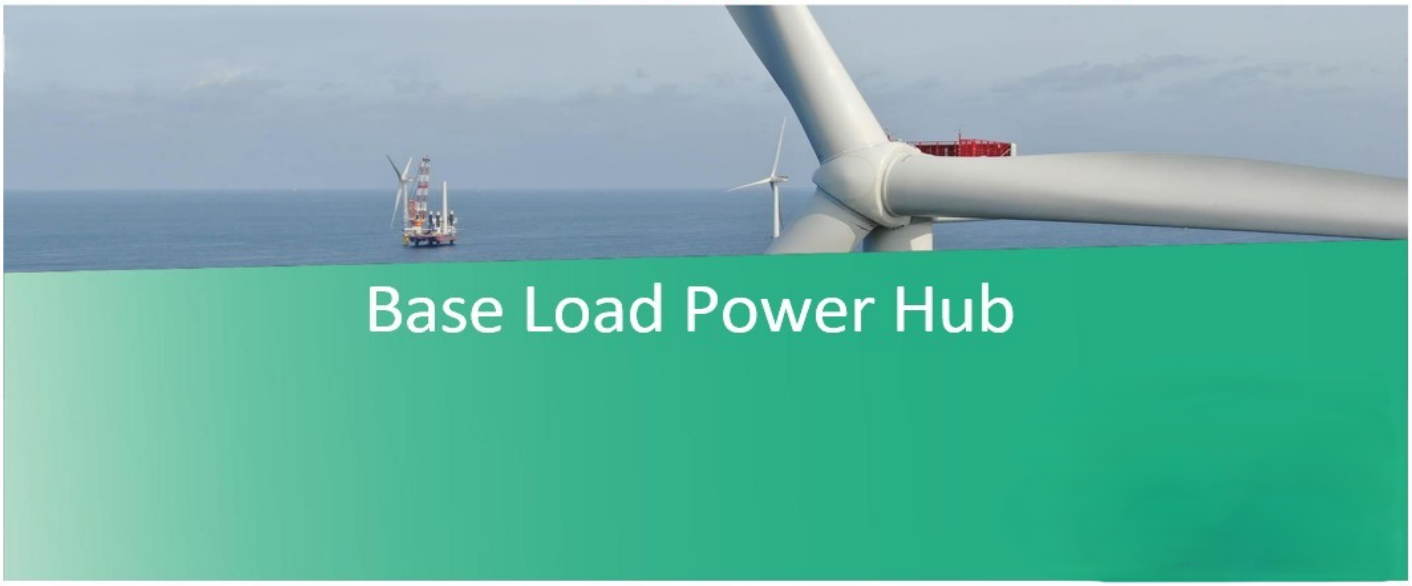
CROSSWIND

ROSETTI MARINO

PROVERLIS

PROJECT **123A90 - HOLLANDSE KUST NOORD WIND PARK**
BLPH Project



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	55 Waste Water
SUBSYSTEM	55-00 Waste Water Disposal

CROSSWIND	123A90 - HOLLANDSE KUST NOORD WIND PARK BLPH Project MECHANICAL COMPLETION DOSSIER INDEX	ROSETTI MARINO

Sub System N°:	55-00	Tick as appropriate	ONSHORE	O
Description:	Waste Water Disposal		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	O
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	NA
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	O
7.	***MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE*** *Mechanical SubSystem Status Index (Print out) and Check/Test Sheets*	O
8.	***MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE*** *Telecommunication Sub-System Status Index (Print out) and Check/Test Sheets*	NA
9.	***MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE*** *HVAC Sub-System Status Index (Print out) and Check/Test Sheets*	NA
10.	***MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE*** *Piping Sub-System Status Index and Check/Test Sheets*	O
11.	***MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE*** *Safety Sub-System Status Index (Print out) and Check/Test Sheets*	NA
12.	***FAT / VENDOR REPORTS*** *Fat reports issued by vendors and/or vendor reports*	NA
13.	***MECHANICAL COMPLETION CHANGES / MARK-UPS*** *A copy of the changes initiated during the Mechanical Completion process pertaining to the relevant Sub-System will be incorporated in this section*	NA

Note: Under the generic terminology “Building” are also covered the following disciplines: **Structural, Painting**

Under the generic terminology “Instrumental” is also covered the following discipline: **Fire & Gas**

ROSETTI MARINO

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

CROSSWIND

Ready For Commissioning (RFC) Certificate

COMPLETE		PARTIAL	●

Revision:	3		Issued on:	2025-05-09	
System:	55	/	Waste Water		
SubSystem:	55-00	/	Waste Water Disposal		

1	COMPANY has, at its option and if required, reviewed the mechanical completion associated with the above-named system/sub-system of the SCOPE and observed that such functional sub-system has been brought into readiness for commencement of the associated pre-commissioning and commissioning activities, but for the outstanding punch list items, if any, attached and referred in this Certificate.
2	Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.
3	Mechanical Completion Status Index attached (per Discipline) Punch List report attached (Outstanding and Cleared)

PUNCH LIST	PENDING POINTS	
Note: All Category "A" Items must be cleared prior to issue a Ready For Commissioning (RFC) Certificate	A 0'	B 4

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2025-05-12	2025-05-13	2025-05-14	2025-05-14
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-05-12T09:31:43.462Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-13T14:38:02.625Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-05-14T07:08:34.371Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-05-14T07:08:41.490Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC

Instrumental	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-LIT-001	Radar Level Transmitter - Vessel T-55001 Level	OFFSHORE	C10000908	CJX08	0	-	-
		ONSHORE	C10000946	TJX04	100	2024-10-02	-
C-55-LIT-001/00-JE-11005	LEVEL TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000058	CJX10	100	2025-02-27	-
		OFFSHORE	C10004802	CJX10	0	-	-

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC

Mechanical	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
T-55001	Waste Water Tank	ONSHORE	C10004522	CDX01	100	2025-03-24	RFC 3

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC

Piping	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
003-1-J1	Joint 003-1-J1	ONSHORE	C10004175	TMX27	100	2025-01-28	RFC 3
003-1-J2	Joint 003-1-J2	ONSHORE	C10004176	TMX27	100	2025-01-28	RFC 3
027-1-J1	Joint 027-1-J1	ONSHORE	C10004209	TMX27	100	2025-04-24	RFC 3
028-1-J1	Joint 028-1-J1	ONSHORE	C10004342	TMX27	100	2025-02-20	RFC 3
028-2-J2	Joint 028-2-J2	OFFSHORE	C10004343	TMX27	0	-	-
028-2-J3	Joint 028-2-J3	OFFSHORE	C10004344	TMX27	0	-	-
028-2-J4	Joint 028-2-J4	OFFSHORE	C10004345	TMX27	0	-	-
033-1-J1	Joint 033-1-J1	OFFSHORE	C10004221	TMX27	0	-	-
033-1-J2	Joint 033-1-J2	OFFSHORE	C10004222	TMX27	0	-	-
033-1-J3	Joint 033-1-J3	OFFSHORE	C10004223	TMX27	0	-	-
033-1-J4	Joint 033-1-J4	OFFSHORE	C10004224	TMX27	0	-	-
033-1-J5	Joint 033-1-J5	OFFSHORE	C10004225	TMX27	0	-	-
098-1-J1	Joint 098-1-J1	OFFSHORE	C10004267	TMX27	0	-	-
099-1-J1	Joint 099-1-J1	ONSHORE	C10004268	TMX27	100	2025-04-01	RFC 3
099-1-J2	Joint 099-1-J2	ONSHORE	C10004269	TMX27	100	2025-04-01	RFC 3
099-1-J3	Joint 099-1-J3	ONSHORE	C10004270	TMX27	100	2025-04-01	RFC 3
100-1-J1	Joint 100-1-J1	ONSHORE	C10004271	TMX27	100	2025-03-25	RFC 3
100-1-J2	Joint 100-1-J2	ONSHORE	C10004272	TMX27	100	2025-02-28	RFC 3
121-1-J1	Joint 121-1-J1	OFFSHORE	C10004289	TMX27	0	-	-
156-1-J1	Joint 156-1-J1	ONSHORE	C10004315	TMX27	100	2025-04-02	RFC 3
156-1-J2	Joint 156-1-J2	ONSHORE	C10004316	TMX27	100	2025-04-02	RFC 3
156-1-J3	Joint 156-1-J3	ONSHORE	C10004317	TMX27	100	2025-04-02	RFC 3
156-1-J4	Joint 156-1-J4	ONSHORE	C10004318	TMX27	100	2025-04-02	RFC 3
156-1-J5	Joint 156-1-J5	ONSHORE	C10004319	TMX27	100	2025-04-02	RFC 3
158-1-J1	Joint 158-1-J1	ONSHORE	C10004320	TMX27	100	2025-03-25	RFC 3

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC

Piping	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-00-TP-004	Test Pack 55-00-TP-004	ONSHORE	C10003255	CLX02A	100	2025-01-03	RFC 3
		ONSHORE	C10003256	CLX02B	100	2025-02-19	RFC 3
		ONSHORE	C10003257	CXX01	100	2025-04-03	RFC 3
		ONSHORE	C10003258	CXX02	100	2025-02-25	RFC 3
		ONSHORE	C10003259	TMX03	100	2025-01-03	RFC 3
		ONSHORE	C10003260	TMX05	100	2025-01-07	RFC 3
		ONSHORE	C10003262	TPLX05	100	2025-01-07	RFC 3
55-00-TP-005	Test Pack 55-00-TP-005	ONSHORE	C10003263	CLX02A	100	2025-02-18	RFC 3
		ONSHORE	C10003264	CLX02B	100	2025-03-04	RFC 3
		ONSHORE	C10003265	CXX01	100	2025-03-27	RFC 3
		ONSHORE	C10003266	TMX03	100	2025-02-20	RFC 3
		ONSHORE	C10003267	TMX05	100	2025-02-20	RFC 3
		ONSHORE	C10003269	TPLX05	100	2025-02-20	RFC 3
55-00-TP-026	Test Pack 55-00-TP-026	ONSHORE	C10003428	CLX02A	100	2025-01-21	RFC 3
		ONSHORE	C10003429	CLX02B	100	2025-02-11	RFC 3
		ONSHORE	C10003430	CXX01	100	2025-04-02	RFC 3
		ONSHORE	C10003431	CXX02	100	2025-02-19	RFC 3
		ONSHORE	C10003432	TMX03	100	2025-01-21	RFC 3
		ONSHORE	C10003433	TMX05	100	2025-01-21	RFC 3
		ONSHORE	C10003435	TPLX05	100	2025-01-21	RFC 3
55-00-TP-060	Test Pack 55-00-TP-060	ONSHORE	C10003673	CLX02A	100	2025-01-27	-
		ONSHORE	C10003674	CLX02B	100	2025-04-07	-
		ONSHORE	C10003675	CXX01	0	-	-
		ONSHORE	C10003676	CXX02	100	2025-04-07	-
		ONSHORE	C10003677	TMX03	100	2025-03-13	-
		ONSHORE	C10003678	TMX05	100	2025-03-13	-
		ONSHORE	C10003680	TPLX05	100	2025-03-13	-

