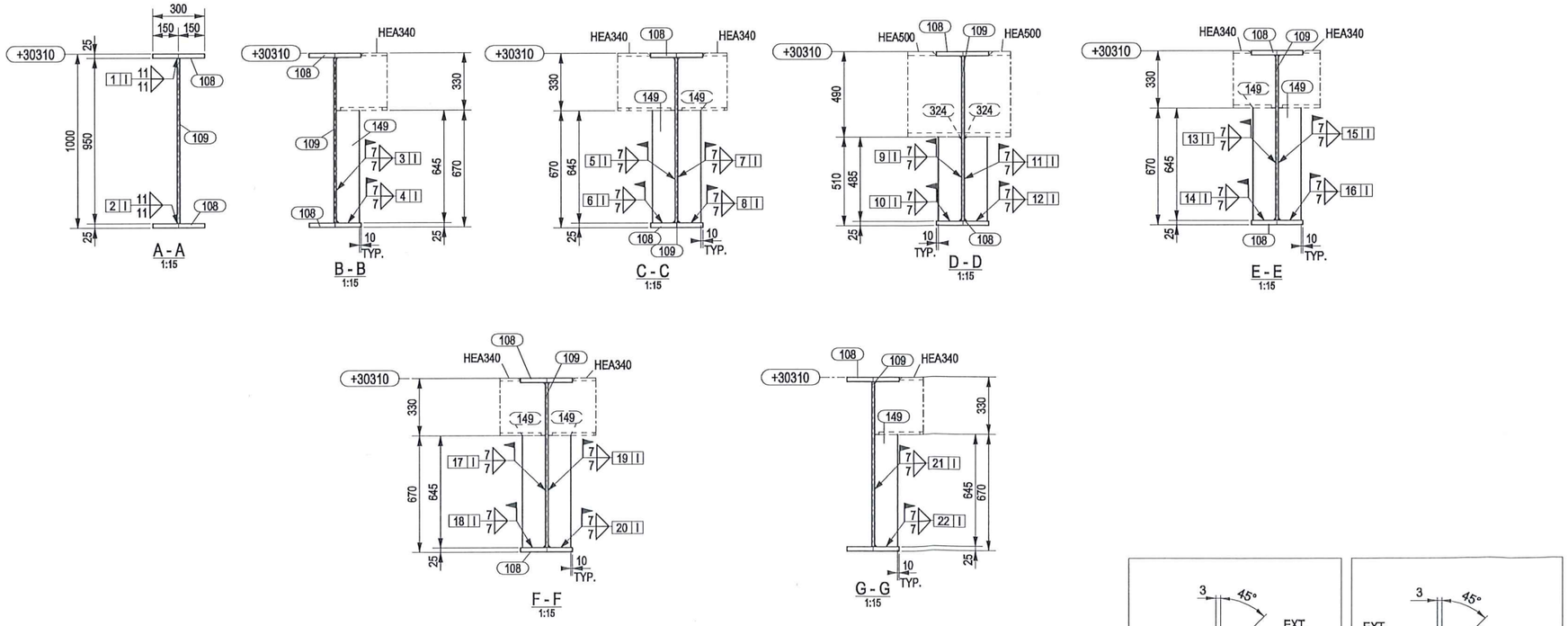
CWUPG013

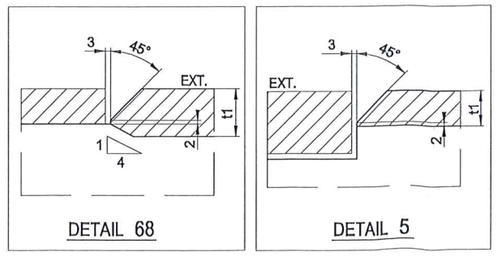
WPG1000x300x15x25

SWEEP = 5 mm

CAMBER = 6 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

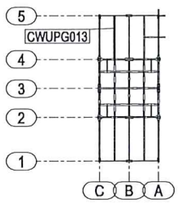




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	22/01/2024	CM-TS	MR	DC	RELEASED HOLD
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

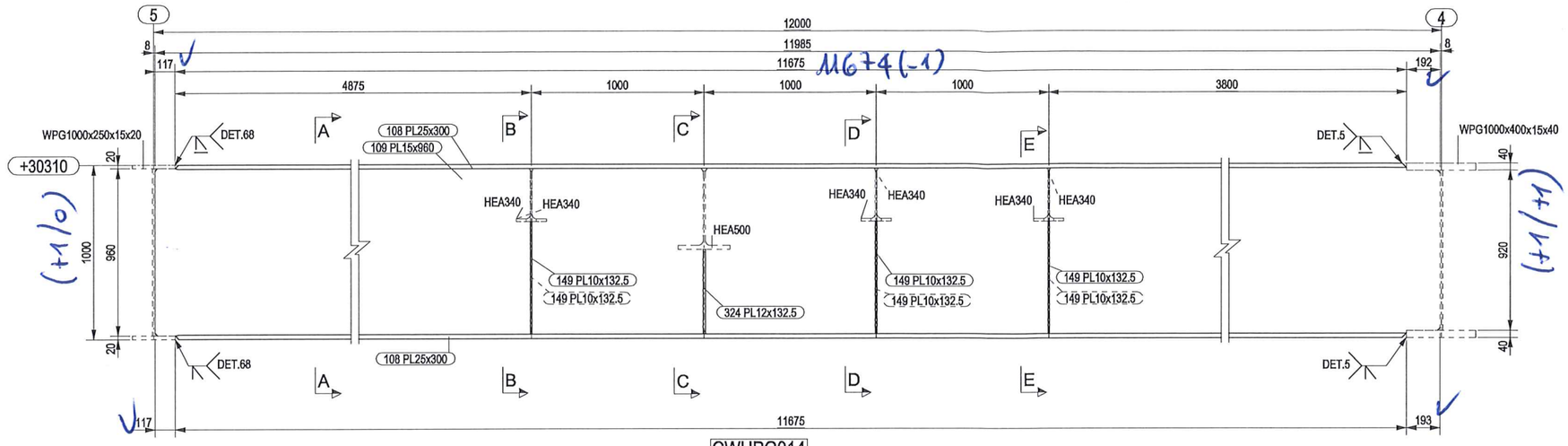
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG013

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90084	SHEET 001	REV. 1

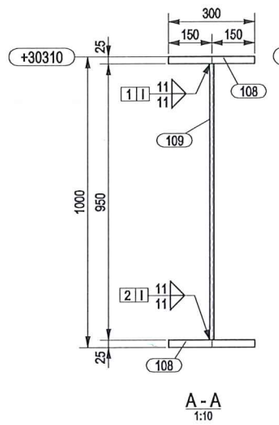
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG014	108	2	PL25x300	11669	S420MLO	2	1371.8	15.18	
CWUPG014	109	1	PL15x960	11985	S420MLO	2	1340.1	23.15	
CWUPG014	149	6	PL10x132.5	645	S355MLO	3	40.2	1.12	
CWUPG014	324	1	PL12x132.5	485	S355MLO	3	6.0	0.14	
						TOTALE	2758.2	39.59	

SWEEP = 4 mm
CAMBER = 6 mm

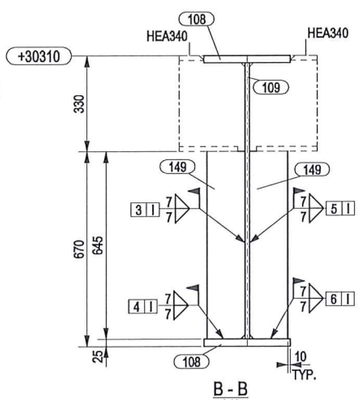
SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL



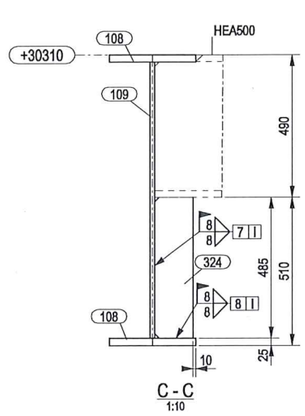
CWUPG014
WPG1000x300x15x25



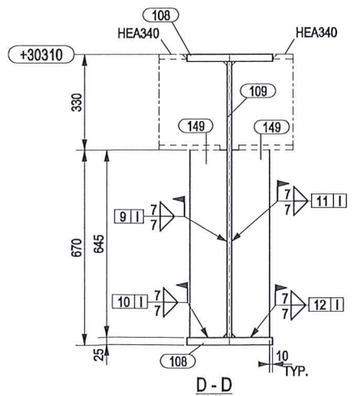
A - A
1:10



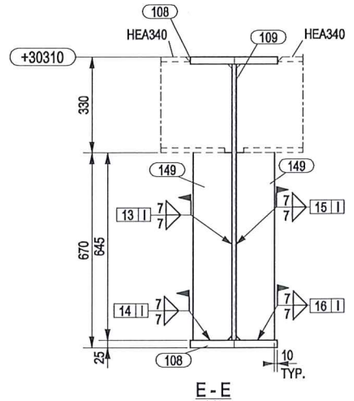
B - B
1:10



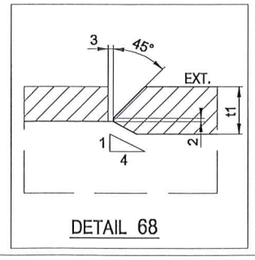
C - C
1:10



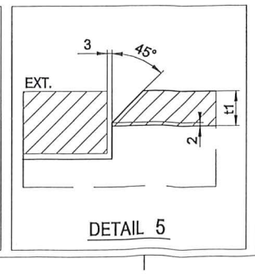
D - D
1:10



E - E
1:10



DETAIL 68

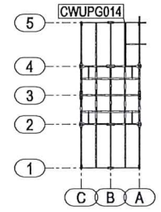


DETAIL 5

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	22/01/2024	CM-TS	MR	DC	RELEASED HOLD
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG014

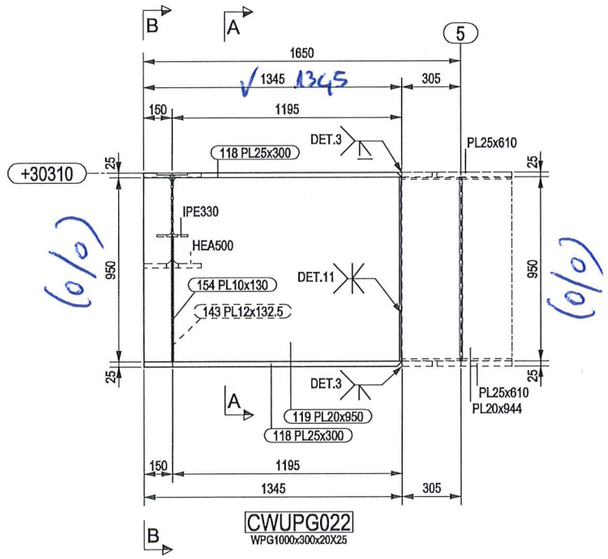
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90085	SHEET 001	REV. 1

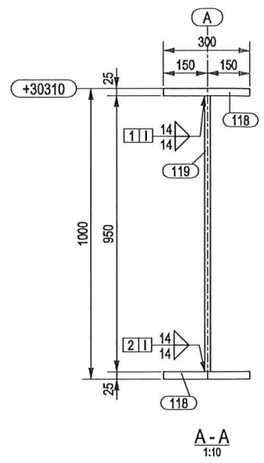
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG022	118	2	PL25x300	1342	S420MLO	2	156.8	1.77	
CWUPG022	119	1	PL20x950	1342	S420MLO	2	199.6	2.63	
CWUPG022	143	1	PL12x132.5	485	S355MLO	3	6.0	0.14	
CWUPG022	154	1	PL10x130	645	S355MLO	3	6.6	0.18	
						TOTALE	368.9	4.72	

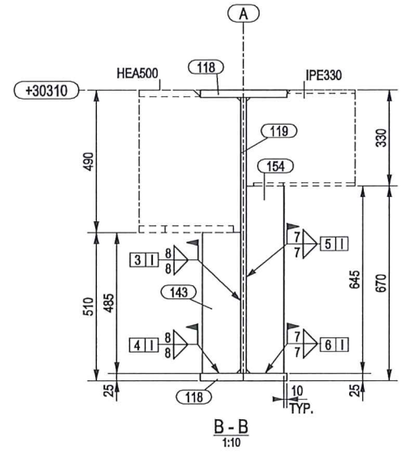
SWEEP = 0 mm

CAMBER = 0 mm

SCANWELL
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



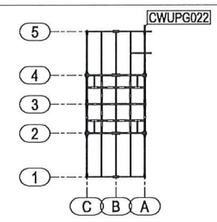




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



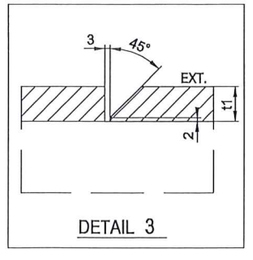
PLAN AT EL.+30310 TOS

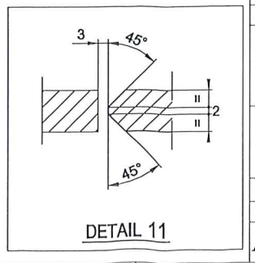
HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION





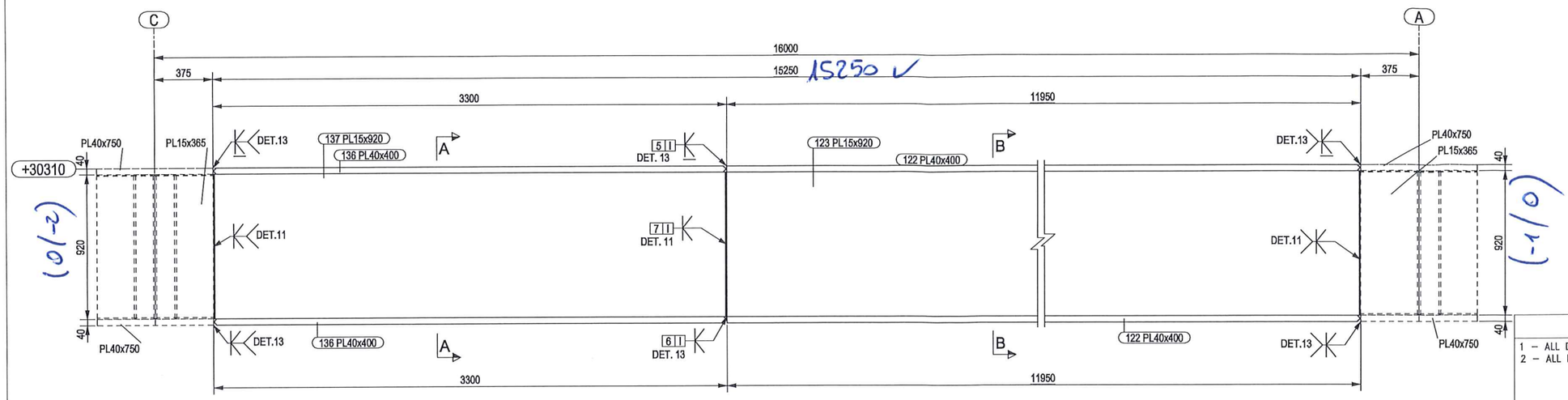
CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG022

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90090	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG027	122	2	PL40x400	11947	S420MLO	2	2998.8	21.07	
CWUPG027	123	1	PL15x920	11947	S420MLO	2	1293.9	22.36	
CWUPG027	136	2	PL40x400	3294	S420MLO	2	822.9	5.82	
CWUPG027	137	1	PL15x920	3294	S420MLO	2	356.2	6.17	
						TOTALE	5471.9	55.43	



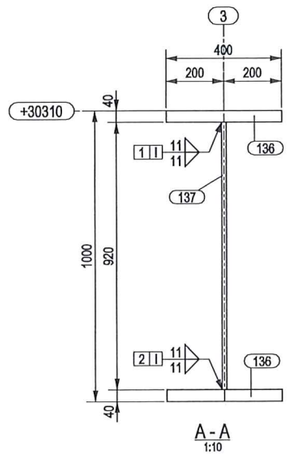
SWEEP= 7 mm

CAMBER= 5 mm

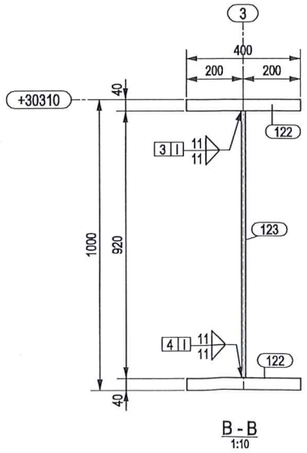
SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

CWUPG027

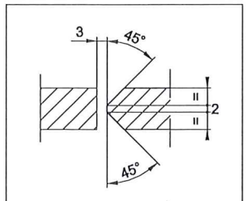
WPG1000x400x15x40



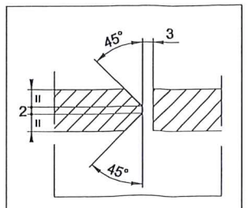
A - A
1:10



B - B
1:10



DETAIL 11

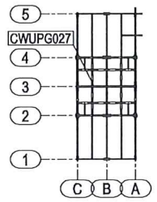


DETAIL 13

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

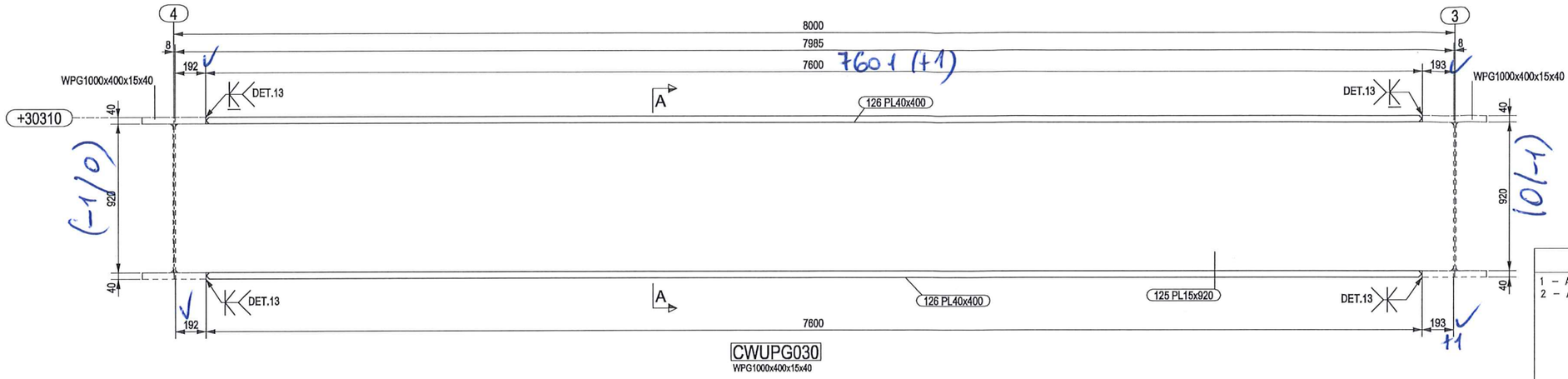
ROSETTI MARINO

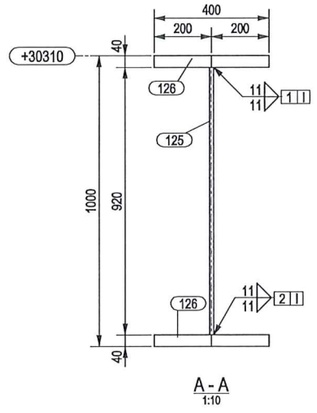
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG027

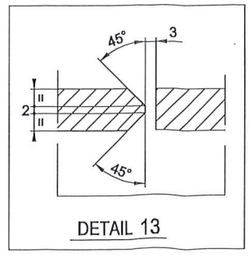
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90096	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG030	125	1	PL15x920	7985	S420MLO	2	865.0	14.96	
CWUPG030	126	2	PL40x400	7594	S420MLO	2	1903.1	13.39	
						TOTALE	2768.0	28.35	

SWEEP = 3 mm
CAMBER = 4 mm





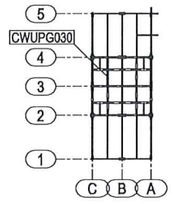


SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

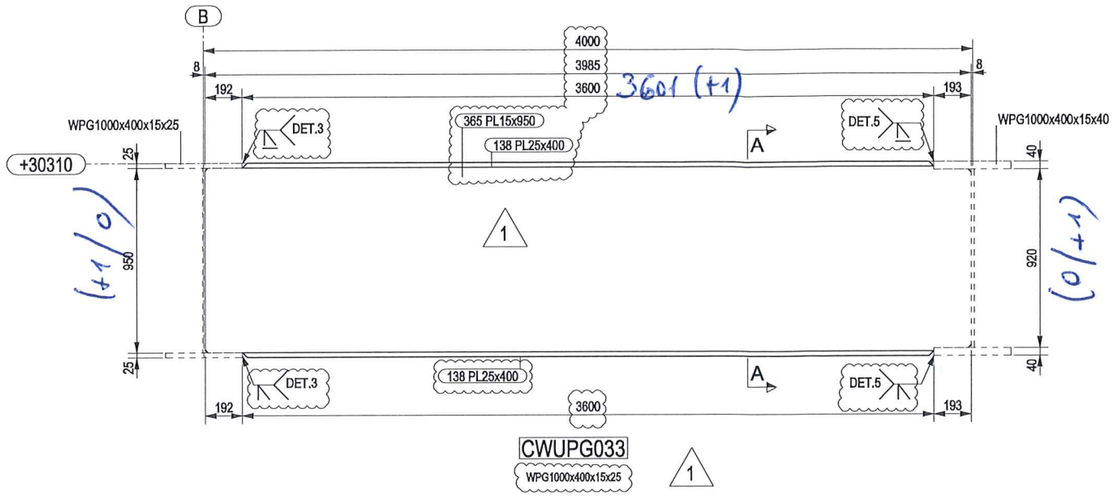
CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG030

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90099	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG033	138	2	PL25x400	3594	S420MLO	2	560.9	6.13	
CWUPG033	365	1	PL15x950	3985	S420MLO	2	445.0	7.71	
						TOTALE	1006.0	13.83	

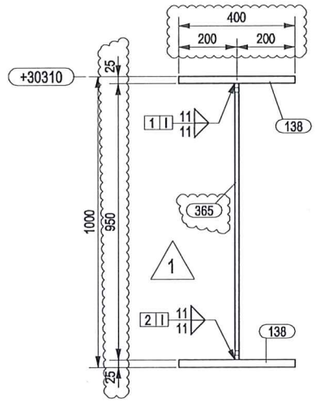
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3601 (+1)

SWEEP = 0 mm
CAMBER = 2mm

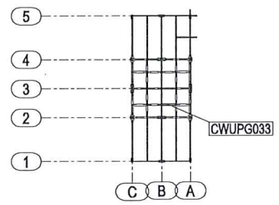
SCANDIUZZI STEEL CONSTRUCTIONS S.r.l. ITALY QUALITY CONTROL



NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

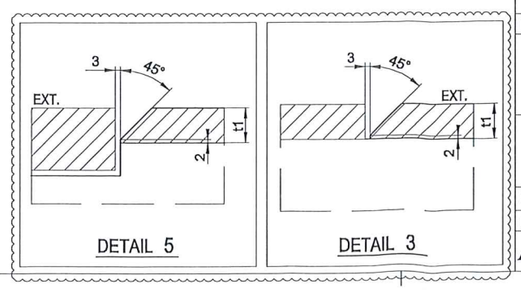


PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS



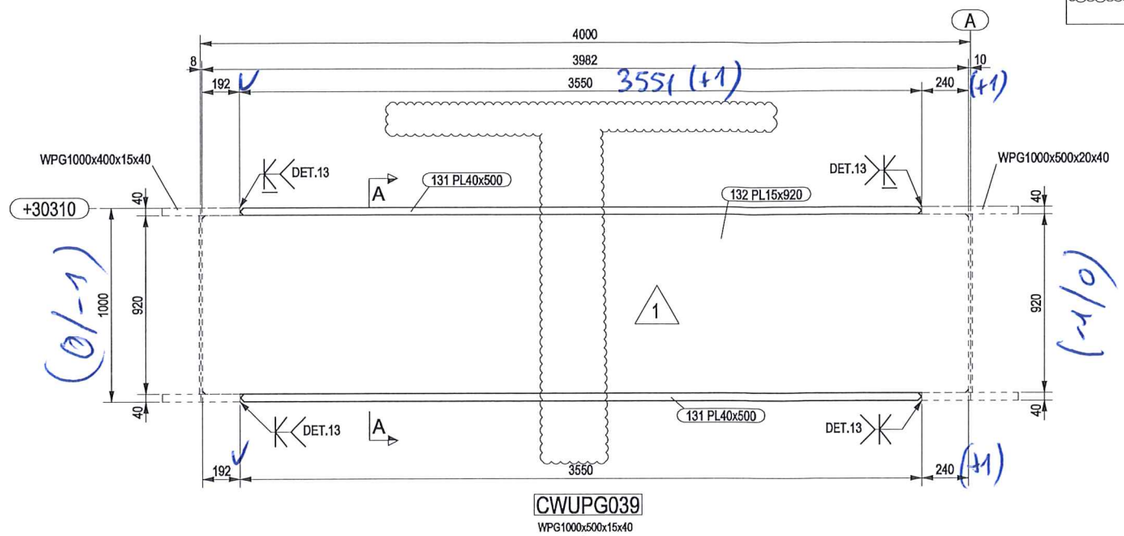
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG033

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90102	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG039	131	2	PL40x500	3544	S420MLO	2	1107.1	7.69	
CWUPG039	132	1	PL15x920	3982	S420MLO	2	431.4	7.47	
						TOTALE	1538.5	15.16	



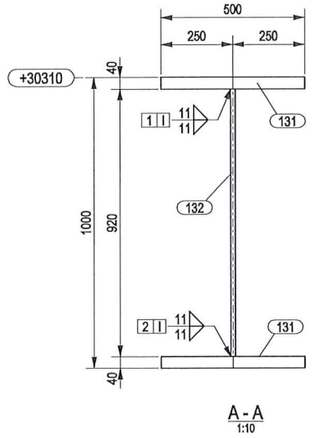
CWUPG039

WPG1000x500x15x40

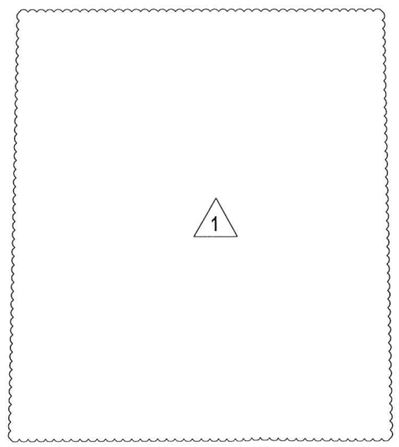
SWEEP = 0 mm

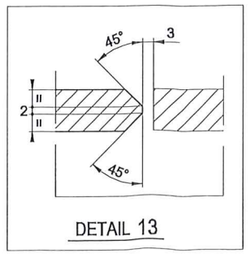
CAMBER = 1 mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL



A - A
1:10



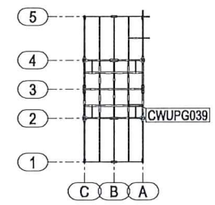


DETAIL 13

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

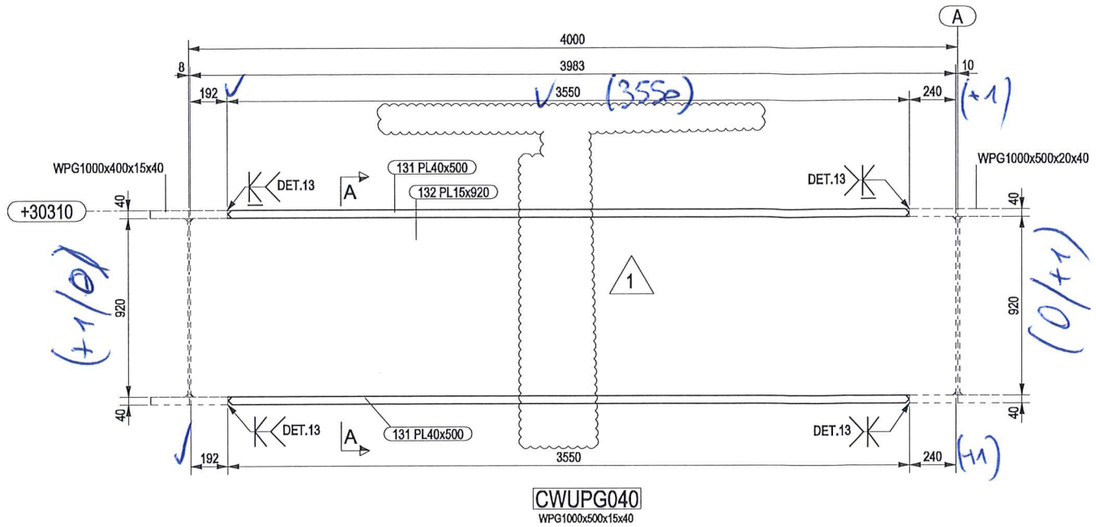
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

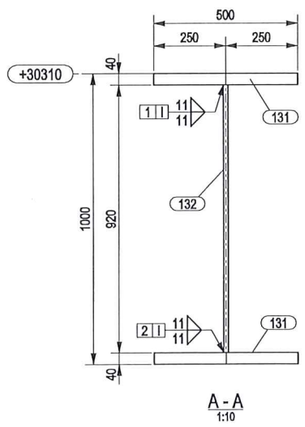
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG039

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90106	SHEET 001	REV. 1

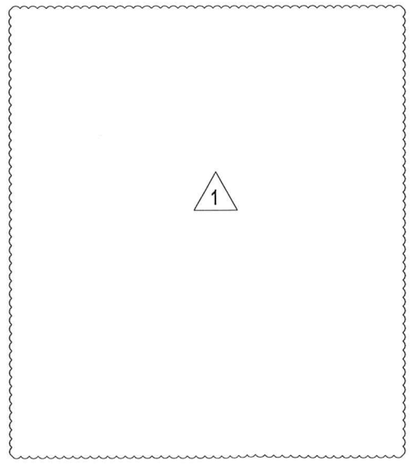
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG040	131	2	PL40x500	3544	S420MLO	2	1107.1	7.69	
CWUPG040	132	1	PL15x920	3982	S420MLO	2	431.4	7.47	
						TOTALE	1538.5	15.16	



CWUPG040
WPG1000x500x15x40



A - A
1:10



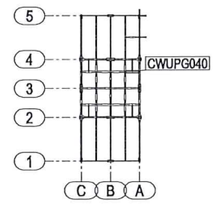
SCANDIUZZI STEEL CONSTRUCTIONS S.r.l.
QUALITY CONTROL

SWEEP = 0mm
CAMBER = 0mm

1

NOTES
1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

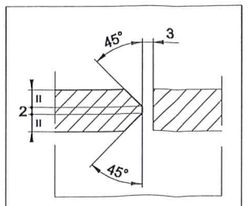


PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS



DETAIL 13

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

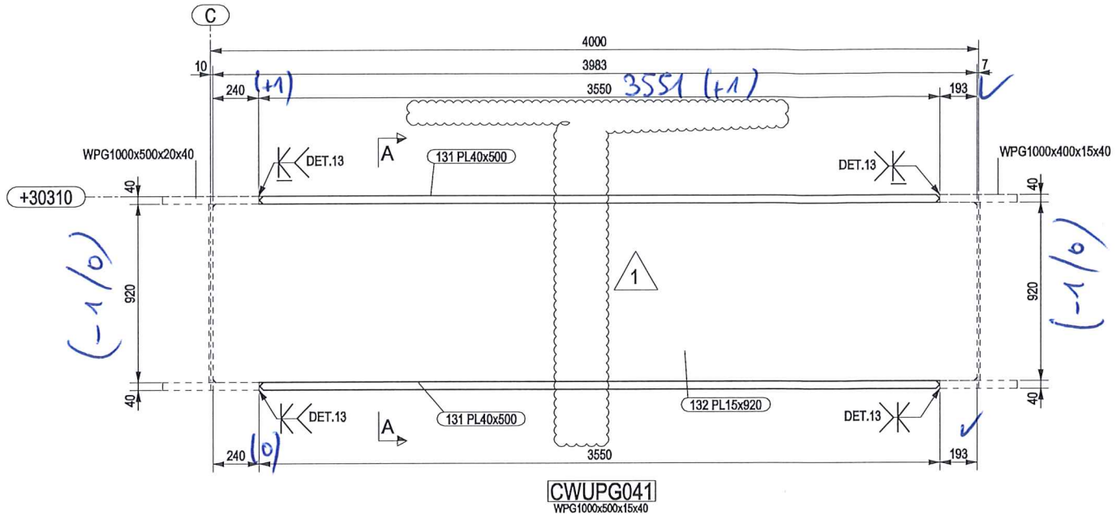
CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG040

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90107	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG041	131	2	PL40x500	3544	S420MLO	2	1107.1	7.69	
CWUPG041	132	1	PL15x920	3982	S420MLO	2	431.4	7.47	
						TOTALE	1538.5	15.16	

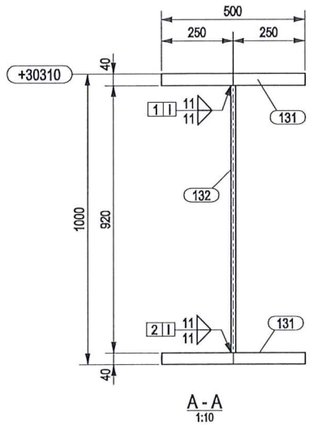
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CWUPG041
WPG1000x500x15x40

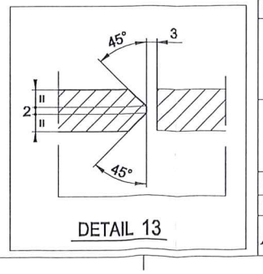
SWEEP = 1 mm
CAMBER = 0 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



A-A
1:10

1

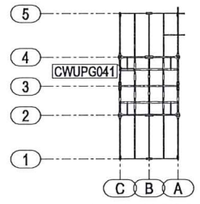


DETAIL 13

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

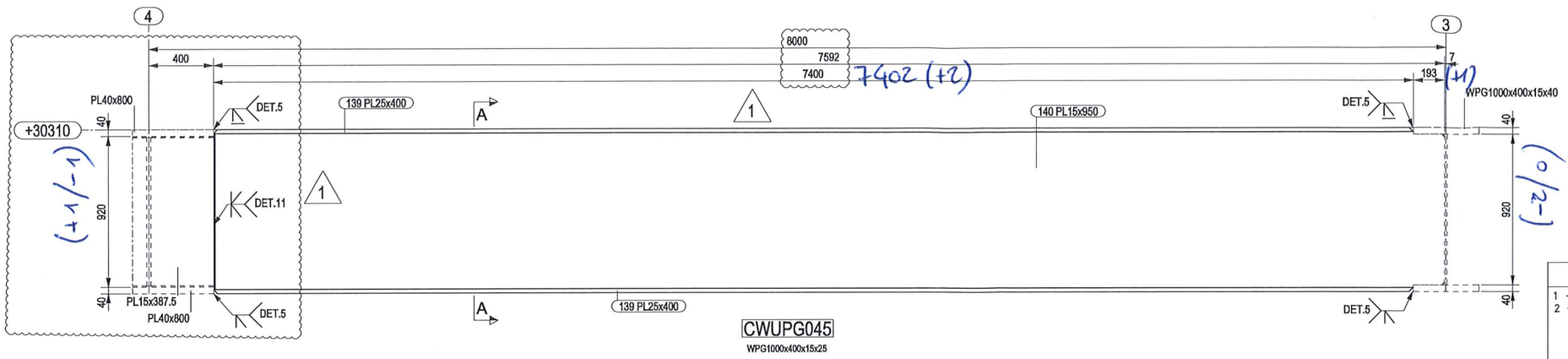
CROSSWIND

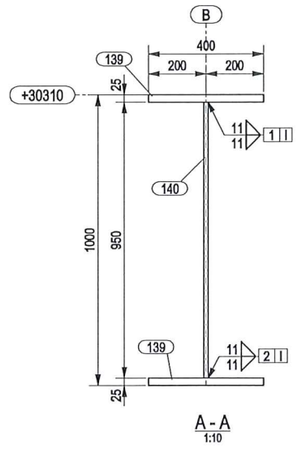
ROSETTIMARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG041

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90108	SHEET 001	REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG045	139	2	PL25x400	7394	S420MLO	2	1157.5	12.59	
CWUPG045	140	1	PL15x950	7590	S420MLO	2	848.0	14.66	
						TOTALE	2005.5	27.24	





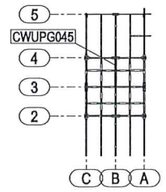
SWEEP = 3 mm
CAMBER = 4 mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN

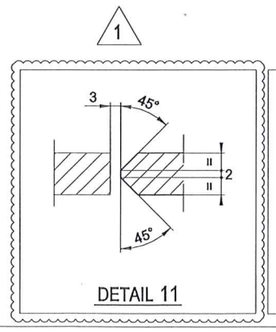


PLAN AT EL.+30310 TOS

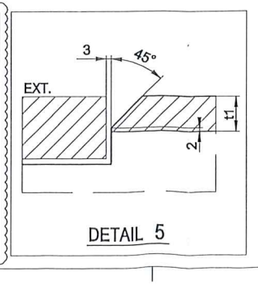
HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS



DETAIL 11



DETAIL 5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

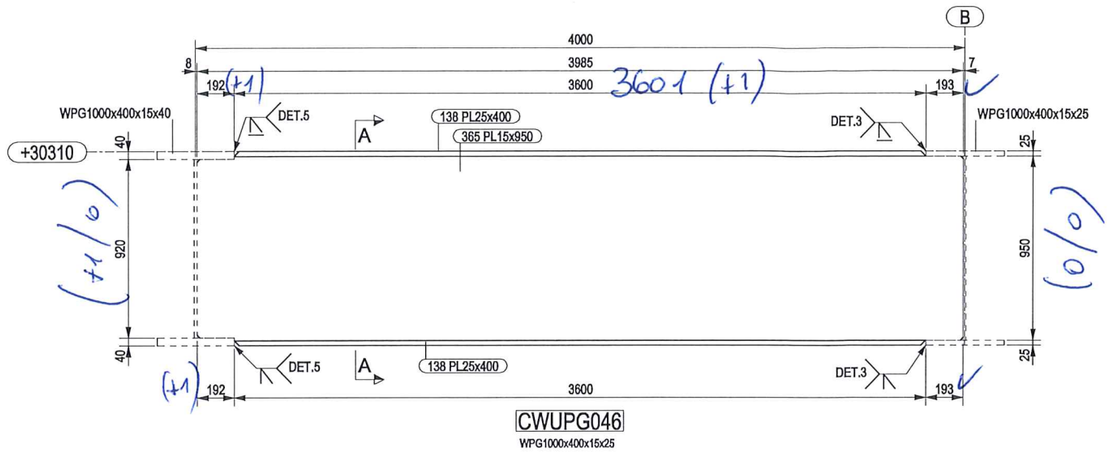
CROSSWIND | ROSETTI MARINO

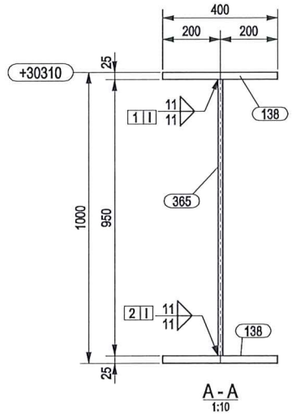
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG045

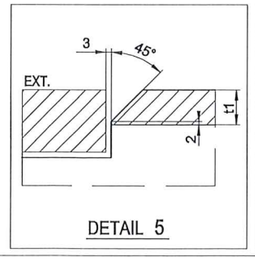
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90112	SHEET 001	REV. 1

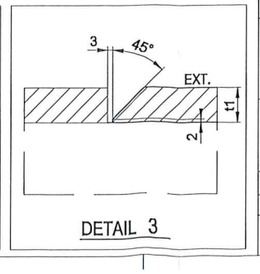
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG046	138	2	PL25x400	3594	S420MLO	2	560.9	6.13	
CWUPG046	365	1	PL15x950	3985	S420MLO	2	445.0	7.71	
						TOTALE	1006.0	13.83	

SWEEP = 2 mm
CAMBER = 1 mm







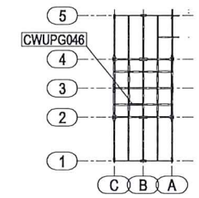


SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	07/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG046

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90147	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-017	1 of 1	16/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO013	PL40x1800	123A90-FDL-ST-DD-90139	1
CWUNO014	SPD800x30	123A90-FDL-ST-DD-90141	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
16/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-018	1 of 1	16/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

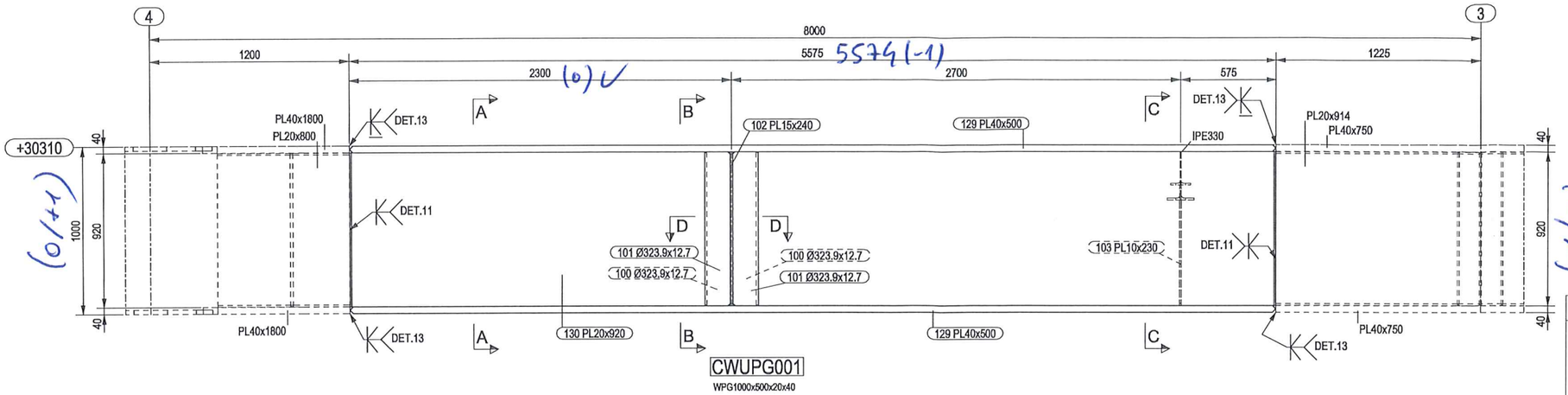
Mark Number	Description	Drawing	Quantity
CWUPG032	PL25x400	123A90-FDL-ST-DD-90101	1
CWUPG016	PL10x132.5	123A90-FDL-ST-DD-90143	1
CWUPG015	PL12x132.5	123A90-FDL-ST-DD-90146	1
CWUPG047	PL25x400	123A90-FDL-ST-DD-90148	1
CWUPG001	Ø323.9x12.7	123A90-FDL-ST-DD-90074	1
CWUPG002	Ø323.9x12.7	123A90-FDL-ST-DD-90075	1
CWUPG017	PL25x300	123A90-FDL-ST-DD-90086	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
16/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG001	100	2	Ø323.9x12.7	920	API5LX52	2	41.5	0.46	
CWUPG001	101	2	Ø323.9x12.7	920	API5LX52	2	41.4	0.46	
CWUPG001	102	1	PL15x240	920	S420MLO	2	26.0	0.48	
CWUPG001	103	1	PL10x230	720	S355MLO	3	13.0	0.35	
CWUPG001	129	2	PL40x500	5569	S420MLO	2	1743.0	12.06	
CWUPG001	130	1	PL20x920	5569	S420MLO	2	803.2	10.49	
						TOTALE	2668.0	24.30	



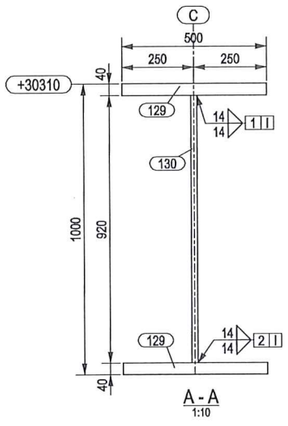
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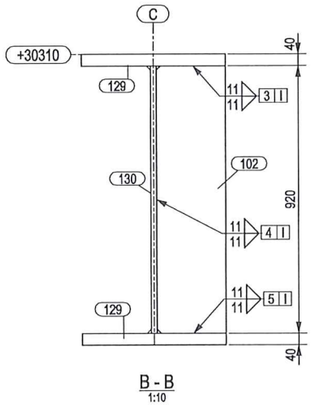
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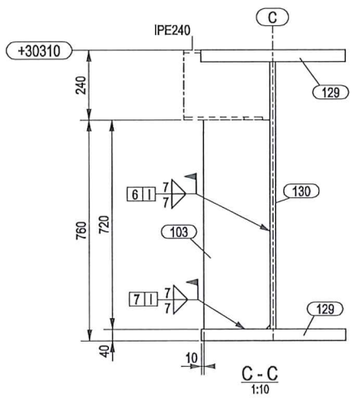
SCANDIUZZI STEEL CONSTRUCTIONS S.r.l. ITALY QUALITY CONTROL

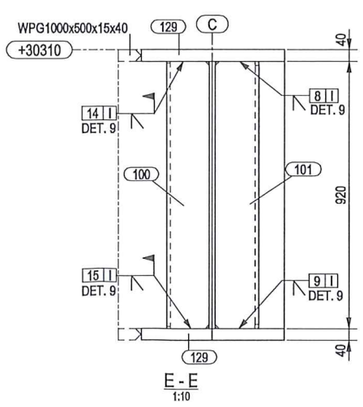
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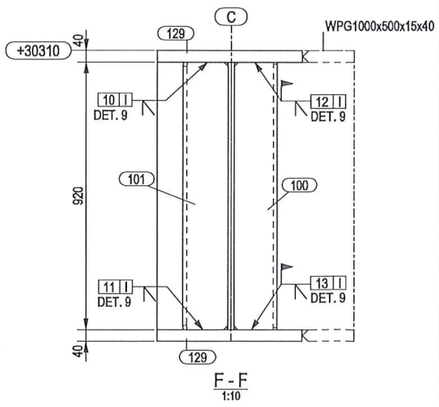
1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

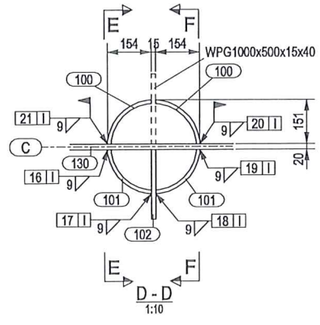


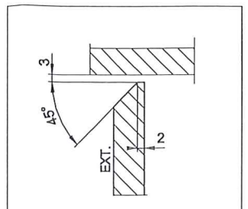




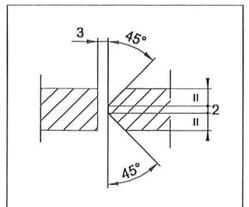




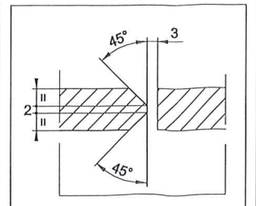




DETAIL 9

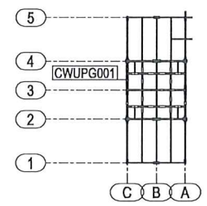


DETAIL 11



DETAIL 13

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

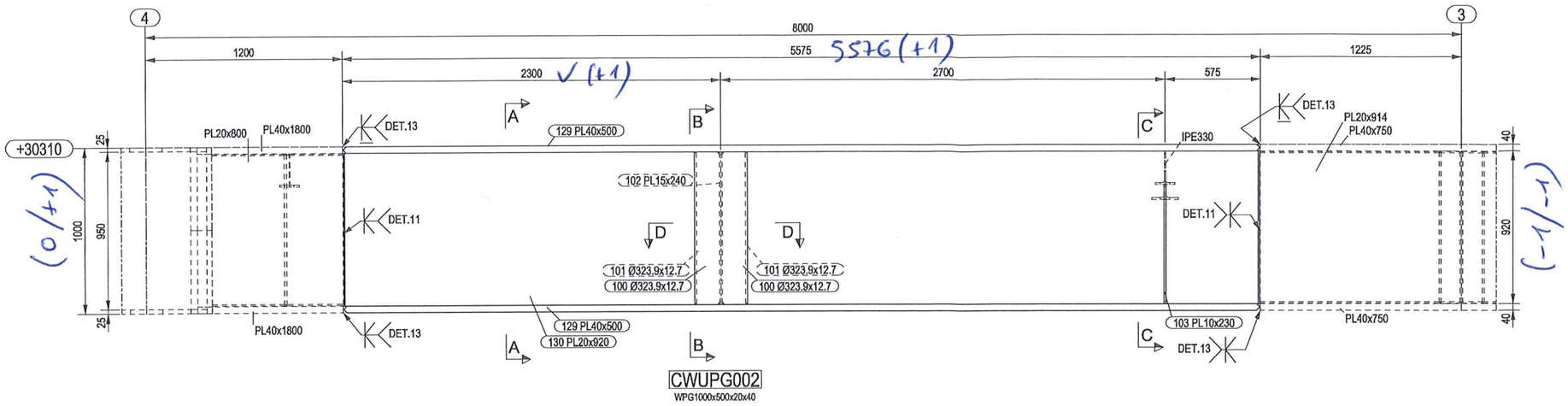
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG001

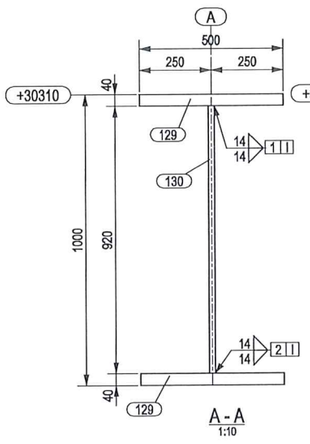
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90074	SHEET 001	REV. 0

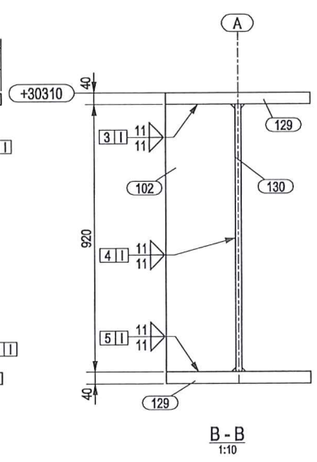
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG002	100	2	Ø323.9x12.7	920	API5LX52	2	41.5	0.46	
CWUPG002	101	2	Ø323.9x12.7	920	API5LX52	2	41.4	0.46	
CWUPG002	102	1	PL15x240	920	S420MLO	2	26.0	0.48	
CWUPG002	103	1	PL10x230	720	S355MLO	3	13.0	0.35	
CWUPG002	129	2	PL40x500	5569	S420MLO	2	1743.0	12.06	
CWUPG002	130	1	PL20x920	5569	S420MLO	2	803.2	10.49	
						TOTALE	2668.0	24.30	

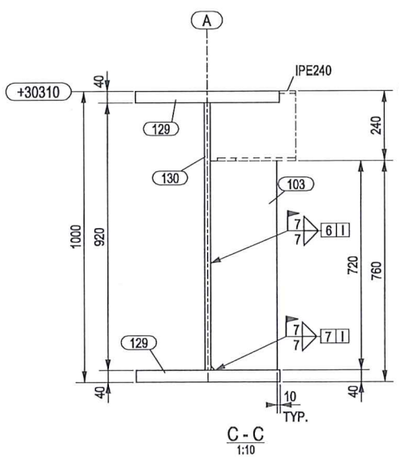
CAMBER = 3 mm
SWEEP = 2mm

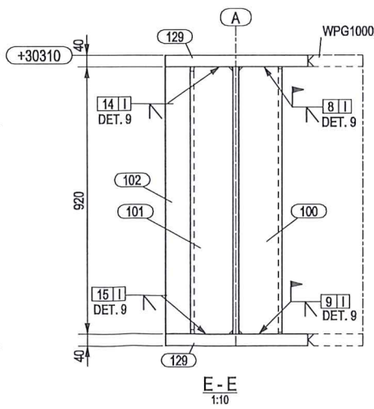
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL

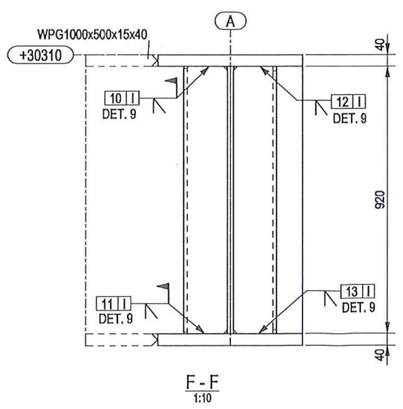


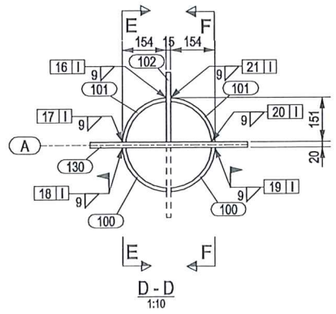


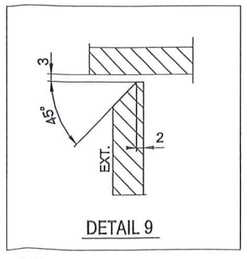


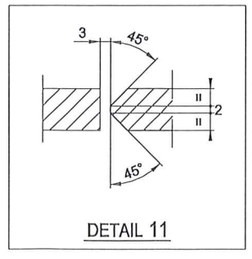


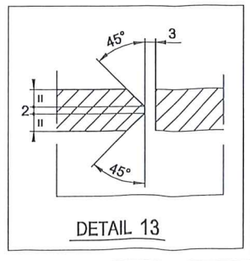








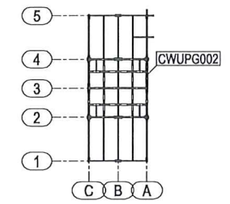




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

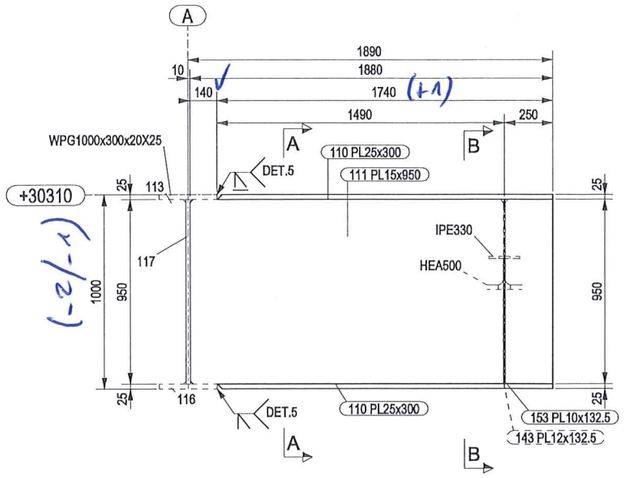
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

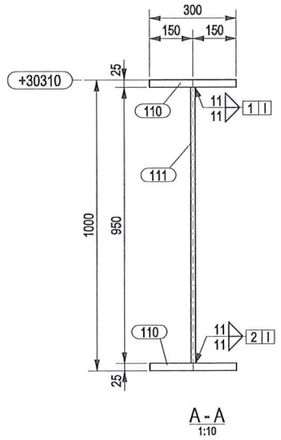
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG002

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90075	SHEET 001	REV. 0

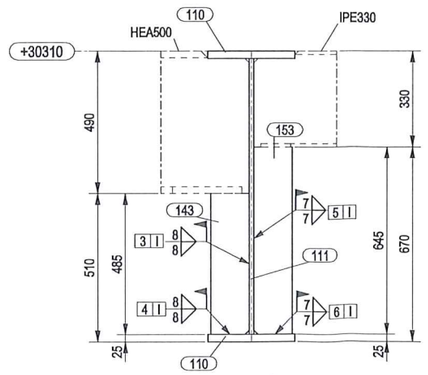
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG015	110	2	PL25x300	1737	S420MLO	2	203.3	2.28	
CWUPG015	111	1	PL15x950	1880	S420MLO	2	210.3	3.66	
CWUPG015	143	1	PL12x132.5	485	S355MLO	3	6.0	0.14	
CWUPG015	153	1	PL10x132.5	645	S355MLO	3	6.7	0.19	
						TOTALE	426.3	6.26	



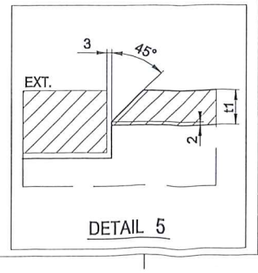
CWUPG015
WPG1000x300x15x25



A - A
1:10



B - B
1:10



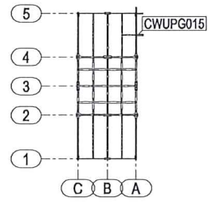
DETAIL 5

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A.
ITALY
QUALITY CONTROL

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
D	07/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

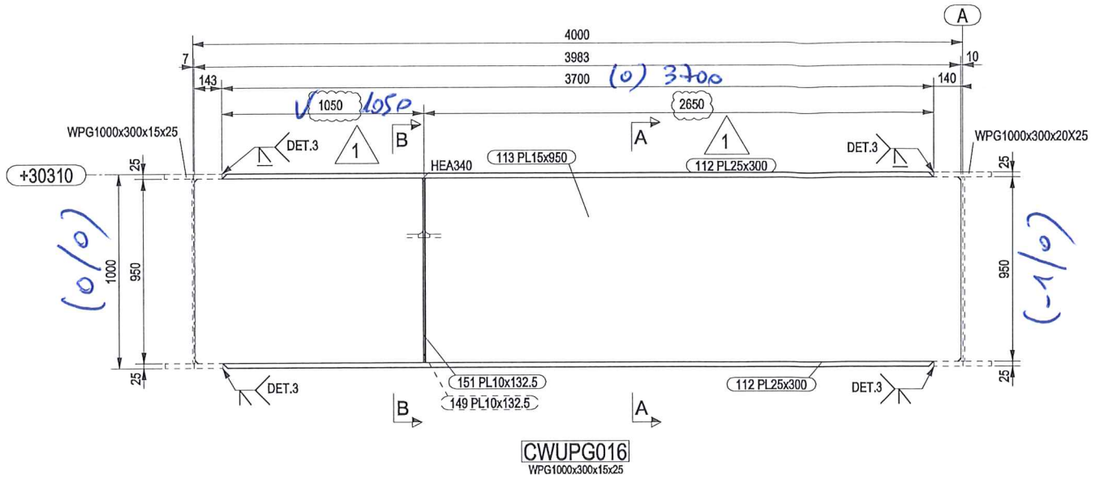
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG015

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE 1:15

DRAWN CM-TS | CHECKED M.ROSSI | APPROVED D.CASADIO | DATE 07/12/2023

A1 | DRAWING NO. 123A90-FDL-ST-DD-90146 | SHEET 001 | REV. 0

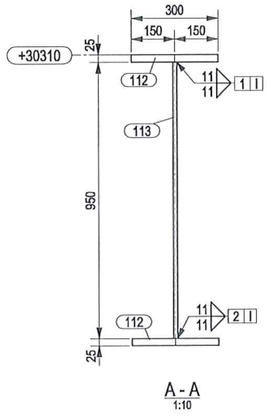
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG016	112	2	PL25x300	3694	S420MLO	2	432.5	4.81	
CWUPG016	113	1	PL15x950	3983	S420MLO	2	445.4	7.71	
CWUPG016	149	1	PL10x132.5	645	S355MLO	3	6.7	0.19	
CWUPG016	151	1	PL10x132.5	950	S355MLO	3	9.9	0.27	
						TOTALE	894.5	12.99	

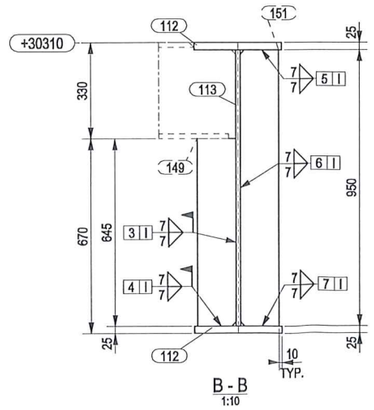


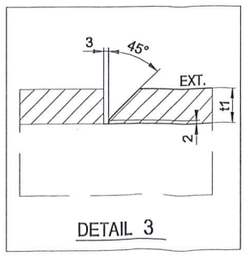
CAMBER = 1mm

SWEEP = 0mm

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL





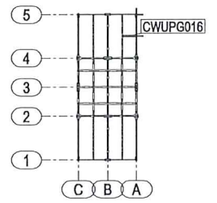


DETAIL 3

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	22/01/2024	CM-TS	MR	DC	RELEASED HOLD / REVISED WHERE IND.
0	07/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

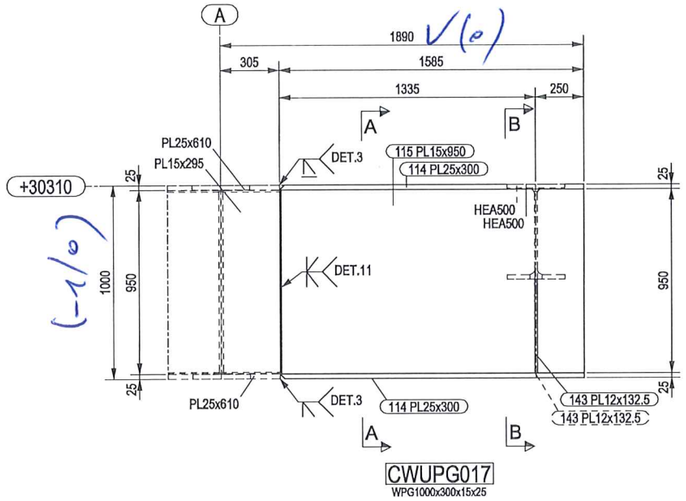
CROSSWIND | ROSETTI MARINO

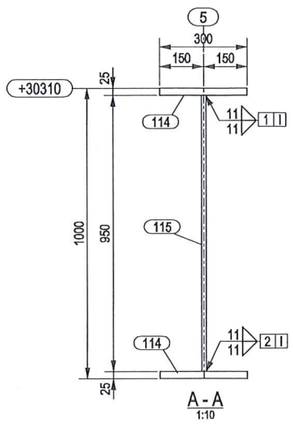
TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG016

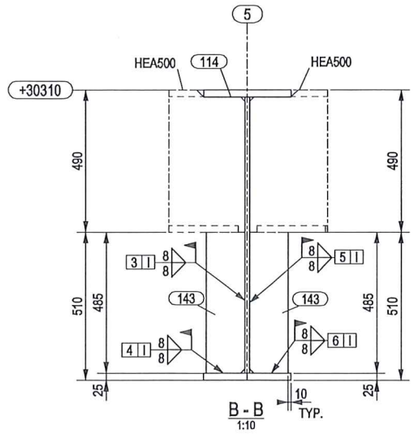
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90143	SHEET 001	REV. 1

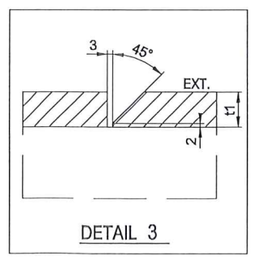
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG017	114	2	PL25x300	1582	S420MLO	2	185.0	2.08	
CWUPG017	115	1	PL15x950	1582	S420MLO	2	176.7	3.07	
CWUPG017	143	2	PL12x132.5	485	S355MLO	3	12.1	0.29	
						TOTALE	373.8	5.44	

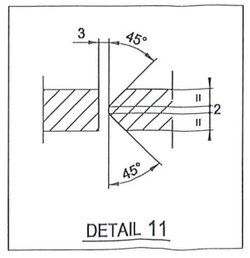
SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL







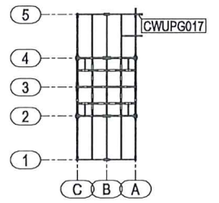




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG017

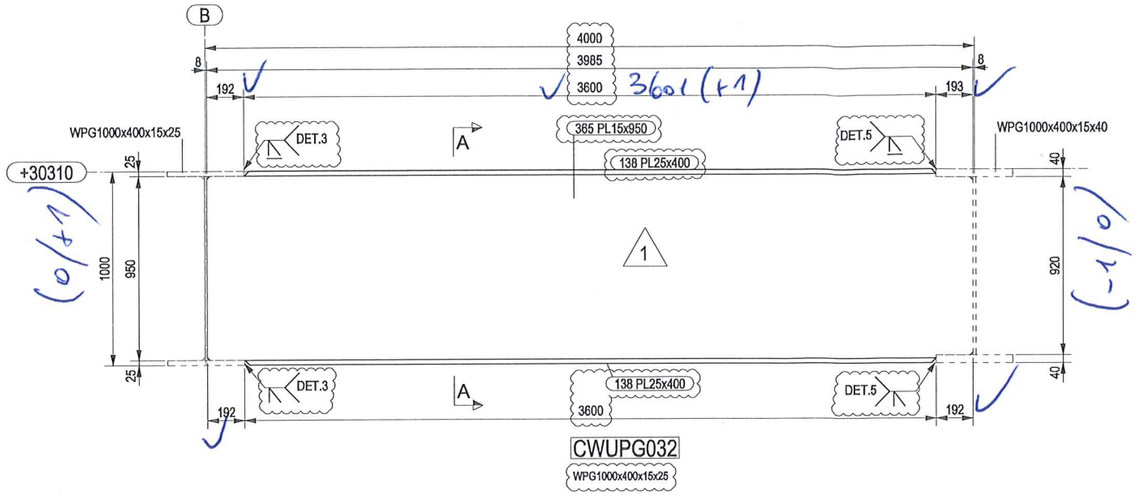
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 01/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90086	SHEET 001	REV. 0

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG032	138	2	PL25x400	3594	S420MLO	2	560.9	6.13	
CWUPG032	365	1	PL15x950	3985	S420MLO	2	445.0	7.71	
						TOTALE	1006.0	13.83	

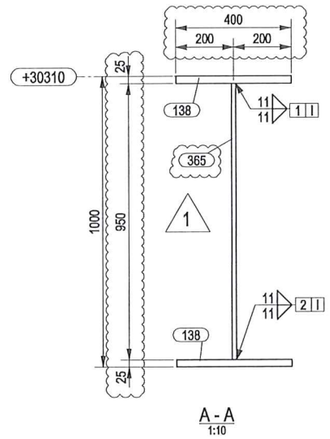
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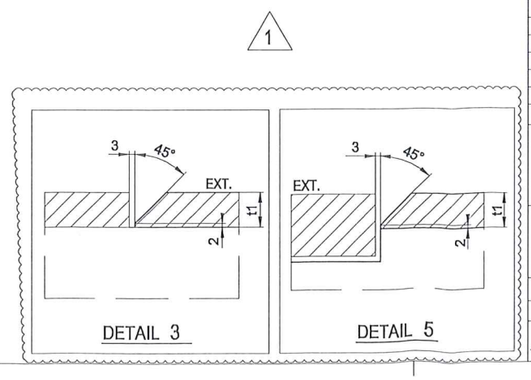
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SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL



CWUPG032
WPG1000x400x15x25

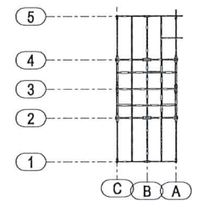




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	07/12/2023	CM-TS	MR	DC	REVISED WHERE INDICATED
0	01/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

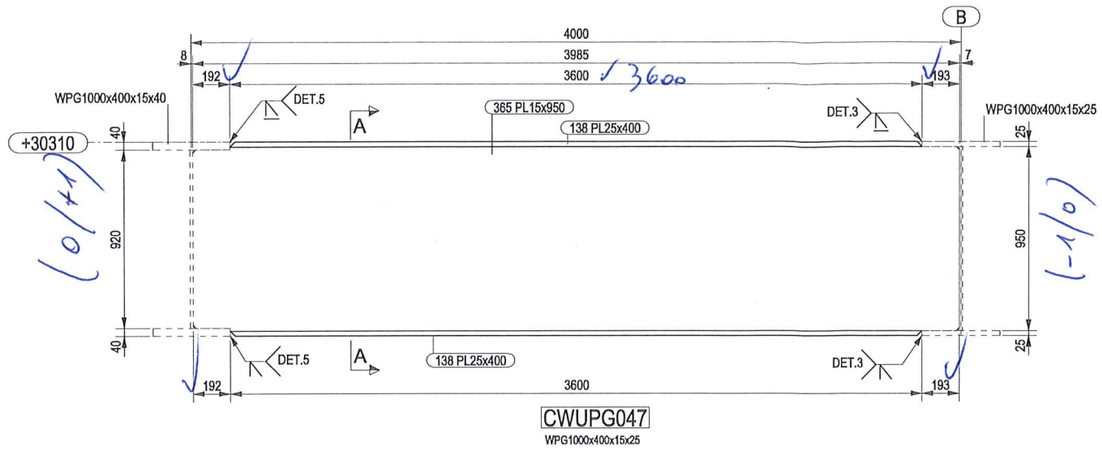
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG032

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90101		SHEET 001 / REV. 1

MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWUPG047	138	2	PL25x400	3594	S420MLO	2	560.9	6.13	
CWUPG047	365	1	PL15x950	3985	S420MLO	2	445.0	7.71	
						TOTALE	1006.0	13.83	

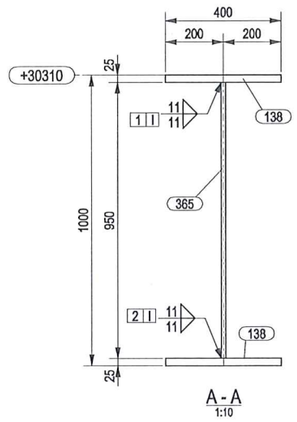
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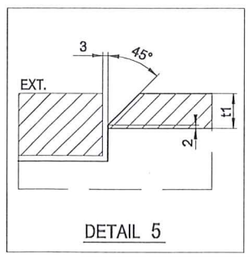
CWUPG047

WPG1000x400x15x25

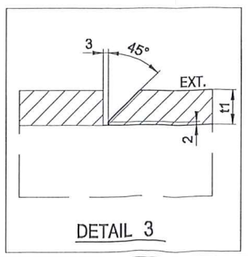


A - A

1:10



DETAIL 5

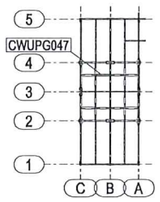


DETAIL 3

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	07/12/2023	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTIMARINO

TITLE : BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
MARK CWUPG047

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:15
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 07/12/2023
A1	DRAWING NO. 123A90-FDL-ST-DD-90148	SHEET 001	REV. 0

SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-019	1 of 1	12/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	

Mark Number	Description	Drawing	Quantity
CWUNO010	PL25x914	123A90-FDL-ST-DD-90134	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
12/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. DT101620A Rev 1

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-020	1 of 1	22/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

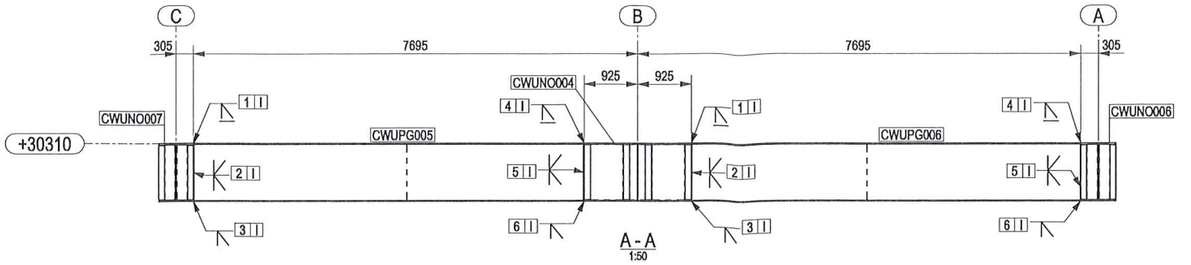
Remarks	Mark CWUPG007, CWUPG008 and CWUNo003 has been checked assembled. Assembly DWG 90198.

Mark Number	Description	Drawing	Quantity
CWUPG007	PL20x250	123A90-FDL-ST-DD-90080	1
CWUPG008	PL20x250	123A90-FDL-ST-DD-90081	1

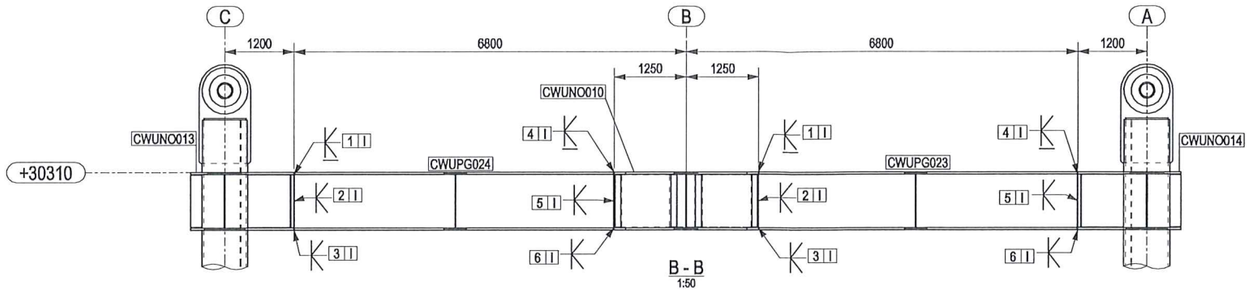
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

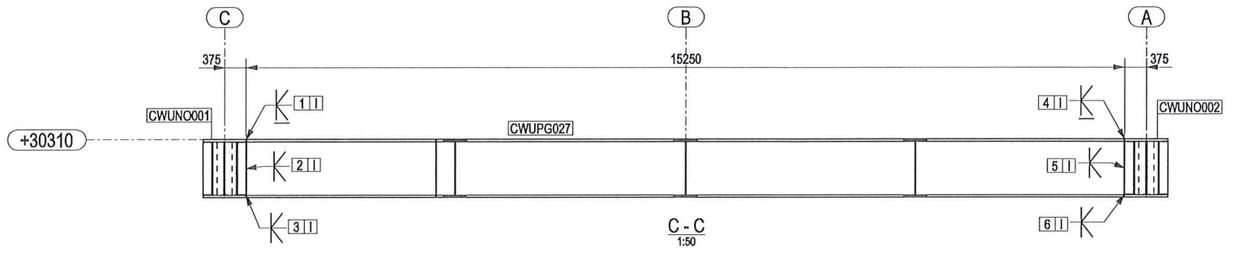
Mod. DT101620A Rev 1



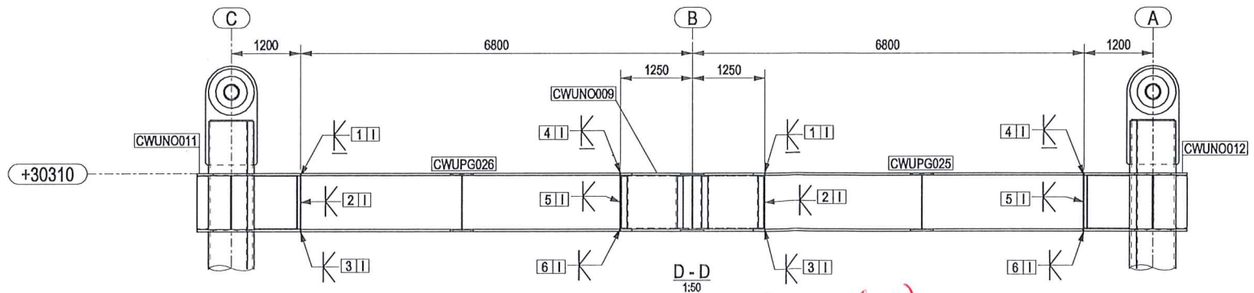
A - A
1:50



B - B
1:50



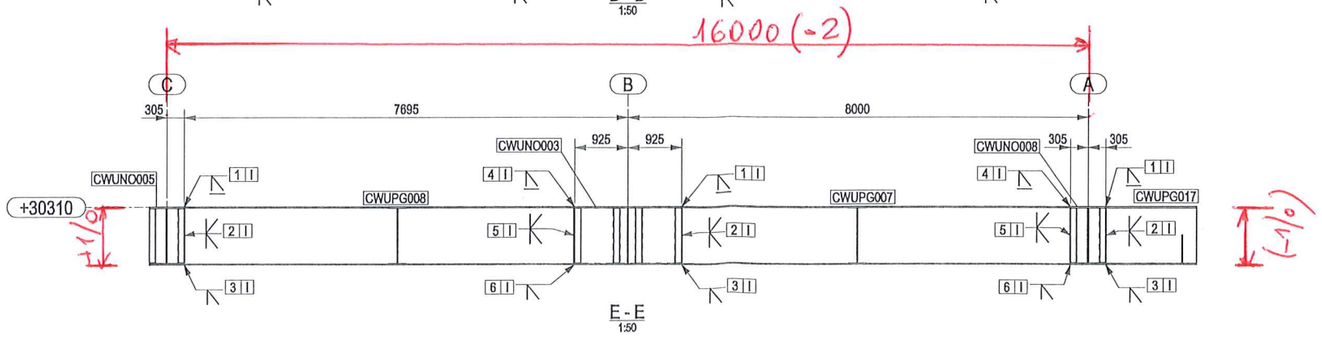
C - C
1:50



D - D
1:50

CAMBER = 7mm
SWEEP = 5mm

SCANDIUZZI
STEEL CONSTRUCTIONS S.p.A
IT
QUALITY CONTROL

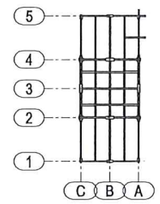


E - E
1:50

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90197

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	12/01/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:90
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 05/01/2024
A1	DRAWING NO. 123A90-FDL-ST-DD-90198	SHEET 001	REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-021	1 of 1	26/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

Remarks	Mark CWUPG004 and CWUNO002 has been checked assembled. Assembly DWG 90201.

Mark Number	Description	Drawing	Quantity
CWUNO002	PL20x914	123A90-FDL-ST-DD-90126	1
CWUNO011	SPD800x30	123A90-FDL-ST-DD-90135	1
CWUPG004	Ø323.9x12.7	123A90-FDL-ST-DD-90077	1

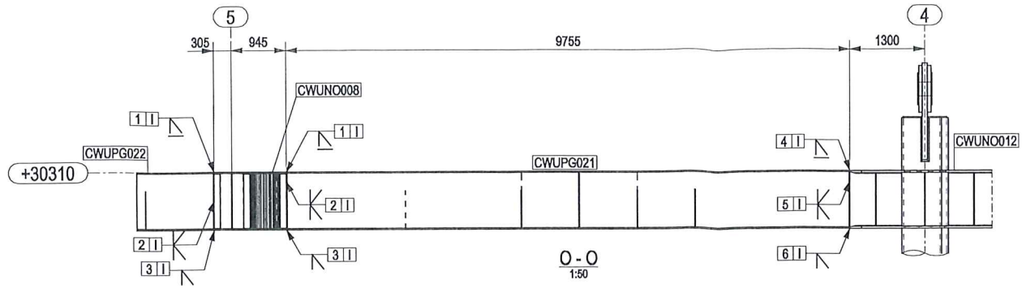
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
26/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

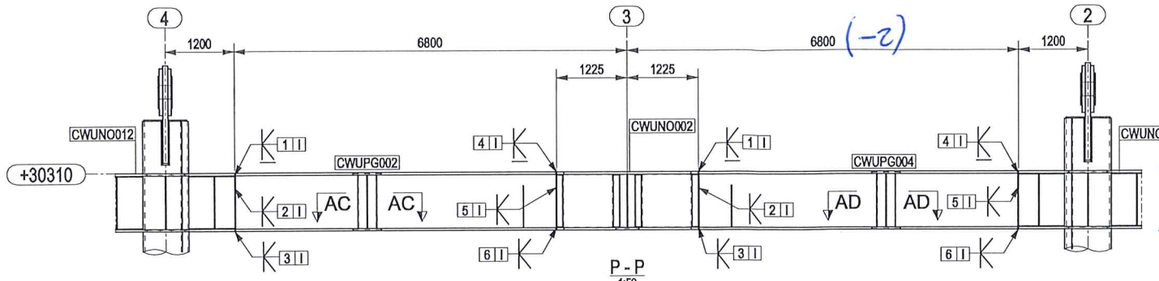
Mod. DT101620A Rev 1

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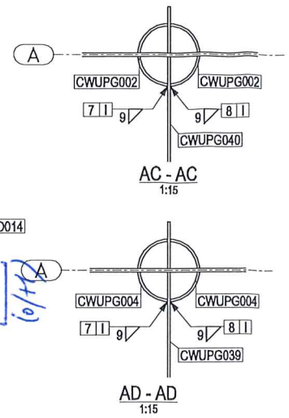
SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL



O - O
1:50

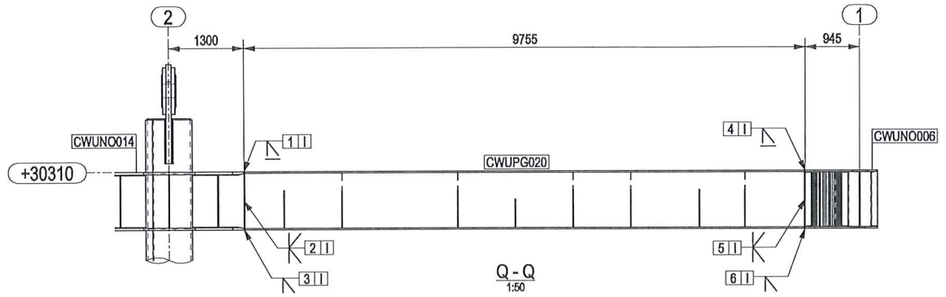


P - P
1:50

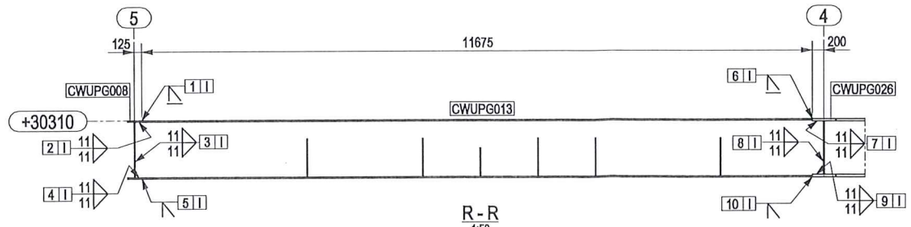


AC - AC
1:15

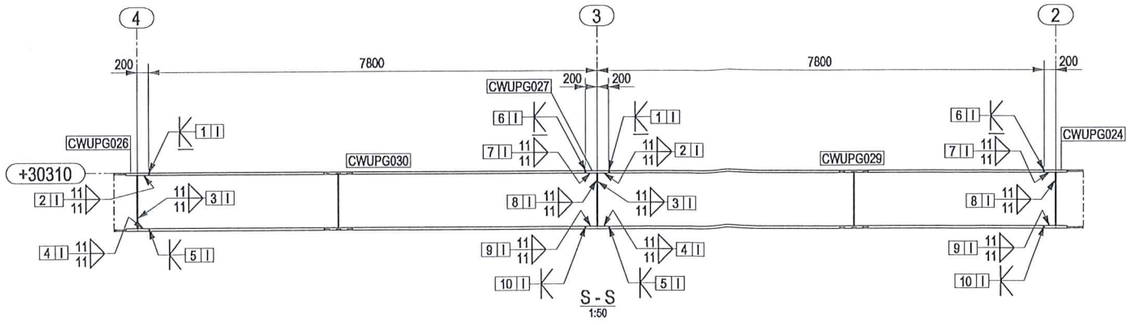
AD - AD
1:15



Q - Q
1:50



R - R
1:50

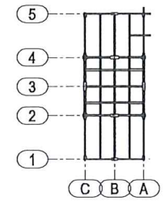


S - S
1:50

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90197

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	12/01/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:90
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 05/01/2024
A1	DRAWING No. 123A90-FDL-ST-DD-90201		SHEET 001 / REV. 0

SCANDIUZZI	DIMENSIONAL CHECK REPORT	Certificate Num.	Pages	Issue Date
		2308-DT-022	1 of 1	29/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091	Production drawings + Client procedure 123A90-PML-QHSE-PRO-00091

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.8| Dimensional Control of structural sub-assembly

Test Result	
	✓ Accepted
	Rejected

Test Type	
	✓ VISUAL TEST
	✓ DIMENSIONAL TEST
	IN PROCESS TEST
	SUPERFICIAL TREATMENTS

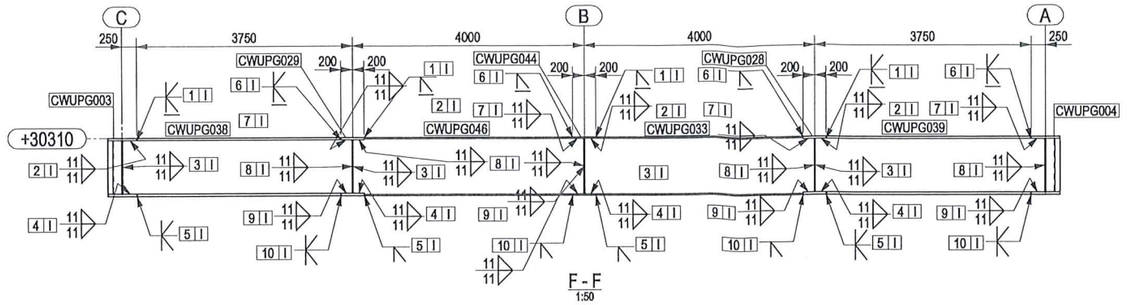
Remarks	
	Mark CWUPG004 and CWUNO001 has been checked assembled (see Assembly DWG 90199). Mark CWUPG019 and CWUNO005 has been checked assembled (see Assembly DWG 90199). Mark CWUPG021 and CWUNO008 has been checked assembled (see Assembly DWG 90201).