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC

Piping	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-00-TP-061	Test Pack 55-00-TP-061	ONSHORE	C10003681	CLX02A	100	2024-12-19	-
		ONSHORE	C10003682	CLX02B	100	2025-04-02	-
		ONSHORE	C10003683	CXX01	0	-	-
		ONSHORE	C10003684	CXX02	100	2025-04-07	-
55-00-TP-062	Test Pack 55-00-TP-062	ONSHORE	C10003686	CLX02A	100	2025-01-28	RFC 3
		ONSHORE	C10003687	CLX02B	100	2025-02-17	RFC 3
		ONSHORE	C10003688	CXX02	100	2025-02-25	RFC 3
55-00-TP-100	Test Pack 55-00-TP-100	ONSHORE	C10003711	CLX02A	100	2025-03-03	-
		OFFSHORE	C10003712	CLX02B	0	-	-
		OFFSHORE	C10003713	CXX01	0	-	-
		OFFSHORE	C10003714	CXX02	0	-	-
55-00-TP-101	Test Pack 55-00-TP-101	OFFSHORE	C10003716	CLX02A	0	-	-
		OFFSHORE	C10003717	CLX02B	0	-	-
		OFFSHORE	C10003718	CXX01	0	-	-
		OFFSHORE	C10003719	CXX02	0	-	-
		OFFSHORE	C10003720	TMX03	0	-	-
		OFFSHORE	C10003721	TMX05	0	-	-
		OFFSHORE	C10003723	TPLX05	0	-	-
55-00-TP-104	Test Pack 55-00-TP-104	OFFSHORE	C10003733	CLX02A	0	-	-
		OFFSHORE	C10003734	CLX02B	0	-	-
		OFFSHORE	C10003735	CXX01	0	-	-
		OFFSHORE	C10003736	TMX03	0	-	-
		OFFSHORE	C10003737	TMX05	0	-	-
		OFFSHORE	C10003739	TPLX05	0	-	-
T-55001	Waste Water Tank	ONSHORE	C10004926	TMX05	100	2025-02-24	RFC 3

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-00	Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002058	B	55-00-TP-061 C10003681	Spool has not been installed in erection. Inspection points from 3 to 6 of ITR "Inspection before test" to be checked during reinstatement.	.		KAlbonetti 2024-12-19	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30002336	B	55-00-TP-004 C10003255	SK.027 (SH.1/1): PS-01056.1 and PS-01056.2, positions R1 and R2 have not been installed and the position F1 has not been drilled.	.		KAlbonetti 2025-01-03	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003116	B	55-00-TP-026 C10003428	SK.003 (SH.1/2): The earthing plate has been placed oriented toward South instead of West. Engineering dpt. accepted it via e-mail, but the	.		KAlbonetti 2025-01-21	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30003118	B	55-00-TP-026 C10003428	PS-02138.2 not installed. Position R2 is missing and the UPN80 has not been drilled yet.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003119	B	55-00-TP-026 C10003428	PS-02091.1 has not been assembled.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003120	B	55-00-TP-026 C10003428	PS-02092.1 has not been assembled.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003123	B	55-00-TP-026 C10003428	Inspection point n.4 not checked because the line is not aligned due preparation for pressure test.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003124	B	55-00-TP-026 C10003428	SP-02014.1: position is 220 mm from W15 of SK.100 instead of 162 mm as marked in the isometric.	.		KAlbonetti 2025-01-21	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30003127	B	55-00-TP-026 C10003428	PS-02043.1 and PS-02042.1 shoes are not touching on the structure. Distance of 10 mm.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-00	Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003129	B	55-00-TP-026 C10003428	PS-02044.1 and PS-02045.1' shoes are not touching on the structure. Distance of 10 mm.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003131	B	55-00-TP-026 C10003428	PS-02120.1 and PS-02119.1' shoes do not touch on the structures. Distance of 5 mm.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003133	B	55-00-TP-026 C10003428	PS-01001.2: position R3 not installed and structural part not drilled yet.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003134	B	55-00-TP-026 C10003428	PS-02124.3: position R2 is missing.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003197	B	55-00-TP-062 C10003686	All piping supports of type "C-16", "S-211" and "S-212" have not been assembled as for specification. They shall all be checked during	.		KAlbonetti 2025-01-25	2025-02-17	LNovaga 2025-02-17	2025-02-17
C30003198	B	55-00-TP-060 C10003673	All piping supports type "S-64" and "C-33" have not been installed as for specification. The structural part is ok. They shall be checked during	.		MBruschi 2025-01-25	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30003199	B	55-00-TP-060 C10003673	Spools belonging to the TP not installed in erection. Cehck performed on ground with no equipmente installed before test. Inspection	.		MBruschi 2025-01-25	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30003277	B	55-00-TP-026 C10003429	SK.068 (SH.1/2): Suppost PS-02120.2 has not been assembled.	.		KAlbonetti 2025-01-29	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003914	B	55-00-TP-005 C10003263	PS-01035.1 and PS-01035.2 not installed.	.		KAlbonetti 2025-02-17	2025-03-04	LNovaga 2025-03-04	2025-03-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-00	Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003916	B	55-00-TP-005 C10003263	Horizontal section between J1 and position n.2 has been shortened to 290 mm to go correctly into the penetration at +23310.	.		KAlbonetti 2025-02-17	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004008	B	55-00-TP-004 C10003256	The support PS-01056.1is not aligned and does not fully touch the structural support that has a misalignment as in photo.	.		LNovaga 2025-02-19	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004133	B	55-00-TP-062 C10003688	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-25	2025-03-24	LNovaga 2025-03-24	2025-03-24
C30004134	B	55-00-TP-062 C10003688	At 700 down from the PS-03080 there is a point where touch-up is necessary but not possible until the scaffold hasn't been removed.	.		KAlbonetti 2025-02-25	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30004192	B	55-00-TP-005 C10003264	Support PS-PS-01035.1 is S-64 – 1” – 300 – 200 instead S-64 – 1” – 100 – 200	.		LNovaga 2025-03-04			
C30004292	B	55-00-TP-005 C10003265	The joint and the overlap of the sheets are not sealed.	.		LNovaga 2025-03-27	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004293	B	55-00-TP-005 C10003265	Missing the insulation pillow around the joint 028-1-J1.	.		LNovaga 2025-03-27	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004294	B	55-00-TP-005 C10003265	The part near the penetration is not insulated because there are water hoses for comm activities. See attached photo.	.		LNovaga 2025-03-27			
C30004302	B	55-00-TP-026 C10003430	Missing the insulation pillows around jonts 003-1-J1, 003-1-J2 and 100-1-J1.	.		LNovaga 2025-04-02	2025-04-04	LNovaga 2025-04-04	2025-04-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-00	Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004318	B	55-00-TP-004 C10003257	Missing the insulation pillow around the joint 027-1-J1.	.		LNovaga 2025-04-03	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004319	B	55-00-TP-004 C10003257	Color coding and fluid direction are missing.	.		LNovaga 2025-04-03			
C30004320	B	55-00-TP-060 C10003674	The PS-01054.1 (S-64) stand measures 140 mm x 200 mm instead of 100 mm x 200 mm, and the structural stand (UPN100) is 550 mm long instead	.		LNovaga 2025-04-07			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-00	Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002058	B	55-00-TP-061 C10003681	Spool has not been installed in erection. Inspection points from 3 to 6 of ITR "Inspection before test" to be checked during reinstatement.	.		KAlbonetti 2024-12-19	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30002336	B	55-00-TP-004 C10003255	SK.027 (SH.1/1): PS-01056.1 and PS-01056.2, positions R1 and R2 have not been installed and the position F1 has not been drilled.	.		KAlbonetti 2025-01-03	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003116	B	55-00-TP-026 C10003428	SK.003 (SH.1/2): The earthing plate has been placed oriented toward South instead of West. Engineering dpt. accepted it via e-mail, but the	.		KAlbonetti 2025-01-21	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30003118	B	55-00-TP-026 C10003428	PS-02138.2 not installed. Position R2 is missing and the UPN80 has not been drilled yet.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003119	B	55-00-TP-026 C10003428	PS-02091.1 has not been assembled.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003120	B	55-00-TP-026 C10003428	PS-02092.1 has not been assembled.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003123	B	55-00-TP-026 C10003428	Inspection point n.4 not checked because the line is not aligned due preparation for pressure test.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003124	B	55-00-TP-026 C10003428	SP-02014.1: position is 220 mm from W15 of SK.100 instead of 162 mm as marked in the isometric.	.		KAlbonetti 2025-01-21	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30003127	B	55-00-TP-026 C10003428	PS-02043.1 and PS-02042.1 shoes are not touching on the structure. Distance of 10 mm.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-00 Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003129	B	55-00-TP-026 C10003428	PS-02044.1 and PS-02045.1' shoes are not touching on the structure. Distance of 10 mm.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003131	B	55-00-TP-026 C10003428	PS-02120.1 and PS-02119.1' shoes do not touch on the structures. Distance of 5 mm.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003133	B	55-00-TP-026 C10003428	PS-01001.2: position R3 not installed and structural part not drilled yet.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003134	B	55-00-TP-026 C10003428	PS-02124.3: position R2 is missing.	.		KAlbonetti 2025-01-21	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003197	B	55-00-TP-062 C10003686	All piping supports of type "C-16", "S-211" and "S-212" have not been assembled as for specification. They shall all be checked during	.		KAlbonetti 2025-01-25	2025-02-17	LNovaga 2025-02-17	2025-02-17
C30003198	B	55-00-TP-060 C10003673	All piping supports type "S-64" and "C-33" have not been installed as for specification. The structural part is ok. They shall be checked during	.		MBruschi 2025-01-25	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30003199	B	55-00-TP-060 C10003673	Spools belonging to the TP not installed in erection. Cehck performed on ground with no equipmente installed before test. Inspection	.		MBruschi 2025-01-25	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30003277	B	55-00-TP-026 C10003429	SK.068 (SH.1/2): Suppost PS-02120.2 has not been assembled.	.		KAlbonetti 2025-01-29	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30003914	B	55-00-TP-005 C10003263	PS-01035.1 and PS-01035.2 not installed.	.		KAlbonetti 2025-02-17	2025-03-04	LNovaga 2025-03-04	2025-03-04

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-00 Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003916	B	55-00-TP-005 C10003263	Horizontal section between J1 and position n.2 has been shortened to 290 mm to go correctly into the penetration at +23310.	.		KAlbonetti 2025-02-17	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004008	B	55-00-TP-004 C10003256	The support PS-01056.1is not aligned and does not fully touch the structural support that has a misalignment as in photo.	.		LNovaga 2025-02-19	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004133	B	55-00-TP-062 C10003688	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-25	2025-03-24	LNovaga 2025-03-24	2025-03-24
C30004134	B	55-00-TP-062 C10003688	At 700 down from the PS-03080 there is a point where touch-up is necessary but not possible until the scaffold hasn't been removed.	.		KAlbonetti 2025-02-25	2025-04-07	LNovaga 2025-04-07	2025-04-07
C30004192	B	55-00-TP-005 C10003264	Support PS-PS-01035.1 is S-64 – 1” – 300 – 200 instead S-64 – 1” – 100 – 200	.	Changes have been recorded on RLMUs	LNovaga 2025-03-04	RDegliEsposti 2025-06-25	RDegliEsposti 2025-06-25	2025-06-25
C30004292	B	55-00-TP-005 C10003265	The joint and the overlap of the sheets are not sealed.	.		LNovaga 2025-03-27	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004293	B	55-00-TP-005 C10003265	Missing the insulation pillow around the joint 028-1-J1.	.		LNovaga 2025-03-27	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004294	B	55-00-TP-005 C10003265	The part near the penetration is not insulated because there are water hoses for comm activities. See attached photo.	.	Insulation installed.	LNovaga 2025-03-27	RDegliEsposti 2025-07-22	RDegliEsposti 2025-07-22	2025-07-22
C30004302	B	55-00-TP-026 C10003430	Missing the insulation pillows around jonts 003-1-J1, 003-1-J2 and 100-1-J1.	.		LNovaga 2025-04-02	2025-04-04	LNovaga 2025-04-04	2025-04-04