Mark Number	Description	Drawing	Quantity
CWUNO001	PL20x914	123A90-FDL-ST-DD-90125	1
CWUNO005	Ø406.4x12.7	123A90-FDL-ST-DD-90129	1
CWUNO008	Ø406.4x12.7	123A90-FDL-ST-DD-90132	1
CWUNO012	PL40x1800	123A90-FDL-ST-DD-90137	1
CWUPG003	Ø323.9x12.7	123A90-FDL-ST-DD-90076	1
CWUPG019	PL25x300	123A90-FDL-ST-DD-90088	1
CWUPG021	PL25x300	123A90-FDL-ST-DD-90092	1

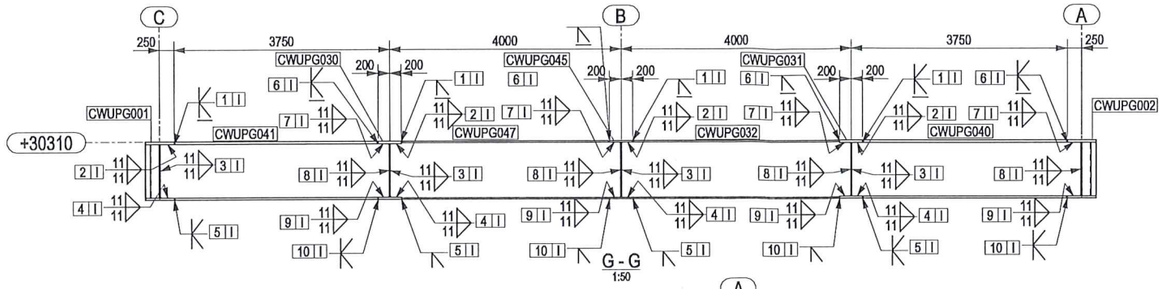
Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
29/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

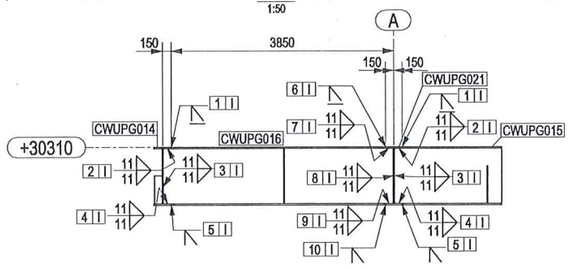
Mod. DT101620A Rev 1



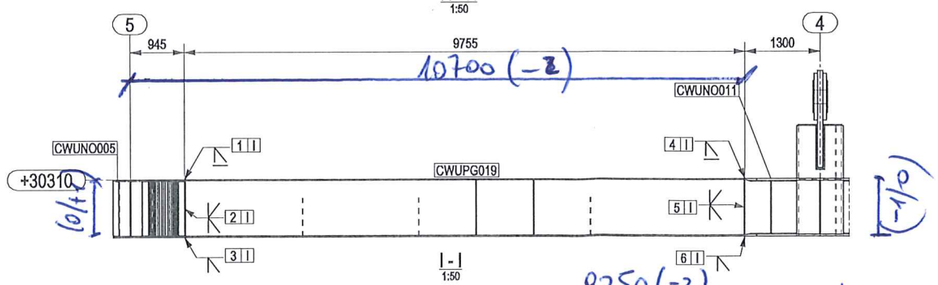
F - F
1:50



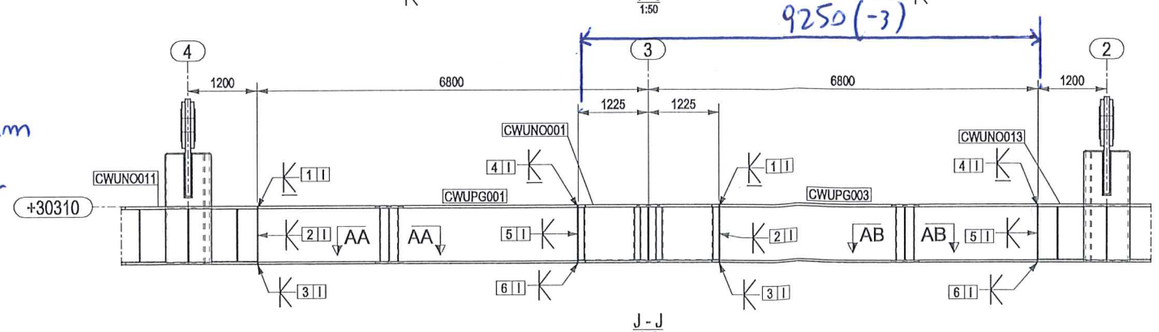
G - G
1:50



H - H
1:50



I - I
1:50

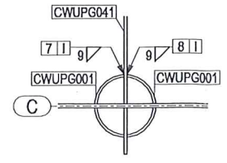


J - J
1:50

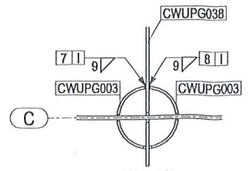
CAMBER = 4mm
SWEEP = 3mm

CAMBER = 3mm
SWEEP = 2mm

SCANDUZZI
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



AA - AA
1:15

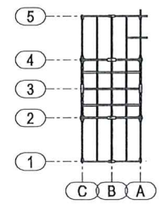


AB - AB
1:15

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90197

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	12/01/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

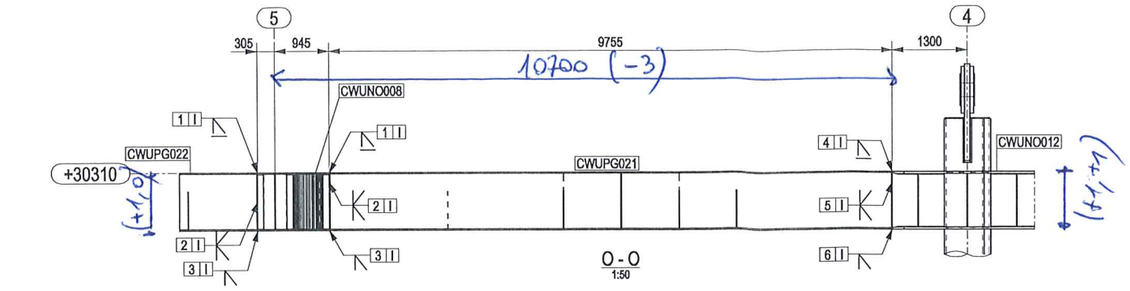
CROSSWIND
ROSETTI MARINO

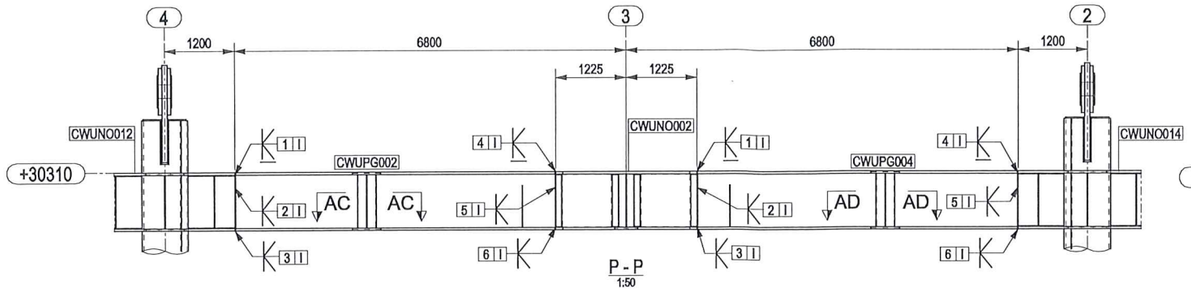
TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
ASSEMBLY PRIMARY

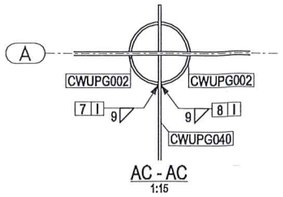
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:90
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 05/01/2024
A1	DRAWING NO. 123A90-FDL-ST-DD-90199	SHEET 001	REV. 0

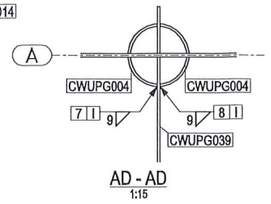
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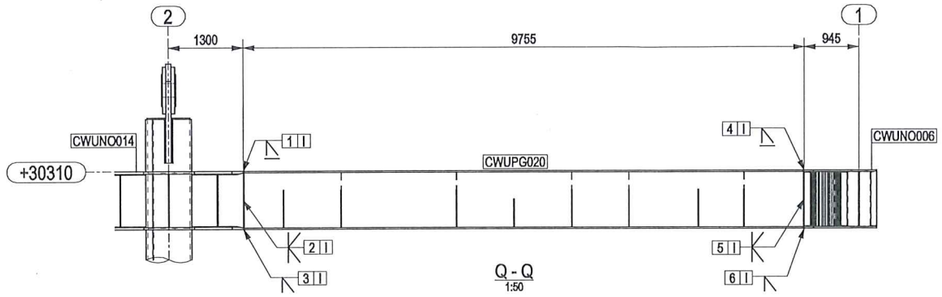
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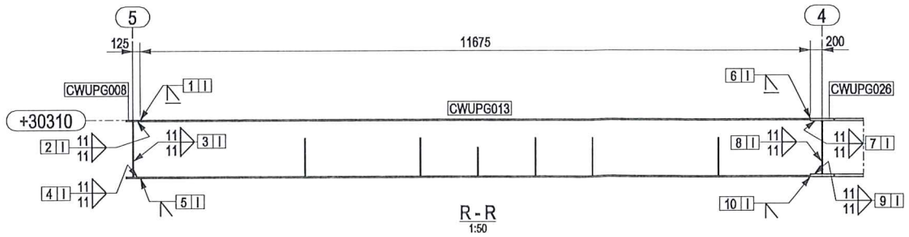


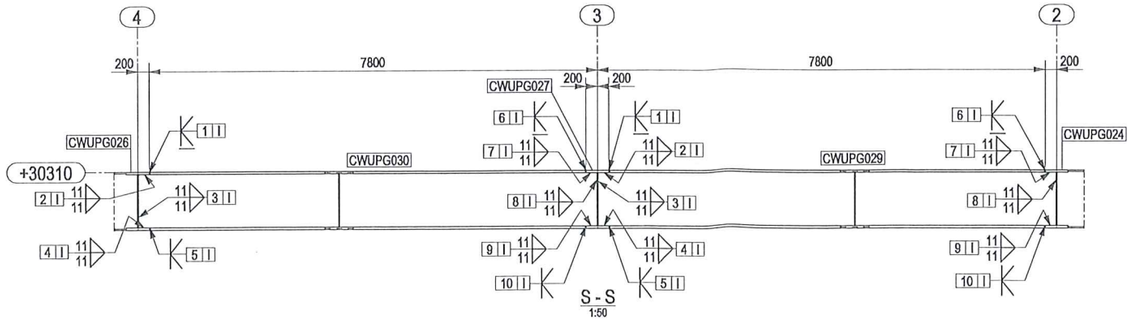








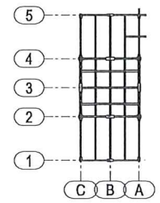




NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR PLAN VIEW AND MATERIAL LIST SEE DWG 90197

KEY PLAN



PLAN AT EL.+30310 TOS

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90050	TOPSIDE-PRIMARY STEEL PLAN AT EL.+30310 TOS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	12/01/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
TOP SIDES – PRIMARY PLAN AT EL. +30310 TOS
ASSEMBLY PRIMARY

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:90
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 05/01/2024
A1	DRAWING NO. 123A90-FDL-ST-DD-90201	SHEET 001	REV. 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-001	1 of 2	27/12/2023

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	Acceptance Criteria	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	14
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
27/12/2023	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 03/01/2024		

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG001	None	123A90-FDL-ST-DD-90000	1
CWLPG002	None	123A90-FDL-ST-DD-90001	1
CWLPG024	None	123A90-FDL-ST-DD-90023	1
CWLPG029	None	123A90-FDL-ST-DD-90028	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
27/12/2023	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 03/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-002	1 of 2	22/12/2023

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy		
Reference Standard	Magnetic particle procedure 2308-NDE-00	Acceptance Criteria	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	14
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/12/2023	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi		

For Items and quantities see next page(s)

08/01/2024

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-002	2 of 2	22/12/2023

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG003	None	123A90-FDL-ST-DD-90002	1
CWLPG004	None	123A90-FDL-ST-DD-90003	1
CWLPG005	None	123A90-FDL-ST-DD-90004	1
CWLPG006	None	123A90-FDL-ST-DD-90005	1
CWLPG025	None	123A90-FDL-ST-DD-90024	1
CWLPG026	None	123A90-FDL-ST-DD-90025	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/12/2023	Simonetto Angelo	ROSETTI MARINO SpA Alberto Ludoni 05/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-003	1 of 2	08/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	Acceptance Criteria	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	Mark CWLP0031, CWLNO008 and CWLPG0038 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchin 09/01/2024		

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-003	2 of 2	08/01/2024

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG014	None	123A90-FDL-ST-DD-90013	1
CWLPG031	None	123A90-FDL-ST-DD-90030	1
CWLPG038	None	123A90-FDL-ST-DD-90037	1
CWLNO001	None	123A90-FDL-ST-DD-90049	1
CWLNO002	None	123A90-FDL-ST-DD-90050	1
CWLNO003	None	123A90-FDL-ST-DD-90051	1
CWLNO006	None	123A90-FDL-ST-DD-90054	1
CWLNO008	None	123A90-FDL-ST-DD-90056	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lupoli Quality Management Dept. 08/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-004	1 of 2	10/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	Acceptance Criteria	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	14
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	Mark CWLP0021, CWLNO014 and CWLPG0022 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
10/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Luchini Quality Management Dept. 16/01/24		

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-004	2 of 2	10/01/2024

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG008	None	123A90-FDL-ST-DD-90007	1
CWLPG010	None	123A90-FDL-ST-DD-90009	1
CWLPG011	None	123A90-FDL-ST-DD-90010	1
CWLPG021	None	123A90-FDL-ST-DD-90020	1
CWLPG022	None	123A90-FDL-ST-DD-90021	1
CWLPG023	None	123A90-FDL-ST-DD-90022	1
CWLPG046	None	123A90-FDL-ST-DD-90045	1
CWLPG047	None	123A90-FDL-ST-DD-90046	1
CWLPG048	None	123A90-FDL-ST-DD-90047	1
CWLNO014	None	123A90-FDL-ST-DD-90062	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
10/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Luccini 16/01/24		

The considered drawings revisions are those applicable at certificate issue date Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-005	1 of 2	15/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	Acceptance Criteria	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	13
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	Mark CWLP0035, CWLNO012 and CWLPG0045 has been checked assembled. Mark CWLP0033, CWLNO011 and CWLPG0042 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
15/01/2024	Simonetto Angelo	16/01/24		

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG007	None	123A90-FDL-ST-DD-90006	1
CWLPG009	None	123A90-FDL-ST-DD-90008	1
CWLPG012	None	123A90-FDL-ST-DD-90011	1
CWLPG015	None	123A90-FDL-ST-DD-90014	1
CWLPG016	None	123A90-FDL-ST-DD-90015	1
CWLPG017	None	123A90-FDL-ST-DD-90016	1
CWLPG018	None	123A90-FDL-ST-DD-90017	1
CWLPG033	None	123A90-FDL-ST-DD-90032	1
CWLPG035	None	123A90-FDL-ST-DD-90034	1
CWLPG039	None	123A90-FDL-ST-DD-90038	1
CWLPG042	None	123A90-FDL-ST-DD-90041	1
CWLPG045	None	123A90-FDL-ST-DD-90044	1
CWLPG049	None	123A90-FDL-ST-DD-90048	1
CWLNO004	None	123A90-FDL-ST-DD-90052	1
CWLNO005	None	123A90-FDL-ST-DD-90053	1
CWLNO011	None	123A90-FDL-ST-DD-90059	1
CWLNO012	None	123A90-FDL-ST-DD-90060	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
15/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. 16/01/24		

The considered drawings revisions are those applicable at certificate issue date Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-006	1 of 2	18/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	Acceptance Criteria	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	12
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	Mark CWLPG019, CWLNO013 and CWLPG020 has been checked assembled.

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
18/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchini Quality Management Dept. 23/01/2024		

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG013	None	123A90-FDL-ST-DD-90012	1
CWLPG019	None	123A90-FDL-ST-DD-90018	1
CWLPG020	None	123A90-FDL-ST-DD-90019	1
CWLPG027	None	123A90-FDL-ST-DD-90026	1
CWLPG028	None	123A90-FDL-ST-DD-90027	1
CWLPG030	None	123A90-FDL-ST-DD-90029	1
CWLPG032	None	123A90-FDL-ST-DD-90031	1
CWLNO013	None	123A90-FDL-ST-DD-90061	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
18/01/2024	Simonetto Angelo	ROSETTI MARINO SpA Alberto Lucchi Supply Management		

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-007	1 of 2	22/01/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	**Acceptance Criteria**	ISO 23278 Lev. 2

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ **Accepted**	**Rejected**

NDE Standard	EN ISO 9712	**Material**	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	**Working Status**	Completed welds
Text Extension [%]	100	**Test Temperature [°C]**	12
Surface pre-Cleaning	Brushed	**Device Type**	CMG YOKE
Magnetiz. Direction	Longitudinal	**Current**	AC
Prods Distance [mm]	135	**Examination Method**	Wet
Magnetic Field Check	✓	**Contrast Paint**	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	**Developer Method**	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	**Carrier**	Kerosenoil
Demagnetization		**Inspection Light [lux]**	> 1000

Remarks	Items assembled

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lucchi 23/01/2024		

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLPG036	None	123A90-FDL-ST-DD-90035	1
CWLPG037	None	123A90-FDL-ST-DD-90036	1
CWLPG040	None	123A90-FDL-ST-DD-90039	1
CWLPG041	None	123A90-FDL-ST-DD-90040	1
CWLPG043	None	123A90-FDL-ST-DD-90042	1
CWLPG044	None	123A90-FDL-ST-DD-90043	1
CWLNO007	None	123A90-FDL-ST-DD-90055	1
CWLNO009	None	123A90-FDL-ST-DD-90057	1
CWLNO010	None	123A90-FDL-ST-DD-90058	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/01/2024	Simonetto Angelo	ROSETTI MARINO S.p.A. Alberto Lunghi Shipyard Management Dept. 23/01/2024		

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-008	1 of 2	01/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	**Acceptance Criteria**	ISO 23278 Lev. 2

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ **Accepted**	**Rejected**

NDE Standard	EN ISO 9712	**Material**	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	**Working Status**	Completed welds
Text Extension [%]	100	**Test Temperature [°C]**	12
Surface pre-Cleaning	Brushed	**Device Type**	CMG YOKE
Magnetiz. Direction	Longitudinal	**Current**	AC
Prods Distance [mm]	135	**Examination Method**	Wet
Magnetic Field Check	✓	**Contrast Paint**	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	**Developer Method**	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	**Carrier**	Kerosenoil
Demagnetization		**Inspection Light [lux]**	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Antonio Moreno			

For Items and quantities see next page(s)

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG005	None	123A90-FDL-ST-DD-90078	1
CWUPG006	None	123A90-FDL-ST-DD-90079	1
CWUPG009	None	123A90-FDL-ST-DD-90145	1
CWUPG011	None	123A90-FDL-ST-DD-90082	1
CWUPG024	None	123A90-FDL-ST-DD-90093	1
CWUPG023	None	123A90-FDL-ST-DD-90091	1
CWUPG031	None	123A90-FDL-ST-DD-90100	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

The considered drawings revisions are those applicable at certificate issue date Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-009	1 of 2	01/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	**Acceptance Criteria**	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	**Material**	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	**Working Status**	Completed welds
Text Extension [%]	100	**Test Temperature [°C]**	12
Surface pre-Cleaning	Brushed	**Device Type**	CMG YOKE
Magnetiz. Direction	Longitudinal	**Current**	AC
Prods Distance [mm]	135	**Examination Method**	Wet
Magnetic Field Check	✓	**Contrast Paint**	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	**Developer Method**	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	**Carrier**	Kerosenoil
Demagnetization		**Inspection Light [lux]**	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Antoroso Moreno			

For Items and quantities see next page(s)

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-009	2 of 2	01/02/2024

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLNO016	None	123A90-FDL-ST-DD-90064	1
CWLNO018	None	123A90-FDL-ST-DD-90066	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
01/02/2024	Amoroso Moreno			

The considered drawings revisions are those applicable at certificate issue date Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-010	1 of 2	02/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	LOWER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	**Acceptance Criteria**	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	**Material**	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	**Working Status**	Completed welds
Text Extension [%]	100	**Test Temperature [°C]**	12
Surface pre-Cleaning	Brushed	**Device Type**	CMG YOKE
Magnetiz. Direction	Longitudinal	**Current**	AC
Prods Distance [mm]	135	**Examination Method**	Wet
Magnetic Field Check	✓	**Contrast Paint**	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	**Developer Method**	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	**Carrier**	Kerosenoil
Demagnetization		**Inspection Light [lux]**	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-010	2 of 2	02/02/2024

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLNO017	None	123A90-FDL-ST-DD-90065	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-011	1 of 2	02/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;

Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	**Acceptance Criteria**	ISO 23278 Lev. 2

Type of Control	✓ **Internal**	**Internal with Customer**	**Supplier Site**	**Customer Site**

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ **Accepted**	**Rejected**

NDE Standard	EN ISO 9712	**Material**	S420MLO + S355MLO
Surface Conditions	As welded	**Working Status**	Completed welds
Text Extension [%]	100	**Test Temperature [°C]**	12
Surface pre-Cleaning	Brushed	**Device Type**	CMG YOKE
Magnetiz. Direction	Longitudinal	**Current**	AC
Prods Distance [mm]	135	**Examination Method**	Wet
Magnetic Field Check	✓	**Contrast Paint**	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	**Developer Method**	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	**Carrier**	Kerosenoil
Demagnetization		**Inspection Light [lux]**	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-011	2 of 2	02/02/2024

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG012	None	123A90-FDL-ST-DD-90083	1
CWUPG020	None	123A90-FDL-ST-DD-90089	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
02/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-012	1 of 2	05/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	UPPER DECK;
Examination Place	Volpago del Montello (TV) - Italy

Reference Standard	Magnetic particle procedure 2308-NDE-00	**Acceptance Criteria**	ISO 23278 Lev. 2

Type of Control	✓ Internal	Internal with Customer	Supplier Site	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	✓ Accepted	Rejected

NDE Standard	EN ISO 9712	**Material**	S420MLO + S355MLO
Surface Conditions	As welded	**Working Status**	Completed welds
Text Extension [%]	100	**Test Temperature [°C]**	15
Surface pre-Cleaning	Brushed	**Device Type**	CMG YOKE
Magnetiz. Direction	Longitudinal	**Current**	AC
Prods Distance [mm]	135	**Examination Method**	Wet
Magnetic Field Check	✓	**Contrast Paint**	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	**Developer Method**	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	**Carrier**	Kerosenoil
Demagnetization		**Inspection Light [lux]**	> 1000

Remarks	

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
05/02/2024	Simonetto Angelo			

For Items and quantities see next page(s)

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-012	2 of 2	05/02/2024

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG018	None	123A90-FDL-ST-DD-90087	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
05/02/2024	Simonetto Angelo			

The considered drawings revisions are those applicable at certificate issue date Mod. MT101620A Rev 0

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-013	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API 5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUNO004	None	123A90-FDL-ST-DD-90128	1
CWUNO006	None	123A90-FDL-ST-DD-90130	1
CWUNO007	None	123A90-FDL-ST-DD-90131	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-014	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
LOWER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWLNO015	None	123A90-FDL-ST-DD-90063	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-015	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG038	None	123A90-FDL-ST-DD-90105	1
CWUPG044	None	123A90-FDL-ST-DD-90111	1
CWUPG028	None	123A90-FDL-ST-DD-90097	1
CWUPG029	None	123A90-FDL-ST-DD-90098	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-016	1 of 1	06/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API 5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUNO003	None	123A90-FDL-ST-DD-90127	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
06/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-017	1 of 1	08/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
✓	Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
✓	Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG033	None	123A90-FDL-ST-DD-90102	1
CWUPG039	None	123A90-FDL-ST-DD-90106	1
CWUPG040	None	123A90-FDL-ST-DD-90107	1
CWUPG041	None	123A90-FDL-ST-DD-90108	1
CWUPG045	None	123A90-FDL-ST-DD-90112	1
CWUPG010	None	123A90-FDL-ST-DD-90144	1
CWUPG046	None	123A90-FDL-ST-DD-90147	1
CWUPG013	None	123A90-FDL-ST-DD-90084	1
CWUPG014	None	123A90-FDL-ST-DD-90085	1
CWUPG022	None	123A90-FDL-ST-DD-90090	1
CWUPG027	None	123A90-FDL-ST-DD-90096	1
CWUPG030	None	123A90-FDL-ST-DD-90099	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
08/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-018	1 of 1	16/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUNO013	None	123A90-FDL-ST-DD-90139	1
CWUNO014	None	123A90-FDL-ST-DD-90141	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
16/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-019	1 of 1	16/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5L X52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG032	None	123A90-FDL-ST-DD-90101	1
CWUPG016	None	123A90-FDL-ST-DD-90143	1
CWUPG015	None	123A90-FDL-ST-DD-90146	1
CWUPG047	None	123A90-FDL-ST-DD-90148	1
CWUPG001	None	123A90-FDL-ST-DD-90074	1
CWUPG002	None	123A90-FDL-ST-DD-90075	1
CWUPG017	None	123A90-FDL-ST-DD-90086	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
16/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-020	1 of 1	19/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5L X52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUNO010	None	123A90-FDL-ST-DD-90134	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
19/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-021	1 of 1	22/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	13
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	Mark CWUPG007, CWUPG008 and CWUNo003 has been checked assembled. Assembly DWG 90198.

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUPG007	None	123A90-FDL-ST-DD-90080	1
CWUPG008	None	123A90-FDL-ST-DD-90081	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
22/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-022	1 of 1	26/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	14
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	Mark CWUPG004 and CWUNO002 has been checked assembled. Assembly DWG 90201.

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUNO002	None	123A90-FDL-ST-DD-90126	1
CWUNO011	None	123A90-FDL-ST-DD-90135	1
CWUPG004	None	123A90-FDL-ST-DD-90077	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
26/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

SCANDIUZZI	MAGNETIC PARTICLE INSPECTION REPORT	Certificate Num.	Pages	Issue Date
		2308-MT-023	1 of 1	29/02/2024

Customer	Project Name	Item	Purchase Order	Rev.
Rosetti Marino	BASE LOAD POWER HUB (BLPH)	PLATE GIRDER (welded beam and nodes)	1723001792-1723001793	0

Material Description	Examination Place
UPPER DECK;	Volpago del Montello (TV) - Italy

Reference Standard	Acceptance Criteria
Magnetic particle procedure 2308-NDE-00	ISO 23278 Lev. 2

Type of Control	
	✓ Internal
	Internal with Customer
	Supplier Site
	Customer Site

ITP Number	Phase Description
1723001793-QC-ITP-00002	3.5| 100% MT Examination

Test Result	
	✓ Accepted
	Rejected

NDE Standard	EN ISO 9712	Material	S420MLO + S355MLO + API5LX52
Surface Conditions	As welded	Working Status	Completed welds
Text Extension [%]	100	Test Temperature [°C]	15
Surface pre-Cleaning	Brushed	Device Type	CMG YOKE
Magnetiz. Direction	Longitudinal	Current	AC
Prods Distance [mm]	135	Examination Method	Wet
Magnetic Field Check	✓	Contrast Paint	ELITE FLAW FINDR - WBL5
Developer Type	Color contrast	Developer Method	Wet
Developer Name	ELITE FLAW FINDR - BLACK BW-2	Carrier	Kerosenoil
Demagnetization		Inspection Light [lux]	> 1000

Remarks	
	Mark CWUPG004 and CWUNO001 has been checked assembled (see Assembly DWG 90199). Mark CWUPG019 and CWUNO005 has been checked assembled (see Assembly DWG 90199). Mark CWUPG021 and CWUNO008 has been checked assembled (see Assembly DWG 90201).

Mark Number	Discontinuities [Type and Dimensions]	Drawing	Quantity
CWUNO001	None	123A90-FDL-ST-DD-90125	1
CWUNO005	None	123A90-FDL-ST-DD-90129	1
CWUNO008	None	123A90-FDL-ST-DD-90132	1
CWUNO012	None	123A90-FDL-ST-DD-90137	1
CWUPG003	None	123A90-FDL-ST-DD-90076	1
CWUPG019	None	123A90-FDL-ST-DD-90088	1
CWUPG021	None	123A90-FDL-ST-DD-90092	1

Issue Date	Scandiuzzi Steel Constructions	Rosetti Marino	CROSSWIND	TPI
29/02/2024	Angelo Simonetto			

The considered drawings revisions are those applicable at certificate issue date

Mod. MT101620A Rev 1

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CERTIFICATO DI CONTROLLO RADIOGRAFICO – RADIOGRAPHIC EXAMINATION REPORT
RT 072-24 Data: 11-01-2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa - Butt welds
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136-138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-20-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	-
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	-	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90013, 123A90-FDL-ST-DD-90180		

PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 10675-1 Liv.1

CODICI DELLE DISCONTINUITA' - *DISCONTINUITY CODE:*

12	Difetto film *Film Defect*	202	Cavità di ritiro *Shrinkage cavity*	402	Mancanza penetrazione *Lack of penetration*	517	Ripresa difettosa *Poor restart*	2013	Nido di soffiature *Clustered porosità*
100	Cricche *Crack*	300	Inclusioni solide *Solid inclusion*	500	Irregolarità di maglia *Irregular shape*	600	Difetto generico *Generic indication*	2014	Porosità allineate *Aligned porosity*
101	Cricche longitudinali *Longitudinal crack*	301	Inclusioni di scoria *Slag inclusion*	502	Sovrametallo *Excess weld metal*	601	Colpo d'arco *Arc strike*	2015	Cavità allungate *Elongated cavity*
102	Cricche trasversali *Transverse crack*	302	Inclusioni di flusso *Flux inclusion*	504	Eccesso penetrazione *Excess of penetration*	602	Spruzzo *Spatter*	2016	Tarlo *Worm hole*
103	Cricche a raggiera *Radiating cracks*	303	Inclusione di ossido *Oxide inclusion*	507	Slivellamento *Misalignment*	604	Colpo di mola *Grinding mark*	2024	Cavità cratere *Crater pipe*
104	Cricche di cratere *Crater crack*	304	Inclusione metallica *Metallic Inclusion*	511	Insellamento *External concavity*	2011	Poro *Isolated gas porosity*	5011	Incisione marginale *Undercut*
201	Soffiatura *Gas cavity*	401	Mancanza di fusione *Lack of fusion*	515	Insellam. al vertice *Root concavity*	2012	Porosità unif. distribuite *Porosity regularly distributed*	5013	Incisione al vertice *Shrinkage groove*

APPARECCHIATURA RADIOGRAFICA:
RADIOGRAFIC EQUIPMENT:

1	Apparecchio: *Testing equipment:*	Comet Evo Pxs Evo 300DS Matricola : 985483	Tipo di sorgente: *Source type:*	☑	Raggi X *X Ray*	☐	Raggi Y *Gamma ray*	Dimensione macchia focale: *Sources size:*	Ø 1 mm
2	Apparecchio: *Testing equipment:*		Tipo di sorgente: *Source type:*	☐	Raggi X *X Ray*	☐	Raggi Y *Gamma ray*	Dimensione macchia focale: *Sources size:*	mm
3	Apparecchio: *Testing equipment:*		Tipo di sorgente: *Source type:*	☐	Raggi X *X Ray*	☐	Raggi Y *Gamma ray*	Dimensione macchia focale: *Sources size:*	mm

ESITO/RESULT : A = Conforme - *Acceptable* - NC = Non Conforme - *Unacceptable*

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CERTIFICATO DI CONTROLLO RADIOGRAFICO – RADIOGRAPHIC EXAMINATION REPORT

RT 072-24 Data: 11-01-2024

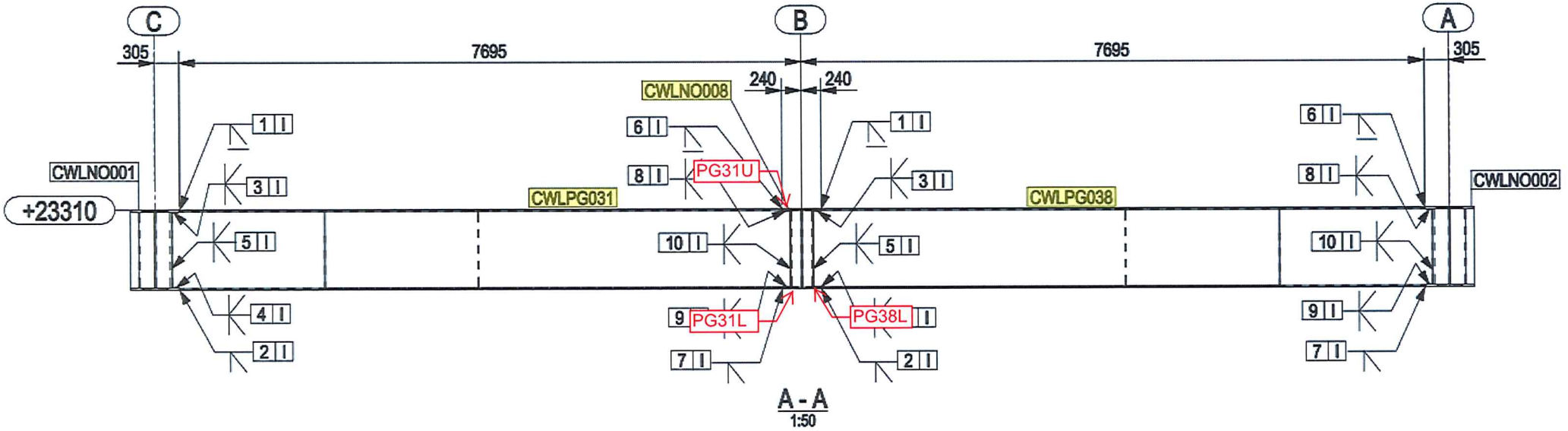
TECNICA DI CONTROLLO RADIOGRAFICO:
RADIOGRAFIC TECHNIQUE:

Tecnica radiografica: *Radiographic technique:*	☐ Panoramica *Panoramic*	☑ Imm. singola parete singola *Single view, single wall exposure*		☐ Imm. singola parete doppia *Single view, double wall exposure*		☐ Imm. doppia parete doppia *Double view, double wall exposure*					
Apparecchio n: *Testing equipment n:*	1	Curie: *Activity*	-	IQI: *IQI:*	ISO 19232-1 10 FE-EN	☐ Lato film *Film side*	☑ Lato sorgente *Source side*	Sensibilità equivalente *Equivalent sensitivity:*		W12-W13	
Penombra geometrica: *Geometrical unsharpness:*	ISO17636-1 fig.21			Numero di esposizioni: *Number of exposures:*	Vedi tabella See table	Densità: *Density:*	≥2.3	Estens. test: *Extent of exam:*		100%	
Produttore film-Lotto: *Film manufacturer-Lot:*	Carestream – 0475 012		Scadenza: *Expiry:*	04-2025	Schermi protezione pellicola: *Film screens:*		0,10/0,10	Numero film per busta: *Number of film in each film holder:*		1	
Tipo di sviluppo- Lotto: *Developer type- Lot:*	Carestream - 5091962		Scadenza: *Expiry:*	01-2025	Tipo di fissaggio- Lotto: *Fixer type- Lot:*		Carestream - 5091867	Scadenza: *Expiry:*		11-2024	
Trattamento pellicola: *Film processing:*	Automatico *Automatic*		Ciclo di sviluppo(min): *Development cycle(min):*	8	Temperatura di sviluppo(°C): *Development temperature(°C):*		28				

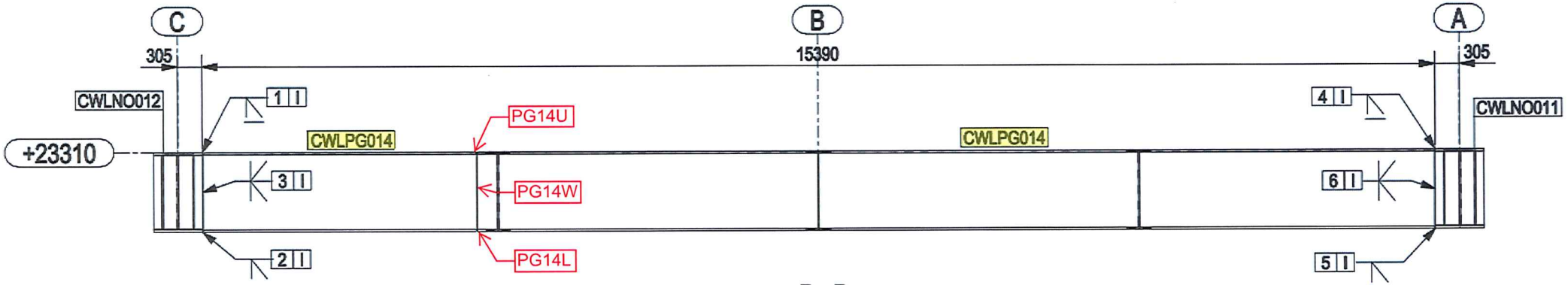
IDENTIFICAZIONE DELLA SALDATURA Identification of welding					PARAMETRI RADIOGRAFICI Radiographic Parameters						
Saldatura *Welding*	*Marca Mark*	*Disegno Drawing*	Tratto *Stroke*	Materiale base *Base material mm*	Distanza sorg.- ogg. *Source - ob. Distance mm*	Distanza ogg. - film *Ob. - film distance mm*	Voltaggio *Voltage* KV/MA	Tipo film *Type film*	Saldatore *Welder*	Discontinuità *Discontinuity*	Esito *Result*
W1	CWLPG014	123A90-FDL-ST-DD-90013	1-2	25	800	25	270/3/2'10"	T200	TO		A
			3-4	"	"	"	"	"	"	2016	A
W2	CWLPG014	123A90-FDL-ST-DD-90013	1-2	25	800	25	270/3/2'10"	T200	TO	2011	A
			3-4	"	"	"	"	"	"		A
W3	CWLPG014	123A90-FDL-ST-DD-90013	1-2	15	800	15	210/3/1'45"	T200	TO	5011	A
			2-3	"	"	"	"	"	"	2015	A
			3-4	"	"	"	"	"	"	2016	A
W2	CWLPG022	123A90-FDL-ST-DD-90180	1-2	25	800	25	270/3/2'10"	T200	H		A
			3-4	"	"	"	"	"	"		A
W7	CWLPG031	123A90-FDL-ST-DD-90180	1-2	20	800	20	240/3/1'45"	T200	H	5013	A
			3-4	"	"	"	"	"	"		A
W6	CWLPG031	123A90-FDL-ST-DD-90180	1-2	20	800	20	240/3/1'45"	T200	H		A
			3-4	"	"	"	"	"	"		A
W2	CWLPG038	123A90-FDL-ST-DD-90180	1-2	20	800	20	240/3/1'45"	T200	H	5011	A
			3-4	"	"	"	"	"	"	2016	A

ESITO/RESULT : A = Conforme - *Acceptable* - NC = Non Conforme - *Unacceptable*

OPERATORE CND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Ionita Marius 2 liv. RT UNI EN ISO 9712 11-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

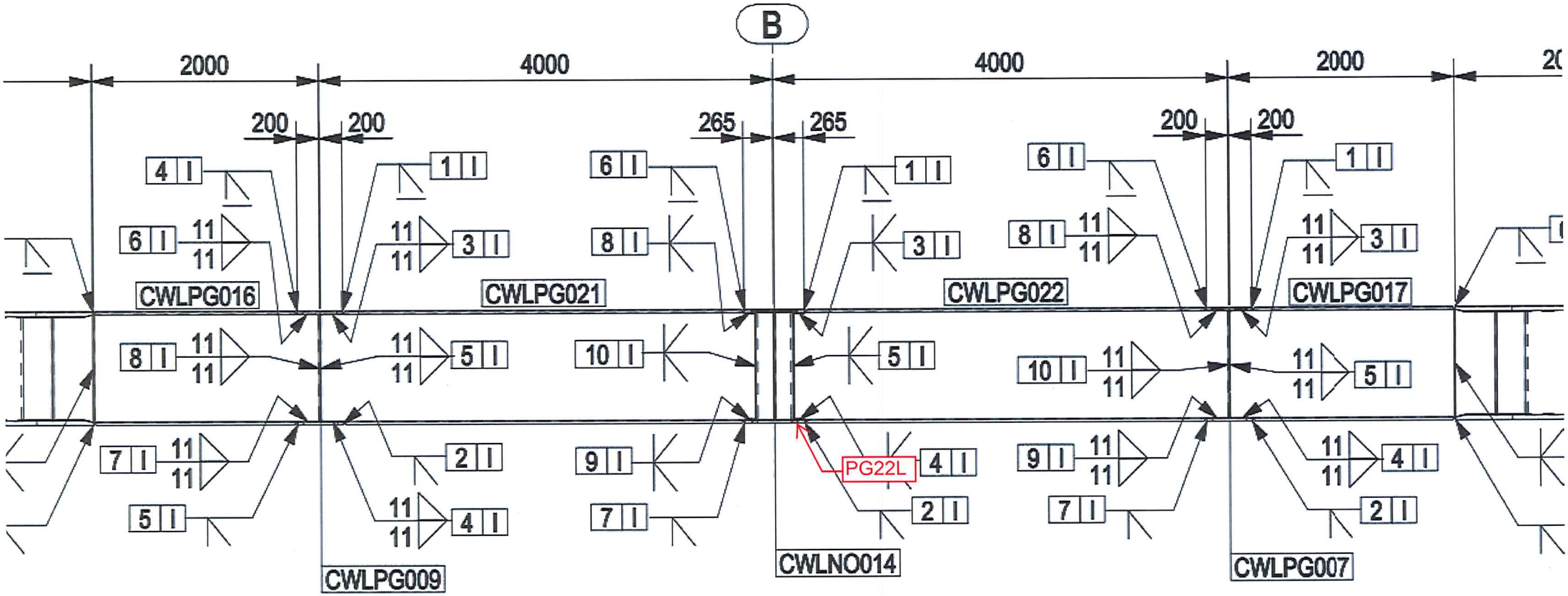


A - A
1:50



B - B

SANDHILL
STEEL CONSTRUCTIONS S.p.A
ITALY
QUALITY CONTROL



C - C

1:50

STEEL CONSTRUCTIONS S.p.A
ITALY
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CERTIFICATO DI CONTROLLO RADIOGRAFICO – RADIOGRAPHIC EXAMINATION REPORT

RT 359-24 Data: 22-02-2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa - Butt welds
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136-138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-20
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	-
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	-	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90198		

PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 10675-1 Liv.1

CODICI DELLE DISCONTINUITA' - *DISCONTINUITY CODE:*

12	Difetto film *Film Defect*	202	Cavità di ritiro *Shrinkage cavity*	402	Mancanza penetrazione *Lack of penetration*	517	Ripresa difettosa *Poor restart*	2013	Nido di soffiature *Clustered porosità*
100	Cricche *Crack*	300	Inclusioni solide *Solid inclusion*	500	Irregolarità di maglia *Irregular shape*	600	Difetto generico *Generic indication*	2014	Porosità allineate *Aligned porosity*
101	Cricche longitudinali *Longitudinal crack*	301	Inclusioni di scoria *Slag inclusion*	502	Sovrametallo *Excess weld metal*	601	Colpo d'arco *Arc strike*	2015	Cavità allungate *Elongated cavity*
102	Cricche trasversali *Transverse crack*	302	Inclusioni di flusso *Flux inclusion*	504	Eccesso penetrazione *Excess of penetration*	602	Spruzzo *Spatter*	2016	Tarlo *Worm hole*
103	Cricche a raggiera *Radiating cracks*	303	Inclusione di ossido *Oxide inclusion*	507	Slivellamento *Misalignment*	604	Colpo di mola *Grinding mark*	2024	Cavità cratere *Crater pipe*
104	Cricche di cratere *Crater crack*	304	Inclusione metallica *Metallic Inclusion*	511	Insellamento *External concavity*	2011	Poro *Isolated gas porosity*	5011	Incisione marginale *Undercut*
201	Soffiatura *Gas cavity*	401	Mancanza di fusione *Lack of fusion*	515	Insellam. al vertice *Root concavity*	2012	Porosità unif. distribuite *Porosity regularly distributed*	5013	Incisione al vertice *Shrinkage groove*

APPARECCHIATURA RADIOGRAFICA:

RADIOGRAFIC EQUIPMENT:

1	Apparecchio: **Testing equipment:**	Comet Evo Pxs Evo 300DS Matricola : 985483	Tipo di sorgente: **Source type:**	☑	Raggi X **X Ray**	☐	Raggi Y **Gamma ray**	Dimensione macchia focale: **Sources size:**	Ø 1 mm
2	Apparecchio: **Testing equipment:**		Tipo di sorgente: **Source type:**	☐	Raggi X **X Ray**	☐	Raggi Y **Gamma ray**	Dimensione macchia focale: **Sources size:**	mm
3	Apparecchio: **Testing equipment:**		Tipo di sorgente: **Source type:**	☐	Raggi X **X Ray**	☐	Raggi Y **Gamma ray**	Dimensione macchia focale: **Sources size:**	mm

ESITO/RESULT : A = Conforme - *Acceptable* - NC = Non Conforme - *Unacceptable*

OPERATORE CND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
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CERTIFICATO DI CONTROLLO RADIOGRAFICO – RADIOGRAPHIC EXAMINATION REPORT

RT 359-24 Data: 22-02-2024

TECNICA DI CONTROLLO RADIOGRAFICO:
RADIOGRAFIC TECHNIQUE:

Tecnica radiografica: *Radiographic technique:*	☐ Panoramica *Panoramic*	☑ Imm. singola parete singola *Single view, single wall exposure*		☐ Imm. singola parete doppia *Single view, double wall exposure*		☐ Imm. doppia parete doppia *Double view, double wall exposure*					
Apparecchio n: *Testing equipment n:*	1	Curie: *Activity*	-	IQI: *IQI:*	ISO 19232-1 10 FE-EN	☐ Lato film *Film side*	☑ Lato sorgente *Source side*	Sensibilità equivalente *Equivalent sensitivity:*	W12-W13		
Penombra geometrica: *Geometrical unsharpness:*	ISO17636-1 fig.21	Numero di esposizioni: *Number of exposures:*	Vedi tabella See table	Densità: *Density:*	≥2.3	Estens. test: *Extent of exam:*	100%				
Produttore film-Lotto: *Film manufacturer-Lot:*	Carestream – 0475 012	Scadenza: *Expiry:*	04-2025	Schermi protezione pellicola: *Film screens:*	0,10/0,10	Numero film per busta: *Number of film in each film holder:*	1				
Tipo di sviluppo- Lotto: *Developer type- Lot:*	Carestream - 5091962	Scadenza: *Expiry:*	01-2025	Tipo di fissaggio- Lotto: *Fixer type- Lot:*	Carestream - 5091867	Scadenza: *Expiry:*	11-2024				
Trattamento pellicola: *Film processing:*	Automatico *Automatic*	Ciclo di sviluppo(min): *Development cycle(min):*	8	Temperatura di sviluppo(°C): *Development temperature(°C):*	28						

IDENTIFICAZIONE DELLA SALDATURA Identification of welding					PARAMETRI RADIOGRAFICI Radiographic Parameters						
Saldatura *Welding*	*Marca Mark*	*Disegno Drawing*	Tratto *Stroke*	Materiale base *Base material mm*	Distanza sorg.- ogg. *Source - ob. Distance mm*	Distanza ogg. - film *Ob. - film distance mm*	Voltaggio *Voltage* KV/MA	Tipo film *Type film*	Saldatore *Welder*	Discontinuità *Discontinuity*	Esito *Result*
S1	CWUPG007	123A90-FDL-ST-DD-90198	1-2	20	800	20	240/3/1'45"	T200	RS		A
			3-4	"	"	"	"	"	"		A
S3	CWUPG007	123A90-FDL-ST-DD-90198	1-2	"	"	"	"	"	"	2011	A
			3-4	"	"	"	"	"	"		A
S2	CWUPG007	123A90-FDL-ST-DD-90198	1-2	15	800	15	210/3/1'45"	T200	RS		A
			2-3	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A
S4	CWUPG008	123A90-FDL-ST-DD-90198	1-2	20	800	20	240/3/1'45"	T200	RS		A
			3-4	"	"	"	"	"	"		A
S6	CWUPG008	123A90-FDL-ST-DD-90198	1-2	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A
S5	CWUPG008	123A90-FDL-ST-DD-90198	1-2	15	800	15	210/3/1'45"	T200	RS		A
			2-3	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A

ESITO/RESULT : A = Conforme - *Acceptable* - NC = Non Conforme - *Unacceptable*

OPERATORE CND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Ionita Marius 2 liv. RT UNI EN ISO 9712 22-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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CERTIFICATO DI CONTROLLO RADIOGRAFICO – RADIOGRAPHIC EXAMINATION REPORT
RT 452-24 Data: 01-03-2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa - Butt welds
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136-138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-20
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	-
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	-	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90198		

PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 10675-1 Liv.1

CODICI DELLE DISCONTINUITA' - *DISCONTINUITY CODE:*

12	Difetto film *Film Defect*	202	Cavità di ritiro *Shrinkage cavity*	402	Mancanza penetrazione *Lack of penetration*	517	Ripresa difettosa *Poor restart*	2013	Nido di soffiature *Clustered porosità*
100	Cricche *Crack*	300	Inclusioni solide *Solid inclusion*	500	Irregolarità di maglia *Irregular shape*	600	Difetto generico *Generic indication*	2014	Porosità allineate *Aligned porosity*
101	Cricche longitudinali *Longitudinal crack*	301	Inclusioni di scoria *Slag inclusion*	502	Sovrametallo *Excess weld metal*	601	Colpo d'arco *Arc strike*	2015	Cavità allungate *Elongated cavity*
102	Cricche trasversali *Transverse crack*	302	Inclusioni di flusso *Flux inclusion*	504	Eccesso penetrazione *Excess of penetration*	602	Spruzzo *Spatter*	2016	Tarlo *Worm hole*
103	Cricche a raggiera *Radiating cracks*	303	Inclusione di ossido *Oxide inclusion*	507	Slivellamento *Misalignment*	604	Colpo di mola *Grinding mark*	2024	Cavità cratere *Crater pipe*
104	Cricche di cratere *Crater crack*	304	Inclusione metallica *Metallic Inclusion*	511	Insellamento *External concavity*	2011	Poro *Isolated gas porosity*	5011	Incisione marginale *Undercut*
201	Soffiatura *Gas cavity*	401	Mancanza di fusione *Lack of fusion*	515	Insellam. al vertice *Root concavity*	2012	Porosità unif. distribuite *Porosity regularly distributed*	5013	Incisione al vertice *Shrinkage groove*

APPARECCHIATURA RADIOGRAFICA:
RADIOGRAFIC EQUIPMENT:

1	Apparecchio: **Testing equipment:**	Comet Evo Pxs Evo 300DS Matricola : 985483	Tipo di sorgente: **Source type:**	☑	Raggi X **X Ray**	☐	Raggi Y **Gamma ray**	Dimensione macchia focale: **Sources size:**	Ø 1 mm
2	Apparecchio: **Testing equipment:**		Tipo di sorgente: **Source type:**	☐	Raggi X **X Ray**	☐	Raggi Y **Gamma ray**	Dimensione macchia focale: **Sources size:**	mm
3	Apparecchio: **Testing equipment:**		Tipo di sorgente: **Source type:**	☐	Raggi X **X Ray**	☐	Raggi Y **Gamma ray**	Dimensione macchia focale: **Sources size:**	mm

ESITO/RESULT : A = Conforme - *Acceptable* - NC = Non Conforme - *Unacceptable*

OPERATORE CND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. RT UNI EN ISO 9712 01-03-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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CERTIFICATO DI CONTROLLO RADIOGRAFICO – RADIOGRAPHIC EXAMINATION REPORT

RT 452-24 Data: 01-03-2024

TECNICA DI CONTROLLO RADIOGRAFICO:
RADIOGRAFIC TECHNIQUE:

Tecnica radiografica: *Radiographic technique:*	☐ Panoramica *Panoramic*	☑ Imm. singola parete singola *Single view, single wall exposure*		☐ Imm. singola parete doppia *Single view, double wall exposure*		☐ Imm. doppia parete doppia *Double view, double wall exposure*					
Apparecchio n: *Testing equipment n:*	1	Curie: *Activity*	-	IQI: *IQI:*	ISO 19232-1 10 FE-EN	☐ Lato film *Film side*	☑ Lato sorgente *Source side*	Sensibilità equivalente *Equivalent sensitivity:*	W10-W13		
Penombra geometrica: *Geometrical unsharpness:*	ISO17636-1 fig.21	Numero di esposizioni: *Number of exposures:*	Vedi tabella See table	Densità: *Density:*	≥2.3	Estens. test: *Extent of exam:*	100%				
Produttore film-Lotto: *Film manufacturer-Lot:*	Carestream – 0475 012	Scadenza: *Expiry:*	04-2025	Schermi protezione pellicola: *Film screens:*	0,10/0,10	Numero film per busta: *Number of film in each film holder:*	1				
Tipo di sviluppo- Lotto: *Developer type- Lot:*	Carestream - 5091962	Scadenza: *Expiry:*	01-2025	Tipo di fissaggio- Lotto: *Fixer type- Lot:*	Carestream - 5091867	Scadenza: *Expiry:*	11-2024				
Trattamento pellicola: *Film processing:*	Automatico *Automatic*	Ciclo di sviluppo(min): *Development cycle(min):*	8	Temperatura di sviluppo(°C): *Development temperature(°C):*	28						

IDENTIFICAZIONE DELLA SALDATURA Identification of welding					PARAMETRI RADIOGRAFICI Radiographic Parameters						
Saldatura *Welding*	*Marca Mark*	*Disegno Drawing*	Tratto *Stroke*	Materiale base *Base material* mm	Distanza sorg.- ogg. *Source - ob. Distance* mm	Distanza ogg. - film *Ob. - film distance* mm	Voltaggio *Voltage* KV/MA	Tipo film *Type film*	Saldatore *Welder*	Discontinuità *Discontinuity*	Esito *Result*
S1	CWUPG025	123A90-FDL-ST-DD-90198	1-2	40	800	40	300/3/5'40"	T200	MD		A
			3-4	"	"	"	"	"	"		A
S3	CWUPG025	123A90-FDL-ST-DD-90198	1-2	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A
S2	CWUPG025	123A90-FDL-ST-DD-90198	1-2	15/20	800	20	210/3/1'45"	T200	MD		A
			2-3	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A
S4	CWUPG026	123A90-FDL-ST-DD-90198	1-2	40	800	40	300/3/5'40"	T200	MD		A
			3-4	"	"	"	"	"	"		A
S6	CWUPG026	123A90-FDL-ST-DD-90198	1-2	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A
S5	CWUPG026	123A90-FDL-ST-DD-90198	1-2	15/20	800	20	210/3/1'45"	T200	MD		A
			2-3	"	"	"	"	"	"		A
			3-4	"	"	"	"	"	"		A

ESITO/RESULT : A = Conforme - *Acceptable* - NC = Non Conforme - *Unacceptable*

OPERATORE CND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 481/23 Data :18/12/2023

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15.09 ÷ 19.05
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90062 – 90061 – 90056 – 90055		

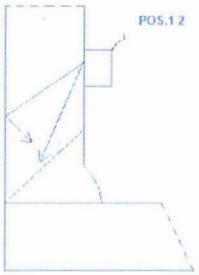
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	123A90-FDL-ST-DD-	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:



IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLNO014 W1	-	-	-	-	-	-	-	A
Mark CWLNO013 W1	-	-	-	-	-	-	-	A
Mark CWLNO008 W1	-	-	-	-	-	-	-	A
Mark CWLNO007 W1	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 485/23 Data :21/12/2023

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	19.05
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90054 – 90050		

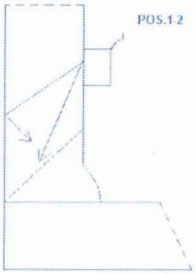
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:



IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLNO002 W1	-	-	-	-	-	-	-	A
Mark CWLNO006 W1	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 21-12-2023			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 001/24 Data :08/01/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136 - 138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90051 – 90049 – 90013 - 90180		

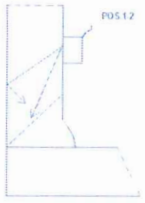
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

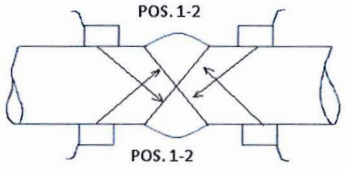
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:





IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLNO001 W1	-	-	-	-	-	-	-	A
Mark CWLNO003 W1	-	-	-	-	-	-	-	A
Mark CWLPG014 W1-W2-W3	-	-	-	-	-	-	-	A
Mark CWLPG031-CWLNO008-CWLPG038 S1-S2-S3-S4-S5 S6-S7-S8-S9-S10	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 08-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 012/24 Data :10/01/2024

PCliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136-138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90022, 90180		

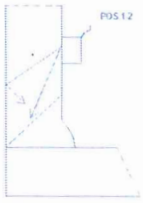
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

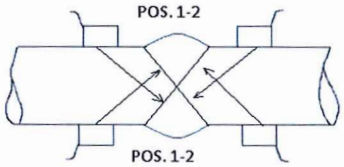
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:





IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLPG023 W1-W2-W3	-	-	-	-	-	-	-	A
Mark CWLPG021-CWLNO014-CWLPG022 S1-S2-S3-S4-S5 S6-S7-S8-S9-S10	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 10-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

TRM ndt S.r.l.
Controlli non distruttivi
Via Tiepolo,16/B - 31021 Mogliano Veneto(TV)-Italy
Telefono: 041-5906946 Fax:041-457248
p.i./c.f.:04005440278
info@trmndt.it tecnico@trmndt.it trmndtslr@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 013/24 Data :12/01/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136-138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	10-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90059 – 90060 – 90052 – 90053-90181 - 90184		

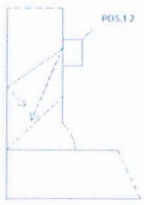
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

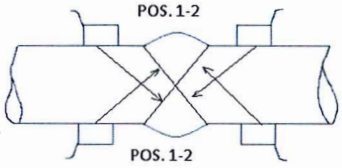
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:





SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 12-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

TRM ndt S.r.l.
Controlli non distruttivi

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 013/24 Data :12/01/2024

IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLN011 W1-W2-W3-W4-W6 W7 -W9-W10-W17-W18	-	-	-	-	-	-	-	A
Mark CWLN012 W1-W2-W3-W4-W6 W7 -W9-W10-W17-W18	-	-	-	-	-	-	-	A
Mark CWLPG033-CWLNO011-CWLPG042 S1-S2-S3-S4-S5-S6	-	-	-	-	-	-	-	A
Mark CWLPG035-CWLNO012-CWLPG045 S1-S2-S3-S4-S5-S6	-	-	-	-	-	-	-	A
CWLNO004 W1-W2-W3-W4-W6-W7 W9-W13-W17-W21	-	-	-	-	-	-	-	A
CWLNO005 W1-W2-W3-W4-W6-W7 W9-W13-W17-W21	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 12-01-2024			SCANDIN... STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

TRM ndt S.r.l.
Controlli non distruttivi

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 017/24 Data :16/01/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	136-138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	10-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90012 – 90057 – 90058 - 90180		

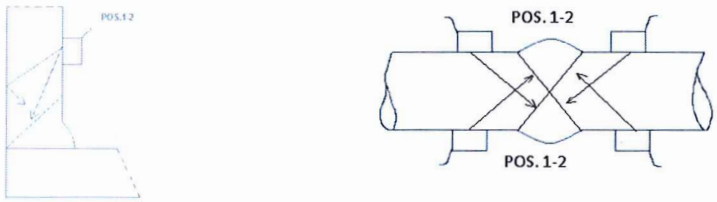
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:



SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 16-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

TRM ndt S.r.l.
Controlli non distruttivi

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 017/24 Data :16/01/2024

IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLPG020-CWLNO013-CWLPG019 S1-S2-S3-S4-S5 S6-S7-S8-S9-S10	-	-	-	-	-	-	-	A
CWLPG013 W1-W2-W3	-	-	-	-	-	-	-	A
CWLNO009 W1-W2-W3-W4-W6-W7 W9-W10-W17-W18	-	-	-	-	-	-	-	A
CWLNO010 W1-W2-W3-W4-W6-W7 W9-W10-W17-W18	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 16-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

TRM ndt S.r.l.
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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 020/24 Data :18/01/2024

PCliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 – 136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	10-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90181		

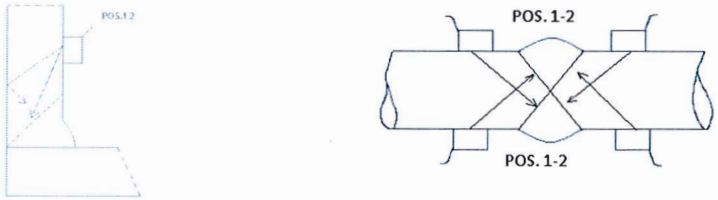
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:



IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLPG040-CWLNO008-CWLPG041 S1-S2-S3-S4-S5 S6-S7-S8-S9-S10	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 18-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 024/24 Data :23/01/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 – 136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-25
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90181, 90183		

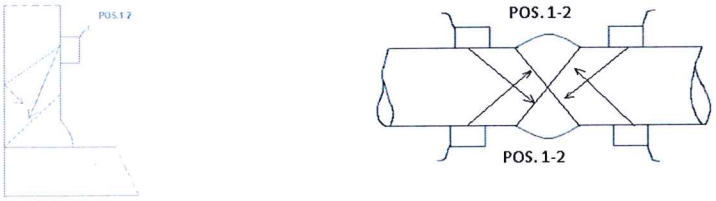
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 60/4	4	60°	Trasv.	8x9	1	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	2	45	200	

Sketch:



IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLPG043-CWLNO009-CWLPG037 S1-S2-S3 S5-S6-S7-S8	-	-	-	-	-	-	-	A
Mark CWLPG036-CWLNO010-CWLPG044 S1-S2-S3 S5-S6-S7-S8	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 23-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 047/24 Data :30/01/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 – 136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90064 – 90066		

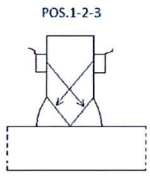
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

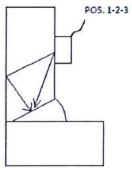
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

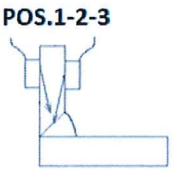
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:







IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLNO016 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W38-W39-W41-W42 CWBR001-1	-	-	-	-	-	-	-	A
Mark CWLNO018 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W38-W39-W41-W42 CWBR028-2	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 06-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

TRM ndt S.r.l.
Controlli non distruttivi
Via Tiepolo,16/B - 31021 Mogliano Veneto(TV)-Italy
Telefono: 041-5906946
p.i./c.f.:04005440278
info@trmndt.it tecnico@trmndt.it trmndtslr@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 048/24 Data :31/01/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 – 136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90065		

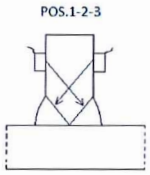
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

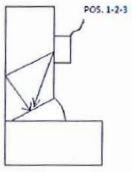
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

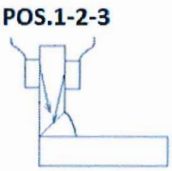
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:







IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLNO017 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W38-W39-W41-W42 CWBR027-2	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 31-01-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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info@trmndt.it tecnico@trmndt.it trmndtslr@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 055/24 Data :06/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 – 136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90065		

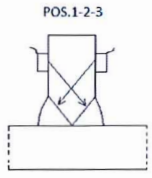
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

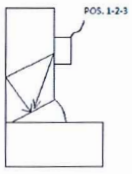
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

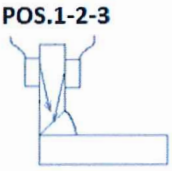
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:







IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWLNO015 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W38-W39-W41-W42 CWBR002-1	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 06-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

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info@trmndt.it tecnico@trmndt.it trmndtsrl@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 058/24 Data :06/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90127		

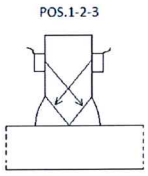
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

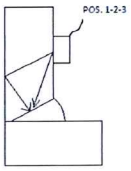
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

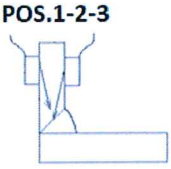
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:







IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO003 W1-W2-W4-W6-W8-W10-W12-W14-W16-W18-W19-W20-W21-W22	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Lorenzo 2 liv. UT UNI EN ISO 9712 06-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 059/24 Data :06/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90128		

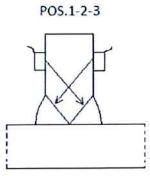
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

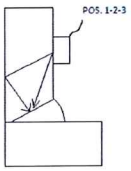
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

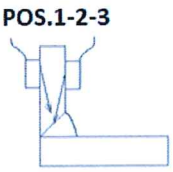
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:







IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO004 W1-W2-W4-W6-W8-W10-W12-W14-W16-W18-W19-W20-W21-W22	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Lorenzo 2 liv. UT UNI EN ISO 9712 06-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 060/24 Data :06/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90130		

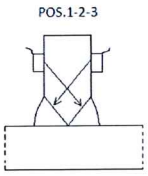
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

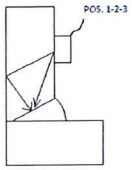
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

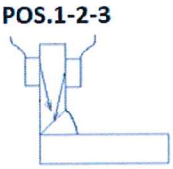
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:







IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO006 W1-W2-W4-W6-W8-W10-W12-W14-W15-W16-W17-W18	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Lorenzo 2 liv. UT UNI EN ISO 9712 06-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 061/24 Data :06/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90131		

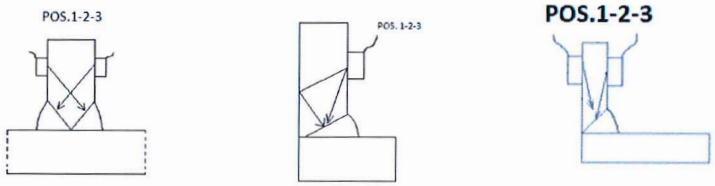
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:



IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO007 W1-W2-W4-W6-W8-W10-W12-W14-W15-W16-W17-W18	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Lorenzo 2 liv. UT UNI EN ISO 9712 06-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.A. QUALITY CONTROL

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 066/24 Data :13/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90140 - 90096		

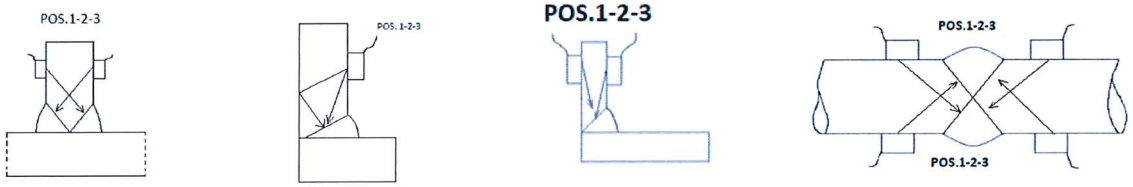
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:



IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO013 W1-W2-W5-W6-W9-W10-W13-W14-W35-W36-W38-W39	-	-	-	-	-	-	-	A
Mark CWUPG027 W5-W6-W7	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 13-02-2024			SCANDIUZZI STEEL CONSTRUCTION S.p.A QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 074/24 Data :15/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90074 – 90075 – 90076 – 90077 123A90-FDL-ST-DD-90125 – 90126 – 90141		

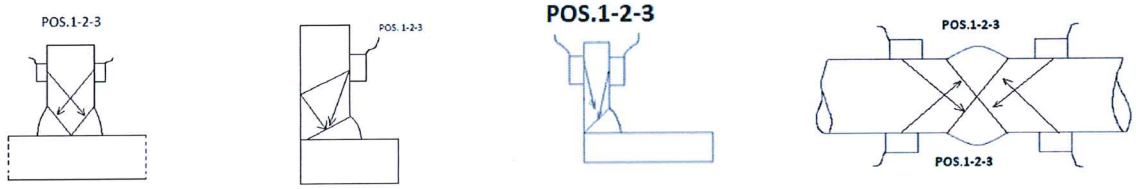
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:



SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 15-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 074/24 Data :15/02/2024

IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUPG001 W8-W9-W10-W11-W12 W13-W14-W15	-	-	-	-	-	-	-	A
Mark CWUPG002 W8-W9-W10-W11-W12 W13-W14-W15	-	-	-	-	-	-	-	A
Mark CWUPG003 W8-W9-W10-W11-W12 W13-W14-W15	-	-	-	-	-	-	-	A
Mark CWUPG004 W8-W9-W10-W11-W12 W13-W14-W15	-	-	-	-	-	-	-	A
Mark CWUNO001 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W19-W20-W21-W22 W28-W29-W32-W33	-	-	-	-	-	-	-	A
Mark CWUNO014 W1-W2-W5-W6-W9-W10 W13-W14-W35-W36-W37 W38-W39-W44	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 15-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 079/24 Data :20/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90126 -90134 -90129 -90198		

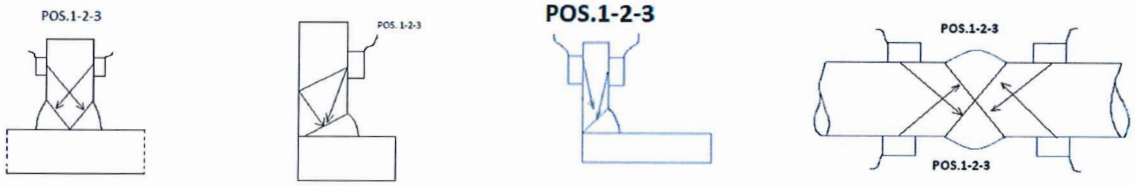
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:



SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 20-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

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CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT

UT 079/24 Data :20/02/2024

IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO002 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W19-W20-W21-W22 W29-W33	-	-	-	-	-	-	-	A
Mark CWUNO010 W1-W2-W3-W4-W5-W6 W7-W8-W9-W10-W11-W12 W13-W14-W15-W16-W17 W18-W19-W20-W21-W22	-	-	-	-	-	-	-	A
Mark CWUNO005 W1-W2-W4-W6-W8 W10-W12-W14-W15-W16 W17-W18	-	-	-	-	-	-	-	A
Mark CWUPG008 W4-W5-W6	-	-	-	-	-	-	-	A
Mark CWUPG007 W1-W2-W3	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Rodio Aldo 3 liv. UT UNI EN ISO 9712 20-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 082/24 Data :22/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90126 -90136		

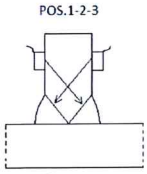
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

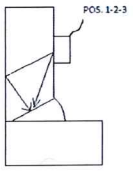
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

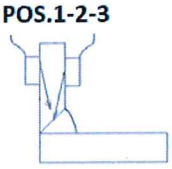
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

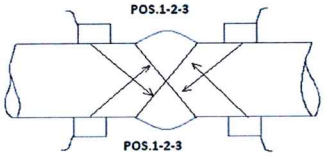
Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:









IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO011 W1-W2-W5-W6-W9-W10 W13-W14-W35-W36-W38 W39	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 22-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

TRM ndt S.r.l.
Controlli non distruttivi
Via Tiepolo,16/B - 31021 Mogliano Veneto(TV)-Italy
Telefono: 041-5906946
p.i./c.f.:04005440278
info@trmndt.it tecnico@trmndt.it trmndtsrl@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 087/24 Data :27/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90201 – 90199 – 90132 -90137		

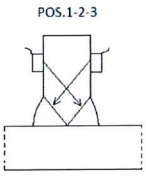
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

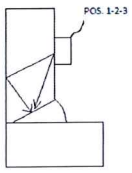
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

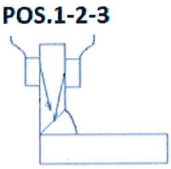
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

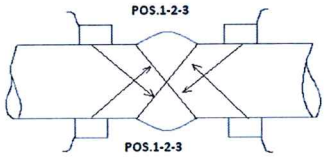
Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:









SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 27-02-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A. ITALY QUALITY CONTROL

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info@trmndt.it tecnico@trmndt.it trmndtsrl@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 087/24 Data :27/02/2024

IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUPG004 W1-W2-W3	-	-	-	-	-	-	-	A
Mark CWUPG019 W1-W2-W3	-	-	-	-	-	-	-	A
Mark CWUPG021 W1-W2-W3	-	-	-	-	-	-	-	A
Mark CWUNO008 W1-W2-W4-W6-W8-W10 W12-W14-W15-W16-W17 W18	-	-	-	-	-	-	-	A
Mark CWUNO012 W1-W2-W5-W6-W9-W10 W13-W14-W35-W36-W38 W39	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 27-02-2024			SCANDIUZZI STEEL CONSTRUCTION S.p.A. ITALY QUALITY CONTROL

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www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 098/24 Data :29/02/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90198 – 90199		

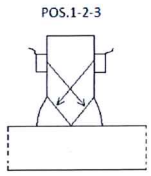
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

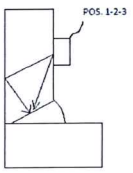
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

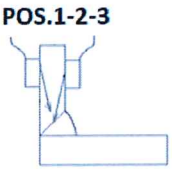
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

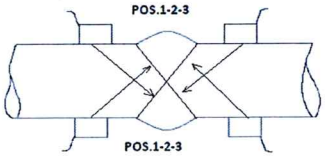
Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:









IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUPG025 W1-W2-W3	-	-	-	-	-	-	-	A
Mark CWUPG003 W1-W2-W3	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
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OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 29-02-2024			SCANDIUZZI STEEL CONSTRUCTION S.p.A. ITALY QUALITY CONTROL

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info@trmndt.it tecnico@trmndt.it trmndtsrl@legalmail.it
www.trmndt.it

CERTIFICATO DI CONTROLLO ULTRASONORO - ULTRASONIC EXAMINATION REPORT
UT 105/24 Data :04/03/2024

Cliente: *Customer:*	ROSETTI MARINO	Particolare: *Component:*	Saldature testa testa – Tee but weld
Impianto: *Plant:*	BASE LOAD POWER HUB (BLPH)	Proc. saldat.: *Welding process:*	138 -136
Oggetto: *Object:*	PLATE GIRDER (WELDED BEAM) AND STEELWORKS JOINT	Materiale: *Material:*	S460 MLO EN10225
Ordine *Order:*	-	Estens. test: *Test Extension:*	100%
P.O.: *P.O. job:*	-	Spessore (mm) : *Thickness (mm):*	15-40
Sigla: *Item:*	-	Temperatura d'esame (°C): *Test Temperature (°C):*	15
Commessa: *Shop order:*	123A90	Condizioni superficiali: *Surface conditions:*	Come saldato-As welded
Nr. Fabbrica: *Serial Nr.:*	Vedi tabella – See table	Stadio lavorazione: *Working step:*	Dopo saldatura-After welding
Disegno: *Drawing:*	123A90-FDL-ST-DD-90133 -90198		

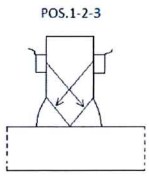
PROCEDURA E TECNICA DI CONTROLLO - *PROCEDURE AND TEST METHOD*

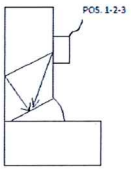
Specifica di riferimento: *Specific Reference:*	1723001793-NDT-PRO-00003 Rev.01	**Classe di accettabilità:** *Acceptance criteria:*	UNI EN ISO 11666 Liv2

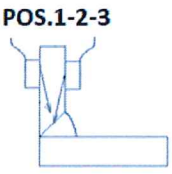
Strumento di controllo: *Testing equipment:*	Blocco di calibrazione: *Reference block:*	Tecnica: *Technique:*	Smorzatura: *Damping:*	Accoppiante: *Coupling by:*	Perdite trasf.to: *Transfer losses:*	Soglia: *Reject:*	Taratura sensibilità: *Sensitività test:*
STARMANS DIO 1000 SFE Matricola:17-012	V1	Pe	/	Gel	/	0	Dac Ø3mm

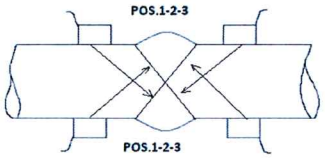
Sonde *Probes*	Tipo *Type*	Freq. MHz *Frequency*	Angolo *Angle*	Onde *Waves*	Sezione *Section (mm)*	Rif.to *Ref.*	Amplificazione dB *Amplification: dB*	Campo mm *Range mm*	Note *Notes*
IMG	TA 45/4	4	45°	Trasv.	8x9	1	35	150	
IMG	TA 60/4	4	60°	Trasv.	8x9	2	37	150	
IMG	TA 70/4	4	70°	Trasv.	8x9	3	45	200	

Sketch:









IDENTIFICAZIONE *IDENTIFICATION*	DISCONTINUITA' *DISCONTINUITY*	l mm	w mm	d mm	h mm	A dB	NOTE *NOTES*	ESITO *RESULT*
Mark CWUNO009 W1-W2-W3-W4-W9-W10-W11-W12-W17-W18-W19 W20-W21-W22	-	-	-	-	-	-	-	A
Mark CWUPG026 W1-W2-W3	-	-	-	-	-	-	-	A

SOLO INDICAZIONI RILEVANTI SARANNO REGISTRATE(ONLY RELEVANT INDICATIONS WILL BE RECORDED):
l = Lunghezza - *Length* **w** = Larghezza – *Width* **d** = Profondità - *Depth* **h** = Altezza - *Height* **A** = Amplificazione - *Amplitude*
ESITO/RESULT : **A** = Conforme - *Acceptable* - **NC** = Non Conforme - *Unacceptable*

OPERATORECND ESAMINATORE *NDT TECHNICIAN AND EXAMINER*	ISPETTORE CLIENTE *CUSTOMER INSPECTOR*	ENTE COLLAUDATORE *SURVEYOR INSPECTOR*	*CONTROLLO QUALITA' QUALITY CONTROL*
Castellano Fabio 2 liv. UT UNI EN ISO 9712 04-03-2024			SCANDIUZZI STEEL CONSTRUCTIONS S.p.A ITALY QUALITY CONTROL

3 CIMOLAI DOSSIER

This document undergoes an issuance cycle within EDMS Fusionlive". Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

Dossier finale commessa

Manufacturer Record Book

REV.	DATA *DATE*	DESCRIZIONE MODIFICA *DESCRIPTION OF MODIFICATION*	REDATTO *COMPILED*	CONTROLLATO *CHECKED*	APPROVATO *APPROVED*
00	24/01/2024	Emesso per informazione / Issued for information	A. Gianessi CQ	M. Macor RCQ	M. Macor RSQ

Table of contents

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SECTION 1	Plates certificate
SECTION 2	Procedure qualification record (WPS and PQR)
SECTION 3	Pipe certificates (Inspection certificate according to EN 10204-3.1)
SECTION 4	Visual test reports
SECTION 5	Magnetic particle test reports
SECTION 6	Ultrasonic test reports
SECTION 7	Radiographic test Reports
SECTION 8	Dimensional control reports
SECTION 9	Mechanical test results
SECTION 10	Visual test Procedure
SECTION 10	Magnetic particle Procedure
SECTION 10	Ultrasonic test procedure
SECTION 11	Radiographic test procedure
SECTION 12	Dimensional control procedure
SECTION 13	Marking procedure
SECTION 14	Inspection test plan

SECTION 0	Unpriced P.O.

DocuSign Envelope ID: 24A60BE0-0B54-45CC-A1D4-6FB1C2D36296

Destination:
ROSETTI MARINO S.P.A.
Magazzino V.Trieste
Via Trieste 230
I-48122 RAVENNA RA

RM Purch.Order N. 1723001802 123A90A

Type	**Z1RP**	Order Date	**30.10.2023**
Revision	**1** of **17.11.2023**	Print Date	**27.11.2023**
Project	**123A90A - Base Load Power Hub Platform - Common**		

Invoice to:
ROSETTI MARINO S.P.A.
Via Trieste, 230
I-48122 RAVENNA RA
Codice univoco fatturazione elettronica: A4707H7

To
CIMOLAI SPA
VIALE PASTEUR 49
00144 ROMA RM
ITALY

Delivery date: **15.01.2024**

Attn.: **MR. BELLUCCI IVAN**
Yr. Ref.: **N° 0854-4**
Tel. nr. **0434-5581**
e-mail **ivan.bellucci@cimolai.com**
Delivery term: **FCA - SAN GIORGIO DI NOGARO**
Payment: **45 DAYS - REMITTANCE**

Our Reference: **DI ROSA ANTONINO**
Tel **0544 878064** Fax **0544 878105-224** E-Mail **antonino.dirosa@rosetti.it**
Your order confirmation is required.
CUP **.....**
CIG **.....**

****

For any further details about delivery dates see parag. 13

****

WELDED TUBULARS

Item/Rev	Description	Quantity	UOM	Unit Price	Net value (**EUR**)
40 1	**1PIPECSMM437** STRUCTURAL PIPE 550MM X 20MM EN10225 S460MLO Size: Length **10,000** m Cert.: D10 - CERT. 3.1 EN 10204 ED.2004 WBS Element: 123A90A.23BB - Bracings	**40,000** **4**	**m** **PC**		
50 1	**1PIPECSMM438** STR PIPE 600 MM X 20MM EN10225 S460MLO Size: Length **9,600** m Cert.: D10 - CERT. 3.1 EN 10204 ED.2004 WBS Element: 123A90A.23BB - Bracings	**38,400** **4**	**m** **PC**		
60 1	**1PIPECSMM439** STR PIPE 800 MM X 20MM EN10225 S460MLO Entrambi i lati con cianfrino ½ V 25° esterno. Size: Length **3,740** m Cert.: D10 - CERT. 3.1 EN 10204 ED.2004 WBS Element: 123A90A.23BA - Legs	**14,960** **4**	**m** **PC**		

Rosetti Marino S.p.A.
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E-mail: procurement@rosetti.it - Web site: www.rosetti.it
Cap.Soc. € 4.000.000,00 i.v. - REA Ra 1530 - Reg.Impr. di Ravenna / C.F. / P.IVA 00082100397

DocuSign Envelope ID: 24A60BE0-0B54-45CC-A1D4-6FB1C2D36296

Revision 01 - COMMERCIAL NOTES

The order revision is issued in order to modify the following contractual conditions with respect to the previous revision:

a) Amended the length of item. 10
b) Amended the type of certification from 3.2 to 3.1
c) Amended the general notes

As a result of above mentioned changes to contractual conditions, it is agreed that the total value of this order is increased of €

After this revision, the total value of this Order changes from the previous amount of to the agreed contractual amount of €

Herewith, the Supplier declares he renounces to claim any other sum relevant to above mentioned changes to Rosetti Marino Spa.

All other terms and conditions stated on base order not modified by this order revision remain unchanged and valid.

ROSETTI MARINO S.p.A., a company incorporated in Italy (Company Registrar and VAT Number 00082100397) and having its registered office at 230, Via Trieste, 48122 Ravenna (Italy) (hereinafter referred to as "COMPANY" or "ROSETTI")

And

CIMOLAI SPA, a company incorporated in ITALY, (Company Registrar and VAT number IT01507200937) having its registered office - principal place of business in VIALE PASTEUR 49, 00144 ROMA (RM) (hereinafter referred to as "CONTRACTOR")

WHEREAS

(A) CROSSWIND C.V., a company organized under the laws of The Netherlands with registration number 77886070 and its registered address at Hoofplein 20, 3032 AC Rotterdam, The Netherlands (hereinafter referred to as "CLIENT"), has awarded COMPANY the contract n° CW-WP4-2023-05, issued by CLIENT on 10th July 2023, for developing the Engineering, Procurement, Construction, Offshore installation, Commissioning and Operation of the Base Load Power Hub (BLPH) to be installed within the offshore Wind Farm Hollandse Kust Noord Wind Park Project, located 18,5 km off the coast of the Netherlands, (the "PROJECT").

(B) COMPANY is seeking a contractor capable to timely perform the WORKS, the SERVICES and/or deliver the GOODS (as described in this PURCHASE ORDER) to be carried out for and/or incorporated in the plant concerning the PROJECT.

(C) CONTRACTOR represents that it has the necessary know-how, experience, capacity, capability in the applicable PROJECT industrial sector, has qualified and experienced PERSONNEL with sufficient facilities, resources, premises and equipment and is properly financed to timely carry out and deliver such WORK and is willing to do so in accordance with the terms and conditions set out in this CONTRACT.

NOW THEREFORE IN CONSIDERATION OF THE FOREGOING AND THE MUTUAL COVENANTS SET OUT BELOW THE PARTIES AGREE AS FOLLOWS:

Rosetti Marino S.p.A.
Head Office Via Trieste, 230 - 48122 Ravenna - Italy
Tel. +39 0544 878 111 - Fax. +39 0544 878 105
E-mail: procurement@rosetti.it - Web site: www.rosetti.it
Cap.Soc. € 4.000.000,00 i.v. - REA Ra 1530 - Reg.Impr. di Ravenna / C.F. / P.IVA 00082100397

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1. DEFINITIONS

The words and expressions used herein in capital letters shall have the meaning assigned to them in COMPANY's GENERAL TERMS AND CONDITIONS FOR THE SUPPLY OF RAW MATERIALS No. SPC-PRO-01 rev.2018-00 dated 02/10/2018, attached to this PURCHASE ORDER. The CONTRACT shall be interpreted and construed according to the English language.

All instructions, notifications, agreements, authorizations and acknowledgements shall be in writing. All written communications between COMPANY and CONTRACTOR related to the CONTRACT shall be in the English language. The following additional definitions integrate those specified under Clause 1.0 of COMPANY's GENERAL TERMS AND CONDITIONS, referenced in Clause 3 'CONTRACT DOCUMENTS', below:

(i) CONTRACT means this PURCHASE ORDER together with all documents indicated in Clause 3 below including any other document referenced in the CONTRACT DOCUMENTS;

(ii) CONTRACT DOCUMENTS means all the documents indicated in Clause 3 which specify the scope of work of the CONTRACT;

(iii) SITE means the Base Load Power Hub (BLPH) to be installed within the offshore Wind Farm Hollandse Kust Noord Wind Park Project, located 18,5 km off the coast of the Netherlands which is the CLIENT's location where the PLANT is to be installed, commissioned and operated.

(iv) WORKSITE means ROSETTI MARINO SpA in Marina di Ravenna-RA (Italy) where the main fabrication activities for the PROJECT shall be performed.

2. OBJECT OF THE CONTRACT # SCOPE OF WORK

2.1 The CONTRACTOR, shall carry out the WORKS, the SERVICES as detailed in CONTRACT DOCUMENTS in accordance with the terms, conditions and requirements of the CONTRACT;

2.2 Without limiting the foregoing, by way of summary, the CONTRACTOR shall deliver and/or perform the following :

(i) GOODS: as per above price list;

(ii) DOCUMENTATION/CERTIFICATION: as per Clause 3;

. Scraps material from plates remaining at Cimolai property

2.3 Company shall:
i) Supply of the steel plates [DAP SAN GIORGIO DI NOGARO CIMOLAI'S WORKSHOP]

3. CONTRACT DOCUMENTS AND PRIORITY

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3.1 This CONTRACT is composed by the following documents which constitute integral part hereof. The CONTRACT DOCUMENTS are meant to be mutually explanatory; in the event of any conflict or inconsistency between the CONTRACT DOCUMENTS the order of priority set out below shall apply:

(i) Amendments to COMPANY's GENERAL TERMS AND CONDITIONS No. SPC-PRO-01 rev.2018-00 dated 02/10/2018;

(IF ANY # if CONTRACTOR accepts the above referenced conditions, without any comment, this bullet needs to be deleted during the final commercial negotiation phase)

(ii) COMPANY's GENERAL TERMS AND CONDITIONS No. SPC-PRO-01 rev.2018-00 dated 02/10/2018;

- The material shall be supplied in accordance with spec.:

. 123A90-DDL-ST-SP-90018_Str.mat specification
. K559-2254-MT-SPE-001 - Fabrication Specification rev 1
. crosswind welded tubulars lista tubi
. RFQ mail dated 19/10/2023

- Supplier's quotation N° 0854-4 dated 31/10/2023

- Requested material certificates in accordance with EN 10204 (3.1.)

- Documents for Company approval:
1. Inspection test plan (ITP)
2. Welding book (WPS+PQR)
3. Welder qualification
4. NDT procedure
5. Operator's qualification (NDT)
6. Dimensional control procedure

- Final data vendor book

4. EFFECTIVE DATE

The CONTRACT shall become effective as of 08/11/2023 (the "EFFECTIVE DATE").

Anyway, it is agreed and understood that the delivery date of the GOODS is exclusively indicated at Clause 13 of this PURCHASE ORDER and the above definition of EFFECTIVE DATE has no effect on it.

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5. PRICING AND PRICE VALIDITY

5.1 The above PURCHASE ORDER TOTAL AMOUNT is fixed and firm for all the duration of the CONTRACT, and not subject to any revision, or escalation, or any adjustment due to currency fluctuations or other causes whatsoever. The PURCHASE ORDER TOTAL AMOUNT includes all taxes, fees, levies, imposts, duties, charges required by all the applicable laws, excluding only the value added tax, if applicable.

5.2 The unit price # as per CONTRACT DOCUMENTS # shall be considered fixed and firm for any additional quantities of GOODS/WORKS/SERVICES which may be ordered for the PROJECT.

6. OPTIONS (IF ANY)

Not applicable

7. SPARE PARTS AND SPECIAL TOOLS

Not applicable

8. TECHNICAL ASSISTANCE FOR COMMISSIONING AND START-UP ACTIVITIES

Not applicable.

9. INVOICING & PAYMENT TERMS AND CONDITIONS

9.1 Currency
The accounting and payment currency of the CONTRACT shall be Euro.

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9.2 Milestones
Invoices shall give evidence of the number of the CONTRACT and have in attachment the supporting documents indicated herein below:

9.2.1 The invoices relevant to material equipment shall be issued according to the following milestones.

a) 100% of the PURCHASE ORDER TOTAL AMOUNT at delivery of the GOODS (including Final Technical Documentation as per SMIR)//regarding Items from 40 to 60, of price breakdown, at the delivery point indicated in this PURCHASE ORDER; (#DELIVERY INSTALLMENT"), against presentation of the following;.
(i) Receipt by COMPANY of the correct invoice; and
(ii) Receipt by COMPANY of the customs documents listed in Clause 15, approved by COMPANY's Supply Management Department; and
(iii) Receipt by COMPANY of GOODS and Final Technical Documentation, certified by COMPANY's Supply Management Department by issuing a release note to CONTRACTOR);

In case CONTRACTOR is prevented to submit the Final Technical Documentation upon delivery of the GOODS, due to reasons solely attributable to COMPANY's responsibility, present instalment shall be paid as follows:

a) 100 % of the PURCHASE ORDER TOTAL AMOUNT against presentation of supporting documentation (items i) through iii) above plus the release note of the GOODS certified by COMPANY's Supply Management Department).

9.3 Invoice Reference and Addresses
CONTRACTOR's invoice(s) shall be addressed to COMPANY, shall make reference to this PURCHASE ORDER and be sent to the reference regarding administration & account payable indicated at below Clause 24.2.
Each invoice shall be sent in one original and shall contain the sentence #Not assignable credit".
In case of a PURCHASE ORDER amendment issue, all invoices related to will comply with the same invoice scheme defined in this PURCHASE ORDER as here above indicated, unless not otherwise stated in the pertinent PURCHASE ORDER amendment

9.4 Terms of payment
All payments under this CONTRACT shall be made by bank wire transfer.

9.4.1 Invoices corresponding to supply of the GOODS (materials and equipment) shall be paid within fourty-five (45) DAYS from the receipt date of the correct invoice with all the required documentation.

9.5 Payment conditions

All payment shall become due and payable provided that all the previous milestones have been duly completed and invoiced.

(i) a copy of this PURCHASE ORDER together with all documents composing the CONTRACT as listed above has been duly signed for acceptance without reserve by CONTRACTOR's authorized representative, through COMPANY's Docu Sign portal as per relevant instructions,

10. NOT USED

Rosetti Marino S.p.A.
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11. BANK GUARANTEES

Not applicable

12. CONTRACTOR'S OBLIGATIONS.

Not applicable

13. MILESTONES AND DELIVERY DATES

13.1 Performance and delivery

GOODS shall be delivered in accordance with the delivery dates set forth in Clause 13.2

Plates arrival (on behalf of Rosetti Marino) in Cimolai's workshop: within week 45/2023

13.2 Milestones and delivery date(s):
items. 40-50: within 08/01/2024
item. 60: within 15/01/2024

The following dates/milestones shall constitute key dates ("KEY DATES") for the purpose of this CONTRACT:

13.3 Acceptance test: the GOODS and the WORKS shall not be deemed accepted or delivered if they fail to pass the acceptance test indicated in the CONTRACT DOCUMENTS. [if any]

13.4 The GOODS shall be delivered FCA SAN GIORGIO DI NOGARO, as the term is defined in the INCOTERMS, latest edition.

Note: In case of steel plates late delivery in Cimolai workshop, the new delivery dates of the pipes will be reconsidered according to Cimolai workload.

14. SHIPMENT PREPARATION, PACKAGING AND MARKING

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The packaging is included in the price of the GOODS and CONTRACTOR shall be responsible for any damage to the material caused by an unsuitable packaging. CONTRACTOR shall provide a proper packaging of the supplied materials in accordance with the PURCHASE ORDER or, if not specified, according to the best practices usually applied in the trading, in order to guarantee the material is not damaged during transportation and storage, including all operations of handling, loading and unloading.

CONTRACTOR shall prepare the GOODS for shipment in accordance with the following COMPANY's specifications:

- "Instructions for marking, packing and filling out transportation note for ferrous materials and welding consumable" SPC-ACQ-01 Dated 30/10/2003 Rev.0;

In case CONTRACTOR has not the above mentioned specifications, he shall require these documents.

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15. SHIPPING AND CUSTOMS DOCUMENTS

15.1 Notification of the material readiness shall be provided to the appointed expeditor.

The notification shall be issued 5 working days before the readiness date per item and/or global supply, and shall include the copy of shipping and customs documents, as per Clause 15.2.

15.2 DOCUMENT FOR TRANSPORT AND CUSTOM PURPOSES
The CONTRACTOR shall provide the shipping and customs documents as listed below:
15.2.1. PACKING LIST as per the Rosetti template "XXX-122A70 BOURI BGUP PACKING-LIST FORM" (here attached) to be provided at least 15 days (in case of standard/in gauge transport) or 45 days (in case of out of gauge transport) prior the delivery date required in order;
15.2.2 ONLY in case of dangerous goods: MSDS (Material Safety Data Sheet) & MGDF/SHIPPER DECLARATION in accordance with ADR/IMO/IATA rules and regulations, to be provided at least 15 days prior the shipping date, or 45 working days in case of out of gauge transport;
15.2.3. Transport Document: CMR (in case of road transport) or Bill of Lading (in case of sea freight) or Airway Bill (in case of airfreight) (to be applied only in case of CPT/CIF/CIP/DAP/DDP deliveries);
15.2.4. ONLY IN CASE OF NON UE SHIPMENTS: CUSTOMS INVOICE completed with the following information for customs purposes:
- Job and purchase order numbers;
- Shipper name;
- Consignee and delivery address;
- Delivery terms;
- description of goods as per purchase order item numbers;
- unit value for each item;
- hs code for each item;
- country of origin for each item;
- kind and number of packages;
- total net/gross weight.

15.2.5 CERTIFICATE OF ORIGIN (NON PREFERENTIAL) issued by the local Chamber of Commerce or, when required, equivalent documentation to be agreed in accordance with customs regulation;
15.2. CERTIFICATE OF PREFERENTIAL ORIGIN (if applicable) or exporter authorization number declaration (if available).

The above listed documents shall be sent to the appointed expeditor and logistic@rosetti.it.

For any further assistance or clarification on the shipping and customs documents to be issued, please contact our Transport, Logistics and Customs Department:

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Head Office Via Trieste, 230 - 48122 Ravenna - Italy
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E-mail: logistic@rosetti.it.

16 INSPECTION AND TESTING

Not applicable

17. INSPECTION & TEST PLAN

Not applicable

18 QUALITY ASSURANCE, PLANNING AND CERTIFICATES

Not applicable

19. KEY PROJECT DOCUMENTATION DELIVERY DATES

Not applicable.

20. LIQUIDATED DAMAGES

CONTRACTOR acknowledges that the failure to perform in accordance with the following terms constitute a MATERIAL DEFAULT of CONTRACT. Should CONTRACTOR fail to complete or deliver the WORKS and/or GOODS (fulfill the SERVICES, if any) in accordance with the CONTRACT the following liquidated damages shall apply:

20.1 Liquidated damages for failure to reach the guaranteed performances of GOODS (if any)
NOT APPLICABLE

20.2 Liquidated damages for late delivery of Key Project Documentation AS DEFINED IN THE SMIR
NOT APPLICABLE

20.3 Liquidated damages for failure to comply with Progress KEY DATES as per Clause 13.2
NOT APPLICABLE

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20.4 Liquidated damages for late delivery of GOODS
Should CONTRACTOR fail to deliver the WORKS and/or the GOODS in accordance with the terms provided in CONTRACT, CONTRACTOR shall be liable to pay liquidated damages as follows:
1% of the delayed portion value for each complete calendar week of delay.
Maximum liquidated damages for delay in delivery of the WORKS and/or GOODS shall be 8% of the PURCHASE ORDER TOTAL AMOUNT.
(1 week of grace period is allowed)
The document that determine the delivery date is the transport document duly signed by COMPANY's representative at the truck arrival at the delivery place.

20.5 Liquidated damages for late delivery of WORKSITE/SITE entrance documents, if applicable
NOT APPLICABLE

20.6 Maximum aggregate liquidated damages amount
The above liquidated damages shall not exceed 10% of the CONTRACT PRICE.

20.7 Liquidated damages for failure to comply with HSE requirements
NOT APPLICABLE

20.8 Liquidated damages - Obligation to notify # Loss of right
With reference to Clauses 20.2 and 20.4, it is understood that any delay attributable exclusively to COMPANY and/or its representatives may result in the liquidated damages not being applied provided such delays are notified in due time and supported by indisputable evidence. CONTRACTOR shall inform COMPANY in writing of all the necessary details, explaining delays in delivery and which, in his opinion, relieve him from his delivery responsibilities. CONTRACTOR’s failure to give notification within forty-eight (48) hours of such events or to submit the relevant documentation within sixty (60) days from the date of receipt of the request (or the date indicated by COMPANY) shall result in the loss of CONTRACTOR’s rights hereunder and to any CLAIM.

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21. STORAGE

Not applicable.

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22. KICK OFF MEETING

Not applicable.

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23. PRE INSPECTION MEETING

Not applicable.

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24. PROJECT DELIVERABLES CORRESPONDENCE - NOTICES

Hard copies of all documents requested by this PURCHASE ORDER shall be delivered by COMPANY's headquarter at the following address:

ROSETTI MARINO S.p.A.

Via Trieste, 230

48122 Ravenna (RA),

Italy

Direct references to specific discipline/department/documents management in relation to this PURCHASE ORDER are the following:

24.0 CONTRACTUAL NOTICES

Except where otherwise stated in this CONTRACT, formal notices (including, but not limited to, application of Liquidated Damages under Art. 20) relevant to this CONTRACT shall be exchanged PARTIES as per this Article. Such notices shall be effective if given in writing by e-mail and registered e-mail (or, if registered e-mail is not available, facsimile or recorded delivery/registered post).

COMPANY's representative:
GABRIELE FRANCO # [Procurement and Logistics Director]
e-mail address gabriele.franco@rosetti.it
registered e-mail: rosetti.legal@legalmail.it

CONTRACTOR's representative:
MR. IVAN BELLUCCI
Tel. +39/0434-5581
Fax +39/0434-361401
e-mail address: ivan.bellucci@cimolai.com

24.1 COMMERCIAL CORRESPONDENCE

Commercial correspondence relevant to this PURCHASE ORDER shall be exchanged between:

COMPANY's representative:
Procurement Department
ANTONINO DI ROSA - Buyer
Tel. +39 / 0544 / 878064
e-mail address Antonino.dirosa@rosetti.it

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and

CONTRACTOR's representative:
MR. IVAN BELLUCCI
Tel. +39/0434-5581
Fax +39/0434-361401
e-mail address: ivan.bellucci@cimolai.com

24.2 ADMINISTRATION & ACCOUNT PAYABLE - BANK GUARANTEES

The correspondence regarding administration & account payable and bank guarantees relevant to this PURCHASE ORDER shall be addressed to:

ROSETTI MARINO S.p.A.

Administration, Finance & Control Dept.

Via Trieste, 230

48122 Ravenna (RA)

Italy

Mr. Luca Di Stefano

Tel.: + 39 0544 87. 8036

E-mail: amministrazione@rosetti.it

Invoices shall be addressed to: ROSETTI MARINO S.p.A.

Each invoice shall be sent in one original and shall contain the sentence "Not assignable credit".

Invoices issued by Italian CONTRACTOR(s) shall be sent to COMPANY exclusively in electronic format XML through the Exchange System (SDI) of Italian governmental authority (Agenzia delle Entrate) using the addressee code A4707H7. The detailed ‘courtesy invoice’ and any other supporting documents, referenced in Art.9.2, shall be sent by CONTRACTOR to COMPANY to the email address referenced above.

24.3 TECHNICAL DOCUMENTATION AND COMMUNICATION EXCHANGE

Technical correspondence relevant to this PURCHASE ORDER shall managed through COMPANY’ software FusionLive, as per instructions given in the MATERIAL REQUISITION.

24.4 INSPECTIONS, EXPEDITING, TEST NOTIFICATION

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The correspondence regarding INSPECTIONS, EXPEDITING, TEST NOTIFICATION shall be addressed to:
Supply Management Dept.
Mr. Lucchi Alberto
Tel.: +39 0544 877316
E-mail: collaudi@rosetti.it,

24.5 SHIPPING, CUSTOMS, NOTIFICATION FOR SHIPMENT AND TRANSPORTATION

The correspondence regarding shipping document, customs formalities, notification for shipment and transportation shall be addressed to:

SHIPPING DOCUMENT/CUSTOMS FORMALITIES

ROSETTI MARINO S.p.A.

Logistic/Transport Department

Via Trieste, 230

48122 Ravenna (RA),

Italy

Ms. Sonia Pazzi,

Tel.: +39 0544 87.8075

Fax: +39 0544 87.8057

E-mail: sonia.pazzi@rosetti.it

NOTIFICATION FOR SHIPMENT AND TRANSPORTATION

In accordance with Clause 15.

24.6 MATERIAL CERTIFICATES AND FINAL DOSSIER

The correspondence regarding material certificates and final dossiers shall be addressed to:

ROSETTI MARINO S.p.A.

Certification Department

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Via Trieste, 230

48122 Ravenna (RA),

Italy

Ms. Sonia Emiliani, Mr. Paolo Ancarani

Tel.: +39 0544 87.8070 - Fax: +39 0544 87.8138

E-mail: certification@rosetti.it

24.7 WORKSITE/SITE ENTRANCE DOCUMENTS (if applicable):

Not applicable

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25. VENDORS LIST

Not applicable

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26. CONFIRMATION AND ACCEPTANCE OF THE CONTRACT

COMPANY and CONTRACTOR agree to sign electronically the present PURCHASE ORDER and all applicable appendixes referenced in Clause 3 ‘CONTRACT DOCUMENTS AND PRIORITY’, through COMPANY’s portal as per relevant instructions.

26.1 CONTRACTOR shall return to COMPANY the PURCHASE ORDER and the above referenced appendixes, signed electronically on the last page, as follows :

a) the present PURCHASE ORDER;

b) the COMPANY’s GENERAL TERMS AND CONDITIONS;

a. fill-in the signature field ‘For CONTRACTOR’, put in the second last page of the document, for the acceptance of all terms of COMPANY’s GENERAL TERMS AND CONDITIONS above;

and

b. fill-in the signature field ‘For CONTRACTOR’, put in the last page of the document, for approving expressly and specifically the list of Articles signed and stamped by CONTRACTOR’s authorized Legal Representative for acceptance without reserve within five (5) Calendar Days of receipt thereof.

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26.2 The CONTRACT number shall be indicated in every commercial document.

26.3 Any missing, conflict, discrepancy, inconsistency or ambiguity among such CONTRACT DOCUMENTS shall be immediately brought to the attention of the COMPANY.

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27. WARRANTY PERIOD

See SPC-PRO-01 rev. 2018-00 CGA PROCUREMENT - RAW MATERIAL 02/10/2018.

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28. CLAIMS

28.1 CONTRACTOR shall give notice to COMPANY of each claim, demand or proceeding by CONTRACTOR against COMPANY or its shareholders or their respective AFFILIATES arising out of or related to COMPANY's performance under the CONTRACT. Such notice shall be clearly marked with the caption "Notice of Claim" on each page of the document within fourteen (14) days after CONTRACTOR has had notice of or should reasonably have been expected to have had notice of the basis for such claim, demand or proceeding and, with regard to any claim, demand or proceeding arising after completion of the WORKS, not later than thirty (30) days after COMPANY's final acceptance of the WORKS. Any statute of limitations notwithstanding, CONTRACTOR expressly agrees that its right to bring or to assert against COMPANY or its shareholders or their respective AFFILIATES any such claim, demand or proceeding shall be waived unless (a) timely notice, as set forth above, is given to COMPANY in accordance with the provisions of Article 26 of the COMPANY'S GENERAL TERMS AND CONDITIONS FOR THE SUPPY OF MACHINES & PACKAGES, and (b) legal (including arbitration) proceedings, if any, based on such claim or demand are commenced within one (1) year of the date of such notice.

28.2 CONTRACTOR shall include a clause similar to Article 28.2 of this Purchase Order in all of its subcontracts and purchase orders. Further, in the event that any claim, demand or proceeding is made or commenced against COMPANY or its shareholders or their respective AFFILIATES by or on behalf of any subcontractor arising out of, related to or in any way connected with the WORK, CONTRACTOR shall defend, indemnify and hold COMPANY, its shareholders and their respective AFFILIATES harmless against and from any and all damages or costs (including administrative costs, attorneys' fees and other expenses) associated with or related to such claim, demand or proceeding, and such damages and costs shall not be reimbursable by COMPANY.

28.3 For the purpose of this Article 28, reference to the term "COMPANY" shall include CLIENT.

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29. ATTACHMENTS

The documents listed in Clause 3 "CONTRACT DOCUMENTS AND PRIORITY" shall be considered as integral part of the CONTRACT.

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30. AMENDMENTS TO COMPANY's GENERAL TERMS AND CONDITIONS FOR THE SUPPLY OF RAW MATERIALS No.SPC-PRO-01 rev.2018 dated 02/10/2018, as applicable to this PURCHASE ORDER

- Art. 8.4 is added as follows:
#It is understood between the Parties that the liquidated damages constitute the sole financial remedy in case of late delivery of goods. COMPANY may terminate the CONTRACT if the maximum of Liquidated Damages has been reached".
- Art. 18.2 CROSS INDEMNITY is considered not applicable
- Art. 19.0 CONSEQUENTIAL LOSS is considered not applicable
- Art. 20.3 is considered not applicable.

31. CODE OF CONDUCT

CONTRACTOR agrees to perform the WORK and to conduct its affairs in respect of the CONTRACT in accordance with the following COMPANY policy and CLIENT policy (i.e. Exhibits G and H), specified under Clause 3 of this PURCHASE ORDER.
CONTRACTOR, in performing its obligations under the CONTRACT, shall establish and maintain appropriate business standards, procedures and controls including those necessary to avoid any real or apparent impropriety or adverse impact on the interests of COMPANY, its shareholders or their respective AFFILIATES. COMPANY shall have the right, but not the obligation, to periodically review at reasonable frequency during performance of WORK, such business standards, procedures and controls including, without limitation, those related to the activities of CONTRACTOR's employees and agents in their relations with COMPANY's employees, agents and representatives, subcontractors and other third parties, and those relating to the placement and administration of purchase orders and subcontracts. Participation by COMPANY in any such review shall not constitute a waiver by COMPANY of any rights under the CONTRACT and COMPANY undertakes no obligations as a result of COMPANY's participation in such review.
CONTRACTOR shall not make, either directly or indirectly, any improper payments of money or anything of value to a government official in connection with the CONTRACT. All payments by COMPANY to
CONTRACTOR will be received by CONTRACTOR for its own account and CONTRACTOR is not authorized to offer, give, or promise any part of such payments, directly or indirectly, to any government official, political party or official thereof, or any candidate for political office, or to any officer, director, employee or other agent or representative of any instrumentality of any government.
CONTRACTOR shall exercise all reasonable care and diligence to prevent any actions or conditions which could result in a conflict with COMPANY's best interests. This obligation shall apply to the activities of the employees, agents and subcontractors of CONTRACTOR in their relations with the employees and their families of COMPANY, agents, subcontractors and third parties. CONTRACTOR's compliance with this requirement shall include, but shall not be limited to, establishing precautions to prevent its employees or agents, or those of its subcontractors from making, receiving, providing, or offering any substantial gifts, extravagant entertainment, payments, loans, or other considerations.
CONTRACTOR shall ensure that all documents including invoices, vouchers, financial settlements, billings and reports submitted by CONTRACTOR to COMPANY shall truly reflect the facts about the activities and transactions to which they pertain, and CONTRACTOR represents that in any further recording or reporting made by COMPANY for whatever purpose, COMPANY may rely upon all such documents and the data therein as being complete and accurate.
CONTRACTOR shall place similar requirements on all subcontractors who are involved in furnishing materials or performing services as part of WORK, including the obligation to notify COMPANY upon discovery of any instance of non-compliance as stipulated below. If CONTRACTOR discovers or is advised of any errors or exceptions related to its invoicing of WORK, CONTRACTOR and COMPANY will together review the nature of the errors or exceptions, and CONTRACTOR will, if appropriate, promptly take corrective action and adjust the relevant invoice or refund overpayments.
CONTRACTOR agrees to notify COMPANY promptly upon discovery of any instance in which the CONTRACTOR fails to comply with this Article 31.
The remuneration to be paid to the CONTRACTOR pursuant to the CONTRACT shall constitute the only remuneration in

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connection with the CONTRACT and the performance of the WORK. Any remuneration, compensation or other benefit received by the CONTRACTOR from any third parties in connection with the performance of the WORK (whether by way of gratuity, commission, finder's or agent's fee or otherwise) may be deducted by the COMPANY. CONTRACTOR shall keep the COMPANY informed of any and all such remuneration, compensation or other benefit.
CONTRACTOR agrees to be bound and agrees that CONTRACTOR's employees performing the WORK at CLIENT's property shall be bound by, and CONTRACTOR shall arrange for employees of its subcontractors to be bound by, CLIENT's alcohol and drug policy

32. SPECIFIC CONTRACT PROVISIONS

Below conditions are CLIENT’s specific provisions applicable to this CONTRACT and prevails, where in contrast, to those indicated in COMPANY’s General Terms and Conditions, which are part of CONTRACT DOCUMENTS listed in Clause 3 :
Art.32.1 HEALTH, SAFETY, SECURITY, AND ENVIRONEMNTAL REQUIREMENTS
With regard to the provisions set forth in Art.11.1 of above referenced COMPANY’s General Terms and Conditions; CONTRACTOR shall strictly abide with the requirements of CLIENT’s ‘HSSE requirements’ under Exhibit E of this CONTRACT.
Art. 32.2 DEFECT correction for reason of safety or other emergency
The following provision is added to those indicated under Clause 7.4 of above referenced COMPANY’s General Terms and Conditions:

Where COMPANY determines it is necessary for reason of safety or other emergency, COMPANY has the right to correct DEFECT itself or engage a THIRD PARTY to correct any DEFECT at CONTRACTOR’s risk and expense without first allowing CONTRACTOR to do so. In such case, COMPANY will promptly notify CONTRACTOR and provide the details of the nature of the DEFECT. COMPANY will give CONTRACTOR an opportunity to inspect the corrected DEFECT when safety, need for expeditious correction of the DEFECT, and resumption of operation allow.
Art. 32.3 # INSURANCES
CONTRACTOR shall place and maintain insurances in accordance with the provisions and requirements under Appendix 1, which are referred to in full.
Art. 32.4 # ADDITIONAL RIGHTS AND OBLIGATIONS
PARTIES agree on and accept the additional provisions under Appendix 2, which are referred to in full, and CONTRACTOR undertakes to comply with the obligations therein.
For acceptance of the CONTRACTOR :

For acceptance of the CONTRACTOR:

Name of the CONTRACTOR:

DocuSigned by:
SIMONE ZANETTI
10E2AE17DEB0427...

Name of the authorized representative:

Title of the authorized representative:

Rosetti Marino S.p.A.
Head Office Via Trieste, 230 - 48122 Ravenna - Italy
Tel. +39 0544 878 111 - Fax. +39 0544 878 105
E-mail: procurement@rosetti.it - Web site: www.rosetti.it
Cap.Soc. € 4.000.000,00 i.v. - REA Ra 1530 - Reg.Impr. di Ravenna / C.F. / P.IVA 00082100397

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12-gen-24 | 16:23 CET

Date

- PR N° 1323001380-1323001465

Prepared by:	Verified by:	Approved by:	
ROSETTI MARINO S.P.A. **DI ROSA ANTONINO** Proc.& Sub.Dept.	ROSETTI MARINO S.P.A.	ROSETTI MARINO S.P.A. **RICCI FABIO** Procurement & Subcontracting Manager	

DocuSigned by:
3AC3AD972BD64C8...
27-nov-23 | 17:01 CET

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SECTION 1	Plates certificate

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301573

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

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

TMUGF Firma / MTSMD Signature — Data / Date

Sonia Emiliani

27.10.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

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

A02
Inspection certificate
EN 10204 - 3.2
N142C4ED-4

Z02 Date 15-05-2023

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0376103/A	A08 Order-No.:	3500317	A07 OrderDat.	09-03-2023

Date of dispatch 15-05-2023 400F

A06 Customer	Kroeger Staal B.V. Oostelljke Randweg 40 NL-4782 PZ MOERDIJK	B01 Product	Plate		
		B02 Material	S460MLO	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	6869	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Europe Steel Projects BV Oostelijke Randweg 40 NL-4782 PZ MOERDIJK	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
751806	174546/1	30	20,00	3050,0	12000	1		5.831	83043	S460MLOVAS
754265	170980/2	20	20,00	3000,0	12000	1		5.788	83043	S460MLOVAS
754265	170980/1	20	20,00	3000,0	11206	1		5.396	83043	S460MLOVAS
754265	170981/2	20	20,00	3000,0	12000	1		5.788	83043	S460MLOVAS
754265	170981/1	20	20,00	3000,0	12000	1		5.790	83043	S460MLOVAS
754272	170903/1	80	40,00	2500,0	12000	1		9.576	83043	S460MLOVAS
754272	170921/1	70	30,00	3000,0	12000	1		8.628	83043	S460MLOVAS
754272	170922/1	70	30,00	3000,0	12000	1		8.625	83043	S460MLOVAS
754272	171630/1	60	30,00	2051,0	12000	1		5.891	83043	S460MLOVAS
754272	171630/2	60	30,00	2051,0	11780	1		5.772	83043	S460MLOVAS
754582	168790/1	120	50,00	2500,0	12000	1		12.069	83041	S460MLOVAS
754582	168792/1	120	50,00	2500,0	12000	1		12.079	83041	S460MLOVAS

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Inspection representative voestalpine
Höpfl Nadine

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T. Mette
Surveyor

voestalpine
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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
754582	168793/1	140	50,00	3000,0	12000	1		14.473	83043	S460MLOVAS
754582	168794/1	140	50,00	3000,0	12000	1		14.440	83043	S460MLOVAS
755680	176964/1	80	40,00	2500,0	12000	1		9.574	83043	S460MLOVAS
859727	168580/1	100	50,00	2051,0	12000	1		9.832	83043	S460MLOVAS
860447	171382/1	170	60,00	2051,0	12000	1		11.854	83043	S460MLOVAS
860447	171383/1	170	60,00	2051,0	12000	1		11.855	83043	S460MLOVAS
860758	168375/1	150	50,00	3000,0	16000	1		19.211	83043	S460MLOVAS
860758	168376/1	150	50,00	3000,0	16000	1		19.230	83043	S460MLOVAS
860758	168777/1	130	50,00	2500,0	16000	1		16.102	83043	S460MLOVAS
860758	168779/1	160	50,00	3050,0	12000	1		14.703	83043	S460MLOVAS
860758	168781/1	160	50,00	3050,0	12000	1		14.611	83043	S460MLOVAS
860758	170951/2 ITEM 60	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
860758	170951/1	50	25,00	2500,0	12000	1		5.990	83043	S460MLOVAS
860758	170952/2	50	25,00	2500,0	12000	1		6.015	83043	S460MLOVAS
860758	170952/1	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
860758	170955/2 ITEM 110	50	25,00	2500,0	12000	1		5.991	83043	S460MLOVAS
860758	170955/1	50	25,00	2500,0	12000	1		5.990	83043	S460MLOVAS
861322	170953/1	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
861322	170953/2	50	25,00	2500,0	12000	1		5.989	83043	S460MLOVAS
861322	170954/2	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
861322	170954/1 ITEM 60	50	25,00	2500,0	12000	1		6.014	83043	S460MLOVAS
861323	168795/1	100	50,00	2051,0	12000	1		9.909	83043	S460MLOVAS
861323	170924/2	40	25,00	2051,0	11872	1		4.857	83043	S460MLOVAS
861323	170924/1	40	25,00	2051,0	12000	1		4.917	83043	S460MLOVAS
861323	170925/1	40	25,00	2051,0	12000	1		4.934	83043	S460MLOVAS
861323	170925/2	40	25,00	2051,0	12000	1		4.934	83043	S460MLOVAS
861325	171932/1	180	60,00	2500,0	16000	1		19.232	83043	S460MLOVAS
861662	171628/1	100	50,00	2051,0	12000	1		9.871	83043	S460MLOVAS
861662	171629/1	60	30,00	2051,0	12000	1		5.903	83043	S460MLOVAS
861662	171629/2	60	30,00	2051,0	12000	1		5.902	83043	S460MLOVAS
861665	171889/1	130	50,00	2500,0	16000	1		16.000	83043	S460MLOVAS
861927	170961/1	80	40,00	2500,0	12000	1		9.559	83043	S460MLOVAS
861927	170985/2	20	20,00	3000,0	12000	1		5.795	83043	S460MLOVAS
861927	170985/1	20	20,00	3000,0	12000	1		5.792	83043	S460MLOVAS

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Surveyor

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
861927	170986/2	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170986/1	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170987/2	20	20,00	3000,0	12000	1		5.793	83043	S460MLOVAS
861927	170987/1	20	20,00	3000,0	12000	1		5.792	83043	S460MLOVAS
861927	170988/1	10	20,00	2500,0	12000	1		4.850	83043	S460MLOVAS
861927	170988/2	10	20,00	2500,0	12000	1		4.850	83043	S460MLOVAS
861927	170989/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170989/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170990/2	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170990/1 } ITEM 30	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170991/1 }	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	170991/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170992/1 } ITEM 100	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861927	170992/2 }	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861927	170993/2	10	20,00	2500,0	12000	1		4.853	83043	S460MLOVAS
861927	170993/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861927	173123/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
861927	173123/2	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
861927	173125/2	30	20,00	3050,0	12000	1		5.887	83043	S460MLOVAS
861928	170994/1	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861928	170994/2	10	20,00	2500,0	12000	1		4.829	83043	S460MLOVAS
861928	170995/1	10	20,00	2500,0	12000	1		4.831	83043	S460MLOVAS
861928	170995/2	10	20,00	2500,0	12000	1		4.830	83043	S460MLOVAS
861928	170996/2	10	20,00	2500,0	12000	1		4.826	83043	S460MLOVAS
861928	170996/1	10	20,00	2500,0	12000	1		4.826	83043	S460MLOVAS
861928	170997/1	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
861928	170997/2	10	20,00	2500,0	12000	1		4.854	83043	S460MLOVAS
948013	170901/1	90	40,00	3000,0	12000	1		11.490	83043	S460MLOVAS
948013	170902/1	90	40,00	3000,0	12000	1		11.465	83043	S460MLOVAS
948018	170978/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948018	170978/2	30	20,00	3050,0	12000	1		5.887	83043	S460MLOVAS
948018	170979/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948056	168379/1	110	50,00	2051,0	16000	1		13.132	83043	S460MLOVAS
948056	168380/1	110	50,00	2051,0	16000	1		13.132	83043	S460MLOVAS

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Surveyor

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
948056	168579/1	100	50,00	2051,0	12000	1		9.871	83043	S460MLOVAS
948257	170927/1	30	20,00	3050,0	12000	1		5.882	83043	S460MLOVAS
948257	170927/2	30	20,00	3050,0	12000	1		5.882	83043	S460MLOVAS
948257	170928/2	30	20,00	3050,0	12000	1		5.889	83043	S460MLOVAS
948257	170928/1	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948257	172093/1	30	20,00	3050,0	12000	1		5.911	83043	S460MLOVAS
948257	172093/2	30	20,00	3050,0	11013	1		5.416	83043	S460MLOVAS
948259	170926/1	40	25,00	2051,0	12000	1		4.918	83043	S460MLOVAS
948259	170926/2	40	25,00	2051,0	12000	1		4.917	83043	S460MLOVAS
948259	170956/2	30	20,00	3050,0	12000	1		5.888	83043	S460MLOVAS
948259	170956/1	30	20,00	3050,0	12000	1		5.890	83043	S460MLOVAS
949159	169974/1	200	65,00	2500,0	12000	1		15.639	83043	S460MLOVAS
949159	171931/1	190	60,00	2800,0	16000	1		21.513	83043	S460MLOVAS
		Sum				93		722.807		

B14 - Supplementary information

length-deviation for plate(s) 170924/2, 170980/1, 171630/2, 172093/2: Customer accepted the deviation.

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
Set values >=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
751806	.037	.329	1.620	.006	.0007	.032	.175	.170	.006	.170	.003	.036	.010	.0070	.0003	.0020	.0023	.0020	.0020	.0020	.37
754265	.037	.331	1.620	.008	.0004	.034	.168	.170	.005	.162	.005	.036	.011	.0053	.0005	.0020	.0014	.0020	.0020	.0020	.36
754272	.028	.340	1.620	.007	.0005	.034	.183	.170	.006	.163	.004	.034	.012	.0046	.0002	.0020	.0016	.0020	.0020	.0020	.36
754582	.027	.342	1.610	.006	.0006	.039	.174	.170	.009	.192	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020	.0020	.36
755680	.029	.317	1.600	.006	.0005	.031	.172	.170	.006	.159	.004	.037	.011	.0040	.0002	.0020	.0012	.0020	.0020	.0020	.35
859727	.031	.347	1.630	.005	.0005	.033	.175	.180	.006	.173	.004	.035	.011	.0054	.0003	.0020	.0017	.0020	.0020	.0020	.36
860447	.058	.395	1.540	.008	.0004	.037	.175	.280	.019	.164	.004	.026	.011	.0053	.0002	.0020	.0031	.0020	.0020	.0020	.38
860758	.031	.327	1.600	.005	.0004	.038	.169	.190	.006	.160	.004	.035	.012	.0047	.0002	.0020	.0015	.0020	.0020	.0020	.36
861322	.035	.327	1.590	.005	.0005	.032	.164	.170	.006	.164	.004	.035	.012	.0051	.0002	.0020	.0014	.0020	.0020	.0020	.36
861323	.031	.341	1.620	.005	.0005	.034	.189	.180	.009	.162	.004	.038	.012	.0047	.0003	.0030	.0017	.0020	.0020	.0020	.36
861325	.053	.190	1.540	.006	.0008	.033	.188	.510	.119	.018	.004	.027	.012	.0043	.0002	.0020	.0009	.0020	.0020	.0020	.41
861662	.034	.356	1.630	.007	.0007	.034	.181	.170	.008	.160	.004	.036	.011	.0057	.0002	.0020	.0017	.0020	.0020	.0020	.37
861665	.031	.338	1.610	.006	.0007	.042	.185	.190	.006	.165	.004	.035	.012	.0045	.0003	.0020	.0019	.0020	.0020	.0020	.36
861927	.032	.317	1.610	.008	.0006	.033	.180	.170	.007	.165	.004	.036	.012	.0052	.0003	.0020	.0015	.0020	.0020	.0020	.36
861928	.031	.310	1.610	.006	.0005	.032	.176	.170	.006	.162	.003	.038	.012	.0040	.0002	.0020	.0012	.0020	.0020	.0020	.36
948013	.032	.337	1.630	.006	.0007	.035	.188	.170	.005	.158	.004	.038	.014	.0059	.0003	.0020	.0015	.0020	.0020	.0020	.36
948018	.032	.335	1.610	.007	.0004	.038	.173	.170	.007	.161	.004	.039	.012	.0055	.0002	.0030	.0012	.0020	.0020	.0020	.36
948056	.034	.341	1.620	.008	.0004	.036	.172	.170	.008	.158	.004	.035	.012	.0059	.0002	.0020	.0024	.0020	.0020	.0020	.36
948257	.031	.309	1.610	.006	.0006	.036	.173	.170	.008	.161	.004	.035	.012	.0058	.0002	.0060	.0024	.0020	.0020	.0020	.36
948259	.037	.326	1.620	.006	.0003	.039	.172	.170	.007	.162	.003	.033	.011	.0057	.0002	.0020	.0018	.0020	.0020	.0020	.37
949159	.054	.183	1.540	.007	.0012	.030	.189	.520	.119	.022	.004	.027	.011	.0044	.0002	.0020	.0009	.0020	.0020	.0020	.41

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
751806	.15	.039	.049	4.57
754265	.15	.041	.052	6.42
754272	.14	.038	.050	7.39
754582	.14	.039	.050	7.96
755680	.14	.041	.052	7.75
859727	.15	.039	.050	6.11
860447	.17	.030	.041	6.98
860758	.14	.039	.051	8.09
861322	.15	.039	.051	6.27
861323	.15	.042	.054	7.23
861325	.16	.031	.043	7.67
861662	.15	.040	.051	5.96
861665	.15	.039	.051	9.33
861927	.15	.040	.052	6.35
861928	.14	.041	.053	8.00
948013	.15	.042	.056	5.93
948018	.15	.043	.055	6.91
948056	.15	.039	.051	6.10
948257	.14	.039	.051	6.21
948259	.15	.036	.047	6.84
949159	.17	.031	.042	6.82

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							440	520		17.0			
Set values <=								700			93.00		
751806	174546	30,0	20.06	F	O	T	546	625	A5	19.4	87.38		
754265	170981	30,0	20.20	F	O	T	610	694	A5	18.5	87.80		
860758	170952	30,0	25.53	F	O	T	551	601	A5	22.4	91.61		
	170955	30,0	25.50	F	O	T	529	588	A5	22.9	89.96		
861322	170953	30,0	25.39	F	O	T	559	616	A5	22.0	90.69		
	170954	30,0	25.82	F	O	T	560	614	A5	22.2	91.27		
861323	170924	30,0	25.41	F	O	T	572	615	A5	22.9	92.98		
861927	170986	30,0	20.51	F	O	T	541	634	A5	23.7	85.35		
	170990	30,0	20.69	F	O	T	553	614	A5	20.9	90.03		
	170992	30,0	20.59	F	O	T	537	630	A5	20.8	85.32		
	173123	30,0	20.48	F	O	T	550	616	A5	20.1	89.23		
	173125	30,0	20.58	F	O	T	541	605	A5	19.8	89.44		
861928	170995	30,0	20.60	F	O	T	544	616	A5	20.1	88.36		
	170996	30,0	20.53	F	O	T	549	616	A5	21.7	89.01		
948018	170978	30,0	20.50	F	O	T	548	649	A5	21.3	84.46		
948257	170927	30,0	20.79	F	O	T	554	649	A5	20.2	85.42		
	170928	30,0	20.33	F	O	T	539	650	A5	22.8	82.98		
948259	170926	30,0	25.58	F	O	T	550	602	A5	26.2	91.36		
	170956	30,0	20.28	F	O	T	545	651	A5	20.5	83.78		
>=							420	520		17.0			
Set values <=								700			93.00		
754272	170903	30,0	40.86	F	O	T	522	604	A5	22.4	86.45		
	170921	30,0	30.46	F	O	T	530	585	A5	23.4	90.60		
755680	176964	30,0	40.84	F	O	T	507	590	A5	23.5	85.93		
861662	171629	30,0	30.57	F	O	T	531	600	A5	22.6	88.49		
861927	170961	30,0	40.71	F	O	T	542	628	A5	21.4	86.37		
948013	170902	30,0	40.71	F	O	T	547	632	A5	21.1	86.58		
>=							415	500		17.0			
Set values <=								675			93.00		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
	>=						415	500		17.0			
Set values	<=							675			93.00		
754582	168790	Ø	9.98	F	V	T	503	584	A5	25.2	85.99		
	168793	Ø	9.99	F	V	T	501	585	A5	25.8	85.63		
	168794	Ø	10.00	F	V	T	504	588	A5	28.6	85.70		
	168790	Ø	10.00	F	V	T	518	591	A5	27.1	87.51	001	1
	168793	Ø	10.00	F	V	T	507	580	A5	27.1	87.45	001	1
	168794	Ø	10.00	F	V	T	508	581	A5	28.8	87.48	001	1
859727	168580	Ø	10.03	F	V	T	461	594	A5	30.3	77.73		
	168580	Ø	10.03	F	V	T	513	592	A5	30.3	86.66	001	1
860447	171382	Ø	10.03	F	V	T	432	588	A5	27.3	73.54		
	171382	Ø	10.01	F	V	T	482	577	A5	28.3	83.48	001	1
860758	168375	Ø	9.99	F	V	T	428	516	A5	32.1	83.00		
	168777	Ø	9.99	F	V	T	517	590	A5	27.1	87.53		
	168781	Ø	9.98	F	V	T	495	590	A5	27.4	83.82		
	168375	Ø	10.01	F	V	T	503	582	A5	28.3	86.42	001	1
	168777	Ø	10.00	F	V	T	512	586	A5	25.9	87.51	001	1
	168781	Ø	9.99	F	V	T	504	583	A5	24.6	86.46	001	1
861323	168795	Ø	10.00	F	V	T	493	602	A5	28.1	81.97		
	168795	Ø	10.00	F	V	T	526	598	A5	27.1	87.90	001	1
861325	171932	Ø	10.01	F	V	T	429	564	A5	28.0	76.16		
	171932	Ø	10.00	F	V	T	476	564	A5	28.3	84.32	001	1
861662	171628	Ø	10.01	F	V	T	471	589	A5	28.9	79.89		
	171628	Ø	10.00	F	V	T	542	620	A5	25.0	87.38	001	1
861665	171889	Ø	10.02	F	V	T	504	603	A5	28.3	83.58		
	171889	Ø	9.98	F	V	T	518	597	A5	27.5	86.69	001	1
948056	168380	Ø	9.99	F	V	T	492	602	A5	29.7	81.74		
	168380	Ø	10.01	F	V	T	521	600	A5	28.6	86.71	001	1
949159	171931	Ø	10.01	F	V	T	455	592	A5	25.4	76.91		
	171931	Ø	9.98	F	V	T	493	582	A5	27.7	84.75	001	1
	>=						405	500		17.0			
Set values	<=							675			93.00		
949159	169974	Ø	10.03	F	V	T	452	587	A5	25.7	77.04		
	169974	Ø	10.02	F	V	T	505	593	A5	26.3	85.18	001	1

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

	B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
								>= 405	500		17.0			
Set values								<=	675			93.00		

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			
>=						-40	42	42	42	60			
Set values <=													
751806	174546	CV 10x10	F	O	T	-40	336	344	329	336			
754265	170981	CV 10x10	F	O	T	-40	253	296	323	291			
754272	170903	CV 10x10	F	O	T	-40	325	336	351	338			
	170921	CV 10x10	F	O	T	-40	365	364	340	356			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			
>=						-40	42	42	42	60			
Set values <=													
754582	168790	CV 10x10	F	O	T	-40	355	346	365	355			
	168793	CV 10x10	F	O	T	-40	357	371	367	365			
	168794	CV 10x10	F	O	T	-40	364	380	361	368			
	168790	CV 10x10	F	O	T	-40	318	335	335	329	001	1	
	168793	CV 10x10	F	O	T	-40	337	329	310	325	001	1	
	168794	CV 10x10	F	O	T	-40	342	299	352	331	001	1	
	168790	CV 10x10	F	K	T	-40	361	365	359	362			
	168793	CV 10x10	F	K	T	-40	391	46	350	262			
	168794	CV 10x10	F	K	T	-40	382	403	401	395			
	168790	CV 10x10	F	K	T	-40	317	322	313	318	001	1	
	168793	CV 10x10	F	K	T	-40	356	309	320	328	001	1	
	168794	CV 10x10	F	K	T	-40	360	309	322	330	001	1	
755680	176964	CV 10x10	F	O	T	-40	375	358	361	364			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
859727	168580	CV 10x10	F	O	T	-40	384	337	354	358			
	168580	CV 10x10	F	O	T	-40	298	315	306	306	001	1	
	168580	CV 10x10	F	K	T	-40	413	383	407	401			
	168580	CV 10x10	F	K	T	-40	303	280	310	298	001	1	
860447	171382	CV 10x10	F	O	T	-40	284	137	152	191			
	171382	CV 10x10	F	O	T	-40	234	229	303	255	001	1	
	171382	CV 10x10	F	K	T	-40	44	177	228	150			
	171382	CV 10x10	F	K	T	-40	92	181	145	140	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			
>=						-40	42	42	42	60			
Set values <=													
860758	168375	CV 10x10	F	O	T	-40	331	358	350	346			
	168777	CV 10x10	F	O	T	-40	349	358	347	351			
	168781	CV 10x10	F	O	T	-40	350	357	355	354			
	170955	CV 10x10	F	O	T	-40	348	349	347	348			
	168375	CV 10x10	F	O	T	-40	280	306	191	259	001	1	
	168777	CV 10x10	F	O	T	-40	312	283	329	308	001	1	
	168781	CV 10x10	F	O	T	-40	277	320	329	309	001	1	
	168375	CV 10x10	F	K	T	-40	314	344	358	339			
	168777	CV 10x10	F	K	T	-40	363	364	356	361			
	168781	CV 10x10	F	K	T	-40	143	42	82	89			
	168375	CV 10x10	F	K	T	-40	318	280	335	311	001	1	
	168777	CV 10x10	F	K	T	-40	292	304	337	311	001	1	
	168781	CV 10x10	F	K	T	-40	61	116	116	98	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
861322	170954	CV 10x10	F	O	T	-40	340	328	327	332			
861323	168795	CV 10x10	F	O	T	-40	341	339	347	342			
	170924	CV 10x10	F	O	T	-40	292	318	309	307			
	168795	CV 10x10	F	O	T	-40	311	297	310	306	001	1	
	168795	CV 10x10	F	K	T	-40	327	320	337	328			
	168795	CV 10x10	F	K	T	-40	280	315	312	302	001	1	
861325	171932	CV 10x10	F	O	T	-40	338	339	347	341			
	171932	CV 10x10	F	O	T	-40	263	320	310	298	001	1	
	171932	CV 10x10	F	K	T	-40	324	352	336	337			
	171932	CV 10x10	F	K	T	-40	304	263	264	277	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
Set values <=													
861662	171628	CV 10x10	F	O	T	-40	313	329	328	323			
	171629	CV 10x10	F	O	T	-40	319	310	325	318			
	171628	CV 10x10	F	O	T	-40	257	59	262	193	001	1	
	171628	CV 10x10	F	K	T	-40	339	359	356	351			
	171628	CV 10x10	F	K	T	-40	171	228	233	211	001	1	
861665	171889	CV 10x10	F	O	T	-40	324	344	355	341			
	171889	CV 10x10	F	O	T	-40	257	290	312	286	001	1	
	171889	CV 10x10	F	K	T	-40	375	362	357	365			
	171889	CV 10x10	F	K	T	-40	46	294	290	210	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07	B06	C40	C01		C02	C03	C42	C42	C42	C43			
Heat No.	Plate No	shape	loc.	PosTh.	Dir	temp	SV	SV	SV	AV	Sim.htm	WBH	samp.cond.
						°C	J	J	J	J			
>=						-40	42	42	42	60			
Set values <=													
861927	170961	CV 10x10	F	O	T	-40	340	325	333	332			
	170986	CV 10x10	F	O	T	-40	346	353	352	350			
	170990	CV 10x10	F	O	T	-40	377	362	358	365			
	170992	CV 10x10	F	O	T	-40	361	361	367	363			
	173123	CV 10x10	F	O	T	-40	339	344	351	345			
861928	170996	CV 10x10	F	O	T	-40	358	363	361	360			
948013	170902	CV 10x10	F	O	T	-40	339	333	333	335			
948018	170978	CV 10x10	F	O	T	-40	352	357	360	357			
948056	168380	CV 10x10	F	O	T	-40	332	354	359	348			
	168380	CV 10x10	F	O	T	-40	291	273	323	296	001	1	
	168380	CV 10x10	F	K	T	-40	359	374	360	364			
	168380	CV 10x10	F	K	T	-40	323	293	272	296	001	1	
948257	170928	CV 10x10	F	O	T	-40	282	314	329	308			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
948259	170926	CV 10x10	F	O	T	-40	341	344	333	339			
	170956	CV 10x10	F	O	T	-40	315	344	341	333			
949159	169974	CV 10x10	F	O	T	-40	314	311	314	313			
	171931	CV 10x10	F	O	T	-40	324	331	313	323			
	169974	CV 10x10	F	O	T	-40	293	283	279	285	001	1	
	171931	CV 10x10	F	O	T	-40	291	291	283	288	001	1	
	169974	CV 10x10	F	K	T	-40	213	236	266	238			
	171931	CV 10x10	F	K	T	-40	291	276	265	277			
	169974	CV 10x10	F	K	T	-40	214	224	252	230	001	1	
	171931	CV 10x10	F	K	T	-40	210	224	227	220	001	1	
>= Set values <=						-40	29	29	29	46			
751806	174546	CV 10x10	F	ZB2	T	-40	288	304	259	284			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
754265	170981	CV 10x10	F	ZB2	T	-40	265	236	244	248			strain aged 5%, 60 min. at 250°C
754272	170903	CV 10x10	F	ZB2	T	-40	321	333	325	326			strain aged 5%, 60 min. at 250°C
754582	168794	CV 10x10	F	ZB2	T	-40	332	54	327	238			strain aged 5%, 60 min. at 250°C
755680	176964	CV 10x10	F	ZB2	T	-40	317	325	320	320			strain aged 5%, 60 min. at 250°C
859727	168580	CV 10x10	F	ZB2	T	-40	329	329	331	330			strain aged 5%, 60 min. at 250°C
860447	163141	CV 10x10	F	ZB2	T	-40	66	62	48	59			strain aged 5%, 60 min. at 250°C
860758	168781	CV 10x10	F	ZB2	T	-40	59	63	67	63			strain aged 5%, 60 min. at 250°C
861322	170954	CV 10x10	F	ZB2	T	-40	288	288	241	272			strain aged 5%, 60 min. at 250°C
861323	168795	CV 10x10	F	ZB2	T	-40	305	310	270	295			strain aged 5%, 60 min. at 250°C
	170924	CV 10x10	F	ZB2	T	-40	319	322	323	321			strain aged 5%, 60 min. at 250°C
861325	168332	CV 10x10	F	ZB2	T	-40	282	301	297	293			strain aged 5%, 60 min. at 250°C
861662	171628	CV 10x10	F	ZB2	T	-40	264	298	296	286			strain aged 5%, 60 min. at 250°C
	171629	CV 10x10	F	ZB2	T	-40	278	297	280	285			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	29	29	29	46			
Set values <=													
861665	171889	CV 10x10	F	ZB2	T	-40	126	89	105	107			strain aged 5%, 60 min. at 250°C
861927	170961	CV 10x10	F	ZB2	T	-40	316	224	174	238			strain aged 5%, 60 min. at 250°C
861928	170996	CV 10x10	F	ZB2	T	-40	335	333	345	338			strain aged 5%, 60 min. at 250°C
948013	170902	CV 10x10	F	ZB2	T	-40	278	309	50	213			strain aged 5%, 60 min. at 250°C
948018	170978	CV 10x10	F	ZB2	T	-40	323	306	340	323			strain aged 5%, 60 min. at 250°C
948056	168380	CV 10x10	F	ZB2	T	-40	290	325	317	310			strain aged 5%, 60 min. at 250°C
948257	170928	CV 10x10	F	ZB2	T	-40	252	261	267	260			strain aged 5%, 60 min. at 250°C
948259	170926	CV 10x10	F	ZB2	T	-40	320	323	315	319			strain aged 5%, 60 min. at 250°C
949159	169974	CV 10x10	F	ZB2	T	-40	301	300	293	298			strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

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

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
751806	174546	F	OS	HV10	200	201	202
754265	159038	F	OS	HV10	206	213	209
754272	170921	F	OS	HV10	190	188	192
754582	164400	F	OS	HV10	198	202	202
755680	176964	F	OS	HV10	211	211	214
859727	154898	F	OS	HV10	203	199	204
860447	171382	F	OS	HV10	251	255	255
860758	168781	F	OS	HV10	244	240	237
861322	170954	F	OS	HV10	208	206	211
861323	170924	F	OS	HV10	191	199	195
861325	171932	F	OS	HV10	218	211	212
861662	171629	F	OS	HV10	202	210	203
861665	171889	F	OS	HV10	224	226	226
861927	170992	F	OS	HV10	208	208	206
861928	170996	F	OS	HV10	219	218	213
948013	159551	F	OS	HV10	196	195	195
948018	159076	F	OS	HV10	216	215	217
948056	158938	F	OS	HV10	199	199	201
948257	170928	F	OS	HV10	225	226	220
948259	170926	F	OS	HV10	206	209	207
949159	169974	F	OS	HV10	265	264	257

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z (SV) %	Z (SV) %	Z (SV) %	Z (AV) %
>=						416	416	416	25	25	25	35
Set values <=												
751806	174546	Ø	6.00	F	S	605	608	609	82	82	82	82
754265	170981	Ø	6.02	F	S	715	713	727	81	81	79	80
754272	170921	Ø	9.97	F	S	573	576	575	81	78	83	81
755680	176964	Ø	9.94	F	S	564	565	564	82	83	83	83
860758	168781	Ø	9.98	F	S	561	562	561	54	81	81	72
861322	170954	Ø	10.00	F	S	610	608	609	77	79	78	78
861323	170924	Ø	10.01	F	S	606	606	607	82	82	82	82
861662	171629	Ø	9.98	F	S	590	590	587	82	80	84	82
861927	170961	Ø	9.96	F	S	599	598	597	82	81	78	80
	170992	Ø	6.02	F	S	615	615	619	83	85	84	84
861928	170996	Ø	6.02	F	S	608	608	606	86	83	85	85
948013	170902	Ø	9.97	F	S	600	602	599	82	81	82	82
948018	170978	Ø	6.02	F	S	622	469	624	83	76	83	81
948257	170928	Ø	6.09	F	S	633	631	629	83	83	82	82
948259	170926	Ø	9.95	F	S	589	589	589	82	84	83	83
	170956	Ø	5.99	F	S	636	636	636	82	82	83	82
>=						400	400	400	25	25	25	35
Set values <=												
754582	164880	Ø	9.98	F	S	562	561	562	83	83	85	84
859727	154898	Ø	9.96	F	S	566	568	567	82	81	81	82
860447	171382	Ø	9.96	F	S	592	588	592	70	71	75	72
860758	168781	Ø	9.98	F	S	561	562	561	54	81	81	72
861323	170924	Ø	10.01	F	S	606	606	607	82	82	82	82
861325	168329	Ø	9.98	F	S	590	587	591	81	81	78	80
861662	171629	Ø	9.98	F	S	590	590	587	82	80	84	82
861665	171889	Ø	9.97	F	S	577	578	577	80	81	81	80
948056	158938	Ø	9.97	F	S	583	579	582	83	83	84	83
949159	169974	Ø	9.92	F	S	593	592	593	80	79	74	78

SpThickn: specimen thickness

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %

C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
751806	151215	.036	.334	1.630	.006	.0005	.032	.171	.170	.007	.166	.003	.036	.010	.0065	.0002	.0020	.0022	.0020	.0020
754265	170981	.040	.326	1.600	.008	.0007	.030	.169	.170	.004	.162	.005	.037	.011	.0057	.0005	.0020	.0013	.0020	.0020
754272	170921	.029	.335	1.620	.007	.0006	.032	.183	.170	.005	.162	.004	.034	.012	.0045	.0002	.0020	.0015	.0020	.0020
754582	168790	.030	.290	1.580	.006	.0006	.035	.178	.230	.025	.138	.004	.033	.011	.0050	.0002	.0020	.0013	.0020	.0020
	168793	.027	.339	1.590	.005	.0004	.042	.171	.170	.007	.189	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020
	168794	.027	.339	1.590	.005	.0004	.042	.171	.170	.007	.190	.004	.035	.011	.0050	.0002	.0020	.0014	.0020	.0020
755680	176964	.030	.323	1.610	.006	.0005	.031	.176	.170	.007	.158	.004	.035	.010	.0047	.0003	.0020	.0013	.0020	.0020
859727	154868	.030	.345	1.620	.006	.0003	.034	.171	.180	.006	.171	.003	.035	.011	.0050	.0002	.0020	.0019	.0020	.0020
860447	162234	.057	.388	1.530	.008	.0003	.037	.171	.280	.018	.162	.003	.025	.012	.0043	.0002	.0020	.0028	.0020	.0020
	171383	.060	.390	1.540	.008	.0007	.036	.175	.280	.018	.164	.004	.026	.011	.0042	.0003	.0020	.0026	.0020	.0020
860758	168375	.033	.323	1.610	.005	.0004	.038	.165	.190	.006	.160	.004	.035	.012	.0058	.0002	.0020	.0013	.0020	.0020
	168777	.030	.331	1.600	.005	.0005	.038	.172	.180	.006	.180	.004	.035	.012	.0046	.0003	.0020	.0013	.0020	.0020
	168781	.033	.323	1.610	.005	.0004	.038	.164	.190	.006	.159	.004	.035	.012	.0047	.0002	.0020	.0014	.0020	.0020
	170951	.033	.321	1.580	.005	.0005	.038	.166	.190	.006	.160	.003	.034	.012	.0046	.0002	.0020	.0015	.0020	.0020
861322	170954	.038	.321	1.590	.005	.0007	.028	.178	.180	.007	.167	.004	.033	.011	.0052	.0003	.0020	.0014	.0020	.0020
861323	170924	.031	.336	1.620	.005	.0005	.035	.184	.180	.009	.161	.004	.038	.012	.0048	.0002	.0020	.0016	.0020	.0020
861325	171923	.050	.186	1.520	.006	.0005	.036	.184	.510	.118	.015	.004	.026	.012	.0048	.0002	.0020	.0011	.0020	.0020
861662	171629	.035	.350	1.610	.007	.0009	.033	.180	.170	.008	.159	.003	.036	.010	.0052	.0002	.0020	.0016	.0020	.0020
861665	171889	.032	.335	1.590	.006	.0007	.043	.182	.200	.006	.167	.003	.035	.012	.0045	.0003	.0020	.0018	.0020	.0020
861927	170986	.032	.323	1.630	.009	.0004	.034	.179	.170	.007	.164	.003	.036	.012	.0051	.0003	.0020	.0017	.0020	.0020
	170990	.032	.313	1.590	.008	.0006	.031	.178	.170	.006	.162	.003	.035	.012	.0050	.0003	.0020	.0017	.0020	.0020
	170992	.032	.318	1.610	.008	.0005	.031	.179	.170	.006	.165	.003	.037	.013	.0050	.0003	.0020	.0015	.0020	.0020
	173123	.033	.316	1.590	.008	.0005	.030	.181	.170	.006	.161	.003	.034	.012	.0063	.0003	.0020	.0018	.0020	.0020
861928	170996	.031	.325	1.620	.006	.0005	.031	.181	.170	.007	.160	.004	.036	.011	.0045	.0003	.0020	.0013	.0020	.0020
948013	170902	.035	.335	1.620	.006	.0007	.032	.187	.170	.005	.158	.003	.038	.013	.0051	.0003	.0020	.0013	.0020	.0020
948018	170978	.034	.330	1.600	.007	.0005	.038	.168	.170	.008	.166	.003	.039	.012	.0049	.0003	.0020	.0011	.0020	.0020
948056	168380	.035	.332	1.590	.007	.0005	.036	.170	.170	.007	.157	.003	.035	.012	.0048	.0002	.0020	.0025	.0020	.0020
948257	170928	.033	.308	1.600	.006	.0006	.034	.169	.170	.007	.162	.003	.036	.012	.0053	.0002	.0060	.0021	.0020	.0020
948259	170926	.038	.325	1.610	.005	.0006	.037	.170	.170	.006	.163	.003	.034	.012	.0050	.0003	.0020	.0015	.0020	.0020
949159	169974	.055	.183	1.530	.007	.0012	.029	.188	.520	.120	.021	.004	.026	.012	.0051	.0002	.0020	.0009	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.41	.22	.120	.130	
751806	151215	.0020	.0020	.37	.15	.039	.049	4.92
754265	170981	.0020	.0020	.36	.15	.042	.053	5.26
754272	170921	.0020	.0020	.36	.14	.038	.050	7.11
754582	168790	.0020	.0020	.36	.14	.037	.048	7.00
	168793	.0020	.0020	.35	.14	.039	.050	8.57
	168794	.0020	.0020	.35	.14	.039	.050	8.40
755680	176964	.0020	.0020	.36	.14	.039	.049	6.60
859727	154868	.0020	.0020	.36	.14	.038	.049	6.80
860447	162234	.0020	.0020	.38	.17	.028	.040	8.60
	171383	.0020	.0020	.39	.17	.030	.041	8.57
860758	168375	.0020	.0020	.36	.15	.039	.051	6.55
	168777	.0020	.0020	.36	.14	.039	.051	8.26
	168781	.0020	.0020	.36	.15	.039	.051	8.09
	170951	.0020	.0020	.35	.14	.037	.049	8.26
861322	170954	.0020	.0020	.36	.15	.037	.048	5.38
861323	170924	.0020	.0020	.36	.15	.042	.054	7.29
861325	171923	.0020	.0020	.40	.16	.030	.042	7.50
861662	171629	.0020	.0020	.36	.15	.039	.049	6.35
861665	171889	.0020	.0020	.36	.15	.038	.050	9.56
861927	170986	.0020	.0020	.36	.15	.039	.051	6.67
	170990	.0020	.0020	.36	.14	.038	.050	6.20
	170992	.0020	.0020	.36	.15	.040	.053	6.20
	173123	.0020	.0020	.36	.15	.037	.049	4.76
861928	170996	.0020	.0020	.36	.15	.040	.051	6.89
948013	170902	.0020	.0020	.37	.15	.041	.054	6.27
948018	170978	.0020	.0020	.36	.15	.042	.054	7.76
948056	168380	.0020	.0020	.36	.15	.038	.050	7.50
948257	170928	.0020	.0020	.36	.14	.039	.051	6.42
948259	170926	.0020	.0020	.36	.15	.037	.049	7.40
949159	169974	.0020	.0020	.41	.17	.030	.042	5.69

C99 - Supplementary information

Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

Remarks

Simulated heat treatment of test coupons:

Item 100:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 110:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 120:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 130:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 140:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 150:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

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Remarks

Item 160:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 170:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 180:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 190:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 200:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

NV

Issued at Augsburg on 2023-05-25

for DNV
This document has been digitally signed and will therefore not have handwritten signatures.
T. Mette
Surveyor

voestalpine
ONE STEP AHEAD.

D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40, 50, 60, 70, 80, 90
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

NV

Issued at Augsburg on 2023-05-25

for DNV
This document has been digitally signed and will therefore not have handwritten signatures.
T. Mette
Surveyor

voestalpine
ONE STEP AHEAD.

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301574

ROSETTI MARINO

ROSETTI MARINO

Conforme alla spec. **PO**

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

TMUGF Firma — Data

MTSMD Signature — Date

Sonia Emiliani — 27.10.2023

Emiliani Sonia

[X] REVIEW

[ ] WITNESS

CUSTOMER

NOTE

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 1/26
Datum/Date: 15.10.2019

Nr. (A07) Bestoller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kennzeichnung des Materials / Marking of the product (B06)
Herstellerzeichen/Stahlsorte/Schmelzen-Nr/
Erzeugnis-Nr./Sachverständigenstempel
Trademark/Steelgrade/Heat-No/Product-No/
inspector's stamp

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge mm x mm x mm Thickness x Width x Length (B09-B11)
01	1	146204 2	53565	TM	15,00 x 2500,0 x 12000
01	1	146205 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147484 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147484 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147485 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147485 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147486 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147486 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147487 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147487 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147488 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147488 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147489 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147489 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147490 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147490 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147491 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147491 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147492 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147492 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147493 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147494 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147494 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147495 1	53565	TM	15,00 x 2500,0 x 12000
01	1	147495 2	53565	TM	15,00 x 2500,0 x 12000
01	1	147801 1	25832	TM	15,00 x 2500,0 x 12000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 2/26
Datum/Date: 15.10.2019

Nr. (A07) Bestellar Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger Customer (A06):

Erzeugnis Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. Works order No. (A08): 0000100512

Lieferschein-Nr. Dispatch note No.: 0088503535
14.10.2019

Abnahme Inspection (A05): DNVGL **N141U2Y6**

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B06)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
01	1	147801 2	25832	TM	15,00 x 2500,0 x 12000
01	1	147802 1	68832	TM	15,00 x 2500,0 x 12000
01	1	147803 2	25832	TM	15,00 x 2500,0 x 12000
01	1	147804 1	25832	TM	15,00 x 2500,0 x 12000
01	1	147804 2	25832	TM	15,00 x 2500,0 x 12000
01	1	147805 1	14711	TM	15,00 x 2500,0 x 12000
02	1	147776 1	53565	TM	15,00 x 2500,0 x 16000
02	1	147777 1	53565	TM	15,00 x 2500,0 x 16000
02	1	147800 1	24964	TM	15,00 x 2500,0 x 16000
03	1	147529 2	53528	TM	20,00 x 2500,0 x 12000
03	1	147530 1	53528	TM	20,00 x 2500,0 x 12000
03	1	147530 2	53528	TM	20,00 x 2500,0 x 12000
03	1	147531 2	53528	TM	20,00 x 2500,0 x 12000
03	1	147532 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147532 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147533 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147533 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147534 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147534 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147535 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147535 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147536 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147536 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147537 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147537 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147538 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147538 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147539 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147540 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147540 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147541 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147541 2	26008	TM	20,00 x 2500,0 x 12000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 · DNV·GL

Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 3/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06) — 16.07.2019 — Nr. (A07) Empfänger Customer (A06)

Erzeugnis Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. Works order No. (A08): 0000100512
Lieferschein-Nr. Dispatch note No.: 0088503535 / 14.10.2019
Abnahme Inspection (A05): DNVGL **N141U2Y6**

Materialdaten / Material data (B01–B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09–B11) mm x mm x mm
03	1	147542 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147542 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147543 1	26008	TM	20,00 x 2500,0 x 12000
03	1	147543 2	26008	TM	20,00 x 2500,0 x 12000
03	1	147544 1	26008	TM	20,00 x 2500,0 x 12000
03	1	150080 1	25832	TM	20,00 x 2500,0 x 12000
04	1	147464 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147465 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147466 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147467 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147468 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147469 1	53565	TM	20,00 x 2500,0 x 16000
04	1	147470 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147471 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147473 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147474 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147475 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147476 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147477 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147478 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147479 1	24964	TM	20,00 x 2500,0 x 16000
04	1	147522 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147523 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147524 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147525 1	24695	TM	20,00 x 2500,0 x 16000
04	1	147527 1	24964	TM	20,00 x 2500,0 x 16000
05	1	147463 1	26009	TM	25,00 x 2500,0 x 12000
05	1	147507 1	53565	TM	25,00 x 2500,0 x 12000
05	1	147508 1	53528	TM	25,00 x 2500,0 x 12000
05	1	147509 1	53528	TM	25,00 x 2500,0 x 12000
05	1	147510 1	53528	TM	25,00 x 2500,0 x 12000
05	1	147511 1	53528	TM	25,00 x 2500,0 x 12000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Horstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 4/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Materialdaten / Material data (B01–B99)

Pos. Item	Anzahl Quantity (B08)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09–B11) mm x mm x mm
05	1	147512 1	26009	TM	25,00 x 2500,0 x 12000
05	1	147512 2	26009	TM	25,00 x 2500,0 x 12000
05	1	147513 1	25832	TM	25,00 x 2500,0 x 12000
05	1	147514 1	25832	TM	25,00 x 2500,0 x 12000
06	1	147152 1	26037	TM	25,00 x 2500,0 x 16000
06	1	147154 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147156 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147157 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147158 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147159 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147160 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147161 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147162 1	26009	TM	25,00 x 2500,0 x 16000
06	1	147163 1	26007	TM	25,00 x 2500,0 x 16000
07	1	147101 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147102 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147103 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147104 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147105 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147106 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147107 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147108 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147109 1	26037	TM	30,00 x 2500,0 x 12000
07	1	147113 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147114 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147115 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147116 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147117 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147118 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147119 1	24964	TM	30,00 x 2500,0 x 12000
07	1	147120 1	24964	TM	30,00 x 2500,0 x 12000
08	1	147086 1	53528	TM	30,00 x 2500,0 x 16000

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 5/26
Datum/Date: 15.10.2019

Nr. (A07) Empfänger / Customer (A06): 16.07.2019

Nr. (A07) Besteller / Purchaser (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Materialdaten / Material data (B01-B99)

Pos. Item	Anzahl Quantity (B06)	Erzeugnis-Nr. Product No. (B07)	Schmelzen-Nr. Heat No. (B07)	Lieferzustand Cond. of delivery (B04)	Dicke x Breite x Länge Thickness x Width x Length (B09-B11) mm x mm x mm
08	1	147087 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147088 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147089 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147091 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147092 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147094 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147096 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147097 1	53528	TM	30,00 x 2500,0 x 16000
08	1	147099 1	53528	TM	30,00 x 2500,0 x 16000
09	1	147061 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147062 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147064 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147066 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147069 1	26006	TM	40,00 x 2500,0 x 12000
09	1	147070 1	26005	TM	40,00 x 2500,0 x 12000
09	1	147071 1	26005	TM	40,00 x 2500,0 x 12000
09	1	149385 1	26005	TM	40,00 x 2500,0 x 12000
10	1	147057 1	26006	TM	40,00 x 2500,0 x 16000
10	1	147201 1	53744	TM	40,00 x 2500,0 x 16000
10	1	147202 1	53744	TM	40,00 x 2500,0 x 16000

01	32	Gewicht	113.056	kg
02	3	Weight	14.130	kgs
03	29	(B12)	136.590	
04	20		125.600	
05	10		58.880	
06	10		78.500	
07	17		120.105	
08	10		94.200	
09	8		75.360	
10	3		37.680	
Σ	142		854.101	

TM: thermomechanisch gewalzt / thermomechanically rolled

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Cyron

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 6/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A08)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A09): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Maßprüfung und Sichtkontrolle auf äußere Beschaffenheit: ohne Beanstandung
Dimensional check and visual examination of the surface condition: without objection

Schmelzenanalyse / Ladle analysis (C70-C99)

Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤0,13	Si % 0,15 - 0,55	Mn % ≤1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30	Cr % ≤0,25	Ni % ≤0,70
14711	0,09	0,33	1,65	0,013	0,001	0,003	0,037	0,01	0,05	0,04
24695	0,08	0,29	1,57	0,012	0,002	0,003	0,036	0,02	0,03	0,04
24964	0,08	0,28	1,60	0,014	0,003	0,004	0,043	0,02	0,04	0,06
25832	0,10	0,30	1,6	0,014	0,003	0,007	0,036	0,04	0,04	0,04
26005	0,08	0,17	1,62	0,013	0,001	0,006	0,033	0,24	0,03	0,36

Schmelzen-Nr. Heat No. (B07)	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,040	B % ≤0,0005	Mo % ≤0,25	As % ≤0,030	Sn % ≤0,020	Pb % ≤0,010	Ca % ≤0,005	EV1 1) % ≤0,21
14711	0,009	0,011	0,040	0,0001	0,01	0,002	0,002	0,001	0,002	0,19
24695	0,003	0,012	0,038	0,0002	0,001	0,003	0,002	0	0,002	0,17
24964	0,005	0,013	0,037	0,0002	0,01	0,003	0,002	0	0,001	0,18
25832	0,003	0,015	0,040	0,0002	0,01	0,003	0,005	0,001	0,002	0,20
26005	0,037	0,002	0,037	0,0005	0,003	0,003	0,003	0	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb % ≤0,010	EV2 2) %	Bi % ≤0,010	EV3 3) % ≤0,11	EV4 4) % ≤0,90	Nb+V % ≤0,09
14711	0,001	0,38	0,000	0,06	0,11	0,05
24695	0,001	0,35	0	0,05	0,09	0,04
24964	0,001	0,36	0	0,06	0,13	0,04
25832	0,001	0,38	0	0,06	0,13	0,04
26005	0,002	0,40	0	0,08	0,63	0,07

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 7/26
Datum/Date: 15.10.2019

Nr. (A07) Bestellor Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03): S460MLO Z35 / DIN EN 10225-1 11/19 / DIN EN 10029 B 02/11 / DIN EN 10163-2 Kl. B UG3 03/05

Works order No. (A08): 0000100512

Lieferschein-Nr. Dispatch note No: 0088503535 / 14.10.2019

Abnahme Inspection (A05): DNVGL **N141U2Y6**

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30	Cr % ≤ 0,25	Ni % ≤ 0,70
26006	0,07	0,19	1,61	0,01	0,003	0,005	0,044	0,22	0,04	0,38
26007	0,1	0,29	1,61	0,014	0,002	0,004	0,041	0,09	0,04	0,04
26008	0,09	0,30	1,62	0,011	0,004	0,004	0,027	0,03	0,03	0,03
26009	0,09	0,29	1,60	0,011	0,002	0,005	0,046	0,02	0,08	0,05
26037	0,09	0,29	1,61	0,011	0,005	0,005	0,045	0,09	0,04	0,04
53528	0,09	0,30	1,63	0,015	0,001	0,006	0,048	0,07	0,04	0,04
53565	0,09	0,3	1,63	0,009	0,003	0,006	0,041	0,11	0,04	0,05

Schmelzen-Nr. Heat No. (B07)	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	B % ≤ 0,0005	Mo % ≤ 0,25	As % ≤ 0,030	Sn % ≤ 0,020	Pb % ≤ 0,010	Ca % ≤ 0,005	EV1 1) % ≤ 0,21
26006	0,038	0,003	0,037	0,0001	0,003	0,003	0,002	0	0,001	0,18
26007	0,004	0,017	0,040	0,0003	0	0,003	0,009	0	0,001	0,20
26008	0,002	0,011	0,040	0,0001	0	0,003	0,003	0	0,001	0,19
26009	0,003	0,016	0,040	0,0002	0,02	0,003	0,002	0	0,001	0,19
26037	0,003	0,011	0,040	0,0001	0,003	0,003	0,003	0	0,002	0,19
53528	0,004	0,015	0,040	0,0003	0,004	0,003	0,006	0,001	0,002	0,19
53565	0,004	0,012	0,040	0,0002	0,002	0,003	0,003	0	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb % ≤ 0,010	EV2 2) %	Bi % ≤ 0,010	EV3 3) % ≤ 0,11	EV4 4) % ≤ 0,90	Nb+V % ≤ 0,09
26006	0,001	0,39	0	0,08	0,64	0,08
26007	0,001	0,39	0	0,06	0,17	0,04
26008	0,001	0,37	0	0,05	0,09	0,04
26009	0,001	0,38	0	0,06	0,17	0,04
26037	0,001	0,38	0	0,05	0,17	0,04
53528	0,001	0,38	0	0,06	0,15	0,04
53565	0,001	0,38	0	0,06	0,20	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: V+Nb+Ti
4) EV4: Cr+Cu+Mo+Ni

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 18 64 DNV·GL

Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 8/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Schmelzenanalyse / Ladle analysis (C70-C99)
Herstellerangaben / Manufacturer standard

Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30	Cr % ≤ 0,25	Ni % ≤ 0,70
53744	0,08	0,18	1,62	0,014	0,002	0,004	0,034	0,21	0,04	0,35
68832	0,09	0,31	1,58	0,014	0,003	0,003	0,036	0,02	0,04	0,03

Schmelzen-Nr. Heat No. (B07)	V % ≤ 0,080	Ti % ≤ 0,075	Nb % ≤ 0,040	B % ≤ 0,0005	Mo % ≤ 0,25	As % ≤ 0,030	Sn % ≤ 0,020	Pb % ≤ 0,010	Ca % ≤ 0,005	EV1 1) % ≤ 0,21
53744	0,034	0,003	0,032	0,0001	0,01	0,003	0,002	0	0,001	0,19
68832	0,004	0,013	0,040	0,0003	0,01	0,002	0,006	0,000	0,002	0,19

Schmelzen-Nr. Heat No. (B07)	Sb % ≤ 0,010	EV2 2) %	Bi % ≤ 0,010	EV3 3) % ≤ 0,11	EV4 4) % ≤ 0,90	Nb+V % ≤ 0,09
53744	0,001	0,40	0	0,07	0,61	0,07
68832	0,000	0,37	0,000	0,06	0,10	0,04

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : V+Nb+Ti
4) EV4 : Cr+Cu+Mo+Ni

Stahlherstellung: Sauerstoffaufblasverfahren
Steel making: Basic oxygen process
(C70)

vollberuhigt, feinkornbehandelt
fully killed, made to fine grain practice

Vakuumbehandelt
vacuum degassed

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 9/26
Datum/Date: 15.10.2019

Nr. (A07) Bestellter / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C90)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30
124265 *)	14711	0,08	0,31	1,62	0,013	0,002	0,002	0,044	0,01
124265 *)	14711	0,09	0,31	1,64	0,014	0,001	0,002	0,034	0,01
142668 *)	24695	0,08	0,27	1,61	0,009	0,004	0,002	0,039	0,03
142668 *)	24695	0,08	0,32	1,51	0,013	0,002	0,002	0,036	0,02
143193 *)	24695	0,08	0,28	1,57	0,014	0,004	0,003	0,032	0,02
143193 *)	24695	0,08	0,32	1,56	0,012	0,004	0,003	0,035	0,02

Proben-Nr. Specimen No. (C90)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,060	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
124265 *)	14711	0,05	0,03	0,007	0,008	0,032	0,01	0,0004	0,18
124265 *)	14711	0,05	0,04	0,011	0,015	0,038	0,003	0,0005	0,19
142668 *)	24695	0,03	0,04	0,003	0,013	0,031	0,002	0,0001	0,17
142668 *)	24695	0,04	0,04	0,002	0,009	0,034	0,00	0,0001	0,17
143193 *)	24695	0,04	0,04	0,002	0,015	0,039	0,002	0,0000	0,17
143193 *)	24695	0,04	0,03	0,003	0,014	0,035	0,002	0,0004	0,17

Proben-Nr. Specimen No. (C90)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
124265 *)	14711	0,37	0,10	0,05	0,04
124265 *)	14711	0,38	0,10	0,06	0,05
142668 *)	24695	0,36	0,10	0,05	0,03
142668 *)	24695	0,34	0,10	0,05	0,04
143193 *)	24695	0,35	0,10	0,06	0,04
143193 *)	24695	0,35	0,09	0,05	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 64 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 10/26
Datum/Date: 15.10.2019

16.07.2019

Nr. (A07) Besteller / Purchaser (A06)

Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535, 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,13	Si % 0,15 - 0,55	Mn % ≤1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015-0,055	Cu % ≤0,30
147116	24964	0,08	0,26	1,56	0,018	0,003	0,005	0,038	0,03
147116	24964	0,07	0,28	1,56	0,016	0,003	0,004	0,047	0,02
145821 *)	25832	0,09	0,29	1,6	0,016	0,005	0,007	0,041	0,04
145821 *)	25832	0,09	0,33	1,5	0,018	0,004	0,007	0,036	0,03
147045 *)	26005	0,07	0,18	1,58	0,016	0,003	0,004	0,030	0,23
147045 *)	26005	0,09	0,19	1,62	0,015	0,000	0,004	0,037	0,25

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,040	Mo % ≤0,23	B %	EV1 1) % ≤0,21
147116	24964	0,05	0,06	0,003	0,013	0,030	0,004	0,0006	0,18
147116	24964	0,05	0,06	0,003	0,014	0,037	0,01	0,0007	0,17
145821 *)	25832	0,05	0,03	0,004	0,011	0,038	0,01	0,0004	0,19
145821 *)	25832	0,04	0,05	0,004	0,011	0,040	0,01	0,0005	0,18
147045 *)	26005	0,04	0,35	0,042	0,003	0,030	0,003	0,0004	0,18
147045 *)	26005	0,04	0,38	0,038	0,002	0,039	0,001	0,0005	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤0,90	EV4 4) % ≤0,11	Nb+V % ≤0,09
147116	24964	0,36	0,14	0,05	0,03
147116	24964	0,35	0,14	0,05	0,04
145821 *)	25832	0,37	0,13	0,05	0,04
145821 *)	25832	0,36	0,13	0,06	0,04
147045 *)	26005	0,39	0,62	0,08	0,07
147045 *)	26005	0,42	0,67	0,08	0,08

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 11/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
149385	26005	0,09	0,17	1,61	0,009	0,001	0,006	0,025	0,23
149385	26005	0,08	0,18	1,60	0,014	0,001	0,005	0,039	0,23
147064	26006	0,06	0,18	1,59	0,01	0,004	0,004	0,045	0,21
147064	26006	0,07	0,18	1,62	0,02	0,002	0,004	0,042	0,21
147163	26007	0,0	0,28	1,59	0,015	0,003	0,005	0,040	0,09
147163	26007	0,1	0,30	1,61	0,014	0,003	0,002	0,045	0,09

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
149385	26005	0,03	0,36	0,042	0,001	0,036	0,003	0,0005	0,20
149385	26005	0,03	0,36	0,037	0,002	0,032	0,00	0,0002	0,19
147064	26006	0,04	0,39	0,041	0,003	0,035	0,004	0,0001	0,17
147064	26006	0,04	0,40	0,031	0,003	0,029	0,003	0,0003	0,18
147163	26007	0,04	0,04	0,005	0,019	0,032	0	0,0004	0,10
147163	26007	0,04	0,04	0,001	0,020	0,031	0	0,0003	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,03
149385	26005	0,41	0,62	0,08	0,08
149385	26005	0,40	0,62	0,07	0,07
147064	26006	0,38	0,64	0,08	0,08
147064	26006	0,40	0,65	0,06	0,06
147163	26007	0,28	0,17	0,06	0,04
147163	26007	0,39	0,17	0,05	0,03

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
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Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser (A06)
Empfänger / Customer (A05)

Erzeugnis / Product: Grobblech / Heavy plate (B01)

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤0,13	Si % 0,15 – 0,55	Mn % ≤1,65	P % ≤0,020	S % ≤0,005	N % ≤0,010	Al % 0,015–0,055	Cu % ≤0,30
147532	26008	0,10	0,31	1,64	0,009	0,001	0,002	0,023	0,03
147532	26008	0,08	0,29	1,60	0,010	0,004	0,005	0,033	0,03
147533	26008	0,10	0,33	1,63	0,013	0,004	0,005	0,021	0,03
147533	26008	0,09	0,32	1,65	0,010	0,002	0,005	0,029	0,02
147160	26009	0,08	0,28	1,62	0,015	0,002	0,004	0,051	0,01
147160	26009	0,08	0,27	1,60	0,012	0,003	0,007	0,049	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤0,25	Ni % ≤0,70	V % ≤0,080	Ti % ≤0,025	Nb % ≤0,040	Mo % ≤0,23	B %	EV1 1) % ≤0,21
147532	26008	0,02	0,04	0,004	0,008	0,036	0	0,0000	0,20
147532	26008	0,04	0,04	0,000	0,007	0,037	0	0,0005	0,18
147533	26008	0,02	0,04	0,001	0,012	0,038	0	0,0002	0,20
147533	26008	0,02	0,03	0,003	0,010	0,036	0	0,0000	0,19
147160	26009	0,09	0,05	0,004	0,014	0,035	0,02	0,0001	0,18
147160	26009	0,07	0,05	0,004	0,016	0,036	0,03	0,0002	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤0,90	EV4 4) % ≤0,11	Nb+V % ≤0,09
147532	26008	0,38	0,09	0,05	0,04
147532	26008	0,36	0,11	0,04	0,04
147533	26008	0,38	0,09	0,05	0,04
147533	26008	0,37	0,07	0,05	0,04
147160	26009	0,38	0,17	0,05	0,04
147160	26009	0,37	0,17	0,06	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 13/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03): S460MLO Z35 DIN EN 10225-1 11/19; DIN EN 10029 B 02/11; DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70–C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
147512	26009	0,07	0,29	1,62	0,012	0,003	0,005	0,054	0,02
147512	26009	0,09	0,30	1,60	0,014	0,002	0,007	0,039	0,02
147105	26037	0,10	0,31	1,61	0,010	0,005	0,006	0,039	0,09
147105	26037	0,09	0,31	1,63	0,008	0,005	0,007	0,037	0,09
147107	26037	0,09	0,31	1,60	0,009	0,005	0,005	0,049	0,11
147107	26037	0,09	0,29	1,61	0,013	0,002	0,005	0,049	0,11

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
147512	26009	0,09	0,06	0,001	0,013	0,039	0,02	0,0005	0,17
147512	26009	0,09	0,04	0,003	0,013	0,036	0,02	0,0006	0,19
147105	26037	0,03	0,05	0,002	0,007	0,039	0,004	0,0000	0,20
147105	26037	0,04	0,04	0,004	0,010	0,039	0,002	0,0000	0,19
147107	26037	0,03	0,04	0,002	0,013	0,031	0,003	0,0004	0,19
147107	26037	0,04	0,04	0,003	0,013	0,039	0,003	0,0001	0,19

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
147512	26009	0,37	0,19	0,05	0,04
147512	26009	0,38	0,17	0,05	0,04
147105	26037	0,38	0,17	0,05	0,04
147105	26037	0,38	0,17	0,05	0,04
147107	26037	0,37	0,18	0,05	0,03
147107	26037	0,38	0,19	0,06	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT · 18 84 · DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
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DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
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Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser (A06) — Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A06): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % < 0,30
147098 *)	53528	0,08	0,31	1,60	0,019	0,002	0,004	0,055	0,08
147098 *)	53528	0,08	0,28	1,56	0,013	0,000	0,007	0,040	0,06
147099	53528	0,10	0,28	1,62	0,018	0,001	0,006	0,040	0,06
147099	53528	0,09	0,32	1,63	0,013	0,003	0,005	0,050	0,05
146204	53565	0,10	0,2	1,58	0,005	0,004	0,008	0,047	0,11
146204	53565	0,10	0,2	1,58	0,010	0,002	0,004	0,035	0,11

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
147098 *)	53528	0,04	0,03	0,005	0,014	0,038	0,004	0,0006	0,18
147098 *)	53528	0,04	0,04	0,001	0,013	0,037	0,003	0,0008	0,18
147099	53528	0,04	0,03	0,003	0,018	0,039	0,004	0,0004	0,20
147099	53528	0,05	0,03	0,002	0,014	0,037	0,003	0,0003	0,19
146204	53565	0,04	0,04	0,005	0,012	0,038	0,003	0,0002	0,20
146204	53565	0,03	0,04	0,003	0,012	0,037	0,00	0,0006	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
147098 *)	53528	0,36	0,15	0,06	0,04
147098 *)	53528	0,36	0,14	0,05	0,04
147099	53528	0,39	0,13	0,06	0,04
147099	53528	0,38	0,13	0,05	0,04
146204	53565	0,38	0,19	0,06	0,04
146204	53565	0,38	0,18	0,05	0,04

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
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Datum/Date 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A05)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35 DIN EN 10225-1 11/19; DIN EN 10029 B 02/11; DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 – 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015–0,055	Cu % ≤ 0,30
147464	53565	0,10	0,2	1,63	0,009	0,002	0,007	0,047	0,11
147464	53565	0,08	0,4	1,63	0,007	0,004	0,004	0,036	0,11
147201	53744	0,07	0,17	1,64	0,012	0,002	0,004	0,036	0,21
147201	53744	0,06	0,19	1,61	0,012	0,003	0,005	0,036	0,20
148000 *)	53744	0,09	0,18	1,63	0,010	0,002	0,004	0,039	0,21
148000 *)	53744	0,07	0,18	1,62	0,018	0,000	0,004	0,041	0,20

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
147464	53565	0,04	0,05	0,002	0,013	0,034	0,001	0,0005	0,20
147464	53565	0,04	0,05	0,002	0,008	0,038	0,00	0,0001	0,18
147201	53744	0,05	0,36	0,039	0,003	0,032	0,01	0,0005	0,18
147201	53744	0,04	0,33	0,028	0,003	0,032	0,01	0,0000	0,17
148000 *)	53744	0,04	0,35	0,037	0,003	0,029	0,004	0,0002	0,20
148000 *)	53744	0,05	0,35	0,038	0,004	0,033	0,01	0,0005	0,18

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
147464	53565	0,39	0,20	0,05	0,04
147464	53565	0,37	0,20	0,05	0,04
147201	53744	0,40	0,63	0,07	0,07
147201	53744	0,38	0,58	0,06	0,06
148000 *)	53744	0,42	0,60	0,07	0,07
148000 *)	53744	0,40	0,61	0,08	0,07

1) EV1: PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2: CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3: Cr+Cu+Mo+Ni
4) EV4: V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Vorkenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 16/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Stückanalyse / Check analysis (C70-C99)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	C % ≤ 0,13	Si % 0,15 - 0,55	Mn % ≤ 1,65	P % ≤ 0,020	S % ≤ 0,005	N % ≤ 0,010	Al % 0,015-0,055	Cu % ≤ 0,30
893397 *)	68832	0,10	0,31	1,63	0,014	0,004	0,003	0,030	0,02
893397 *)	68832	0,10	0,31	1,54	0,013	0,005	0,003	0,031	0,02

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Cr % ≤ 0,25	Ni % ≤ 0,70	V % ≤ 0,080	Ti % ≤ 0,025	Nb % ≤ 0,040	Mo % ≤ 0,23	B %	EV1 1) % ≤ 0,21
893397 *)	68832	0,04	0,04	0,005	0,014	0,034	0,01	0,0004	0,20
893397 *)	68832	0,04	0,03	0,003	0,013	0,036	0,01	0,0000	0,19

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	EV2 2) %	EV3 3) % ≤ 0,90	EV4 4) % ≤ 0,11	Nb+V % ≤ 0,09
893397 *)	68832	0,39	0,11	0,05	0,04
893397 *)	68832	0,37	0,10	0,05	0,04

1) EV1 : PCM=C+Mn/20+Mo/15+Ni/60+Cr/20+V/10+Cu/20+Si/30+5xB
2) EV2 : CEV=C+Mn/6+Mo/5+Ni/15+Cr/5+V/5+Cu/15
3) EV3 : Cr+Cu+Mo+Ni
4) EV4 : V+Nb+Ti
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
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Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser / (A06)
Empfänger / Customer / (A08)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A09): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch / Tensile test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH N/mm2 460 - 580	Zugfestigkeit Tensile strength (C12) Rm N/mm2 550 - 700	ReH/Rm ReH/Rm	Bruchdehnung Elongation (C13) A5 7) % ≥ 17
146204	53565	K4G	Q	TM	P	514	585	0,88	23
147061	26006	K4G	Q	TM	P	499	555	0,90	26
147064	26006	K4G	Q	TM	P	504	559	0,90	27
147066	26006	K4G	Q	TM	P	490	552	0,89	31
147088	53528	K4G	Q	TM	P	488	598	0,82	23
147094	53528	K4G	Q	TM	P	495	600	0,82	28
147097	53528	K4G	Q	TM	P	486	596	0,82	23
147098 *)	53528	K4G	Q	TM	P	501	610	0,82	22
147099	53528	K4G	Q	TM	P	503	598	0,84	26
147100 *)	53528	K4G	Q	TM	P	478	589	0,81	27
147105	26037	K4G	Q	TM	P	494	604	0,82	26
147107	26037	K4G	Q	TM	P	490	599	0,82	24
147114	24964	K4G	Q	TM	P	519	622	0,83	24
147116	24964	K4G	Q	TM	P	522	626	0,83	26
147119	24964	K4G	Q	TM	P	509	613	0,83	23
147160	26009	K4G	Q	TM	P	501	599	0,84	24
147163	26007	K4G	Q	TM	P	493	587	0,84	24
147201	53744	K4G	Q	TM	P	483	550	0,88	30
147463	26009	K4G	Q	TM	P	530	640	0,83	22
147464	53565	K4G	Q	TM	P	498	605	0,82	24
147469	53565	K4G	Q	TM	P	521	610	0,85	29
147470	24964	K4G	Q	TM	P	522	594	0,88	23
147479	24964	K4G	Q	TM	P	544	614	0,89	24
147485	53565	K4G	Q	TM	P	578	622	0,93	23
147490	53565	K4G	Q	TM	P	573	622	0,92	22

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
6) P: prismatisch / prismatic
7) A5: Lo=5,65√So

*) *Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery*

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) 1191706.1
Seite/Page 18/26
Datum/Date 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02–B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch / Tensile test (C10–C29)

Proben-Nr. Specimen No (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Form Type (C10) 6)	Streckgrenze Yield point (C11) ReH N/mm2 460 – 580	Zugfestigkeit Tensile strength (C12) Rm N/mm2 550 – 700	ReH/Rm Reh/Rm	Bruchdehnung Elongation (C13) A5 7) % ≥ 17	
147495	53565	K4G	Q	TM	P	555	613	0,91	27	
147511	53528	K4G	Q	TM	P	509	608	0,84	27	
147512	26009	K4G	Q	TM	P	529	631	0,84	25	
147514	25832	K4G	Q	TM	P	511	593	0,86	24	
147525	24695	K4G	Q	TM	P	532	596	0,89	29	
147527	24964	K4G	Q	TM	P	529	606	0,87	27	
147531	53528	K4G	Q	TM	P	523	613	0,85	23	
147532	26008	K4G	Q	TM	P	530	592	0,90	24	
147533	26008	K4G	Q	TM	P	535	615	0,87	22	
147534	26008	K4G	Q	TM	P	517	601	0,86	23	
147800	24964	K4G	Q	TM	P	561	602	0,93	25	
147802	68832	K4G	Q	TM	P	574	614	0,93	23	
147804	25832	K4G	Q	TM	P	529	599	0,88	23	
147805	14711	K4G	Q	TM	P	579	634	0,91	22	
149385	26005	K4G	Q	TM	P	550	608	0,90	28	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) G: Erzeugnisdicke / Thickness of product
4) Q: quer / transversal
5) TM: thermomechanisch gewalzt / thermomechanically rolled
6) P: prismatisch / prismatic
7) A5: Lo=5,65 √So
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 19/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019 Nr. (A07) Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03): S460MLO Z35 / DIN EN 10225-1 11/19 / DIN EN 10029 B 02/11 / DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Abnahme / Inspection (A05): DNVGL / **N141U2Y6**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1 % ≥25	2	3	MW 4) % ≥35
145812 *)	25832	K4	TM	59	70	57	62
145821 *)	25832	K4	TM	67	62	69	66
146203 *)	24964	K4	TM	47	57	37	47
146204	53565	K4	TM	49	42	53	48
147064	26006	K4	TM	72	70	72	71
147098 *)	53528	K4	TM	66	69	65	67
147099	53528	K4	TM	74	69	69	71
147105	26037	K4	TM	38	30	46	38
147114	24964	K4	TM	67	69	68	68

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1 N/mm2 ≥440	2	3
145812 *)	25832	K4	TM	585	597	594
145821 *)	25832	K4	TM	597	592	599
146203 *)	24964	K4	TM	580	576	566
146204	53565	K4	TM	580	583	578
147064	26006	K4	TM	551	557	554
147098 *)	53528	K4	TM	599	597	601
147099	53528	K4	TM	584	590	579
147105	26037	K4	TM	599	605	601
147114	24964	K4	TM	614	617	613

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 20/26
Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser (A06) — Empfänger / Customer (A06)