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-00	Waste Water Disposal

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004318	B	55-00-TP-004 C10003257	Missing the insulation pillow around the joint 027-1-J1.	.		LNovaga 2025-04-03	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004319	B	55-00-TP-004 C10003257	Color coding and fluid direction are missing.	.	Colour code and fluid direction flow added.	LNovaga 2025-04-03	RDegliEsposti 2025-07-07	RDegliEsposti 2025-07-07	2025-07-07
C30004320	B	55-00-TP-060 C10003674	The PS-01054.1 (S-64) stand measures 140 mm x 200 mm instead of 100 mm x 200 mm, and the structural stand (UPN100) is 550 mm long instead	.	Changes have been recorded on RLMUs	LNovaga 2025-04-07	RDegliEsposti 2025-06-25	RDegliEsposti 2025-06-25	2025-06-25
C30004390	B	55-00-TP-060 C10003675	Color coding and fluid direction are missing.	.	Colour coding and fluid flow direction have been marked.	LNovaga 2025-06-03	RDegliEsposti 2025-07-08	RDegliEsposti 2025-07-08	2025-07-08
C30004391	B	55-00-TP-061 C10003683	Color coding and fluid direction are missing.	.	Colour coding and fluid flow direction have been marked.	LNovaga 2025-06-03	RDegliEsposti 2025-07-08	RDegliEsposti 2025-07-08	2025-07-08

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004133

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003688	1.4 Discipline	Piping
1.2 Item	55-00-TP-062	Test Pack 55-00-TP-062	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-03-24

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-03-24

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004134

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003688	1.4 Discipline	Piping
1.2 Item	55-00-TP-062	Test Pack 55-00-TP-062	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

At 700 down from the PS-03080 there is a point where touch-up is necessary but not possible until the scaffold hasn't been removed.

Name: Kangi Albonetti

Date: 2025-02-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-07

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-07

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004192

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003264	1.4 Discipline	Piping
1.2 Item	55-00-TP-005	Test Pack 55-00-TP-005	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Support PS-PS-01035.1 is S-64 – 1” – 300 – 200 instead S-64 – 1” – 100 – 200

Name: Lorenzo Novaga
Date: 2025-03-04
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-04
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Changes have been recorded on RLMUs

Name: Raffaele Degli Esposti
Date: 2025-06-25
Signature:

5 - CLEARANCE CHECK

Ref. to RLMU 123A90-DDL-PP-DD-72000-PS-01035_01_01A

Name: Raffaele Degli Esposti
Date: 2025-06-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-25
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004292

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003265	1.4 Discipline	Piping
1.2 Item	55-00-TP-005	Test Pack 55-00-TP-005	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

The joint and the overlap of the sheets are not sealed.

Name: Lorenzo Novaga

Date: 2025-03-27

Signature:

3 - DEFECT ASSESSMENT

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3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004293

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003265	1.4 Discipline	Piping
1.2 Item	55-00-TP-005	Test Pack 55-00-TP-005	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Missing the insulation pillow around the joint 028-1-J1.

Name: Lorenzo Novaga

Date: 2025-03-27

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004294

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003265	1.4 Discipline	Piping
1.2 Item	55-00-TP-005	Test Pack 55-00-TP-005	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

The part near the penetration is not insulated because there are water hoses for comm activities.
See attached photo.

Name: Lorenzo Novaga
Date: 2025-03-27
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-03-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Insulation installed.

Name: Raffaele Degli Esposti
Date: 2025-07-22
Signature:

5 - CLEARANCE CHECK

Added two L-profiles.

Name: Raffaele Degli Esposti
Date: 2025-07-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-24
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004302

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003430	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Missing the insulation pillows around jonts 003-1-J1, 003-1-J2 and 100-1-J1.

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-04-02
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004318

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003257	1.4 Discipline	Piping
1.2 Item	55-00-TP-004	Test Pack 55-00-TP-004	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Missing the insulation pillow around the joint 027-1-J1.

Name: Lorenzo Novaga

Date: 2025-04-03

Signature:

3 - DEFECT ASSESSMENT

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3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004319

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003257	1.4 Discipline	Piping
1.2 Item	55-00-TP-004	Test Pack 55-00-TP-004	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Lorenzo Novaga
Date: 2025-04-03
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-04-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Colour code and fluid direction flow added.

Name: Raffaele Degli Esposti
Date: 2025-07-07
Signature:

5 - CLEARANCE CHECK

Added two L-profiles.

Name: Raffaele Degli Esposti
Date: 2025-07-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-08
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004320

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003674	1.4 Discipline	Piping
1.2 Item	55-00-TP-060	Test Pack 55-00-TP-060	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

The PS-01054.1 (S-64) stand measures 140 mm x 200 mm instead of 100 mm x 200 mm, and the structural stand (UPN100) is 550 mm long instead of 358. Produce an RLMU on the support list.

Name: Lorenzo Novaga
Date: 2025-04-07
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-04-07
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Changes have been recorded on RLMUs

Name: Raffaele Degli Esposti
Date: 2025-06-25
Signature:

5 - CLEARANCE CHECK

Ref. to RLMU 123A90-DDL-PP-DD-72000-PS-01054_01_01A

Name: Raffaele Degli Esposti
Date: 2025-06-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-25
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004390

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003675	1.4 Discipline	Piping
1.2 Item	55-00-TP-060	Test Pack 55-00-TP-060	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Lorenzo Novaga

Date: 2025-06-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-06-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Colour coding and fluid flow direction have been marked.

Name: Raffaele Degli Esposti

Date: 2025-07-08

Signature:

5 - CLEARANCE CHECK

Added two L-profiles.

Name: Raffaele Degli Esposti

Date: 2025-07-08

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-07-08

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004391

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003683	1.4 Discipline	Piping
1.2 Item	55-00-TP-061	Test Pack 55-00-TP-061	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Lorenzo Novaga

Date: 2025-06-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-06-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Colour coding and fluid flow direction have been marked.

Name: Raffaele Degli Esposti

Date: 2025-07-08

Signature:

5 - CLEARANCE CHECK

Added two L-profiles.

Name: Raffaele Degli Esposti

Date: 2025-07-08

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-07-08

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003116

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

SK.003 (SH.1/2): The earthing plate has been placed oriented toward South instead of West. Engineering dpt. accepted it via e-mail, but the drawing shall be marked-up.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Document marked-up.

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003118

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02138.2 not installed. Position R2 is missing and the UPN80 has not been drilled yet.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003119

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02091.1 has not been assembled.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003120

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02092.1 has not been assembled.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003123

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Inspection point n.4 not checked because the line is not aligned due preparation for pressure test.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003124

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

SP-02014.1: position is 220 mm from W15 of SK.100 instead of 162 mm as marked in the isometric.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Document marked-up.

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003127

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02043.1 and PS-02042.1 shoes are not touching on the structure. Distance of 5 mm.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003129

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02044.1 and PS-02045.1' shoes are not touching on the structure. Distance of 10 mm.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003131

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02120.1 and PS-02119.1' shoes do not touch on the structures. Distance of 5 mm.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003133

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-01001.4: position R3 not installed and structural part not drilled yet.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003134

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003428	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-02124.3: position R2 is missing.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003197

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003686	1.4 Discipline	Piping
1.2 Item	55-00-TP-062	Test Pack 55-00-TP-062	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

All piping supports of type "C-16", "S-211" and "S-212" have not been assembled as for specification. They shall all be checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-25

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003198

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003673	1.4 Discipline	Piping
1.2 Item	55-00-TP-060	Test Pack 55-00-TP-060	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

All piping supports type "S-64" and "C-33" have not been installed as for specification. The structural part is ok. They shall be checked during reinstatement.

Name: Massimo Bruschi
Date: 2025-01-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-07
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-04-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-07
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003199

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003673	1.4 Discipline	Piping
1.2 Item	55-00-TP-060	Test Pack 55-00-TP-060	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Spools belonging to the TP not installed in erection. Cehck performed on ground with no equipmente installed before test. Inspection points 4 to 7 to be checked during flange management after test.

Name: Massimo Bruschi
Date: 2025-01-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-07
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-04-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-07
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003277

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003429	1.4 Discipline	Piping
1.2 Item	55-00-TP-026	Test Pack 55-00-TP-026	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

SK.068 (SH.1/2): Suppost PS-02120.2 has not been assembled.

Name: Kangi Albonetti

Date: 2025-01-29

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003914

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003263	1.4 Discipline	Piping
1.2 Item	55-00-TP-005	Test Pack 55-00-TP-005	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

PS-01035.1 and PS-01035.2 not installed.

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-17
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-03-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003916

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003263	1.4 Discipline	Piping
1.2 Item	55-00-TP-005	Test Pack 55-00-TP-005	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

Horizontal section between J1 and position n.2 has been shortened to 290 mm to go correctly into the penetration at +23310.

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-17
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Document marked-up.

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004008

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003256	1.4 Discipline	Piping
1.2 Item	55-00-TP-004	Test Pack 55-00-TP-004	
1.3 Subsystem	55-00	Waste Water Disposal	

2 - OBSERVATION

The support PS-01056.1is not aligned and does not fully touch the structural support that has a misalignment as in photo.

Name: Lorenzo Novaga

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-19
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Added two L-profiles.

Name: Kangi Albonetti

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


027_A
TP-004 / Priority 3
1"-WW-038-01CS-H
55-00

STANLEY
0-42-130

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

DRAWING NO. DRAWING_NO.