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)	
				% ≥ 25			% ≥ 35	
147116	24964	K4	TM	58	55	51	55	
147160	26009	K4	TM	59	65	66	63	
147163	26007	K4	TM	58	62	61	60	
147201	53744	K4	TM	65	62	59	62	
147464	53565	K4	TM	61	59	59	60	
147479	24964	K4	TM	56	54	60	57	
147511	53528	K4	TM	66	66	49	60	
147525	24695	K4	TM	62	64	57	61	
147531	53528	K4	TM	70	70	65	68	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3	
				N/mm2 ≥ 440			
147116	24964	K4	TM	627	627	626	
147160	26009	K4	TM	573	577	570	
147163	26007	K4	TM	572	568	569	
147201	53744	K4	TM	544	547	541	
147464	53565	K4	TM	596	589	590	
147479	24964	K4	TM	594	586	595	
147511	53528	K4	TM	583	577	580	
147525	24695	K4	TM	589	587	593	
147531	53528	K4	TM	601	596	603	

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

Abnahmestempel
Inspection Stamp
(Z03)

Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 21/26
Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser / (A06)
Empfänger / Customer / (A06)

Erzeugnis / Product: Grobblech / Heavy plate (B01)

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019
Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Zugversuch Dickenrichtung / Through thickness tension test (C10-C29)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Brucheinschnürung Reduction of area 1	2	3	MW 4)	
				% ≥ 25			% ≥ 35	
147532	26008	K4	TM	70	67	71	69	
147802	68832	K4	TM	68	70	64	67	
147804	25832	K4	TM	73	67	69	70	
147805	14711	K4	TM	71	72	62	68	
149385	26005	K4	TM	69	71	73	71	

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2)	Zustand Cond. (B05) 3)	Zugfestigkeit Rm Tensile strength Rm (C12) 1	2	3		
				N/mm2 ≥ 440				
147532	26008	K4	TM	576	577	575		
147802	68832	K4	TM	603	606	603		
147804	25832	K4	TM	577	579	578		
147805	14711	K4	TM	634	615	615		
149385	26005	K4	TM	583	578	585		

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) TM: thermomechanisch gewalzt / thermomechanically rolled
4) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 22/26
Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller Empfänger
Purchaser Customer
(A06) (A06)

Erzeugnis Grobblech
Product Heavy plate
(B01)

Werkstoff und Lieferbedingung S460MLO Z35
Steel grade and terms of delivery DIN EN 10225-1 11/19
(B02-B03) DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. 0000100512
Works order No.
(A08)
Lieferschein-Nr. 0088503535
Dispatch note No. 14.10.2019

Abnahme DNVGL
Inspection **N141U2Y6**
(A05)

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C08)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
146203 *)	24964	K4O	Q	A5	KV	-040	181	180	200	187
146203 *)	24964	K4O	Q	A6	KV	-040	118	134	142	131
146204	53565	K4O	Q	A5	KV	-040	92	73	100	88
146204	53565	K4O	Q	A6	KV	-040	74	65	61	67
146204	53565	K4O	Q	TM	KV600	-040	155	153	146	151
147061	26006	K4O	Q	TM	KV450	-040	333	293	289	305
147064	26006	K4O	Q	A5	KV450	-040	274	305	254	278
147064	26006	K4O	Q	A6	KV450	-040	224	208	208	213
147064	26006	K4O	Q	TM	KV600	-040	219	256	217	231
147066	26006	K4O	Q	TM	KV600	-040	314	298	343	318
147088	53528	K4O	Q	TM	KV450	-040	200	209	219	209
147094	53528	K4O	Q	TM	KV450	-040	147	146	138	144
147097	53528	K4O	Q	TM	KV450	-040	133	106	108	116
147098 *)	53528	K4O	Q	A5	KV450	-040	80	104	97	94
147098 *)	53528	K4O	Q	A6	KV450	-040	55	70	68	64
147098 *)	53528	K4O	Q	TM	KV450	-040	145	137	167	150
147099	53528	K4O	Q	A5	KV450	-040	91	64	64	73
147099	53528	K4O	Q	A6	KV450	-040	87	56	60	68
147099	53528	K4O	Q	TM	KV450	-040	136	229	145	170
147100 *)	53528	K4O	Q	TM	KV450	-040	128	109	107	115
147105	26037	K4O	Q	A5	KV	-040	53	59	55	56
147105	26037	K4O	Q	A6	KV	-040	54	58	34	49
147105	26037	K4O	Q	TM	KV450	-040	179	153	122	151
147107	26037	K4O	Q	A5	KV450	-040	106	118	98	107
147107	26037	K4O	Q	A6	KV450	-040	78	80	76	78
147107	26037	K4O	Q	TM	KV450	-040	147	153	206	169

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
A6: gealtert: 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1998

Kesten

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Herstellerzeichen
Trademark
(A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

AJ Abnahmestempel
Inspection Stamp
(Z03)

Abnahmebeauftragter
Inspection Representative
(Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 23/26
Datum/Date: 15.10.2019

Nr. (A07) Bestellter Purchaser (A06): 16.07.2019
Nr. (A07) Empfänger Customer (A06):

Erzeugnis Product (B01): Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03): S460MLO Z35 / DIN EN 10225-1 11/19 / DIN EN 10029 B 02/11 / DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. Works order No. (A08): 0000100512

Lieferschein-Nr. Dispatch note No.: 0088503535 / 14.10.2019

Abnahme Inspection (A05): DNVGL **N141U2Y6**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
147114	24964	K4O	Q	A5	KV450	-040	125	94	134	118
147114	24964	K4O	Q	A6	KV450	-040	118	33	83	78
147114	24964	K4O	Q	TM	KV450	-040	260	254	253	256
147116	24964	K4O	Q	A5	KV450	-040	109	103	75	96
147116	24964	K4O	Q	A6	KV450	-040	35	72	103	70
147116	24964	K4O	Q	TM	KV450	-040	253	255	227	245
147119	24964	K4O	Q	TM	KV450	-040	283	166	190	213
147160	26009	K4O	Q	A5	KV450	-040	258	265	285	269
147160	26009	K4O	Q	A6	KV450	-040	220	186	127	178
147160	26009	K4O	Q	TM	KV450	-040	274	262	227	254
147161	26009	K4O	Q	TM	KV450	-040	259	259	271	263
147163	26007	K4O	Q	A5	KV450	-040	226	206	219	217
147163	26007	K4O	Q	A6	KV450	-040	195	201	217	204
147163	26007	K4O	Q	TM	KV450	-040	260	229	272	254
147201	53744	K4O	Q	A5	KV450	-040	360	331	340	344
147201	53744	K4O	Q	A6	KV450	-040	233	251	259	248
147201	53744	K4O	Q	TM	KV450	-040	230	284	283	266
147463	26009	K4O	Q	TM	KV600	-040	110	133	161	135
147464	53565	K4O	Q	A5	KV450	-040	69	88	73	77
147464	53565	K4O	Q	A6	KV450	-040	65	75	70	70
147464	53565	K4O	Q	TM	KV450	-040	148	149	134	144
147469	53565	K4O	Q	A5	KV450	-040	115	138	108	120
147469	53565	K4O	Q	A6	KV450	-040	103	102	83	96
147469	53565	K4O	Q	TM	KV450	-040	216	197	196	203
147470	24964	K4O	Q	TM	KV450	-040	201	173	160	178
147479	24964	K4O	Q	A5	KV450	-040	249	199	210	219

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
A6: gealtert: 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 24/26
Datum/Date 15.10.2019

Nr. (A07) 16.07.2019 Nr. (A07)
Besteller / Purchaser (A06)
Empfänger / Customer (A06)

Erzeugnis / Product: Grobblech / Heavy plate (B01)

Werksauftrags-Nr. / Works order No. (A08): 0000100512
Lieferschein-Nr. / Dispatch note No.: 0088503535 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 K1, B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Probon-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2	3	MW 6) J
147479	24964	K4O	Q	A6	KV450	-040	142	170	165	159
147479	24964	K4O	Q	TM	KV450	-040	175	238	212	208
147485	53565	K4O	Q	TM	KV450	-040	154	136	133	141
147490	53565	K4O	Q	TM	KV450	-040	157	127	136	140
147495	53565	K4O	Q	TM	KV600	-040	139	163	159	154
147511	53528	K4O	Q	A5	KV450	-040	133	122	105	120
147511	53528	K4O	Q	A6	KV450	-040	108	94	118	107
147511	53528	K4O	Q	TM	KV600	-040	204	200	181	195
147512	26009	K4O	Q	A5	KV450	-040	120	161	121	134
147512	26009	K4O	Q	A6	KV450	-040	121	90	83	98
147512	26009	K4O	Q	TM	KV600	-040	255	228	237	240
147514	25832	K4O	Q	A5	KV450	-040	212	191	246	216
147514	25832	K4O	Q	A6	KV450	-040	151	155	186	164
147514	25832	K4O	Q	TM	KV600	-040	241	247	222	237
147525	24695	K4O	Q	A5	KV450	-040	269	243	267	260
147525	24695	K4O	Q	A6	KV450	-040	132	227	223	194
147525	24695	K4O	Q	TM	KV450	-040	179	272	182	211
147527	24964	K4O	Q	TM	KV450	-040	175	195	207	192
147531	53528	K4O	Q	A5	KV450	-040	115	155	159	143
147531	53528	K4O	Q	A6	KV450	-040	132	127	108	122
147531	53528	K4O	Q	TM	KV600	-040	212	197	201	203
147532	26008	K4O	Q	A5	KV450	-040	123	117	204	148
147532	26008	K4O	Q	A6	KV450	-040	117	129	192	146
147532	26008	K4O	Q	TM	KV600	-040	212	155	226	198
147533	26008	K4O	Q	A5	KV450	-040	109	137	137	128
147533	26008	K4O	Q	A6	KV450	-040	87	126	112	108

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert: 5% / aged: 5%
A6: gealtert: 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection Stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)

Cyron

ILSENBURGER GROBBLECH
Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03): **1191706.1**
Seite/Page: 25/26
Datum/Date: 15.10.2019

Nr. (A07) Besteller / Purchaser (A06): 16.07.2019

Nr. (A07) Empfänger / Customer (A06):

Erzeugnis / Product (B01): Grobblech / Heavy plate

Werksauftrags-Nr. / Works order No. (A08): 0000100512

Lieferschein-Nr. / Dispatch note No.: 0088503535 / 14.10.2019

Werkstoff und Lieferbedingung / Steel grade and terms of delivery (B02-B03):
S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Abnahme / Inspection (A05): DNVGL **N141U2Y6**

Kerbschlagbiegeversuch / Impact test (C40-C49)

Proben-Nr. Specimen No. (C00)	Schmelzen-Nr. Heat No. (B07)	Ort Location (C01) 1) 2) 3)	Richt. Direct. (C02) 4)	Zustand Cond. (B05) 5)	Probenform Type of specimen (C40-C41)	Temperatur Temperature (C03) °C	Schlagarbeit Impact energy (C42-C43) 1 J	2 J	3 J	MW 6) J
147533	26008	K4O	Q	TM	KV600	-040	191	148	174	171
147534	26008	K4O	Q	A5	KV450	-040	208	142	141	164
147534	26008	K4O	Q	A6	KV450	-040	102	158	124	128
147534	26008	K4O	Q	TM	KV600	-040	157	127	197	160
147800	24964	K4O	Q	TM	KV450	-040	163	154	157	158
147802	68832	K4O	Q	A5	KV450	-040	279	168	177	208
147802	68832	K4O	Q	A6	KV450	-040	144	251	158	184
147802	68832	K4O	Q	TM	KV450	-040	157	256	215	209
147804	25832	K4O	Q	A5	KV450	-040	185	203	184	191
147804	25832	K4O	Q	A6	KV450	-040	163	176	154	164
147804	25832	K4O	Q	TM	KV450	-040	137	150	193	160
147805	14711	K4O	Q	A5	KV450	-040	229	201	298	243
147805	14711	K4O	Q	A6	KV450	-040	134	163	206	168
147805	14711	K4O	Q	TM	KV450	-040	255	180	161	199
149385	26005	K4O	Q	A5	KV450	-040	200	228	176	201
149385	26005	K4O	Q	A6	KV450	-040	139	156	139	145
149385	26005	K4O	Q	TM	KV450	-040	179	224	204	202

1) K: Kopf / Top
2) 4: 1/4 Breite / 1/4 Width
3) O: oberflächennah / near surface
4) Q: quer / transversal
5) A5: gealtert 5% / aged: 5%
A6: gealtert 6% / aged: 6%
TM: thermomechanisch gewalzt / thermomechanically rolled
6) MW: Mittelwert / Average
*) Das Probestück ist nicht Bestandteil der Lieferung / The sample product is not part of the delivery

Probenbehandlung:
A5: 5% plastische Verformung,ungealtert
A6: 5% plastische Verformung, 1h bei 250°C gealtert

Treatment of testcoupons:
A5: 5% plastically strained, unaged
A6: 5% plastically strained, 1h aged at 250°C

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

SAFEGUARDING LIFE, PROPERTY AND THE ENVIRONMENT - 18 84 DNV·GL

Herstellerzeichen / Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel / Inspection stamp (Z03)

Abnahmebeauftragter / Inspection Representative (Z02)
Cyron

ILSENBURGER GROBBLECH

Ein Unternehmen der Salzgitter Gruppe

Abnahmeprüfzeugnis 3.2
Inspection certificate 3.2
DIN EN 10204
(A02)

Nr./No. (A03) **1191706.1**
Seite/Page 26/26
Datum/Date 15.10.2019

Nr. (A07) Besteller Purchaser (A06) 16.07.2019 Nr. (A07) Empfänger Customer (A06)

Erzeugnis Product (B01) Grobblech / Heavy plate

Werkstoff und Lieferbedingung Steel grade and terms of delivery (B02-B03) S460MLO Z35
DIN EN 10225-1 11/19
DIN EN 10029 B 02/11
DIN EN 10163-2 Kl. B UG3 03/05

Werksauftrags-Nr. Works order No. (A08) 0000100512

Lieferschein-Nr. Dispatch note No. 0088503535 14.10.2019

Abnahme Inspection (A05) DNVGL **N141U2Y6**

Alle Bleche wurden gemäß EN 10160 07/99 flächen- und randzonengeprüft
Prüfklasse der Flächenprüfung: S2
Prüfklasse der Randzonenprüfung: E3
Befund: keine Beanstandung

All plates have been ultrasonically tested according to EN 10160 07/99
in area and edges.
Class of areatesting: S2
Class of edgestesting: E3
Results: No faults were found.

Application onboard DNV - classed objects is subject to special consideration.

Prequalified for opt.18, Annex E of EN 10225

Material gem. Optionen 2,6,10,12,13 der EN 10225
Material according to options 2,6,10,12,13 of EN 10225

Unsere Produkte sind frei von radioaktiven Stoffen.
Der Freigabegrenzwert von 100 Bq/kg, der die Einhaltung der Grenzwerte der Strahlenschutzverordnung (StrlSchV) für die uneingeschränkte Freigabe von festen Stoffen (StrlSchV Anlage III, Spalte 5) für eisenverwandte Nuklide gewährleistet, wird nicht überschritten.

Our products are free of radioactive substances and do not exceed the clearing limit value of 100 Bq/kg, which guarantees the compliance with limit values given in the Radiation Protection Ordinance (StrlSchV) for the unrestricted clearance of solid material (StrlSchV Annex III, Section 5) for ferrous nuclides.

Es wird bestätigt, daß die Lieferung den Anforderungen der Lieferbedingung entspricht.
We hereby certify that the delivered material complies with the terms of the order.
(Z01)
QM-System: Certification as per ISO 9001 since 28 February 1990

Kesten

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Herstellerzeichen Trademark (A04)

Ilsenburger Grobblech GmbH
Veckenstedter Weg 10
D-38871 Ilsenburg
(A01)

Abnahmestempel Inspection Stamp (Z03)

Abnahmebeauftragter Inspection Representative (Z02)

Cyron

SECTION 2	Procedure qualification record (WPS and PQR)

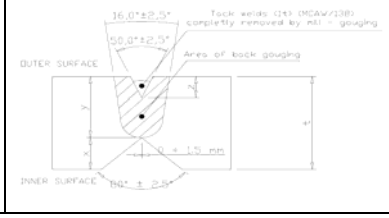
CIMOLAI Pordenone - Italy	**WPS n.**	**2023263-01**	**Rev.**	**00**
			Date	**29/11/2023**

Diameter (thickness): 550, 600, 800 (20)

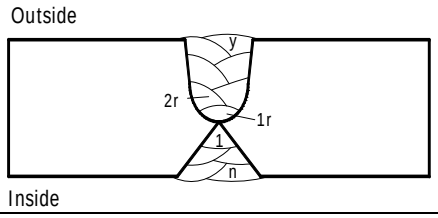
☑	**Sald. Int. 4F**
☐	**Sald. Int. 2F**
☑	**Sald. Est. 5F**
☐	**Sald. Est. 4F**
☐	**Giunzione lam.**

WELDING PROCESS(ES)	**MCAW (138) + SAW (121)**	TYPE(S)	**Fully mechanised**
SUPPORTING WPQR	**S2014-05**	Reference Standard	**EEMUA 158 ed. 3**

JOINTS
Type: double Vee- Butt weld
Back Gouging: Yes / performed by machine milling
Backing material: with
Root spacing: See sketch at side
Groove Angle: See sketche at side



t	**20**
x	**8**
y	**12**
z	**5**



WELDING SEQUENCE AND PARAMETERS

LAYER	PROCESS	CONSUMABLES BRAND NAME	CONSUMABLES Ø (mm)	Polarity	Wire Feed Speed [mm/min.] AMPS	VOLTS	TRAVEL SPEED [mm/min]	Heat input [kj/mm]
1t**	MCAW (138)	Wire: Steelcored SAF-FRO M10	2,4	DCEP	3050 ÷ 3150 500 ÷ 530	24 ÷ 25	680 ÷ 750	0,77 ÷ 0,94
1	SAW (121)	Wire: Oerlikon OE-SD3 1Ni 1/4 Mo Flux: Oerlikon OP121TT	1E: 4	DCEP	590 ÷ 640	28 ÷ 30	750 ÷ 850	2,23 ÷ 2,92
			2E: 4	AC	520 ÷ 560	29 ÷ 31		
2 ÷ n	SAW (121)	Wire: Oerlikon OE-SD3 1Ni 1/4 Mo Flux: Oerlikon OP121TT	1E: 4	DCEP	590 ÷ 620	29 ÷ 31	1150 ÷ 1200	2,46 ÷ 2,92
			2E: 4	AC	520 ÷ 560	31 ÷ 33		
			3E: 4	AC	500 ÷ 540	32 ÷ 34		
1r-3r	SAW (121)	Wire: Oerlikon OE-SD3 1Ni 1/4 Mo Flux: Oerlikon OP121TT	1E: 4	AC	520 ÷ 620	29 ÷ 31	800 ÷ 1000	1,80 ÷ 2,88
			2E: 4	AC	500 ÷ 600	30 ÷ 32		
4r ÷ nr	SAW (121)	Wire: Oerlikon OE-SD3 1Ni 1/4 Mo Flux: Oerlikon OP121TT	1E: 4	DCEP	580 ÷ 640	30 ÷ 32	1250 ÷ 1350	2,14 ÷ 2,69
			2E: 4	AC	500 ÷ 540	31 ÷ 33		
			3E: 4	AC	480 ÷ 520	32 ÷ 34		

**Note: PASS 1t completely removed by machine gouging

BASE METALS

Mat. Specification	EN 10225-1
Type or grade	S460MLO
Ceq qualified	≤ 0.40%
Pcm qualified	N.A.
Diameter	N.A.
Thickness	20 mm

POSITION

Position of groove	FLAT
Weld progression	N.A.
Other	-

FILLER METALS

	MCAW (138)	SAW (121)
Spec. No. (SFA) - Wire	AWS A 5.18	AWS A5.23
AWS No. (Class) - Wire	E70T15-M21A2-CS3-H4	EN15
Size of filler metal	ø 2.4 mm	ø 4 mm
Filler metal product form	Metal cored wire	Solid wire
Supplementary filler metal	N.A.	N.A.
Weld metal thickness range qualified		
Groove	N.A.	15 ÷ 40 mm
Fillet	-	-
Electrode-Flux (Classification)	N.A.	AWS A 5.23: F8A10-ENi5-Ni5
Flux type	N.A.	Neutral
Wire / flux trade name	FRO Steelcored M10	Wire: Oerlikon OE-SD3 1Ni 1/4 Mo Flux: Oerlikon OP121TT
Consumable insert	N.A.	N.A.
Other	N.A.	N.A.

PREHEAT

Preheat temperature	50 °C min (20°C min. for 1t)
Interpass temperature	250 °C max
Method	Gas burners
Other	

POSTWELD HEAT TREATMENT

Temperature range	N.A.
Time range	N.A.
Other	N.A.

GAS - MCAW (138) ONLY

	Gas(es)	Mixture (%)	Flow rate (l/min)
Shielding	Ar-CO_2	80%Ar-20%CO_2	50÷55
Trailing	N/A	N/A	N/A
Backing	N/A	N/A	N/A

ELECTRICAL CHARACTERISTICS

Current & Polarity	SEE WELDING SEQUENCE & PARAMETERS
Tungsten Electrode Size and Type	N.A.
Model of Metal Arc Transfer for MCAW (138)	Spray arc
Amps	SEE WELDING SEQUENCE & PARAMETERS
Volts	SEE WELDING SEQUENCE & PARAMETERS
Other	SEE WELDING SEQUENCE & PARAMETERS

TECHNIQUE

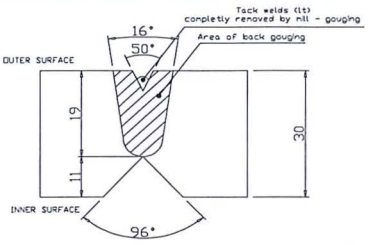
String of weave bead	STRING		
Orifice, nozzle or gas cap size	24 mm		
Initial and interpass cleaning	Brushing / grinding (if necessary)		
Oscillation	NONE		
Multipass or single pass (per side)	MULTIPASS		
Single or multiple electrode	SINGLE (pass 1t) AND MULTIPLE (other passes)		
Electrode spacing	1 ÷ n	1st Wire: inclination -0° Spacing between 1st and 2nd wire: 23 mm 2nd Wire inclination: 12° Spacing between 2nd and 3rd wire: 23 mm 3rd Wire inclination: 24°	1r ÷ nr 1st Wire: inclination -0° Spacing between 1st and 2nd wire: 22 mm 2nd Wire inclination: 12° Spacing between 2nd and 3rd wire: 23 mm 3rd Wire inclination: 24°
Stick out (MCAW)	25 ÷ 30 mm		
Stick out (SAW)	33 ÷ 38 mm		
Peening	N.A.		
Other			

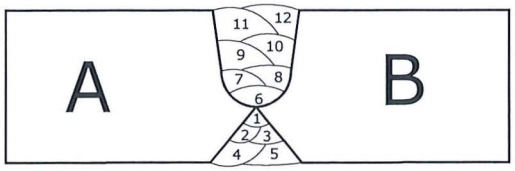
Prepared by	**CQ**	**Approved by**	**RCQ**
Date	**29/11/2023**	**Date**	**29/11/2023**
A. Gianessi		**M. Macor**	

CIMOLAI S.p.A. Cimolai S.p.A.	WELDING PROCEDURE QUALIFICATION RECORD **WPQR S2014-05**	WPQR: Date: Sheet 1 of 2	S2014-05 rev.0 29/08/2014

WELDING PROCESS(ES)	MCAW + SAW	TYPE(S) Reference Standard	Fully mechanised EEMUA 158

JOINTS
Design: Double Vee groove weld - Butt joint
Backing material: weld metal / base metal
Root spacing: See sketch at side
Retainers: Not used
Groove Angle: See sketches
Gouging: Yes - performed by machine gouging (milling)





WELDING SEQUENCE AND PARAMETERS

Date of welding		22/07/2014 - 24/07/2014							
LAYER	PROCESS	CONSUMABLES			Wire feed speed [mm/min.]	VOLTS	TRAVEL SPEED	Heat input	Actual temp.
		BRAND NAME	Ø (mm)	Polarity	AMPS		(mm/min)	kj/mm	°C
1t	MCAW	Wire: Fro Steelcored M10	2.4	DCEP	3150 520	24	800	0,94	20
1	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	29	900	2,28	50
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	540	30			
2	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1050	3,07	115
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	540	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	33			
3	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1100	2,93	175
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	540	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	33			
4	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1100	2,93	212
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	540	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	33			
5	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1100	2,91	220
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	33			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	500	34			
6	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	30	800	2,39	50
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	510	32			
7	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	540	29	1000	1,89	105
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	530	30			
8	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	580	29	780	2,61	158
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	570	30			
9	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1300	2,42	185
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	500	33			
10	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1300	2,42	210
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	500	33			
11	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1250	2,51	250
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	500	33			
12	SAW	Wire1: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	DCEP	620	31	1300	2,42	145
		Wire2: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	520	32			
		Wire3: Oerlikon OE-SD3 1Ni1/4Mo - Flux Oerlikon OP 121TT	4.0	AC	500	33			

BASE METALS

Material specification (A - B)	EN 10225
Grade (A - B)	S460G2+M
Group no. / Sub group no. (A-B)	N.A.
Group no. Qualified	N.A.
Test coupon thickness	30
Test coupon thickness qualified range	-
Outside pipe diameter	N.A.
Outside pipe diameter range	N.A.
Carbon equivalent	0.37 %
Carbon equivalent qualified	Ceq ≤ 0.40%
Pcm	-
Pcm qualified	-
Other	N.A.

FILLER METALS

Process type	MCAW	SAW
(wire - flux trade name)	(M10)	(OE-SD3 1Ni1/4Mo - OP121TT)
Spec. No. (SFA) - wire	A5.18	AWS A 5.23
AWS No. (Class) - wire	E70C-6MH4	EG
Spec No. (EN) - wire	EN ISO 17632-A	EN ISO 14171
EN No. (Class) - wire	T 46 4 M M 1 H5	A-SZ
Wire diameter	2.4	4.0
Filler metal product form	Metal cored wire	Solid wire
Deposited weld metal:		
Groove	5	30 + reinforcement
Fillet	-	-
Electrode-Flux (Classification)	N.A.	EN 760: SA FB 1 55 AC H5 AWS A 5.23: F8A10-EG-G
Flux type	N.A.	Neutral
Flux trade name	N.A.	Oerlikon OP121TT
Consumable insert	N.A.	N.A.
Other	N.A.	N.A.

POSITION

Position of groove	Flat
Weld progression	N.A.
Other	-

PREHEAT

Preheat temperature	50 °C MIN
Interpass temperature	250 °C MAX
Method of preheat (if any)	Gas Burners
Other	**20°C min. (pass 1t only)** **Tack welds completly removed by machine gouging (milling)**

POSTWELD HEAT TREATMENT / POST-HEATING / AGING

Temperature range	N.A.
Time range	N.A.
Other	N.A.

GAS - MCAW ONLY

		Mixture (%)	Flow rate (l/min)
Shielding	Ar-CO_2	80%Ar-20%CO_2	54
Trailing	N.A.	N.A.	N.A.
Backing	N.A.	N.A.	N.A.

ELECTRICAL CHARACTERISTICS

Current & Polarity	SEE WELDING SEQUENCE & PARAMETERS
Amps	SEE WELDING SEQUENCE & PARAMETERS
Volts	SEE WELDING SEQUENCE & PARAMETERS
Other	SEE WELDING SEQUENCE & PARAMETERS

TECHNIQUE

Travel speed	SEE WELDING SEQUENCE AND PARAMETERS
String of weave bead	STRING
Orifice, nozzle or gas cap size	24 mm
Oscillation	None
Multipass or single pass (per side)	MULTIPASS
Single or multiple electrode	SINGLE (GMAW) AND MULTIPLE (SAW)
Electrode spacing	1 ÷ 5: 1st Wire: inclination -0° Spacing between 1st and 2nd wire: 23 mm 2nd Wire inclination: 12° Spacing between 2nd and 3rd wire: 23 mm 3rd Wire inclination: 24° 6 ÷ 12: 1st Wire: inclination -0° Spacing between 1st and 2nd wire: 22 mm 2nd Wire inclination: 12° Spacing between 2nd and 3rd wire: 23 mm 3rd Wire inclination: 24°
Other	25 mm STICKOUT pass 1t (GMAW) 35 mm STICKOUT pass 1 ÷ 12 (SAW)

CIMOLAI S.p.A. Cimolai S.p.A.	WELDING PROCEDURE QUALIFICATION RECORD **WPQR S2014-05**	WPQR : Date:	S2014-05 rev.0 29/08/2014 Sheet 2 of 2

WELDING PROCESS(ES)	MCAW + SAW	TYPE(S) Reference Standard	Fully mechanised EEMUA 158

OTHER TESTS / CERTIFICATES

Type of test	Result	Certificate No.	Certificate issued by
VISUAL EXAMINATION	Satisfactory	S2014-05/VT/01 rev. 0	Cimolai S.p.a.
MAGNETIC EXAMINATION	Satisfactory	S2014-05/MT/01 rev. 0	Tecnocontrol
ULTRASONIC EXAMINATION	Satisfactory	S2014-05/UT/01 rev. 0	Tecnocontrol
MECHANICAL TEST	Satisfactory	R.14.754 rev. 1	Metalservices
MACROGRAPHIC EXAMINATION	Satisfactory	R.14.754 rev. 1	Metalservices
CTOD test	N.A.	N.A.	N.A.
PLATES CERTIFICATE	Satisfactory	cert. No. **367985-001** heat: **364220** plate: **748156-01**	Dillinger Hutte
CONSUMABLE CERTIFICATE	Satisfactory	**Cert no.:** ALW0311202-6 **Steelcored M10 - Lot:** 0913007232 **Cert. No.:** ALW03101164-98 **1Ni1/4Mo- Lot:** 09140AL057 **Cert. No.:** ALW00120600-193 **Oerlikon OP121TT** - Lot.: 01790644	Consumable certificate SAF/FRO - Oerlikon
OTHERS			

List of the Welders involved in the WPQR: Nicu Stan (1t); Marcin Gilis (1 ÷ 12);

Identification No. NS, CG;

We, the undersigned, certify that the statements in this record are correct and that the test welds were prepared, welded, and tested in conformance with the requirements of EEMUA 158

CIMOLAI S.p.A.
Quality Control Department
Date 29/08/2014
Signature

SGS Italia S.p.A.
WITNESSED ☒ REVIEWED ☒
DATE 29/08/2014
S

Third Party Signature _____

Date

CIMOLAI S.p.A.

San Giorgio di Nogaro (UD)

VISUAL AND DIMENSIONAL INSPECTION OF WELDS – REPORT

RAPPORTO DI ISPEZIONE VISIVA E DIMENSIONALE SALDATURE

Report No. S2014-05/VT/01 rev. 0

Date / Data 06.08.2014

Page / Pagina 1/1

General Data / Dati Generali

Client & Project / Cliente e Progetto	-	Job / Commessa	WPQR S2014-05
Purchase Order / Ordine d'acquisto	-	QCP / PCQ	-
Date of testing / Data controllo	28/07/2014		

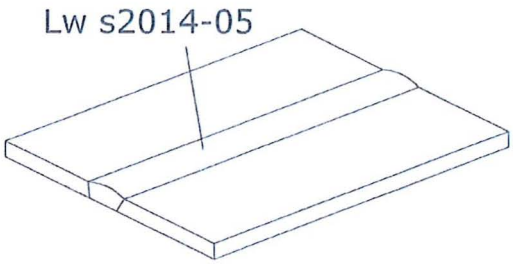
Product Data / Dati del prodotto

Product Serial No. / Marca pezzo	See below	☐	Before PWHT / Prima del t. termico
P.O. ID / Posizione nell'ordine	See below	☐	After PWHT / Dopo t. termico
Steel / Acciaio	See below	☑	No PWHT / t. termico non previsto
Thickness/Spess.	See below	Extent/Estensione	100% of weld
Surf. Conditions / Condizioni sup.	As Welded / Come saldato		

Reference Documents / Documenti di riferimento

Procedure / Procedura	EEMUA 158 par. 7.5.2 + CLB-FC-0X-ST-SPE-0100 rev. C3
Acceptance Criteria / Criteri di acc.	EEMUA 158 - table 5 + CLB-FC-0X-ST-SPE-0100 rev. C3

Welded Particular Sketch / Schizzo particolare saldato



Test Record / Registrazione del controllo

Pos. Cliente Client Pos.	Cimolai Mk.	Materiale di Base Base Material	Weld Id Numero saldatura	Analyzed / Analizzati						Not Accept.	Accept.
				Cracks Cricche	Under-cuts Incis.	Reinforce ment Sovramet.	Reinf. Shape Forma cordone	Weld to b. met.. transizione	Porosity Porosità		
	s2014-05	EN 10225: S460G2+M	LW S2014-05	✓	✓	✓	✓	✓	✓	☐	☑

Test Result / Risultato del controllo

☑ Accettable / Accettabile: ☐ Not Acceptable / Non Accettabile

Remarks / Note

Stamps and Signatures / Timbri e firme

VT Operator / Operatore VT	Cimolai S.p.A.	Testing Authority / Ente collaudatore	Client Representative / Rappr. cliente
IW1-C IT100GSA 06.08.2014	CIMOLAI S.p.A. Quality Control Department Date 06.08.2014 Signature	SGS Italia S.p.A. WITNESSED ☐ REVIEWED ☐ DATE 06.08.2014 S	

TECNOCONTROL SRL
NON DESTRUCTIVE EXAMINATION
RUDA – (UD) Italy

CERTIFICATO DI CONTROLLO MAGNETOSCOPICO

Magnetic Particles Examination Report

CERT. N./Report n. S2014-05/MT/01

Foglio / Sheet 1 di/of 2

Data / Date 06/08/2014

COSTRUTTORE / Manufacturer: Cimolai S.p.A.	COMM. COSTRUTT./ Manufacturer job: WPQR s2014-05
CLIENTE / Customer: Cimolai S.p.A.	COMM. CLIENTE - Customer job: -
DESTINATARIO / Consignee: -	COMM. DEL DESTIN.- Consignee job: -
ITEM / Item: See next page	ORDINE DEL CLIENTE - Customer order: -
MARCA / Serial no.: See next page	LUOGO DELL'ESAME - Place of examination: Porto Nogaro (Italy)
	DATA DELL'ESAME - Date of examination: 28.07.2014

ATTREZZ. IMPIEGATA/Equipment employed

COSTRUTTORE-Manufacturer	C.G.M.
TIPO-Type	Magiscop twist – ort
SIST. DI MAGN./Sist. of magn.	Magnetic – magnetico
CORRENTE/Current	Alterning – alternata
INTENSITÁ/Intensity	Forza di sollevamento Lifting power 4,5 Kg
Dist. Puntali/Prodes space	150 ÷ 180 mm
Verifica/verification	Pie shaped indicator
Note/Remarks	Burmah Type II

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI

This is to certify that the test has been performed according to indicated reference code, and the results are those recorded

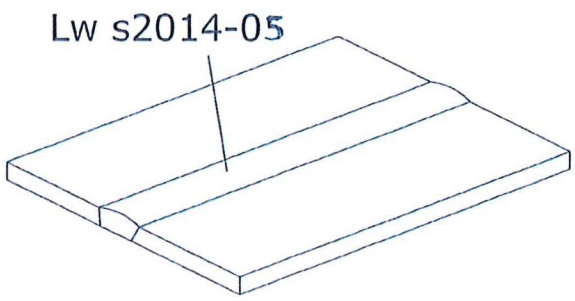
OGGETTO DEL PRESENTE CERTIFICATO-Subject of this certificate: CONTROLLO MAGNETOSCOPICO SALDATURA TESTA-TESTA
MAGNETIC PARTICLE INSPECTION OF BUTT WELD

PROCEDURA-Procedure: EEMUA 158 + CLB-FC-0X-ST-SPE-0100 rev. C3

STANDARDS DI ACCETT.-Acceptance standards: EEMUA 158 table 5
EEMUA 158 par 7.4.1
CLB-FC-0X-ST-SPE-0100 rev. C3

MATERIALE / Material	EN10225: S460G2+M	SP.	30 mm
DISEGNO DI RIFER.-Reference drawing: -	P.C.Q./Q.c.p.		
COND. SUP. surface condict.	MAT. BASE / Base material	Wrought	
	SALDATURA/weld	As Welded	
FASE DI LAV./ Working step: (FINAL CHECK)	PROC. DI SALD.-Welding process	GMAW + SAW (136 + 121)	
	TIPO DI GIUNTO / Joint type	BUTT WELD	
	ESTENS. DELL'ESAME / Extent of Examin.	100%	

SCHIZZO DEL PARTICOLARE CONTROLLATO / Sketch of examinated particular



RILEVATORE IMPIEGATO
Type of magnetic particles employed

- [ ] FLUORESCENTE/Fluorescent
- [X] A CONTRASTO DI COLORE/Visible
- [ ] SECCO/Dry
- [X] UMIDO/Wet

MARCA/Trade mark: C.G.M.

TIPO/type: LK 35

VERNICE DI CONTRASTO
Background paint

MARCA/Trade mark: C.G.M.

TIPO/Type: VECOPLAST

SMAGNETIZZAZ./demagnetization

- [ ] SI/Yes
- [X] NO/No

ESITO/Result

- [X] ACCETTABILE / Acceptable:
- [ ] NON ACCETTABILE / Not acceptable

THE OPERATOR/L'operatore	THE MANUFACT.-Il costrutt.	INSPECT.AUTH.-Ente d'isp.	THE CUSTOMER-Il cliente	CONSIGNEE - Destinatario
TECNOCONTROL CAPACCHIONE LORIS LIV 2 EN 473 LIV 2 SNT-TC-1A	CIMOLAI S.p.A. Quality Control Department Date 06.08.2014 Signature	SGS Italia S.p.A. WITNESSED ☐ REVIEWED ☑ DATE 06/08/14		

TECNOCONTROL SRL NON DESTRUCTIVE EXAMINATION RUDA – (UD) Italy	CERTIFICATO DI CONTROLLO MAGNETOSCOPICO Magnetic Particles Examination Report	CERT. N./Report n. S2014-05/MT/01 Foglio / Sheet 2 di/of 2 Data / Date 06/08/2014

COSTRUTTORE-Manufacturer	COMM.COSTRUTT.-Manufacturer job	DATA DELL'ESAME-Date of examination	
Cimolai S.p.A.	WPQR s2014-05	28/07/2014	
CLIENTE/Customer Cimolai S.p.A.	COMM. CLIENTE-Customer job -	DISEGNO DI RIFER.-Reference drawing -	
DESTINATARIO/Consignee -	COMM. DEL DESTIN.-Consignee job -	ITEM/Item See below	MARCA – Serial no. See below

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI
This is to certify that the test has been performed according to indicated reference code, and the results are those recorded

REGISTRAZIONI DELLE INDICAZIONI RILEVATE - Record of the indications detected

Num. CND NDE Id	Item Cliente Client Item	Marca Mark	Sigla Saldatura – WPS utilizzata WELD ID – used WPS	N. Indicaz. Indicat. no.	Dist. da 0-MPI / Start from 0-MPI		Lungh. Lenght (mm)	Difetto Defect	GIUDIZ. JUDGEM. (**)
					Rifer. di partenza Start point ref. (0 – MPI)	Misura Value (mm)			
-	-	s2014-05	Lw s2014-05	-	-	-	-	-	A

(**) A = Accettabile / Acceptable
NA = Non accettabile / Not Acceptable

THE OPERATOR-L'operatore	THE MANUFACT.-Il costrutt.	INSPECT.AUTH.-Ente d'isp.	THE CUSTOMER-Il cliente	CONSIGNEE - Destinatario
TECNOCONTROL CAPACCHIONE LORIS LIV 2 EN 473 LIV 2 SNT-TC-1A	CIMOLAI S.p.A. Quality Control Department Date 06.08.2014 Signature	SGS Italia S.p.A. WITNESSED ☐ REVIEWED ☒ DATE 06/08/2014 5		

TECNOCONTROL SRL
NON DESTRUCTIVE EXAMINATION
RUDA – (UD) Italy

CERTIFICATO DI CONTROLLO ULTRASONORO

Ultrasonic Examination Report

CERT. N./Report n. **S2014-05/UT/01 rev. 0**

Foglio / Sheet **1 di/of 2**

Data / Date **06/08/2014**

COSTRUTTORE - Manufacturer	**Cimolai S.p.A.**
CLIENTE - Customer	**Cimolai S.p.A.**
DESTINATARIO – Consignee	
ITEM - Item	**See next page**
MARCHE – Serial nos	**See next page**
COMM.COSTRUTT.-Manufacturer job	**WPQR S2014-05**
COMM. CLIENTE - Customer job	-
COMM. DEL DESTIN.- Consignee job	-
ORDINE DEL CLIENTE - Customer order	
LUOGO DELL'ESAME-Place of examination	**Porto Nogaro (Italy)**
DATA DELL'ESAME - Date of examination	**28/07/2014**

STRUMENTO IMPIEGATO-Instrument employed

COSTRUTT.-Manuf. **Olympus**

TIPO-Type **Epoch 600**

N. DI SERIE /Serial n. **100033510**

SONDE / Probes

N.	TIPO / Type	f (Mz)	Dim. (mm)	Ang.
1	KRAUTK. MWB 60-4	4	8 x 9	60°
2	KRAUTK. MWB 70-4	4	8 x 9	70°
3	KRAUTK. MWB 45-4	4	8 x 9	45°
4				

THE OPERATOR-L'operatore

TECNOCONTROL
CAPACCHIONE LORIS
LIV 2 EN 473
LIV 2 SNT-TC-1A

THE MANUFACT.-Il costrutt.

CIMOLAI S.p.A.
Quality Control Department
Date 06.08.2014

INSPECT.AUTH-Ente d'isp.

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☐
DATE 6/8/2014
5

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI

This is to certify that the test has been performed according to indicated reference code, and the results are those recorded

OGGETTO DEL PRESENTE CERTIFICATO - Subject of this certificate

CONTROLLO ULTRASONORO SALDATURA TESTA-TESTA
ULTRASONIC EXAMINATION OF BUTT WELD

PROCEDURA-Procedure: **EMMUA 158 + CLB-FC-0X-ST-SPE-0100 rev. C3**

STANDARDS DI ACCETT.-Acceptance standards: **EEMUA 158 para.7.4.2 + CLB-FC-0X-ST-SPE-0100 rev. C3**

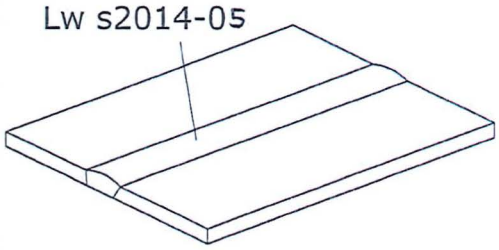
MATERIALE / Material	1 see next page	TCK	30 mm

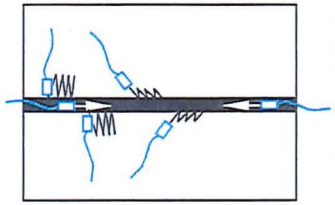
DISEGNO DI RIFER./* Reference drawing	TRATT. TERMICO / Head treatment	Condiz. Sup / Surface condiction	MAT. BASE/Base mat.	Wrought
-	-		SALDATURA/Weld	As Welded
FASE DI LAV./ Working step		PROC. DI SALD.- Welding process		121 / SAW – 136 / GSFCAW
FINAL CHECK		MEZZO DI ACCOPP.- Couplant		Paste C.G.M. " U-49"

THE CUSTOMER-Il cliente

CONSIGNEE - Destinatario

SCHIZZO DEL PARTICOLARE CONTROLLATO/Particular examinated sketch





ESITO – Result GIUDIZIO - Judgement

[x] ACCETTABILE – Acceptable:

[ ] NON ACCETTABILE - Unacceptable

NOTE/Remarks:

Controllo eseguito dalla superficie esterna
Test carried out from outside surface

TECNOCONTROL SRL NON DESTRUCTIVE EXAMINATION RUDA – (UD) Italy	CERTIFICATO DI CONTROLLO ULTRASONORO Ultrasonic Examination Report	CERT. N./Report n. Foglio / Sheet Data / Date	S2014-05/UT/01 rev. 0 2 di/of 2 06/08/2014

COSTRUTTORE-Manufacturer	COMM.COSTRUTT.-Manufacturer job	DATA DELL'ESAME-Date of examination	CLIENTE/Customer	ORDINE DEL CLIENTE - Customer order
Cimolai S.p.A.	WPQR S2014-05	28/07/2014	Cimolai S.p.a.	-

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI
This is to certify that the test has been performed according to indicated reference code, and the results are those recorded

REGISTRAZIONI DELLE INDICAZIONI RILEVATE - Record of the indications detected

Pos. Cliente	Marca Cimolai	Materiale di base	Sigla Saldatura	N. Indicaz.	SONDA	Dist. da 0-UT / Start from 0-UT		Lungh.	Prof. / Depht (mm)		Ampiezza	Probabile natura del difetto	GIUDIZIO
Client Position	Cimolai Mark	Base Material	WELD ID	Indicat. no.	Probe (*)	Rifer. di partenza Start point reference (0 – U.T.)	Misura Value (mm)	Length (mm)	Dall'int. From inside	Dall'est. From outside	Amplitude (% DAC)	Probable nature of the defect	JUDGEM. (**)
	S2014-05	EN 10225:S460 G2+M	LW s2014-05	-	1 – 2 – 3	A	-	-	-	-	-	-	A

(*) Vedi sonde impiegate su Pag. 1
See probes employed on page-1

(**) A = Accettabile / Acceptable
NA = Non accettabile / Not Acceptable

THE OPERATOR-L'operatore	THE MANUFACT.-Il costrutt.	INSPECT.AUTH.-Ente d'isp.	THE CUSTOMER-Il cliente	CONSIGNEE - Destinatario
TECNOCONTROL CAPACCHIONE LORIS LIV 2 EN 473 LIV 2 SNT-TC-1A	CIMOLAI S.p.A. Quality Control Department Date 06.08.2014 Signature	SGS Italia S.p.A. WITNESSED ☒ REVIEWED ☐ DATE 06/08/2014 5		

METAL SERVICES MATERIALS TESTING

TEST REPORT No. R.14.754 Rev.1
ISSUED ON 29/08/2014

Customer
CIMOLAI Spa
Via Ungaresca, 38
33170 Pordenone

MATERIAL DESCRIPTION

Sample no.	Identification mark
1694	Sample identified "S2014-05–heat no. 364220–plate no. 748156-01–S460G+M thk. 30 mm - CLB-FC-OX-ST-SPE-0100 Rev. C3"

MATERIAL RECEPTION

Data	ddt no.	Offer no.	Order no.
29/07/2014	1391/S	14.044	-

Sampling data

Sampling and identification executed by the Customer

INFORMATION

The present test report cannot be reproduced in a partial way without the formal written approval of Metal Services Materials Testing Srl.
Test results are only related to the supplied tested samples; the remains of them will be stored and available for not more than 30 days after the test report issuing date, unless differently agreed on the purchase order.
This document, if transmitted via e-mail, cannot be modified without the written authorization of Metal Services Materials Testing Srl.
Equipment used are to be intended under metrological validity.
The uncertainty of measurement is expressed as expanded uncertainty obtained by multiplying the combined uncertainty for the coverage factor of k = 2, corresponding to a confidence interval of about 95%.
(+) Supervised test by 3rd part inspector.

TEST INDEX

Serial no.	Test	Standard	Page
1	Transverse tensile test on welds	UNI EN ISO 4136	2
2	Longitudinal tensile test on welds	UNI EN ISO 5178	2
3	Bend test on welds	UNI EN ISO 5173	2
4	Impact test on welds	UNI EN ISO 9016	2
5	Hardness test on arc welded joints	UNI EN ISO 9015-1	3
6	Hardness test on arc welded joints	EEMUA 158	4
7	Photographic report	-	5

NOTE

This document replace the test report no. 14.754 Rev.0 (as for customer request by 19/08/2014 mail)
//

RESERVED FOR DIGITAL SIGNATURE

Firmato digitalmente da
ANDREA QUERIN
CN = QUERIN ANDREA
O = non presente
C = IT

Laboratory Manager

METAL SERVICES MATERIALS TESTING S.R.L.

Inspector (+)

SGS Italia S.r.l.A.
WITNESSED ☒ REVIEWED ☒
DATE 29 AGO. 2014
5

METAL SERVICES
MATERIALS TESTING

TEST REPORT No.
R.14.754 Rev.1

ISSUED ON
29/08/2014

1. TRANSVERSE TENSILE TEST ON WELDS

Sample no.	Date	Position	T °C	a mm	b mm	So mm²	Fm N	Rm MPa	Fracture Position
1694	04/08/2014	T to weld	23	15.9	25.1	399.1	235000	589	Base material
1694	04/08/2014	T to weld	23	15.9	25.0	397.5	234000	589	Base material
1694	04/08/2014	T to weld	23	16.0	25.0	400.0	233000	583	Base material
1694	04/08/2014	T to weld	23	15.9	25.1	399.1	232000	581	Base material
Reference limits in according to customer sampling list		Min.	-	-	-	-	-	520	-
		Max.	-	-	-	-	-	680	-

Instruments: Galdabini PM40 (Serial no.29359)
Glossary: //
Note: //

2. LONGITUDINAL TENSILE TEST ON WELDS

Sample no.	Date	Position	T °C	Reh MPa	$Rp_{0.02}$ MPa	$Rp_{0.2}$ MPa	$Rp_{1.0}$ MPa	$Rt_{0.5}$ MPa	Rm MPa	A %	Z %	Rs/Rm
1694	04/08/2014	All weld	23	-	-	603	-	604	744	23.0	64	-
Reference limits in according to customer sampling list		Min.	-	-	-	420	-	420	520	20.0	-	-
		Max.	-	-	-	-	-	-	680	-	-	-

Instruments: Galdabini Quasar 250 (Serial no.V901)
Glossary: //
Note: //

3. BEND TEST ON WELDS

Sample no.	Date	Type of test	T °C	t_s mm	l mm	d mm	Bend angle °	Test Result
1694	04/08/2014	SBB	23	10	75	50	180	Satisfactory
1694	04/08/2014	SBB	23	10	75	50	180	Satisfactory
1694	04/08/2014	SBB	23	10	75	50	180	Satisfactory
1694	04/08/2014	SBB	23	10	75	50	180	Satisfactory

Instruments: Galdabini PM40 (Serial no.29359)
Glossary: //
Note: //

4. IMPACT TEST ON WELDS

Sample no.	Date	Position	w mm	T °C	KV_8 J			KV_8 AVG J
1694	04/08/2014	VHT 5/2	10	-40	125	146	150	140
1694	04/08/2014	VHT 2/2	10	-40	197	221	202	207
1694	04/08/2014	VHT 0/2	10	-40	191	200	186	192
1694	04/08/2014	VWT 0/2	10	-40	80	84	84	83
1694	04/08/2014	VHT 5/14	10	-40	180	134	121	145
1694	04/08/2014	VHT 2/14	10	-40	88	100	69	86
1694	04/08/2014	VHT 0/14	10	-40	82	237	285	201
1694	04/08/2014	VWT 0/14	10	-40	177	148	121	149
1694	04/08/2014	VHT 5/18	10	-40	220	204	222	215
1694	04/08/2014	VHT 2/18	10	-40	151	215	190	185
1694	04/08/2014	VHT 0/18	10	-40	125	248	211	195
1694	04/08/2014	VWT 0/18	10	-40	140	132	138	137
Reference limits in according to customer sampling list		Min.	-	-		50		60
		Max.	-	-		-		-

Instruments: Galdabini Impact 300 (Serial no.V88G)
Glossary: //
Note: When absorbed energy ≥ 240 J the values are approximate

NOTE

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Laboratory Manager

METAL SERVICES MATERIALS TESTING S.R.L.

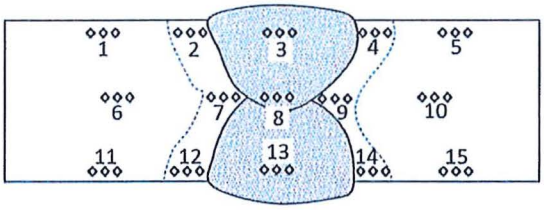
Inspector (1)

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☐
DATE 29 AGO 2014
5

METAL SERVICES MATERIALS TESTING S.r.l.
Via J. Srebernic, 14 – 34077 Ronchi dei Legionari (GO) Telefono: 0481 474849 – Fax: 0481-474825 – Cod. fisc/P.IVA 00547070318
www.metalservices.it info@metalservices.it

HARDNESS TEST ON ARC WELDED JOINTS

Sample no.	Data	Type of test	Position				
1694		HV10	BM	HAZ	WM	HAZ	BM
			1	2	3	4	5
			180 179 181	172 196 206	227 239 231	208 187 184	179 181 178
			BM	HAZ	WM	HAZ	BM
			6	7	8	9	10
			168 166 167	183 185 198	223 222 224	199 183 175	168 166 169
			BM	HAZ	WM	HAZ	BM
			11	12	13	14	15
			176 170 171	179 198 199	221 225 211	212 185 176	178 170 175
			Maximum recorded value		BM: 181	HAZ: 212	WM: 239



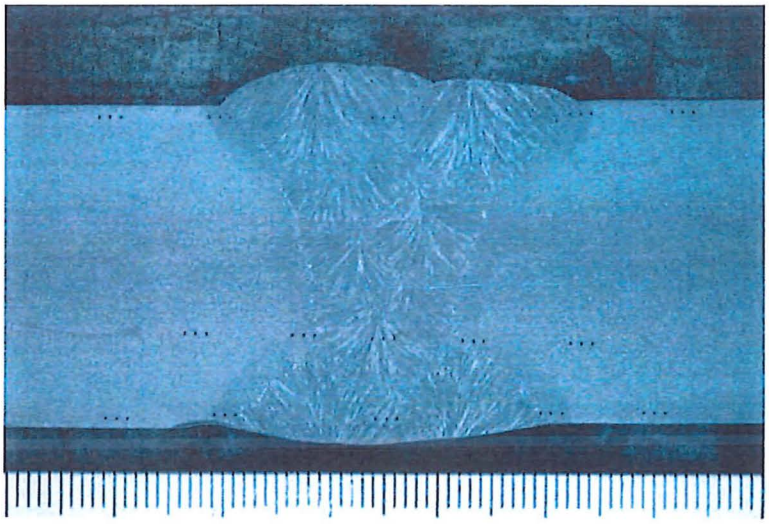
Instruments: Wolpert Diatestor 2RC (Serial no. 8965)
Glossary: //
Note: //

PHOTOGRAPHIC REPORT

Picture no.	Sample no.	Position	Etching
1	1694	Transversal weld joint	Nitac

Note

//



Laboratory Manager

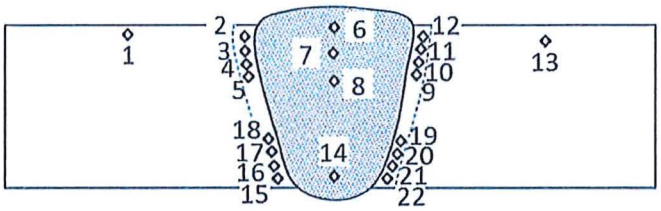
METAL SERVICES MATERIALS TESTING S.r.l.

Inspector (*)

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 29 AGO. 2014
5

HARDNESS TEST ON ARC WELDED JOINTS

Sample no.	Data	Type of test	Position				
1694		HV10	BM	HAZ	HAZ	WM	HAZ
			1	2 – 3	4 – 5	6 – 7 – 8	9 – 10
			166	202 206	210 214	210 225 209	208 207
			HAZ	BM	WM	HAZ	HAZ
			11 – 12	13	14	15 – 16	17 – 18
			195 188	176	222	183 195	192 176
			HAZ	HAZ	-	-	-
			19 – 20	21 – 22	-	-	-
			191 189	189 179	-	-	-
			Maximum recorded value		BM: 176	HAZ: 214	WM: 225



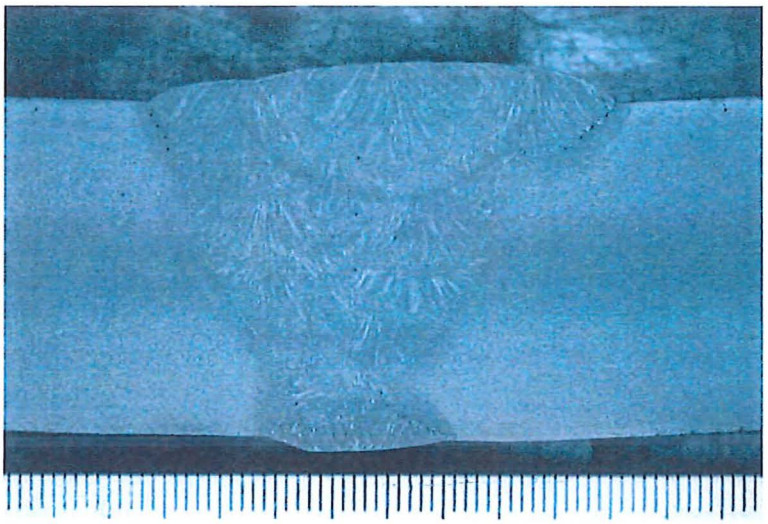
Instruments: Wolpert Diatestor 2RC (Serial no. 8965)
Glossary: //
Note: //

PHOTOGRAPHIC REPORT

Picture no.	Sample no.	Position	Etching
2	1694	Transversal weld joint	Nitac

Note

//



Laboratory Manager

METAL SERVICES MATERIALS TESTING S.R.L.

Inspector

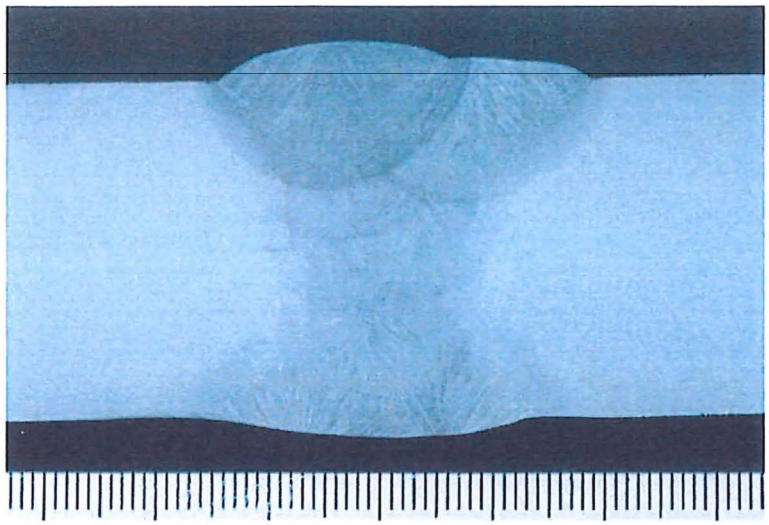
SGS ITALIA S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 25 NOV. 2014

PHOTOGRAPHIC REPORT

Picture no.	Sample no.	Position	Etching
3	1694	Transversal weld joint	Nitac

Note

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OPINIONS AND INTERPRETATIONS

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INSPECTOR NOTES(+)

//

NOTE

//

Laboratory Manager

METAL SERVICES MATERIALS TESTING S.R.L.

Inspector (*)

SGS Italia S.p.A.
WITNESSED / REVIEWED
DATE 29/08/2014
S

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991		A10 Advice of dispatch No./ Date of dispatch 2379970-19.10.11	A08/ Manufacturer's order/ A03 Certificate No. 367985-001 Sheet 1/...
A05 Established Inspecting body TUVC KUND	A06 Purchaser SPS,SUTTON COLDFIELD A07.1 No. 0057939 CALL OFF 4 Final receiver BROEKMAN,ROTTERDAM A07.2 No. 168397-100-PO-2380E		B01 Product HOT ROLLED PLATES
B02/ Steel design. TYPE-I-S460G2+M B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010 EN-10225:09/MOM:17.05.2011			

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness	B10 Width MM	B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
03	1	30,00	x 3050	x 13500	9697	TM	364207	748164-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364207	748165-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364207	748166-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364207	748630-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364209	748160-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364209	748486-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364209	750446-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364209	750461-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	748154-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	748158-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	748159-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	750458-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	750460-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	750462-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364212	750463-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364214	750459-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364215	750457-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364218	748162-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364220	748155-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364220	748156-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364220	748163-01	ITEM 012 PJT130A
03	1	30,00	x 3050	x 13500	9697	TM	364220	748631-01	ITEM 012 PJT130A
**	22				213334				

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☑
DATE 20.10.11
5

A04 TFK
Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	2/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No. 168397-100-PO-2380E	

B02/ Steel design. **TYPE-I-S460G2+M**

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

B01-B99 Description of the product

B14 Item No.	B08 Number of pieces	B09 Thickness		B10 Width		B11 Length	B12 Theoretical mass KG	B04 Product delivery condition	B07.2 Heat No.	B07.1 Rolled plate No./ Test No.	A09 Purchaser article number
		MM									
04	1	30,00	x	3050	x	11000	7901	TM	364209	750453-01	ITEM 013 PJT130B
04	1	30,00	x	3050	x	11000	7901	TM	364209	750455-01	ITEM 013 PJT130B
04	1	30,00	x	3050	x	11000	7901	TM	364215	748172-01	ITEM 013 PJT130B
**	3						23703				
07	1	30,00	x	3050	x	8000	5746	TM	364209	750464-01	ITEM 016 PJT130E
07	1	30,00	x	3050	x	8000	5746	TM	364209	750466-01	ITEM 016 PJT130E
**	2						11492				
09	1	35,00	x	3050	x	13500	11313	TM	364343	748609-01	ITEM 018 PJT135B
09	1	35,00	x	3050	x	13500	11313	TM	364343	750473-01	ITEM 018 PJT135B
**	2						22626				
***	29						271155				

B06 Marking of the product

ITEM NO.: 01,03-07,09,12
STEEL DESIGNATION **TYPE I S460G2 M**
HEAT NO. / TRADEMARK / ROLLED PLATE NO.-TEST NO. / INSPECTOR'S STAMP

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 03.08.16
5

A04 **TFK** Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

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Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01 **GTS Industries - Groupe Dillinger Hütte**
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

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A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	3/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No. 168397-100-PO-2380E	

B02/ Steel design. **TYPE-I-S460G2+M**

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10 MPA RP02	C11 RM	C12	C13 A % L0=5D	C14-C15 RP02/RM
01	364218	750309*		K4	QO	RT	478	579		27	0,82
03	364207	748164		K4	QO	RT	476	586		27	0,81
03	364207	748165		K4	QO	RT	475	589		25	0,80
03	364207	748166		K4	QO	RT	476	590		26	0,80
03	364207	748630		K4	QO	RT	485	588		26	0,82
03	364209	748160		K4	QO	RT	491	597		27	0,82
03	364209	748486		K4	QO	RT	491	596		27	0,82
03	364209	750446		K4	QO	RT	478	589		21	0,81
03	364209	750461		K4	QO	RT	482	590		27	0,81
03	364212	748154		K4	QO	RT	470	584		25	0,80
03	364212	748158		K4	QO	RT	490	589		27	0,83
03	364212	748159		K4	QO	RT	471	577		30	0,81
03	364212	750458		K4	QO	RT	497	596		28	0,83
03	364212	750460		K4	QO	RT	492	596		29	0,82
03	364212	750462		K4	QO	RT	483	593		27	0,81
03	364212	750463		K4	QO	RT	488	596		27	0,81
03	364214	750459		K4	QO	RT	492	588		23	0,83
03	364215	750457		K4	QO	RT	496	592		27	0,83
03	364218	748162		K4	QO	RT	482	586		28	0,82
03	364220	748155		K4	QO	RT	490	589		27	0,83
03	364220	748156		K4	QO	RT	486	590		28	0,82
03	364220	748163		K4	QO	RT	469	585		28	0,80
03	364220	748631		K4	QO	RT	498	596		28	0,83

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 20/10/11
5

A04 TFK Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	4/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No. 168397-100-PO-2380E	

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C10-C29 Tensile test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C10	C11 MPA RP02	C12 RM	C13 A % L0=5D	C14-C15 RP02/RM
04	364209	750453		K4	QO	RT		501	606	27	0,82
04	364209	750455		K4	QO	RT		496	601	27	0,82
04	364215	748172		K4	QO	RT		490	593	27	0,82
07	364209	750464		K4	QO	RT		475	585	28	0,81
07	364209	750466		K4	QO	RT		515	606	28	0,85
09	364343	748609		K4	QO	RT		491	589	30	0,83
09	364343	750473		K4	QO	RT		499	596	27	0,83

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 26/10/11
5

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.		B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
01	364218	750309	*		K4	QX	-40		CHP-V		600	AV	147	176	165	163
			*		K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	100	79	99	93
03	364207	748164			K4	QX	-40		CHP-V		600	AV	198	183	191	191
03	364207	748165			K4	QX	-40		CHP-V		600	AV	181	167	141	163
03	364207	748166			K4	QX	-40		CHP-V		600	AV	170	171	123	155
03	364207	748630			K4	QX	-40		CHP-V		600	AV	218	205	206	210
03	364209	748160			K4	QX	-40		CHP-V		600	AV	176	192	149	172
03	364209	748486			K4	QX	-40		CHP-V		600	AV	137	124	124	128
03	364209	750446			K4	QX	-40		CHP-V		600	AV	173	182	177	177
03	364209	750461			K4	QX	-40		CHP-V		600	AV	179	187	188	185
03	364212	748154			K4	QX	-40		CHP-V		600	AV	191	162	196	183
03	364212	748158			K4	QX	-40		CHP-V		600	AV	128	194	143	155
					K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	112	105	96	104

A04 TFK Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01 GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2379970-19.10.11

A08/ Manufacturer's order/ A03 Certificate No.: 367985-001 Sheet: 5/...

A05 Established Inspecting body: TUVC KUND

A06 Purchaser: SPS, SUTTON COLDFIELD A07.1 No. 0057939 CALL OFF 4

Final receiver: BROEKMAN, ROTTERDAM A07.2 No. 168397-100-PO-2380E

B01 Product: HOT ROLLED PLATES

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 25.10.11
5

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
03	364212	748159		K4	QX	-40		CHP-V		600	AV	199	178	129	169
03	364212	750458		K4	QX	-40		CHP-V		600	AV	150	136	151	146
03	364212	750460		K4	QX	-40		CHP-V		600	AV	134	132	123	130
03	364212	750462		K4	QX	-40		CHP-V		600	AV	144	151	159	151
03	364212	750463		K4	QX	-40		CHP-V		600	AV	115	120	109	115
03	364214	750459		K4	QX	-40		CHP-V		600	AV	140	137	116	131
03	364215	750457		K4	QX	-40		CHP-V		600	AV	128	128	130	129
03	364218	748162		K4	QX	-40		CHP-V		600	AV	166	178	184	176
				K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	88	85	94	89
03	364220	748155		K4	QX	-40		CHP-V		600	AV	209	192	137	179
03	364220	748156		K4	QX	-40		CHP-V		600	AV	203	201	135	180
				K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	100	84	98	94
03	364220	748163		K4	QX	-40		CHP-V		600	AV	184	185	154	174
03	364220	748631		K4	QX	-40		CHP-V		600	AV	137	159	138	145
04	364209	750453		K4	QX	-40		CHP-V		600	AV	115	118	144	126
04	364209	750455		K4	QX	-40		CHP-V		600	AV	134	141	116	130
04	364215	748172		K4	QX	-40		CHP-V		600	AV	178	146	130	151
04	364215	748173	*	K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	101	95	81	92
05	364214	748180	*	K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	91	93	98	94
07	364207	748189	*	K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	75	89	79	81
07	364209	748185	*	K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	102	98	110	103
07	364209	750464		K4	QX	-40		CHP-V		600	AV	157	120	151	143
07	364209	750466		K4	QX	-40		CHP-V		600	AV	173	170	117	153
09	364343	748609		K4	QX	-40		CHP-V		600	AV	173	170	150	164

A04 TFK
Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	6/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No.	168397-100-PO-2380E

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C40-C49 Impact test

B14 Item No.	B07.2 Heat No.	B07.1 Rol.plate/ Test No.	B05 Reference (heat) treatment	C01	C02/ C01	C03 Temp. GR.C	C41 Width of test piece	C40 Type of test piece	C44 Testing method	C46 Energy Joule	C45	C42 Individual values AV=J			C43 Mean value
09	364343	748613 *		K7	QX	-40		CHP-V	5,0%-250C/60MN	600	AV	99	109	98	102
09	364343	750473		K4	QX	-40		CHP-V		600	AV	208	209	173	197

C40-C49 Further information about impact test

ITEM NO.: 01,03,06,12
X=SUB-SURFACE -2MM

C66-C68 Supplementary tests on test samples

ITEM NO.: 01,03-07,09,12
DEEP ETCH TESTING AS PER DH-STANDARD =<2B : SATISFACTORY

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 26/10/11
5

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	AS	SN
364207	Y	0,101	0,479	1,57	0,013	0,0008	0,0043	0,027	0,015	0,046	0,032	0,001	0,026	0,002	0,001
364209	Y	0,105	0,483	1,60	0,014	0,0006	0,0036	0,024	0,009	0,034	0,034	0,001	0,027	0,004	0,001
364212	Y	0,110	0,466	1,58	0,014	0,0007	0,0038	0,034	0,007	0,047	0,032	0,001	0,027	0,003	0,001
364214	Y	0,106	0,445	1,57	0,009	0,0023	0,0069	0,045	0,008	0,071	0,026	0,001	0,027	0,002	0,001
364215	Y	0,113	0,466	1,59	0,013	0,0012	0,0044	0,035	0,008	0,052	0,029	0,001	0,026	0,003	0,001
364218	Y	0,101	0,484	1,59	0,012	0,0031	0,0053	0,033	0,008	0,042	0,035	0,001	0,026	0,004	0,001
364220	Y	0,110	0,487	1,60	0,011	0,0011	0,0046	0,031	0,008	0,040	0,028	0,001	0,027	0,003	0,001
364343	Y	0,111	0,482	1,58	0,012	0,0013	0,0041	0,039	0,013	0,046	0,037	0,002	0,026	0,004	0,002

A04 TFK Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01 GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	7/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No.	168397-100-PO-2380E

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C70-C99 Chemical composition % - Heat analysis

B07.2 Heat	C70	TI	PB	B	SB	CA	BI	AL-T
364207	Y	0,003	0,001	0,0002	0,0010	0,0029	0,0001	0,034
364209	Y	0,002	0,001	0,0001	0,0009	0,0025	0,0001	0,035
364212	Y	0,003	0,001	0,0002	0,0004	0,0029	0,0001	0,031
364214	Y	0,003	0,001	0,0002	0,0007	0,0030	0,0001	0,051
364215	Y	0,003	0,001	0,0001	0,0001	0,0025	0,0001	0,055
364218	Y	0,003	0,001	0,0002	0,0005	0,0030	0,0001	0,036
364220	Y	0,002	0,001	0,0001	0,0006	0,0025	0,0001	0,033
364343	Y	0,003	0,001	0,0002	0,0013	0,0023	0,0001	0,040

C94 Heat analysis Carbon equivalent / Alloying restrictions

B07.2 Heat										
364207	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	7,91
364209	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,10	FO-A1=	9,72
364212	FO-02=	0,39	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	8,16
364214	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,15	FO-A1=	7,39
364215	FO-02=	0,39	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	12,50
364218	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	6,79
364220	FO-02=	0,39	FO-51=	0,03	FO-52=	0,03	FO-55=	0,11	FO-A1=	7,17
364343	FO-02=	0,39	FO-51=	0,03	FO-52=	0,03	FO-55=	0,14	FO-A1=	9,76

C95 Ladle treatment

ITEM NO.: 01,03-07,09,12
HEAT OF THE INDICATED ITEM: VACUUM DEGASSED

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 05.08.14
5

A04 TFK
Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02 INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004
INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991

A10 Advice of dispatch No./ Date of dispatch: 2379970-19.10.11

A08/ Manufacturer's order/ A03 Certificate No.: 367985-001 Sheet: 8/...

A05 Established Inspecting body: TUVC KUND

A06 Purchaser: SPS,SUTTON COLDFIELD A07.1 No. 0057939 CALL OFF 4

Final receiver: BROEKMAN,ROTTERDAM A07.2 No. 168397-100-PO-2380E

B01 Product: HOT ROLLED PLATES

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	C	SI	MN	P	S	N	CU	MO	NI	CR	V	NB	TI	B
364207	748175	K40	0,105	0,476	1,55	0,012	0,0006	0,0029	0,027	0,016	0,045	0,030	0,000	0,026	0,002	0,0002
364207	748181	K40	0,105	0,471	1,53	0,013	0,0008	0,0048	0,027	0,015	0,045	0,031	0,000	0,025	0,002	0,0002
364207	748182	K40	0,108	0,475	1,53	0,013	0,0007	0,0058	0,028	0,015	0,044	0,031	0,000	0,026	0,002	0,0003
364207	748189	K40	0,107	0,486	1,54	0,012	0,0006	0,0058	0,029	0,016	0,045	0,031	0,000	0,026	0,002	0,0003
364209	748183	K40	0,108	0,483	1,55	0,014	0,0007	0,0024	0,024	0,009	0,033	0,031	0,000	0,026	0,002	0,0002
364209	748184	K40	0,109	0,490	1,56	0,014	0,0006	0,0037	0,025	0,008	0,032	0,031	0,000	0,027	0,002	0,0002
364209	748185	K40	0,111	0,488	1,57	0,014	0,0006	0,0025	0,025	0,009	0,033	0,032	0,000	0,028	0,002	0,0002
364209	748186	K40	0,110	0,489	1,57	0,014	0,0006	0,0029	0,024	0,009	0,033	0,032	0,000	0,028	0,002	0,0002
364212	748158	K40	0,097	0,464	1,54	0,013	0,0008	0,0030	0,034	0,008	0,045	0,030	0,000	0,026	0,003	0,0002
364212	748161	K40	0,107	0,474	1,55	0,014	0,0007	0,0031	0,036	0,008	0,047	0,030	0,000	0,027	0,003	0,0003
364214	748178	K40	0,103	0,460	1,54	0,012	0,0016	0,0068	0,041	0,008	0,056	0,029	0,000	0,027	0,003	0,0003
364214	748180	K40	0,107	0,454	1,55	0,011	0,0020	0,0051	0,041	0,008	0,061	0,027	0,000	0,028	0,003	0,0003
364215	748172	K40	0,107	0,465	1,55	0,012	0,0010	0,0040	0,035	0,009	0,050	0,027	0,000	0,026	0,002	0,0003
364215	748173	K40	0,106	0,467	1,55	0,013	0,0010	0,0036	0,034	0,009	0,049	0,027	0,000	0,026	0,002	0,0003
364218	748162	K40	0,102	0,491	1,56	0,012	0,0039	0,0061	0,035	0,009	0,041	0,034	0,000	0,026	0,003	0,0003
364218	750309	K40	0,102	0,495	1,58	0,011	0,0035	0,0047	0,035	0,008	0,041	0,033	0,000	0,024	0,003	0,0003
364220	748156	K40	0,102	0,486	1,55	0,010	0,0006	0,0038	0,031	0,008	0,038	0,025	0,001	0,025	0,002	0,0002
364220	748174	K40	0,108	0,488	1,57	0,011	0,0015	0,0037	0,032	0,009	0,040	0,028	0,001	0,027	0,002	0,0002
364343	748603	K40	0,104	0,496	1,55	0,011	0,0012	0,0040	0,039	0,014	0,045	0,034	0,002	0,026	0,003	0,0003
364343	748613	K40	0,102	0,485	1,53	0,011	0,0012	0,0034	0,037	0,013	0,044	0,034	0,002	0,025	0,003	0,0002
364343	748617	K40	0,105	0,486	1,55	0,011	0,0013	0,0030	0,039	0,014	0,045	0,034	0,001	0,026	0,003	0,0003

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE 20/10/11
5

A04 TFK Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01 GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais

Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

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A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	9/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No. 168397-100-PO-2380E	

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C70-C99 Chemical composition % - Product analysis

B07.2 Heat	B07.1 Test No.	C01	AL-T
364207	748175	K4O	0,034
364207	748181	K4O	0,029
364207	748182	K4O	0,029
364207	748189	K4O	0,032
364209	748183	K4O	0,034
364209	748184	K4O	0,032
364209	748185	K4O	0,034
364209	748186	K4O	0,034
364212	748158	K4O	0,030
364212	748161	K4O	0,030
364214	748178	K4O	0,039
364214	748180	K4O	0,041
364215	748172	K4O	0,054
364215	748173	K4O	0,053
364218	748162	K4O	0,035
364218	750309	K4O	0,035
364220	748156	K4O	0,031
364220	748174	K4O	0,031
364343	748603	K4O	0,040
364343	748613	K4O	0,040
364343	748617	K4O	0,039

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☑
DATE 28/10/11
5

A04 TFK Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
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F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

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A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	10/...

A05 Established Inspecting body	A06 Purchaser		A07.1 No.	B01 Product
TUVC KUND	SPS,SUTTON COLDFIELD		0057939 CALL OFF 4	HOT ROLLED PLATES
	Final receiver	BROEKMAN,ROTTERDAM	A07.2 No. 168397-100-PO-2380E	

B02/ Steel design. TYPE-I-S460G2+M

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C94 Product analysis Carbon equivalent / Alloying restrictions

B07.2 Heat	B07.1 Test No.	C01											
364207	748175	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	11,72
364207	748181	K40	FO-02=	0,37	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	6,04
364207	748182	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	5,00
364207	748189	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	5,52
364209	748183	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,10	FO-A1=	14,17
364209	748184	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,10	FO-A1=	8,65
364209	748185	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,10	FO-A1=	13,60
364209	748186	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,10	FO-A1=	11,72
364212	748158	K40	FO-02=	0,37	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	10,00
364212	748161	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	9,68
364214	748178	K40	FO-02=	0,37	FO-51=	0,03	FO-52=	0,03	FO-55=	0,13	FO-A1=	5,74
364214	748180	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,14	FO-A1=	8,04
364215	748172	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	13,50
364215	748173	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	14,72
364218	748162	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,12	FO-A1=	5,74
364218	750309	K40	FO-02=	0,38	FO-51=	0,02	FO-52=	0,03	FO-55=	0,12	FO-A1=	7,45
364220	748156	K40	FO-02=	0,37	FO-51=	0,03	FO-52=	0,03	FO-55=	0,10	FO-A1=	8,16
364220	748174	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,11	FO-A1=	8,38
364343	748603	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,13	FO-A1=	10,00
364343	748613	K40	FO-02=	0,37	FO-51=	0,03	FO-52=	0,03	FO-55=	0,13	FO-A1=	11,76
364343	748617	K40	FO-02=	0,38	FO-51=	0,03	FO-52=	0,03	FO-55=	0,13	FO-A1=	13,00

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☑
DATE 21/10/11
5

A04 TFK
Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

QM-System: Certification as per ISO 9001

DILLINGER HÜTTE

Erläuterungen siehe Rückseite/Explications voir au verso/See reverse for explanations (www.dillinger.de/certificate)

A02	A10 Advice of dispatch No./ Date of dispatch	A08/ Manufacturer's order/ A03 Certificate No.	Sheet
INSPECTION CERTIFICATE 3.2 AS PER EN 10204:2004 INSPECTION REPORT 3.2 AS PER EN 10204:1991+A1:1995 + AS PER ISO 10474:1991	2379970-19.10.11	367985-001	11

A05 Established Inspecting body	A06 Purchaser / Final receiver		A07.1 / A07.2 No.	B01 Product
TUVC KUND	SPS, SUTTON COLDFIELD BROEKMAN, ROTTERDAM		0057939 CALL OFF 4 168397-100-PO-2380E	HOT ROLLED PLATES

B02/ Steel design. **TYPE-I-S460G2+M**

B03 Any suppl. requirements 168397-100-MW-SP-0002:REV.D1-15.12.2010
EN-10225:09/MOM:17.05.2011

C94 Carbon equivalent formula / Alloying restrictions

FO-02 = C+(MN/6)+(CR+MO+V)/5+(NI+CU)/15
FO-51 = V +NB
FO-52 = V +NB+TI
FO-55 = CU+MO+NI+CR
FO-A1 = AT/N

D01 Marking and identification, surface appearance, shape and dimensional properties

ITEM NO.: 01,03-07,09,12
RESULT OF MARKING, SURFACE, SHAPE AND DIMENSIONS: NO REMARKS
SURFACE AS PER EN-10225
THICKNESS AS PER EN-10029:10-A
LENGTH AND WIDTH AS PER EN-10029:10
FLATNESS AS PER EN-10029:10-T4L

D02 Non-destructive tests - Ultrasonic testing

ITEM NO.: 01,03-07,09,12
UT-SPECIFICATION : EN-10160 CLASS S1 AND E2
SCANNING PLAN BODY : LONGITUDINALLY SCAN LINES SPACING 100 MM
EDGES : 100 MM
PERSONNEL QUALIFICATION : LEVEL 2 IN ACCORDANCE TO EN 473
THE TEST RESULTS MEET THE REQUIREMENTS OF THE ORDER.

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☑
DATE 03/03/15
5

A04 **TFK** Manufacturer's mark

Z01/Z02/Z03 We hereby certify, that the above mentioned materials have been delivered in accordance with the terms of order.

6022/11/0346

GEPRÜFT / CHECKED / VERIFIE
Technischer Überwachungs-Verein Saarland e.V.
Druckgeräte Herstellung

Dipl.Ing. Steinmill
Inspector

POISSONNET
Test House Manager

A01
GTS Industries - Groupe Dillinger Hütte
Port 3032
3032 rue du Comte Jean - CS 56317
F-59379 Dunkerque Cedex 1 - FRANCE
Service Qualité-Essais
Date 20.10.11 LM 1

AIR LIQUIDE WELDING FRANCE
13 Rue d'Epluches, Saint-Ouen l'Aumône
95315 Cergy Pontoise Cedex - France

Phone: +33134213333
Fax: +33134213130

SAF-FRO

Certificato di Prodotto / Product Certificate

Certificato N°: / Certificate n°: ALW03111202-6

Ordine N°: / Order n°:

Bolla N°: / Delivery Note n°: 47387

Cliente: / Customer:
CIMOLAI SPA
VIA ETTORE MAJORANA ,7

33058 S. GIORGIO DI NOGARO

Data: / Date: 25/11/2013

Quantità: / Quantity;

UM: / Unit: KG

Designazione: / Trade name: W000273683 STEELCORED M10 2.4X0250XDRUM

Lotto N°: / Batch n°: 0913007232

Classificazione: / Classification: EN ISO 17632-A:T464MM1H5
AWS A5.18:E70C-6MH4

In combinazione con: / In combination with: Mix: Ar/CO2

Si confermano le proprietà sotto riportate per i consumabili di saldatura da noi forniti

We confirm following properties for the welding filler metals delivered by us

Analisi chimica del deposito: / Weld metal chemical analysis (%):

In accordo a / According to EN 10204-2.2

C	Mn	Si	P	S	Al	Cr	Ni	Mo	V
0.08	1.5	0.4	0.008	0.009	0.015	0.02	0.03	0.01	0.002

Cu	Nb								
0.12	0.002								

Proprietà meccaniche del deposito / Weld metal mechanical properties:

In accordo a / According to EN 10204-2.2

Trattamento Termico Heat treatment	Test temp. °C	Snervamento Yield Strength ReH [N/mm²]	Trazione Tensile Strength Rm [N/mm²]	Allungamento Elongation A [%]	Durezza Hardness HB	Resilienza - Impact strength (Charpy-V)		
						Temp: °C	Joule	Media Average
Come Saldato as Welded	20	480	570	28		-40		90

Note:

Remarks:

Questo certificato è stato stampato da computer e non necessita di firma

This certificate is printed by computer and needs no signature

Quality Departement - Cittadella Plant

Bizzotto Manuele

Emesso da - issued by: Olivieri Elena

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☐
DATE .....
5 .....

AIR LIQUIDE WELDING

AIR LIQUIDE WELDING FRANCE
13 Rue d'Epluches, Saint-Ouen l'Aumône
95315 Cergy Pontoise Cedex - France

Phone: +33134213333
Fax: +33134213130

SAF-FRO

Certificato di Prodotto / Product Certificate

Certificato N°:	Ordine N°:	Bolla N°:	Cliente:
Certificate n°:	Order n°:	Delivery Note n°:	Customer:
ALW03101164-98		20498	CIMOLAI SPA (S.GIORGIO) VIA UNGARESCA 38
Data:	**Quantità:**	**UM:**	
Date:	Quantity:	Unit:	33170 PORDENONE
30/05/2014		KG	ITALY

Designazione: W000376348
Trade name: OE-SD3 1NI 1/4MO 4.00X0025XB450*CIMOLAI

Lotto N°: / Batch n°: 09140AL057

Classificazione: EN ISO 14171-A : SZ
Classification: AWS A5.23 : EG

Si confermano le proprietà sotto riportate per i consumabili di saldatura da noi forniti

We confirm following properties for the welding filler metals delivered by us

Analisi chimica prodotto / Product chemical analysis (%):
In accordo a / According to EN 10204-2.2

C	Mn	Si	P	S	Ni	Mo			
0.097	1.49	0.21	0.007	0.003	0.96	0.23			

Note:
Remarks:

Questo certificato è stato stampato da computer e non necessita di firma
This certificate is printed by computer and needs no signature

Quality Departement - Cittadella Plant
Bizzotto Manuele

Emesso da - issued by: Benedini Francesca

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☒
DATE ...
5 ...

AIR LIQUIDE WELDING

AIR LIQUIDE WELDING FRANCE
13 Rue d'Epluches, Saint-Ouen l'Aumône
95315 Cergy Pontoise Cedex - France

Phone: +33134213333
Fax: +33134213130

SAF-FRO

Certificato di Prodotto / Product Certificate

Certificato N°: / Certificate n°: ALW00120600-193

Ordine N°: / Order n°:

Bolla N°: / Delivery Note n°: 15961

Cliente: / Customer:
CIMOLAI SPA (S.GIORGIO)
VIA UNGARESCA 38

33170 PORDENONE
ITALY

Data: / Date: 30/04/2014

Quantità: / Quantity:

UM: / Unit: KG

Designazione: / Trade name: W000280042 OP 121TT DRYX0025

Lotto N°: / Batch n°: 01790644

Classificazione: / Classification: EN 760 - S A FB 1 55 AC H5

Si confermano le proprietà sotto riportate per i consumabili di saldatura da noi forniti

We confirm following properties for the welding filler metals delivered by us

Analisi chimica prodotto / Product chemical analysis (%):

In accordo a / According to EN 10204-2.2

SiO2	CaF2	MnO	Al2O3	MgO	CaO	Fe2O3			
14	25	1	18	30	7	2			

Analisi granulometrica / Sieve analysis (%):

In accordo a / According to EN 10204-2.2

> 1600 µm	> 1000 µm	> 315 µm	> 315 µm	> 500 µm					
5	35	10	1	50					

Note:

Remarks:

Questo certificato è stato stampato da computer e non necessita di firma

This certificate is printed by computer and needs no signature

Quality Departement - Verona Unit

Piubello Andrea

Emesso da - issued by: Benedini Francesca

SGS Italia S.p.A.
WITNESSED ☐ REVIEWED ☐
DATE 22.04.14
5

AIR LIQUIDE WELDING

SECTION 3	Pipe certificates (Inspection certificate according to EN 10204-3.1)

CIMOLAI
Pordenone - Italy
Plant: San Giorgio di Nogaro (UD)

INSPECTION TEST CERTIFICATE 3.1 (EN 10204:2005)

CERTIFICATO DI CONTROLLO 3.1 (EN 10204:2005)

CERT. No. / *ATTESTATO No.*: 2023263/VIS/03 rev. 00
DATE - *DATA*: 24/01/24
PAGE - *PAGINA*: 1 di 2

CLIENT / *CLIENTE*: **Rosetti Marino S.p.A.**
Cimolai JOB / *COMMESSA CIMOLAI*: **2023263**
P.O. No. / *Nr. ORDINE*: **1723001802 rev. 01**
PROJECT / *PROGETTO*: **HOLLANDSE KUST NOORD WIND PARK Project**

We declare that the material hereunder listed has been produced and controlled in accordance with P.O. 1723001802 rev. 01 and documents referenced therein.

Order specifications: **123A90-DDL-ST-SP-90018_Str.mat specification; K559-2254-MT-SPE-001 - Fabrication Specification rev. 01**

PIPE ID: See below
TYPE of PIPES: SAWL Pipes
GRADE: See table below
DELIVERY CONDITION: normalized rolled
ORIGIN OF PLATES: Metinvest Trametal Spa, Via Enrico Fermi, 44, 33058 San Giorgio di Nogaro UD - Italy
ENDS: Square ends

PIPES DESCRIPTION AND TEST REPORTS TRACEABILITY

P.O. ITEM	Pipe ID	Nominal Dimensions [mm]	Grade	Heat Number	Plate Number	Plate certificate number	Plate Supplier	Vis. and Dim. Report Number	VT Report Number	MT Report Number	UT Report Number	RT Report Number
40	23-3135	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24695	147524/1	1191706.1	VOESTALPINE	2023263-DIM-23-3135	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
40	23-3136	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24964	147476/1	1191706.1	VOESTALPINE	2023263-DIM-23-3136	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
40	23-3137	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24964	147474/1	1191706.1	VOESTALPINE	2023263-DIM-23-3137	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
40	23-3138	550 x 20 x 10000	EN 10225-1: S460MLO+Z35	24964	147527/1	1191706.1	VOESTALPINE	2023263-DIM-23-3138	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3139	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	53565	147465/1	1191706.1	VOESTALPINE	2023263-DIM-23-3139	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3140	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	53565	147467/1	1191706.1	VOESTALPINE	2023263-DIM-23-3140	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3141	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	24964	147477/1	1191706.1	VOESTALPINE	2023263-DIM-23-3141	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
50	23-3142	600 x 20 x 9600	EN 10225-1: S460MLO+Z35	24964	147478/1	1191706.1	VOESTALPINE	2023263-DIM-23-3142	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3144/d	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170991/1	A0376103	VOESTALPINE	2023263-DIM-23-3144/d	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3145	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170990/1	A0376103	VOESTALPINE	2023263-DIM-23-3145	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3146	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170990/1	A0376103	VOESTALPINE	2023263-DIM-23-3146	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01
60	23-3147	800 x 20 x 3740	EN 10225-1: S460MLO+Z35	861927	170990/1	A0376103	VOESTALPINE	2023263-DIM-23-3147	2023263/VT/01	2023263/MT/01	2023263/UT/01	2023263/RT/01

Hydrotests:
Not Appplicable

Mechanical test reports:
30848 dated 19.01.2024

Additional Notes:
Not applicable

Manufacturer Signature	Customer Signature	Third party signature	Final Client Signature	Other Signature

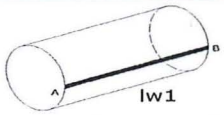
SECTION 4	Visual test reports

CIMOLAI Pordenone - Italy Stabilimento di San Giorgio di Nogaro	RAPPORTO ESAME VISIVO SALDATURA - longitudinal welds - WELD VISUAL TEST REPORT - saldature longitudinali -	Nr. Certificato / *Report Nr.*: 2023263/VT/01 Foglio / *Sheet*: 1 di 1 Data emissione / *Issue Date*: 24/01/2024

DATI GENERALI - GENERAL DATA

CLIENTE: *CLIENT:*	Rosetti Marino S.p.A.	**PROGETTO:** *PROJECT:*	N.A.
COMMESSA CIMOLAI: *CIMOLAI'S JOB:*	2023263	**PIANO CONTROLLO QUALITÀ Nr.:** *INSPECTION TEST PLAN Nr.:*	PFC-2023263-01 rev.00
SPECIFICA DI CONTROLLO: *REFERENCE STANDARD:*	EEMUA 158 par. 7.4.1	**PROCEDURA DI CONTROLLO:** *EXAMINATION PROCEDURE:*	IOP-VT-2023263-01
CRITERIO DI ACCETTABILITÀ: *ACCEPTANCE CRITERIA:*	EEMUA 158 Table 14	**DISEGNO:** *DRAWING:*	N.A.
MATERIALE BASE: *BASE MATERIAL:*	EN 10225-1: S460MLO + Z35	**CONDIZIONI SUPERFICIALI:** *SURFACE FINISH:*	AS WELDED AFTER CLEANING *AS WELDED AFTER CLEANING*
CONDIZIONI DI ILLUMINAMENTO: *ILLUMINANCE AT THE SURFACE*	≥ 500 lx (use of artificial light when necessary)	**STRUMENTAZIONE:** *TEST DEVICES:*	None
TRATTAMENTO TERMICO: *HEAT TREATMENT CONDITION:*	none	**TIPO DI ISPEZIONE:** *INSPECITION TYPE:*	DIRETTA / *DIRECT* ☑ REMOTA / *REMOTE* ☐

SCHEMI - SKETCHES



RISULTATI DEL CONTROLLO - TEST RESULT

ELEMENTO ITEM	NUMERO SALDATURA WELD NUMBER	TIPO DI SALDATURA WELD TYPE	ESTENS. CONTROLLO [%] EXTENT OF EXAMINATION [%]	DATA ISPEZIONE INSPECTION DATE	ESITO (*) RESULT	DISCONTINUITÀ (**) DISCONTINUITY	NOTE REMARKS
23-3135	LW1	Butt Weld	100	21/12/2023	A	-	-
23-3136	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3137	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3138	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3139	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3140	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3141	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3142	LW1	Butt Weld	100	08/01/2024	A	-	-
23-3144/d	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3145	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3146	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3147	LW1	Butt Weld	100	20/12/2023	A	-	-

NOTE - REMARKS:

Conformity of FIT UP before welding (Gap, Misalignment, other imperfections) has been verified with visual examination.

(*) **A** = CONFORME / ACCEPTABLE || **NC** = NON CONFORME / NOT ACCEPTABLE

REMARKS: VT extent - From Outside: 100% of longitudinal welds after weld completion. From inside: for diameter less than 800mm, the welds is inspected for a lenght equal to the outer diameter at both pipe ends, for diameter equal to or greater than 800mm, 100% of longitudinal internal welds after weld completion.

Cimolai S.p.A* Q.C.S. OPERATOR	Cimolai S.p.A** Q.C.S. OPERATOR	Cimolai S.p.A Q.C.S. MANAGER	Rappresentante del cliente Client Representative
M. MACOR ISO 9712 - VT LEV. 2		CIMOLAI S.p.A. Quality Control Department Date 24/01/24 Signature	

SECTION 5	Magnetic particle test reports

CIMOLAI
Pordenone - Italy
Stabilimento di San Giorgio di Nogaro

RAPPORTO ESAME MAGNETOSCOPICO
- saldature longitudinali -

MAGNETOSCOPIC TEST REPORT
- longitudinal welds -

Nr. Certificato / *Report Nr.*	2023263/MT/01
Foglio: / *Sheet:*	1 of 1
Data emissione: / *Issue Date:*	24/01/2024

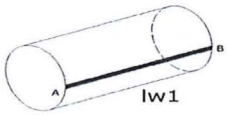
DATI GENERALI - GENERAL DATA

CLIENTE: *CLIENT:*	Rosetti Marino S.p.A.	**PROGETTO:** *PROJECT:*	HOLLANDSE KUST NOORD WIND PARK Project, 1723001802 rev. 01
COMMESSA CIMOLAI: *CIMOLAI'S JOB:*	2023263	**PIANO CONTROLLO QUALITÀ Nr.:** *INSPECTION TEST PLAN Nr.:*	PFC-2023263-01 rev.00
SPECIFICA DI CONTROLLO: *REFERENCE STANDARD:*	EEMUA 158 ed. 3 par. 7.4.4	**PROCEDURA DI CONTROLLO:** *EXAMINATION PROCEDURE:*	IOP-MT-2023263-01
CRITERIO DI ACCETTABILITÀ: *ACCEPTANCE CRITERIA:*	EEMUA 158 ed. 3 par. 7.5.5	**DISEGNO:** *DRAWING:*	N.A.
MATERIALE BASE: *BASE MATERIAL:*	EN 10225-1: S460MLO + Z35	**CONDIZIONI SUPERFICIALI:** *SURFACE FINISH:*	COME SALDATO DOPO PULIZIA *AS WELDED AFTER CLEANING*
CONDIZIONI DI ILLUMINAMENTO: *ILLUMINANCE AT THE SURFACE*	≥ 500 lx (use of artificial light when necessary)	**TRATTAMENTO TERMICO:** *HEAT TREATMENT CONDITION:*	none
APPARECCHIATURA: *INSTRUMENT:*	CGM JOKE TWIST - SN 21198	**TIPO POLI:** *TYPE OF POLES:*	ARTICOLATI *ARTICOLATED*
TIPO DI CORRENTE / INTENSITÀ *TYPE OF CURRENT / INTENSITY*	AC	**DISTANZA POLI:** *POLES DISTANCE:*	150 / 200 mm
PROVA DI MAGNETIZZAZIONE: *TEST OF MAGNETIZATION:*	LIFT TEST 4,5 kg	**SEQUENZA DI MAGNETIZZAZIONE:** *MAGNETIZATION SEQUENCE:*	Two directions at 90° each other, 45° respect to weld axis

MEZZI DI RILEVAMENTO - DETECTION MEDIA

MEZZO RILEVATORE: *DETECTION MEDIA:*	BLACK - WET POWDER LK 35 S - C.G.M.	**MEZZO DI CONTRASTO:** *CONTRAST AID:*	WHITE - VECOPLAST V42 C.G.M.

SCHEMI - SKETCHES



RISULTATI DEL CONTROLLO - TEST RESULT

ELEMENTO ITEM	NUMERO SALDATURA WELD NUMBER	TIPO DI SALDATURA WELD TYPE	ESTENS. CONTROLLO [%] EXTENT OF EXAMINATION [%]	DATA ISPEZIONE INSPECTION DATE	ESITO (*) RESULT	DISCONTINUITÀ DISCONTINUITY	NOTE REMARKS
23-3135	LW1	Butt Weld	100	21/12/2023	A	-	-
23-3136	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3137	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3138	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3139	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3140	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3141	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3142	LW1	Butt Weld	100	08/01/2024	A	-	-
23-3144/d	LW1	Butt Weld	100	09/01/2024	A	-	-
23-3145	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3146	LW1	Butt Weld	100	20/12/2023	A	-	-
23-3147	LW1	Butt Weld	100	20/12/2023	A	-	-

NOTE - REMARKS:

(*) **A** = CONFORME / *ACCEPTABLE* || **NC** = NON CONFORME / *NOT ACCEPTABLE*

REMARKS:

Cimolai S.p.A Q.C.S. OPERATOR	Cimolai S.p.A Q.C.S. MANAGER	Ente Collaudatore Testing Authority	Rappresentante del cliente Client Representative
CIMOLAI S.p.A. V. Ponte	CIMOLAI S.p.A. Quality Control Department Date 24/01/24 Signature		

SECTION 6	Ultrasonic test reports

CIMOLAI
San Giorgio di Nogaro Workshop

RAPPORTO ESAME ULTRASONORO
- saldature longitudinali -

ULTRASONIC TEST REPORT
- longitudinal welds -

Nr. Certificato / *Report Nr.*	2023263/UT/01
Foglio: / *Sheet:*	1 di 1
Data emissione: / *Issue Date:*	24/01/2024

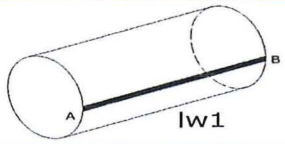
DATI GENERALI - GENERAL DATA

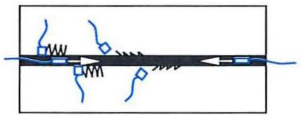
CLIENTE: *CLIENT:*	Rosetti Marino S.p.A.	**PROGETTO:** *PROJECT:*	HOLLANDSE KUST NOORD WIND PARK Project, 1723001802 rev. 01
COMMESSA CIMOLAI: *CIMOLAI'S JOB:*	2023263	**PIANO CONTROLLO QUALITÀ Nr.:** *INSPECTION TEST PLAN Nr.:*	PFC-2023263-01 rev.00
SPECIFICA DI CONTROLLO: *REFERENCE STANDARD:*	ISO 17640 lev. B Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	**PROCEDURA DI CONTROLLO:** *EXAMINATION PROCEDURE:*	IOP-UTE-2023263-01
CRITERIO DI ACCETTABILITÀ: *ACCEPTANCE CRITERIA:*	ISO 11666 lev.2 2Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	**DISEGNO:** *DRAWING:*	N.A.
MATERIALE BASE: *BASE MATERIAL:*	EN 10225-1: S460MLO + Z35	**CONDIZIONI SUPERFICIALI:** *SURFACE FINISH:*	AS WELDED AFTER CLEANING *AS WELDED AFTER CLEANING*
PROCESSO SALDATURA: *WELDING PROCESS:*	SAW	**MEZZO DI ACCOPPIAMENTO:** *COUPLANT :*	METYLCELLULOSE GLUE *METYLCELLULOSE GLUE*
APPARECCHIATURA: *INSTRUMENT:*	Olympus EPOCH650 Sn.160161102	**BLOCCO CAMPIONE TARATURA:** *CALIBRATION BLOCK:*	SMI 1
TRATTAMENTO TERMICO: *HEAT TREATMENT CONDITION:*	none		

CARATTERISTICHE SONDE DI CONTROLLO - PROBE INSPECTION SPECIFICATIONS

ID *ID* -	SONDA / Nr. SERIE *PROBE / SERIAL Nr.* -	ONDE *WAVES* -	ANG. *ANGLE* [Deg.]	DIMENSIONE *CRYSTAL SIZE* -	FREQUENZA *FREQUENCY* [MHz]
1	GE MSEB4	Long.	0°	ø10	4
2	GE MKW 70-4	Tranv.	70°	8x9	4
3	GE MKW 60-4	Tranv.	60°	8x9	4
4	IMG TA-45-4P	Tranv.	45°	8x9	4
5	IMG STA 70-2	Tranv.	70°	14x14	2
6	IMG STA 60-2	Tranv.	60°	14x14	2
7	IMG STA 45-2	Tranv.	45°	14x14	2

SCHEMI - SKETCHES





RISULTATI DEL CONTROLLO - TEST RESULT (part 1-1)

ELEMENTO *ITEM*	NUMERO SALDATURA *WELD NUMBER*	TIPO GIUNTO *WELD TYPE*	*Transducer angle*	*Extent of examination*	*Decibels*				*Indication*				ESITO *RESULT (**)*	DATA ISPEZIONE *INSPECTION DATE*	NOTE *REMARKS*
					Indication level (%) a	*Reference level* b	*Attenuation factor* c	*Indication rating* d	*Length*	*Angular distance (sound path)*	*Depth from "A" surface*	*Distance from* A			
23-3135	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	21/12/2023	-
23-3136	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3137	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3138	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3139	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	09/01/2024	-
23-3140	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3141	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3142	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	08/01/2024	-
23-3144/d	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	09/01/2024	-
23-3145	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3146	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-
23-3147	LW1	BW	1/2/3/4	100%	-	-	-	-	-	-	-	-	A	20/12/2023	-

NOTE - REMARKS:

NOTE - REMARKS:
UT performed on longitudinal weld and on pipe body for a lenght of 100mm on each pipe end,
UT test performed only on the external part of pipe.

(**) EVALUATION A = ACCETTABILE / ACCEPTABLE (no indications) NA = INDICAZIONE NON ACCETTABILE / UNACCEPTABLE INDICATION

Cimolai S.p.A Q.C.S. OPERATOR	Cimolai S.p.A Q.C.S. MANAGER	Ente Collaudatore Testing Authority	Rappresentante del cliente Client Representative
CIMOLAI S.p.A. Valentino Ponte QUALITY CONTROL DEPARTMENT V.PONTE_150912-UT-EV.2	CIMOLAI S.p.A. Quality Control Department Date: 24/01/24 Signature:		

SECTION 7	Radiographic test reports

Italsabi	RAPPORTO RADIOGRAFICO RADIOGRAPHIC TEST REPORT	Rapporto	2023263/RT/06	
		DATA	Fg	Di
		19/01/2024	1	3

Cliente CUSTOMER	CIMOLAI S.P.A.			**Costruttore** BUILDER	-
Ordine ORDER	N.A.	**Commessa**	2023263	**Disegno** DWG	-
Oggetto OBJECT	LONGITUDINAL WELDED PIPE			**Norma di Riferimento** STANDARDS	ISO 17636-1 - Class B
Procedura PROCEDURE	IOP-RT-2023263-01			**Criterio di accettabilità** ACCEPTANCE CRITERIA	ISO 10675-1 lev. 1

N°	SIGLA D'IDENTIFICAZIONE DELLA SALDATURA WELD IDENTIFICATION NUMBER	N° SALDATURA WELD N°	NR.ESPOSIZIONI EXPOSITION NO.	MATERIALE MATERIAL TYPE	Thk mm	SALDATORE WELDER	LUNGHEZZA MM OR INCH	SPESSORE RINFORZO SALDATURA MM WELD THICKNESS REINFORC.	TECNICA RIPRESA TECHNIQUE	DENSITA' DENSITY	FILO VISIBILE VISIBLE WIRE	EXAMINATION DATE DATA D'ESAME	DIFETTO DEFECT	GIUDIZIO JUDGMENT
1	23-3135	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.5 - 3.8	13	05/01/2024	None	A
2	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
3	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
4														
5	23-3136	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.6 - 3.9	13	05/01/2024	None	A
6	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
7	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
8														
9	23-3136	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.3 - 3.5	13	05/01/2024	None	A
10	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
11	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
12														
13	23-3137	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.4 - 3.8	13	05/01/2024	None	A
14	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
15	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
16														
17	23-3138	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	10000	3	SINGLE	2.4 - 3.7	13	05/01/2024	None	A
18	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
19	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
20														

DIFETTO
DEFECT

A (3)	= POROSITA' - SOFFIATURE 2011 (GAS CAVITIES - POROSITY)	C (8)	= MANCANZA DI FUSIONE INCOLLATURA, 401 (LACK OF FUSION)	F (11)	= SOLCHI O INCISIONI SUPERFICIALI 5012 (SURFACE UNDERCUT)	K (2)	= CRICCA DI CRATERE 104 (SHRINKAGE CRACK)	Df	=DIFETTO FILM (FILM DEFECT)
Ab (5)	= TARLI 2015-2016 (WORM HOLES)	D (9)	= MANCANZA DI PENETRAZIONE, 402 (INCOMPLETE PENETRATION)	Fa (21)	= SOLCHI O INCISIONI AL VERTICE 5013 (ROOT UNDERCUT)	I (21)	= INSELLAMENTO 515 (ROOT CONCAVITY)		
Ac (3.4)	= S. ALLINEATE-LOCALIZZATE 2013 (ALLINEATED GAS CAVITIES)	Ea (1)	= CRICCA O FESSURA LONGITUDINALE, 100 (LONGITUDINAL CRAKS)	G	= CORDONE IRREGOLARE (SURFACE CONDITION)	L (23)	= DIFETTO DI RIPRESA 517 (STOP - START DEFECT)	FILM LENGTH	400
B (6)	= INCLUSIONI DI SCORIA 300 (SLAG INCLUSION)	Eb (1)	= CRICCA O FESSURA TRASVERSALE, 100 (TRASVERSAL CRAKS)	Ep (16)	= ECCESSO DI PENETRAZIONE 504 (EXCESS OF PENETRATION)	W (7)	= INCLUSIONI DI TUNGSTENO 3042 (TUNGSTEN INCLUSION)		

GIUDIZIO
JUDGMENT

Df - Cf	= RIPETERE FILM CONFERMA DIFETTO (REPEAT FILM TO CONFIRM DEFECT)	A	= ACCETTABILE (ACCEPTABLE)	R	= RIPARARE (TO REPAIR)	NT	= TAGLIARE (TO CUT)	NX	= RIPETERE FILM (TO REPEAT FILM)

Apparecchiatura Raggi - X o Y
X - RAY EQUIPMENT

Tipo TIPE	GILARDONI MHFM 300D-C	**Kv**	250	**mA**	3	**Curie** CURIES	-	**Macchia focale mm** FOCAL SIZE		3,0 x 3,0	
Densità Film FILM DENSITY	1,8% - 4,0%	**Distanza Fuoco - Oggetto** Ug = F x d / D			680	**Distanza lato Sorgente - Film** DISTANCE FROM SOURCE SIDE OF OBJECT TO FILM				20	
Penetrametro I.Q.I. PENETRAMETER	**EN**	✖	**ASTM**		**Posizione I.Q.I.** IQI POSITION	**Lato Sorgente** SURCE SIDE	✖	**Lato Film** FILM SIDE		**TIPO IQI** IQI CLASS	**ASTM 1B**
Film FILM	KODAK AA400	**Formato** SIZE	10X48	**Film Singolo** SINGLE FILM	✖	**Film Doppio** DOUBLE FILM		**Schermi 0,05 - 0,10** INTENSIFYNG SCREEN	✖	**Svil. Aut.** DEVELOPMENT	✖

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CSWIP 3.1
19/1/24

QCM

CIMOLAI S.p.A.
Quality Control Department
Date 19/01/24
Signature

A.I.

Italsabi	RAPPORTO RADIOGRAFICO RADIOGRAPHIC TEST REPORT	Rapporto	2023225/RT/06	
		DATA	Fg	Di
		19/01/2024	2	3

Cliente CUSTOMER	CIMOLAI S.P.A.			Costruttore BUILDER	-
Ordine ORDER	N.A.	Commessa	2023263	Disegno DWG	-
Oggetto OBJECT	LONGITUDINAL WELDED PIPE			Norma di Riferimento STANDARDS	ISO 17636-1 - Class B
Procedura PROCEDURE	IOP-RT-2023263-01			Criterio di accettabilità ACCEPTANCE CRITERIA	ISO 10675-1 lev. 1

N°	SIGLA D'IDENTIFICAZIONE DELLA SALDATURA WELD IDENTIFICATION NUMBER	N° SALDATURA WELD N°	NR.ESPOSIZIONI EXPOSITION NO.	MATERIALE MATERIAL TYPE	Thk mm	SALDATORE WELDER	LUNGHEZZA MM OR INCH	SPESSORE RINFORZO SALDATURA MM WELD THICKNESS REINFORC.	TECNICA RIPRESA TECHNIQUE	DENSITA' DENSITY	FILO VISIBILE VISIBLE WIRE	EXAMINATION DATE DATA D'ESAME	DIFETTO DEFECT	GIUDIZIO JUDGMENT
1	23-3139	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.3 - 3.7	13	05/01/2024	None	A
2	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
3	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
4														
5	23-3140	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.2 - 3.6	13	05/01/2024	None	A
6	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
7	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
8														
9	23-3141	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.7 - 3.8	13	05/01/2024	None	A
10	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
11	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
12														
13	23-3142	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	9600	3	SINGLE	2.2 - 3.7	13	09/01/2024	None	A
14	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
15	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
16														
17	23-3144	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.8 - 3.8	13	08/01/2024	None	A
18	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
19	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
20														

DIFETTO
DEFECT

A (3)	= POROSITA' - SOFFIATURE 2011 (GAS CAVITIES - POROSITY)	C (8)	= MANCANZA DI FUSIONE INCOLLATURA, 401 (LACK OF FUSION)	F (11)	= SOLCHI O INCISIONI SUPERFICIALI 5012 (SURFACE UNDERCUT)	K (2)	= CRICCA DI CRATERE 104 (SHRINKAGE CRACK)	Df	=DIFETTO FILM (FILM DEFECT)
AB (5)	= TARLI 2015-2016 (WORM HOLES)	D (9)	= MANCANZA DI PENETRAZIONE, 402 (INCOMPLETE PENETRATION)	Fa (21)	= SOLCHI O INCISIONI AL VERTICE 5013 (ROOT UNDERCUT)	I (21)	= INSELLAMENTO 515 (ROOT CONCAVITY)		
Ac (3-4)	= S. ALLINEATE-LOCALIZZATE 2013 (ALLINEATED GAS CAVITIES)	Ea (1)	= CRICCA O FESSURA LONGITUDINALE, 100 (LONGITUDINAL CRAKS)	G	= CORDONE IRREGOLARE (SURFACE CONDITION)	L (23)	= DIFETTO DI RIPRESA 517 (STOP - START DEFECT)	FILM LENGTH	400
B (6)	= INCLUSIONI DI SCORIA 300 (SLAG INCLUSION)	Eb (1)	= CRICCA O FESSURA TRASVERSALE, 100 (TRASVERSAL CRAKS)	Ep (16)	= ECCESSO DI PENETRAZIONE 504 (EXCESS OF PENETRATION)	W (7)	= INCLUSIONI DI TUNGSTENO 3042 (TUNGSTEN INCLUSION)		

GIUDIZIO
JUDGMENT

Df - Cf	= RIPETERE FILM CONFERMA DIFETTO (REPEAT FILM TO CONFIRM DEFECT)	A	= ACCETTABILE (ACCEPTABLE)	R	= RIPARARE (TO REPAIR)	NT	= TAGLIARE (TO CUT)	NX	= RIPETERE FILM (TO REPEAT FILM)

Apparecchiatura Raggi - X o Y
X - RAY EQUIPMENT

Tipo TIPE	GILARDONI MHFM 300D-C	Kv	250	mA	3	Curie CURIES	-	Macchia focale mm FOCAL SIZE	3,0 x 3,0		
Densità Film FILM DENSITY	1,8% - 4,0%	Distanza Fuoco - Oggetto Ug = F x d / D			680	Distanza lato Sorgente - Film DISTANCE FROM SOURCE SIDE OF OBJECT TO FILM		20			
Penetrametro I.Q.I. PENETRAMETER	EN	✖	ASTM		Posizione I.Q.I. IQI POSITION	Lato Sorgente SURCE SIDE	✖	Lato Film FILM SIDE		TIPO IQI CLASS	IQI 10 FEEN
Film FILM	KODAK AA400	Formato SIZE	10X48	Film Singolo SINGLE FILM	✖	Film Doppio DOUBLE FILM		Schermi 0,05 - 0,10 INTENSIFYNG SCREEN	✖	Svil. Aut. DEVELOPMENT	✖

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Level II UT - MT - PT - VT - RT SNT TC 1A
CSWIP 3.1
19/01/24

QCM

CIMOLAI S.p.A.
Quality Control Department
Date 19/01/24
Signature

A.I.

Italsabi

RAPPORTO RADIOGRAFICO
RADIOGRAPHIC TEST REPORT

Rapporto	2023225/RT/06	
DATA	Fg	Di
19/01/2024	3	3

Cliente CUSTOMER	CIMOLAI S.P.A.			Costruttore BUILDER	-
Ordine ORDER	N.A.	Commessa	2023263	Disegno DWG	-
Oggetto OBJECT	LONGITUDINAL WELDED PIPE			Norma di Riferimento STANDARDS	ISO 17636-1 - Class B
Procedura PROCEDURE	IOP-RT-2023263-01			Criterio di accettabilità ACCEPTANCE CRITERIA	ISO 10675-1 lev. 1

N°	SIGLA D'IDENTIFICAZIONE DELLA SALDATURA WELD IDENTIFICATION NUMBER	N° SALDATURA WELD N°	NR. ESPOSIZIONI EXPOSITION NO.	MATERIALE MATERIAL TYPE	MATERIALE MATERIAL Thk mm	SALDATORE WELDER	LUNGHEZZA MM OR INCH	SPESSORE RINFORZO SALDATURA MM WELD THICKNESS REINFORC.	TECNICA RIPRESA TECHNIQUE	DENSITA' DENSITY	FILO VISIBILE VISIBLE WIRE	EXAMINATION DATE DATA D'ESAME	DIFETTO DEFECT	GIUDIZIO JUDGMENT
1	23-3145	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.2 - 3.8	13	11/01/2024	None	A
2	"	-	2 - 3	"	"	-	"	"	"	"	"	"	None	A
3	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
4														
5	23-3146	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.3 - 3.8	13	10/01/2024	None	A
6	"	-	2 - 3	"	"	-	"	"	"	"	"	"	B	A
7	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
8														
9	23-3147	-	0 - 1	EN 10225-1: S460MLO+Z35	20	-	3700	3	SINGLE	2.3 - 3.8	13	11/01/2024	None	A
10	"	-	2 - 3	"	"	-	"	"	"	"	"	"	B	A
11	"	-	4 - 5	"	"	-	"	"	"	"	"	"	None	A
12														
13														
14														
15														
16														
17														
18														
19														
20														

DIFETTO
DEFECT

A (3)	= POROSITA' - SOFFIATURE 2011 (GAS CAVITIES - POROSITY)	C (8)	= MANCANZA DI FUSIONE INCOLLATURA, 401 (LACK OF FUSION)	F (11)	= SOLCHI O INCISIONI SUPERFICIALI 5012 (SURFACE UNDERCUT)	K (2)	= CRICCA DI CRATERE 104 (SHRINKAGE CRACK)	Df	=DIFETTO FILM (FILM DEFECT)
Ab (5)	= TARLI 2015-2016 (WORM HOLES)	D (9)	= MANCANZA DI PENETRAZIONE, 402 (INCOMPLETE PENETRATION)	Fa (21)	= SOLCHI O INCISIONI AL VERTICE 5013 (ROOT UNDERCUT)	I (21)	= INSELLAMENTO 515 (ROOT CONCAVITY)		
Ac (3+4)	= S. ALLINEATE-LOCALIZZATE 2013 (ALLINEATED GAS CAVITIES)	Ea (1)	= CRICCA O FESSURA LONGITUDINALE, 100 (LONGITUDINAL CRAKS)	G	= CORDONE IRREGOLARE (SURFACE CONDITION)	L (23)	= DIFETTO DI RIPRESA 517 (STOP - START DEFECT)	FILM LENGTH	400
B (6)	= INCLUSIONI DI SCORIA 300 (SLAG INCLUSION)	Eb (1)	= CRICCA O FESSURA TRASVERSALE, 100 (TRASVERSAL CRAKS)	Ep (16)	= ECCESSO DI PENETRAZIONE 504 (EXCESS OF PENETRATION)	W (7)	= INCLUSIONI DI TUNGSTENO 3042 (TUNGSTEN INCLUSION)		

GIUDIZIO
JUDGMENT

Df - Cf	= RIPETERE FILM CONFERMA DIFETTO (REPEAT FILM TO CONFIRM DEFECT)	A	= ACCETTABILE (ACCEPTABLE)	R	= RIPARARE (TO REPAIR)	NT	= TAGLIARE (TO CUT)	NX	= RIPETERE FILM (TO REPEAT FILM)

Apparecchiatura Raggi - X o Y
X - RAY EQUIPMENT

Tipo TIPE	GILARDONI MHFM 300D-C	Kv	250	mA	3	Curie CURIES	-	Macchia focale mm FOCAL SIZE	3,0 x 3,0		
Densità Film FILM DENSITY	1,8% - 4,0%	Distanza Fuoco - Oggetto Ug = F x d / D			680	Distanza lato Sorgente - Film DISTANCE FROM SOURCE SIDE OF OBJECT TO FILM			20		
Penetrametro I.Q.I. PENETRAMETER	EN	✖	ASTM		Posizione I.Q.I. IQI POSITION	Lato Sorgente SURCE SIDE	✖	Lato Film FILM SIDE		TIPO IQI IQI CLASS	10 FEEN
Film FILM	KODAK AA400	Formato SIZE	10X48	Film Singolo SINGLE FILM	✖	Film Doppio DOUBLE FILM		Schermi 0,05 - 0,10 INTENSIFYNG SCREEN	✖	Svil. Aut. DEVELOPMENT	✖

Tecnico TECHNICIAN

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Level II UT - MT - PT - VT - RT SNT TC 1A
CSWIP 3.1
18/01/24

QCM

CIMOLAI S.p.A.
Quality Control Department
Date 19/01/24
Signature

A.I.

SECTION 8	Dimensional control reports

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3135
REV.	00
DATE - *DATA*	09.01.2024
PAGE - *PAGINA*	1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3135	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548,1	551,9	547,1	552,9	549,6	550,6	550,5	550,3	549,3	550,3	550,1	549,9

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
				MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Ovality	5,5	5,5												
	Dia UL														
	Dia LL			547,7	550,7	3	548	553,3	5,3	548,2	553,4	5,2	548,9	551,8	2,8

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,21	20,35

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10011

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	6,1

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,5

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	2,6	1,8	2,2	2,7

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	1,1	1,5	1,5	0,8

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

NOTES:
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FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3136
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3136	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548	552	548	552	549,6	550,7	550,9	550,8	549,3	550,3	550,5	550,4

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	5,5	5,5	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL			547,7	551,2	3,6	548,9	552,3	3,5	548,7	551,9	3,2	549,1	551,5	2,4
	Dia LL														

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,36	20,41

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10012

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	7,5

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,6

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	2,8	2,6	2,9	2,4

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,7	0,3	0,2	0,1

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3137	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
EEMUA 158	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548	552	548	552	550,5	551	551	550,9	550	550,5	550,5	550,5

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	5,5	5,5	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL														
	Dia LL			547,8	552,2	4,4	549,1	553	3,9	548,8	552,2	3,4	548,1	552	3,9

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,28	20,31

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10012

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	7

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,3

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	3	3	3

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,5	0,6	0,4	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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Pordenone - Italy
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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3138	550	20	10000

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	550	548	552	548	552	550,1	550,7	550,9	550,5	549,7	550,3	550,4	550,1

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	5,5	5,5	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			547,1	552,3	5,2	548,6	553,5	4,9	547,3	552,5	5,2	546,9	552,1	5,2

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,23	20,27

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
10000	10000	10050	10010

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.613,96			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8,3	8

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,3

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,7	3	2,7

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,8	0,3	0,2	0,4

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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Pordenone - Italy
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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3139
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3139	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598	602	598	602	600	601	601,3	600,8	599,7	600,7	600,9	600,6

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			597	601,5	4,5	599	602,4	3,4	599,7	602,5	2,8	599	602	2,9

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21	20,33	20,49

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	6

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3	0,8

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,6	3	1,4

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	1,1	0,7	0,1	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	3	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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CIMOLAI Pordenone - Italy

Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3140
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3140	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598,1	601,9	597,1	602,9	600,2	600,8	601	600,7	599,8	600,6	600,6	600,4

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			597,9	601,8	3,9	598,6	602,4	3,8	597,5	603,4	5,9	597,9	603,7	5,8

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,36	20,59

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	3,8

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,6

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,6	2,7	3

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,2	0,4	0,8	1,2

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0,6	0,7	0,7	0,7

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B

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CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3141
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INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3141	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598,1	601,9	597,1	602,9	600	600,6	600,9	600,5	599,7	600,4	600,6	600,3

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL			597,4	601,8	4,5	598,7	603,6	5	599,1	603,1	4,1	597,8	602,9	5,1
	Dia LL														

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,24	20,34

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	5

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,4

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,2	1	1,2	2

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	1,3	1,1	1,5	0,8

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	,	,	,	,

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CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3142
REV.	00
DATE - *DATA*	09.01.2024
PAGE - *PAGINA*	1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3142	600	20	9600

REFERENCE STANDARD	CLIENT ITEM
EEMUA 158	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	600	598,1	601,9	597,1	602,9	600,2	600,8	600,9	600,3	599,8	600,4	600,5	600

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			597,6	602,8	5,2	598,2	604,2	6	598,6	604,1	5,5	596,5	602,4	5,9

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,32	20,43

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
9600	9600	9650	9650

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
2.746,14			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	8	3,4

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,3

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,4	2,4	3

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,7	0,8	1	1

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B

NOTES:
All dimensions are expressed in mm
The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

CIMOLAI
Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3144D
REV.	00
DATE - *DATA*	11.01.2024
PAGE - *PAGINA*	1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3144D	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	798,1	801,9	800,3	800,8	800,8	800,5	800,1	800,6	800,6	800,4

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			797,9	803	5,1	797,9	803,2	5,2	798,6	802,6	4	797,7	803,4	5,7

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	19,76	20,55

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3745

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76	,	,	,

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	2,2

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,9

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,9	1,9	1,3	1,4

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,7	0,2	0,3	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

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CIMOLAI Pordenone - Italy

Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3145
REV.	00
DATE - *DATA*	10.01.2024
PAGE - *PAGINA*	1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3145	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	797,1	802,9	799,4	800,4	800,8	800,2	799,1	800,1	800,5	800

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
				END A			1/3 L			2/3 L			END B		
	Ovality	6	6	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia UL			796,8	802,1	5,3	797,2	802,7	5,5	797,9	803,2	5,3	797,8	803,4	5,6
	Dia LL														

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,60	20,70

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3743

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76			

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	2,2

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	1,2

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	3	2,5	2,1	1,8

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,8	0,2	0,1	0,6

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3146
REV.	00
DATE - *DATA*	11.01.2024
PAGE - *PAGINA*	1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3146	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	798,1	801,9	800,3	800,5	800,5	800,2	800,1	800,3	800,2	799,9

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			797,7	803,6	5,9	797,5	803,5	6	797,8	803,2	5,4	797,8	802,2	4,4

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,48	20,58

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3744

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76	,	,	,

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	1,2

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,5

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,8	2	2,1	2,8

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,9	0,8	0,4	0,3

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

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DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No.	2023-263-DIM-23-3147
REV.	00
DATE - *DATA*	11.01.2024
PAGE - *PAGINA*	1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.	NOMINAL DIMENSION		
			NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
2023-263	IOP-DIM-2023-263-01 rev. 0	23-3147	800	20	3740

REFERENCE STANDARD	CLIENT ITEM
123A90-PML-QHSE-PRO-00091	

DIAMETER	NOMINAL DIAMETER	TOLERANCE				ACTUAL MEASUREMENT							
		ENDS		BODY		END A	1/3 L	2/3 L	END B	END A	1/3 L	2/3 L	END B
		LOWER LIMIT	UPPER LIMIT	LOWER LIMIT	UPPER LIMIT	DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT				DIAMETER CALCULATED BASED ON AVERAGE DIAMETER			
	800	798,1	801,9	798,1	801,9	800,3	800,2	800,1	800,2	800,1	800	799,9	799,9

OUT OF ROUNDNESS (OVALITY)	Tol.	Ends	Body	ACTUAL MEASUREMENT											
	Ovality	6	6	END A			1/3 L			2/3 L			END B		
	Dia UL			MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY	MIN. DIAMETER	MAX DIAMETER	OVALITY
	Dia LL			797,5	803,4	5,9	797,6	802,9	5,3	797,5	803,2	5,7	797,3	802,7	5,4

THICKNESS	NOMINAL THICKNESS	TOLERANCE		ACTUAL MEASUREMENT	
		LOWER LIMIT	UPPER LIMIT	MIN. THICKNESS	MAX THIKNESS
	20	19,7	21,5	20,56	20,61

NOMINAL LENGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
3740	3740	3745	3744

NOMINAL WEIGHT	TOLERANCE		ACTUAL MEASUREMENT
	LOWER	UPPER	
1.438,76	,	,	,

FULL-LENGHT STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	3,1	1,8

LOCAL OUT OF STRAIGHTNESS	TOLERANCE	ACTUAL MEASUREMENT
	UPPER LIMIT	
	0	0,6

OUT OF SQUARENESS	TOLERANCE	ACTUAL MEASUREMENT	
	UPPER LIMIT	END A	END B
	3	0,00	0,00

EXTERNAL WELD BEAD HEIGHT	TOLERANCE		ACTUAL MEASUREMENT			
	LOWER LIMIT	UPPER LIMIT	END A	1/3L	2/3L	END B
	0	3	1,7	1,7	1,8	1,9

WELD EDGE MISALIGNMENT	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	5	0,7	1,3	0,9	0,8

LOCAL OUT OF ROUNDNESS	TOLERANCE	ACTUAL MEASUREMENT			
	UPPER LIMIT	END A	1/3L	2/3L	END B
	,	0	0	0	0

END BEVEL ANGLES	TOLERANCE		ACTUAL MEASUREMENT	
	LOWER LIMIT	UPPER LIMIT	END A	END B
	25	30	25	25

NOTES:
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FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

SECTION 9	Mechanical test results

GLOBAL TEST srl

LAB N° 1230 L

Seda A: legale, amministrativa e operativa
Via Venier,21/B – 30020 Marcon (VE)
Tel 041923994 - E-mail: laboratorio@globaltest.it
Seda B: operativa
Via A. Moro 10/C, 45026 Lendinara (RO)

CLIENTE / CUSTOMER
CIMOLAI S.p.a.
Corso Lino Zanussi, 26 - 33080 Porcia (PN)

ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
	PAG. 1 di 1

RAPPORTO DI PROVA / TEST REPORT

Prodotto Product	Id. Cliente Client Id.	Ricevuto il Received on	Id. Global Test Global Test Id.	Dimensioni dichiarate Declared dimensions	Materiale dichiarato Declared material	Note Remarks
Weld Coupon	23-3144T(*)	12/01/2024	13910	Thk 20 mm	S460MLO EN 10025-1	Job no.: 2023263 Doc. No.: 2023263/TAL/01 rev. 00 Heat nr.: 861927 Plate No.: 170991/1 **PRODUCTION TESTS**

Prove eseguite e Normative di riferimento Performed Tests and Reference Standards	Eseguita il Performed on	Esecuzione Testing by
Room temperature tensile test according to UNI EN ISO 4136:2022 + UNI EN ISO 6892-1:2020	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Room temperature tensile test according to UNI EN ISO 5178:2019 + UNI EN ISO 6892-1:2020	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Bend test according to UNI EN ISO 5173:2012	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Charpy Impact Test according to UNI EN ISO 148-1:2016 + UNI EN ISO 9016:2022	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Macrographic examination according to UNI EN ISO 17639:2022	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐
Hardness test according to UNI EN ISO 6507-1:2018	18/01/2024	Sede A ☒ Sede B ☐ Altro ☐

Non è permessa la riproduzione parziale del presente rapporto di prova senza l'autorizzazione di Global Test. Il campionamento dei saggi è stato effettuato a cura del Cliente. I risultati riportati nel presente documento si riferiscono esclusivamente alle prove effettuate sui saggi consegnati in laboratorio così come ricevuti ed indicate in tabella "identificazione cliente". I residui dei saggi lavorati e le provette verranno conservati per 1 mese; dopo tale periodo verranno rottamati. Il presente documento è archiviato per minimo di 10 anni. Quando riportata, l'incertezza di misura è espressa con fattore di copertura k=2 pari a livello di fiducia del 95% circa.

Partial reproduction of this report without Global Test authorization is strictly forbidden. The sampling of materials was performed by Customer. The test results given here, only refer to tests carried out on materials delivered in the laboratory as received and shown in table "Client identification". The residual of samples machined and test samples will be kept for 1 month; after which they will be scrapped. This document will be kept in memory for 10 years at least. When reported, the uncertainty of measurement is expressed with a coverage factor k = 2 equal to 95% level of confidence.

Approvato da: RESPONSABILE LABORATORIO
Marco Canato
GLOBAL TEST Srl

Spazio riservato ad eventuali approvazioni esterne / Space reserved for possible external approvals

GLOBAL TEST srl

LAB N° 1230 L

Seda A: legale, amministrativa e operativa
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Tel 041923994 - E-mail: laboratorio@globaltest.it
Seda B: operativa
Via A. Moro 10/C, 45026 Lendinara (RO)

CLIENTE / CUSTOMER
CIMOLAI S.p.a.
Corso Lino Zanussi, 26 - 33080 Porcia (PN)

ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
	PAG. 2 di 2

Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Room temperature tensile test according to UNI EN ISO 4136:2022 + UNI EN ISO 6892-1:2020	None

PROVA DI TRAZIONE / TENSILE TEST

Identificativo Campione Sample Identification		**Provino** Specimen	**Posizione** Position	**Dimensioni** Dimensions	**Area** Area	**Carico Max** Maximum Load **F_m**	**Carico Rottura** Ultimate Tensile Strength **Rm**	**Aspetto frattura** Fracture Appearance	**Zona rottura** Fracture Location
Cliente / Client	**Lab**. / Lab.			mm	mm^2	N	MPa		
23-3144T(*)	13910 / 1	F	TW	19.89 x 19.00	377.9	235344	623	Ductile	In Weld
23-3144T(*)	13910 / 2	F	TW	19.99 x 19.00	379.8	237624	626	Ductile	In Weld
Values according to Doc. No. 2023263/TAL/01 rev. 00:							**> 520**	***	***

Posizione: *Position:*	**Tipo di campione:** *Specimen Tipe:*	**Tipo di velocità di prova:** *Testing Rate method:*
TB: trasversale in materiale base / transversal on base metal LB: longitudinale in materiale base / longitudinal on base metal TW: trasversale attraverso saldatura / transversal across weld metal LW: longitudinale su saldatura / longitudinal on weld metal	F – prismatica / flat C – cilindrica / cilyndrical T – tubo intero / entire pipe P – provetta da tubo / specimen from pipe	"A224" method

Approvato da: RESPONSABILE LABORATORIO	**Spazio riservato ad eventuali approvazioni esterne** / Space reserved for possible external approvals
Marco Canato GLOBAL TEST Srl	

GLOBAL TEST srl

LAB N° 1230 L

Seda A: legale, amministrativa e operativa
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CIMOLAI S.p.a.
Corso Lino Zanussi, 26 - 33080 Porcia (PN)

ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
RAPPORTO DI PROVA N° / TEST REPORT	DATA / DATE
30848	19/01/2024
	PAG. 3 di 3

Prove eseguite e Normative di riferimento – Performed Tests and Reference Standards	Standards Correlati – Related Standards
Room temperature tensile test according to UNI EN ISO 5178:2019 + UNI EN ISO 6892-1:2020	None

PROVA DI TRAZIONE / TENSILE TEST

Identificativo Campione Sample Identification		**Provino** Specimen	**Posizione** Position	**Dimensioni** Dimensions	**Area** Area	**Lunghezza Iniziale** Original Length L_0	**Snervamento** Yield Strength **Reh**	**Rt0.5%** Rt0.5%	**Rottura** Tensile Strength **Rm**	**Rt0.5%/Rm** Rt0.5%/Rm	**Allungamento** Elongation **A**	**Strizione** Area Reduction **Z**	**Zona di rottura** Break position
Cliente / Client	**Lab**. / Lab.			mm	mm^2	mm	MPa	MPa	MPa		%	%	
23-3144T(*)	13910 / 3	C	LW-T/3	Ø 12.63	125.3	50.0	531	530	615	0.86	26.4	74.0	***
Values according to Doc. No. 2023263/TAL/01 rev. 00:							**> 440**	**> 440**	**> 520**	***	**> 20**	***	***

Posizione: *Position:*	**Tipo di provino:** *Specimen Type:*	**Tipo di velocità di prova:** *Testing Rate method:*
TB: trasversale in materiale base / transversal on base metal LB: longitudinale in materiale base / longitudinal on base metal TW: trasversale attraverso saldatura / transversal across weld metal	F – prismatica / flat C – cilindrica / cilyndrical T – tubo intero / entire pipe	"A224" method

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LW: longitudinale su saldatura / longitudinal on weld metal	P – provetta da tubo / specimen from pipe	

Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Bend test according to UNI EN ISO 5173:2012	None

PROVA DI PIEGA / BEND TEST

Identificativo Campione Sample Identification		**Posizione** Position	**Dimensioni** Dimensions	**Mandrino** Jig	**Angolo** Angle	**Distanza Rulli** Rolls Distance	**Esito** Results
Cliente / Client	**Lab.** / Lab.		mm	mm		mm	
23-3144T(*)	13910 / 4	SBB	19.9 x 10.2	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)
23-3144T(*)	13910 / 5	SBB	19.8 x 10.3	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)
23-3144T(*)	13910 / 6	SBB	19.9 x 10.2	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)
23-3144T(*)	13910 / 7	SBB	19.8 x 10.4	40	180°	63	Not defects noted according to UNI EN ISO 15614-1:2019 Par. 7.4.2 (*)

Tipo di provino: *Specimen Type:*	**Note:** Remarks:
TFBB: Piega trasversale al dritto / transversal face bend test TRBB: Piega trasversale al rovescio / transversal root bend test SBB: Piega trasversale laterali / transversal side bend test	Testing Procedure: Former Bend Test Test Temperature: (23±5)°C

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CIMOLAI S.p.a.
Corso Lino Zanussi, 26 - 33080 Porcia (PN)

ORDINE / ORDER N°	DATA / DATE
Ordine 2024011531	15/01/2024
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Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Charpy Impact test according to UNI EN ISO 148-1:2016	UNI EN ISO 9016:2022

PROVA DI RESILIENZA / CHARPY IMPACT TEST

Identificativo Campione Sample Identification		**Temperatura** Temperature	**Posizione** Position	**Dimensioni** Dimensions	**Intaglio** Notch	**Resilienza** Impact energy Joule				**Espansione laterale** Lateral expansion mm			
Cliente / Client	**Lab.** / Lab.	°C		mm		1	2	3	AVG	1	2	3	AVG
23-3144T(*)	13910 / 8	- 40	VWT 0/2	10.0 x 10.0	KV_2	70	60	100	77	0.52	0.52	1.12	0.72
23-3144T(*)	13910 / 9	- 40	VHT 0/2	10.0 x 10.0	KV_2	112	120	98	110	1.29	1.64	1.20	1.38
23-3144T(*)	13910 / 10	- 40	VHT 2/2	10.0 x 10.0	KV_2	100	132	144	125	1.10	1.50	1.53	1.38
23-3144T(*)	13910 / 11	- 40	VHT 5/2	10.0 x 10.0	KV_2	118	122	102	114	1.15	1.25	1.12	1.17
Values according to Doc. No. 2023263/TAL/01 rev. 00:						**> 35**			**> 46**	***			***

Posizione provino: *Position of specimen:*	**Note:** *Remarks:*
BM: Materiale Base / Base Metal VHT: Linea di Fusione / Fusion Line VWT: Zona Fusa / Weld Metal	Tempo di condizionamento provini: >15 min Conditioning time: >15 min 1) Valore approssimativo KV eccede 80% della capacità dell'apparecchiatura - Approximate KV value exceeds 80% of the equipment's capacity 2) Valore approssimativo di provino non rotto – Approximate value of unbroken specimen

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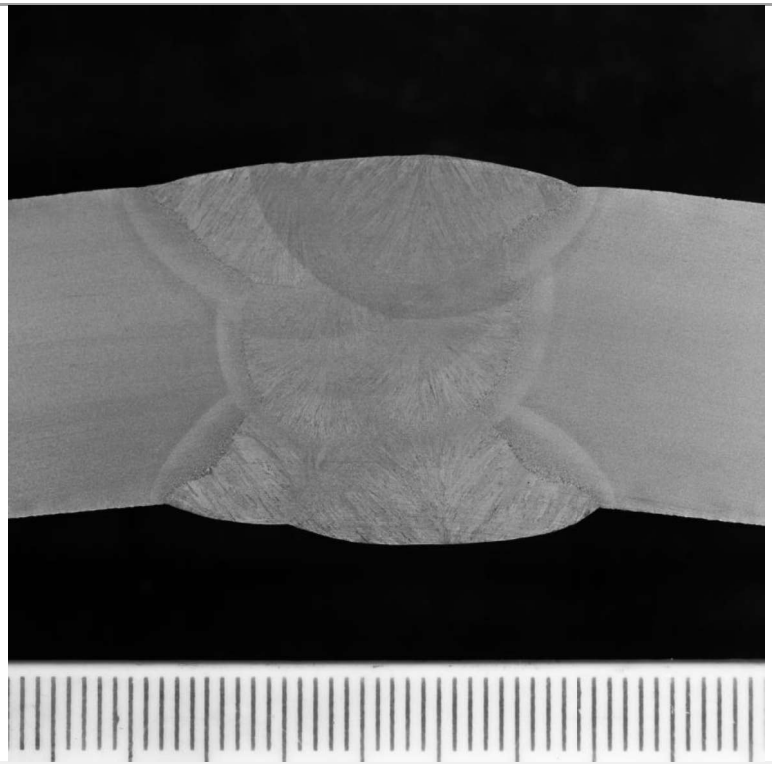
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CLIENTE / CUSTOMER	**CIMOLAI S.p.a.** Corso Lino Zanussi, 26 - 33080 Porcia (PN)
ORDINE / ORDER N°	Ordine 2024011531
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Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Macrographic examination according to UNI EN ISO 17639:2022	UNI 3138:1984

ESAME MACROGRAFICO / MACROGRAPHIC EXAMINATION



Identificativo Campione Sample Identification	**Cliente** Client	23-3144T(*)
	Lab. Lab.	13910 / 12
Posizione Prelievo / Sampling position **Zona Esaminata /** Examinated Area		Transversal Weld Joint
Tipo di saldatura/ Weld Joint type		Butt Weld
Tipo di Attacco / Etching Type		Nital 10%
Metodo di attacco / Ethching method		Immersione – 30s Swabbing – 30s
Designazione / Designation		Esame-ISO 17639-A-E-1.2/1.2-1.2/1.2-A.1
Esito / Result (*)		No defects noted according to UNI EN ISO 5817:2014 Lev. B + UNI EN ISO 15614-1:2019 Lev.2 Para 7.5

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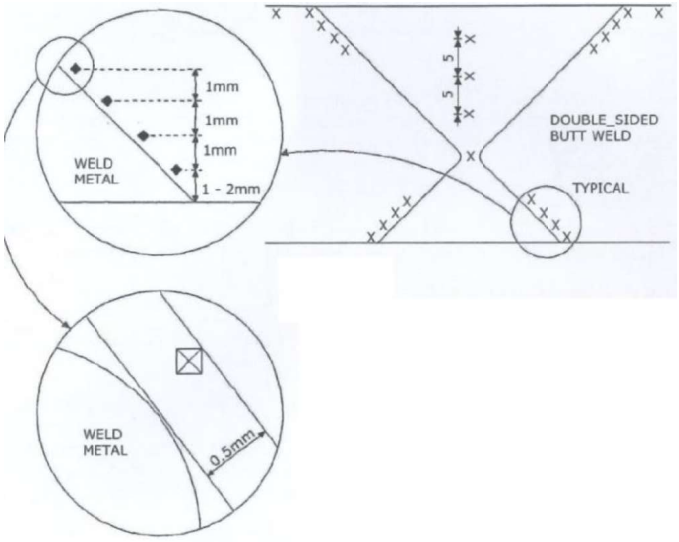
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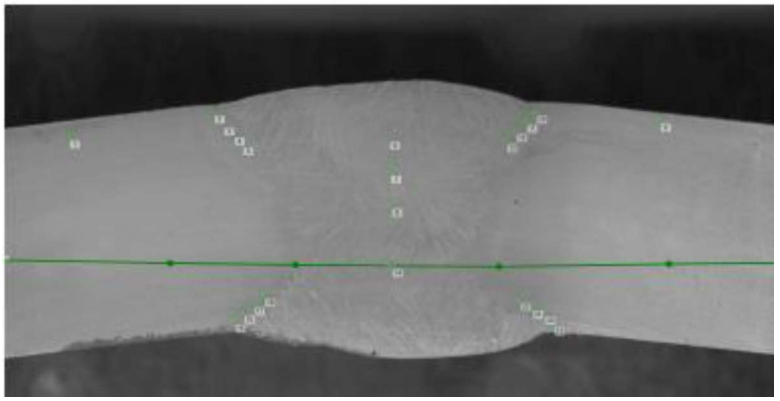
ORDINE / ORDER N°	DATA / DATE
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Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards (*)
Hardness test according to UNI EN ISO 6507-1:2018	EEMUA Publication 158 Ed. 3 Fig. 8

PROVA DI DUREZZA / HARDNESS TEST

Identificativo Campione Sample Identification		**Prova di durezza** Hardness Test	**Values according to Doc. No. S2023-06/TAL/00 rev. 00:**
Cliente / Client	**Lab.** / Lab.		
23-3144T(*)	13910 / 12	HV10	**< 325**





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
219	180	176	188	180	208	190	198	220	184	188	185	180	197	186	189	181	186	187	186	188	181

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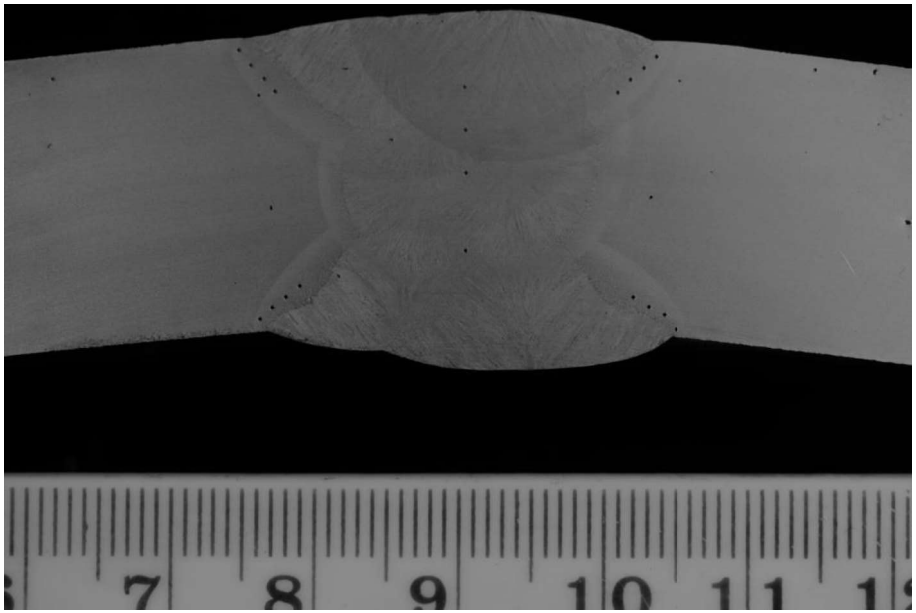
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CLIENTE / CUSTOMER	
CIMOLAI S.p.a. Corso Lino Zanussi, 26 - 33080 Porcia (PN)	
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Prove eseguite e Normative di riferimento - Performed Tests and Reference Standards	Standards Correlati - Related Standards
Hardness test according to UNI EN ISO 6507-1:2018	None

FOTO DOPO LA PROVA DI DUREZZA / PHOTO AFTER HARDNESS TEST

Identificativo Campione Sample Identification	
Cliente / Client	**Lab**. / Lab.
23-3144T(*)	13910 / 12



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STRUMENTI USATI PER LE PROVE / EQUIPMENT USED FOR TESTS

Equipment used	Trademark		Calibration expiry (±15 days)
Digital Caliper	Borletti CDJB15	Sn: 032819-186295	27/10/2025
Tensile Test Machine – 1200kN	GALDABINI QUASAR 1200	Sn: VB3Z	13/03/2024
Electronic Exstensometer	GALDABINI MICRO	Sn: 34647	13/03/2024
Tensile Test Machine – 200kN	GALDABINI QUASAR 200	Sn: VB3V	13/03/2024
Electronic Extensometer	GALDABINI MICRO	Sn: GT015	13/03/2024
Hydraulic Press	OMCN P30/MR	Sn: 589557	-
Charpy pendulum	Wolpert PW30/15K	Sn: 1216	13/03/2024
Digital Thermometer + Probe	TC Direct + PT100	Sn: 220606695 + 220606695/PT100	11/06/2024
Camera	CANON EOS 4000D	Sn: 153070020586	-
Hardness Testing Machine	QNESS Q30A+	Sn: Q1788/02/20	13/03/2024

(*) Metodo di prova non accreditata da ACCREDIA – Ente Italiano di Accreditamento
Test method not accredited by ACCREDIA - Italian Accreditation System

La decorrenza del presente Rapporto di Prova coincide con la data di emissione del documento, posta in alto a destra. Non rileva il fatto che la firma digitale sia eventualmente apposta successivamente.
The effective date of this Test Report corresponds with the emission date, placed in the upper right corner. It does not have relevance the fact that the digital signature is eventually affixed afterwards.

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SECTION 10	Visual Test Procedure

IOP-VT-2023263-01
VISUAL EXAMINATION INSTRUCTION

Project: **123A90A - Base Load Power Hub Platform**

Client: **Rosetti Marino SpA**

Revision matrix (revised where underlined)

1	16/01/2024	Gianessi A.	Macor M.	Nali M.
0	11/12/2023	Gianessi A.	Macor M.	Nali M.
Rev.	**Date**	**Issued**	**Checked**	**Approved**

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1. SCOPE

This procedure is intended for the visual examination of welds and HAZ on longitudinal welds of pipes in ferromagnetic steel and for the dimensioning of indications by means of comparison with Acceptance Standards .

Visual examination shall be used to evaluate an item by observation, such as: the correct assembly, evidence of leaking, surface conditions, shape, or cleanliness of materials, parts, and components used in the fabrication and construction of structure.

This procedure shall be applied solely by the qualified Quality Control Personnel for the visual inspection of the welds and materials

The visual inspection shall be executed during the following fabrication stages:

a) on completion of the cutting of the pieces to be welded;
b) on completion of the fit-up before start of welding;
c) during welding and after back-gouging;
d) on completion of the welding;
e) before start of welding repairs;
f) on completion of the repair of welds and base material;
g) on completion of the whole fabrication process.

- Quality level in accordance to EEMUA 158 table 14 and ISO 5817: Level C

2. REFERENCE DOCUMENTS

- EN ISO 17637:2017: Non destructive testing of welds. Visual testing of fusion-welded joints
- EN ISO 5817:2023: Fusion welded joints in steel, ... – Quality levels for imperfections
- ISO 9712:2022: Qualification and Certification of NDT Personnel.
- EEMUA 158: 2014: Construction Specification for fixed offshore structures

3. PERSONNEL QUALIFICATION

Examination shall be carried out by NDE examiners holding a level II or III qualification in accordance with the following document or other equivalent standard:

- ISO 9712

The personnel employed for the execution of NDE Examination shall have an annual vision test to assure:

- Near vision acuity: the examination should ensure natural or corrected near distance acuity such that they are capable of reading standard J-1 letters on standard Jaeger test type charts or Times Roman No.4,5 (having a height of 1,6mm) or equivalent characters to a distance of not less than 30 cm with one or both eyes. Equivalent near vision tests are acceptable
- Color contrast differentiation: the examination should demonstrate the capability of distinguishing and differentiating contrast among colors or shades of gray (reading of Ishiara test or equivalent)

4. EXTENT OF EXAMINATION

Extent of Examination shall be as follow:

- From outside: 100% on longitudinal welds after weld completion
- From inside:
  - For diameter equal to or greater than 800 mm, 100% on longitudinal welds after weld completion
  - For diameter less than 800 mm, the welds shall be inspected for a length equal to the outer diameter at both pipe ends.

The width of the surface shall include the weld metal and the adjacent parent metal up to a distance of 20 mm on each side of the weld.

5. TIME OF EXAMINATION

Visual Examination shall be carried out at least 24 hours following completing of welding. When PWHT is performed, final Visual Examination shall be carried out when all heat treatments have been completed.

6. SURFACE CONDITIONS

The surface to be inspected shall be cleaned from any dirt, oil, grease, scales, slag and any other contaminations which may interfere with the scanning or interpretation of the results: when the base material or weld surface interferes with the examination, the base material or weld shall be prepared as needed to permit the examination.

Base material surface adjacent to the weld, shall be prepared to a distance at least 25 mm on either side of the weld: shall be free of weld spatter, rust or other foreign particles which could interfere with examination and this could be obtained by sandblasting or light grinding

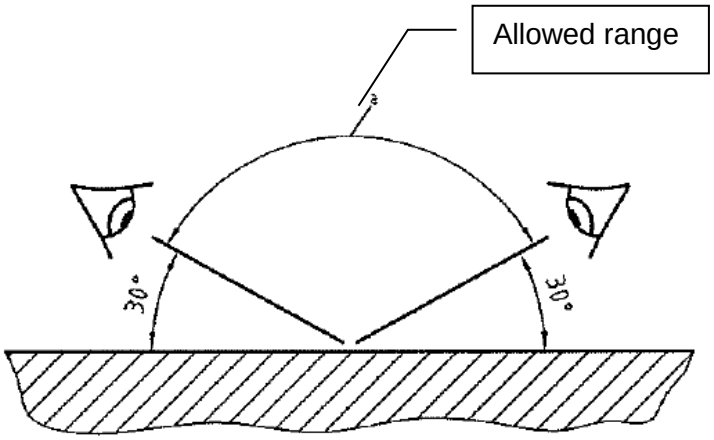
The weld surface should be free of irregularities that could impede examination, offer reasonably smooth surface with minimal undercut, rippling and spatter and should merge smoothly into the adjacent base materials. “As welded” weld surface condition is acceptable to perform correctly the examination. If undercuts, imperfect shape, incorrect weld toe or other surface discontinuities are clearly visible before examination start, these shall be removed with adequate operations (grinding, welding etc.).

If "PWHT" is required, any Welding Remedial shall be done "before PWHT" and to the correct Weld Repair Procedure.

7. EXAMINATION TECHNIQUE

7.1 Direct Visual Examination.

Direct Visual Examination technique is used when access is sufficient to place the eye at 24 in. (600 mm) or less from the surface to be examined and at an angle not less than 30 deg. Mirrors may be used to improve the angle of vision, and aids such as a magnifying lens may be used to assist examination for small defects and where a greater sensitivity is required. Illumination (natural or supplemental white light) for the specific part, component, or section thereof being examined is required. The minimum light intensity at the examination surface shall be 500 lux.



8. DEMONSTRATION

A fine line or wire 1/32 in (0.8 mm) or less in width, located on the surface or a similar surface to that to be examined, may be considered as a method for procedure demonstration. The artificial imperfection should be in the least discernible location on the surface area to be examined to validate the procedure.

9. EXAMINATION AIMS

9.1 Examination of cut surfaces.

Surfaces and edges to be welded shall be in conformity to the construction drawings and relevant WPS: free of indentations, smooth, uniform, and free from fins, tears, cracks, and other discontinuities which would adversely affect the quality or strength of the weld. Surfaces to be welded and surfaces adjacent to a weld shall also be free from loose or thick scale, slag, rust, moisture, grease, and other foreign material that would prevent proper welding.
When possible, the examination shall be carried out on completion of the blast cleaning operation.

9.2 Examination of the assembled pieces

The tack welds shall be carried out by qualified welders, intact and free of defects.
Defective tack welds shall be totally removed prior to any subsequent operation being carried out.
The distance between the edges to be welded shall comply with the construction drawings and the relevant welding procedure.
The edge misalignment for butt welds shall be less than 10% of the lower thickness but not greater than 3 mm.

9.3 Weld and surrounding area examination

The examination shall be carried out in order to verify as follows:

a) the presence of superficial defects like cracks, worm and gas holes, weld spatter, blow holes, etc.;
b) the presence of undercuts between base material and weld;
c) the presence of undercuts between the different runs of the same weld;
d) dimensional conformity of the weld profile to the construction drawing and to the relevant welding procedure;
e) the dimension of the weld reinforcement in the butt welds;
f) the removal of temporary tack welds, extraneous material residuals electrodes arch strokes and weld spatters.
g) all surface defects (i.e. because of the use of plate clamp), should be repaired.
h) after removal, positions of former temporary pieces shall be tested by MPI

9.4 Post-repair examination

Examination after repair by means of grinding shall verify the followings:

a) the complete removal of the defect;
b) that the grinding-affected area shall be smooth with the adjacent area;
c) that the grinded area shall comply with the geometrical dimensions as specified in the construction drawings (i.e. the profile of the weld section and the minimum base material thickness).

Where the above conditions may not be achieved by grinding only, it will be necessary to restore the area by means of welding in accordance with an approved repair welding procedure.

10. ACCEPTANCE CRITERIA

Acceptance Criteria shall be in according to table 14 of EEMUA 158 reported here below. Where doubts may persist an opportune non destructive inspection shall be carried out, e.g. magnetic particle or dry penetrant inspection.

Table 14 Visual inspection acceptance criteria

Defect type	Permitted maximum
Undercut	Slight intermittent undercut permitted, depth should not exceed approximately 0·5mm.
Shrinkage grooves and root concavity	As for undercut, depth should not exceed 1·5mm.
Excess penetration (girth welds only)	3mm maximum. Occasional local slight excess is allowable.
Reinforcement shape	The reinforcement shall blend smoothly with the parent metal. Dressing is not normally required provided the shape does not interfere with the specified NDT techniques.
Overlap	Not permitted.
Linear misalignment	See 4.5.2. (k) and (l)

11. REPAIR

In the event that unacceptable indications have been detected, the relevant removal of the defects shall be carry out by machining, grinding, chipping or gouging. Oxygen gouging shall not be used in quenched and tempered steel. Where arc-air gouging may be carried out, it will be necessary to grind the area in order to remove the decarburized material and to smooth the relevant surfaces.

A visual inspection shall be carried out on the cut surfaces in order to verify that the removal of the defect has been achieved.

Once the defect have been removed, the cutting surface shall be prepared and smoothed down in order to allow the area to be repaired by means of welding in accordance with an approved procedure.

Once the repair have been completed, the affected area shall be re-inspected in accordance with this procedure.

Local grinding may be used to reduce or remove imperfections which are the cause of unacceptable indications, while all repairs, in which welding processes are foreseen, shall be carried out in accordance with established procedures.

Repair By Welding

Before repair welding, the defects shall be completely removed. Each unacceptable discontinuity shall be directly marked on the weld over the discontinuity for its entire length. The depth from the surface and indication rating shall be marked on base metal right next to the defect.
The excavated area shall have smooth transitions to the metal surface and allow good access for both NDT after excavation and subsequent repair welding. After excavation, complete removal of the defects shall be confirmed by MT or PT. PWHT shall be performed after repair if specified for the original weld. The excavated groove shall extend minimum 25 mm before and after the defect, measured at defect depth. Defects spaced less than 100 mm shall be repaired as one continuous defect.
After repair welding, the complete weld (i.e. the repaired area plus at least 100 mm on each side) shall be subjected at least to the same NDT as specified for the original weld.
Repair welding may only be carried out once in the same area: the second require customer involvement.

Re-welding
Re-welding shall be performed in accordance with the procedures and WPS utilized for the original weld, and includes complete removal of the original weld and HAZ

12. VISUAL EXAMINATION REPORT

A report which clearly identifies the work and the area of inspection shall be completed by the VT operator at the time of inspection. Examination results for each weld shall be reported on the Visual Examination Report Form. The Visual Examination Report (sample form) is enclosed as Attachment 1 to this procedure: any change or update to this form, does not invalidate this procedure as long all therein information are maintained.

The report shall be signed by the Quality Control Manager and when required by the Client's Inspector and other Authority Testing.

The report form for welds that are acceptable need only contain sufficient information to identify the weld, the operator (signature), and the acceptability of the weld.

When a defect shall be identified and repair shall be required, the relevant report issued at completion of the inspection operation will have to record both inspections prior and after the repair of the defect.

Evaluation of retested repaired weld areas shall be tabulated on a new line on the report form. If the original report form is used, an R1, R2, ...Rn shall prefix the indication number. If additional report forms are used, the R number shall prefix the report number.

All NDT shall be properly documented in such a way that the performed testing can be easily retraced at a later stage. The reports shall identify the unacceptable defects present in the tested area, and a conclusive statement as to whether the weld satisfies the acceptance criteria or not.

The report shall include a reference to the applicable standard, NDT procedure and acceptance criteria. In addition, as a minimum, the following information must be given or easily retrievable from therein included information:

- object and drawing references
- place and date of examination

- material type and dimensions
- post weld heat treatment, if required
- location of examined areas, type of joint
- welding process used
- name and certification level of the operator carrying out the testing
- surface conditions
- contract requirements e.g. order no., specifications, special agreements etc.
- sketch showing location and information regarding detected defects
- extent of testing
- test equipment used
- description and location of all recordable indications
- examination results with reference to acceptance level.
- number of repairs to be specified in the report, such as once or twice repairs in the same area.

The report shall be such that there is no doubt about what is tested, where it has been carried out and give a clear and exact description of reportable defect location.

The format of report is not a reason for rejection as long all above indicated information are included and any change induced by addition doesn't be considered a rejection of those already issued

ATTACHMENT N. 1

CIMOLAI S.p.A.
San Giorgio di Nogaro (UD)

VISUAL AND DIMENSIONAL INSPECTION OF WELDS - REPORT

RAPPORTO DI ISPEZIONE VISIVA E DIMENSIONALE SALDATURE

REPORT No.

DATE - *DATA*

PAGE - *PAGINA* 1 di 1

GENERAL DATA / DATI GENERALI

CLIENT / *CLIENTE* | CLIENT P.O. / *ORDINE CLIENTE* | JOB / COMMESSA | ITP

PLACE AND DATE OF EXAMINATION / LUOGO E DATA DELL'ESAME | TESTING EQUIPMENT USED / STRUMENTI UTILIZZATI

PRODUCT DATA / DATI DEL PRODOTTO

BASE MATERIAL / MATERIALE BASE | THICKNESS / SPESSORE | SURF. CONDITIONS / CONDIZIONI SUP. | PWHT CONDITIONS / CONDIZ. TRATT. TERMICO

REFERENCE DOCUMENTS / DOCUMENTI DI RIFERIMENTO

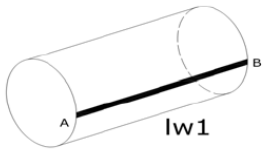
PROCEDURE / PROCEDURA | ACCEPTANCE CRITERIA / CRITERI DI ACCETTABILITA' | REF. DRAWINGS / RIF. DISEGNI

WELD PARTICULAR SKETCH / SCHIZZO PARTICOLARE SALDATO

TEST EXTENSION / ESTENSIONE DEL CONTROLLO

TYPE OF JOINT / TIPI DI GIUNTO

WELDING PROCESS / PROCESSO DI SALDATURA



TEST RECORDS / REGISTRAZIONE DEL CONTROLLO

Client Pos. Pos. Cliente	Cimolai Mk.	Base Material Materiale Base	Weld ID	Analyzed / Analizzati						Not Accept.	Accept.
				Cracks Cricche	Under-cuts Incisioni	Reinforcement Sovrametallo	Reinf. Shape Forma cordone	Weld to b. metal transizione	Porosity Porosità		

TEST RESULT / RISULTATO DEL CONTROLLO

✓ ACCEPTABLE / ACCETTABILE	NOT ACCEPTABLE / NON ACCETTABILE

REMARKS / NOTE

STAMPS AND SIGNATURES / TIMBRI E FIRME

VT Operator / Operatore VT	Cimolai SpA	Testing Authority / Ente Collaudatore	Client Representative / Rappresentante del Cliente

ATTACHMENT N. 2

Table 1 extracted from EN ISO 5817 and table 12 extracted from EN 10217-3

Table 1 — Limits for imperfections

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1 Surface imperfections							
1.1	100	Crack		≥ 0,5	Not permitted	Not permitted	Not permitted
1.2	104	Crater crack		≥ 0,5	Not permitted	Not permitted	Not permitted
1.3	2017	Surface pore	Maximum dimension of a single pore for — butt welds — fillet welds	0,5 to 3	$d \leq 0{,}3\ s$ $d \leq 0{,}3\ a$	Not permitted	Not permitted
			Maximum dimension of a single pore for — butt welds — fillet welds	> 3	$d \leq 0{,}3\ s$, but max. 3 mm $d \leq 0{,}3\ a$, but max. 3 mm	$d \leq 0{,}2\ s$, but max. 2 mm $d \leq 0{,}2\ a$, but max. 2 mm	Not permitted
1.4	2025	End crater pipe		0,5 to 3 > 3	$h \leq 0{,}2\ t$ $h \leq 0{,}2\ t$, but max. 2 mm	Not permitted $h \leq 0{,}1\ t$, but max. 1 mm	Not permitted Not permitted
1.5	401	Lack of fusion (incomplete fusion)	—	≥ 0,5	Not permitted	Not permitted	Not permitted
		Micro lack of fusion	Only detectable by micro examination	≥ 0,5	Permitted	Permitted	Not permitted
1.6	4021	Incomplete root penetration	Only for single side butt welds	≥ 0,5	Short imperfections: $h \leq 0{,}2\ t$ but max. 2 mm	Not permitted	Not permitted

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels D	C	B
1.7	5011	Continuous undercut	Smooth transition is required. This is not regarded as a systematic imperfection.	0,5 to 3	Short imperfections: $h \leq 0,2\ t$	Short imperfections: $h \leq 0,1\ t$	Not permitted
	5012	Intermittent undercut		> 3	$h \leq 0,2\ t$, but max. 1 mm	$h \leq 0,1\ t$, but max. 0,5 mm	$h \leq 0,05\ t$, but max. 0,5 mm
1.8	5013	Shrinkage groove	Smooth transition is required.	0,5 to 3	Short imperfections: $h \leq 0,2$ mm + $0,1\ t$	Short imperfections: $h \leq 0,1\ t$	Not permitted
				> 3	Short imperfections: $h \leq 0,2\ t$, but max. 2 mm	Short imperfections: $h \leq 0,1\ t$, but max.1 mm	Short imperfections: $h \leq 0,05\ t$, but max. 0,5 mm
1.9	502	Excess weld metal (butt weld)	Smooth transition is required.	≥ 0,5	$h \leq 1$ mm + $0,25\ b$, but max. 10 mm	$h \leq 1$ mm + $0,15\ b$, but max. 7 mm	$h \leq 1$ mm + $0,1\ b$,but max. 5 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels D	C	B
1.10	503	Excessive convexity (fillet weld)		≥ 0,5	$h \le 1$ mm + 0,25 b, but max. 5 mm	$h \le 1$ mm + 0,15 b, but max. 4 mm	$h \le 1$ mm + 0,1 b, but max. 3 mm
1.11	504	Excess penetration		0,5 to 3 > 3	$h \le 1$ mm + 0,6 b $h \le 1$ mm + 1,0 b, but max. 5 mm	$h \le 1$ mm + 0,3 b $h \le 1$ mm + 0,6 b, but max. 4 mm	$h \le 1$ mm + 0,1 b $h \le 1$ mm + 0,2 b, but max. 3 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels D	C	B
1.12	505	Incorrect weld toe	— butt welds	≥ 0,5	$\alpha \geq 90°$	$\alpha \geq 110°$	$\alpha \geq 150°$
			— fillet welds $\alpha_1 \geq \alpha$ and $\alpha_2 \geq \alpha$	≥ 0,5	$\alpha \geq 90°$	$\alpha \geq 100°$	$\alpha \geq 110°$
1.13	506	Overlap		≥ 0,5	$h \leq 0,2\,b$	Not permitted	Not permitted
1.14	509	Sagging	Smooth transition is required	0,5 to 3	Short imperfections: $h \leq 0,25\,t$	Short imperfections: $h \leq 0,1\,t$	Not permitted
	511	Incompletely filled groove		> 3	Short imperfections: $h \leq 0,25\,t$, but max. 2 mm	Short imperfections: $h \leq 0,1\,t$, but max. 1 mm	Short imperfections: $h \leq 0,05\,t$, but max. 0,5 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.15	510	Burn through	—	≥ 0,5	Not permitted	Not permitted	Not permitted
1.16	512	Excessive asymmetry of fillet weld (excessive unequal leg length)	In cases where an asymmetric fillet weld has not been prescribed.	≥ 0,5	$h \le 2\ \text{mm} + 0{,}2\ a$	$h \le 2\ \text{mm} + 0{,}15\ a$	$h \le 1{,}5\ \text{mm} + 0{,}15\ a$
1.17	515	Root concavity	Smooth transition is required.	0,5 to 3 > 3	$h \le 0{,}2\ \text{mm} + 0{,}1\ t$ Short imperfections: $h \le 0{,}2\ t$, but max. 2 mm	Short imperfections: $h \le 0{,}1\ t$ Short imperfections: $h \le 0{,}1\ t$, but max. 1 mm	Not permitted Short imperfections: $h \le 0{,}05\ t$, but max. 0,5 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.18	516	Root porosity	Spongy formation at the root of a weld due to bubbling of the weld metal at the moment of solidification (e. g. lack of gas backing)	≥ 0,5	Locally permitted	Not permitted	Not permitted
1.19	517	Poor restart	—	≥ 0,5	Permitted The limit depends on the type of imperfection occurred due to restart.	Not permitted	Not permitted
1.20	5213	Insufficient throat thickness	Not applicable to processes with proof of greater depth of penetration 	0,5 to 3 > 3	Short imperfections: $h \leq 0{,}2$ mm + 0,1 a Short imperfections: $h \leq 0{,}3$ mm + 0,1 a, but max. 2 mm	Short imperfections: $h \leq 0{,}2$ mm Short imperfections: $h \leq 0{,}3$ mm + 0,1 a, but max. 1 mm	Not permitted Not permitted
1.21	5214	Excessive throat thickness	The actual throat thickness of the fillet weld is too large. 	≥ 0,5	Permitted	$h \leq 1$ mm + 0,2 a, but max. 4 mm	$h \leq 1$ mm + 0,15 a, but max. 3 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.22	601	Stray arc	—	≥ 0,5	Permitted, if the properties of the parent metal are not affected.	Not permitted	Not permitted
1.23	602	Spatter	—	≥ 0,5	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection
1.24	610	Temper colour (Discolouration)	—	≥ 0,5	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2 Internal imperfections							
2.1	100	Cracks	All types of crack except microcracks and crater cracks	≥ 0,5	Not permitted	Not permitted	Not permitted
2.2	1001	Microcracks	A crack usually only visible under the micro-scope (50 ×)	≥ 0,5	Permitted	Acceptance depends on type of parent metal with particular reference to crack sensitivity	Acceptance depends on type of parent metal with particular refer-ence to crack sensitivity
2.3	2011 2012	Gas pore Uniformly distributed porosity	The following conditions and limits for imper-fections shall be fulfilled. See also Annex A for information.				
			a1) Maximum dimension of the area of the imperfections (inclusive of systematic imperfec-tion) related to the projected area	≥ 0,5	For single layer: ≤ 2,5 % For multi-layer: ≤ 5 %	For single layer: ≤ 1,5 % For multi-layer: ≤ 3 %	For single layer: ≤ 1 % For multi-layer: ≤ 2 %
			NOTE The porosity in the project area depends on the numbers of layers (volume of the weld).				
			a2) Maximum dimension of the cross-sectional area of the imperfections (inclusive of systematic imperfection) related to the fracture area (only applicable to test pieces: production test, welder or procedure qualification tests)	≥ 0,5	≤ 2,5 %	≤ 1,5 %	≤ 1 %
			b) Maximum dimension for a single pore for	≥ 0,5			
			— butt welds		$d \leq 0{,}4\,s$, but max. 5 mm $d \leq 0{,}4\,a$, but max. 5 mm	$d \leq 0{,}3\,s$, but max. 4 mm $d \leq 0{,}3\,a$, but max. 4 mm	$d \leq 0{,}2\,s$, but max. 3 mm $d \leq 0{,}2\,a$, but max. 3 mm
			— fillet welds				

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.4	2013	Clustered (localized) porosity	Reference length for l_p is 100 mm. The total gas pore area within the cluster is represented by a circle of diameter d_A surrounding all the gas pores. The requirement for a single gas pore shall be met by all the gas pores within this circle. A permitted porous area shall be local. The possibility of the pore cluster masking other imperfections shall be taken into consideration. If D is less than d_{A1} or d_{A2}, whichever is smaller, then the total gas pore area is represented by a circle of diameter d_{AC}, where $d_{AC} = d_{A1} + d_{A2} + D$. Systematic cluster porosity is not permitted. d_A corresponds to d_{A1}, d_{A2} or d_{AC}, whichever is applicable.	≥ 0,5	$d_A \leq 25$ mm or $d_{A,\max} \leq w_p$	$d_A \leq 20$ mm or $d_{A,\max} \leq w_p$	$d_A \leq 15$ mm or $d_{A,\max} \leq w_p/2$

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.5	2014	Linear porosity	— butt welds	≥ 0,5	$h \le 0{,}4\,s$, but max. 4 mm $l \le s$, but max. 75 mm	$h \le 0{,}3\,s$, but max. 3 mm $l \le s$, but max. 50 mm	$h \le 0{,}2\,s$, but max. 2 mm $l \le s$, but max. 25 mm
			— fillet welds	≥ 0,5	$h \le 0{,}4\,a$, but max. 4 mm $l \le a$, but max. 75 mm	$h \le 0{,}3\,a$, but max. 3 mm $l \le a$, but max. 50 mm	$h \le 0{,}2\,a$, but max. 2 mm $l \le a$, but max. 25 mm
			Case 1 ($D > d_2$) Case 2 ($D < d_2$) Reference length for l_p is 100 mm. For case 1: $d_1 = h$ For case 2: $d_1 + d_2 + D = h$				

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.6	2015	Elongated cavity	— butt welds	≥ 0,5	$h \le 0{,}4\,s$, but max. 4 mm $l \le s$, but max. 75 mm	$h \le 0{,}3\,s$, but max. 3 mm $l \le s$, but max. 50 mm	$h \le 0{,}2\,s$, but max. 2 mm $l \le s$, but max. 25 mm
	2016	Wormholes	— fillet welds	≥ 0,5	$h \le 0{,}4\,a$, but max. 4 mm $l \le a$, but max. 75 mm	$h \le 0{,}3\,a$, but max. 3 mm $l \le a$, but max. 50 mm	$h \le 0{,}2\,a$, but max. 2 mm $l \le a$, but max. 25 mm
2.7	202	Shrinkage cavity		≥ 0,5	Short imperfections permitted, but not breaking of the surfaces: butt welds: $h \le 0{,}4\,s$, but max. 4 mm fillet welds: $h \le 0{,}4\,a$, but max. 4 mm	Not permitted	Not permitted
2.8	2024	Crater pipe	 The larger value of h or l will be measured	0,5 to 3 > 3	h or $l \le 0{,}2\,t$ h or $l \le 0{,}2\,t$, but max. 2 mm	Not permitted	Not permitted
2.9	300	Solid inclusions	— butt welds	≥ 0,5	$h \le 0{,}4\,s$, but max. 4 mm $l \le s$, but max. 75 mm	$h \le 0{,}3\,s$, but max. 3 mm $l \le s$, but max. 50 mm	$h \le 0{,}2\,s$, but max. 2 mm $l \le s$, but max. 25 mm
	301	Slag inclusions					
	302	Flux inclusions	— fillet welds	≥ 0,5	$h \le 0{,}4\,a$, but max. 4 mm $l \le a$, but max. 75 mm	$h \le 0{,}3\,a$, but max. 3 mm $l \le a$, but max. 50 mm	$h \le 0{,}2\,a$, but max. 2 mm $l \le a$, but max. 25 mm
	303	Oxide inclusions					

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.10	304	Metallic inclusions other than copper	— butt welds	≥ 0,5	$h \le 0,4\,s$, but max. 4 mm	$h \le 0,3\,s$, but max. 3 mm	$h \le 0,2\,s$,but max. 2 mm
			— fillet welds	≥ 0,5	$h \le 0,4\,a$, but max. 4 mm	$h \le 0,3\,a$, but max. 3 mm	$h \le 0,2\,a$, but max. 2 mm
2.11	3042	Copper inclusions	—	≥ 0,5	Not permitted	Not permitted	Not permitted
2.12	401	Lack of fusion (incomplete fusion)		≥ 0,5	Short imperfections permitted: butt welds: $h \le 0,4\,s$, but max. 4 mm fillet welds: $h \le 0,4\,a$ but max. 4 mm	Not permitted	Not permitted
	4011	Lack of side wall fusion					
	4012	Lack of interrun fusion					
	4013	Lack of root fusion					

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.13	402	Lack of penetration	T-joint (fillet weld)	> 0,5	Short imperfection: $h \le 0,2\,a$, but max. 2 mm	Not permitted	Not permitted
			T-joint (partial penetration)	≥ 0,5	Short imperfections: butt joint: $h \le 0,2s$ or i, but max. 2 mm T-joint: $h \le 0,2a$, but max. 2 mm	Short imperfections: butt joint: $h \le 0,1\,s$ or i, but max. 1,5 mm fillet joint: $h \le 0,1\,a$, but max. 1,5 mm	Not permitted
			Butt joint (partial penetration)	≥ 0,5	Short imperfection: $h \le 0,2\,t$, but max. 2 mm	Not permitted	Not permitted
			Butt joint (full penetration)				

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels			
					D	C	B	
3 Imperfections in joint geometry								
3.1	507	Linear misalignment	The limits relate to deviations from the correct position. Unless otherwise specified, the correct position is that when the centrelines coincide (see also Clause 1). t refers to the smaller thickness.					
	5071	Linear misalignment between plates		0,5 to 3	$h \le 0{,}2$ mm + 0,25 t	$h \le 0{,}2$ mm + 0,15 t	$h \le 0{,}2$ mm + 0,1 t	
				> 3	$h \le 0{,}25\ t$ but max. 5 mm	$h \le 0{,}15\ t$, but max. 4 mm	$h \le 0{,}1\ t$, but max. 3 mm	
			Plates and longitudinal welds					
	5072	Transversely circular welds at cylindrical hollow sections		≥ 0,5	$h \le 0{,}5\ t$, but max. 4 mm	$h \le 0{,}5\ t$, but max. 3 mm	$h \le 0{,}5\ t$, but max. 2 mm	
			Circumferential welds					
3.2	617	Incorrect root gap for fillet welds	Gap between the parts to be joined. Gaps exceeding the appropriate limit may, in certain cases, be compensated for by a corresponding increase in the throat thickness.	0,5 to 3	$h \le 0{,}5$ mm + 0,1 a	$h \le 0{,}3$ mm + 0,1 a	$h \le 0{,}2$ mm + 0,1 a	
				> 3	$h \le 1$ mm + 0,3 a, but max. 4 mm	$h \le 0{,}5$ mm + 0,2 a, but max. 3 mm	$h \le 0{,}5$ mm + 0,1 a, but max. 2 mm	

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels			
					D	C	B	
4 Multiple imperfections								
4.1	None	Multiple imperfections in any cross section	$h_1 + h_2 + h_3 + h_4 = \sum h$	0,5 to 3	Not permitted	Not permitted	Not permitted	
				> 3	Maximum total height of imperfections: $\sum h \le 0{,}4\,t$ or $\le 0{,}25\,a$	Maximum total height of imperfections: $\sum h \le 0{,}3\,t$ or $\le 0{,}2\,a$	Maximum total height of imperfections: $\sum h \le 0{,}2\,t$ or $\le 0{,}15\,a$	
			$h_1 + h_2 + h_3 = \sum h$					

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
4.2	None	Projected or cross-sectional area in longitudinal direction	Case 1 ($D > l_3$) $h_1 \times l_1 + h_2 \times l_2 + h_3 \times l_3 = \Sigma h \times l$ Case 2 ($D < l_3$) $h_1 \times l_1 + h_2 \times l_2 + \left(\frac{h_2 + h_3}{2}\right) \times D + h_3 \times l_3 = \Sigma h \times l$ The sum of the areas $\Sigma h \times l$ shall be calculated as a percentage to the evaluation area $l_p \times w_p$ (case 1). If D is smaller than the shorter length of one of the neighbouring imperfections, the full connection of the two imperfections shall be applied to the sum of imperfections (case 2). See also Annex A for information.	≥ 0,5	$\Sigma h \times l \leq 16\ \%$	$\Sigma h \times l \leq 8\ \%$	$\Sigma h \times l \leq 4\ \%$

Table 12 — Maximum height of the weld seam for SAW tubes

Wall thickness T (mm)	Maximum height of the outside and inside weld seam (mm)
$T \leq 12,5$	3
$T > 12,5$	4

SECTION 11	Magnetic Particle test procedure

IOP-MPI-2023263-01
MAGNET EXAMINATION INSTRUCTION

Project: **123A90A - Base Load Power Hub Platform**

Client: **Rosetti Marino SpA**

Revision matrix(revised where underlined)

1	16/01/2024	Gianessi A.	Guzzon A.	Ponte V.
0	07/12/2023	Gianessi A.	Guzzon A.	Ponte V.
Rev.	**Date**	**Issued**	**Checked**	**Approved**

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1. SCOPE

This procedure is intended for the magnetic particle examination of welds and HAZ on longitudinal welds of pipes in ferromagnetic steel and for the dimensioning of indications by means of comparison with Acceptance Standards .

This procedure describes techniques for Wet Magnetic Particles Examination for detecting cracks and other discontinuities that are open to the surface of the part, employing AC Yoke Technique only.