REV. REV

T-55001
WASTE WATER TANK
CAPACITY : 16 m3
DESIGN P/T : 0.005 barg / 80°C
MATERIAL : CARBON STEEL
02

Waste Water Disposal System SS 55-00

123A90-DDL-PR-PID-80022
BIOCIDE DOSING UNIT
E
1"-CI-043-01CP-E
02
NOTA 7

123A90-DDL-PR-PID-80029
FROM LIQUID SEAL DRUM
NNF
1"-WW-202-01CS-H
02

123A90-DDL-PR-PID-80011
FROM ELECTROLYSER PACKAGE
NNF
1"-WW-004-01CS-H

DECK HOOK-UP 001
WW-004
WW-081
02
1"-WW-081-01CS-H

SP 0039
2"-AV-256-01CS-N
HOOK-UP 002
RS
RS
X
I1
I2
02

55 LI 001 H L
55 LIT 001
3"
L

M1 24"

02

T-55001
TRIM LINE:
3" WW-200-01CS-H
NOTE 8
02

NOTE 1, 5

123A90-DDL-PR-PID-80022
FROM WATER TREARMENT PACKAGE
NNF
1"-WW-038-01CS-H
DECK HOOK-UP 001
02

BLPH-MV-400
1"
3/4"
1"x3/4"
CONC. RED. 3/4"x1/2"
BLPH-MV-401
1/2"
SAMPLE CONNECTION

3"-WW-201-01CS-F
NOTE 4
BLPH-MV-467
3"
LC
02

NOTES

1. ALL STILLING TUBES AND DIP PIPES SHALL BE SUPER DUPLEX.
2. DELETED.
3. DELETED.
4. DRAIN LINE TO SHIP DISPOSAL. 02
5. PERFORATED STILLING TUBE.
6. DELETED. 02
7. FOR PERIODIC DOSING OF THE WASTE WATER TANK.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR WASTE WATER TANK - T-55001, DOC. N. "123A90-DDL-MAC-DS-50008"

HOLDS

1. DELETED.
2. DELETED.
3. DELETED. 02
4. DELETED.
5. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80026	SHEET 001	REV. 02

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

V-43001

HYDROGEN VENT KO DRUM

SIZE : 600 mm (ID) x 2350 mm (H)
DESIGN P/T : 3.5 barg / -10 / 80°C
MATERIAL : LTCS + 1 mm CA 02

Q-43004

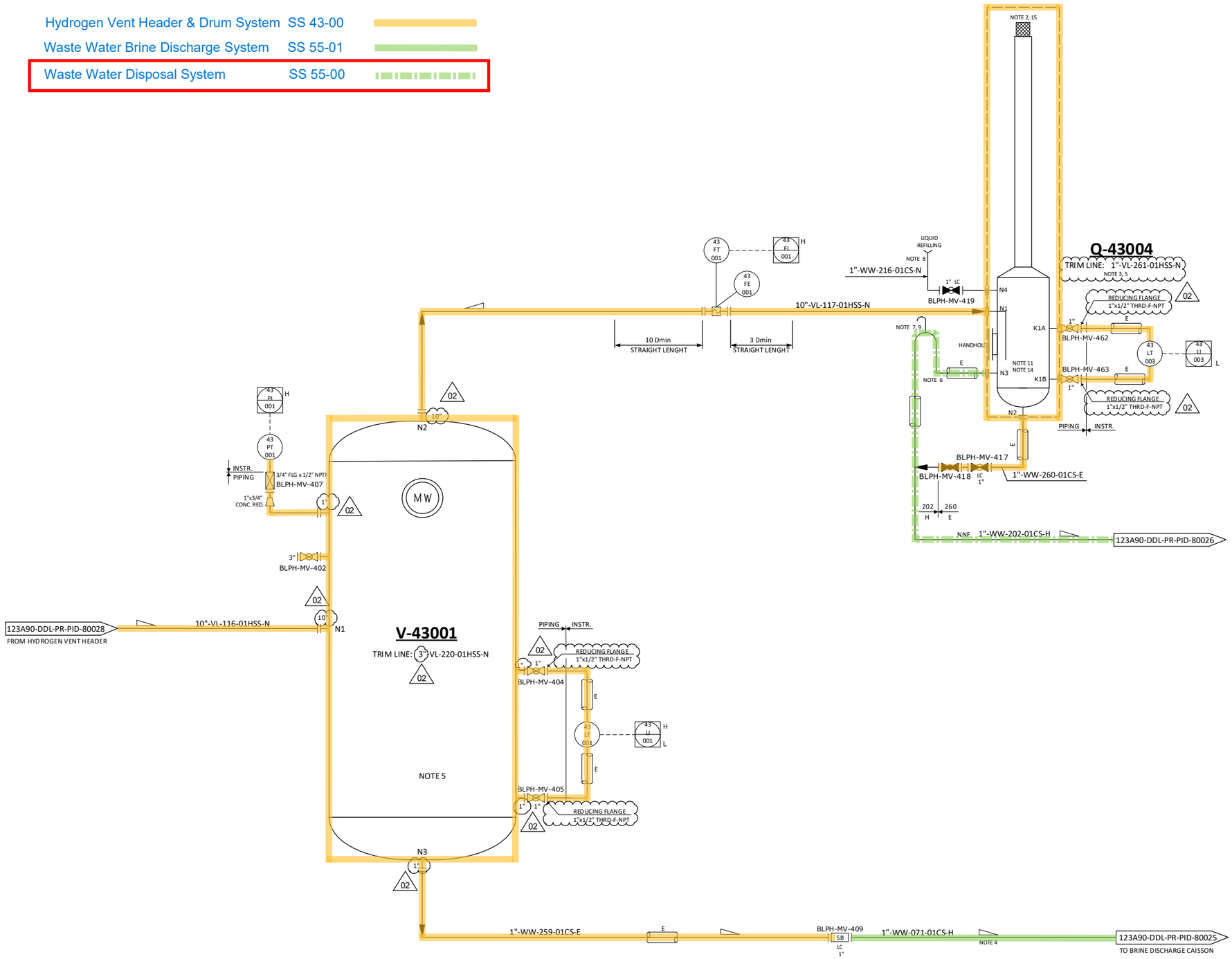
HYDROGEN VENT NOTE 1

SIZE : 254 mm (ID)
DESIGN P/T : 3.5 barg / -10 / 80°C
MATERIAL : LTCS + 3 mm CA 02

Hydrogen Vent Header & Drum System SS 43-00

Waste Water Brine Discharge System SS 55-01

Waste Water Disposal System SS 55-00



NOTES

1. VENT TO SAFE LOCATION SEGREGATED FROM OTHER VENTS.
2. VENT TO BE EQUIPPED WITH FLAME ARRESTOR AND BIRD SCREEN.
3. LIQUID SEAL DRUM IS PART OF THE VENT SYSTEM.
4. LIQUID DRAIN LINES TO BE ROUTED TO ENSURE GRAVITY DRAIN.
5. HYDROGEN VENT KO DRUM AND LIQUID SEAL DRUM TO BE HEAT TRACING.
   - V-43001 HEAT TRACED FROM B.T.L. UP TO 600 mm, BOTTOM HEAD ALSO TO BE HEAT TRACED. 02
6. SEAL LEG WILL BE DETERMINATED ON THE MAXIMUM BACK PRESSURE IN THE VENT. 02
7. SEAL VENT TO BE PLACED INTO A SAFE POSITION.
8. FILLING LINE TO BE PLACED IN AN ACCESSIBLE POSITION.
9. TRACED FROM NOZZLE N3 UP TO SWAN NECK.
10. DELETED. 02
11. INLET DIP LEG SUBMERSION HEIGHT OF 0.6 m. 02
12. DELETED. 02
13. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 VENT KOD.
14. LIQUID INSIDE SEAL DRUM IS A WATER - GLYCOL MIXTURE WITH 40% VOLUME OF GLYCOL.
15. TOP OF TIP OF H2 VENT SHALL BE AT AS MINIMUM 6.2 m FROM HIGHEST REACHABLE PLATFORM.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN VENT DRUM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80029		SHEET 001 / REV. 02

File Name : FILE_NAME

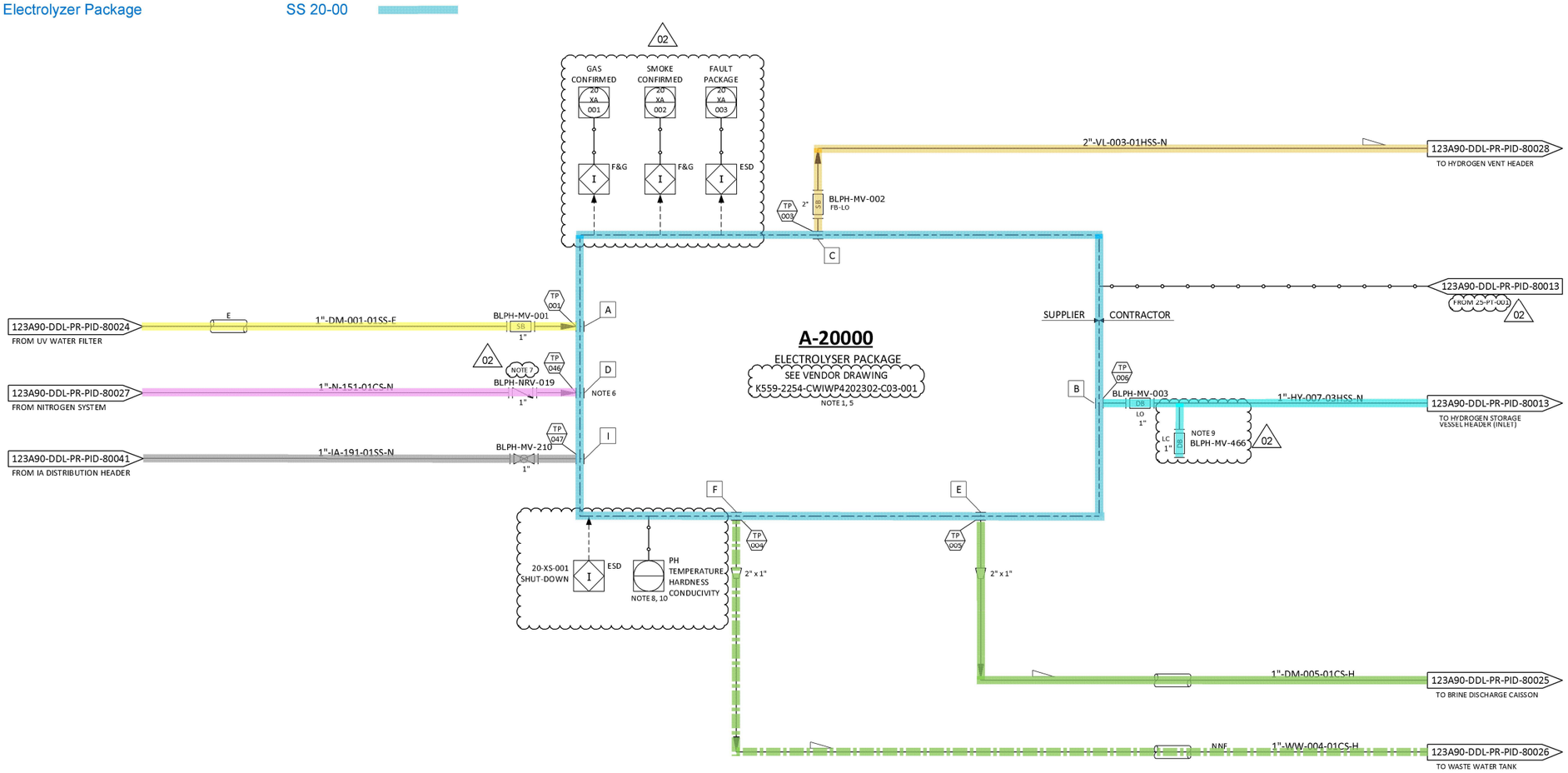
DRAWING NO. DRAWING_NO.