- Quality level in accordance to ISO5817 : Level B
- Above indicate ISO5817 Level B require that MT examination shall be made at least in accordance with EN ISO 17638
- Above indicate ISO5817 Level B require that applicable MT examination acceptance criteria shall be in accordance with EN ISO 23278 level 2X

2. REFERENCE DOCUMENTS

- EN ISO 17638:2016: Non destructive testing of welds. Magnetic particle testing
- EN ISO 23278:2015: Non destructive testing of welds. Magnetic particle testing of welds. Acceptance criteria.
- ISO 9712:2022 : Qualification and Certification of NDT Personnel.
- EN ISO 3059:2013: Non-destructive testing – Penetrant testing and magnetic particle testing – Viewing conditions.
- EEMUA 158:2014: Construction Specification for fixed offshore structures

3. PERSONNEL QUALIFICATION

Examination shall be carried out by NDE examiners holding a level II or III qualification in accordance with the following document or other equivalent standard:

- ISO 9712

The personnel employed for the execution of NDE Examination shall have an annual vision test to assure:

- Near vision acuity: the examination should ensure natural or corrected near distance acuity such that they are capable of reading standard J-1 letters on standard Jaeger test type charts or Times Roman No.4,5 (having a height of 1,6mm) or equivalent characters to a distance of not less than 30 cm with one or both eyes. Equivalent near vision tests are acceptable
- Color contrast differentiation: the examination should demonstrate the capability of distinguishing and differentiating contrast among colors or shades of gray (reading of Ishiara test or equivalent)

4. EXTENT OF EXAMINATION

Extent of Examination shall be as follow:

- From outside: 100% on longitudinal welds after weld completion

- From inside:
  - For diameter equal to or greater than 800 mm, 100% on longitudinal welds after weld completion
  - For diameter less than 800 mm, the welds shall be inspected for a length equal to the outer diameter at both pipe ends

The width of the surface shall include the weld metal and the adjacent parent metal up to a distance of 15 mm on each side of the weld, to include a theoretical 5 mm width of heat affected zone (HAZ), in compliance to EN ISO 17638 paragraph 5.6.2.

5. TIME OF EXAMINATION

Magnetic Particle Examination shall be carried out at least 24 hours following completing of welding. When PWHT is performed, final Magnetic Particle Examination shall be carried out when all heat treatments have been completed.

6. SURFACE CONDITIONS

The surface to be inspected shall be cleaned from any dirt, oil, grease, scales, slag and any other contaminations which may interfere with the scanning or interpretation of the results.
Base material surface adjacent to the weld, shall be prepared to a distance at least 25 mm on both side of the weld: shall be free of weld spatter, rust or other foreign particles which could interfere with examination and this could be obtained by sandblasting or light grinding.
The weld surface should be free of irregularities that could impede examination, offer reasonably smooth surface with minimal undercut, rippling and spatter and should merge smoothly into the adjacent base materials. “As welded” weld surface condition is acceptable to perform correctly the examination. If undercuts, imperfect shape, incorrect weld toe or other surface discontinuities are clearly visible before examination start, these shall be removed with adequate operations (grinding, welding etc.).

7. EQUIPMENT

Magnetizing equipment.

The equipment used is an hand-held AC (alternative current) portable electromagnet that produce a magnetic field between the two poles.
Use of permanent magnets is not permitted.
The equipment shall be annually checked and, if necessary, re-calibrated.
Periodical functional checks may be carried out by a lift test as follow:
The electromagnetic yoke shall be capable of supporting a steel plate having a minimum mass of 4,5 kg, with the magnet poles set at their recommended spacing. The major dimension of the plate shall be greater than the pole spacing of the electromagnet.

Generally CGM TWIST 24-0-24 Yoke type and TR. 220/48 V alternative current generator or equivalent shall be used but other equivalent could be used if properly calibrated in accordance to the herein listed requirements.

Magnetic Particle Materials

Non fluorescent Wet magnetic particles (black colored) suspended in a suitable liquid medium (Kerosenoil) shall be used; they shall form a uniform suspension when agitated.
The particles are premixed with the suspending vehicle by the supplier and are available in pressurized spray bottles or tanks and ready to use.
The temperature range of the wet particle suspension and the surface of the test object should be within 0°C ≤ T ≤ 57°C
Generally CGM LK35, or equivalent shall be used. Products of other manufacturers may be employed, but mixing of products from different brand is not allowed.
Magnetic particle material, brand, type used shall be reported in the examination report (see form shown in Attachment N. 1).

8. EXAMINATION SEQUENCE

Magnetization

The part to be inspected must be magnetized in at least two different directions, approximately at right angles to each other. The examination must be carried out with enough overlap to guarantee covering 100% of the area under examination.

Magnetic field strength and magnetic field direction shall be checked by using the field measurer, as in Figure 1, placed on the surface under examination.

When magnetization is induced, a clear line of magnetic particles should appear on the coppered surface of the indicator. If a clearly defined line does not appear, the magnetization method must be changed or refined until it appears.

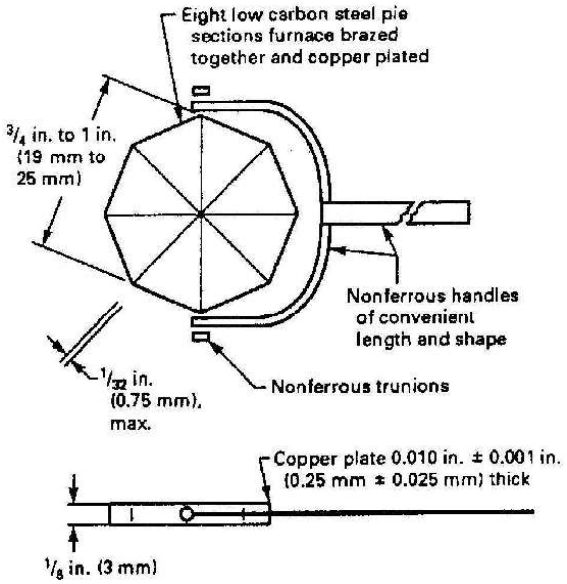


Figure 1 : Magnetic field indicator

Wet Particle application

Wet magnetic particles shall be applied either by spraying or flowing over the areas to be inspected immediately prior to and during magnetization. The magnetization must be constantly maintained during the examination and during the removal of excess wet particles, if necessary (Continuous Method).

Only upon completion of these operations, namely detector application, removal of excess detector and examination, the magnetic field can be eliminated.

Examination coverage

The effective testing area is the one shadow indicated on Fig.2. All examinations shall be conducted with sufficient field overlap to ensure 100% coverage at the required sensitivity in accordance to parameters indicated in Figures 2 and 3.

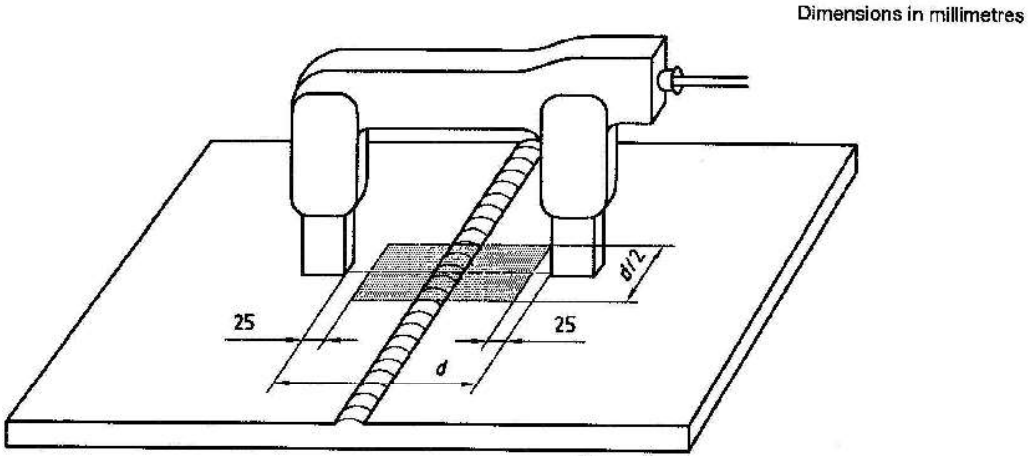
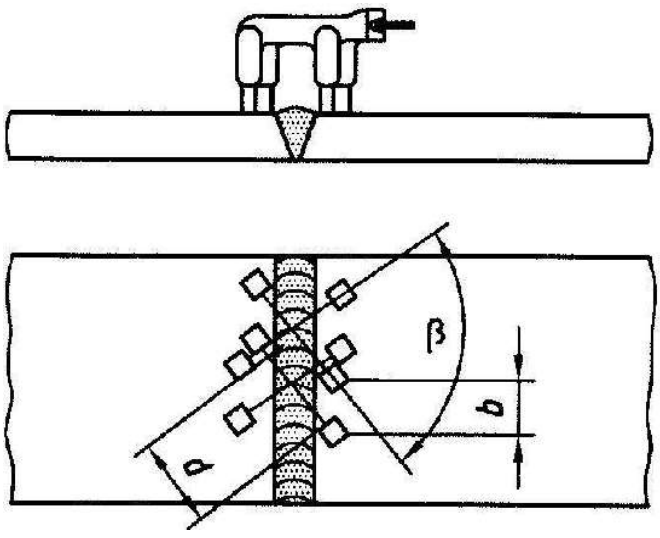


Figure 2 : Effective testing area



d ≥ 150 mm

b ≤ d/2

ß ≈ 90°±30°

Figure 3 : Magnetizing overlap technique

Viewing conditions

The inspection shall be performed in daylight viewing conditions or with artificial light. Use of monochromatic sources such as sodium lamps is not permitted. The test surface must

be illuminated uniformly. Flashes and reflections should be avoided. The minimum light intensity at the examination surface shall be 500 lux.

Interpretation of indication

The following definitions have to be applied

- *Linear indication*: An indication in which the length is at least three times the width.
- *Non-linear indication*: An indication of circular or elliptical shape with a length less than three times the width.
- *Aligned indication*: Three or more indications in a line, separated by 2 mm or less edge-to-edge.
- *Open indication*: An indication visible after removal of the magnetic particles or that can be detected by the use of contrast dye penetrant.
- *Non-open indication*: An indication that is not visually detectable after removal of the magnetic particles or that cannot be detected by the use of contrast dye penetrant.
- *Relevant indication*: An indication that is caused by a condition or type of discontinuity that requires evaluation. Only indications which have any dimension equal or greater than 1,5 mm shall be considered relevant.

Post inspection cleaning and demagnetization

No post inspection cleaning or demagnetization is required

9. ACCEPTANCE CRITERIA

The Acceptance Level for welds are specified in table below: table15 form EEMUA 158 3rd ed.
All indications exceeding -10dB DAC shall be investigate to the extent that they can be evaluated in terms of the Acceptance Criteria. All indications exceeding Acceptance Criteria shall be reported.

Table 15 Ultrasonic testing acceptance criteria

Type of flaw	Acceptance level (see *Note*)	
Three dimensional flaws (i.e. slag, porosity).	a)	Indications greater than 100% of the reference curve shall be reported. The maximum acceptable length shall be $\frac{t}{3}$ or 20mm, whichever is the smaller.
	b)	Indications less than 100% but greater than 50% of the reference curve shall be reported. The maximum acceptable length shall be 2t or 50mm, whichever is the smaller.
	c)	Indications less than 50% of the reference curve are acceptable.
Two dimensional flaws other than cracks (i.e. lack of side wall fusion, lack of inter-run fusion).	a)	Not acceptable if the indications exceed the reference curve, or lie within 6mm of either surface, regardless of amplitude.
	b)	Indications more than 6mm from either surface which are less than 100% but greater than 50% of the reference curve shall be reported. The maximum acceptable length shall be $\frac{t}{3}$ or 20mm, whichever is the smaller.
	c)	Indications more than 6mm from either surface which are less than 50% of the reference curve are acceptable.
Cracks or suspect cracks.	Not acceptable.	
Incomplete penetration or lack of root fusion in single-sided welds.	Not acceptable.	
Single point reflectors: (indications which show Pattern 1 behaviour in both directions, as per EN ISO 17640:2010).	If separated by a distance of 25mm or greater, acceptable regardless of amplitude. If separated by less than 25mm, indications with an amplitude greater than 100% of the reference curve shall be reported.	

Note: t = thickness of member under test.

10. REPAIR

Local grinding may be used to reduce or remove imperfections which are the cause of unacceptable indications, while all repairs foreseen use of welding processes, shall be carried out in accordance with established procedures.

Repair By Welding

Before repair welding, the defects shall be completely removed. Each unacceptable discontinuity shall be marked on the weld, over the discontinuity, for its entire length directly. The depth from the surface and indication rating shall be marked on base metal next to the defect.
The excavated area shall have smooth transitions to the metal surface and allow a good access for both NDT and subsequent repair welding. After excavation, complete removal of the defects shall be confirmed by MT or PT. PWHT shall be performed after repair by welding. The excavated groove shall extend minimum 25 mm after both start and end of

defect, measured at defect depth. Defects spaced less than 100 mm shall be repaired as one continuous defect.
After repair welding the complete weld (i.e. the repaired area plus at least 100 mm on each side) shall be subjected at least to the same NDT as specified for the original weld.
Repair welding may only be carried out once in the same area: the second require customer involvement.

Re-welding
Re-welding shall be performed in accordance with the procedures and WPS utilized for the original weld, and includes complete removal of the original weld and HAZ

11. MAGNETIC PARTICLE EXAMINATION REPORT

A report which clearly identifies the work and the area of inspection shall be completed by the MT operator at the time of inspection. Examination results for each weld shall be reported on the Magnetic Particle Report Form. The Magnetic Particle Report (sample form) is enclosed as Attachment 1 to this procedure: any change or update to this form, does not invalidate this procedure as long all therein information are maintained.

The report shall be signed by the Quality Control Manager and when required by the Client's Inspector and other Testing Authority.

The MT report, which are acceptable, need only to contain sufficient information to identify the weld, the operator (signature), and the acceptability of the weld.

When a defect shall be identified and repair shall be required, the relevant report issued at completion of the inspection operation will have to record both inspections prior and after the repair of the defect.

Evaluation of retested repaired weld areas shall be tabulated on a new line on the report form. If the original report form is used, an R1, R2, ...Rn shall prefix the indication number. If additional report forms are used, the R number shall prefix the report number.

All NDT shall be properly documented in such a way that the performed testing can be easily retraced at a later stage. The reports shall identify the unacceptable defects present in the tested area, and a conclusive statement as to whether the weld satisfies the acceptance criteria or not.

The report shall include a reference to the applicable standard, NDT procedure and acceptance criteria. In addition, as a minimum, the following information must be given or easily retrievable from therein included information:

- object and drawing references
- place and date of examination
- material type and dimensions
- post weld heat treatment, if required
- location of examined areas, type of joint
- welding process used

- name and certification level of the operator carrying out the testing
- surface conditions
- contract requirements e.g. order no., specifications, special agreements etc.
- sketch showing location and information regarding detected defects
- extent of testing
- test equipment used
- description and location of all recordable indications
- examination results with reference to acceptance level.
- number of repairs to be specified in the report, such as once or twice repairs in the same area.
- type of magnetization equipment
- type of current
- detection media
- demagnetization, if required.
- lifting force
- other means of magnetic field strength verification

The report shall be such that there is no doubt about what is tested, where it has been carried out and give a clear and exact description of reportable defect location.

The format of report is not a reason for rejection as long all above indicated information are included and any change induced by addition doesn't be considered a rejection of those already issued

ATTACHMENT N. 1

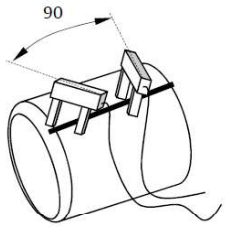
CIMOLAI S.p.A.	CERTIFICATO DI CONTROLLO MAGNETOSCOPICO Magnetic Particles Examination Report	Cert. Nr. / Report nr. Foglio / Sheet Data / Date

COSTRUTTORE / Manufacturer	COMM. COSTRUTT. / Manufactorer's Job	ATTREZZ. IMPIEGATA / Equipment employed
CLIENTE / Customer	COMM. CLIENTE / Customer's Job -	Costruttore / Manufacturer Tipo / Type Sist. di Magn. / Sist. of Magn. Corrente / Current Forza di Sollev. / Lifting Power Distanza Puntali / Prodes space Verifica / Verification
DESTINATARIO / Consignee	ORDINE DESTINATARIO / Consignee Order	
ITEM / Item	LUOGO DELL'ESAME / Place of Examination	
MARCA / Serial nr.	DATA DELL'ESAME / Date of Examination	Note / Remarks

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI
This is to certify that the test has been performed according to indicated referene code, and the results are those recorded

OGGETTO DEL PRESENTE CERTIFICATO / Subject of this certificate **CONTROLLO MAGNETOSCOPICO SALDATURA TESTA-TESTA** **MAGNETIC PARTICLE INSPECTION OF BUTT WELD**		PROCEDURE / Procedure STANDARD DI ACCETTAZIONE / Acceptance Standards	
		MATERIALE BASE / Base Material	SPESSORE / Thickness
DISEGNO DI RIFER. / Reference Drawing -	P.C.Q. / Q.C.P.	COND. SUP. Surface Conditions	MAT. / Base Material Saldatura / Weld
FASE DI LAVORAZIONE / Reference Drawing **(FINAL CHECK)**		PROC DI SALD. / Welding Process TIPO DI GIUNTO / Joint Type ESTENS. DELL'ESAME Extent. Of Examin.	

SCHIZZO DEL PARTICOLARE CONTROLLATO / Sketch of examined particular



A: punto inizio saldatura / welding start point
B: punto fine saldatura / welding end point

RILEVATORE IMPIEGATO
Type of magnetic particles employed

- [ ] FLUORESCENTE / Fluorescent
- [X] A CONTRASTO DI COLORE / Visible
- [ ] SECCO / Dry
- [X] UMIDO / Wet

MARCA / Trade Mark
TIPO / Type
Lotto / Batch

VERNICE DI CONTRASTO
Background paint

MARCA / Trade Mark
TIPO / Type **VECOPLAST**

SMAGNETIZZAZ. / Demagnetization

[ ] SI / Yes [X] NO / No

ESITO / Results

[X] ACCETTABILE / Acceptable [ ] NON ACCETTABILE / Not acceptable

OPERATORE. / Operator	COSTRUTTORE / Manufacturer	ENTE D'ISPEZIONE / Inspect. Auth.	DESTINATARIO / Consignee

CIMOLAI s.p.A.	**CERTIFICATO DI CONTROLLO MAGNETOSCOPICO** **Magnetic Particles Examination Report**	**Cert. Nr. / Report nr.** **Foglio / Sheet** 2 di/of 2 **Data / Date**

COSTRUTTORE / Manufacturer	COMM. COSTRUTT. / Manufactorer's Job	DATA DELL'ESAME / Date of Examination
CLIENTE / Customer	COMM. CLIENTE / Customer's Job	ITEM / Item
DESTINATARIO / Consignee	ORDINE DESTINATARIO / Consignee Order	MARCA / Serial nr.

REGISTRAZIONI DELLE INDICAZIONI RILEVATE - Record of the recorder indications

Num. CND NDE Id.	Item Destinatario Consignee item	Marca Mark	Sigla Saldatura WPS utilizzata WELD ID used WPS	N. Indicaz. Indic. Nr	Dist. Da 0-MPI / Start from 0-Mpi		Lungh. Lenght (mm)	Difetto Defect	GIUDIZIO JUDGEM. (**)
					Rifer. Di partenza Start point ref. (0-MPI)	Misura Value (mm)			

(**) **A = ACCETTABILE / Acceptable** **NA = NON ACCETTABILE / Not Acceptable**

OPERATORE. / Operator	COSTRUTTORE / Manufacturer	ENTE D'ISPEZIONE / Inspect. Auth.	DESTINATARIO / Consignee

SECTION 12	Ultrasonic test procedure

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IOP-UT-2023263-01
ULTRASONIC EXAMINATION INSTRUCTION

Project: **123A90A - Base Load Power Hub Platform**

Client: **Rosetti Marino SpA**

Revision matrix (revised where underlined)

1	16/01/2024	Gianessi A.	D'Anna E.	Ponte V.
0	07/12/2023	Gianessi A.	D'Anna E.	Ponte V.
Rev.	**Date**	**Issued**	**Checked**	**Approved**

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1. SCOPE

This procedure is intended for the manual ultrasonic pulse echo technique examination of groove welds and HAZ on longitudinal welds of pipes in ferritic steel having thickness between 10 mm and 100 mm inclusive and for the dimensioning of indications by means of comparison with Acceptance Standards .

This Procedure is in accordance with EN 17640. As this standard specify a range of available selections, the following has been chosen:

- Quality level in accordance to ISO5817 : Level B
- Above indicate ISO5817 Level B require that UT examination shall be made at least in accordance with EN ISO 17640 testing level B
- Above indicate ISO5817 Level B require that applicable UT examination acceptance criteria shall be in accordance with EN ISO 11666 level 2

2. REFERENCE DOCUMENTS

- EN ISO 17640: 2017: Ultrasonic Examination of welded joints. Non-destructive testing of welds – Ultrasonic testing
- EN ISO 11666:2018 Acceptance levels Non-destructive testing of welds – Ultrasonic testing
- EN ISO 23279:2017: Characterization of indications in welds
- ISO 9712:2021 : Qualification and Certification of NDT Personnel.
- EN 12668: 2010-2013 All parts: Characterization and verification of ultrasonic examination equipment
- K559-2254-MT-SPE-001 rev.01: Structural Fabrication Specification Base Load Power Hub (BLPH)

3. PERSONNEL QUALIFICATION

Examination shall be carried out by NDE examiners holding a level II or III qualification in accordance with the following document or other equivalent standard:

- ISO 9712

The personnel employed for the execution of NDE Examination shall have an annual vision test to assure:

- Near vision acuity: the examination should ensure natural or corrected near distance acuity such that they are capable of reading standard J-1 letters on standard Jaeger test type charts or Times Roman No.4,5 (having a height of 1,6mm) or equivalent characters to a distance of not less than 30 cm with one or both eyes. Equivalent near vision tests are acceptable
- Color contrast differentiation: the examination should demonstrate the capability of distinguishing and differentiating contrast among colors or shades of gray (reading of Ishiara test or equivalent)

4. EXTENT OF EXAMINATION

From outside on 100% of longitudinal pipe welds after weld completion have to\ be examined: full skip from both sides of weld.
Ultrasonic examination shall include weld and parent material for at least 10 mm on each side of the weld or heat affected zone (HAZ), whichever is greater.
The base metal adjacent to the weld, to the extent having width of the scanning area for angle probes, have to be examined with straight beam for laminations and transverse defects that could interfere with examination of the weld.

5. TIME OF EXAMINATION

Ultrasonic Examination shall be carried out at least 24 hours following completing of welding. When PWHT is performed, final Ultrasonic Examination shall be carried out when all heat treatments have been completed.
For Steels with R_e < 360 MPa are allowed to testing after 24h, if the rate of defects is low.
The first 5% of the tested seams, per method and workstation, shall be checked after 48h. Thereafter, the time of examination could be lowered to 24h.

6. SURFACE CONDITIONS

The surface to be inspected shall be cleaned from any dirt, scales, slag and any other contaminations which may interfere with the scanning or interpretation of the results.
Base material surface adjacent to the weld, shall be prepared to a distance at least allowing the full skip scanning of the shallowest angle transducer on either side of the weld: shall be free of weld spatter, rust or other foreign particles which could interfere with probe coupling and this could be obtained by sandblasting or light grinding.
“As welded” weld surface condition is acceptable to perform correctly the examination.
If undercuts, imperfect shape, incorrect weld toe or other surface discontinuities are clearly visible before examination start, these shall be removed with adequate operations (grinding, welding etc.).

7. COUPLANT

Glycerin, gel, special paste or other similar products may be used. The total chlorine and sulphur content shall be less than 1000 ppm.
Usually Cimolai uses C.G.M. type U-49 or Sichozell, made by Henkel, which shall be mixed with water (dilution Approx 1:40). Similar products could be otherwise used, providing the couplant used during examination is the one used for calibration.

8. ULTRASONIC EQUIPMENT

Instrument. \

The UT instrument shall be the pulse-echo type suitable for use with transducers oscillating at frequencies between 1 and 6 MHz. The display shall be an “A” scan rectified video trace.

A pulse-echo instrument calibrated annually by a qualified vendor, in accordance with ASTM E 317 or EN12668-1 shall be employed. Moreover, recorded linearity checks for ultrasonic equipment according with Appendix A, should be carried out at the beginning of each period of extended use but not more than every 3 months.

The linearity of the time base shall be within 2% over the whole range, i.e. the echoes do not deviate by more than 2% of the time base range from their true position. The amplifier shall be linear to an accuracy of ±1 dB at any point within the range 20% to 80% full screen height.

Cimolai normally uses one or more of the following equipments, but other equivalent could be used if properly calibrated in accordance to the herein listed requirements:

- GE Model USM GO Advanced GE Model USN 60 SW
- KRAUTKRAMER Model USK7 B Krautkramer
- OLYMPUS Model EPOCH 600

Probes

The following probes are normally used, but others could be used if equivalent or for a better evaluation and characterization of indications:

TRADE MARK	MANUFACTURER	FREQUENCY (MHz)	BEAM ANGLE (degree)	CRYSTAL SIZE (mm)	Wave Type	Thickness Range (mm)
MSEB4	Krautkramer	4	0	Dual 3.5 x 10	Compression	< 35mm
B4S	Krautkramer	4	0	Single	Compression	≥35mm
MWB 60-4	Krautkramer	4	60	Single	Shear	< 35mm
MWB 70-4	Krautkramer	4	70	Single	Shear	< 35mm
MWB 45-4	Krautkramer	4	45	Single	Shear	< 35mm
SWB 60-2	Krautkramer	2	60	Single	Shear	≥35mm
SWB 70-2	Krautkramer	2	70	Single	Shear	≥35mm
SWB 45-2	Krautkramer	2	45	Single	Shear	≥35mm

Ultrasonic equipment checks

Other equipment checks, in addition to those previous indicated, shall be performed in as per the following table, in accordance to EN12668-3. This checks doesn’t need to be recorded

Check	Frequency
Linearity of timebase	Weekly
Linearity of equipment gain	Weekly
Probe index	Daily
Beam angle	Daily
Physical state and external aspects	Daily
Sensitivity and signal-to-noise ratio	Weekly
Pulse duration	Weekly

9. EXAMINATION OF FULL PENETRATION WELDS

Calibration of range scale and angle determination

The IIW or ISO calibration blocks (K1 or K2; No.1 Reference block of EN12223, or No.2 Reference block of EN 27963), shall be used for calibration of range scale and for angle determination. These calibration blocks shall preferably have the same acoustic properties as the material to be tested. The range (scale) shall be determined depending of thicknesses under testing and shall be appropriate so that to assure the entire volume of weld has been examined.

Reference blocks for calibration of amplification for testing of welds.

For testing of welds, sensitivity setting for the weld examination shall be referred to a Distance/Amplitude Correction (DAC) curve for a series of 3 mm diameter size drilled holes in a suitable calibration block. The curve shall be corrected where necessary for differences between the attenuation and surface condition of the material under test and the test block.

Range and setting sensitivity shall be checked every 4 hours.

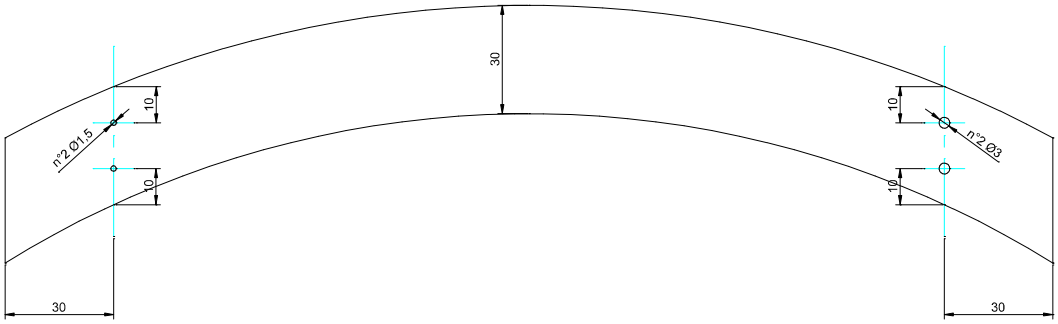
If deviation are found during this checks, the correction given in the following table 2 taken off by ISO 17640 shall be carried out.

Table 2 — Sensitivity and range corrections

Sensitivity		
1	Deviations $\leqslant$ 4 dB	Setting shall be corrected before the testing is continued.
2	Reduction of the sensitivity > 4 dB	Setting shall be corrected and all testing carried out with the equipment over the previous period shall be repeated.
3	Increase in sensitivity > 4 dB	Setting shall be corrected and all recorded indications shall be re-examined.
Range		
1	Deviations $\leqslant$ 2 % of the range	Setting shall be corrected before testing is continued.
2	Deviations > 2 % of the range	Setting shall be corrected and testing carried out with the equipment over the previous period shall be repeated.

Basic calibration blocks to be used shall be as in Fig.2 in according with ANNEX B of EN 583-2. Material from which the block is fabricated shall be of the same product form and equivalent P Number grouping of the material being examined. Alternative block may be

used provided that the alternative reflector(s) produces a sensitivity equal to than the specified reflector(s). The temperature difference during the range and sensitivity setting and during the test shall be within -15/+15 °C.



Construction of reference curve, DAC

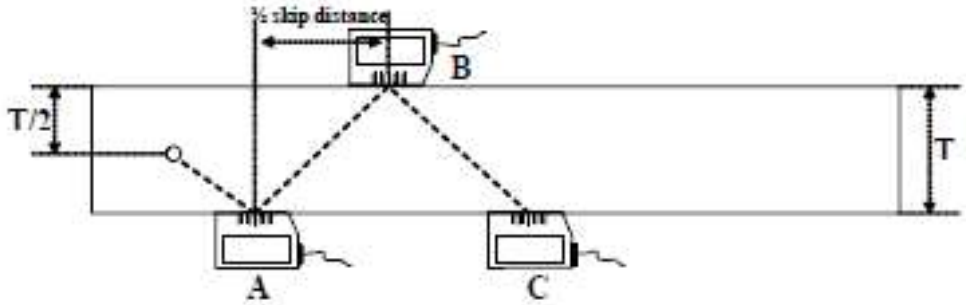
Angle probes:

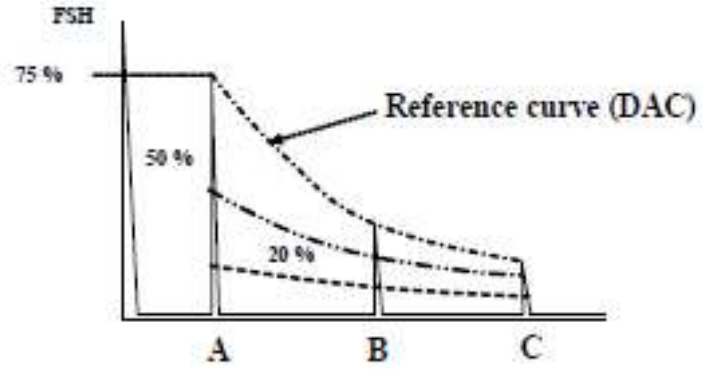
The echo reflected from the drilled hole in the applicable reference block, is maximized and the gain control regulated so that the echo amplitude is 75% of full screen height (FSH).

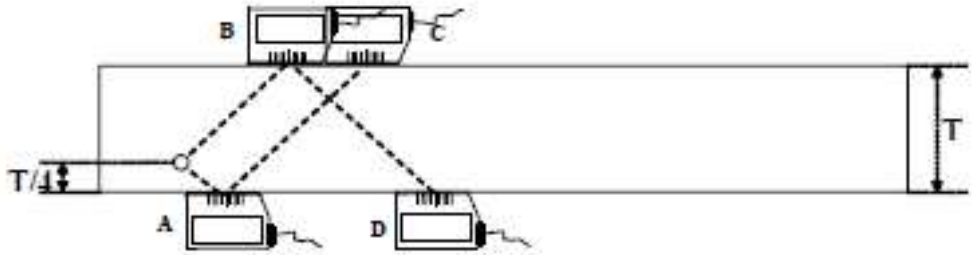
This gain setting is called the primary gain and is to be noted. Without altering the primary gain, the probe is positioned in various skip distances and the respective echo amplitudes are marked on the screen.

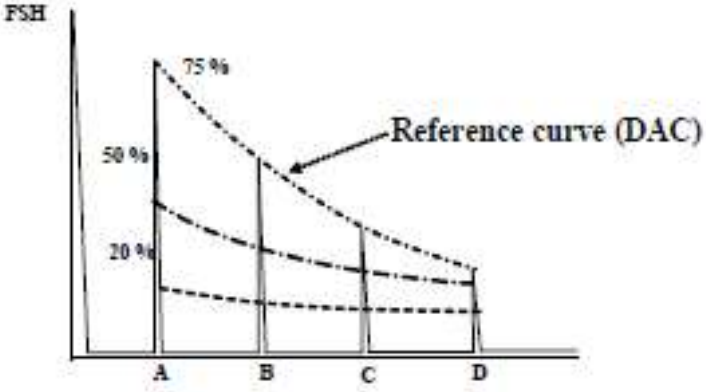
These points are connected with a smooth line with a length, which covers the required scanning area. This is the reference curve (DAC).

The first point of DAC must be selected so that the distance in sound path from the probe index to the drilled hole is not less than 0.6 N where N is the near field length of the relevant probe.

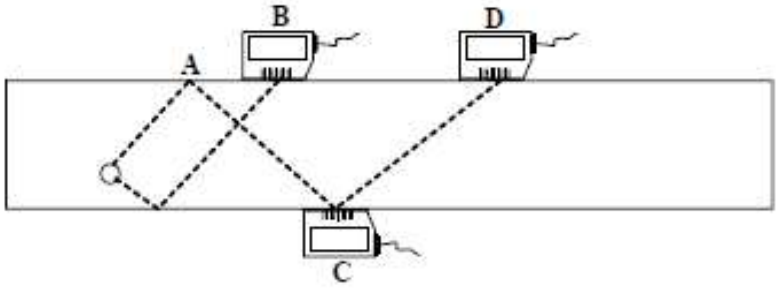

½ skip distance
B
T/2
T
A
C

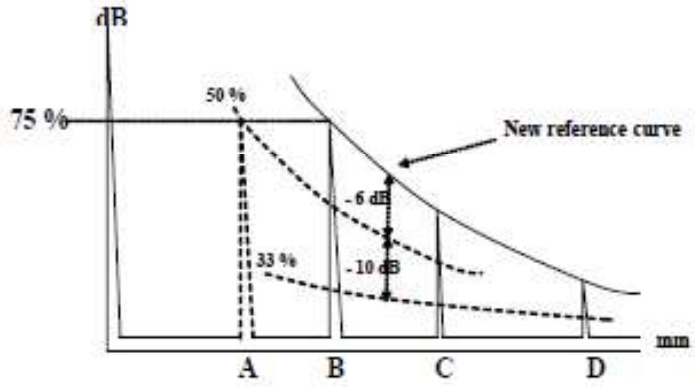

FSH
75 %
Reference curve (DAC)
50 %
20 %
A
B
C


B
C
T
T/4
A
D


FSH
75 %
Reference curve (DAC)
50 %
20 %
A
B
C
D

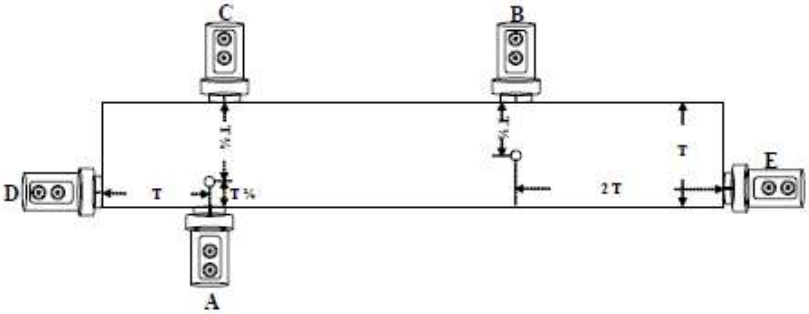
When DAC has been set up it is recommended to draw two additional curves, 33% and 50% of DAC, on the screen. Where DAC by excessive sound paths falls to below 25% of FSH the gain in this area is to be increased and a new DAC must be established, see figure below

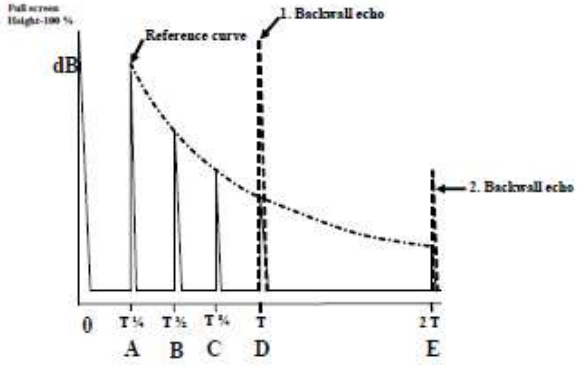




Straight beam probes:

For testing of weld connections using straight beam probes the side drilled hole (SDH) in the reference block is to be used for gain setting as for the angle probes. In order to have relevant DAC, the curve must be established as indicated here following.





Transfer correction:

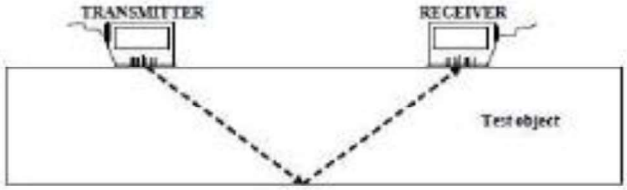
When calibration is not carried out on the piece itself or where reference block is not representative of the surface condition of the part to be examined, any possible difference in attenuation and surface character between the reference block and the object to be tested are to be checked and transfer correction shall be determined as follows:

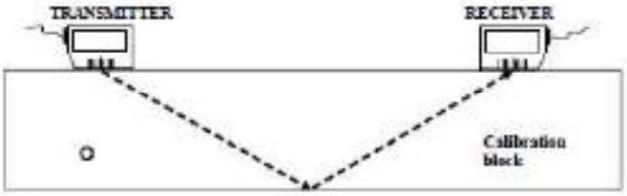
Two angle probes of the same type as those to be utilized during the testing are to be used. The probes are placed on the object to be tested. One of the probes works as a transmitter probe, whilst the other acts as receiver. The first echo is maximized and with the aid of the gain control it is adjusted to reach DAC. The gain setting is noted. Without altering this gain setting the probes are moved to the reference block. The echo is adjusted to reach DAC and the gain setting is noted. Any difference in echo amplitude between the two materials can now be determined with the aid of the gain control.

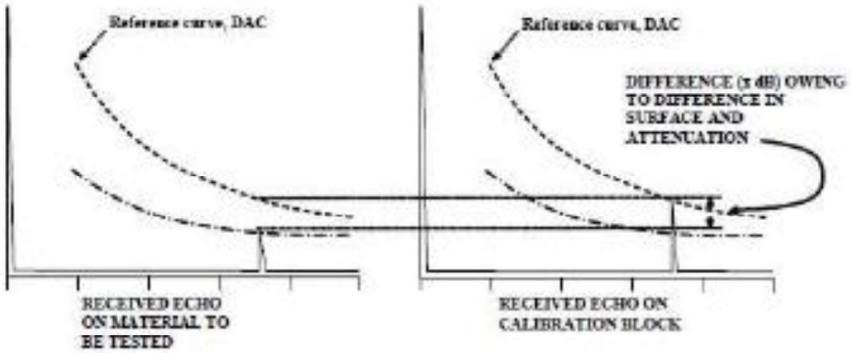
Transfer correction shall be carried out considering the following requirements:

- if the differences are less than 2 dB, correction is not required
- if the differences are greater than 2 dB but smaller than 12 dB they shall be compensate for
- if transfer losses exceed 12 dB, the reason shall be considered and further preparation of the scanning surface shall be carried out, if applicable.

When there are no apparent reasons for high correction values, the attenuation, at various locations on the test object shall be measured. Where it is found to vary significantly, corrective actions must be considered.







The calibration of range scale with straight beam probe is to be carried out with an IIW calibration block, a K2 calibration block or on a defect free area of the material to be tested. The range scale is to be selected such that there are always at least 2 back-wall echoes (reflections) on the screen.

At approximately four-hourly intervals the range scale, probe angle and primary gain must be checked and corrected. Checks shall also be carried out whenever a system parameter is changed or changes in the equivalent settings are suspected.

Calibration time:

Calibration shall be performed, prior to use of the system, in the thickness range under examination. As applicable the calibration shall provide the following measurements: sweep range calibration and Distance Amplitude Correction.

When any part of the examination system is changed, a calibration check shall be made on the basic calibration block to verify that distance range points, sensitivity setting, beam index point, true angle probe satisfy the requirements of the Code. During testing of the weld, the noise level excluding spurious surface conditions, shall remain at least 12 dB below the evaluation level.

At approximately four-hourly intervals the range scale, probe angle and primary gain must be checked and corrected. Checks shall also be carried out whenever a system parameter is changed or changes in the equivalent settings are suspected.
If deviation is found to be >2% of range scale, > 4dB of primary gain setting or >2° of nominal angle probe, the examination carried out with the equipment over the previous period shall be repeated.

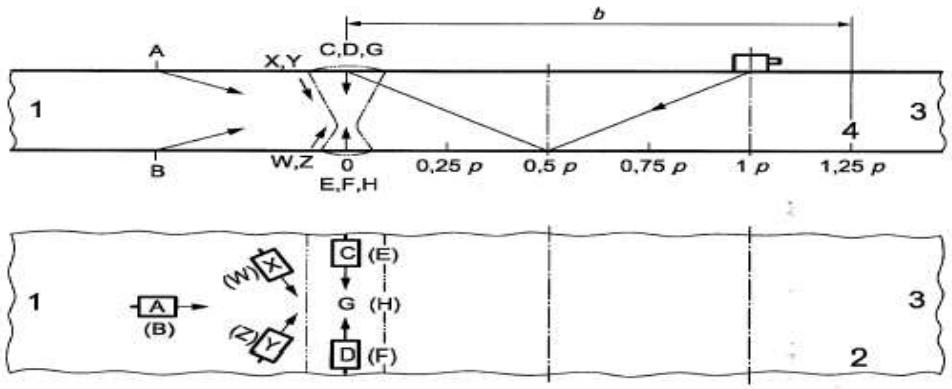
Testing of parent material

The examination is to be performed in order to reveal possible imperfections, which might influence the angle probe testing.
The whole of the area (1.5 × S) which will transfer ultrasound when using angle probes shall be tested. The gain setting shall be calibrated on a defect free place on the parent material. The second back wall echo shall be set to 75% of FSH Imperfections with a cross section larger than the sound beam (loss of back wall echo) shall be reported. The extent of the imperfections is measured with the aid of the 6 dB-drop method when complete loss of back wall echo occurs.

Testing of weld

Welds shall comply with ISO 5817 level B, so Level B in compliance with EN17640 shall be used (See Figure A.1 and Table A.1).

- Primary reference level. Primary reference level is DAC + Transfer Correction
- Scanning sensitivity. Scanning sensitivity is Primary reference level + 10 dB
  Evaluation of discontinuities shall be performed with respect to the primary reference level.



Key

1	position 1
2	position 2
3	position 3
4	position 4
A, B, C, D, E, F, G, H, W, X, Y, Z	probe positions
b	scanning zone width (SZW) related to skip distance, *p*
p	full skip distance

Figure A.1 — Butt joints in plates and pipes

Table A.1 — Butt joints in plates and pipes (for symbols, see key to Figure A.1)

Testing level	Thickness of the parent material	Longitudinal indications						Transverse indications			
		Required number of				Total number of scans	Notes	Required number of		Total number of scans	Notes
		Probe angles	Probe positions	Scanning zone width	Probe positions			Probe angles	Probe positions		
	mm	L-scans			N-scans			T-scans			
A	$8 \leqslant t < 15$	1	A or B	1,25 *p*	—	2	[a]	1	(X and Y) or (W and Z)	4	[c]
	$15 \leqslant t < 40$	1	A or B	1,25 *p*	—	2	[a]	1	(X and Y) or (W and Z)	4	[c]
B	$8 \leqslant t < 15$	1	A or B	1,25 *p*	—	2	[c]	1	(X and Y) or (W and Z)	4	[c]
	$15 \leqslant t < 40$	2[f]	A or B	1,25 *p*	—	4	[be]	1	(X and Y) or (W and Z)	4	[c]
	$40 \leqslant t < 60$	2	A or B	1,25 *p*	—	4	[b]	2	(X and Y) or (W and Z)	8	[c]
	$60 \leqslant t \leqslant 100$	2	A or B	1,25 *p*	—	4	[b]	2	(C and D) or (E and F)	4	[cd]

[a] May be limited by agreement to one scan from one side.
[b] Additional testing by tandem technique by special agreement.
[c] Required only by special agreement.
[d] The surface of the weld cap shall comply with the requirement in Clause 8. This may require dressing of the weld cap. However, for single sided circumferential pipe welds, the outside cap only is to be dressed.
[e] If only accessible from one side, two angles shall be used.
[f] In the range 15 mm < *t* ≤ 25 mm, one angle is sufficient provided the frequency is below 3 MHz.

NOTE L-scan: scan for longitudinal indications using angle beam probes;
N-scan: scan using straight beam probe;
T-scan: scan for transverse indications using angle beam probes;
p is the full skip distance.

Scanning patterns

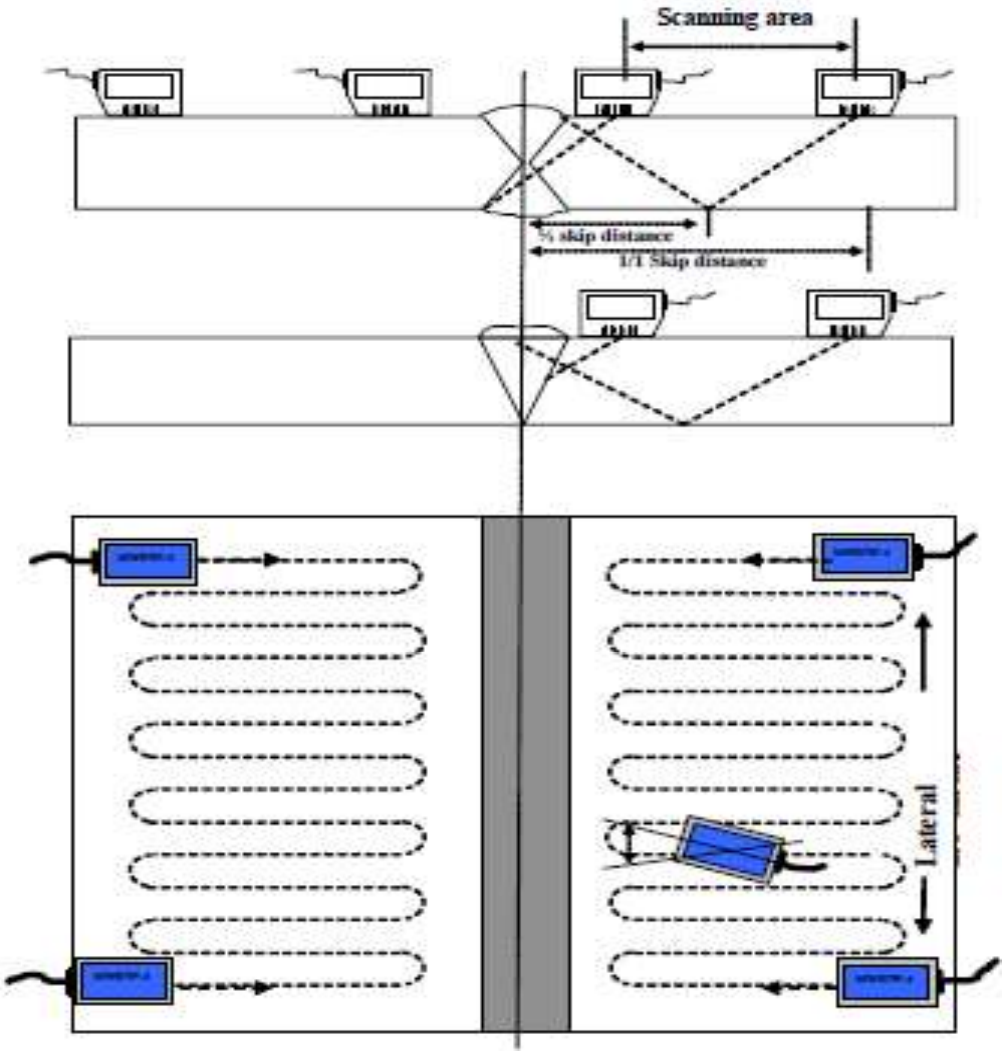
Longitudinal discontinuities detection.

Where possible the welds are to be tested from one surface of the plate and from both sides of the weld connection. The angle probe is placed on the parent material in such a way that the sound beam is normal to the weld. The probe is to be moved forwards and backwards in the scanning area of 1.5 × S.

During this movement the probe is to be continuously turned 5 to 10° in the horizontal plane.

The lower part of the weld and heat-affected zone shall be tested for longitudinal imperfections by half skip techniques. The remainder can be examined by full-skip techniques \

The lateral movement of the probe shall be executed overlapping at least 10% of the previous examined zone. The speed of the probe shall not exceed 150 mm/sec.



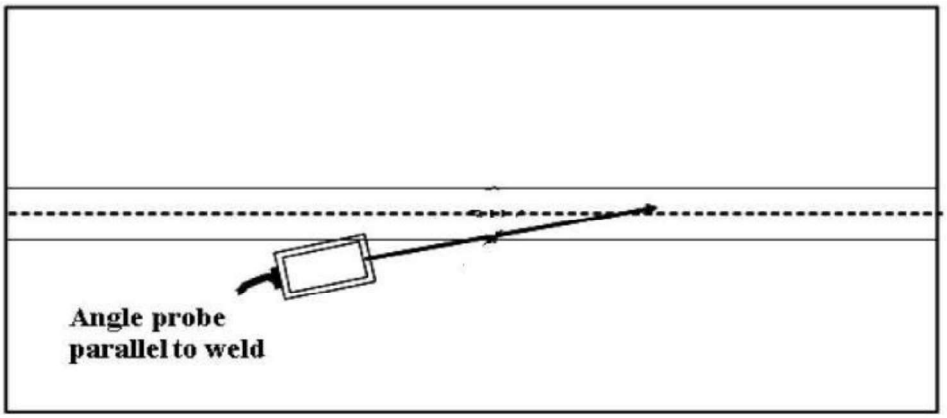
Transversal discontinuities detection.

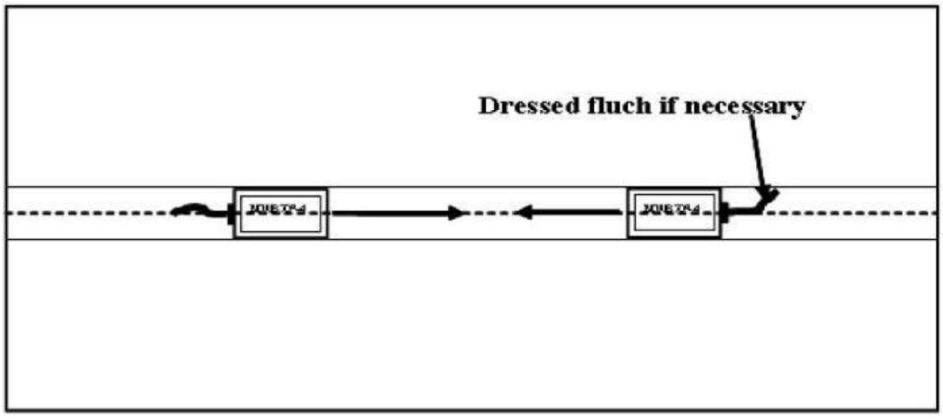
Transverse imperfections can be detected by placing the probe on the surface along the centre line of the weld connection provided the surface finish is sufficient smooth. Alternatively the probe can be placed alongside the weld connection, so that the beam forms a small angle with the centerline.

If using an angle probe along the centre line of the weld is judged to be the only method of reliable examination, the weld cap is to be ground flush or smooth with the parent material, see Fig. 6-13b. The probe is then moved along the centerline, so that the entire weld is covered.

Scanning is in all cases to be performed from both sides of the weld and in both directions.

\





Discontinuity Size Measurement.

The length of the imperfections is to be evaluated by maximizing the echo amplitude in the middle of the defect. Subsequently, the probe is traversed towards the edge of the imperfection until the echo amplitude has dropped to the evaluation level -10 dB (33% of DAC) The centre of the probe is then marked off as the edge of the imperfection. This length shall be recorded under “discontinuity length” on the test report.

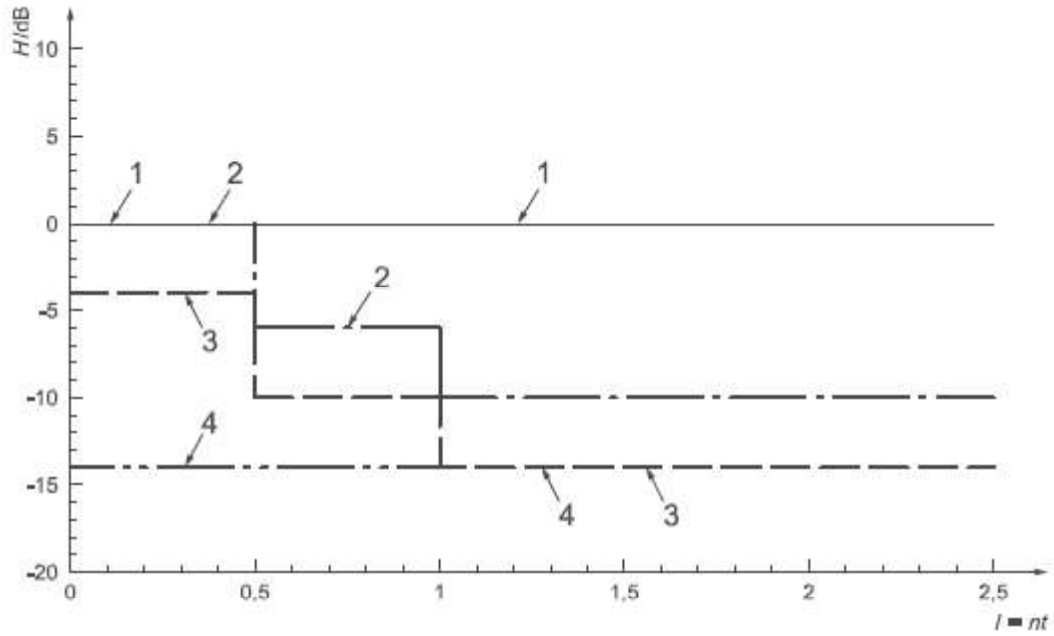
10. ACCEPTANCE STANDARD

Four levels as defined in ISO 17640 are used:

- Reference level
- Evaluation level
- Recording level (4dB below the acceptance level)
- Acceptance level

The Acceptance Criteria for welds shall comply with EN ISO 5817 lev B, so EN ISO 11666 lev. 2 shall be used (see figure A.3 extracted from EN ISO 11666) with the following additions: all imperfections from which the reflected echo amplitude exceeds

the evaluation level shall be characterized and all those that are characterized as planar (e.g. cracks, lack of fusion, incomplete penetration) shall be rejected
Grouping of indications and cumulative length of indications are assessed according to EN 11666:2011 par 5.4 and 5.5



Key
1 reference level
2 acceptance level 2
3 recording level
4 evaluation level
H amplitude
l indication length
n multiplier of *t*
t thickness

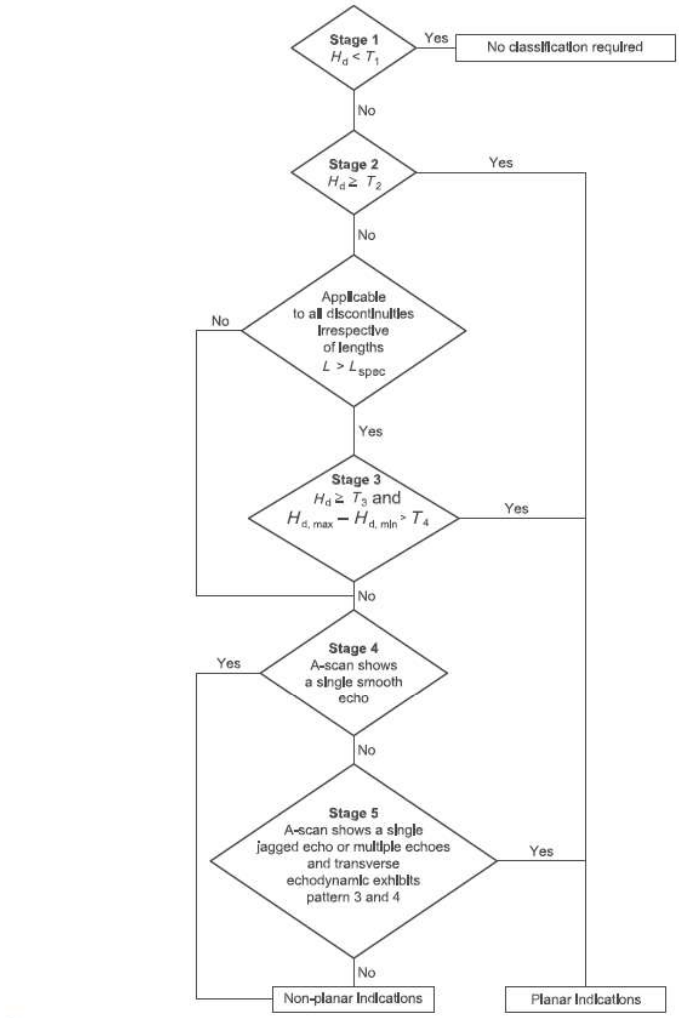
Figure A.3 — Levels for technique 1 for thicknesses 15 mm to 100 mm — Acceptance level 2

Characterization of indications

Characterization of indications are based on echo amplitude – (stage 1 and 2) and directional reflectivity criteria (stage 3) given in ISO 23279:

- Low amplitudes (stage 1): An indication having echo amplitude lower than the evaluation level is not significant and shall not be characterized.
- High amplitude (stage 2): An indication having echo amplitude that is at least equal to the reference level plus 6 dB is a planar defect.
- Directional reflectivity criteria (stage 3): By comparing the maximum echo amplitude from an indication using two probe angles having different refraction angles of more than 10° the difference shall be more than 9 dB. When comparing the amplitude from a shear wave angle probe and a compression wave normal probe, the difference shall be more than 15 dB.

Classification of internal indications in weld Flow chard procedure (ISO23279):



Key

H_d	indication echo amplitude
$H_{d,max}$	maximum echo amplitude
$H_{d,min}$	minimum echo amplitude
L	length
L_{spec}	specified length
T_1, T_2, T_3, T_4	see Table A.1

Table A.1 — Different thresholds used in the flowchart procedure

Threshold	T_1	T_2	T_3	T_4
Threshold values	Evaluation level	Reference level plus 6 dB	Reference level minus 6 dB	9 dB[a] or 15 dB[b]

[a] Shear waves.

[b] Between reflections obtained with a shear wave and a longitudinal wave.

11. REPAIR

All repairs shall be carried out in accordance with established procedures.

Repair By Welding

Before repair welding, the defects shall be completely removed. Each unacceptable discontinuity shall be marked on the weld over the discontinuity for its entire length directly. The depth from the surface and indication rating shall be marked on base metal right next to the defect.
The excavated area shall have smooth transitions to the metal surface and allow good access for both NDT after excavation and subsequent repair welding. After excavation, complete removal of the defects shall be confirmed by MT or PT. PWHT shall be performed after repair if specified for the original weld. The excavated groove shall extend minimum 25 mm behind both start and end of defect, measured at defect depth. Defects spaced less than 100 mm shall be repaired as one continuous defect.
After repair welding the complete weld (i.e. the repaired area plus at least 100 mm on each side) shall be subjected at least to the same NDT as specified for the original weld.
Repair welding may only be carried out once in the same area: the second require customer involvement.

Re-welding

Re-welding shall be performed in accordance with the procedures and WPS utilized for the original weld, and includes complete removal of the original weld and HAZ

12. ULTRASONIC TEST REPORT

A report which clearly identifies the work and the area of inspection shall be completed by the UT operator at the time of inspection. Examination results for each weld shall be reported on the Ultrasonic Examination Report Form. The Ultrasonic Examination Report (sample form) is enclosed as Attachment 1 to this procedure: any change or update to this form, does not invalidate this procedure as long all therein information are maintained.

The report shall be signed by the Quality Control Manager and when required by the Client's Inspector and other Authority Testing.

The report form for welds that are acceptable need only contain sufficient information to identify the weld, the operator (signature), and the acceptability of the weld.

When a defect shall be identified and repair shall be required, the relevant report issued at completion of the inspection operation will have to record both inspections prior and after the repair of the defect.

Evaluation of retested repaired weld areas shall be tabulated on a new line on the report form. If the original report form is used, an R1, R2, ...Rn shall prefix the indication number. If additional report forms are used, the R number shall prefix the report number.

All NDT shall be properly documented in such a way that the performed testing can be easily retraced at a later stage. The reports shall identify the unacceptable defects present in the tested area, and a conclusive statement as to whether the weld satisfies the acceptance criteria or not.

The report shall include a reference to the applicable standard, NDT procedure and acceptance criteria. In addition, as a minimum, the following information must be given or easily retrievable from therein included information: \

- object and drawing references
- place and date of examination
- material type and dimensions
- post weld heat treatment, if required
- location of examined areas, type of joint
- welding process used
- name and certification level of the operator carrying out the testing
- surface conditions
- contract requirements e.g. order no., specifications, special agreements etc.
- sketch showing location and information regarding detected defects
- extent of testing
- test equipment used
- description and location of all recordable indications
- examination results with reference to acceptance level.
- number of repairs to be specified in the report, such as once or twice repairs in the same area.
- probes, type and frequency
- identification of reference blocks used
- couplant medium
- reporting level, if different from acceptance level
- calibration range
- scanning technique, half skip or full skip scanning.
- surface compensation/transfer correction
- defect type (At least defined as Spherical, Volume or Planar

The report shall be such that there is no doubt about what is tested, where it has been carried out and give a clear and exact description of reportable defect location.

The format of report is not a reason for rejection as long all above indicated information are included and any change induced by addition doesn't be considered a rejection of those already issued.

APPENDIX- A

Check of Screen Height Linearity

To verify the ability of the ultrasonic instrument to meet the linearity, as required in paragraph 8, position an angle beam search unit as shown in the Fig. 2 so that indication can be observed from both the 1/2 and 3/4T holes in a basic calibration block. Adjust the search unit position to give a 2:1 ratio of amplitudes between the two indications, with the larger set at 80% of full screen height. Without moving the search unit, adjust sensitivity (gain) to successively set the larger indication from 100% to 20% of full screen height, in increments (of 2 dB steps available), and read the smaller indication at each setting.
The reading must be 50% of the larger amplitude, within 5% of full screen height. The setting and readings must be estimated to the nearest 1% of full screen.
Alternatively, a straight beam search unit may be used on any calibration block which will provide amplitude differences, with sufficient signal separation to prevent overlapping of the two signals.

Check of Amplitude Control Linearity

To verify the accuracy of the amplitude control of the ultrasonic instruments, as required in paragraph 8, position an angle beam search unit as shown in Fig. 1 so that the indication from the 1/2T hole in basic calibration block is peaked on the screen. With the increases and decreases in attenuation shown in the following table, the indication must fall within the specified limits base. Other convenient reflectors from any calibration block may be used with angle or straight beam search units.

Test n°	Indication set at % of full screen	dB control change	Indication limits % of full screen (+20%)
1	80%	-6 dB	32 to 48%
2	80%	-12 dB	16 to 24%
3	40%	+6 dB	64 to 96%
4	20%	+12 dB	64 to 96%

The setting and reading must be estimated to the nearest 1% of full screen.

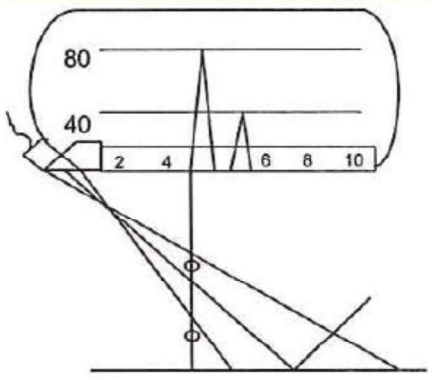


Figure 1

ATTACHMENT N. 1

CIMOLAI

CERTIFICATO DI CONTROLLO ULTRASONORO

Ultrasonic Examination Report

Cert. Nr. / Report nr.
Foglio / Sheet
Data / Date

COSTRUTTORE / Manufacturer — COMM. COSTRUTTORE / Manufacturer's Job

CLIENTE / Customer — COMM. CLIENTE / Customer's Job

DESTINATARIO / Consignee — ORDINE DEL DESTINATARIO / Consignee Order

ITEM / Item — LUOGO DELL'ESAME / Place of Examination

MARCHE / Serial Nr. — DATA DELL'ESAME / Date of Examination

STRUMENTO IMPIEGATO / Instrument used
COSTRUTT. / Manuf.
TIPO / Type
N. DI SERIE / Serial nr.

SONDE / Probes

n	TIPO Type	f (MHz)	Dim. (mm)	Ang
1				
2				
3				
4				

OPERATORE / Operator

COSTRUTTORE / Manufacturer

ENTE ISPEZIONE / Inspection Authority

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI
This is to certify that the test has been performed according to indicated reference code, and the results are those recorded

OGGETTO DEL PRESENTE CERTIFICATO / Subject of this certificate

CONTROLLO ULTRASONORO SALDATURA TESTA-TESTA
ULTRASONIC EXAMINATION OF BUTT WELD

PROCEDURA / Procedure

STANDARD DI ACCETTAZIONE / Acceptance Standards

MATERIALE / Material — THK

DISEGNO DI rif. / Reference drawing — TRATT. TERMICO / Heat treatment
-
-

CONDIZIONI SUP. / Surface conditions — MAT. BASE / Base material — SALDATURA / Weld

FASE DI LAVORAZIONE / Working step

PROC. DI SALD. / Welding process
MEZZO DI ACCOPP. / Couplant
RIF. BLOCCO DI CALIBRAZIONE / Calibration block

DESTINATARIO / Consignee

SCHIZZO DEL PARTICOLARE CONTROLLATO / Sketch of examined particular

ESITO / Results — GIUDIZIO / Judgement

[X] ACCETTABILE / Acceptable
[ ] NON ACCETTABILE / Not acceptable

NOTE / Remarks

Controllo eseguito dalla superfice esterna
Test carried out from outside surface

CIMOLAI

CERTIFICATO DI CONTROLLO ULTRASONORO

Ultrasonic Examination Report

Cert. Nr. / Report nr.

Foglio / Sheet

Data / Date

COSTRUTTORE / Manufacturer	COMM. COSTRUTTORE / Manufacturer's Job	DATA DELL'ESAME / Date of Examination	DESTINATARIO / Consignee	ORDINE DEL DESTIN. / Consignee Order

SI CERTIFICA CHE LA PROVA E' STATA ESEGUITA SECONDO LE NORME DI RIFERIMENTO INDICATE E CHE I RISULTATI SONO QUELLI TRASCRITTI

This is to certify that the test has been performed according to indicated reference code, and the results are those recorded

REGISTRAZIONE DELLE INDICAZIONI RILEVATE - Record of detected indications

Pos. Cliente	Marca Cimolai	Materiale Base	Sigla Saldatura	N° Indicaz.	SONDA (*)	Dist. Da 0-UT / Start from 0-UT		Lungh	Prof. / Depht (mm)		Ampiezza	Probabile Natura del Difetto	GIUDIZIO
Client Pos.	Cimolai Mark	Base Material	Weld ID	Indic. N°	PROBE (*)	Rifer. Di partenza Start point ref.	Misura Value (mm)	Lungh	Dall'Int. From inside	Dall'Est. From outside	Ampiezza (% DAC)	Probable Nature of Defect	JUDGEMENT (**)

(*) vedi sonde impiegate a pag. 1 / see employed probes on page 1

(**) A = Accettabile / Acceptable
NA = Non accettabile / Note Acceptable

OPERATORE / Operator	COSTRUTTORE / Manufacturer	ENTE D'ISPEZIONE / Inspection Authority	DESTINATARIO / Consignee

CIMOLAI Pordenone - Italy

Doc. ref. IOP-UTE-2023263-01

Rev. 1

Date 16/01/2024

SECTION 13	Radiographic test procedure

IOP-RT-2023263-01
RADIOGRAPHIC EXAMINATION INNATRUCTION

Project: **123A90A - Base Load Power Hub Platform**

Client: **Rosetti Marino SpA**

Revision matrix (revised where underlined)

1	16/01/2024	Gianessi A.	Guzzon A.	Scaini S.
0	07/12/2023	Gianessi A.	Guzzon A.	Scaini S.
Rev.	**Date**	**Issued**	**Checked**	**Approved**

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1. SCOPE

This procedure shall be used for the radiographic examination of the longitudinal SAW welded pipes (base material EN 10028-3: P355NH) having nominal thickness 15 mm and 17 mm.
This Procedure is intended for X-ray Testing and it complies with EN 17636-1 class A.

2. REFERENCE DOCUMENTS

- UNI EN ISO 17636-1:2022 : Non-destructive testing of welds - Radiographic testing of fusion welded joints
- EN ISO 5817:2023: Fusion welded joints in steel, ... – Quality levels for imperfections
- ISO 9712:2022: Qualification and Certification of NDT Personnel.
- ISO 19232-1:2013: Image quality of radiographs – Part 1: Image quality indicators (wire type – Determination of image quality value.
- ISO 11699-1:2008: Industrial Radiographic Film – Classification of film systems for industrial Radiographic
- EN 25580:1992: Industrial radiographic illuminators – Minimum requirements
- EEMUA 158:2014 Construction Specification for fixed offshore structures
- K559-2254-MT-SPE-001 rev.01: Structural Fabrication Specification Base Load Power Hub (BLPH)

3. PERSONNEL QUALIFICATION

Examination shall be carried out by NDE examiners holding a level II or III qualification in accordance with the following document or other equivalent standard:

- ISO 9712

The personnel employed for the execution of NDE Examination shall have an annual vision test to assure:

- Near vision acuity: the examination should ensure natural or corrected near distance acuity such that they are capable of reading standard J-1 letters on standard Jaeger test type charts or Times Roman No.4,5 (having a height of 1,6mm) or equivalent characters to a distance of not less than 30 cm with one or both eyes. Equivalent near vision tests are acceptable
- Color contrast differentiation: the examination should demonstrate the capability of distinguishing and differentiating contrast among colors or shades of gray (reading of Ishiara test or equivalent)

4. EXTENT OF EXAMINATION

Examination shall be carried out on 100% of longitudinal welds since welds are performed in workshop

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5. TIME OF EXAMINATION

Radiographic Examination shall not carried out until at least 24 hours have elapsed following completion of welding. However, for welds which are subject to a PWHT requirement, the examination may be performed and reported immediately following completion of the PWHT process.
The inspection and NDE before heat treatment will be at the sole discretion of the Contractor and does not prevent the rear controls.

6. SURFACE CONDITIONS

The surface irregularities that might hide or be confused with discontinuities must be removed. The irregularities of the seams, as regards both the inside (if accessible) and outside, must be removed with a suitable method so that they do not disturb the evaluation of the films.

7. SURFACE CONDITIONS

X-Ray source shall be used.

8. FILM SELECTION AND SCREEN

Film system classes shall be used in accordance with ISO11699-1 and ISO 5579.
Table 1 shows film system classes and metal screens used.

Normally following film or equivalent shall be used:

Agfa D7 or Kodak AA400 for film class C5

Radiation source	Penetrated thickness	Film system class	Type and thickness of metal screens
X-ray potentials		C5	0.02 mm to 0.15 mm front and back screens of lead
X-ray potentials	≤ 50 mm	C5	0.02 mm to 0.2 mm front and back screens of lead
X-ray potentials > 250 Kv to	> 50 mm	C5	*0.1* mm to 0.2 mm front screens of lead *(note 1)* 0.2 mm to 0.2 mm back screens of lead

Note 1: Ready packed films with a front screen up to 0,03mm may be used if an additional lead screen of 0,1mm is placed between the object and the film

Table 1: Film system classes and metal screens

All screens should be handled carefully to avoid dents and scratches, dirt, or grease on active surfaces.
Good contact between films and screens is required; this may be achieved also using vacuum- packed films.

Table 3 — Film system classes and metal screens for the radiography of steels, copper and nickel based alloys

Radiation source	Penetrated thickness w	Film system class[a]		Type and thickness of metal screens	
		Class A	Class B	Class A	Class B
X-ray potentials ⩽ 100 kV		C 5	C 3	None or up to 0,03 mm front and back screens of lead	
X-ray potentials > 100 kV to 150 kV				Up to 0,15 mm front and back screens of lead	
X-ray potentials > 150 kV to 250 kV			C 4	0,02 mm to 0,15 mm front and back screens of lead	
Yb 169 Tm 170	$w < 5$ mm	C 5	C 3	None or up to 0,03 mm front and back screens of lead	
	$w \geqslant 5$ mm		C 4	0,02 mm to 0,15 mm front and back screens of lead	
X-ray potentials > 250 kV to 500 kV	$w \leqslant 50$ mm	C 5	C 4	0,02 mm to 0,2 mm front and back screens of lead	
	$w > 50$ mm		C 5	0,1 mm to 0,2 mm and front screens of lead[b] 0,02 mm to 0,2 mm back screens of lead	
Se 75		C 5	C 4	0,1 mm to 0,2 mm front and back screens of lead	
Ir 192		C 5	C 4	0,02 mm to 0,2 mm front screens of lead[b]	0,1 mm to 0,2 mm front screens of lead[b]
				0,02 mm to 0,2 mm back screens of lead	
Co 60	$w \leqslant 100$ mm	C 5	C 4	0,25 mm to 0,7 mm front and back screens of steel or copper[c]	
	$w > 100$ mm		C 5		
X-ray equipment with energy from 1 MeV to 4 MeV	$w \leqslant 100$ mm	C 5	C 3	0,25 mm to 0,7 mm front and back screens of steel or copper [c]	
	$w > 100$ mm		C 5		
X-ray equipment with energy from 4 MeV to 12 MeV	$w \leqslant 100$ mm	C 4	C 4	Up to 1 mm front screen of copper, steel or tantalum[d].	
	100 mm < $w \leqslant$ 300 mm	C 5			
	$w > 300$ mm		C 5	Back screen of copper or steel up to 1 mm and tantalum up to 0,5 mm [d]	
X-ray equipment with energy above 12 MeV	$w \leqslant 100$ mm	C 4	—	Up to 1 mm front screen of tantalum [e] No back screen	
	100 mm < $w \leqslant$ 300 mm	C 5	C 4		
	$w > 300$ mm		C 5	Up to 1 mm front screen of tantalum [e] Up to 0,5 mm back screen of tantalum	

[a] Better film system classes may also be used.

[b] Ready packed films with a front screen up to 0,03 mm may be used if an additional lead screen of 0,1 mm is placed between the object and the film.

[c] In class A, 0,5 mm to 2,0 mm screens of lead may also be used.

[d] In class A, 0,5 mm to 1 mm screens of lead may also be used.

[e] Tungsten screens may also be used.

9. FILM PROCESSING

Manual or automatic film processing may be used. Automatic processingequipment is periodically checked. In case of continuous service a weekly check will be performed. The check consists of washing the rollers and basins, the latter every three months.

All the radiographs shall be processed in accordance with UNI EN ISO 11699-2.

All the films shall be free from defects due to fabrication or processing which could confuse or limit proper interpretation of the radiographs.

Normally products (or equivalent) for film processing are:

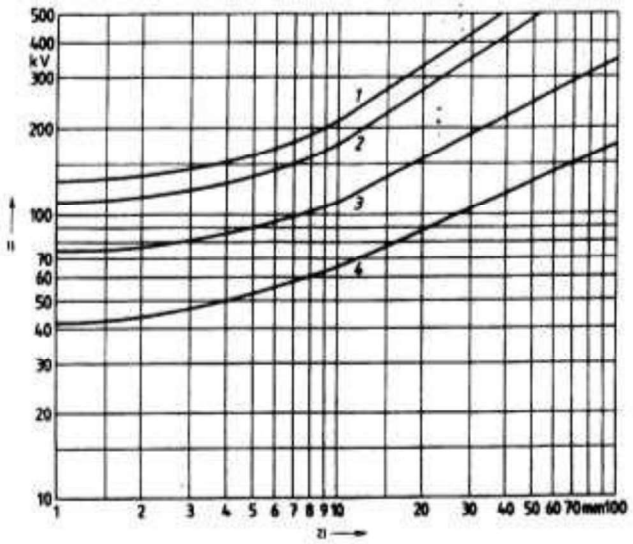
a) Manual processing
Developer: AGFA GEVAERT type G 128
Fixer: AGFA GEVAERT type G 328

b) Automatic processing
Equipment: AGFA NDT M ECO
Developer: AGFA GEVAERT type G 127
Fixer: AGFA GEVAERT type G 321

10. EQUIPMENT

Manufacturer	Model	Beam	Penetration (mm in steel)	Focal spot (mm)	Max Voltage (KV)
SEIFERT	ERESCO 65 MF2	Directional	65	3	300
SEIFERT	ERESCO 42 MF2	Directional	42	1.5	200
GILARDONI	MHF 300 D	Directional	65	3	300
ICM	SITE-X C3005	Panoramic	52	0.5 x 5	300

The maximum voltage used for steel in the examinations shall not exceed the value shown in Figure 1.



1 Copper/Nickel and alloys
2 Steel
3 Titanium and alloys
4 Alluminium and alloys

Figure 20 : Maximum X-ray voltage for X-ray devices up to 500 kV as a function of penetrated thickness and material

Figure 1: Maximum X-ray voltage as a function of penetrated thickness and material

11. TYPES AND POSITION OF IMAGE QUALITY INDICATORS (IQI)

ISO Wire-type IQIs shall be used. They shall be W 1 FE, W 6 FE, W 10 FE as given in figure 2, in accordance with ISO 19232-1:2004. IQIs shall be manufactured and identified in accordance with the requirements allowed in ISO 19232-1 (equal to EN 462-1).

One wire penetrameter shall be placed on the weld with the wires across to the weld axis at the centre of the area of interest.

The wires shall be directed perpendicular to the weld and its location shall ensure that at least 10 mm of the wire length will show in a section of uniform optical density, which is normally in the parent metal adjacent to the weld so that the length of the wires is perpendicular to the length of the weld.

Dimensions in millimetres

Image quality indicator including				Wire			Wire centreline spacing, a
W 1	W 6	W 10	W 13	Wire number	Nominal wire diameter	Tolerances	
X				W 1	3.20		9.6^{+1}_{0}
X				W 2	2.50	± 0.03	7.5^{+1}_{0}
X				W 3	2.00		6^{+1}_{0}
X				W 4	1.60		
X				W 5	1.25		
X	X			W 6	1.00	± 0.02	
X	X			W 7	0.80		
	X			W 8	0.63		
	X			W 9	0.50		
	X	X		W 10	0.40		
	X	X		W 11	0.32		
	X	X		W 12	0.25	± 0.01	5^{+1}_{0}
		X	X	W 13	0.20		
		X	X	W 14	0.16		
		X	X	W 15	0.125		
		X	X	W 16	0.100		
			X	W 17	0.080	± 0.005	
			X	W 18	0.063		
			X	W 19	0.050		

Figure 2: Image Quality Indicators. Designation, wire diameters and fundamental wires

The IQI used shall be placed on the source side of the object when Radiographic Technique shown in fig.3 will be applied.

Depending on the applicable Radiographic Technique and pipe thickness, IQI shall be referred to Tables 2 and 3.

The procedure shall be qualified to demonstrate that the minimum required sensitivity is achieved all throught the wall thickness including the two opposite surfaces.
If the penetrameter is placed on film side shall be marked with a letter “F”.

Table 2
Single-wall technique IQI on source side

Table A.3 — Wire IQI

Image quality class B				
Nominal thickness t mm				IQI value[a]
		⩽	1,5	W 19
>	1,5	⩽	2,5	W 18
>	2,5	⩽	4	W 17
>	4	⩽	6	W 16
>	6	⩽	8	W 15
>	8	⩽	12	W 14
>	12	⩽	20	W 13
>	20	⩽	30	W 12
>	30	⩽	35	W 11
>	35	⩽	45	W 10
>	45	⩽	65	W 9
>	65	⩽	120	W 8
>	120	⩽	200	W 7
>	200	⩽	350	W 6
>	350			W 5

a When using Ir 192 sources, IQI values lower than listed values can be accepted as follows:

12 mm to 40 mm: up to 1 value.

Table 3
Double-wall technique - single image IQI on film side

Table A.7 — Wire IQI

Image quality class B				
Penetrated thickness w mm				IQI value[a]
		⩽	1,5	W 19
>	1,5	⩽	2,5	W 18
>	2,5	⩽	4	W 17
>	4	⩽	6	W 16
>	6	⩽	8	W 15
>	8	⩽	15	W 14
>	15	⩽	25	W 13
>	25	⩽	38	W 12
>	38	⩽	45	W 11
>	45	⩽	55	W 10
>	55	⩽	70	W 9
>	70	⩽	100	W 8
>	100	⩽	170	W 7
>	170	⩽	250	W 6
>	250			W 5

12. RADIOGRAPHS TECHNIQUE

Improved techniques (Class B according to EN ISO 17636-1) shall be chosen as radiographic technique.

A single-wall exposure with single film technique shall be used for radiography whenever practical. When it is not practical to use a single-wall technique, a double-wall technique – single image shall be used.

Remark: When radiographing a weld, if the ratio between thickness of weld reinforcement and base material is such that it is impossible to obtain a film density of 2.0 ÷ 4.0 in the area of interest using one film only, then two subsequent "single film" exposures of different film density shall be performed. Each radiograph shall be evaluated in the film area where the density is 2.0 ÷ 4.0. This means that in such a case, two films will be necessary for the same weld position.
The evaluation of both radiographs together must ensure that an acceptable film density covers the full area under testing.
If double film viewing is used, the optical density of one single film shall not be lower than 1,3.

Test arrangement: radiation source located outside the pipe and the film inside (see Fig.3)

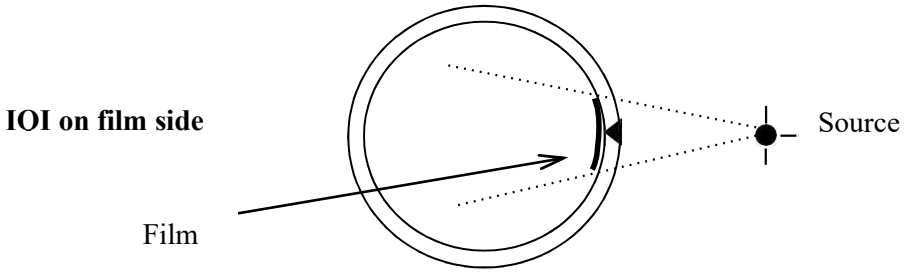


Figure 3: Test arregement

13. OVERLAPS OF FILMS

When radiographing a weld with two or more separate films, the films shall be overlapped sufficiently to ensure that the complete region of interest is radiographed. This shall be verified with the same location marker (normally lead number) visible on two successive radiographs.
At least an overlap of 25 mm minimum shall be demonstrate from each end of the film.

14. DENSITY OF RADIOGRAPHS

Density limitation

The densities resulting from any variation of penetrated thickness should be 2.0 up to 3.0 in the area of interest for single film exposure. When double film is used image density of the weld shall be 2.6 up to 3.8, with a minimum of 1,3 on each film. A measuring tolerance of ± 0.1 is permitted. High optical density can be used with advantage where the viewing light is sufficiently bright in accordance with EN 25580

Density measurement

In order to judge the density a densitometer must be employed. The densitometer calibration is verified by comparison with a calibrated step wedge tablet in accordance with Tecnocontrol internal procedure N. DEN 02 rev.0. Densitometer normally used is type X-Rite 301, checked with calibrated X-RAY FILM STEP TABLET

15. MAXIMUM AREA OF SINGLE EXPOSURE

The number of radiographs for a complete examination of a longitudinal weld shall be calculated on the base of the following conditions:

The ratio of the penetrated thickness at the outer edge of an evaluated area of uniform thickness to that at the centre beam shall not be more than 1.1, according to class B of ISO 17636-1

The size of the area to be examined includes the weld plus 10 mm of parent metal on each side of the weld.

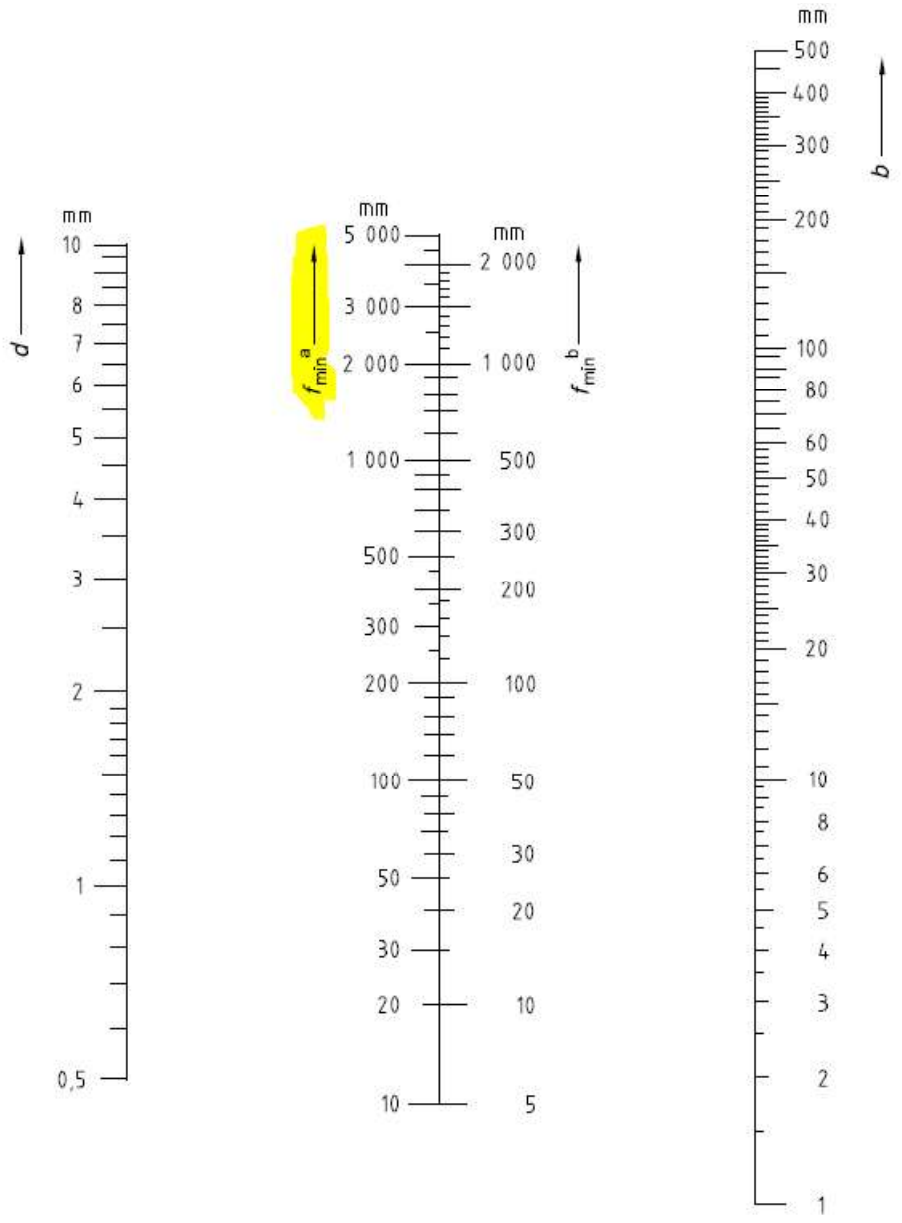
16. SOURCE TO OBEJECT DISTANCE

The minimum source-to-object distance, f min, depends on the source size d and the object-to-film distance, b.

The distance, f, shall, where practicable, be chosen so that the ratio of this distance to the source size, d, i.e. f/d, is not below the values given by the following equations according to ISO 17636-1 class B.

For Class B: $\frac{f}{d} \geq 15 \left(\frac{b}{mm}\right)^{\frac{2}{3}}$ (1) b is given mm

If the distance b < 1,2 t, the dimension b in Equations (1) and (2) and Figure 4 extracted from ISO 17636-1 shall be replaced by the nominal thickness t. For determination of the source-to-object distance, f min, the normogram in figure 4 based on equation may be used.



a Class B.

b Class A.

Figure 21 — Nomogram for the determination of minimum source-to-object distance, f_{min}, in relation to object-to-film distance, b, and the source size, d.

Figure 4: Normogram for the determination of minimum source to object distance f min. in relation to object to film distance and the sorce size. Source: ISO 17636-1

17. IDENTIFICATION SYSTEM

Identification on the film holders
The following data is permanently marked on the film holder:
Manufacturer; Manufacturer Job; Identification Pipe Mark; Weld identification (if more than one); position of area examined; data of examination; thickness; radiation source type; film density; results; judgement for acceptance.

Identification on the films
The following data are permanently included in the film as radiographic image:
Data of examination; Manufacturer; Manufacturer Job; Identification Pipe Mark; Identification weld (if more than one); location marks; IQI;
The identification by lead letters or numbers that must appear on the radiographic image must be put on the pipe and not on the envelope containing the film, and their position must be marked on the pipe itself, so that the examined area can be exactly localized.
The system adopted must not, however, hide the area involved in the examination.

18. SCATTERED RADIATION

If necessary, the film shall be shielded from scattered radiation by an adeguate thickness of lead at least 1 mm, or of tin at least 1,5 mm, placed behind the film-screen combination.
The presence of back scattered radiation shall be checked for each new test arrangement by a letter B (with a height of minimum 10 mm and a thickness of minimum 1.5 mm) placed immediately behind each cassette. If the image of this symbol records as a lighter image on the radiograph, it shall be rejected. If the symbol is darker or visible the radiograph is acceptable and demonstrates good protection against scattered radiation.

19. EVALUATION OFRADIOGRAPHS

Quality of the films
All the films must be free from damage of a mechanical, chemical or other nature in the measure in which they might hide defects or make it difficult to interpret the image in the relative area of the object under examination.
Such damage can be of the following types, among others:
clouding;
development defects such as striation, drops of water or spots;
scratches, fingerprints, creases, dirt, marks, irregularities or tears;
loss of definition due to poor screen-plate contact;
false indications due to defects or irregularities in the reinforcement screen.

Image Quality values (Radiographic sensitivity)
The sensitivity shall be assessed by the number of the smallest wire that can be discerned from the examination of the image of IQI on the radiograph.
Table 2 and 3 of this procedure show the minimum quality values. The image quality value obtained shall be indicated on the Radiographic Examination Report

20. ACCEPTANCE CRITERIA FOR FLAWS

Acceptance Criteria shall be in according to Level. B of Table 1 EN ISO 5817 attached to this procedure as Attachment 2

21. REPAIR OF WELDS

No rectification, repair or modification shall be made without the approval of the purchaser or Inspecting Authority.

Unacceptable imperfections shall be either repaired or deemed not to comply with this Specification. Repair welds shall be carried out to an approved procedure and subjected to the same Acceptance Criteria as original work.

Examination of the repaired area should include the repaired area, together with a distance of three material thicknesses (not repair weld thicknesses) on either side of the repair, and should include a similar distance along any weld seams intersecting the area of repair.

Radiographs of repair welds shall be clearly identified R1, R2 etc. for the first repair, second repair, etc.

22. CERTIFICATION

A Report giving information on the radiographic examination performed as required by EN 1435 shall be made for each pipe.

The report form for welds that are acceptable need only contain sufficient information to identify the

weld, the operator (signature), and the acceptability of the weld.

Evaluation of retested repaired weld areas shall be tabulated on a new line on the report form. If the original report form is used, an R1, R2, …Rn shall prefix the indication number. If additional report forms are used, the R number shall prefix the report number.

The format of the radiographic Examination report is given in Annex 1 of this procedure. Annex 1 is essential part of this procedure

ATTACHMENT N. 1

Table 1 extracted from EN ISO 5817 and table 12 extracted from EN 10217-3

Table 1 — Limits for imperfections

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1 Surface imperfections							
1.1	100	Crack		≥ 0,5	Not permitted	Not permitted	Not permitted
1.2	104	Crater crack		≥ 0,5	Not permitted	Not permitted	Not permitted
1.3	2017	Surface pore	Maximum dimension of a single pore for	0,5 to 3		Not permitted	Not permitted
			— butt welds		$d \leq 0{,}3\,s$		
			— fillet welds		$d \leq 0{,}3\,a$		
			Maximum dimension of a single pore for	> 3			Not permitted
			— butt welds		$d \leq 0{,}3\,s$, but max. 3 mm	$d \leq 0{,}2\,s$, but max. 2 mm	
			— fillet welds		$d \leq 0{,}3\,a$, but max. 3 mm	$d \leq 0{,}2\,a$, but max. 2 mm	
1.4	2025	End crater pipe		0,5 to 3	$h \leq 0{,}2\,t$	Not permitted	Not permitted
				> 3	$h \leq 0{,}2\,t$, but max. 2 mm	$h \leq 0{,}1\,t$, but max. 1 mm	Not permitted
1.5	401	Lack of fusion (incomplete fusion)	—	≥ 0,5	Not permitted	Not permitted	Not permitted
		Micro lack of fusion	Only detectable by micro examination	≥ 0,5	Permitted	Permitted	Not permitted
1.6	4021	Incomplete root penetration	Only for single side butt welds	≥ 0,5	Short imperfections: $h \leq 0{,}2\,t$ but max. 2 mm	Not permitted	Not permitted

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.7	5011	Continuous undercut	Smooth transition is required. This is not regarded as a systematic imperfection.	0,5 to 3	Short imperfections: $h \le 0{,}2\ t$	Short imperfections: $h \le 0{,}1\ t$	Not permitted
	5012	Intermittent undercut		> 3	$h \le 0{,}2\ t$, but max. 1 mm	$h \le 0{,}1\ t$, but max. 0,5 mm	$h \le 0{,}05\ t$, but max. 0,5 mm
1.8	5013	Shrinkage groove	Smooth transition is required.	0,5 to 3	Short imperfections: $h \le 0{,}2$ mm $+ 0{,}1\ t$	Short imperfections: $h \le 0{,}1\ t$	Not permitted
				> 3	Short imperfections: $h \le 0{,}2\ t$, but max. 2 mm	Short imperfections: $h \le 0{,}1\ t$, but max.1 mm	Short imperfections: $h \le 0{,}05\ t$, but max. 0,5 mm
1.9	502	Excess weld metal (butt weld)	Smooth transition is required.	≥ 0,5	$h \le 1$ mm $+ 0{,}25\ b$, but max. 10 mm	$h \le 1$ mm $+ 0{,}15\ b$, but max. 7 mm	$h \le 1$ mm $+ 0{,}1\ b$,but max. 5 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels			
					D	C	B	
1.10	503	Excessive convexity (fillet weld)		≥ 0,5	$h \le 1$ mm + 0,25 b, but max. 5 mm	$h \le 1$ mm + 0,15 b, but max. 4 mm	$h \le 1$ mm + 0,1 b, but max. 3 mm	
1.11	504	Excess penetration		0,5 to 3 > 3	$h \le 1$ mm + 0,6 b $h \le 1$ mm + 1,0 b, but max. 5 mm	$h \le 1$ mm + 0,3 b $h \le 1$ mm + 0,6 b, but max. 4 mm	$h \le 1$ mm + 0,1 b $h \le 1$ mm + 0,2 b, but max. 3 mm	

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels D	C	B
1.12	505	Incorrect weld toe	— butt welds — fillet welds $\alpha_1 \geq \alpha$ and $\alpha_2 \geq \alpha$	≥ 0,5	$\alpha \geq 90°$	$\alpha \geq 110°$	$\alpha \geq 150°$
				≥ 0,5	$\alpha \geq 90°$	$\alpha \geq 100°$	$\alpha \geq 110°$
1.13	506	Overlap		≥ 0,5	$h \leq 0{,}2\,b$	Not permitted	Not permitted
1.14	509	Sagging	Smooth transition is required	0,5 to 3	Short imperfections: $h \leq 0{,}25\,t$	Short imperfections: $h \leq 0{,}1\,t$	Not permitted
	511	Incompletely filled groove		> 3	Short imperfections: $h \leq 0{,}25\,t$, but max. 2 mm	Short imperfections: $h \leq 0{,}1\,t$, but max. 1 mm	Short imperfections: $h \leq 0{,}05\,t$, but max. 0,5 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.15	510	Burn through	—	≥ 0,5	Not permitted	Not permitted	Not permitted
1.16	512	Excessive asymmetry of fillet weld (excessive unequal leg length)	In cases where an asymmetric fillet weld has not been prescribed.	≥ 0,5	$h \leq 2\ \text{mm} + 0{,}2\ a$	$h \leq 2\ \text{mm} + 0{,}15\ a$	$h \leq 1{,}5\ \text{mm} + 0{,}15\ a$
1.17	515	Root concavity	Smooth transition is required.	0,5 to 3	$h \leq 0{,}2\ \text{mm} + 0{,}1\ t$	Short imperfections: $h \leq 0{,}1\ t$	Not permitted
				> 3	Short imperfections: $h \leq 0{,}2\ t$, but max. 2 mm	Short imperfections: $h \leq 0{,}1\ t$, but max. 1 mm	Short imperfections: $h \leq 0{,}05\ t$, but max. 0,5 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.18	516	Root porosity	Spongy formation at the root of a weld due to bubbling of the weld metal at the moment of solidification (e.g. lack of gas backing)	≥ 0,5	Locally permitted	Not permitted	Not permitted
1.19	517	Poor restart	—	≥ 0,5	Permitted The limit depends on the type of imperfection occurred due to restart.	Not permitted	Not permitted
1.20	5213	Insufficient throat thickness	Not applicable to processes with proof of greater depth of penetration 	0,5 to 3 > 3	Short imperfections: $h \leq 0{,}2$ mm + 0,1 a Short imperfections: $h \leq 0{,}3$ mm + 0,1 a, but max. 2 mm	Short imperfections: $h \leq 0{,}2$ mm Short imperfections: $h \leq 0{,}3$ mm + 0,1 a, but max. 1 mm	Not permitted Not permitted
1.21	5214	Excessive throat thickness	The actual throat thickness of the fillet weld is too large. 	≥ 0,5	Permitted	$h \leq 1$ mm + 0,2 a, but max. 4 mm	$h \leq 1$ mm + 0,15 a, but max. 3 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
1.22	601	Stray arc	—	≥ 0,5	Permitted, if the properties of the parent metal are not affected.	Not permitted	Not permitted
1.23	602	Spatter	—	≥ 0,5	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection
1.24	610	Temper colour (Discolouration)	—	≥ 0,5	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection	Acceptance depends on application, e.g. material, corrosion protection

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels			
					D	C	B	
2 Internal imperfections								
2.1	100	Cracks	All types of crack except microcracks and crater cracks	≥ 0,5	Not permitted	Not permitted	Not permitted	
2.2	1001	Microcracks	A crack usually only visible under the microscope (50 ×)	≥ 0,5	Permitted	Acceptance depends on type of parent metal with particular reference to crack sensitivity	Acceptance depends on type of parent metal with particular reference to crack sensitivity	
2.3	2011 2012	Gas pore Uniformly distributed porosity	The following conditions and limits for imperfections shall be fulfilled. See also Annex A for information.					
			a1) Maximum dimension of the area of the imperfections (inclusive of systematic imperfection) related to the projected area	≥ 0,5	For single layer: ≤ 2,5 % For multi-layer: ≤ 5 %	For single layer: ≤ 1,5 % For multi-layer: ≤ 3 %	For single layer: ≤ 1 % For multi-layer: ≤ 2 %	
			NOTE The porosity in the project area depends on the numbers of layers (volume of the weld).					
			a2) Maximum dimension of the cross-sectional area of the imperfections (inclusive of systematic imperfection) related to the fracture area (only applicable to test pieces: production test, welder or procedure qualification tests)	≥ 0,5	≤ 2,5 %	≤ 1,5 %	≤ 1 %	
			b) Maximum dimension for a single pore for	≥ 0,5				
			— butt welds		$d \leq 0{,}4\ s$, but max. 5 mm $d \leq 0{,}4\ a$, but max. 5 mm	$d \leq 0{,}3\ s$, but max. 4 mm $d \leq 0{,}3\ a$, but max. 4 mm	$d \leq 0{,}2\ s$, but max. 3 mm $d \leq 0{,}2\ a$, but max. 3 mm	
			— fillet welds					

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.4	2013	Clustered (localized) porosity	 Reference length for l_p is 100 mm. The total gas pore area within the cluster is represented by a circle of diameter d_A surrounding all the gas pores. The requirement for a single gas pore shall be met by all the gas pores within this circle. A permitted porous area shall be local. The possibility of the pore cluster masking other imperfections shall be taken into consideration. If D is less than d_{A1} or d_{A2}, whichever is smaller, then the total gas pore area is represented by a circle of diameter d_{AC} where $d_{AC} = d_{A1} + d_{A2} + D$. Systematic cluster porosity is not permitted. d_A corresponds to d_{A1}, d_{A2} or d_{AC}, whichever is applicable.	≥ 0,5	$d_A \leq 25$ mm or $d_{A,\max} \leq w_p$	$d_A \leq 20$ mm or $d_{A,\max} \leq w_p$	$d_A \leq 15$ mm or $d_{A,\max} \leq w_p/2$

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.5	2014	Linear porosity	— butt welds	≥ 0,5	$h \le 0{,}4\,s$, but max. 4 mm $l \le s$, but max. 75 mm	$h \le 0{,}3\,s$, but max. 3 mm $l \le s$, but max. 50 mm	$h \le 0{,}2\,s$, but max. 2 mm $l \le s$, but max. 25 mm
			— fillet welds	≥ 0,5	$h \le 0{,}4\,a$, but max. 4 mm $l \le a$, but max. 75 mm	$h \le 0{,}3\,a$, but max. 3 mm $l \le a$, but max. 50 mm	$h \le 0{,}2\,a$, but max. 2 mm $l \le a$, but max. 25 mm
			Case 1 ($D > d_2$) Case 2 ($D < d_2$) Reference length for l_p is 100 mm. For case 1: $d_1 = h$ For case 2: $d_1 + d_2 + D = h$				

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.6	2015	Elongated cavity	— butt welds	≥ 0,5	$h \le 0{,}4\ s$, but max. 4 mm $l \le s$, but max. 75 mm	$h \le 0{,}3\ s$, but max. 3 mm $l \le s$, but max. 50 mm	$h \le 0{,}2\ s$, but max. 2 mm $l \le s$, but max. 25 mm
	2016	Wormholes	— fillet welds	≥ 0,5	$h \le 0{,}4\ a$, but max. 4 mm $l \le a$, but max. 75 mm	$h \le 0{,}3\ a$, but max. 3 mm $l \le a$, but max. 50 mm	$h \le 0{,}2\ a$, but max. 2 mm $l \le a$, but max. 25 mm
2.7	202	Shrinkage cavity		≥ 0,5	Short imperfections permitted, but not breaking of the surfaces: butt welds: $h \le 0{,}4\ s$, but max. 4 mm fillet welds: $h \le 0{,}4\ a$, but max. 4 mm	Not permitted	Not permitted
2.8	2024	Crater pipe	 The larger value of h or l will be measured	0,5 to 3 > 3	h or $l \le 0{,}2\ t$ h or $l \le 0{,}2\ t$, but max. 2 mm	Not permitted	Not permitted
2.9	300	Solid inclusions	— butt welds	≥ 0,5	$h \le 0{,}4\ s$, but max. 4 mm $l \le s$, but max. 75 mm	$h \le 0{,}3\ s$, but max. 3 mm $l \le s$, but max. 50 mm	$h \le 0{,}2\ s$, but max. 2 mm $l \le s$, but max. 25 mm
	301	Slag inclusions					
	302	Flux inclusions	— fillet welds	≥ 0,5	$h \le 0{,}4\ a$, but max. 4 mm $l \le a$, but max. 75 mm	$h \le 0{,}3\ a$, but max. 3 mm $l \le a$, but max. 50 mm	$h \le 0{,}2\ a$, but max. 2 mm $l \le a$, but max. 25 mm
	303	Oxide inclusions					

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.10	304	Metallic inclusions other than copper	— butt welds	≥ 0,5	$h \le 0,4\ s$, but max. 4 mm	$h \le 0,3\ s$, but max. 3 mm	$h \le 0,2\ s$,but max. 2 mm
			— fillet welds	≥ 0,5	$h \le 0,4\ a$, but max. 4 mm	$h \le 0,3\ a$, but max. 3 mm	$h \le 0,2\ a$, but max. 2 mm
2.11	3042	Copper inclusions	—	≥ 0,5	Not permitted	Not permitted	Not permitted
2.12	401	Lack of fusion (incomplete fusion)		≥ 0,5	Short imperfections permitted: butt welds: $h \le 0,4\ s$, but max. 4 mm fillet welds: $h \le 0,4\ a$ but max. 4 mm	Not permitted	Not permitted
	4011	Lack of side wall fusion					
	4012	Lack of inter-run fusion					
	4013	Lack of root fusion					

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
2.13	402	Lack of penetration	T-joint (fillet weld)	> 0,5	Short imperfection: $h \le 0{,}2\,a$, but max. 2 mm	Not permitted	Not permitted
			T-joint (partial penetration) / Butt joint (partial penetration)	≥ 0,5	Short imperfections: butt joint: $h \le 0{,}2s$ or i, but max. 2 mm; T-joint: $h \le 0{,}2a$, but max. 2 mm	Short imperfections: butt joint: $h \le 0{,}1\,s$ or i, but max. 1,5 mm; fillet joint: $h \le 0{,}1\,a$, but max. 1,5 mm	Not permitted
			Butt joint (full penetration)	≥ 0,5	Short imperfection: $h \le 0{,}2\,t$, but max. 2 mm	Not permitted	Not permitted

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
3 Imperfections in joint geometry							
3.1	507	Linear misalignment	The limits relate to deviations from the correct position. Unless otherwise specified, the correct position is that when the centrelines coincide (see also Clause 1). t refers to the smaller thickness.				
	5071	Linear misalignment between plates		0,5 to 3	$h \leq 0{,}2\ \text{mm} + 0{,}25\ t$	$h \leq 0{,}2\ \text{mm} + 0{,}15\ t$	$h \leq 0{,}2\ \text{mm} + 0{,}1\ t$
				> 3	$h \leq 0{,}25\ t$ but max. 5 mm	$h \leq 0{,}15\ t$, but max. 4 mm	$h \leq 0{,}1\ t$, but max. 3 mm
			Plates and longitudinal welds				
	5072	Transversely circular welds at cylindrical hollow sections		≥ 0,5	$h \leq 0{,}5\ t$, but max. 4 mm	$h \leq 0{,}5\ t$, but max. 3 mm	$h \leq 0{,}5\ t$, but max. 2 mm
			Circumferential welds				
3.2	617	Incorrect root gap for fillet welds	Gap between the parts to be joined. Gaps exceeding the appropriate limit may, in certain cases, be compensated for by a corresponding increase in the throat thickness.	0,5 to 3	$h \leq 0{,}5\ \text{mm} + 0{,}1\ a$	$h \leq 0{,}3\ \text{mm} + 0{,}1\ a$	$h \leq 0{,}2\ \text{mm} + 0{,}1\ a$
				> 3	$h \leq 1\ \text{mm} + 0{,}3\ a$, but max. 4 mm	$h \leq 0{,}5\ \text{mm} + 0{,}2\ a$, but max. 3 mm	$h \leq 0{,}5\ \text{mm} + 0{,}1\ a$, but max. 2 mm

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels D	C	B
4 Multiple imperfections							
4.1	None	Multiple imperfections in any cross section	$h_1 + h_2 + h_3 + h_4 = \sum h$ $h_1 + h_2 + h_3 = \sum h$	0,5 to 3 > 3	Not permitted Maximum total height of imperfections: $\sum h \le 0{,}4\,t$ or $\le 0{,}25\,a$	Not permitted Maximum total height of imperfections: $\sum h \le 0{,}3\,t$ or $\le 0{,}2\,a$	Not permitted Maximum total height of imperfections: $\sum h \le 0{,}2\,t$ or $\le 0{,}15\,a$

No.	Reference to ISO 6520-1	Imperfection designation	Remarks	t mm	Limits for imperfections for quality levels		
					D	C	B
4.2	None	Projected or cross-sectional area in longitudinal direction	Case 1 ($D > l_3$) $h_1 \times l_1 + h_2 \times l_2 + h_3 \times l_3 = \Sigma h \times l$ Case 2 ($D < l_3$) $h_1 \times l_1 + h_2 \times l_2 + \left(\frac{h_2 + h_3}{2}\right) \times D + h_3 \times l_3 = \Sigma h \times l$ The sum of the areas $\Sigma h \times l$ shall be calculated as a percentage to the evaluation area $l_p \times w_p$ (case 1). If D is smaller than the shorter length of one of the neighbouring imperfections, the full connection of the two imperfections shall be applied to the sum of imperfections (case 2). See also Annex A for information.	≥ 0,5	$\Sigma h \times l \leq 16\ \%$	$\Sigma h \times l \leq 8\ \%$	$\Sigma h \times l \leq 4\ \%$

Table 12 — Maximum height of the weld seam for SAW tubes

Wall thickness T (mm)	Maximum height of the outside and inside weld seam (mm)
$T \leq 12,5$	3
$T > 12,5$	4

SECTION 14	Dimensional control procedure

Revision	Reason for issue	Prepared	Verified	Approved	Client approval
0	Issued for Construction	M. Macor	A. Gianessi	A. Gianessi	

1. Scope and Field of Application

The scope of this procedure is to define the methods, operating details and equipment for the execution of the dimensional controls on finished tubulars of the job 2023263

The procedure defines manual methods and the dimesional control performed by automatic machine.

2. Standard References

Spec. EEMUA 158 ed. 3

Tolleranze che differiscono dallo standard		☐	SI	☑	NO										
Elenco tolleranze	Ovalità	☐	Diametro	☐	Rettilineità Globale	☐	Rettilineità locale	☐	Lunghezza	☐	Spessore	☐	Planarità testa	☐	
	Altezza cordone esterno	☐	Disallineamento lembi	☐											

3. Responsibility

The production operator is responsible of carring out the dimensional inspection and filling in the appropriate dimensional report (manual method, in case of automatic dimensional control the report is automatically issued by the machine).
Quality Control (QC) personnel are responsible for the review of such report against the allowed tolerances (only for manual methods); in case of automatic dimensional control the machine software highlights to the operator the actual values out of tolerance.

4. Operating Instructions

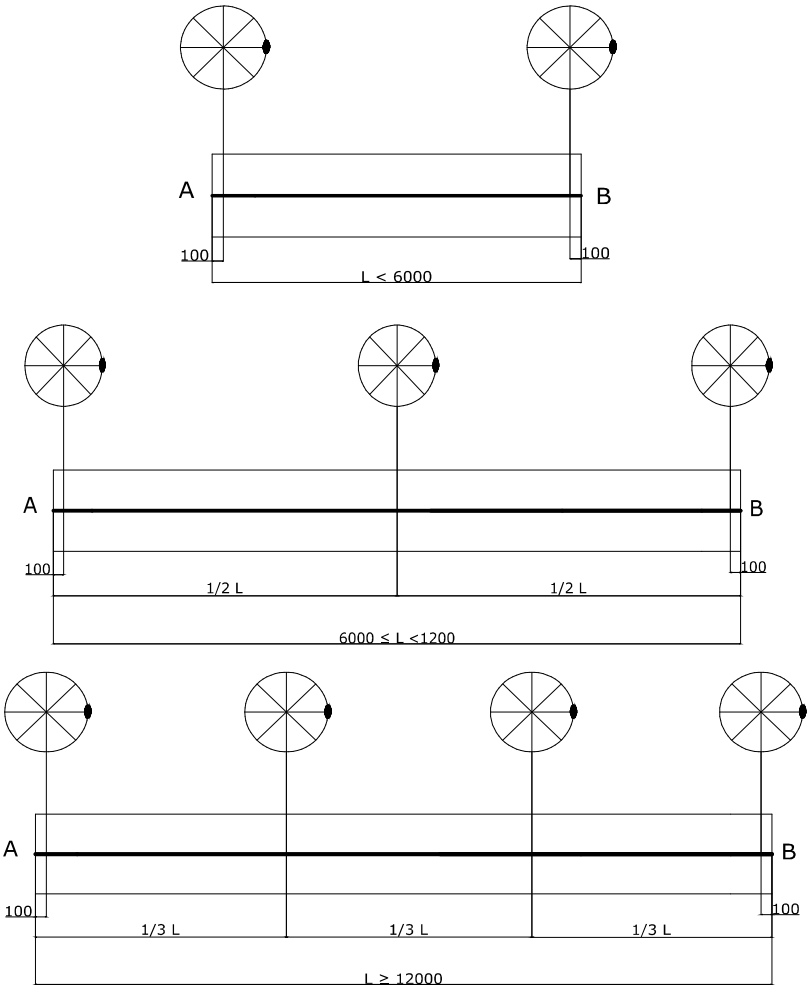
4.1 How to measure and what to measure

To be measured	To be verified		Device for measurement	
	Yes	no	Automatic Method L > 2350 mm	Manual method L ≤ 2350 mm
External Diameter (Circumference)	☑	☐	Automatic dimensional control machine	Diameter tape
Out of roundness	☑	☐	Automatic dimensional control machine	External Caliper (body sections) or laser distance meter; External Caliper, tape (end sections) or laser distance meter;
Local out of roundness	☑	☐	Automatic dimensional control machine	N.A.
Full-lenght Straightness	☑	☐	Automatic dimensional control machine	Wire + measuring tape
Local Out of straightness	☑	☐	Automatic dimensional control machine	N.A.
Wall thickness	☑	☐	N.A.	Ultrasonic Probe
Pipe end "Out of squareness"	☑	☐	N.A.	Square / measuring tape
Length	☑	☐	N.A.	Meausuring tape tape, laser distance meter
Bevels	☑	☐	N.A.	Goniometer / measuring tape
External weld bead height	☑	☐	Automatic dimensional control machine	N.A.
Weld edge misalignment	☑	☐	Automatic dimensional control machine	N.A.
Weighing	☐	☑	N.A.	Dinamometer

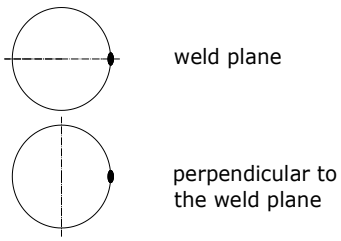
Note: all instruments used shall be in accurate permanent adjustment, have current valid control certificates and be subject to a programme of periodic checking.

4.3 - Where to measure (Manual Method) Manual method
(Applicable to pipes L ≤ 2350 mm;in case of automatic dimensional control machine debug also to pipes L> 2350 mm)

4.3.1 External Diameter (Circumference), Out of roundness.

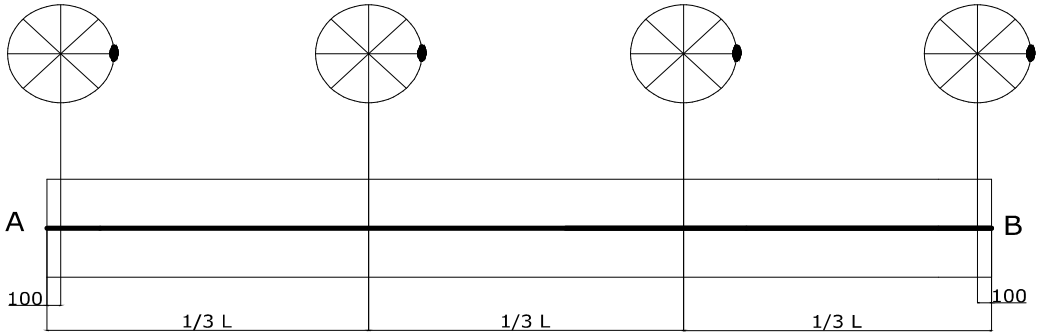


4.3.2. Full lenght straightness to be taken in the following positions

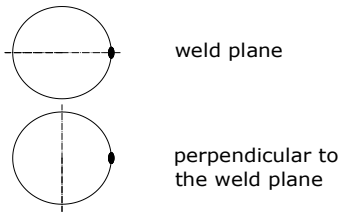


4.2 (Automatic dimensional control machine) - Where to measure (Applicable to pipes L ≥ 2350 mm only)

4.2.1 The automatic dimensional control machine performs the measurements stated within the brackets (External Diameter (Circumference), Out of roundness) each 2 mm of pipe lenght. As an output, on the dimensional control report form (see par. 5.1) the above described measurements will be showed and saved taken into account only the pipe section shown in the drawing below.



4.2.2 Length, Straightness (this position are valid only for manual measurement)



4.2.3 Thickness

Thickness shall be measured at a position not less than 2 timens of wall thickness from the weld
Thickness is normally measured within a distance of half of the outside diameter from the end of the section

4.3.4 Wall thickness shall be measured on both pipe ends as near as practical to the longitudinal weld - (Min. amd max value to be recorded)

4.3.5 Pipe ends Out of Squareness: to be measured at both ends; maximum value to be recorded for both ends

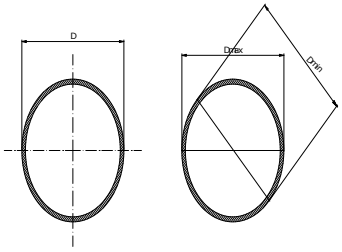
4.3.6 Lenght shall be measured on longitudinal weld plane

4.3.7 Bevel angles shall be measured at both pipe ends

4.3 Tolerances

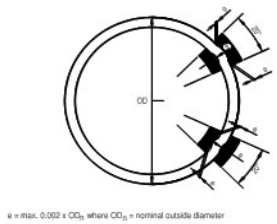
All values are in mm unless otherwise specified

1. Ovality



Nominal Outside Diameter (D)	Spess.	Min Diameter	Max Diameter	Max Ovality
550,0	20,0	547,3	552,8	5,5
600,0	20,0	597,0	603,0	6,0
800,0	20,0	796,0	804,0	6,0

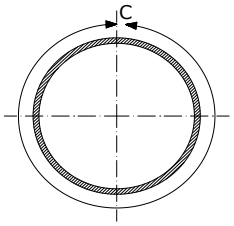
2. Local
Out of roundness



e = max. 0.002 x OD_n where OD_n = nominal outside diameter

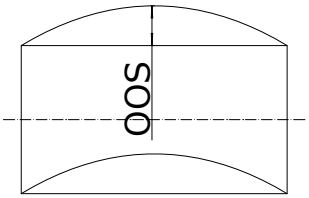
Nominal Outside Diameter (D)	Spess.	Out of roundness
550,0	20,0	NOT TO BE MEASURED
600,0	20,0	NOT TO BE MEASURED
800,0	20,0	NOT TO BE MEASURED

3. Diameter (circumference)



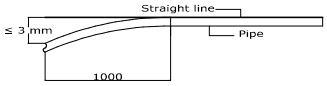
Nominal Outside Diameter "C"	Spess.	PIPE ENDS		PIPE BODY	
		Min. Nominal Diameter	Max Nominal Diameter	Min. Nominal Diameter	Max Nominal Diameter
550,0	20,0	548,1	551,9	547,1	552,9
600,0	20,0	598,1	601,9	597,1	602,9
800,0	20,0	798,1	801,9	797,1	802,9

4. Full lenght straightness



Nominal Length (L)	Maximum OOS
10000	8,3
9600	8,0
3740	3,1

5. Local Out of straightness



Nominal Outside Diameter (D)	Spess.	Out of roundness
550,0	20,0	NOT TO BE MEASURED
600,0	20,0	NOT TO BE MEASURED
800,0	20,0	NOT TO BE MEASURED

6. Length

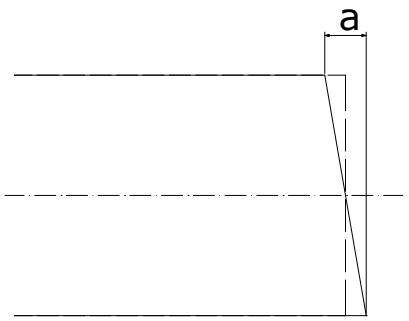


Nominal Length (L)	Tolerance
10000	-0;+50;
9600	-0;+50;
3740	-0;+5;

7. Thickness

NOMINAL	**20,0**				
Min	19,7				
Max	-				
NOMINAL					
Min					
Max					

8. Out of squareness

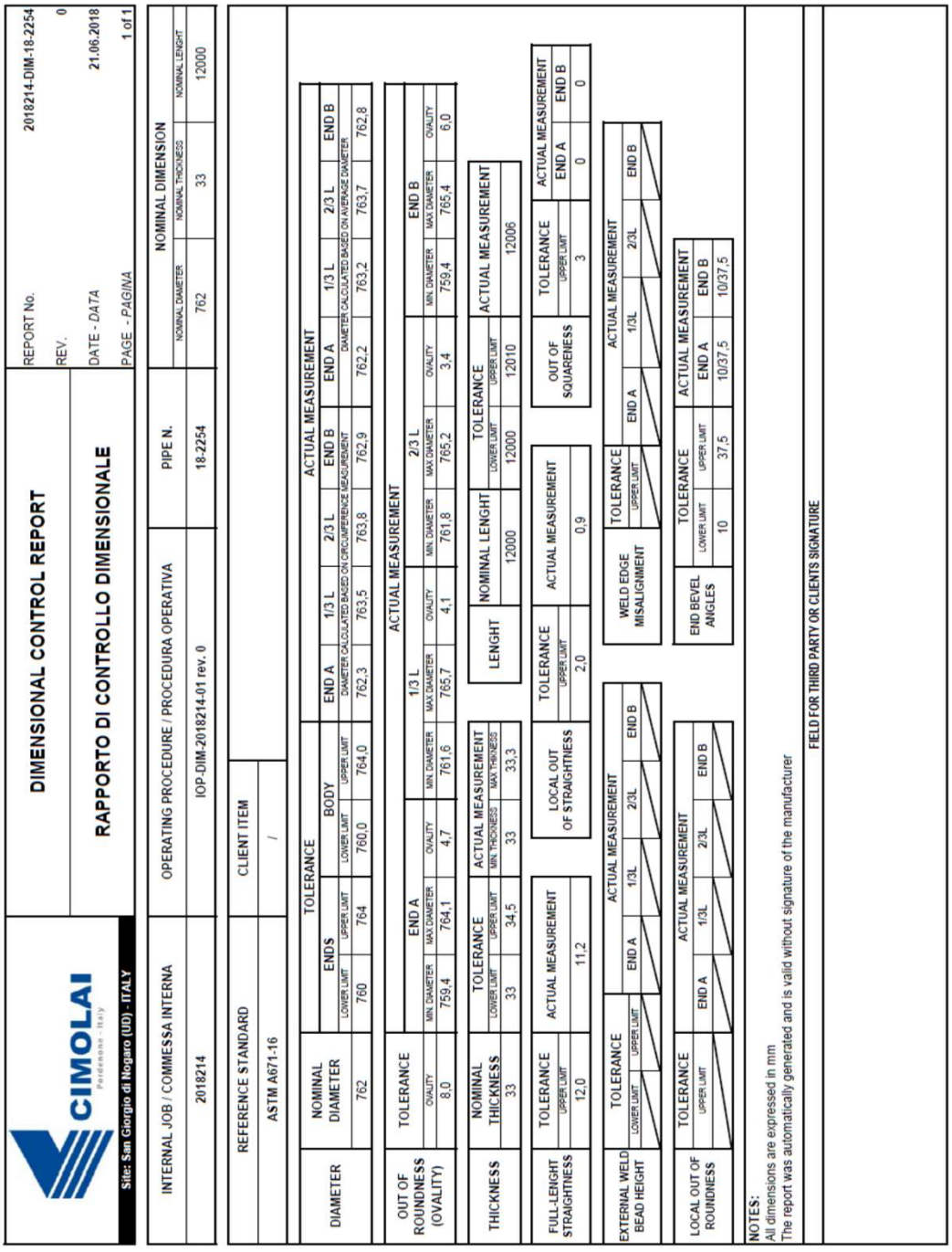


Nominal Outside Diameter (D)	Spess.	Out of Squareness
550,0	20,0	**NON APPLICABILE**
600,0	20,0	**NON APPLICABILE**
800,0	20,0	3,0

9. End bevel angles

25° (0°; +5°)

4.4 Attachment



CIMOLAI Pordenone - Italy
Site: San Giorgio di Nogaro (UD) - ITALY

DIMENSIONAL CONTROL REPORT

RAPPORTO DI CONTROLLO DIMENSIONALE

REPORT No. 2018214-DIM-18-2254
REV. 0
DATE - *DATA* 21.06.2018
PAGE - *PAGINA* 1 of 1

INTERNAL JOB / COMMESSA INTERNA	OPERATING PROCEDURE / PROCEDURA OPERATIVA	PIPE N.
2018214	IOP-DIM-2018214-01 rev. 0	18-2254

NOMINAL DIMENSION		
NOMINAL DIAMETER	NOMINAL THICKNESS	NOMINAL LENGHT
762	33	12000

REFERENCE STANDARD	CLIENT ITEM
ASTM A671-16	/

DIAMETER

NOMINAL DIAMETER	TOLERANCE ENDS LOWER LIMIT	TOLERANCE ENDS UPPER LIMIT	TOLERANCE BODY LOWER LIMIT	TOLERANCE BODY UPPER LIMIT
762	760	764	760,0	764,0

ACTUAL MEASUREMENT — DIAMETER CALCULATED BASED ON CIRCUMFERENCE MEASUREMENT

	END A	1/3 L	2/3 L	END B
	762,3	763,5	763,8	762,9

ACTUAL MEASUREMENT — DIAMETER CALCULATED BASED ON AVERAGE DIAMETER

	END A	1/3 L	2/3 L	END B
	762,2	763,2	763,7	762,8

OUT OF ROUNDNESS (OVALITY)

TOLERANCE OVALITY	END A MIN. DIAMETER	END A MAX DIAMETER	END A OVALITY	1/3 L MIN. DIAMETER	1/3 L MAX DIAMETER	1/3 L OVALITY	2/3 L MIN. DIAMETER	2/3 L MAX DIAMETER	2/3 L OVALITY	END B MIN. DIAMETER	END B MAX DIAMETER	END B OVALITY
8,0	759,4	764,1	4,7	761,6	765,7	4,1	761,8	765,2	3,4	759,4	765,4	6,0

THICKNESS

NOMINAL THICKNESS	TOLERANCE LOWER LIMIT	TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT MIN. THICKNESS	ACTUAL MEASUREMENT MAX THICKNESS
33	33	34,5	33	33,3

LENGHT

NOMINAL LENGHT	TOLERANCE LOWER LIMIT	TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT
12000	12000	12010	12006

FULL-LENGHT STRAIGHTNESS

TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT
12,0	11,2

LOCAL OUT OF STRAIGHTNESS

TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT
2,0	0,9

OUT OF SQUARENESS

TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT END A	ACTUAL MEASUREMENT END B
3	0	0

EXTERNAL WELD BEAD HEIGHT

TOLERANCE LOWER LIMIT	TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT END A	ACTUAL MEASUREMENT 1/3L	ACTUAL MEASUREMENT 2/3L	ACTUAL MEASUREMENT END B

WELD EDGE MISALIGNMENT

TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT END A	ACTUAL MEASUREMENT 1/3L	ACTUAL MEASUREMENT 2/3L	ACTUAL MEASUREMENT END B

LOCAL OUT OF ROUNDNESS

TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT END A	ACTUAL MEASUREMENT 1/3L	ACTUAL MEASUREMENT 2/3L	ACTUAL MEASUREMENT END B

END BEVEL ANGLES

TOLERANCE LOWER LIMIT	TOLERANCE UPPER LIMIT	ACTUAL MEASUREMENT END A	ACTUAL MEASUREMENT END B
10	37,5	10/37,5	10/37,5

NOTES:
All dimensions are expressed in mm
The report was automatically generated and is valid without signature of the manufacturer

FIELD FOR THIRD PARTY OR CLIENTS SIGNATURE

SECTION 15	Marking procedure

Rev. No.	Scope of issue	Prepared	Verified	Approved
0 of 17/08/2023	First issue	A. Gianessi	M. Macor	M. Macor

1. SCOPE

This procedure defines the methods for the final marking of pipes under Cimolai job 2023263.

2. REFERENCE DOCUMENTS

Reference is made to:

- P.O. 1723001802

3. RESPONSIBILITY

Production area personnel are responsible for the correct application of this procedure.
The foreman must coordinate the operations.
QC has the responsibility to verify that pipes are marked in accordance with this procedure.

4. OPERATING INSTRUCTIONS

Pipes must be traced back to the relevant customer order through:

- Low stress stamping

These activities usually take place on finished pipes, i.e., pipes which successfully ended the production steps (nde controls included). When a pipe is going through the production process, it is identified by its base material traceability number which are stencilled on the inside surface of the pipe, close to one end.

Low Stress Stamping
Only low stress stamping applies on pipes thick more than 6mm.
Digits shall be at least 8 mm high

The production operator has to recall the mark of the pipe to be stamped from the machine hard disk.

He then aligns the machine parallel to welding to obtain that the top left first letter of the stamping is 1000 mm from the end and 250 mm from the weld line (see fig.2a/b).

1. SCOPO

La presente procedura di marcatura definisce le modalità operative per la marcatura finale dei tubi della commessa 2023263

2. DOCUMENTI DI RIFERIMENTO

Viene fatto riferimento a:

- P.O. 1723001802

3. RESPONSABILITA'

L'operatore è responsabile della corretta applicazione della procedura.
Il responsabile di area deve coordinare le operazioni.
CQ deve verificare che i tubi siano marcati in accordo con la presente procedura.

4. ISTRUZIONI OPERATIVE

I tubi saranno identificabili in riferimento all'ordine cliente tramite:

- Punzonatura

Tali attività hanno solitamente luogo su tubi finiti che hanno terminato il loro ciclo produttivo (comprensivi di controlli non distruttivi). Quando un tubo è in fase di produzione è rintracciabile dalla sua marca e dal numero di rintracciabilità del materiale base che è riportato manualmente sulla superficie interna del tubo, vicino ad una delle due estremità.

Punzonatura
Viene eseguita solo stampigliatura low stress su spessori superiori a 6 mm. Le cifre devono essere alte almeno 8 mm.

L'operatore deve riportare la marcatura del tubo che deve essere richiamata dall'hard disk della macchina.

Esso deve allineare la macchina parallela alla saldatura in modo da ottenere la prima lettera in alto a sinistra a 1000 mm dalla testa del tubo e 150 mm dalla linea di saldatura (vedi fig.2a/b).

Stamping shall be white paint ringed.

To be punched:

P.O. Number	**1723001802**
P.O. Item	****See Table 1****
Steel grade	**EN 10225-1: S460MLO**
Pipe ID	
Dimension***	
Heat Number	
Plate Number	

***** Outer diameter x thickness x nominal length**

La stampigliatura deve essere evidenziata da una cornice di pittura bianca

Da punzonare

P.O. Number	**1723001802**
P.O. Item	****Vedi tabella 1****
Steel grade	**EN 10225-1: S460MLO**
Pipe ID	
Dimension***	
Heat Number	
Plate Number	

*****Diametro esterno x spessore x lunghezza nominale**

FIG. 2a (front view)

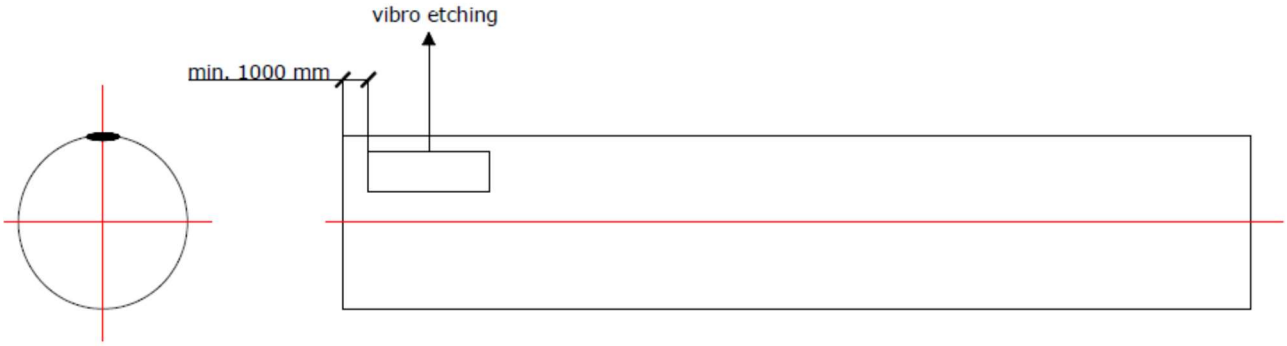
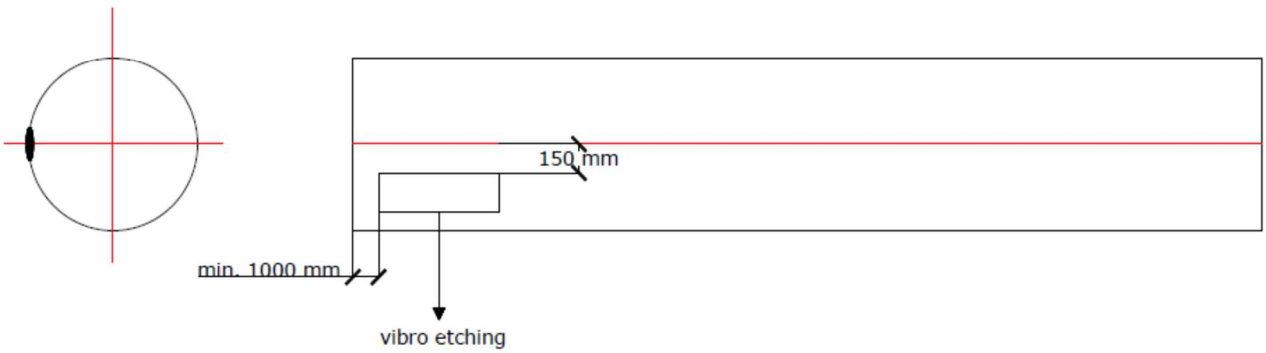


FIG. 2b (plan view)



5. DOCUMENTATION

No documents or records are associated with this procedure.

5. DOCUMENTAZIONE

Non ci sono documenti allegati a questa procedura.

TABLE 1 / TABELLA 1

P.O. ITEM	PIPE ID	Outside Diameter mm	Thk. (mm)	Nominal Pipe length mm
40	23-3135	550	20,00	10000
40	23-3136	550	20,00	10000
40	23-3137	550	20,00	10000
40	23-3138	550	20,00	10000
50	23-3139	600	20,00	9600
50	23-3140	600	20,00	9600
50	23-3141	600	20,00	9600
50	23-3142	600	20,00	9600
60	23-3145	800	20,00	3740
60	23-3146	800	20,00	3740
60	23-3147	800	20,00	3740
60	23-3148	800	20,00	3740

SECTION 16	Inspection test plan

Fabrication and control plan (PFC)

PFC NUMBER	REVISION	DATE	PAGE
PFC-2023263-01	1	16/01/2024	1 of 3

CIMOLAI JOB	CLIENT & PROJECT	SERIAL NUMBER	ORDER
2023263	Rosetti Marino S.p.A. - HOLLANDSE KUST NOORD WIND PARK Project	N.A.	17230011802

Cimolai S.p.A.	Client	AI / Third Party	Final Customer

Prepared by		Verified and approved by	
CQ	Date 16/01/2024	RCQ	Date 16/01/2024
	Sign **Antonio Gianessi**		Sign **Massimiliano Macor**

Step	DESCRIPTION	REFERENCE STANDARDS / PROCEDURES	ACCEPTANCE CRITERIA	Test frequency	AUTHORITY TESTING [1] SIGN AND DATE BY THE PARTY INVOLVED				CERTIFICATES / REPORTS	REMARKS, NON CONFORMITIES
					Cimolai	**Rosetti Marino**	**Crosswind**			
01	Issue of Inspection and test plan	PFC-2023263-01 rev. 00	Contractual requirement Technical offer Spec. K559-2254-MT-SPE-001 rev. 01	-	H	R	R		Fabrication and control plan	-
02	NDT procedure	VT: EEMUA 158 par. 7.4.1 Proc. IOP-VT-2023263-01	VT: EEMUA 158 Table 14	-	H	R/A	R		NDT procedure	VT: visual test
		MT: EEMUA 158 ed. 3 par. 7.4.4 Proc. IOP-MT-2023263-01	MT: EEMUA 158 ed. 3 par. 7.5.5	-	H	R/A	R		NDT procedure	MT: magnetic particle test
		UT**: ISO 17640 lev. B Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	UT: ISO 11666 lev.2 Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	-	H	R/A	R		NDT procedure	UT: ultrasonic test
		RX: ISO 17636-1 Class B Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.3	RX: ISO 10675-1 lev. 1 Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.3	-	H	R/A	R		NDT procedure	RT: radiographic test
03	NDT OPERATOR QUALIFICATION	EEMUA 158 ed. 3 par. 7.3.2 EN ISO 9712	EEMUA 158 ed. 3 par. 7.3.2 EN ISO 9712	-	H	R/A	R		NDT operator certificate	-
04	WELDERS AND WELDING OPERATORS QUALIFICATION	EEMUA 158 ed. 3 par. 4.6 ISO 9606-1: 2012 ISO 14732: 2013	ISO 9606-1: 2012 ISO 14732: 2013	-	H	R/A	R		Welder and welding operator	-
05	WPS/PQR (Welding Book)	WB-2023263-01 EEMUA 158 ed. 3 par. 4 Spec. K559-2254-MT-SPE-001rev. 01	EEMUA 158 ed. 3 - Par. 4 Spec. K559-2254-MT-SPE-001 rev. 01	-	H	R/A	R		Welding book: WPSs, PQRs, welding map	-
06	ORDER RAW MATERIAL FROM APPROVED SUPPLIER AND CONSUMABLE **** PLATES SUPPLIED BY CUSTOMER ****	Proc. PRO-ACQ rev. 08 Proc. IOP-QFO rev. 09	EN 10225-1: 2019 Pipe P.O.	-	-	-	-		Plate Purchase order	-
07	PLATES RECEIPT and TRACEABILITY EN 10225-1: S460MLO	Proc. IOP-CAM rev. 010 Proc. IOP-MMA rev. 05	EN 10225-1: 2019	All plates	H	R	-		Plate certificates acc. to EN 10204-3.2	-
08	OXYCUTTING	Proc. IOP-CAN rev. 04 Cutting drawings	Lenght: 0; + 10mm Width: 0;+4 mm	All Plates every shift	H	-	-		-	-

[1] H = hold point; W = witness point; R = review; M = monitoring ; I = Spot witness, NA = Not applicable , A = acceptance

Step	DESCRIPTION	REFERENCE STANDARDS / PROCEDURES	ACCEPTANCE CRITERIA	Test frequency	AUTHORITY TESTING (1) SIGN AND DATE BY THE PARTY INVOLVED				CERTIFICATES / REPORTS	REMARKS, NON CONFORMITIES
					Cimolai	Rosetti Marino	Crosswind			
09	BEVELLING	Proc. IOP-CIA rev. 04 Bevelling drawings	Width: 0; +2 mm Angle: 0°; +5°	All Plates every shift	H	-	-		-	-
10	PLATE PRE-BENDING	Proc. IOP-BOR rev. 04	Max 3 mm gap between template and pipe countour	After each pass every shift	H	-	-		-	-
11	PIPE COLD FORMING	Proc. IOP-PRE rev. 05	Max 2 mm gap between template and pipe countour	After each press every shift	H	-	-		-	-
12	FIT-UP & TACK WELDING	WB-2023263-01 EEMUA 158 ed. 3 par. 4 Spec. K559-2254-MT-SPE-001rev. 01	EEMUA 158 ed. 3 - Par. 4 Spec. K559-2254-MT-SPE-001 rev. 01	All Pipes	H	-	-		-	-
13	PIPE LONGITUDINAL WELDS	WB-2023263-01 EEMUA 158 ed. 3 par. 4 Spec. K559-2254-MT-SPE-001rev. 01	EEMUA 158 ed. 3 - Par. 4 Spec. K559-2254-MT-SPE-001 rev. 01	All Pipes	H	-	M		-	-
14	SIZING	Proc. IOP-CAL rev. 04	OOR: max 1% OD OOS: max 1 mm / m	All Pipes	H	-	-		-	-
15a)	VT (pipe longitudinal welds)				H	-	M		-	-
	Extent of test of pipe longituinal welds: Pipe OD ≥ 800: 100% of internal and external weld; Pipe OD < 800: 100% of external weld and internal weld both ends for a leght equal to OD)	VT: EEMUA 158 par. 7.4.1 Proc. IOP-VT-2023263-01	VT: EEMUA 158 Table 14	100% of Pipes						
15b)	MT on welds				H	R	M		-	-
	Extent of test of pipe longituinal welds: Pipe OD ≥ 800: 100% of internal and external weld; Pipe OD < 800: 100% of external weld and internal weld both ends for a leght equal to OD)	MT: EEMUA 158 ed. 3 par. 7.4.4 Proc. IOP-MT-2023263-01	MT: EEMUA 158 ed. 3 par. 7.5.5	100% of Pipes						
15c)	UT on welds				H	R	M		-	-
	Extent of test of pipe longituinal welds: 100%	UT**: ISO 17640 lev. B Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	UT: ISO 11666 lev.2 Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.2	100% of Pipes						
15d)	RT on welds				H	R	M		-	
	Extent of test of pipe longituinal welds: 10% of each longitudinal weld; as a minimum one film to be done at both pipe ends and one in the middle of the pipe of each mother pipe	RX: ISO 17636-1 Class B Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.3	RX: ISO 10675-1 lev. 1 Spec. K559-2254-MT-SPE-001 rev. 01 §7.4.3	100% of Pipes						
16	Welds repair (if any)	WB-2023263-01 EEMUA 158 ed. 3 par. 4 Spec. K559-2254-MT-SPE-001rev. 01	EEMUA 158 ed. 3 - Par. 4 Spec. K559-2254-MT-SPE-001 rev. 01	Applicable pipes	H	-	H		NCR to be raysed only in case of major repairs: 100% of weld repair or cracks	-
17	NDT after weld repair	See steps 15a) ÷ 15d)	See steps 15a) ÷ 15d)	App. pipes	H	R	H		-	-
18	PRODUCTION TEST (to be continued at next page) - **NOT APPLICABLE: raw material meets WPQR essential variables of project spec.** K559-2254-MT-SPE-001 rev. 01				H	R	R			
☐	a) Chemical composition	ASTM E415-17 ISO 14284: 1996	EN 10219-1: 2009 - Table 1, A1, A2, B1, B2, B3,	-						Performed by plate supplier or internally
☐	b) Tensile properties of base material	ISO 6892-1: 2019 ISO 5178: 2019	Rp0.2: min. 355 Mpa (S355, thk ≤ 16 mm Rp0.2: min. 345 Mpa (S355, 16 ≤ thk ≤ 40 mm) Rp0.2: min. 440 Mpa (S460, 16 ≤ thk ≤ 40 mm) Rm: 470 ÷ 630 Mpa (S355) Rm: 540 ÷ 720 Mpa (S460)	-					Mechanical test report	-

(1) H = hold point; W = witness point; R = review; M = monitoring ; I = Spot witness, NA = Not applicable , A = acceptance

Step	DESCRIPTION	REFERENCE STANDARDS / PROCEDURES	ACCEPTANCE CRITERIA	Test frequency	AUTHORITY TESTING (1) SIGN AND DATE BY THE PARTY INVOLVED				CERTIFICATES / REPORTS	REMARKS, NON CONFORMITIES
					Cimolai	Rosetti Marino	Crosswind			
☑	c) Tensile properties of longitudinal weld - Transverse tensile test	ISO 4136: 2022 Spec. EEMUA 158 §4.4.4.1	Rm: min. 520 MPa	2 test each applied WPS					Mechanical test report	-
☑	d) Tensile properties of longitudinal weld - All weld meatl tensile test	ISO 5178: 2019 Spec. EEMUA 158 §4.4.4.2	Rp0.2: min. 440 Mpa Rm: min. 520 MPa El ≥ 20%	1 test each applied WPS						-
☑	c) CVN impact test of longitudinal weld and HAZ	ISO 148-1: 2016 Spec. EEMUA 158 §4.4.4.5	HAZ, WM: - Min. ave. 46J, min. sin. 35J (set of 3) carried out at -40°C Position: VWT 0/2, VWT0/10, VHT 0/2, VHT 2/2, VHT 5/2	1 set of test each applied WPS						BM: base metal HAZ: heat affected zone WM: weld metal
☑	d) Bend test	ISO 5173: 2023	No indications longer than 3 mm	4 set of test each applied WPS						-
☑	e) Macrographic	ISO 17639: 2022	ISO 5817: 2014 - lev. C Spec. EEMUA 158 §4.4.4.3	1 test each applied WPS						-
☑	f) Hardness	ISO 6507-1: 2018 Spec. EEMUA 158 §4.4.4.4	HV ≤ 325 HV 10	1 set of test each applied WPS						-
19	ENDS MACHINING	Proc. IOP-CIA rev. 04 Bevelling drawings	Width: 0; +2 mm Angle: 0°; +5°	All Pipes	H	-	-		-	
20	MT ON ENDS	MT: EEMUA 158 ed. 3 par. 7.4.4 Proc. IOP-MT-2023263-01	MT: EEMUA 158 ed. 3 par. 7.5.5	All Pipes both ends	H	-	M/R		MT report	
21	DIMENSIONAL CHECK of Pipes	Proc. IOP-DIM-2023263-01 Spec. EEMUA 158 ed. 3 par. 6	Spec. EEMUA 158 ed. 3 par. 6	All Pipes	H	R	M/R		Dimensional control report	-
22	CLOSING POSSIBLE NCR	Proc. IOP-NCP rev. 02 Proc. PRO-NCF REV. 02	Applicable requirement	App. Pipe	H	H	-		NCR report	-
23	PIPE MARKING	Proc. IOP-MKG-2021241-01	-	All pipes	H	-	-		-	-
24	ISSUE OF FINAL DOCUMENTATION	Inspection test certificate for SAWL pipes	☑ EN 10204-3.1 ☐ EN 10204-3.2	All Pipes	H	R	R		Inspection test certificate	Final documentation include also: 1. Inspection test certificate;
25	ISSUE OF FINAL DOCUMENTATION	Final data book	Final Data Book Index	All Pipes	H	R	R		-	-

(1) H = hold point; W = witness point; R = review; M = monitoring ; I = Spot witness, NA = Not applicable , A = acceptance

4 SIDERTAGLIO DOSSIER

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ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

Pos/Rev	*Descrizione - Description*	*Qta. – Qty.*
11	**PIPES PREFABRICATION**	**1 UR**
11.10	STR PIPE 800 MM x30 MM	4 Pcs.
11.20	ROUNDING 30 MM	4 Pcs.
11.30	STR PIPE 800 MM x40 MM	4 Pcs.
11.40	ROUNDING 40MM	4 Pcs.
11.50	WELDED COUPON TH. 30 L500	1 Pcs.
11.60	WELDED COUPON TH. 40 L500	1 Pcs.

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

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1: PO 1723001835 (Welded Tubulars)

Destinazione:
ROSETTI MARINO S.P.A.
Magazzino V.Trieste
Via Trieste 230
48122 Ravenna RA

Ordine Rosetti Marino N. 1723001835 123A90A
Tipo **Z1RP** Data Ordine **03.11.2023**
Data Stampa **12.01.2024**
Commessa **123A90A - Base Load Power Hub Platform - Common**

Fatturare a:
ROSETTI MARINO S.P.A.
Via Trieste, 230
48122 RAVENNA RA
Codice univoco fatturazione elettronica: A4707H7

Spettabile
SIDERTAGLIO CALANDRATURA SRL
VIA MARZOTTO, 9
36031 DUEVILLE VI

Data consegna: **12.12.2023**

Att.ne: **MR. ANTHONY COCCO**
Vs. rif.: **N° 681 REV.1**
N. Tel. **0444/1801617**
e-mail **alice@sidertagliocalandratura.com**
Resa: **FCA - VS. STABILIMENTO**
Cond. pagamento: **BON.B. 60 GG. D.F. F.M.**

Referente ordine: **DI ROSA ANTONINO**
Tel **0544 878064** Fax **0544 878105-224** E-Mail **antonino.dirosa@rosetti.it**

E' richiesta la Vs. conferma dell'ordine.

****

For any further details about delivery dates see par. 15

****

WELDED TUBULARS

Pos/Rev	Descrizione	Quantità	um	Prezzo unitario	Valore netto (EUR)
11	**PREFABBRICAZIONE TUBI**	**1**	**UR**		
11.10	STR PIPE 800 MM x30 MM EN10225 S460MLO Z un lato dritto, altro lato ½ V 25° esterno rastremato internamente per connessione 20 mm N° 4 PZ. L=2950 mm	*4*	*PZ*	*0,00*	*0,00*
	Elemento WBS: 123A90A.23BB - Bracings				
11.20	SMUSSI CRF DI L/M	*4*	*PZ*	*0,00*	*0,00*
	Elemento WBS: 123A90A.23BB - Bracings				
11.30	STR PIPE 800 MM x40 MM EN10225 S460MLO Z un lato ½ V 25° esterno rastremato internamente per connessione 20 mm, altro lato a K simmetrico N° 4 PZ. L=2170 mm cad.	*4*	*PZ*	*0,00*	*0,00*
	Elemento WBS: 123A90A.23BB - Bracings				
11.40	SMUSSI CRF DI L/M	*4*	*PZ*	*0,00*	*0,00*
	Elemento WBS: 123A90A.23BB - Bracings				
11.50	WELDED COUPON TH. 30 L.500	*1*	*PZ*	*0,00*	*0,00*
	Elemento WBS: 123A90A.23BB - Bracings				
11.60	WELDED COUPON TH. 40 L.500	*1*	*PZ*	*0,00*	*0,00*

Pos/Rev	Descrizione	Quantità	um	Prezzo unitario	Valore netto (EUR)
	Elemento WBS: 123A90A.23BB - Bracings				
11.70	Costo aggiuntivo per lastra Rx centrale fatta su tutti i tubi	0,00			
	Elemento WBS: 123A90A.23BB - Bracings				

ROSETTI MARINO S.p.A., a company incorporated in Italy (Company Registrar and VAT Number 00082100397) and having its registered office at 230, Via Trieste, 48122 Ravenna (Italy) (hereinafter referred to as "COMPANY" or "ROSETTI")

And

SIDERTAGLIO CALANDRATURA SRL, a company incorporated in ITALY, (Company Registrar and VAT number 04069960245 having its registered office - principal place of business in VIA MARZOTTO 9, 36031 DUELLE (VI) (hereinafter referred to as "CONTRACTOR")

WHEREAS

(A) CROSSWIND C.V., a company organized under the laws of The Netherlands with registration number 77886070 and its registered address at Hoofplein 20, 3032 AC Rotterdam, The Netherlands (hereinafter referred to as "CLIENT"), has awarded COMPANY the contract n° CW-WP4-2023-05, issued by CLIENT on 10th July 2023, for developing the Engineering, Procurement, Construction, Offshore installation, Commissioning and Operation of the Base Load Power Hub (BLPH) to be installed within the offshore Wind Farm Hollandse Kust Noord Wind Park Project, located 18,5 km off the coast of the Netherlands, (the "PROJECT").

(B) COMPANY is seeking a contractor capable to timely perform the WORKS, the SERVICES and/or deliver the GOODS (as described in this PURCHASE ORDER) to be carried out for and/or incorporated in the plant concerning the PROJECT.

(C) CONTRACTOR represents that it has the necessary know-how, experience, capacity, capability in the applicable PROJECT industrial sector, has qualified and experienced PERSONNEL with sufficient facilities, resources, premises and equipment and is properly financed to timely carry out and deliver such WORK and is willing to do so in accordance with the terms and conditions set out in this CONTRACT.

NOW THEREFORE IN CONSIDERATION OF THE FOREGOING AND THE MUTUAL COVENANTS SET OUT BELOW THE PARTIES AGREE AS FOLLOWS:

1. DEFINITIONS

The words and expressions used herein in capital letters shall have the meaning assigned to them in COMPANY's GENERAL TERMS AND CONDITIONS FOR THE SUPPLY OF RAW MATERIALS No. SPC-PRO-01 rev.2018-00 dated 02/10/2018, attached to this PURCHASE ORDER. The CONTRACT shall be interpreted and construed according to the English language.

All instructions, notifications, agreements, authorizations and acknowledgements shall be in writing. All written communications between COMPANY and CONTRACTOR related to the CONTRACT shall be in the English language. The following additional definitions integrate those specified under Clause 1.0 of COMPANY's GENERAL TERMS AND CONDITIONS, referenced in Clause 3 'CONTRACT DOCUMENTS', below:

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

2: SUMMARY TRACEABILITY LIST (CAN THK. 30mm)

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

Welding and NDT Traceability

Certificate Nr.
Q0242-01
Date
11/01/2024

Customer	Customer's Order	Drawing	Description	Serial Number	Inspection and Test Plan	NDE Procedure	Our job
Rosetti Marino S.p.A.	1723001835	-	Shells	See WB	Q0242-01 QCP	See QCP	Q0242

SN	Joint Type	Material		WPS	Welder ID	Weld Finish Date	PWHT	VT	MT	UT	RT	NOTE
							Report N°	Report N°	Report N°	Report N°	Report N°	
231107Q0242A	BW	Th 30	S460MLO	79 D.A.-03	Z+E	19/12/23	-	654/23	426/23	913/23	3919/2023	CWUNO011
231107Q0242B	BW	Th 30	S460MLO	79 D.A.-03	Z+E	19/12/23	-	654/23	426/23	913/23	3919/2023	CWUNO012
231107Q0242C	BW	Th 30	S460MLO	79 D.A.-03	Z+E	19/12/23	-	654/23	426/23	913/23	3919/2023	CWUNO013
231107Q0242D	BW	Th 30	S460MLO	79 D.A.-03	Z+E	19/12/23	-	654/23	426/23	913/23	3919/2023	CWUNO014
231108Q0242A	BW	Th 40	S460MLO	79 D.A.-03	Z+E	11/12/23	-	650/23	415/23	905/23	3884/2023	CWLNO015
231108Q0242B	BW	Th 40	S460MLO	79 D.A.-03	Z+E	11/12/23	-	650/23	415/23	905/23	3884/2023	CWLNO016
231108Q0242C	BW	Th 40	S460MLO	79 D.A.-03	Z+C	11/12/23	-	650/23	415/23	905/23	3884/2023	CWLNO017
231108Q0242D	BW	Th 40	S460MLO	79 D.A.-03	Z+C	11/12/23	-	650/23	415/23	905/23	3884/2023	CWLNO018

QCM	Customer	Third Part (if any)	End user
SIDERTAGLIO CALANDRATURA S.R.L. Pipes Rolling & Welding	12/01/2024 ROSETTI MARINO SpA Alberto Lucchi Supply Management Dept.		

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

3: SUMMARY TRACEABILITY LIST (CAN THK. 40mm)

SIDERTAGLIO CALANDRATURA S.R.L.	Lista rintracciabilità Traceability list		Job n°:	Q0242	Tech. Contact:	Mr. Cocco
			Document for:	Quality dept	Sales contact:	Miss Stangherlin
	Doc. name:	Q0242 - Lista rintracciabilità.xlsx	Rev:	00	Date:	22/12/2023
	Scope of work:					WELDED SHELLS

	S/N	Description	Dimension (mm)	Material	Manufacturer	Cert n°	Heat	Plate	UT report n°	Notes
1	231107Q0242A	SHELL COURSE	800(Øe)*2950*30	S460MLO	VOESTALPINE	A0375876/A	859729	156195/1	A0375876/A	CWUNO011
2		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
3		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
4		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
5	231107Q0242B	SHELL COURSE	800(Øe)*2950*30	S460MLO	VOESTALPINE	A0375876/A	859729	156195/1	A0375876/A	CWUNO012
6		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
7		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
8		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
9	231107Q0242C	SHELL COURSE	800(Øe)*2950*30	S460MLO	VOESTALPINE	A0375876/A	859729	156195/1	A0375876/A	CWUNO013
10		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
11		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
12		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
13	231107Q0242D	SHELL COURSE	800(Øe)*2950*30	S460MLO	VOESTALPINE	A0375876/A	859729	156195/1	A0375876/A	CWUNO014
14		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
15		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
16		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
17	231108Q0242A	SHELL COURSE	800(Øe)*2200*40	S460MLO	VOESTALPINE	A0376909/A	952379	194405/1	A0376909/A	CWLNO015
18		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
19		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
20		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
21	231108Q0242B	SHELL COURSE	800(Øe)*2200*40	S460MLO	VOESTALPINE	A0376909/A	952379	194405/1	A0376909/A	CWLNO016
22		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
23		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
24		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
25	231108Q0242C	SHELL COURSE	800(Øe)*2200*40	S460MLO	VOESTALPINE	A0376909/A	952379	194405/1	A0376909/A	CWLNO017
26		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
27		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
28		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	
29	231108Q0242D	SHELL COURSE	800(Øe)*2200*40	S460MLO	VOESTALPINE	A0376909/A	952379	194405/1	A0376909/A	CWLNO018
30		WIRE	Ø 1,2	Outershield 690-H	LINCOLN	2210-27	P1FC210777	-	-	
31		WIRE	Ø 4	S3Ni2,5CrMo	PITTARC	1289	12575 2019	-	-	
32		FLUX	-	FL164B	PITTARC	4902/2023/A	104347	-	-	

SIDERTAGLIO CALANDRATURA S.R.L.

ROSETTI MARINO SpA
Alberto Lucchi
Supply Management Dept.
12/01/2024

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

4: MATERIAL CERTIFICATES BOOK PO 1723001716 (CERT. N. A0375876/A)

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301546

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.
TMUGF Firma / MTSMD Signature: Sonia Emiliani
Data / Date: 27.10.2023
Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

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

A02 Inspection certificate

EN 10204 - 3.2

N142C4E6-14

Z02 Date 18-04-2023

A04 manufacturer's work symbol
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A03 Document number	A0375876/A	A08 Order-No.:	2532476	A07 OrderDat.	14-12-2022

Date of dispatch 14-04-2023 400F

A06 Customer
Kroeger Staal B.V.
Oostelljke Randweg 40
NL-4782 PZ MOERDIJK

A07 OrderNo. 6848

A06 Consignee
Europe Steel Projects BV
Oostelijke Randweg 40
NL-4782 PZ MOERDIJK

B01 Product: Plate

B02 Material: S460MLO

B03 Standard: EN 10225-1 : 2019

Supplementary requirements: Z35 - EN 10164

B04 Delivery condition: thermomechanical rolled + accelerated cooled

B03 - Supplementary requirements
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
753741	154923/1	10	20,00	2500,0	12000	1		4.830	81851	S460MLOVAS
753741	154925/1	10	20,00	2500,0	12000	1		4.830	81851	S460MLOVAS
753741	154925/2	10	20,00	2500,0	12000	1		4.830	81851	S460MLOVAS
753741	154928/1	10	20,00	2500,0	12000	1		4.826	81851	S460MLOVAS
859285	155008/1	30	25,00	2051,0	16000	1		6.525	81853	S460MLOVAS
859285	155010/1	30	25,00	2051,0	16000	1		6.520	81851	S460MLOVAS
859286	155012/1	30	25,00	2051,0	16000	1		6.521	81852	S460MLOVAS
859599	152732/1	250	60,00	3500,0	12000	1		20.150	81853	S460MLOVAS
859599	152733/1	270	65,00	3050,0	12000	1		19.045	81853	S460MLOVAS
859599	153043/1	260	65,00	3000,0	12000	1		18.741	81853	S460MLOVAS
859727	154866/1	170	40,00	3050,0	12000	1		11.693	81853	S460MLOVAS
859727	154887/1	90	30,00	2500,0	16000	1		9.580	81853	S460MLOVAS

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Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
859727	154896/1	280	30,00	2051,0	12000	1		5.889	81853	S460MLOVAS
859727	154936/1	10	20,00	2500,0	12000	1		4.826	81851	S460MLOVAS
859729	156190/1	320	30,00	3050,0	12000	1		8.744	81853	S460MLOVAS
859729	156191/1	320	30,00	3050,0	12000	1		8.746	81853	S460MLOVAS
859729	156192/1	320	30,00	3050,0	12000	1		8.745	81853	S460MLOVAS
859729	156193/1	320	30,00	3050,0	12000	1		8.742	81853	S460MLOVAS
859729	156195/1	100	30,00	3000,0	12000	1		8.630	81853	S460MLOVAS
859729	156201/1	60	25,00	3250,0	14000	1		9.104	81853	S460MLOVAS
859729	156202/1	20	20,00	3050,0	16000	1		7.848	81851	S460MLOVAS
859729	156204/1	20	20,00	3050,0	16000	1		7.846	81851	S460MLOVAS
859729	156206/1	20	20,00	3050,0	16000	1		7.846	81851	S460MLOVAS
859729	156207/1	20	20,00	3050,0	16000	1		7.843	81851	S460MLOVAS
859729	157025/2	280	30,00	2051,0	12000	1		5.881	81853	S460MLOVAS
944916	156173/1	150	40,00	2500,0	12000	1		9.586	81853	S460MLOVAS
944918	157243/1	170	40,00	3050,0	12000	1		11.655	81853	S460MLOVAS
944918	157244/1	170	40,00	3050,0	12000	1		11.661	81853	S460MLOVAS
944918	157245/1	170	40,00	3050,0	12000	1		11.625	81853	S460MLOVAS
944918	157246/1	170	40,00	3050,0	12000	1		11.688	81853	S460MLOVAS
945463	156782/1	110	30,00	3000,0	16000	1		11.493	81853	S460MLOVAS
945942	156872/1	180	40,00	3750,0	14000	1		16.712	81853	S460MLOVAS
947433	154869/1	140	40,00	2051,0	16000	1		10.470	81853	S460MLOVAS
947433	154870/1	140	40,00	2051,0	16000	1		10.455	81853	S460MLOVAS
947433	154881/1	120	35,00	3000,0	12000	1		10.075	81853	S460MLOVAS
947433	156208/1	50	25,00	2500,0	16000	1		8.016	81853	S460MLOVAS
947433	156209/1	50	25,00	2500,0	16000	1		8.011	81853	S460MLOVAS
947433	156211/1	50	25,00	2500,0	16000	1		8.004	81853	S460MLOVAS
		Sum				38		358.232		

B14 - Supplementary information

Flatness acc. EN 10029/11 class N
Dimensional tolerances acc. EN 10029/11
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

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Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
753741	.032	.336	1.620	.007	.0005	.031	.176	.170	.008	.175	.004	.035	.011	.0069	.0002	.0020	.0018	.0020	.0020	.0020	.36
859285	.035	.345	1.610	.006	.0009	.038	.177	.170	.008	.156	.003	.037	.013	.0038	.0002	.0020	.0017	.0020	.0020	.0020	.36
859286	.029	.358	1.700	.006	.0005	.038	.187	.180	.005	.162	.004	.037	.013	.0048	.0002	.0020	.0019	.0020	.0020	.0020	.37
859599	.063	.375	1.560	.008	.0004	.043	.189	.270	.005	.159	.003	.026	.013	.0051	.0002	.0020	.0016	.0020	.0020	.0020	.39
859727	.031	.347	1.630	.005	.0005	.033	.175	.180	.006	.173	.004	.035	.011	.0054	.0003	.0020	.0017	.0020	.0020	.0020	.36
859729	.031	.354	1.640	.006	.0006	.034	.178	.180	.008	.169	.004	.036	.010	.0040	.0002	.0020	.0018	.0020	.0020	.0020	.37
944916	.030	.355	1.650	.006	.0010	.040	.187	.170	.010	.152	.004	.037	.013	.0057	.0002	.0020	.0023	.0020	.0020	.0020	.37
944918	.032	.343	1.640	.007	.0010	.038	.189	.180	.008	.175	.004	.036	.012	.0055	.0002	.0020	.0025	.0020	.0020	.0020	.37
945463	.028	.333	1.580	.006	.0006	.033	.180	.170	.007	.163	.004	.035	.012	.0059	.0002	.0020	.0017	.0020	.0020	.0020	.35
945942	.033	.316	1.610	.006	.0007	.039	.169	.170	.025	.165	.003	.037	.013	.0057	.0002	.0020	.0013	.0020	.0020	.0020	.36
947433	.036	.377	1.630	.006	.0004	.033	.174	.170	.007	.165	.003	.036	.012	.0043	.0002	.0020	.0017	.0020	.0020	.0020	.37

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
753741	.15	.039	.050	4.49
859285	.15	.040	.053	10.00
859286	.15	.041	.054	7.92
859599	.18	.029	.042	8.43
859727	.15	.039	.050	6.11
859729	.15	.040	.050	8.50
944916	.15	.041	.054	7.02
944918	.15	.040	.052	6.91
945463	.14	.039	.051	5.59
945942	.15	.040	.053	6.84
947433	.15	.039	.051	7.67

C99 - Supplementary information
Bi <= 0,01%

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

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							440	520		17.0			
Set values <=								700			93.00		
753741	154929	30,0	20.48	F	O	T	535	617	A5	23.6	86.61		
	154932	30,0	20.61	F	O	T	545	619	A5	22.5	87.97		
859285	155008	30,0	25.26	F	O	T	551	611	A5	23.0	90.17		
	155010	30,0	25.43	F	O	T	581	631	A5	21.7	91.97		
859286	155012	30,0	25.49	F	O	T	569	614	A5	21.9	92.69		
859727	154936	30,0	20.58	F	O	T	538	618	A5	23.6	87.02		
859729	156200	30,0	25.63	F	O	T	569	622	A5	22.3	91.54		
	156204	30,0	20.54	F	O	T	563	628	A5	20.4	89.74		
	156206	30,0	20.58	F	O	T	540	643	A5	22.9	84.01		
	156207	30,0	20.50	F	O	T	569	633	A5	22.7	89.88		
947433	156208	30,0	25.69	F	O	T	564	622	A5	22.7	90.61		
	156209	30,0	25.19	F	O	T	561	624	A5	22.0	90.01		
>=							420	520		17.0			
Set values <=								700			93.00		
859727	154866	30,0	40.75	F	O	T	516	605	A5	22.5	85.40		
	154888	30,0	30.50	F	O	T	540	594	A5	23.4	90.84		
	154896	30,0	30.64	F	O	T	531	591	A5	23.5	89.79		
859729	156191	30,0	30.83	F	O	T	547	612	A5	23.7	89.46		
	156193	30,0	30.60	F	O	T	549	611	A5	24.2	89.89		
	156196	30,0	30.84	F	O	T	577	628	A5	22.6	91.92		
	157025	30,0	30.41	F	O	T	513	585	A5	23.4	87.74		
944916	156173	30,0	40.62	F	O	T	507	593	A5	22.0	85.50		
944918	157244	30,0	41.05	F	O	T	542	624	A5	21.6	86.78		
	157245	30,0	40.61	F	O	T	533	620	A5	21.4	85.99		
945463	156782	30,0	30.66	F	O	T	542	599	A5	23.6	90.48		
945942	156872	30,0	40.57	F	O	T	494	592	A5	23.6	83.45		
947433	154869	30,0	41.14	F	O	T	484	626	A5	24.0	77.30		
	154881	30,0	35.78	F	O	T	544	646	A5	23.3	84.24		
>=							415	500		17.0			
Set values <=								675			93.00		

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							415	500		17.0			
Set values <=								675			93.00		
859599	152732	Ø	9.99	F	V	T	428	593	A5	27.7	72.21		
	152732	Ø	10.01	F	V	T	529	619	A5	24.8	85.51	001	1
>=							405	500		17.0			
Set values <=								675			93.00		
859599	153043	Ø	9.99	F	V	T	445	587	A5	27.3	75.74		
	153043	Ø	9.99	F	V	T	455	560	A5	28.8	81.28	001	1

SpThickn: specimen thickness
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  O: surface
  V: ¼ t
C02;Dir:
  T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
  A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	29	29	29	46			
753741	154894	CV 10x10	F	ZB2	T	-40	321	327	311	320			strain aged 5%, 60 min. at 250°C
859285	154998	CV 10x10	F	ZB2	T	-40	316	316	308	313			strain aged 5%, 60 min. at 250°C
859286	155005	CV 10x10	F	ZB2	T	-40	326	324	347	332			strain aged 5%, 60 min. at 250°C
859599	153043	CV 10x10	F	ZB2	T	-40	68	174	75	106			strain aged 5%, 60 min. at 250°C
859727	154866	CV 10x10	F	ZB2	T	-40	321	292	317	310			strain aged 5%, 60 min. at 250°C
859729	156193	CV 10x10	F	ZB2	T	-40	326	323	315	321			strain aged 5%, 60 min. at 250°C
944916	134244	CV 10x10	F	ZB2	T	-40	290	331	283	301			strain aged 5%, 60 min. at 250°C
944918	157245	CV 10x10	F	ZB2	T	-40	244	29	63	112			strain aged 5%, 60 min. at 250°C
945463	132752	CV 10x10	F	ZB2	T	-40	316	330	326	324			strain aged 5%, 60 min. at 250°C
945942	156872	CV 10x10	F	ZB2	T	-40	320	291	53	221			strain aged 5%, 60 min. at 250°C
947433	154869	CV 10x10	F	ZB2	T	-40	332	343	361	345			strain aged 5%, 60 min. at 250°C
>= Set values <=						-40	42	42	42	60			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
Set values <=													
753741	154929	CV 10x10	F	O	T	-40	406	432	442	427			
	154932	CV 10x10	F	O	T	-40	409	444	452	435			
859285	155008	CV 10x10	F	O	T	-40	347	373	376	365			
859286	155012	CV 10x10	F	O	T	-40	353	357	383	364			
859599	152732	CV 10x10	F	O	T	-40	279	330	322	310			
	153043	CV 10x10	F	O	T	-40	348	322	301	324			
	152732	CV 10x10	F	O	T	-40	307	257	255	273	001	1	
	153043	CV 10x10	F	O	T	-40	187	229	251	222	001	1	
	152732	CV 10x10	F	K	T	-40	230	251	61	180			
	153043	CV 10x10	F	K	T	-40	293	285	279	286			
	152732	CV 10x10	F	K	T	-40	140	48	209	132	001	1	
	153043	CV 10x10	F	K	T	-40	277	291	253	274	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
859727	154866	CV 10x10	F	O	T	-40	340	330	380	350			
	154888	CV 10x10	F	O	T	-40	370	384	394	383			
	154896	CV 10x10	F	O	T	-40	352	370	368	363			
	154936	CV 10x10	F	O	T	-40	433	444	448	441			
859729	156191	CV 10x10	F	O	T	-40	351	364	351	355			
	156193	CV 10x10	F	O	T	-40	352	351	369	357			
	156196	CV 10x10	F	O	T	-40	348	359	381	363			
	156200	CV 10x10	F	O	T	-40	368	372	384	374			
	156206	CV 10x10	F	O	T	-40	329	359	342	343			
944916	156173	CV 10x10	F	O	T	-40	354	335	380	356			
944918	157244	CV 10x10	F	O	T	-40	325	362	377	354			
	157245	CV 10x10	F	O	T	-40	320	341	353	338			
945463	156782	CV 10x10	F	O	T	-40	327	341	354	341			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
945942	156872	CV 10x10	F	O	T	-40	293	341	370	335			
947433	154869	CV 10x10	F	O	T	-40	356	383	411	383			
	154881	CV 10x10	F	O	T	-40	380	377	418	391			
	156208	CV 10x10	F	O	T	-40	343	347	368	352			

C40;shape:
  CV 10x10: Test shape , Dimensions
C01;loc.:
  F: Bottom
PosTh.: Pos Thickness
  K: ½ t
  O: surface
  ZB2: 2mm below surface
C02;Dir:
  T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
  001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
753741	154894	F	OS	HV10	199	203	202
859285	151315	F	OS	HV10	204	206	203
859286	155458	F	OS	HV10	218	221	223
859599	153043	F	OS	HV10	257	254	257
859727	154898	F	OS	HV10	203	199	204
859729	156206	F	OS	HV10	218	217	214
944916	134244	F	OS	HV10	218	215	218
944918	157245	F	OS	HV10	230	235	226
945463	132752	F	OS	HV10	217	217	226
945942	153948	F	OS	HV10	188	190	187
947433	156208	F	OS	HV10	216	211	218

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>= Set values <=						416	416	416	25	25	25	35
753741	154932	Ø	6.00	F	S	615	612	615	81	81	84	82
859285	155008	Ø	10.02	F	S	603	603	601	81	81	83	82
859286	155012	Ø	10.01	F	S	599	598	598	82	81	82	82
859727	154898	Ø	9.96	F	S	566	568	567	82	81	81	82
	154936	Ø	6.00	F	S	602	607	605	85	83	82	83
859729	156193	Ø	10.00	F	S	595	595	595	83	79	80	81
	156206	Ø	5.97	F	S	636	635	636	82	82	85	83
944916	134244	Ø	9.99	F	S	586	585	586	84	84	83	84
944918	157245	Ø	10.01	F	S	591	590	593	82	76	80	79
945463	132752	Ø	10.00	F	S	578	579	578	84	81	82	83
945942	153948	Ø	9.98	F	S	596	598	592	85	84	83	84
947433	156208	Ø	10.00	F	S	609	609	609	85	83	82	83
>= Set values <=						400	400	400	25	25	25	35
859599	153043	Ø	9.96	F	S	582	585	586	80	76	74	76

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
Set values >=							.015													
Set values <=		.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
753741	154894	.031	.329	1.620	.007	.0004	.032	.169	.170	.007	.175	.003	.036	.011	.0055	.0002	.0020	.0015	.0020	.0020
	154932	.030	.335	1.620	.007	.0003	.033	.170	.170	.007	.171	.003	.035	.011	.0051	.0002	.0020	.0016	.0020	.0020
859285	151315	.037	.351	1.600	.006	.0009	.036	.189	.180	.009	.156	.003	.035	.012	.0052	.0003	.0020	.0022	.0020	.0020
859286	155458	.029	.343	1.680	.006	.0005	.038	.180	.180	.005	.164	.003	.036	.013	.0042	.0002	.0020	.0016	.0020	.0020
859599	152732	.059	.371	1.540	.008	.0005	.042	.188	.270	.005	.158	.003	.026	.012	.0049	.0002	.0020	.0015	.0020	.0020
	153043	.061	.373	1.550	.009	.0003	.043	.184	.270	.005	.160	.003	.026	.012	.0051	.0002	.0020	.0016	.0020	.0020
859727	154866	.030	.348	1.620	.006	.0003	.035	.173	.180	.006	.169	.003	.035	.011	.0047	.0002	.0020	.0020	.0020	.0020
	154888	.031	.344	1.610	.005	.0004	.033	.172	.180	.006	.173	.003	.035	.011	.0045	.0002	.0020	.0017	.0020	.0020
	154937	.030	.347	1.620	.006	.0003	.035	.174	.180	.006	.171	.003	.034	.011	.0048	.0002	.0020	.0019	.0020	.0020
859729	154891	.032	.354	1.620	.006	.0009	.034	.178	.180	.007	.166	.004	.036	.010	.0042	.0003	.0030	.0017	.0020	.0020
	156191	.033	.363	1.630	.007	.0005	.032	.182	.180	.008	.166	.003	.035	.009	.0052	.0002	.0020	.0017	.0020	.0020
	156193	.031	.362	1.630	.006	.0005	.034	.180	.180	.008	.165	.003	.035	.010	.0043	.0002	.0020	.0017	.0020	.0020
	156196	.034	.366	1.620	.006	.0003	.033	.177	.170	.007	.166	.003	.036	.011	.0040	.0002	.0020	.0017	.0020	.0020
	156206	.031	.356	1.640	.006	.0008	.035	.178	.180	.007	.169	.004	.037	.011	.0042	.0002	.0020	.0014	.0020	.0020
944916	156172	.029	.341	1.600	.006	.0009	.036	.187	.170	.009	.157	.004	.034	.011	.0049	.0002	.0020	.0021	.0020	.0020
944918	157244	.032	.334	1.610	.007	.0007	.038	.182	.180	.008	.175	.003	.035	.012	.0052	.0002	.0020	.0022	.0020	.0020
	157245	.032	.336	1.620	.007	.0006	.038	.182	.180	.008	.176	.003	.036	.012	.0051	.0002	.0020	.0020	.0020	.0020
945463	156782	.030	.332	1.590	.006	.0003	.032	.180	.170	.007	.162	.003	.035	.012	.0055	.0002	.0020	.0017	.0020	.0020
945942	153948	.034	.329	1.600	.007	.0007	.039	.184	.180	.027	.165	.003	.034	.012	.0059	.0002	.0020	.0016	.0020	.0020
947433	154881	.036	.372	1.620	.006	.0003	.033	.171	.170	.007	.166	.003	.037	.012	.0038	.0002	.0020	.0016	.0020	.0020
	156208	.036	.369	1.610	.006	.0006	.033	.174	.170	.006	.165	.003	.037	.012	.0041	.0003	.0020	.0015	.0020	.0020

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
	>=							2.00
Set values	<=	.0100	.0100	.41	.22	.120	.130	
753741	154894	.0020	.0020	.36	.14	.039	.050	5.82
	154932	.0020	.0020	.36	.14	.038	.049	6.47
859285	151315	.0020	.0020	.37	.15	.038	.050	6.92
859286	155458	.0020	.0020	.37	.15	.039	.052	9.05
859599	152732	.0020	.0020	.38	.17	.029	.041	8.57
	153043	.0020	.0020	.39	.17	.029	.041	8.43
859727	154866	.0020	.0020	.36	.14	.038	.049	7.45
	154888	.0020	.0020	.36	.14	.038	.049	7.33
	154937	.0020	.0020	.36	.14	.037	.048	7.29
859729	154891	.0020	.0020	.36	.15	.040	.050	8.10
	156191	.0020	.0020	.37	.15	.038	.047	6.15
	156193	.0020	.0020	.36	.15	.038	.048	7.91
	156196	.0020	.0020	.36	.15	.039	.050	8.25
	156206	.0020	.0020	.37	.15	.041	.052	8.33
944916	156172	.0020	.0020	.36	.14	.038	.049	7.35
944918	157244	.0020	.0020	.36	.15	.038	.050	7.31
	157245	.0020	.0020	.36	.15	.039	.051	7.45
945463	156782	.0020	.0020	.36	.14	.038	.050	5.82
945942	153948	.0020	.0020	.37	.15	.037	.049	6.61
947433	154881	.0020	.0020	.36	.15	.040	.052	8.68
	156208	.0020	.0020	.36	.15	.040	.052	8.05

C99 - Supplementary information

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

Remarks

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Remarks

Simulated heat treatment of test coupons:

Item 250:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 260:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 270:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 50, 60, 90, 100, 110, 120, 140, 150, 170, 180, 280, 320
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 250, 260, 270
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

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ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

5: MATERIAL CERTIFICATES BOOK PO 1723001716 (CERT. N. A0376909/A)

ROSETTI MARINO

MATERIAL CERTIFICATES BOOK

Supplier	Purchase Order nr.	job	Barcode
EUROPE STEEL PROJECTS BV	1723001716	123A90A	Q012301545

ROSETTI MARINO

ROSETTI MARINO
Conforme alla spec. PO
According to the spc.
TMUGF Firma / MTSMD Signature — Data / Date
Sonia Emiliani
27.10.2023
Emiliani Sonia
[X] REVIEW
[ ] WITNESS

CUSTOMER

NOTE

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

A02
Inspection certificate
EN 10204 - 3.2
N142C4EN-4

A04
manufacturer's work symbol
voestalpine

A03 Document number	A0376909/A	A08 Order-No.:	3500738	A07 OrderDat.	08-06-2023

Date of dispatch 31-08-2023 400F

A06 Customer	Kroeger Staal B.V. Oostelljke Randweg 40 NL-4782 PZ MOERDIJK	B01 Product	Plate		
		B02 Material	S460MLO	B03 Standard	EN 10225-1 : 2019
A07 OrderNo.	6884	Supplementary requirements	Z35 - EN 10164		
A06 Consignee	Europe Steel Projects BV Oostelijke Randweg 40 NL-4782 PZ MOERDIJK	B04 Delivery condition	thermomechanical rolled + accelerated cooled		

B03 - Supplementary requirements
FINAL ROLLING DIRECTION IS PERPENDICULAR TO DIE STAMPING.
MATERIAL IS FINE GRAINED, VACUUM DEGASSED AND FULLY KILLED, PRODUCED BY BOF.
MATERIAL IS PRE-QUALIFIED ACC. TO EN10225:2019 OPTION 17.
OPTIONS 1, 6, 7, 9, 11, 12, 17 OF EN 10225:2019 AND OPTION 18 OF EN 10225:2009

D01 - Visual Examination and dimensional checking: satisfactory. The results of tests performed are in compliance with the requirements.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
752354	190821/1	110	80,00	2051,0	12000	1		15.769	86584	S460MLOVAS
754582	195706/1	10	30,00	2500,0	12000	1		7.146	86584	S460MLOVAS
756276	191219/1	50	50,00	3000,0	12000	1		14.440	86584	S460MLOVAS
756276	191220/1	50	50,00	3000,0	12000	1		14.431	86584	S460MLOVAS
756276	195705/1	10	30,00	2500,0	12000	1		7.142	86584	S460MLOVAS
756875	195702/1	10	30,00	2500,0	12000	1		7.142	86584	S460MLOVAS
756875	195703/1	10	30,00	2500,0	12000	1		7.144	86584	S460MLOVAS
756875	195704/1	10	30,00	2500,0	12000	1		7.145	86584	S460MLOVAS
757417	190833/1	60	60,00	2500,0	12000	1		14.456	86584	S460MLOVAS
757417	190834/1	60	60,00	2500,0	12000	1		14.462	86584	S460MLOVAS
757417	194082/1	70	60,00	3000,0	12000	1		17.311	86584	S460MLOVAS
757417	194083/1	80	60,00	3050,0	12000	1		17.548	86584	S460MLOVAS

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ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.
757417	194084/1	70	60,00	3000,0	12000	1		17.311	86584	S460MLOVAS
860447	194379/1	60	60,00	2500,0	12000	1		14.451	86584	S460MLOVAS
863391	195701/1	30	30,00	2810,0	16000	1		10.740	86584	S460MLOVAS
864105	190825/1	110	80,00	2051,0	12000	1		15.808	86584	S460MLOVAS
864105	191783/1	120	80,00	2500,0	12000	1		19.244	86584	S460MLOVAS
864105	191785/1	130	80,00	3000,0	10500	1		20.193	86584	S460MLOVAS
864105	194358/1	120	80,00	2500,0	12000	1		19.263	86584	S460MLOVAS
864105	194359/1	130	80,00	3000,0	10500	1		20.149	86584	S460MLOVAS
948259	195707/1	10	30,00	2500,0	12000	1		7.145	86584	S460MLOVAS
950779	190819/1	110	80,00	2051,0	12000	1		15.808	86584	S460MLOVAS
951251	195697/1	30	30,00	3050,0	16000	1		11.687	86584	S460MLOVAS
951251	195699/1	30	30,00	3050,0	16000	1		11.684	86584	S460MLOVAS
951324	190829/1	60	60,00	2500,0	9130	1		10.894	86584	S460MLOVAS
951324	194085/1	80	60,00	3050,0	12000	1		17.627	86584	S460MLOVAS
951324	194086/1	80	60,00	3050,0	12000	1		17.598	86584	S460MLOVAS
951324	194365	90	60,00	3250,0	13000	1		20.305	86584	S460MLOVAS
951324	194366/1	100	60,00	3500,0	12000	1		20.144	86584	S460MLOVAS
952379	194402/1	40	40,00	2500,0	12000	1		9.562	86584	S460MLOVAS
952379	194403/1	40	40,00	2500,0	12000	1		9.583	86584	S460MLOVAS
952379	194404/1	40	40,00	2500,0	12000	1		9.561	86584	S460MLOVAS
952379	194405/1	40	40,00	2500,0	12000	1		9.581	86584	S460MLOVAS
952379	194406/1	40	40,00	2500,0	12000	1		9.586	86584	S460MLOVAS
952379	194407/1	40	40,00	2500,0	12000	1		9.585	86584	S460MLOVAS
952379	194408/1	40	40,00	2500,0	12000	1		9.561	86584	S460MLOVAS
952379	194409/1	40	40,00	2500,0	12000	1		9.582	86584	S460MLOVAS
952379	194410/1	40	40,00	2500,0	12000	1		9.561	86584	S460MLOVAS
952379	194411/1	40	40,00	2500,0	12000	1		9.584	86584	S460MLOVAS
952379	194420/1	20	30,00	2500,0	16000	1		9.591	86584	S460MLOVAS
952379	194421/1	20	30,00	2450,0	16000	1		9.367	86584	S460MLOVAS
952379	194422/1	20	30,00	2500,0	16000	1		9.583	86584	S460MLOVAS
		Sum				42		538.474		

B14 - Supplementary information

width-deviation for plate(s) 194421/1, 195701/1: Customer accepted the deviation.