REV. REV

Instrumen Air Distribution Network	SS 63-30
Water Desalination & Distribution System	SS 50-10
Hydrogen Storage Vessel Header (Intel)	SS 43-00
Nitrigen Distribution Network	SS 64-11
Waste Water Brine Discharge System	SS 55-01
Waste Water Disposal System	SS 55-00
Hydrigen Storage Vessel Header (Intel)	SS 25-07
Electrolyzer Package	SS 20-00

A-20000
ELECTROLYSER PACKAGE

DUTY: 2.5MW
DESIGN PRESSURE: 40 barg
DESIGN TEMPERATURE: 80 °C
H2 GENERATING CAPACITY: 500 Nm³/h



NOTES

1. PACKAGE SUPPLIED WITH POWER FROM THE BLPH ELECTRICAL SYSTEM.
2. DELETED.
3. DELETED.
4. DELETED.
5. ELECTROLYSER PACKAGE INCLUDES AN OXYGEN VENT LINE WHICH IS IN THE SCOPE OF SUPPLY OF THE ELECTROLYSER PACKAGE UP TO THE ATMOSPHERE. NO PHYSICAL INTERFACE IS PRESENT BETWEEN ELECTROLYSER PACKAGE AND CONTRACTOR ON THIS LINE.
6. AN ISOLATION VALVE DOWNSTREAM THE CHECK VALVE NRV-019 IS PROVIDED WITHIN THE PACKAGE A-20000.
7. CHECK VALVE NRV-019 TO BE INSTALLED AS CLOSE AS POSSIBLE TO THE ELECTROLYSER PACKAGE A-20000.
8. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
9. NITROGEN PURGING CONNECTION TO BE LOCATED AS CLOSE AS POSSIBLE TO MANUAL VALVE BLPH-MV-003.
10. PH, TEMPERATURE, HARDNESS AND CONDUCTIVITY SHALL BE SENT FROM CONTROL SYSTEM TO ELECTROLISER UCP IN ADDITION TO THE OTHER SOFTWARE SIGNALS.

02

HOLDS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
ELECTROLYSER PACKAGE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80011	SHEET 001	REV. 02

File Name : FILE_NAME

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

NOT APPLICABLE

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC & discipline : I

Instrumental	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-LIT-001	Radar Level Transmitter - Vessel T-55001 Level	OFFSHORE	C10000908	CJX08	0	-	-
		ONSHORE	C10000946	TJX04	100	2024-10-02	-
C-55-LIT-001/00-JE-11005	LEVEL TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000058	CJX10	100	2025-02-27	-
		OFFSHORE	C10004802	CJX10	0	-	-

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-55-LIT-001/00-JE-11005	: LEVEL TRANSMITTER / MARSHALLING PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	55-00	: Waste Water Disposal		Module	LD/LD_B-100_Ext	
TASK	code	C10000058		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX10 — Multi/Single-Core Instrument Control Cable

CABLE DATA

Type: Cu-XLPE-OS-LSZH-SWB-LSZH — Cores/Size mm²: 1X2X0,75 mm2 — Color: GREY

From: 55-LIT-001 — To: 00-JE-11005

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	OK
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0,6	Ω
	SCREEN		0,6	Ω
	EARTH		NA	Ω
	ARMr		0,6	Ω
	TEST VOLTS		500	V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

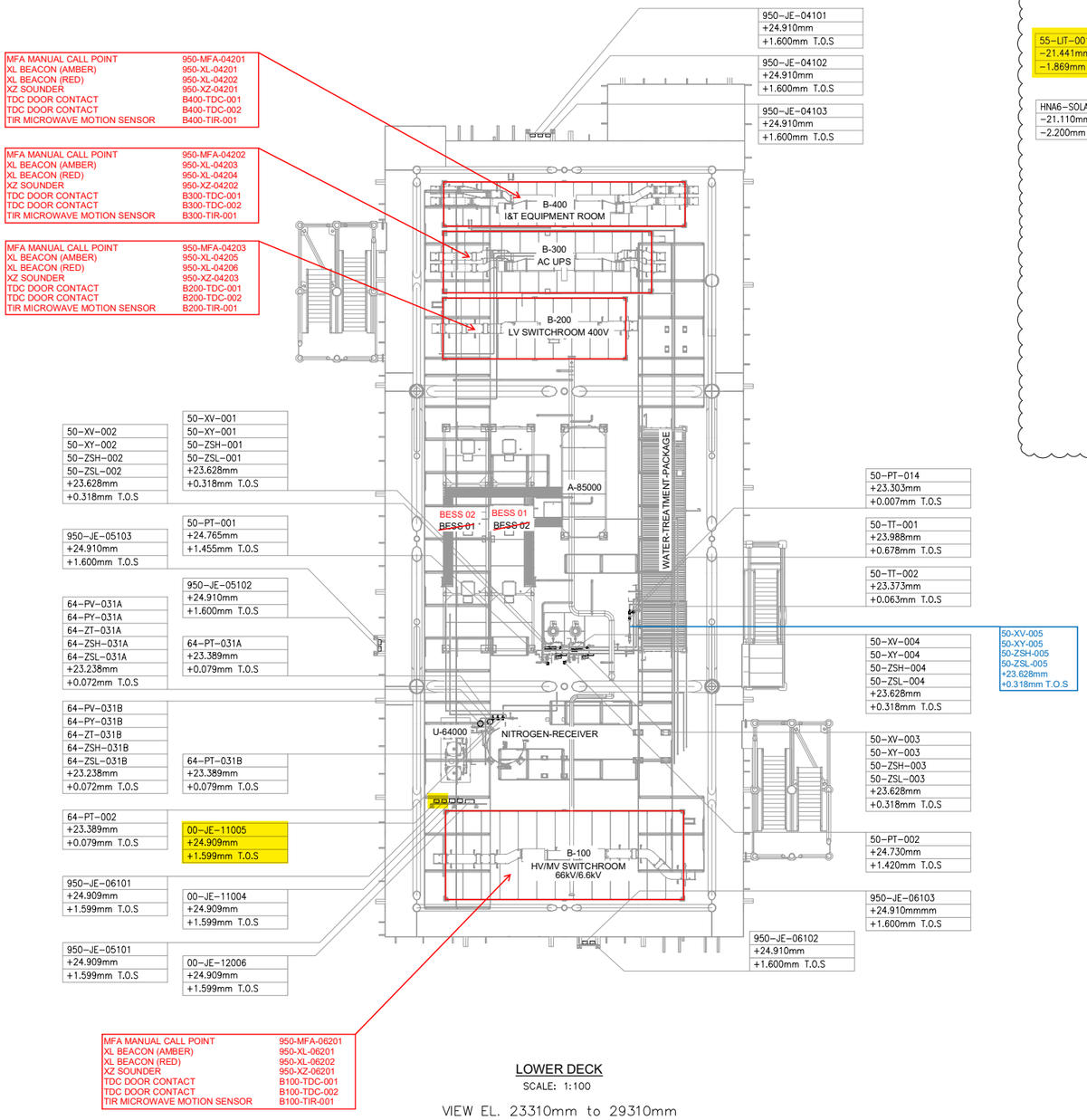
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 — Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Nota 5: refer to PL C30000680
Cable installation and connection both sides will be completed during OFFSHORE phase (See Ref. task C10004802)

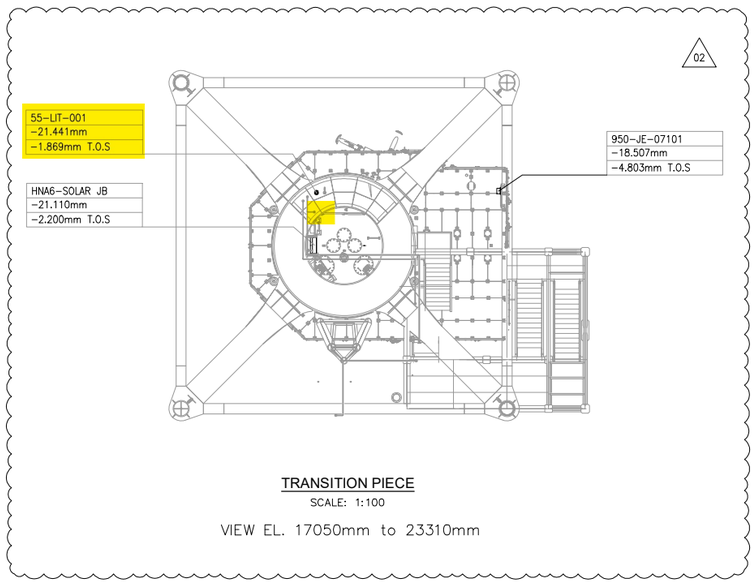
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-02-08	2025-02-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-08T09:38:27.047Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-02-27T13:11:22.586Z	

DRAWING NO. 123A90-DDL-IN-DL-40080

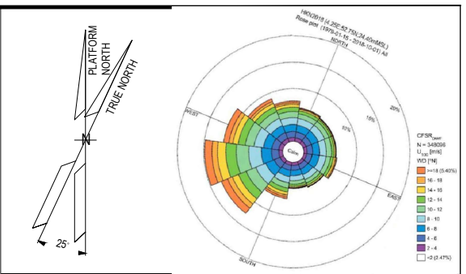
REV. 02



LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm



TRANSITION PIECE
SCALE: 1:100
VIEW EL. 17050mm to 23310mm



NOTES

1. ALL DIMENSIONS AND ELEVATIONS ARE GIVEN IN mm UNLESS OTHERWISE NOTED.
2. ELEVATIONS REFER TO T.O.S.
3. THIS DRAWING IS VALID ONLY FOR INSTRUMENT LOCATION LAYOUT.

LEGEND

- INSTRUMENT JUNCTION BOX
- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

123A90-DDL-PP-DL-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-IN-DL-40081	INSTRUMENT LAYOUT - UPPER DECK
123A90-DDL-IN-LIS-40091	INSTRUMENT CABLE LIST
123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40080**

REV.:	DATE:	SIGNATURE:
2_C	06/11/24	G.Randi

ROSETTI MARINO SpA

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24
A1	DRAWING NO. 123A90–DDL–IN–DL–40080	SHEET 001	REV. 02

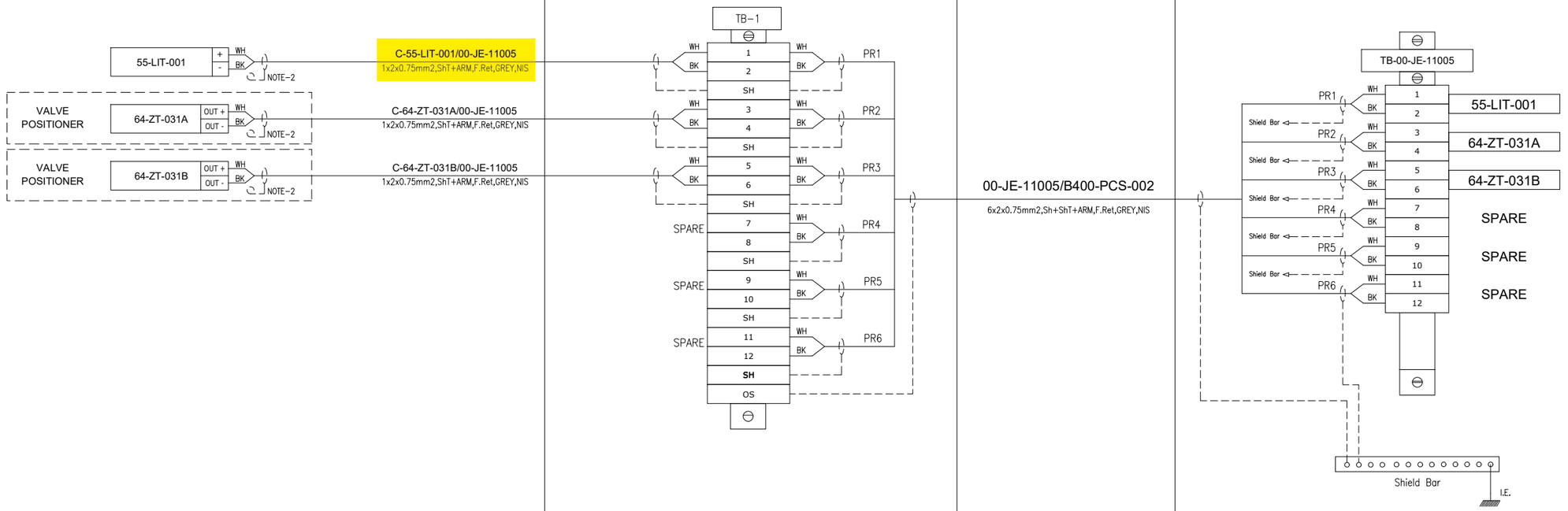
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11005	No.	MARSHALLING CABINET B400-PCS-002