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ONE STEP AHEAD.

Detail of supply

B07 Heat No.	B06 Plate No	Item	Dimensions B09 Thickness mm	B10 Width mm	B11 Length mm	B08 Piece	B12 theor. Mass kg	B13 act. Mass kg	A09 Disp-No 130 42	reference no.

length-deviation for plate(s) 190829/1: Customer accepted the deviation.

B14 - Supplementary information

Dimensional tolerances acc. EN 10029/11
Flatness acc. EN 10029/11 class N
EN10163-2: Class B3 - Repair-welding not permitted
Thicknesstolerance acc. EN 10029/11 tab.1 class B

Chemical composition (Heat analysis) - part 1 of 2

B07 Heat No.	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %	Pb %	Cae %
>=						.015															
Set values <=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100	.0100	.41
752354	.051	.176	1.490	.005	.0006	.031	.155	.570	.119	.033	.003	.027	.013	.0040	.0002	.0020	.0006	.0020	.0020	.0020	.39
754582	.027	.342	1.610	.006	.0006	.039	.174	.170	.009	.192	.004	.035	.011	.0049	.0002	.0020	.0015	.0020	.0020	.0020	.36
756276	.030	.328	1.610	.006	.0003	.048	.172	.170	.005	.162	.003	.036	.013	.0049	.0002	.0020	.0012	.0020	.0020	.0020	.36
756875	.035	.358	1.640	.006	.0003	.046	.176	.170	.010	.165	.004	.037	.013	.0064	.0003	.0020	.0020	.0020	.0020	.0020	.37
757417	.065	.392	1.540	.008	.0006	.031	.182	.260	.012	.158	.005	.028	.012	.0059	.0002	.0020	.0011	.0020	.0020	.0020	.39
860447	.058	.395	1.540	.008	.0004	.037	.175	.280	.019	.164	.004	.026	.011	.0053	.0002	.0020	.0031	.0020	.0020	.0020	.38
863391	.037	.347	1.630	.005	.0006	.050	.181	.170	.006	.159	.005	.036	.011	.0049	.0002	.0020	.0022	.0020	.0020	.0020	.37
864105	.056	.189	1.520	.008	.0009	.029	.176	.520	.121	.015	.005	.029	.014	.0054	.0002	.0020	.0010	.0020	.0020	.0020	.41
948259	.037	.326	1.620	.006	.0003	.039	.172	.170	.007	.162	.003	.033	.011	.0057	.0002	.0020	.0018	.0020	.0020	.0020	.37
950779	.049	.173	1.530	.006	.0007	.028	.177	.500	.100	.010	.003	.026	.012	.0053	.0002	.0020	.0008	.0020	.0020	.0020	.39
951251	.030	.364	1.630	.008	.0005	.039	.182	.180	.006	.163	.005	.037	.011	.0050	.0002	.0020	.0016	.0020	.0020	.0020	.36
951324	.060	.374	1.540	.007	.0008	.039	.174	.270	.013	.154	.004	.026	.010	.0060	.0002	.0020	.0022	.0020	.0020	.0020	.38
952379	.032	.321	1.620	.006	.0007	.042	.177	.170	.006	.157	.004	.035	.012	.0062	.0002	.0020	.0017	.0030	.0020	.0020	.36

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Chemical composition (Heat analysis) - part 2 of 2

B07 Heat No.	Pcm %	LF01 %	LF02 %	Al/N
>=				2.00
Set values <=	.22	.120	.130	
752354	.16	.030	.043	7.75
754582	.14	.039	.050	7.96
756276	.14	.039	.052	9.80
756875	.15	.041	.054	7.19
757417	.18	.033	.045	5.25
860447	.17	.030	.041	6.98
863391	.15	.041	.052	10.20
864105	.17	.034	.048	5.37
948259	.15	.036	.047	6.84
950779	.16	.029	.041	5.28
951251	.15	.042	.053	7.80
951324	.17	.030	.040	6.50
952379	.15	.039	.051	6.77

C99 - Supplementary information
Bi <= 0,01%
C99 - Supplementary information
Pcm: C+((Mn+Cu+Cr)/20)+(Si/30)+(Ni/60)+(Mo/15)+(V/10)+(B*5)
Al/N: Al/N
LF02: Nb+V+Ti
Cae: C+(Mn/6)+(Cr+Mo+V)/5+(Ni+Cu)/15
LF01: Nb+V

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							420	520		17.0			
Set values <=								700			93.00		
754582	195706	30,0	30.31	F	O	T	538	591	A5	24.1	91.00		
756276	195705	30,0	30.62	F	O	T	534	581	A5	25.9	91.94		
756875	195702	30,0	30.39	F	O	T	536	604	A5	21.5	88.69		
863391	195701	30,0	30.68	F	O	T	556	615	A5	23.8	90.40		
948259	195707	30,0	30.40	F	O	T	510	584	A5	22.7	87.25		
951251	195699	30,0	30.47	F	O	T	541	602	A5	23.2	89.86		
952379	194403	30,0	40.92	F	O	T	517	608	A5	23.2	85.13		
	194406	30,0	40.61	F	O	T	449	582	A5	24.4	77.15		
	194407	30,0	40.79	F	O	T	510	596	A5	22.8	85.60		
	194408	30,0	41.00	F	O	T	509	603	A5	22.4	84.44		
	194422	30,0	30.49	F	O	T	522	581	A5	23.7	89.80		
>=							415	500		17.0			
Set values <=								675			93.00		
756276	191220	Ø	10.02	F	V	T	466	573	A5	27.0	81.31		
	191220	Ø	9.99	F	V	T	545	615	A5	26.2	88.65	001	1
757417	190834	Ø	10.02	F	V	T	438	599	A5	28.1	73.03		
	194083	Ø	9.97	F	V	T	461	583	A5	25.1	78.95		
	194084	Ø	10.00	F	V	T	419	581	A5	28.4	72.18		
	190834	Ø	9.99	F	V	T	485	587	A5	28.6	82.70	001	1
	194083	Ø	10.00	F	V	T	484	583	A5	25.9	83.05	001	1
	194084	Ø	10.02	F	V	T	475	576	A5	25.6	82.55	001	1
860447	171382	Ø	10.03	F	V	T	432	588	A5	27.3	73.54		
	171382	Ø	10.01	F	V	T	482	577	A5	28.3	83.48	001	1
951324	190831	Ø	10.02	F	V	T	447	601	A5	26.6	74.30		
	194085	Ø	10.04	F	V	T	475	622	A5	26.5	76.38		
	194365	Ø	10.03	F	V	T	436	615	A5	30.4	71.02		
	194366	Ø	10.03	F	V	T	441	591	A5	26.8	74.65		
	190831	Ø	9.98	F	V	T	490	587	A5	26.2	83.40	001	1
	194085	Ø	10.01	F	V	T	460	564	A5	28.9	81.55	001	1
	194365	Ø	9.97	F	V	T	511	598	A5	27.6	85.44	001	1
	194366	Ø	10.01	F	V	T	488	577	A5	27.9	84.47	001	1
>=							405	500		17.0			

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Test results: C10-C29 Tensile Test at room temperature acc. EN ISO 6892-1

B07 Heat No.	B06 Plate No	C41 Width	SpThickn mm	C01 loc.	PosTh.	C02 Dir	C11 Rp0,2 MPa	C12 Rm MPa	L0	C13 E %	C11 Rp0,2/Rm %	Sim.htm	WBH
>=							405	500		17.0			
Set values <=								675			93.00		
752354	190821	Ø	10.00	F	V	T	439	583	A5	27.0	75.37		
	190821	Ø	9.99	F	V	T	488	584	A5	24.8	83.46	001	1
864105	191783	Ø	10.03	F	V	T	428	573	A5	28.9	74.63		
	191785	Ø	10.03	F	V	T	449	587	A5	26.5	76.51		
	194359	Ø	10.02	F	V	T	440	580	A5	26.9	75.88		
	191783	Ø	9.97	F	V	T	560	634	A5	26.0	88.28	001	1
	191785	Ø	10.03	F	V	T	517	599	A5	29.4	86.28	001	1
	194359	Ø	10.01	F	V	T	489	580	A5	27.2	84.24	001	1
950779	190819	Ø	9.99	F	V	T	435	578	A5	29.2	75.30		
	190819	Ø	9.98	F	V	T	492	588	A5	25.2	83.66	001	1

SpThickn: specimen thickness
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
O: surface
V: ¼ t
C02;Dir:
T: transverse
C11;Rp0,2: Yield Strength
C12; Rm: Tensile Strength
L0: gauge
A5: Length = 5.65 * sqr (area) mm
C13;E: elongation
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
752354	190821	CV 10x10	F	O	T	-40	300	349	355	335			
	190821	CV 10x10	F	O	T	-40	318	287	287	297	001	1	
	190821	CV 10x10	F	K	T	-40	340	334	298	324			
	190821	CV 10x10	F	K	T	-40	333	226	271	277	001	1	
754582	195706	CV 10x10	F	O	T	-40	365	374	349	363			
756276	191220	CV 10x10	F	O	T	-40	135	353	370	286			
	195705	CV 10x10	F	O	T	-40	356	376	382	371			
	191220	CV 10x10	F	O	T	-40	302	234	130	222	001	1	
	191220	CV 10x10	F	K	T	-40	356	370	360	362			
	191220	CV 10x10	F	K	T	-40	65	51	76	64	001	1	
756875	195702	CV 10x10	F	O	T	-40	328	338	327	331			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
	>=					-40	42	42	42	60			
Set values	<=												
757417	190834	CV 10x10	F	O	T	-40	258	278	329	288			
	194083	CV 10x10	F	O	T	-40	250	263	251	255			
	194084	CV 10x10	F	O	T	-40	311	310	329	317			
	190834	CV 10x10	F	O	T	-40	194	257	211	221	001	1	
	194083	CV 10x10	F	O	T	-40	252	191	209	217	001	1	
	194084	CV 10x10	F	O	T	-40	210	118	200	176	001	1	
	190834	CV 10x10	F	K	T	-40	252	288	132	224			
	194083	CV 10x10	F	K	T	-40	235	248	191	225			
	194084	CV 10x10	F	K	T	-40	266	305	266	279			
	190834	CV 10x10	F	K	T	-40	112	69	48	76	001	1	
	194083	CV 10x10	F	K	T	-40	135	122	187	148	001	1	
	194084	CV 10x10	F	K	T	-40	252	239	239	244	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
860447	171382	CV 10x10	F	O	T	-40	284	137	152	191			
	171382	CV 10x10	F	O	T	-40	234	229	303	255	001	1	
	171382	CV 10x10	F	K	T	-40	44	177	228	150			
	171382	CV 10x10	F	K	T	-40	92	181	145	140	001	1	
863391	195701	CV 10x10	F	O	T	-40	342	350	333	342			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
864105	191783	CV 10x10	F	O	T	-40	327	319	357	334			
	191785	CV 10x10	F	O	T	-40	313	333	307	318			
	194359	CV 10x10	F	O	T	-40	338	348	315	334			
	191783	CV 10x10	F	O	T	-40	309	304	299	304	001	1	
	191785	CV 10x10	F	O	T	-40	281	291	293	288	001	1	
	194359	CV 10x10	F	O	T	-40	273	312	309	298	001	1	
	191783	CV 10x10	F	K	T	-40	302	291	245	279			
	191785	CV 10x10	F	K	T	-40	285	290	299	291			
	194359	CV 10x10	F	K	T	-40	321	324	310	318			
	191783	CV 10x10	F	K	T	-40	229	221	114	188	001	1	
	191785	CV 10x10	F	K	T	-40	243	300	306	283	001	1	
	194359	CV 10x10	F	K	T	-40	229	242	300	257	001	1	
948259	195707	CV 10x10	F	O	T	-40	366	347	318	344			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>=						-40	42	42	42	60			
Set values <=													
950779	190819	CV 10x10	F	O	T	-40	277	293	287	286			
	190819	CV 10x10	F	O	T	-40	283	299	298	293	001	1	
	190819	CV 10x10	F	K	T	-40	258	232	247	246			
	190819	CV 10x10	F	K	T	-40	53	161	246	153	001	1	
951251	195699	CV 10x10	F	O	T	-40	329	336	346	337			

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
Set values >=						-40	42	42	42	60			
951324	190831	CV 10x10	F	O	T	-40	249	315	44	203			
	194085	CV 10x10	F	O	T	-40	304	298	311	304			
	194365	CV 10x10	F	O	T	-40	194	208	217	206			
	194366	CV 10x10	F	O	T	-40	252	316	279	283			
	190831	CV 10x10	F	O	T	-40	220	205	228	218	001	1	
	194085	CV 10x10	F	O	T	-40	233	248	246	242	001	1	
	194365	CV 10x10	F	O	T	-40	252	243	266	254	001	1	
	194366	CV 10x10	F	O	T	-40	223	244	246	238	001	1	
	190831	CV 10x10	F	K	T	-40	62	232	121	138			
	194085	CV 10x10	F	K	T	-40	66	273	284	207			
	194365	CV 10x10	F	K	T	-40	297	261	278	279			
	194366	CV 10x10	F	K	T	-40	44	129	220	131			
	190831	CV 10x10	F	K	T	-40	183	182	168	177	001	1	
	194085	CV 10x10	F	K	T	-40	248	193	229	223	001	1	

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	42	42	42	60			
951324	194365	CV 10x10	F	K	T	-40	230	242	207	226	001	1	
	194366	CV 10x10	F	K	T	-40	135	153	213	167	001	1	
952379	194403	CV 10x10	F	O	T	-40	326	334	334	331			
	194406	CV 10x10	F	O	T	-40	374	365	370	369			
	194407	CV 10x10	F	O	T	-40	369	360	362	364			
	194408	CV 10x10	F	O	T	-40	359	366	347	357			
	194422	CV 10x10	F	O	T	-40	364	354	357	358			
>= Set values <=						-40	29	29	29	46			
752354	190821	CV 10x10	F	ZB2	T	-40	319	308	302	310			strain aged 5%, 60 min. at 250°C
754582	168794	CV 10x10	F	ZB2	T	-40	332	54	327	238			strain aged 5%, 60 min. at 250°C
756276	191220	CV 10x10	F	ZB2	T	-40	197	41	121	120			strain aged 5%, 60 min. at 250°C
756875	195702	CV 10x10	F	ZB2	T	-40	252	279	300	277			strain aged 5%, 60 min. at 250°C

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

B07 Heat No.	B06 Plate No	C40 shape	C01 loc.	PosTh.	C02 Dir	C03 temp °C	C42 SV J	C42 SV J	C42 SV J	C43 AV J	Sim.htm	WBH	samp.cond.
>= Set values <=						-40	29	29	29	46			
757417	190834	CV 10x10	F	ZB2	T	-40	50	58	53	54			strain aged 5%, 60 min. at 250°C
860447	163141	CV 10x10	F	ZB2	T	-40	66	62	48	59			strain aged 5%, 60 min. at 250°C
863391	195701	CV 10x10	F	ZB2	T	-40	309	311	296	306			strain aged 5%, 60 min. at 250°C
864105	191785	CV 10x10	F	ZB2	T	-40	290	298	286	292			strain aged 5%, 60 min. at 250°C
948259	195707	CV 10x10	F	ZB2	T	-40	309	312	327	316			strain aged 5%, 60 min. at 250°C
950779	191781	CV 10x10	F	ZB2	T	-40	304	312	316	311			strain aged 5%, 60 min. at 250°C
951251	195699	CV 10x10	F	ZB2	T	-40	285	82	313	227			strain aged 5%, 60 min. at 250°C
951324	190831	CV 10x10	F	ZB2	T	-40	236	217	246	233			strain aged 5%, 60 min. at 250°C
952379	194406	CV 10x10	F	ZB2	T	-40	311	113	327	250			strain aged 5%, 60 min. at 250°C

C40;shape:
CV 10x10: Test shape , Dimensions
C01;loc.:
F: Bottom
PosTh.: Pos Thickness
K: ½ t
O: surface
ZB2: 2mm below surface

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Test results: C40-C49 Impact Test acc. EN ISO 148-1

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

C02;Dir:
T: transverse
C03; temp: Test temperature
C42;SV: single value
C43;AV: average value
Sim.htm: sim. heat treatment
001: Sim.htm group #1
WBH: sim. heat treatment
samp.cond.: sample condition

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Test results: C30-C39 Hardness Test Vickers

B07 Heat No.	B06 Plate No	C01 loc.	PosTh.	Hard.	C31 HV	C31 HV	C31 HV
752354	190821	F	OS	HV10	262	272	264
754582	164400	F	OS	HV10	198	202	202
756276	191220	F	OS	HV10	222	228	227
756875	195702	F	OS	HV10	210	207	208
757417	190834	F	OS	HV10	272	281	267
860447	171382	F	OS	HV10	251	255	255
863391	195701	F	OS	HV10	210	211	215
864105	191785	F	OS	HV10	215	220	226
948259	170926	F	OS	HV10	206	209	207
950779	182618	F	OS	HV10	216	217	219
951251	195699	F	OS	HV10	208	207	208
951324	190831	F	OS	HV10	276	267	266
952379	194406	F	OS	HV10	209	208	206

C01;loc.:
F: Bottom
PosTh.: Pos Thickness
OS: upper side
Hard.: stress

Z02
Inspection representative voestalpine
Höpfl Nadine

Z03
third party stamp

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Augsburg, 2023-09-04
for DNV
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Surveyor

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Test results: C10-C29 through Thickness Test at room temperature acc. DIN / EN 10164:2018

B07 Heat No.	B06 Plate No	C40 Shape	SpThickn mm	C01 loc.	C02 Dir	C12 Rm MPa	C12 Rm MPa	C12 Rm MPa	Z(SV) %	Z(SV) %	Z(SV) %	Z(AV) %
>=						416	416	416	25	25	25	35
Set values <=												
754582	164880	Ø	9.98	F	S	562	561	562	83	83	85	84
756276	191220	Ø	9.98	F	S	565	567	564	84	84	84	84
756875	195702	Ø	9.97	F	S	592	590	590	77	79	78	78
863391	195701	Ø	9.97	F	S	598	600	599	78	81	81	80
948259	170926	Ø	9.95	F	S	589	589	589	82	84	83	83
951251	195699	Ø	9.98	F	S	588	586	586	82	82	80	81
952379	194406	Ø	10.02	F	S	569	569	569	84	83	83	83
>=						400	400	400	25	25	25	35
Set values <=												
752354	159898	Ø	9.97	F	S	593	594	598	58	60	42	53
756276	191220	Ø	9.98	F	S	565	567	564	84	84	84	84
757417	190834	Ø	9.98	F	S	603	604	605	69	71	79	73
860447	171382	Ø	9.96	F	S	592	588	592	70	71	75	72
864105	191785	Ø	10.00	F	S	593	595	590	77	79	78	78
950779	181839	Ø	9.94	F	S	599	600	598	81	81	79	80
951324	190831	Ø	9.98	F	S	601	603	600	71	78	79	76

SpThickn: specimen thickness
C01;loc.:
F: Bottom
C02;Dir:
S: through thickness direction
C12; Rm: Tensile Strength
Z(SV): reduction of area (single value)
Z(AV): reduction of area (average value)

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Chemical composition (Product analysis) - part 1 of 2

B07 Heat No.	B06 Plate No	C %	Si %	Mn %	P %	S %	Al %	Cr %	Ni %	Mo %	Cu %	V %	Nb %	Ti %	N %	B %	Sn %	Ca %	As %	Sb %
	>=						.015													
Set values	<=	.140	.550	1.700	.020	.0050	.055	.250	.700	.250	.300	.080	.050	.025	.0100	.0008	.0200	.0050	.0300	.0100
752354	190821	.051	.182	1.530	.005	.0008	.032	.181	.530	.120	.032	.003	.026	.013	.0044	.0002	.0020	.0007	.0020	.0020
754582	168790	.030	.290	1.580	.006	.0006	.035	.178	.230	.025	.138	.004	.033	.011	.0050	.0002	.0020	.0013	.0020	.0020
756276	191220	.031	.317	1.610	.005	.0005	.046	.170	.170	.004	.163	.003	.036	.013	.0049	.0002	.0020	.0009	.0020	.0020
756875	195702	.036	.346	1.600	.005	.0008	.040	.177	.170	.009	.166	.003	.038	.013	.0063	.0003	.0020	.0018	.0020	.0020
757417	190834	.063	.394	1.550	.007	.0005	.032	.193	.270	.012	.159	.005	.027	.012	.0057	.0002	.0020	.0015	.0020	.0020
	194083	.064	.397	1.550	.008	.0005	.034	.193	.270	.013	.157	.005	.027	.012	.0057	.0002	.0020	.0019	.0020	.0020
	194084	.063	.395	1.550	.007	.0005	.032	.193	.270	.012	.159	.005	.027	.012	.0056	.0002	.0020	.0014	.0020	.0020
860447	171383	.060	.390	1.540	.008	.0007	.036	.175	.280	.018	.164	.004	.026	.011	.0042	.0003	.0020	.0026	.0020	.0020
863391	195701	.038	.333	1.640	.005	.0009	.045	.177	.170	.005	.162	.004	.037	.012	.0048	.0003	.0020	.0019	.0020	.0020
864105	191783	.045	.181	1.490	.006	.0006	.028	.173	.500	.117	.013	.005	.026	.013	.0041	.0002	.0020	.0012	.0020	.0020
	191785	.058	.170	1.440	.008	.0012	.025	.162	.520	.117	.013	.003	.026	.013	.0047	.0003	.0020	.0008	.0030	.0020
	194358	.039	.183	1.530	.008	.0008	.029	.170	.530	.121	.013	.005	.027	.012	.0049	.0002	.0030	.0017	.0020	.0020
	194359	.052	.185	1.510	.007	.0008	.027	.172	.520	.121	.014	.004	.029	.014	.0043	.0002	.0020	.0009	.0020	.0020
948259	170926	.038	.325	1.610	.005	.0006	.037	.170	.170	.006	.163	.003	.034	.012	.0050	.0003	.0020	.0015	.0020	.0020
950779	191781	.050	.175	1.530	.006	.0008	.029	.182	.490	.121	.010	.003	.025	.012	.0048	.0002	.0020	.0010	.0020	.0020
951251	195699	.030	.344	1.620	.007	.0005	.035	.177	.180	.005	.164	.004	.037	.011	.0051	.0003	.0020	.0019	.0020	.0020
951324	190831	.061	.370	1.530	.006	.0010	.036	.178	.270	.011	.152	.004	.027	.010	.0060	.0003	.0020	.0019	.0020	.0020
	194085	.058	.379	1.540	.007	.0008	.040	.172	.270	.013	.151	.004	.026	.010	.0056	.0002	.0020	.0022	.0020	.0020
	194365	.059	.381	1.540	.007	.0008	.039	.173	.270	.012	.151	.004	.026	.010	.0060	.0002	.0020	.0021	.0020	.0020
	194366	.058	.379	1.540	.007	.0007	.035	.181	.270	.012	.154	.004	.026	.010	.0054	.0002	.0020	.0023	.0020	.0020
952379	194402	.032	.316	1.590	.005	.0011	.036	.177	.170	.006	.157	.003	.034	.011	.0071	.0002	.0020	.0017	.0020	.0020
	194406	.032	.315	1.610	.006	.0007	.040	.175	.170	.006	.156	.003	.036	.012	.0064	.0003	.0020	.0016	.0020	.0020
	194408	.032	.315	1.610	.006	.0008	.041	.173	.170	.006	.156	.003	.035	.012	.0061	.0003	.0020	.0019	.0020	.0020
	194420	.032	.314	1.600	.006	.0007	.041	.173	.170	.006	.156	.003	.035	.012	.0060	.0002	.0020	.0017	.0030	.0020

Augsburg, 2023-09-04

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Hopfl Nadine

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Surveyor

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N
Set values >=								2.00
Set values <=		.0100	.0100	.41	.22	.120	.130	
752354	190821	.0020	.0020	.40	.16	.029	.042	7.27
754582	168790	.0020	.0020	.36	.14	.037	.048	7.00
756276	191220	.0020	.0020	.36	.14	.039	.052	9.39
756875	195702	.0020	.0020	.36	.15	.041	.054	6.35
757417	190834	.0020	.0020	.39	.18	.032	.044	5.61
	194083	.0020	.0020	.39	.18	.032	.044	5.96
	194084	.0020	.0020	.39	.18	.032	.044	5.71
860447	171383	.0020	.0020	.39	.17	.030	.041	8.57
863391	195701	.0020	.0020	.37	.15	.041	.053	9.38
864105	191783	.0020	.0020	.39	.15	.031	.044	6.83
	191785	.0020	.0020	.39	.16	.029	.042	5.32
	194358	.0020	.0020	.39	.15	.032	.044	5.92
	194359	.0020	.0020	.40	.16	.033	.047	6.28
948259	170926	.0020	.0020	.36	.15	.037	.049	7.40
950779	191781	.0020	.0020	.40	.16	.028	.040	6.04
951251	195699	.0020	.0020	.36	.14	.041	.052	6.86
951324	190831	.0020	.0020	.38	.17	.031	.041	6.00
	194085	.0020	.0020	.38	.17	.030	.040	7.14
	194365	.0020	.0020	.38	.17	.030	.040	6.50
	194366	.0020	.0020	.38	.17	.030	.040	6.48
952379	194402	.0020	.0020	.36	.14	.037	.048	5.07
	194406	.0020	.0020	.36	.14	.039	.051	6.25
	194408	.0020	.0020	.36	.14	.038	.050	6.72
	194420	.0020	.0020	.36	.14	.038	.050	6.83

C99 - Supplementary information

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

Augsburg, 2023-09-04

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Chemical composition (Product analysis) - part 2 of 2

B07 Heat No.	B06 Plate No	Pb %	Bi %	Cae %	Pcm %	LF01 %	LF02 %	Al/N

Remarks

Simulated heat treatment of test coupons:

Item 50:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 60:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 70:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 80:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 90:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 100:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 110:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 120:

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Remarks

001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

Item 130:
001/1: 1 cycle(s) sim. PWHT: furnace charge temperature at max. 400 °C, heating with max. 55 °C/h up to 580 °C, +10 °C/-10 °C, holding time 240 minutes, cooling with max. 55 °C/h down to 400 °C, final cooling in calm air.

We confirm that the delivered material complies with the terms of order.

C70 - Method of steelmaking: Basic oxygen furnace (BOF) steelmaking, continuous casting, steel is fully killed, vacuum degassed and melted by fine grain practice, austenitic grain size 5 or finer.

The signature of the inspection representative from voestalpine Grobblech GmbH is substituted by a electronic Signature, because the certificates of voestalpine Grobblech GmbH are prepared by a suitable data processing system (EN 10204, Pt.5).

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D02-D50 - ULTRASONIC EXAMINATION PLATE(S)

SPECIFICATION

Item 10, 20, 30, 40
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 50 mm, Edge zone transverse 50 mm; satisfactory
Item 50, 60, 70, 80, 90, 100, 110, 120, 130
Ultrasonic test acc. EN 10160, EN 10160 class S3/Body, Grid 100 mm, EN 10160 class E4/Edge Zone, Edge zone longitudinal 75 mm, Edge zone transverse 75 mm; satisfactory

VALID TEST EQUIPMENT
mechanized ultrasonic "In-Line testing system" (Manufacturer: NDT-Systems & Services) and
mechanized ultrasonic "off-line - testing system" (manufacturer: Windhoff Bahn- und Anlagentechnik GmbH) and
MUT (optional): Sonatest D20 no. 90006523 or Sonatest D20 no. 90007346 or Sonatest D50 no. 90010231 or GE - USM 36 no. 90010775 or Sonatest Wave no. 90015462 or Sonatest Wave no. 90015464

PROBE
(in-line AUT): 3STSE 18.3/8 P5, SEZ5R10RS, SE3 18.3/10 5A, (5MHz)
(off-line AUT): S140 (4MHz) 3T/1R
(MUT): SEB4E (4MHz), SEB4E0° (4MHz), MSEB4E (4MHz), B2SO (2MHz)
watergapcoupling

SURFACE CONDITION
Scaled surface - cleaned surface and free of loose scale.

RESULT
Plate(s) comply with the specification.

INSPECTION OPERATOR
Operators Level 2: qualified and certified according EN ISO 9712 (since 01.01.2013) respectively according the Written Practice „NDT-WP" (in accordance to Recommended Practice SNT-TC-1A). Operators Level 2 for ASME/ASTM.

INSPECTION SUPERVISOR
Responsible Level 3: Bindreiter Erich

Augsburg, 2023-09-04

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ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA** *Scope of Work*
Sidertaglio Calandratura SrL		Welded Tubulars

6: VISUAL, DIMENSIONAL AND MARKING INSPECTION REPORT

(CAN THK. 30mm)

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

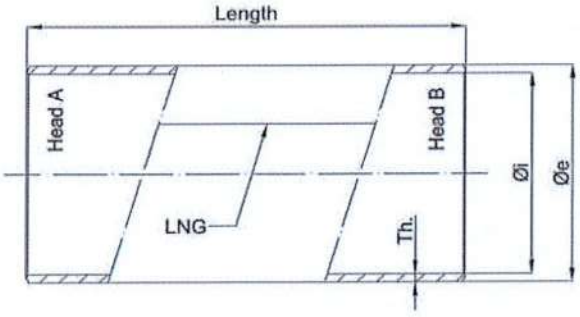
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-05_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 30mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90135	REV. 0
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231107Q0242A		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +18 °C	Device: +18 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

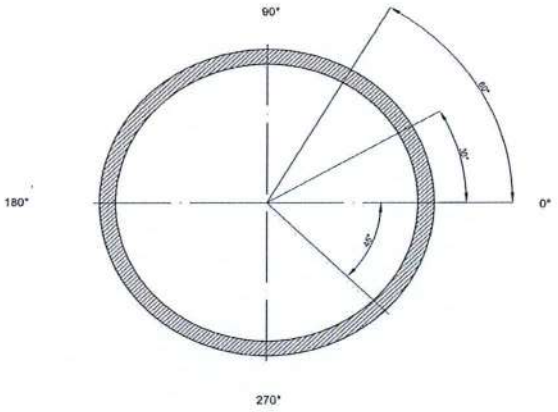
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	**POSIZIONE** dwg zone	**QUOTA NOMINALE** nominal value (mm)	**STRUMENTO** device	45°	0°	30°	60°	90°	**ESITO** result	**NOTE** remarks
±6	Ø head A	740	laser meter	739	741	742	741	741	SATISFACTORY	
±6	Ø head B	740	laser meter	738	740	742	742	742	SATISFACTORY	
≥30	th.	30	caliper	30					SATISFACTORY	
±3	tot. Lenght	2950	meter	2950					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	740	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	740	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWUNO011
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.		ROSETTI MARINO S.p.A. Alberto Buccini Supply Management Dept.		
Date:	Date: 21/12/2023	Date:	Date:	Date: 12/01/2024	Date:

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

MOD. PRD.04 rev.03 14/09/2023

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

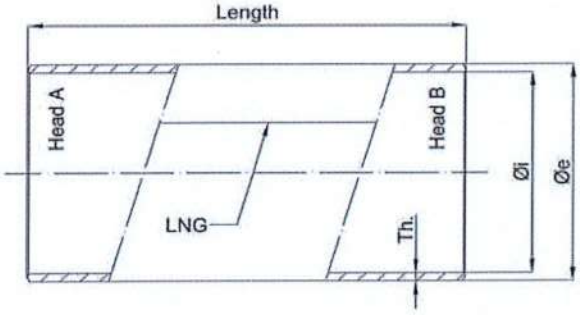
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-06_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 30mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90137	REV. 0
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231107Q0242B		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +18 °C	Device: +18 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

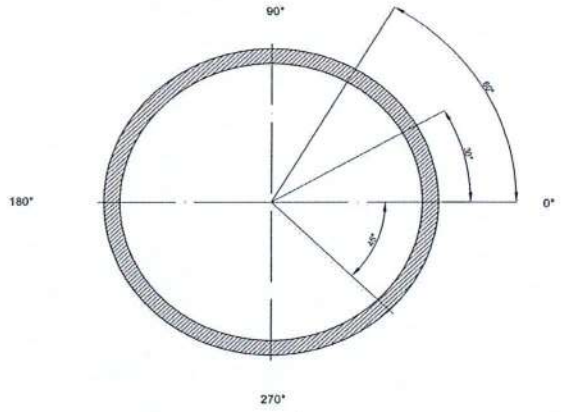
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	**POSIZIONE** dwg zone	**QUOTA NOMINALE** nominal value (mm)	**STRUMENTO** device	45°	0°	30°	60°	90°	**ESITO** result	**NOTE** remarks
±6	Ø head A	740	laser meter	742	742	742	742	742	SATISFACTORY	
±6	Ø head B	740	laser meter	741	741	742	742	742	SATISFACTORY	
≥30	th.	30	caliper	30					SATISFACTORY	
±3	tot. Lenght	2950	meter	2905					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	740	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	740	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWUNO012
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.			ROSETTI MARINO S.p.A. Supply Management Dept.	
Date:	Date: 21/12/2023	Date:	Date:	Date:	Date:

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

MOD. PRD.04 rev.03 14/09/2023

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

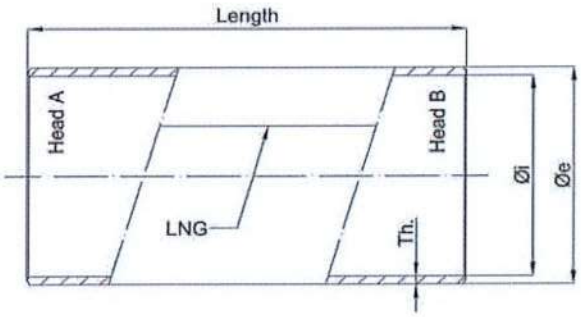
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-07_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 30mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90139	REV. 0
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231107Q0242C		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +18 °C	Device: +18 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

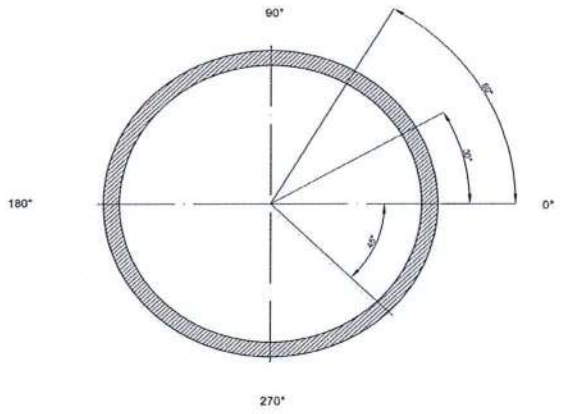
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	**POSIZIONE** dwg zone	**QUOTA NOMINALE** nominal value (mm)	**STRUMENTO** device	45°	0°	30°	60°	90°	**ESITO** result	**NOTE** remarks
±6	Ø head A	740	laser meter	739	743	741	739	739	SATISFACTORY	
±6	Ø head B	740	laser meter	740	741	741	742	743	SATISFACTORY	
≥30	th.	30	caliper	30					SATISFACTORY	
±3	tot. Lenght	2950	meter	2951					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	740	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	740	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWUNO013
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.			ROSETTI MARINO S.p.A. Alberto Luscini	
Date:	Date: 21/12/2023	Date:	Date:	Date: 12/01/24	Date:

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

MOD. PRD.04 rev.03 14/09/2023

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

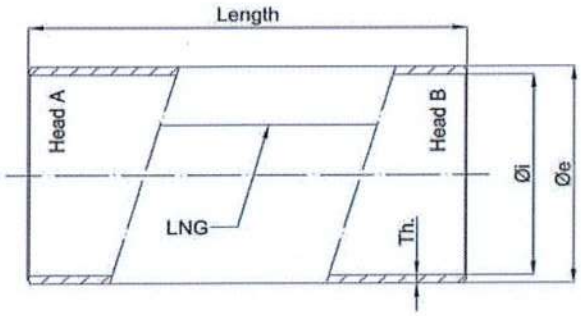
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-08_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 30mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90141	REV. 0
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231107Q0242D		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +18 °C	Device: +18 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

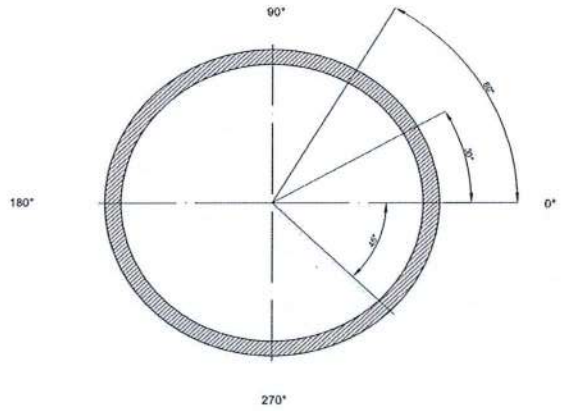
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	**POSIZIONE** dwg zone	**QUOTA NOMINALE** nominal value (mm)	**STRUMENTO** device	45°	0°	30°	60°	90°	**ESITO** result	**NOTE** remarks
±6	Ø head A	740	laser meter	741	740	740	741	743	SATISFACTORY	
±6	Ø head B	740	laser meter	741	744	743	744	742	SATISFACTORY	
≥30	th.	30	caliper	30					SATISFACTORY	
±3	tot. Lenght	2950	meter	2950					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	740	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	740	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWUNO014
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.		ROSETTI MARINO S.p.A.		
Date:	Date: 21/12/2023	Date:	Date:	Date: 22/01/2024	Date:

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

7: VISUAL, DIMENSIONAL AND MARKING INSPECTION REPORT

(CAN THK. 40mm)

SIDERTAGLIO CALANDRATURA S.R.L.
Plate Rolling & Welding

MOD. PRD.04 rev.03 14/09/2023

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

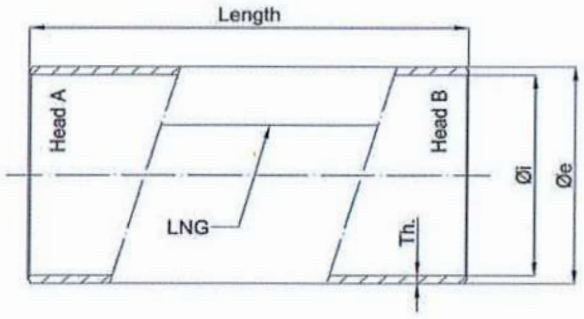
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-01_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 40mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90063	REV. 1
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231108Q0242A		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +23 °C	Device: +23 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

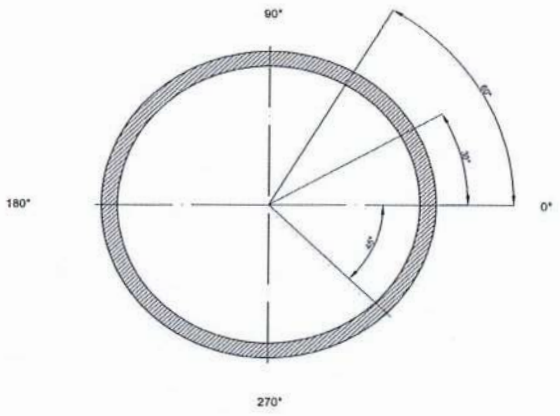
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	POSIZIONE dwg zone	QUOTA NOMINALE nominal value (mm)	STRUMENTO device	45°	0°	30°	60°	90°	ESITO result	NOTE remarks
±6	Ø head A	720	laser meter	722	721	722	723	723	SATISFACTORY	
±6	Ø head B	720	laser meter	721	720	722	724	724	SATISFACTORY	
≥40	th.	40	caliper	40					SATISFACTORY	
±3	tot. Lenght	2170	meter	2170					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	720	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	720	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWLNO015
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.			ROSETTI MARINO SpA Alberto Lucchi	
Date:	Date: 16/12/23	Date:	Date:	Date:	Date:

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

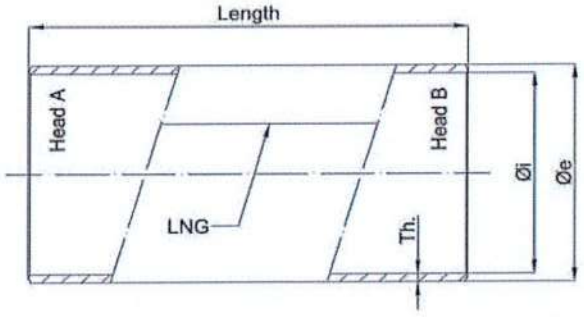
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-02_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 40mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90064	REV. 1
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231108Q0242B		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +23 °C	Device: +23 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

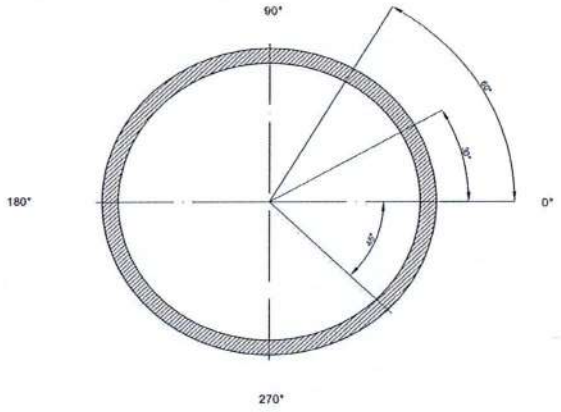
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	POSIZIONE dwg zone	QUOTA NOMINALE nominal value (mm)	STRUMENTO device	45°	0°	30°	60°	90°	ESITO result	NOTE remarks
±6	Ø head A	720	laser meter	722	719	722	721	722	SATISFACTORY	
±6	Ø head B	720	laser meter	722	720	720	721	722	SATISFACTORY	
≥40	th.	40	caliper	40					SATISFACTORY	
±3	tot. Lenght	2170	meter	2170					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	720	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	720	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWLNO016
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.			ROSETTI MARINO S.p.A.	
Date:	Date: 16/12/23	Date:	Date:	Date: 12/01/24	Date:

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

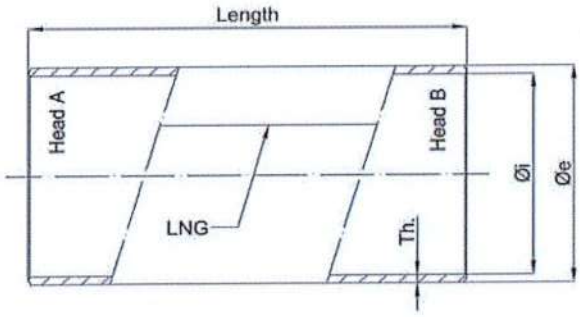
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-03_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 40mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90065	REV. 1
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231108Q0242C		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +23 °C	Device: +23 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

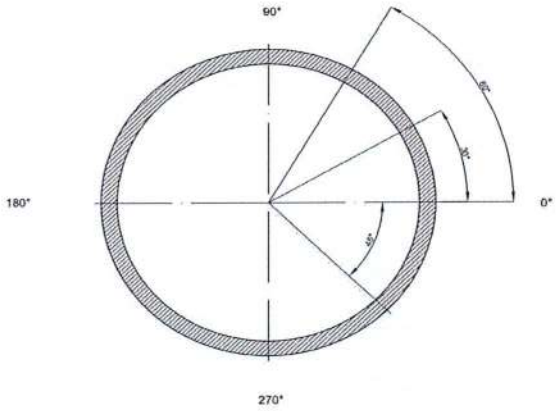
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	POSIZIONE dwg zone	QUOTA NOMINALE nominal value (mm)	STRUMENTO device	45°	0°	30°	60°	90°	ESITO result	NOTE remarks
±6	Ø head A	720	laser meter	723	722	722	723	723	SATISFACTORY	
±6	Ø head B	720	laser meter	722	721	722	723	723	SATISFACTORY	
≥40	th.	40	caliper	40					SATISFACTORY	
±3	tot. Lenght	2170	meter	2171					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	720	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	720	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWLNO017
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.			ROSETTI MARINO S.p.A.	
Date:	Date: 16/12/23	Date:	Date:	Date: 14/01/24	Date:

SIDERTAGLIO CALANDRATURA S.R.L.
Pipes Rolling & Welding

MOD. PRD.04 rev.03 14/09/2023

CERTIFICATO DI CONTROLLO VISIVO, DIMENSIONALE E MARCATURA
visual, dimensional and marking inspection report

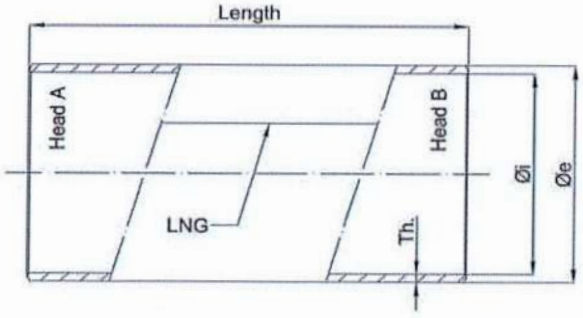
CLIENTE: customer	Rosetti Marino s.p.a.		**CERTIFICATO N°** certificate no.	SID-CAL-Q0242-04_REV.00	
ORDINE: purchase order	1723001835	ITEM	**COMMESSA N°** job no.	Q0242	
PARTICOLARE: part	LNG WELDED SHELL TH. 40mm		**DISEGNO** Drawing	123A90-FDL-ST-DD-90066	REV. 1
ESECUTORE: issued	C. Correa Da Silva (Op)		**VERIFICATO** checked	D. De Rizzo (QCM)	
RIFERIMENTI: references	231108Q0242D		**PIANO ISPEZIONI** itp no.		
			TEMPERATURA temperature	part: +23 °C	Device: +23 °C
			RISULTATO COLLAUDO inspection result	**CONFORME** SATISFACTORY ☑	**NON CONFORME** NOT SATISFACTORY ☐

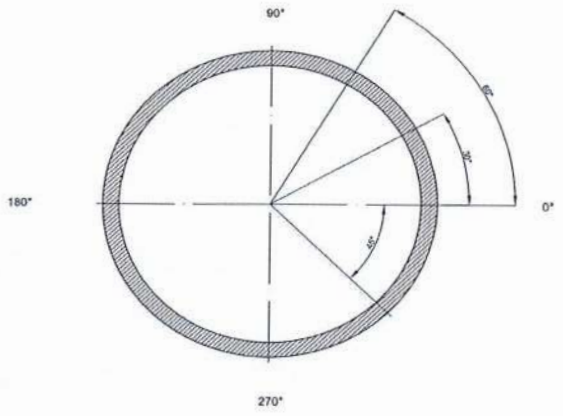
TOLL. DIMENSIONALI *dimensional tollerances (mm)*	**POSIZIONE** dwg zone	**QUOTA NOMINALE** nominal value (mm)	**STRUMENTO** device	45°	0°	30°	60°	90°	**ESITO** result	**NOTE** remarks
±6	Ø head A	720	laser meter	721	719	721	721	721	SATISFACTORY	
±6	Ø head B	720	laser meter	721	720	721	721	721	SATISFACTORY	
≥40	th.	40	caliper	40					SATISFACTORY	
±3	tot. Lenght	2170	meter	2171					SATISFACTORY	
as per DWG	bevels Head A	as per DWG	caliper						SATISFACTORY	
as per DWG	bevels Head B	as per DWG	caliper						SATISFACTORY	
±0,75%	ovalization A	720	laser meter	See "Ø head A"					SATISFACTORY	
±0,75%	ovalization B	720	laser meter	See "Ø head B"					SATISFACTORY	

NOTE: CWLNO018
remarks:

RIFERIMENTI NORMATIVI:
Normatives:

MARKING FRONT SIDE VIEW





OPERATOR	QUALITY MANAGER	PROD. MANAGER	CUSTOMER	CUSTOMER	CUSTOMER
	SIDERTAGLIO CALANDRATURA S.R.L.			ROSETTI MARINO S.p.A.	
Date:	Date: 16/12/23	Date:	Date:	Date: 12/01/24	Date:

8: VISUAL EXAMINATION REPORT (CAN THK. 30mm)

RAPPORTO DI ESAME
Visivo

Visual
EXAMINATION REPORT

Pag. Sheet *1 di of 1*

N° *654/23*

del of **21/12/2023**

ANTARES CONTROL
di Righetto Davide
Via Roma,15/7
36040 Grumolo delle Abbad.(VI)
P.IVA: 04382150243
Cell. 3487376550
antarescontrolli@gmail.com

Cliente Customer	SIDERTAGLIO GALANDRATURA S.R.L. Via Marzotto, 9, 36031 Povolaro VI	**Descrizione del pezzo*** Description object*	Welded shell Øe 800 mm L 2950 mm, Th 30 mm
Ordine* Order*	1723001835 **Del** Of	**Disegno*** Drawing*	**Quantità** 4 Quantity
Comm. Vs cliente* Custoner Job*	Rosetti Marino S.p.A.	**Codice pezzo*** Code name*	231107Q0242 (A, B, C, D)
Incarico Assignment*	Q0242-03 **Comm.*** Job	**Materiale*** Material*	S460MLO **Colata*** Heat*
Data/Luogo del controllo Date and place of the check	21/12/2023 SIDERTAGLIO S.R.L. Via Marzotto, 9, 36031 Povolaro VI	**Tipo Giunto** Joint type	Testa-testa butt weld

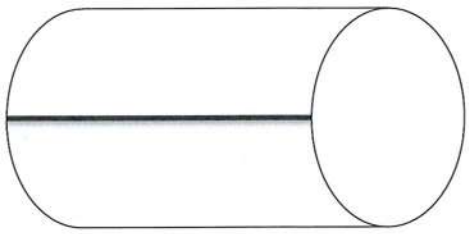
Tipo prodotto Product Type	Laminato / Saldato Laminate / welded	**WPS di riferimento*** Reference WPS*	**Norme di rif. :** Procedure
Fase di controllo Inspection Phase	Finale Final	**Procedura/Specifica*** Specification*	ISO 17637 *Ultima edizione / Latest edition*
Stadio di controllo Inspection Phase	Trattamento termico non richiesto Heat treatment not required	**Classe accettazione*** Acceptance criteria*	ISO 5817 LIV. B *Ultima edizione / Latest edition*
Condizioni superficiali Tests surface status	Spazzolato Brushed	**Estensione del controllo*** Extension examination*	100% saldatura weld 100%

* DATI FORNITI DAL CLIENTE - *THESE DATA ARE SUPPLIED BY THE CUSTOMER Allegato/Annex : 21/12/2023

Tipo luce Light type	Artificiale luce fredda Artificial cold light	**Distanza massima 600 mm** Max distance 600 mm	**Angolo di visione > 30°** Visual angle >30°
Illuminamento Light	Superfice del pezzo >500 LUX Piece surface >500 LUX	**Strumenti di controllo** Equipment	
Luxmetro Matricola/ Serial n°	Delta Ohm ND2102,2 +LP471PHOT 14004390 + 14011722	**Controllo** Test	Non assistito No support **Controllo** Test Localizzato Localized

Note o schizzo :
Notes or sketch:

Customer ID: CWUNO011, CWUNO012, CWUNO013, CWUNO014



Risultato / Result	OPERATORE - OPERATOR	RESPONSABILE - WORD REFERENCE	ISPETTORE - INSPECTOR
Conforme a Norma Acceptable	Righetto Davide II° Liv. SNT-TC-1A / ISO 9712	SIDERTAGLIO CALANDRATURA S.R.L.	ROSETTI MARINO S.p.A. 12/01/24

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

9: VISUAL EXAMINATION REPORT (CAN THK. 40mm)

RAPPORTO DI ESAME Visivo

Visual
EXAMINATION REPORT

N° *650/23*

del of **13/12/2023**

Pag. Sheet *1 di of 1*

ANTARES CONTROL
di Righetto Davide
Via Roma,15/7
36040 Grumolo delle Abbad.(VI)
P.IVA: 04382150243
Cell. 3487376550
antarescontrolli@gmail.com

Cliente Customer	SIDERTAGLIO GALANDRATURA S.R.L. Via Marzotto, 9, 36031 Povolaro VI	**Descrizione del pezzo*** Description object*	Welded shell Øe 800 mm L 2170 mm, Th 40 mm
Ordine* Order*	1723001835 **Del** Of	**Disegno*** Drawing*	**Quantità** 4 Quantity
Comm. Vs cliente* Custoner Job*	Rosetti Marino S.p.A.	**Codice pezzo*** Code name*	231108Q0242 (A, B, C, D)
Incarico Assignment*	Q0242-01 **Comm.*** Job	**Materiale*** Material*	S460MLO **Colata*** Heat*
Data/Luogo del controllo Date and place of the check	13/12/2023 SIDERTAGLIO S.R.L. Via Marzotto, 9, 36031 Povolaro VI	**Tipo Giunto** Joint type	Testa-testa butt weld

Tipo prodotto Product Type	Laminato / Saldato Laminate / welded	**WPS di riferimento*** Reference WPS*	**Norme di rif. :** Procedure
Fase di controllo Inspection Phase	Finale Final	**Procedura/Specifica*** Specification*	ISO 17637 *Ultima edizione / Latest edition*
Stadio di controllo Inspection Phase	Trattamento termico non richiesto Heat treatment not required	**Classe accettazione*** Acceptance criteria*	ISO 5817 LIV. B *Ultima edizione / Latest edition*
Condizioni superficiali Tests surface status	Spazzolato Brushed	**Estensione del controllo*** Extension examination*	100% saldatura weld 100%

* DATI FORNITI DAL CLIENTE - *THESE DATA ARE SUPPLIED BY THE CUSTOMER

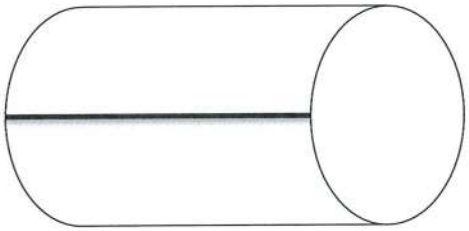
Allegato/Annex :

13/12/2023

Tipo luce Light type	Artificiale luce fredda Artificial cold light	**Distanza massima 600 mm** Max distance 600 mm	**Angolo di visione > 30°** Visual angle >30°
Illuminamento Light	Superfice del pezzo >500 LUX Piece surface >500 LUX	**Strumenti di controllo** Equipment	
Luxmetro Matricola/ Serial n°	Delta Ohm ND2102,2 +LP471PHOT 14004390 + 14011722	**Controllo** Test	Non assistito No support **Controllo** Test Localizzato Localized

Note o schizzo :
Notes or sketch:

Customer ID: CWLNO015, CWLNO016, CWLNO017, CWLNO018



Risultato / Result	OPERATORE - OPERATOR	RESPONSABILE - WORD REFERENCE	ISPETTORE - INSPECTOR
Conforme a Norma Acceptable	Righetto Davide II° Liv. SNT-TC-1A / ISO 9712	SIDERTAGLIO CALANDRATURA S.R.L.	ROSETTI MARINO SpA 12/01/24

10: MAGNETOSCOPIC EXAMINATION REPORT (CAN THK. 30mm)

RAPPORTO DI ESAME MAGNETOSCOPICO

MAGNETOSCOPIC
EXAMINATION REPORT

Pag. Sheet 1 *di of* 1

N° 426/23

del of **21/12/2023**

ANTARES CONTROL
di Righetto Davide
Via Roma,15/7
36040 Grumolo delle Abbad.(VI)
P.IVA: 04382150243
Cell. 3487376550
antarescontrolli@gmail.com

Cliente SIDERTAGLIO GALANDRATURA S.R.L.
Customer Via Marzotto, 9, 36031 Povolaro VI

Ordine* 1723001835 **Del**
Order* Of

Comm. Vs cliente* Rosetti Marino S.p.A.
Custoner Job*

Incarico Q0242-03 **Comm.*** Q0242
Assignment* Job

Data/Luogo del controllo 21/12/2023 SIDERTAGLIO S.R.L.
Date and place of the check Via Marzotto, 9, 36031 Povolaro VI

Descrizione del pezzo* Welded shell Øe 800 mm
Description object* L 2950 mm, Th 30 mm

Disegno* **Quantità** 4
Drawing* Quantity

Codice pezzo* 231107Q0242 (A, B, C, D)
Code name*

Materiale* S460MLO **Colata***
Material* Heat*

Tipo Giunto Testa-testa
Joint type butt weld

Tipo prodotto Laminato / Saldato
Product Type Laminate / welded

Fase di controllo Finale
Inspection Phase Final

Stadio di controllo Trattamento termico non richiesto
Inspection Phase Heat treatment not required

Condizioni superficiali Spazzolato
Tests surface status Brushed

WPS di riferimento* **Norme di rif. :**
Reference WPS* Procedure

Procedura/Specifica* UNI EN ISO 17638
Specification - Standard* ***Ultima edizione / Latest edition***

Classe accettazione* UNI EN ISO 23278 Lev. 2
Acceptance criteria* ***Ultima edizione / Latest edition***

Estensione del controllo* 100% saldatura
Extension examination* 100% weld

* DATI FORNITI DAL CLIENTE - *THESE DATA ARE SUPPLIED BY THE CUSTOMER Allegato/Annex : 21/12/2023

Corrente corrente alternata
Current alternating current

Metodo di controllo Diretto
Examination method Direct

Apparecch. ***Model KY-2 Matricola 220824***
Equipment ***CONFORMITY REPORT n. PRONDT 22-Y02***

Metodo di magnetizzazione elettromagnete
Magnetizing method electromagnet

Tipo di magnetizzazione Longitudinale
Type of magnetization Longitudinal

Tipo di polvere Umido
Type of podwer Wet

Distanza tra i poli 75 - 200 mm
Poles pitch 75 - 200 mm

Piastra di sollevamento 10 LB (4500 g)
Matricola - Lifting plate Matr. PRO - NDT 21 - 054

Intensità di corrente >2,4 kA/m
Current intensity

Intensità di Campo >2,4 kA/m
Field intensity

Densità di flusso > T
Density flux

Gaussmetro- Gaussmeter - LINKJOIN + SONDA LZ-643
Matricola/ Serial n° S180423355 SONDA 64100782160117

Radiometer UV-A
Matricola/ Serial n°

Tipo luce Artificiale luce fredda
Light type Artificial warm light

Intensità di luce Superfice del pezzo >500 LUX
Light intensity Piece surface >500 LUX

Temperatura ambiente tra 20° 40° Attuale 21 C°
Temperature environment from 20° to 40° Actual 21 C°

Produttore PRO NDT
Productor

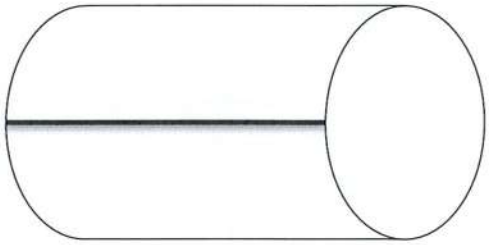
Vernice a contrasto di colore **FLUXO 4**
White contrast paint ***Lotto - Batch L220619/1*** ***scad. 19/06/2027***

Mezzo Rilevatore Magnetico Nero base acqua **FLUXO 215**
Detector type ***Lotto - Batch L220406/1 scad. 06/04/2025***

Smagnetizzazione non richiesta
Demagnetization not required

Note o schizzo :
Notes or sketch:

Customer ID: CWUNO011, CWUNO012, CWUNO013, CWUNO014



Risultato / Result	OPERATORE - OPERATOR	RESPONSABILE - WORD REFERENCE	ISPETTORE - INSPECTOR
Conforme a Norma Acceptable	Righetto Davide II° Liv. SNT-TC1A / ISO 9712	SIDERTAGLIO GALANDRATURA S.R.L.	ROSETTI MARINO S.p.A. Alberto Lucchi 21/01/24

11: MAGNETOSCOPIC EXAMINATION REPORT (CAN THK. 40mm)

RAPPORTO DI ESAME MAGNETOSCOPICO

MAGNETOSCOPIC
EXAMINATION REPORT

N° *415/23*

del of **13/12/2023**

Pag. Sheet *1 di of 1*

ANTARES CONTROL
di Righetto Davide
Via Roma,15/7
36040 Grumolo delle Abbad.(VI)
P.IVA: 04382150243
Cell. 3487376550
antarescontrolli@gmail.com

Cliente SIDERTAGLIO GALANDRATURA S.R.L.
Customer Via Marzotto, 9, 36031 Povolaro VI

Ordine* 1723001835 **Del**
Order* Of

Comm. Vs cliente* Rosetti Marino S.p.A.
Custoner Job*

Incarico Q0242-01 **Comm.*** Q0242
Assignment* Job

Data/Luogo del controllo 13/12/2023 SIDERTAGLIO S.R.L.
Date and place of the check Via Marzotto, 9, 36031 Povolaro VI

Descrizione del pezzo* Welded shell Øe 800 mm
Description object* L 2170 mm, Th 40 mm

Disegno* **Quantità** 4
Drawing* Quantity

Codice pezzo* 231108Q0242 (A, B, C, D)
Code name*

Materiale* S460MLO **Colata***
Material* Heat*

Tipo Giunto Testa-testa
Joint type butt weld

Tipo prodotto Laminato / Saldato
Product Type Laminate / welded

Fase di controllo Finale
Inspection Phase Final

Stadio di controllo Trattamento termico non richiesto
Inspection Phase Heat treatment not required

Condizioni superficiali Spazzolato
Tests surface status Brushed

WPS di riferimento* **Norme di rif. :**
Reference WPS* Procedure

Procedura/Specifica* UNI EN ISO 17638
Specification - Standard* ***Ultima edizione / Latest edition***

Classe accettazione* UNI EN ISO 23278 Lev. 2
Acceptance criteria* ***Ultima edizione / Latest edition***

Estensione del controllo* 100% saldatura
Extension examination* 100% weld

* DATI FORNITI DAL CLIENTE - *THESE DATA ARE SUPPLIED BY THE CUSTOMER Allegato/Annex : 13/12/2023

Corrente corrente alternata
Current alternating current

Metodo di controllo Diretto
Examination method Direct

Apparecch. ***Model KY-2 Matricola 220824***
Equipment ***CONFORMITY REPORT n. PRONDT 22-Y02***

Metodo di magnetizzazione elettromagnete
Magnetizing method electromagnet

Tipo di magnetizzazione Longitudinale
Type of magnetization Longitudinal

Tipo di polvere Umido
Type of podwer Wet

Distanza tra i poli 75 - 200 mm
Poles pitch 75 - 200 mm

Piastra di sollevamento 10 LB (4500 g)
Matricola - Lifting plate Matr. PRO - NDT 21 - 054

Intensità di corrente >2,4 kA/m
Current intensity

Intensità di Campo >2,4 kA/m
Field intensity

Densità di flusso > T
Density flux

Gaussmetro- Gaussmeter - LINKJOIN + SONDA LZ-643
Matricola/ Serial n° S180423355 SONDA 64100782160117

Radiometer UV-A
Matricola/ Serial n°

Tipo luce Artificiale luce fredda
Light type Artificial warm light

Intensità di luce Superfice del pezzo >500 LUX
Light intensity Piece surface >500 LUX

Temperatura ambiente tra 20° 40° Attuale 21 C°
Temperature environment from 20° to 40° Actual 21 C°

Produttore PRO NDT
Productor

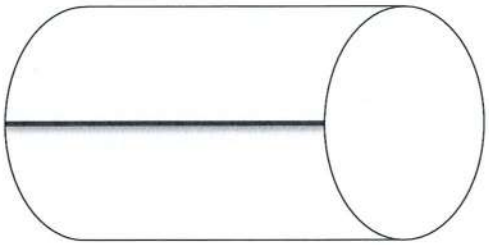
Vernice a contrasto di colore FLUXO 4
White contrast paint ***Lotto - Batch L220619/1*** ***scad. 19/06/2027***

Mezzo Rilevatore Magnetico Nero base acqua **FLUXO 215**
Detector type ***Lotto - Batch L220406/1 scad. 06/04/2025***

Smagnetizzazione non richiesta
Demagnetization not required

Note o schizzo :
Notes or sketch:

Customer ID: CWLNO015, CWLNO016, CWLNO017, CWLNO018



Risultato / Result	OPERATORE - OPERATOR	RESPONSABILE - WORD REFERENCE	ISPETTORE - INSPECTOR
Conforme a Norma Acceptable	Righetto Davide II° Liv. SNT-TC1A / ISO 9712	SIDERTAGLIO GALANDRATURA S.R.L.	ROSETTI MARINO S.p.A. 12/01/24

12: ULTRASONIC EXAMINATION REPORT (CAN THK. 30mm)

RAPPORTO DI PROVA ULTRASUONI

ULTRASONIC
EXAMINATION REPORT

N° ***913/23***

del of **21/12/2023**

Pag. Sheet *1 di of 1*

ANTARES CONTROL
di Righetto Davide
Via Roma,15/7
36040 Grumolo delle Abbad.(VI)
P.IVA: 04382150243
Cell. 3487376550
antarescontrolli@gmail.com

Cliente Customer	SIDERTAGLIO GALANDRATURA S.R.L. Via Marzotto, 9, 36031 Povolaro VI	**Descrizione del pezzo*** Description object*	Welded shell Øe 800 mm L 2950 mm, Th 30 mm
Ordine* Order*	1723001835 **Del** Of	**Disegno*** Drawing*	**Quantità** 4 Quantity
Comm. Vs cliente* Custoner Job*	Rosetti Marino S.p.A.	**Codice pezzo*** Code name*	231107Q0242 (A, B, C, D)
Incarico Assignment*	Q0242-03 **Comm.*** Job	**Materiale*** Material*	S460MLO **Colata*** Heat*
Data/Luogo del controllo Date and place of the check	21/12/2023 SIDERTAGLIO S.R.L. Via Marzotto, 9, 36031 Povolaro VI	**Tipo Giunto** Joint type	Testa-testa butt weld

Tipo prodotto Product Type	Laminato / Saldato Laminate / welded	**WPS di riferimento*** Reference WPS*	**Norme di rif. :** Procedure
Fase di controllo Inspection Phase	Finale Final	**Procedura/Specifica*** Specification*	ISO 17640 liv. B ***Ultima Edizione***
Stadio di controllo Inspection Phase	Trattamento termico non richiesto Heat treatment not required	**Classe accettazione*** Acceptance criteria*	UNI EN ISO 11666 Met.1 Liv.2 ***Ultima Edizione***
Condizioni superficiali Tests surface status	Spazzolato Brushed	**Estensione del controllo*** Extension examination*	100% saldatura *Vedi Note weld 100% *See notes

* DATI FORNITI DAL CLIENTE - *THESE DATA ARE SUPPLIED BY THE CUSTOMER Allegato/Annex : 21/12/2023

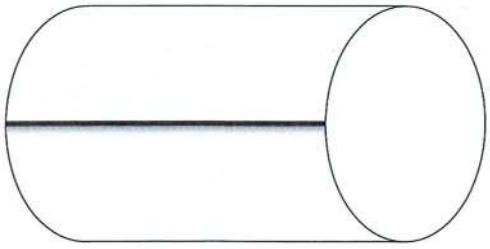
Metodo di controllo Scanning method	Manuale - contatto Manual - contact reflection	**Accoppiante** Coupling medium	COUPLANT FYp COUPLANT FYp
Strumento tipo Instrument : Type	GE Sensing & Inspection Technologies USM 36S Serial nember 15017577	**Cavo** Cable	MPKLL2 L 2000
Report taratura/calibration EN n° E230033 scad. 23/02/2024			
Report taratura/calibration ASME n° A230063 scad. 23/02/2024			
Sonde piane ad onde long. Probes Long. waves type	PRO NDT MD10-4 N°178220 Matricola - Serial n°		
Dimens. crist. Crystal dim.	Ø 10 mm. **freq.** freq.	4 MHZ	
Sonde angol. ad onde trasv. Probes Transv. waves type	PRO NDT MA45-4 2031 12 Matricola - Serial n°		
Dimens. crist. Crystal dim.	8 X 9 **freq.** freq.	4 MHZ	
Sonde angol. ad onde trasv. Probes Transv. waves type	PRO NDT MA60-4 2032 10 Matricola - Serial n°		
Dimens. crist. Crystal dim.	8 X 9 **freq.** freq.	4 MHZ	
Sonde angol. ad onde trasv. Probes Transv. waves type	PRO NDT MA70-4 2033 08 Matricola - Serial n°		
Dimens. crist. Crystal dim.	8 X 9 **freq.** freq.	4 MHZ	

Sovrap. Sonda Overlap	10%		
Vel. di scans. Scanning velocity			
Blocco di calibrazione Calibration Block	Eco di fondo/ Back Raflection		
Foro di Riferimento Reference pole	FBH Ø 2 mm Sonde piane / Plain Probes		
Curve di riferimento Reference curve	Sonde piane / Plain Probes		
Limite di Registrazione Recording level	<20% Back raflection Sonde piane / Plain Probes		
Blocco di calibrazione Calibration Block	V2 - IIW 1018 STEEL 21-V2-01 Sonde angolate / Angular Probes		
Foro di Riferimento Reference pole	SDH Ø 3 mm Sonde angolate / Angular Probes		
Curve di riferimento Reference curve	Curva DAC Sonde angolate / Angular Probes		
Limite di Registrazione Recording level	<20% Back raflection Sonde angolate / Angular Probes		
Cavo Cable	PKLL1 L 2000	**Vel. di scans.** Scanning velocity	

Note o schizzo : Notes or sketch:

Customer ID: CWUNO011, CWUNO012, CWUNO013, CWUNO014

CONTROLLO MATERIALE BASE:
Non sono state riscontrate indicazioni degne di nota.
BASIC MATERIAL CHECK:
No noteworthy indications were found.



Risultato / Result	OPERATORE - OPERATOR	RESPONSABILE - WORD REFERENCE	ISPETTORE - INSPECTOR
Conforme a Norma Acceptable	Davide Righetto II° Liv. SNT-TC1A / ISO 9712	SIDERTAGLIO GALANDRATURA S.R.L.	ROSETTI MARINO S.p.A. 12/01/24

13: ULTRASONIC EXAMINATION REPORT (CAN THK. 40mm)

RAPPORTO DI PROVA ULTRASUONI

ULTRASONIC
EXAMINATION REPORT

N° 905/23

del of **13/12/2023**

Pag. Sheet 1 di of 1

ANTARES CONTROL
di Righetto Davide
Via Roma,15/7
36040 Grumolo delle Abbad.(VI)
P.IVA: 04382150243
Cell. 3487376550
antarescontrolli@gmail.com

Cliente SIDERTAGLIO GALANDRATURA S.R.L.
Customer Via Marzotto, 9, 36031 Povolaro VI

Ordine* 1723001835 **Del**
Order* Of

Comm. Vs cliente* Rosetti Marino S.p.A.
Custoner Job*

Incarico Q0242-01 **Comm.*** Q0242
Assignment* Job

Data/Luogo del controllo 13/12/2023 SIDERTAGLIO S.R.L.
Date and place of the check Via Marzotto, 9, 36031 Povolaro VI

Descrizione del pezzo* Welded shell Øe 800 mm
Description object* L 2170 mm, Th 40 mm

Disegno* **Quantità** 4
Drawing* Quantity

Codice pezzo* 231108Q0242 (A, B, C, D)
Code name*

Materiale* S460MLO **Colata***
Material* Heat*

Tipo Giunto Testa-testa
Joint type butt weld

Tipo prodotto Laminato / Saldato
Product Type Laminate / welded

Fase di controllo Finale
Inspection Phase Final

Stadio di controllo Trattamento termico non richiesto
Inspection Phase Heat treatment not required

Condizioni superficiali Spazzolato
Tests surface status Brushed

WPS di riferimento* **Norme di rif. :**
Reference WPS* Procedure

Procedura/Specifica* ISO 17640 liv. B
Specification* ***Ultima Edizione***

Classe accettazione* UNI EN ISO 11666 Met.1 Liv.2
Acceptance criteria* ***Ultima Edizione***

Estensione del controllo* 100% saldatura *Vedi Note
Extension examination* weld 100% *See notes

* DATI FORNITI DAL CLIENTE - *THESE DATA ARE SUPPLIED BY THE CUSTOMER Allegato/Annex :

13/12/2023

Metodo di controllo Manuale - contatto **Accoppiante** COUPLANT FYp **Sovrap. Sonda** 10%
Scanning method Manual - contact reflection Coupling medium COUPLANT FYp Overlap

Strumento tipo GE Sensing & Inspection Technologies **Cavo** MPKLL2 **Vel. di scans.**
Instrument : Type USM 36S Serial nember 15017577 Cable L 2000 Scanning velocity

Report taratura/calibration EN n° E230033 scad. 23/02/2024

Report taratura/calibration ASME n° A230063 scad. 23/02/2024

Blocco di calibrazione Eco di fondo/ Back Raflection
Calibration Block

Sonde piane ad onde long. PRO NDT MD10-4 N°178220
Probes Long. waves type Matricola - Serial n°

Foro di Riferimento FBH Ø 2 mm
Reference pole Sonde piane / Plain Probes

Dimens. crist. Ø 10 mm. **freq.** 4 MHZ
Crystal dim. freq.

Curve di riferimento
Reference curve Sonde piane / Plain Probes

Sonde angol. ad onde trasv. PRO NDT MA45-4 2031 12
Probes Transv. waves type Matricola - Serial n°

Limite di Registrazione <20% Back raflection
Recording level Sonde piane / Plain Probes

Dimens. crist. 8 X 9 **freq.** 4 MHZ
Crystal dim. freq.

Blocco di calibrazione V2 - IIW 1018 STEEL 21-V2-01
Calibration Block Sonde angolate / Angular Probes

Sonde angol. ad onde trasv. PRO NDT MA60-4 2032 10
Probes Transv. waves type Matricola - Serial n°

Foro di Riferimento SDH Ø 3 mm
Reference pole Sonde angolate / Angular Probes

Dimens. crist. 8 X 9 **freq.** 4 MHZ
Crystal dim. freq.

Curve di riferimento Curva DAC
Reference curve Sonde angolate / Angular Probes

Sonde angol. ad onde trasv. PRO NDT MA70-4 2033 08
Probes Transv. waves type Matricola - Serial n°

Limite di Registrazione <20% Back raflection
Recording level Sonde angolate / Angular Probes

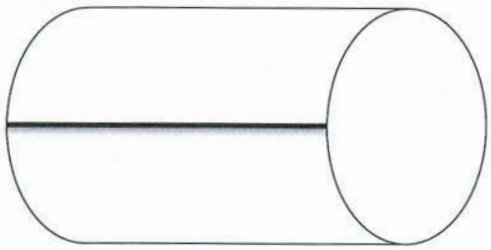
Dimens. crist. 8 X 9 **freq.** 4 MHZ
Crystal dim. freq.

Cavo PKLL1 **Vel. di scans.**
Cable L 2000 Scanning velocity

Note o schizzo :
Notes or sketch:

Customer ID: CWLNO015, CWLNO016, CWLNO017, CWLNO018

CONTROLLO MATERIALE BASE:
Non sono state riscontrate indicazioni degne di nota.
BASIC MATERIAL CHECK:
No noteworthy indications were found.



Risultato / Result	OPERATORE - OPERATOR	RESPONSABILE - WORD REFERENCE	ISPETTORE - INSPECTOR
Conforme a Norma Acceptable	Davide Righetto II° Liv. SNT-TC1A / ISO 9712	SIDERTAGLIO GALANDRATURA S.R.L.	ROSETTI MARINO S.p.A. Alberto Lusoli 12/01/24

ROSETTI MARINO

PROGETTO *Project*	CLIENTE *Client*	N. ORDINE *Order Number*
HOLLANDSE KUST NOORD WIND PARK	CROSSWIND	1723001835
FORNITORE *Supplier*		**FORNITURA *Scope of Work***
Sidertaglio Calandratura SrL		Welded Tubulars

14: RADIOGRAPHIC EXAMINATION REPORT (CAN THK. 30mm)

RAPPORTO RADIOGRAFICO
RADIOGRAPHIC REPORT

N° 3919/2023
del of 29/12/2023
Pag. Sheet 1 di of 1

M.C. CONTROL s.r.l. TEL.0444/411135 - FAX 0444/412154 - Viale Venezia,40 - 36043 CAMISANO VIC. (VI)

Cliente SIDERTAGLIO CALANDRATURA S.R.L.
Customer

Ordine* 1723001835 **Del** **Commessa*** Q0242
Order* Of Job

Descrizione* WELDED SHELL Øe 800 L= 2950 THK. 30 mm **Tipo Giunto** Testa a Testa
Description

Fase di lavoro Dopo saldatura - After welding **Materiale*** S460MLO **PROC.SALD.***
Work stage Material Welding process

Marche di riferimento* SEE BELOW - VEDI SOTTO **Tipo di marcatura** Pennarel. Indel. **Rinf. di Sald.**
Reference marking Type of marking Perm. marker Weld reinforcement

Norme di riferimento: **Procedura/specifica** ISO 17636-1 CL.B **Accettabilità difetti** ISO 10675-1 LIV. 1
Procedure Specification Ultima ed. - Last ed. Acceptance criteria Ultima ed. - Last ed.

Tipo prodotto Laminato / Saldato **Stadio di controllo** Finale **Fase di controllo**
Product Type Inspection Phase Inspection Phase

**Dati forniti dal Cliente - * these data are supplied by the custoner* Allegato/Annex :

Sorgente Raggi x / x-Ray **Corrente mA** 3 **Tensione kV** 300 mC /// **Distanza Fuoco Oggetto (D)** 700 mm
Source Current Voltage F - object distance (D)

Distanza Oggetto - Film (d) 30 mm **Apparecchio** SEIFERT ERESCO 65MF4 **Dimensione Sorgente** 3 mm (1,5 x 1,5)
Object - film distance (d) Radiog. apparatus Source size

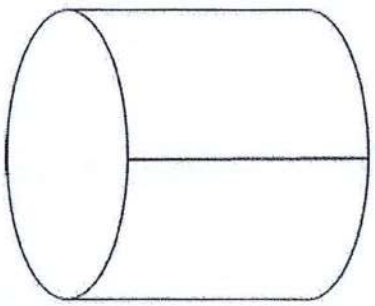
Tipo penetrametro 10 FE ISO **Posizione** Lato Sorgente **Tipo Pellicola** T200 - C4
I.Q.I. Type Position Source side Film type

Film per cassetta Singolo **Tempo di esposizione** 4'25" **Penombra geometrica** $Ug = \frac{F * d}{D}$
N° Film on film older single Exposition Time Geometric unsharpness

Schermi al piombo Sp. : Lato sorgente 0,05 **LATO PELLICOLA** 0,10 **Densità** >=2,3 ÷ 3,2 **Filo Essenziale**
Lead screen Source side Film side Density Essenzial wire

Metodo di sviluppo Automatico Note : **Filo Visibile**
Film processing tecnique Automatic Notes : Visible wire

Tratto Position	Esito Result	Difetti Defects	Disp. di rip. Test. Arrang.	Densità Density
CWUNO011				
1 - 2	C	2011	7.1.3 f2	
3 - 4	C	2011	7.1.3 f2	
5 - 6	C	2011	7.1.3 f2	
CWUNO012				
1 - 2	C		7.1.3 f2	
3 - 4	C		7.1.3 f2	
5 - 6	C		7.1.3 f2	
CWUNO013				
1 - 2	C	2011	7.1.3 f2	
3 - 4	C	2011	7.1.3 f2	
5 - 6	C	2011	7.1.3 f2	
CWUNO014				
1 - 2	C	2011	7.1.3 f2	
3 - 4	C	514	7.1.3 f2	
5 - 6	C	2011	7.1.3 f2	



Difetti - Defects

100 -	C	Cricca Crack	2015-	IG	Inclusione di gas allungata Elongated cavity	3041-	IW	Inclusione di tungsteno Tungsten inclusion	517-	RD	Ripresa difettosa Poor restart
401 -	MF	Mancanza di fusione Lack of fusion (Incollatura)	2016-	T	Tarlo Worm-hole	5011 -	IM	Incisione marginale Undercut	601 -	CD	Colpo d'arco Stray flash , arc strike
402 -	MP	Mancanza di penetrazione Lack of penetration	202 -	CA	Cavità di ritiro Shrinkage cavity	504 -	EP	Eccesso di penetrazione Excessive penetration	602 -	SP	Spruzzi Spatters
2011-	P	Porosità (isolate) Gas pore	2024 -	K	Cavità di cratere Crater pipe	5041 -	SG	Sgocciolamento Local protusion	514 -		Superficie irregolare Irregular surface
2012-	PD	Porosità distribuita uniform. Uniformly distribuited porosity	301-	IS	Inclusioni di scoria Slag inclusion	507 -	SL	Slivellamento Linear misalignment	606 -	EM	Eccesso di molatura Underflushing
2013-	PP	Nido di soffiature Clustered porosity	302-	IF	Inclusioni di flusso Flux inclusion	509 -	SL	Avvallamento Sagging		H	Difetto superficiale Superficial defect
2014-	PA	Pori allineati Linear porosity	303-	IO	Inclusione di ossido Oxide inclusion	511-	IN	Insellamento Incompletely filled groove		DF	Difetto film Film defect

ESITO : RESULT C = CONFORME - ACCEPTABLE R = RIPARARE - TO REPEIR R R = RIPETERE RX - TO REPEAT RX

RESPONSABILE - WORD REFERENCE	OPERATORE - OPERATOR	ISPETTORE - ISPECTOR	
SIDERTAGLIO CALANDRATURA S.R.L.	Cappon Maurizio II° Liv. SNT - TC-1A / ISO 9712	ROSETTI MARINO SpA Alberto Luccisi 12/01/24	

15: RADIOGRAPHIC EXAMINATION REPORT (CAN THK. 40mm)

RAPPORTO RADIOGRAFICO
RADIOGRAPHIC REPORT

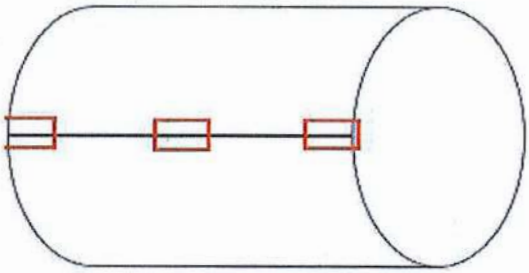
N° 3884/2023
del of 20/12/2023
Pag. Sheet 1 di of 1

M.C. CONTROL s.r.l. TEL.0444/411135 - FAX 0444 / 412154 - Viale Venezia,40 - 36043 CAMISANO VIC. (VI)

Cliente SIDERTAGLIO CALANDRATURA s.r.l. Povolaro di Dueville
Customer
Ordine* 1723001835 Rosetti Marino SpA **Del** **Commessa*** Q0242
Order* Of Job
Descrizione* N° 04 WELDED SHELL Øe 800 L=2170 mm THK. 40 mm **Tipo Giunto** Testa a Testa
Description
Fase di lavoro Dopo saldatura - After welding **Materiale*** S460MLO **PROC.SALD.***
Work stage Material Welding process
Marche di riferimento* CWLNO015-016-017-018 **Tipo di marcatura** Pennarel. Indel. **Rinf. di Sald.**
Reference marking Type of marking Perm. marker Weld reinforcement
Norme di riferimento: **Procedura/specifica** ISO 17636-1 cl B **Accettabilità difetti** ISO 10675-1 LIV. 1
Procedure Specification Ultima ed. - Last ed. Acceptance criteria Ultima ed. - Last ed.
Tipo prodotto Laminato / Saldato **Stadio di controllo** Finale **Fase di controllo**
Product Type Inspection Phase Inspection Phase
*Dati forniti dal Cliente - * these data are supplied by the custoner* Allegato/Annex :

Sorgente Raggi x / x-Ray **Corrente mA** 3 **Tensione kV** 300 mC /// **Distanza Fuoco Oggetto (D)** 700 mm
Source Current Voltage F - object distance (D)
Distanza Oggetto - Film (d) 40 mm **Apparecchio** SEIFERT ERESCO 65MF4 **Dimensione Sorgente** 3 mm (1,5 x 1,5)
Object - film distance (d) Radiog. apparatus Source size
Tipo penetrametro 6 FE EN **Posizione** Lato Sorgente **Tipo Pellicola** AGFA GEVAERT D5 - TYPE 1
I.Q.I. Type Position Source side Film type
Film per cassetta Singolo **Tempo di esposizione** 8' **Penombra geometrica** $Ug = \frac{F * d}{D}$
N° Film on film older single Exposition Time Geometric unsharpness
Schermi al piombo Sp. : Lato sorgente 0,05 **LATO PELLICOLA** 0,10 **Densità** >=2,3 ÷ 3,2 **Filo Essenziale**
Lead screen Source side Film side Density Essenzial wire
Metodo di sviluppo Automatico Note : **Filo Visibile**
Film processing tecnique Automatic Notes : Visible wire

Tratto Position	Esito Result	Difetti Defects	Disp. di rip. Test. Arrang.	Densità Density
CWLNO015				
1 - 2	C		7.1.3 f2	
3 - 4	C		7.1.3 f2	
5 - 6	C		7.1.3 f2	
CWLNO016				
1 - 2	C		7.1.3 f2	
3 - 4	C		7.1.3 f2	
5 - 6	C		7.1.3 f2	
CWLNO017				
1 - 2	C		7.1.3 f2	
3 - 4	C		7.1.3 f2	
5 - 6	C		7.1.3 f2	
CWLNO018				
1 - 2	C		7.1.3 f2	
3 - 4	C		7.1.3 f2	
5 - 6	C		7.1.3 f2	
CWLNO017T				
1 - 2	C		7.1.3 f2	
2 - 3	C		7.1.3 f2	



20/12/2023 Difetti - Defects 20/12/2023

100 -	C	Cricca Crack	2015-	IG	Inclusione di gas allungata Elongated cavity	3041-	IW	Inclusione di tungsteno Tungsten inclusion	517-	RD	Ripresa difettosa Poor restart
401 -	MF	Mancanza di fusione Lack of fusion (incollatura)	2016-	T	Tarlo Worm-hole	5011 -	IM	Incisione marginale Undercut	601 -	CD	Colpo d'arco Stray flash , arc strike
402 -	MP	Mancanza di penetrazione Lack of penetration	202 -	CA	Cavità di ritiro Shrinkage cavity	504 -	EP	Eccesso di penetrazione Excessive penetration	602 -	SP	Spruzzi Spatters
2011-	P	Porosità (isolate) Gas pore	2024 -	K	Cavità di cratere Crater pipe	5041 -	SG	Sgocciolamento Local protusion	514 -		Superficie irregolare Irregular surface
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	Estori Maurizio II° Liv. SNT - TC-1A / ISO 9712		ROSETTI MARINO SpA 12/01/24