<01>



VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40015

REV.:	DATE:	SIGNATURE:
1_J	12/02/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00–JE–11005

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024

A3	DRAWING NO. 123A90–DDL–IN–DG–40015	SHEET 010	REV. 01

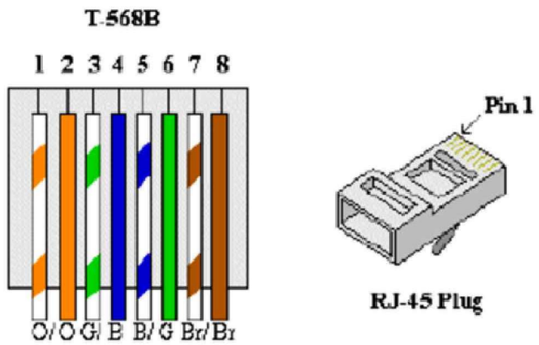
File Name : 123A90-DDL-IN-DG-40015_Rev.01

DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

NOTES:

1. ALL SPARE ENTRIES SHALL BE PROVIDED WITH CERTIFIED EX PROOF PLUGS.
2. CABLE SCREENS / DRAIN WIRE SHALL BE SECURELY INSULATED AND TIED BACK IN THE INSTRUMENT SIDE AND SHAL BE TERMINATED IN THE MARSHALLING SIDE OF THE PANEL.
3. SPARE PAIRS / TRIADS SHALL BE CONNECTED TO TERMINALS IN JUNCTION BOX AND PANEL / MARSHALLING CABINETS.
4. ALL CABLE SCREENS TO BE TERMINATED AT THE INSTRUMENT EARTH BAR IN THE RESPECTIVE EARTH BARS (IS OR NIS) AS APPLICABLE IN THE MARSHALLING CABINET.
5. SWITCH TAG NAME AND PORT WILL BE DEFINED DURING THE CONSTRUCTION PHASE
6. FOR OPTICAL FIBERS, USE THE FOLLOWING COLOR CODING:
   - 01- RED
   - 02- GREEN
   - 03- BLUE
   - 04- YELLOW
   - 05- GREY
   - 06- PURPLE
   - 07- BROWN
   - 08- ORANGE
   - 09- WHITE
   - 10- PINK
   - 11- BLACK
   - 12- TURQUOISE
7. CAT.6A CABLE SHALL BE TERMINATED MEETING REQUIREMENTS OF STANDARD EIA/TIA 568B:



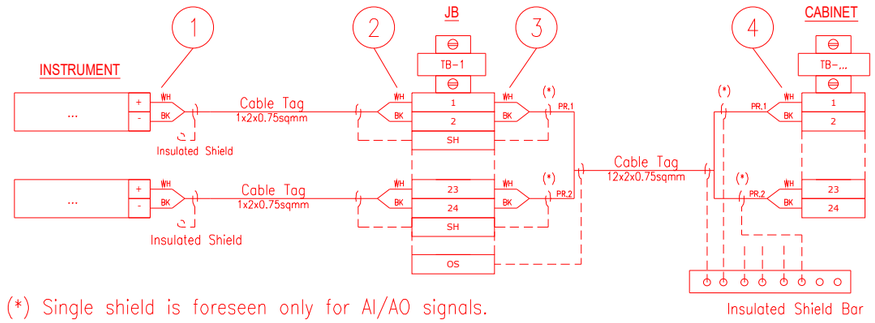
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

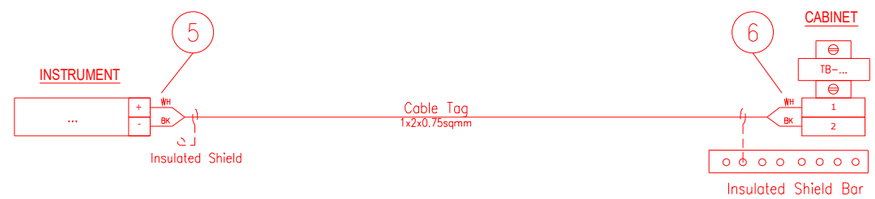
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY SAFE
P.E.	- PLANT EARTH
PCS	- PROCESS CONTROL SYSTEM
ESD	- EMERGENCY SHUTDOWN SYSTEM
SIS	- SAFETY INSTRUMENT SYSTEM
FGS	- FIRE & GAS SYSTEM
MC	- MARSHALLING CABINET
AI	- ANALOGUE INPUT
AO	- ANALOGUE OUTPUT
DI	- DIGITAL INPUT
DO	- DIGITAL OUTPUT
JE	- JUNCTION BOX FOR ELECTRICAL SIGNALS

PHILOSOPHY OF CROSS-FERRULING:

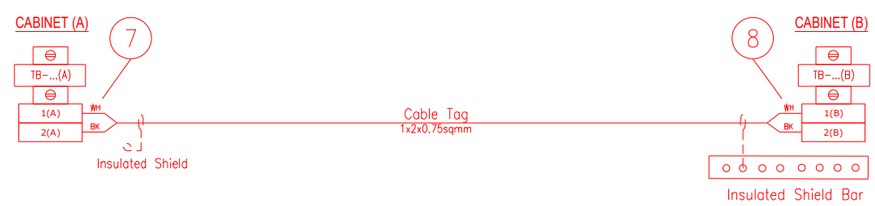
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



INSTRUMENT CONNECTION STRAIGHT TO CABINET



CABINET CONNECTION TO CABINET



1 - INSTR. TERMINAL NO. OR POLARITY / JB TAG / JB TERMINAL NO.
2 - INSTR. TERMINAL NO. OR POLARITY / INSTR. TAG / JB TERMINAL NO.
3 - JB TERMINAL NO. / JB TERMINAL STRIP / CABINET TERMINAL STRIP / PAIR OR CORE NO.
4 - PAIR OR CORE NO. / JB TAG / JB TERMINAL NO. / CABINET TERMINAL STRIP / CABINET TERMINAL NO.
5 - INSTR. TERMINAL NO. OR POLARITY / CABINET TAG / CABINET TERMINAL STRIP / CABINET TERMINAL NO.
6 - INSTR. TERMINAL NO. OR POLARITY / INSTR. TAG / CABINET TERMINAL STRIP/ CABINET TERMINAL NO.
7 - TERMINAL NO. (A) / TERMINAL STRIP (A) / CABINET TAG (B) / CABINET TERMINAL NO. (B) / PAIR OR CORE NO.
8 - PAIR OR CORE NO. / CABINET TERMINAL NO. (A) / CABINET TAG (A) / TERMINAL STRIP (B) / TERMINAL NO. (B)

NOTES: A - HEAT SHRINKABLE BLACK FOR SHIELD OF NIS INSTRUMENT CABLE.
HEAT SHRINKABLE BLUE FOR SHIELD OF IS INSTRUMENT CABLE.
B - ABOVE DESCRIBED PHILOSOPHY IS INTENDED FOR CONNECTION AS REPRESENTED:
IN CASE OF CONNECTION FROM THE OPPOSITE SIDE, ORDER OF FERULE TAG SHALL BE MIRRORED.
C - SAME TAGGING PHILOSOPHY SHALL APPLIED ALSO TO SHIELDS TERMINATED ON TERMINAL STRIP.

REFERENCE DRAWINGS:

PIPING AND INSTRUMENT DIAGRAM 123A90-DDL-PR-PID-80009
INSTRUMENT INDEX 123A90-DDL-IN-LIS-40088
F&G DETECTORS LAYOUT 123A90-DDL-SAF-DL-30027

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_J	12/02/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
GENERAL NOTES/LEGENDS

CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

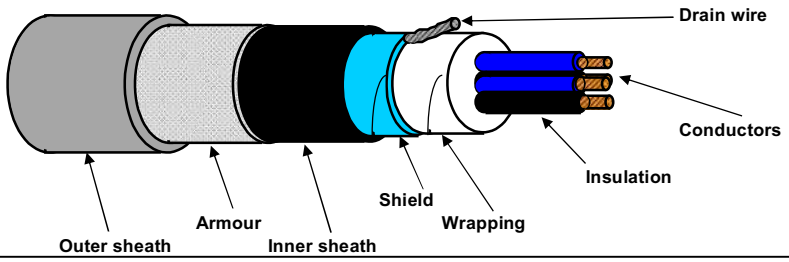
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Function	Area	From Tag	From Main Function	From Area	From Tag Section	To Tag	To Main Function	To Area	To Tag Section	Material ID	Material Desc.	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-55-LIT-001/00-JE-11005	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						55-LIT-001	Level Transmitter	Lower Deck		00-JE-11005	AI/AO JB to PCS	Lower Deck (B-100) Ext.	Junction Box	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH M20S 150/250V (300V) 1x2x0,75mm² - Grey	T2_M20S_Double				T2_M20S_Double				L-SEC-7 / L-SEC-1F / L-SEC-1G / L-SEC-1H / L-SEC-1I / L-SEC-1J / L-SEC-1L / L-SEC-1M / L-SEC-16

FLEI s.r.l.

Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250 V (300 V)

1X2X0,75 - INSTRUMENT CABLE - Flame Retardant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	XLPE, Nominal Thickness 0,5 mm	
Cores colour code :	**White - Black**	
Pair Assembling :	Not required	
Pair Wrapping:	Not required	
Drain wire :	Not required	
Pair Shield :	Not required	
Shield Insulation :	Not required	
Total Assembling :	13/1mt	
Overall Wrapping:	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Drain wire :	7-Stranded **TINNED** annealed copper drain wire, **size 0,5 sqmm**, in continuous contact with the shield	
Overall Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Inner sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, Average Thickness 1,0 mm	
Inner sheath color code:	**Black**	
Armour :	Galvanized Steel Wire Braid Armour (coverage ≥ 90%)	
Outer sheath :	Extruded LSZH Thermoplastic Compound (O.I. ≥ 30%), type **SHF1** to IEC 60093.360, moisture/abrasion/UV Resistant,	
	Average Thickness 1,1 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - 1X2X0,75 SQMM - XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60332.1.2 - IEC 60332.3.22 -**	
(every 1000 mm)	**Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(6,5 ± 10%) mm	
Over armour diameter :	(7,3 ± 10%) mm	
Outer diameter :	(9,5 ± 10%) mm	
Bending radius :	cable outer diameter x 10 (in fixed installation)	
Voltage Test :	1,5 kV a.c. for 5' (Between Cores) / 1,5 kV a.c. for 5' (Between Cores - Shield)	
Conductors DC Resistance :	≤ 26 Ω/km (@ 20°C)	
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)	
Mutual Capacitance :	≤ 150 nF/km	
L/R ratio :	≤ 25 µH/Ω	
Inductance :	≤ 0,9 mH/km	
Applicable Standards		
Design Guidelines :	**IEC 60092.376**	
ON COMPLETE CABLE		
Flame Retardant test :	IEC 60332.1.2 - IEC 60332.3.22	
Acid Gas generation :	IEC 60754.1/2	
Smoke density/Light Transmittance :	IEC 61034.2 (LT ≥ 60%)	
Hazardous Areas :	IEC 60079.14 par.9.3.2a	
Temperature Range :		
ON INSULATION	(max +90°C) (max continuous operation temperature of conductors)	
	(max +250°C) (max conductors temperature during short-circuit for 5 seconds)	
ON COMPLETE CABLE		
During Operation :	(-20°C up to +90°C) (in fixed installation)	
During installation :	(- 5°C up to +50°C)	
Note :	**To meet the requirements of installation and use in Zone 1 & Zone 2 (IEC 60079-14) and "Gas & Vapour Tight" the cable must be provided with Penetrating Inner sheath together with correct ATEX approved equipment or accessories.**	

Office	Date	Sign	Rev.	Date	Sign
Drawn by :	04/04/2024	Messa			
Checked :	04/04/2024	Spaccasassi			
Approved :	04/04/2024	Cucinotta			

The data provided, lending assent for the treatment, will be used to the sense of the article 13 of of the Regulation (UE) 2016/679, also through outsiders, in order to allow the realization of the fulfilments informatives, administrative, commercial and accounting related to the contractual relationship. Integral copy of the informative could be requested at our offices.

All proprietary rights reserved according to law. This document shall be not reproduced without written permission. FLEI reserves the right to change characteristics and technical data of product shown at any time.

ITEM	Tag	55-LIT-001	: Radar Level Transmitter - Vessel T-55001 Level			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10000908		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX08 Electrical Instrument

Installation Check

1	Check for mechanical damage.
2	Check installed equipment is suitable and conforms to specification.
3	Check installation conforms to P&ID and hook-up drawing.
4	Check identification (tag number, tag plates).
5	Check supporting and protection against vibrations.
6	Check calibration certificate (TJX04)
7	Visual Check electrical connections.
8	Check earthing connections.
9	Check the conformity of earthing as per specification (I.P.E. or I.E.)
10	Check tube fittings manufacturer is the one chosen for the plant (if applicable).
11	Check piping connections provide required block & bleed facility (if required).
12	If required produce Red Line Mark Up for "AS BUILT"

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-LIT-001	: Radar Level Transmitter - Vessel T-55001 Level			Dwg	123A90-DDL-IN-DS-40039
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10000946		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Instrumental	Form	TJX04 Analogue O/P

DATA

VENDOR CALIBRATION MANUAL N° 1724000979-QC-PRO-00005

CALIBRATION/TEST PROCEDURE N° : 123A90-PML-QHSE-PRO-00122

MODEL N° :	KRG-10-AD03PV-AA	SERIAL N° :	105429
DATA SHEET N° :	1724000979-IN-DS-00004	Rev :	3
TEST EQUIPMENT :		SERIAL N° :	

Instruments calibration is not required prior to the installation, as long as Manufacturer's calibration certificate is provided and transportation or storage conditions have not corrupted the instrument.

Manufacturer's calibration certificate is valid, not expired and attached to this check sheet

See Attachment

Following section must be filled only if certificate is not valid or missing

TEST DETAILS
CALIBRATION FIGURES

CALIBRATION POINTS	RISING	FALLING	UNITS
INPUT A			
INPUT B *			
INPUT C *			
OUTPUT			

* NOTE : COMPLETE IF APPLICABLE

TESTED LABEL AFFIXED

DATA SHEET ATTACHED

If required produce Red Line Mark Up for "AS BUILT"

Comments:

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS Impianti	RM (ROSETTI MARINO)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-09-17	2024-10-02	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-09-17T06:44:32.077Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-02T09:52:46.905Z	

ABR SERVICE S.r.l.
Via Manlio Monti, 40 – 48123 RAVENNA
Tel. +39 0544 685411 info@abrservice.net
C.F. Part. IVA 02764420390

Plant	CROSSWIND	Description	WASTE WATER TANK T-55001		
Area	T-55001	Loop Tag	55-LI-001	Instrument Tag	55-LT-001
Type of verification	periodic	Calibration range	0,00 ÷ 4660,00 mm	Report N°	031
Type of instrument	Level meter radar	Max uncertainty required	± 0,25 % s.r.	Reference procedure data sheet	123A90-PML-QHSE-PRO-00122 Page N°15

UNDER EXAMINATION INSTRUMENT 'S DATA

Tag	Manufacture	Model	S/N
55-LT-001	TOKYO KEIKI	KRG-10-AD03PV-AA	105429

USED REFERENCE SAMPLE 'S DATA

Manufacture	Model	S/N	n° of certification and calibration center	uncertainty (u.m.)	Date of issue
BEAMEX	MC5-IS	20177766	0144/ME/2024 _LAT 150	± 0,001 c.s.	24/04/2024

environment temperature at the time of check 25 °C

Value indicated before starting the check N.P. mm

CHECK RESULT: *as found*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
mm	mA	mA	mA	
100,00	4,340	4,342	+0,002	+0,012
1165,00	8,000	8,006	+0,006	+0,038
2330,00	12,000	11,994	-0,006	-0,038
3495,00	16,000	16,002	+0,002	+0,012
4660,00	20,000	19,993	-0,007	-0,044
3495,00	16,000	16,001	+0,001	+0,006
2330,00	12,000	11,994	-0,006	-0,038
1165,00	8,000	8,005	+0,005	+0,031
100,00	4,340	4,343	+0,003	+0,019
		max error detected %		0,044

Verification activation of blocks/threshold alarms

Alarm signalling	Type of activation	Alarm intervention	Block description	Action type	Block intervention
mm					

Check: PASSED

Blocks/alarms check:

Corrective action

CHECK RESULT: *as left*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
mm	mA	mA	mA	

errore massimo rilevato % 0,00

Verification activation of blocks/threshold alarms

Alarm signalling	Type of activation	Alarm intervention	Block description	Action type	Block intervention
mm	DESCENT				

Check:

Blocks/alarms check:

Value indicated after the check N.P. mm

Note:

FINAL OUTCOME OF THE VERIFICATION: ***The instrument is SUITABLE***

Verification Date	Verification Expiration	Technical Executor	Viewed	Approved by
20/09/2024	09/2025	PENSO SILVIO		
		signature	*signature*	*signature*

ABR SERVICE S.r.l.
Via M. Monti, 40 - 48123 RAVENNA
Tel. 0544 685411
C.F. e P.IVA 02764420390

GENERAL	1	Tag Number					55-LIT-001			
	2	Service					WASTE WATER TANK (T-55001)			
	3	P&ID Number					123A90-DDL-PR-PID-80026			
	4	Equipment Number	Vessel Trim Number				T-55001	1"-WW-200-01CS-H		
	5	Area Classification					ATEX Zone2 - IIC (IIB+H2) T1			
PROCESS CONDITIONS	6	Fluid					WASTE WATER			
	7	Pressure	Unit	Min.	Oper.	Max.	barg		ATM	
	8	Temperature	Unit	Min.	Oper.	Max.	°C	5	AMB	35
	9	Ambient Temperature		Min.		Max.	-8.4		25	
	10	Design Pressure		Min.		Max.			ATM	
	11	Design Temperature		Min.		Max.			80	
	12	Density (Liquid)					1000			
	13	Oper. Vapour Density					N/A			
	14	Viscosity					1			
	15	Fluid Dielectric Constant					80.2 @20°C			
BODY / GAUGE	16	Body or Gauge Material					AISI 316			
	17	Rating					#150			
	18	Connection Size & Type					FLANGED 3" 150# RF1, TOP MOUNTED			
	19	Cooling Extension					-			
	20	Stilling Well Required					-			
ANTENNA	21	Type					NON CONTACTING RADAR			
	22	Material					SS 316			
	23	Insertion Depth	Diameter				31 mm	72 mm		
	24	Operating Frequency					26 GHz			
	25	Distance (Adapter Plate to Tank Bottom)					High of Tank = 4660 mm			
TRANSMITTER	26	Function					LEVEL MEASUREMENT			
	27	Output	Power Supply				4-20mA	24 Vdc (Loop powered)		
	28	Calibration Range Min.	Max.				0 mm	4660 mm		
	29	Nominal Range Min.	Max.				0 mm	5000 mm		
	30	Mounting					DIRECT ON LINE			
	31	Certification	Ingress Protection				Ex-d IIC (IIB+H2) T1	IP66		
	32	Electrical Class	Electrical Connection				-	2 x M20		
	33	Accuracy	Repeatability				Better then +/-0.5% of SPAN	≤ 0.25% of SPAN		
COMMUNICATION AND SOFTWARE	34	Communication Type	Signal Type				Conventional + Hart	4-20mA Loop powered		
	35	DD Revision	CFF Revision				-	-		
	36	Device Tag	Hart Tag				-	-		
	37	Internal Diagnostics	Capacitance				-	-		
	38	Segment	Device Address				-	-		
	39	Device Class	Simulate				-	-		
	40	Nominal Current	Operating Voltage				-	-		
OPTIONS	41	Interface Card					-			
	42	Cable (Antenna to Transmitter)					-			
	43	Integral Meter					Digital LCD indicator			
PURCHASE	44	Manufacturer					TERRANOVA SRL			
	45	Model					KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6			
	46	Purchase Order Number					4718_OS			

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ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-55-LIT-001/00-JE-11005 : LEVEL TRANSMITTER / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	55-00 : Waste Water Disposal			Module	LD/LD_B-100_Ext	
TASK	code	C10004802	Location	Offshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity	CCK	Discipline	Instrumental	Form	CJX10	Multi/Single-Core Instrument Control Cable

CABLE DATA

Type	Cu-XLPE-OS-LSZH-SWB-LSZH	Cores/Size mm²	1X2X0,75 mm2	Color	GREY
From	55-LIT-001	To	00-JE-11005		

1 Check cable is as specified in project cable schedule.

2 Check relevant documents are at the latest revision.

3 Check cable is routed in accordance with cable layout drawings.

4 Check cable for any physical damage.

5 Check cable is adequately supported and correctly fixed to rack according to Project specification.

6 Check bending radius is within the specified limits.

7 Check cable is correctly loomed and segregated in accordance with specification.

8 Check cable and core marking are in accordance with specification.

9 Check cable labelling is in accordance with specification.

10 Check that glands, shrouds and earthing are in accordance with specification.

11 Check terminations are in accordance with termination diagram

12 Check gland plate for single core cables is non-ferrous.

13 If required produce Red Line Mark Up for "AS BUILT"

INSULATION	CORE to EARTH		MΩ
	CORE to CORE		MΩ
	CORE to SCREEN		MΩ
	CORE to ARMr		MΩ
	SCREEN to EARTH		MΩ
	SCREEN to ARMr		MΩ
CONTINUITY	CORES		Ω
	SCREEN		Ω
	EARTH		Ω
	ARMr		Ω
	TEST VOLTS		V

TEST ALL CORES AND RECORD LOWEST VALUE

Notes: The lowest value is recorded and must be within project specifications

TESTING INSTRUMENTS USED

TYPE / SERIAL N°: Calibration date:

Comments

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC & discipline : M

Mechanical	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
T-55001	Waste Water Tank	ONSHORE	C10004522	CDX01	100	2025-03-24	RFC 3

ITEM	Tag	T-55001	: Waste Water Tank		Dwg	123A90-DDL-PR-PID-80026	
	S/Sys	55-00	: Waste Water Disposal		Module	TP	
TASK	code	C10004522	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Mechanical	Form	CDX01	Storage Tank

1	Check that the nameplate details are correct.	NA
2	Check the location, elevation, orientation and that the vessel is level.	OK
3	Check that the holding down arrangements are correct.	NA
4	Check for any installation damage.	OK
5	Check the vessel internals are as per approved drawings.	OK
6	Check the vessel internally for cleanliness.	OK
7	Check all platforms and ladders are installed as per approved drawings. Also man ways are accessible and suitable for operation.	NA
8	Check out the painting, insulation and the lining for damage.	OK
9	Check the earthing and bonding are as per Project Specifications.	NA
10	Check that the pipe supports are in accordance with the approved design.	NA
11	Check the disconnected pipework flanges against the nozzle flanges for correct alignment.	Note
12	Atmospheric Transportable Drain Vessel to be equipped with Breathing / Vacuum breaker valve.	NA
13	Check Flame Arrestor (if any).	NA
14	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Note 11: Will be check during flange management activities.

	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-03-24	2025-03-24	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-03-24T10:55:51.516Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-24T16:48:27.463Z	

STORAGE TANK DATA SHEET

Revisions					
	Number	0	1		
	Date	03-Mar-23	24-Mar-23		
	By	PK	PK		
	Chk	AK	AK		
	Appd	PK	PK		
Quality Purpose		ICR	IFI		

Document Number **K559-2254-ME-DAT-012**

Job Number **K559**
Client **Shell**

Location **BLPH - Hollandse Kust Noord (HKN)**
Item Number **T-55001**
Item Name **Waste Water Tank**

DESIGN CODE / DESIGN DATA / MATERIALS

Rev							
	Construction Code		API 650				
	Design Conditions	Internal	0.005	barg	at	xx	°C
		External	-0.0025	barg	at	xx	°C
						xx	
	Minimum Design Metal Temp		-29	°C (MDMT)	at	xx	mbarg
	Operating Conditions	Internal	atm	mbarg	at	35	°C
	Corrosion Allowance:	Shell	3	Bottom	3	Roo 3	mm
	☐ Service PWHT Required		No				
	External/Painting Req'ments Per		Painting Required - specification to be confirmed				
	Internal Lining Requirements:		Lined + Anodes - specification to be confirmed				
	☑ Insulation		By Others				
	☑ Cathodic Protection		By Others				
	Foundation		Supported by adjacent structural steel				
	Wind Design		1 Year Return, 3 sec. gust = 35 m/sec, 100 Year Return, 3 sec. gust = 45 m/sec				
	Earthquake Design		N/A				
	Soil Bearing Pressure		N/A	N/mm²			
	Type Of Tank		Flat Top				
	Product Stored		Waste water	Design Specific Gravity	0.996		
	Design Volume		5.0	Cubic Meters			
	Dimensions		Rectangular, In Deck Type: 4000 mm (L) x 4000mm (W) x 1000mm (H) Nominal				
	Orientation		Vertical				
	Inflow		xx	m^3/h			
	Outflow		xx	m^3/h			
	True Vapor Pressure		xx	mbar			
	MATERIAL SPECIFICATION						
	Plate		CS per API 650				
	Pipe		CS per API 650				
	Forging		CS per API 650				
	Flange Bolting		CS per API 650				
	Flange Gasket		By Others				

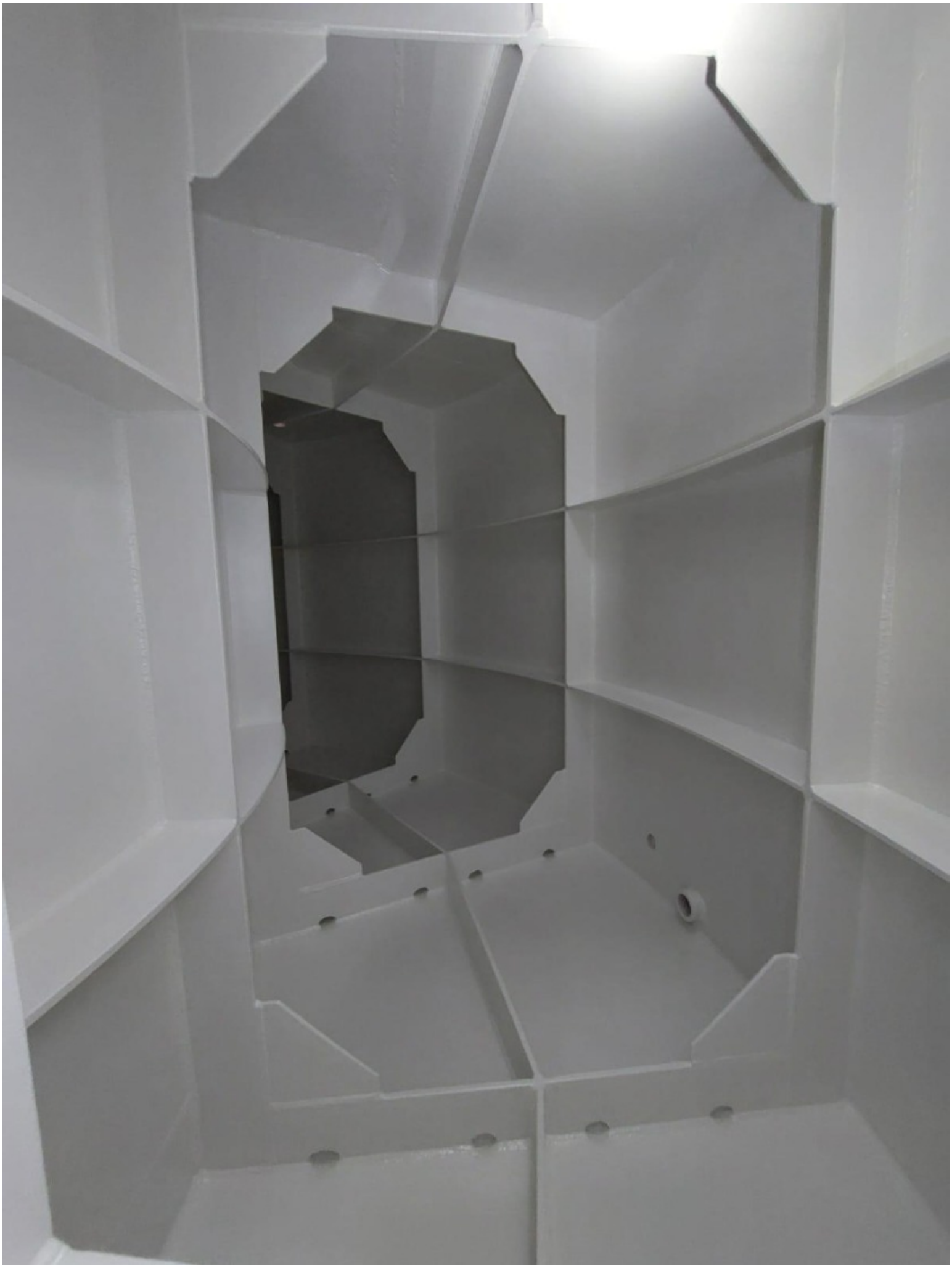
ACCESSORIES

Rev				
	☑ Level Gauge	To be confirmed		
	☑ Emergency Vent	To be confirmed	Pressure Set At	To be confirmed
	☑ Pressure / Vacuum Vent	To be confirmed	Pressure Set At	To be confirmed
	Pressure Set At			
	Vacuum Set At			
	☑ Foam System	To be confirmed		
	☑ Rolling Ladder	To be confirmed		
	☑ Landing Platform	To be confirmed		
	☑ Circular Stairway	To be confirmed		
	☑ Ladder Cage	To be confirmed		
	☑ Floating Roof With Seals	To be confirmed		
	☑ Handrail	To be confirmed		
	☑ Pipe Support	To be confirmed		
	☑ Pipe Guide	To be confirmed		

STORAGE TANK DATA SHEET

Document Number	**K559-2254-ME-DAT-012**
Job Number	**K559**
Client	**Shell**
Location	**BLPH - Hollandse Kust Noord (HKN)**
Item Number	**T-55001**
Item Name	**Waste Water Tank**

Rev	GENERAL NOTES (IF APPLICABLE)
	VM-1. All materials & appurtenances shown on this data sheet or required in the attached specifications shall be by the Tank Subcontractors.
	VM-2. Ladder or stairway, platforming & handrails shall be designed, furnished & erected by Tank Subcontractor in accordance with Subcontractors standard details. Platform flooring shall be grating.
	VM-3. All structural steel to be hot dip galvanized.
	VM-4. Deleted.
	VM-5. Tank Subcontractor to provide grounding lugs. Four (4) off lugs to be supplied.
	VM-6. Leak detection/containment shall be by the Tank Subcontractor.
	VM-7. Tank dimensions shall be confirmed by the Tank Subcontractor
	VM-8. Design life is 30 years.
	VM-9. Calculated slosh height under earthquake conditions shall be provided by the Tank Subcontractor.
	VM-10. Tank shell thickness shall be calculated by the "one foot" method in accordance with API 650. Variable design point method in accordance API 650 may be used if a more economical design is possible, subject to Company Approval.
	VM-11. Permitted nozzle loads shall be assessed by the Tank Subcontractor in accordance with API 650 Appendix P.
	VM-12. Local loads resulting from ladders, stairways and platforms etc. shall be considered in the mechanical design.
	VM-13. Shell and Roof seams shall be located to clear openings to the maximum extent possible.
	VM-14. The number of spot radiographs referred to in API 650 shall be applicable to each tank, irrespective of the number of tanks being erected concurrently or continuously at any location.
	VM-15. When complete or spot radiographs are taken at plate junctions, the film shall allow at least 51 mm of weld length on each side of the vertical seams. At least 50% of the spot radiographs taken on vertical seams shall include intersection with horizontal seams.
	VM-16. Nozzle shall be installed within the following tolerances: a. Projection from the inside of the tank to the face of flange ±3mm. b. Elevation or orientation ±6mm. c. Flange tilt in any plane ±1/2 degree but not exceed 5.0mm. d. For hillside nozzles, from face to centreline of the tank and from centreline of tank to centreline of nozzle ±6 mm. e. Flange bolt hole orientation ±1.5mm.
	VM-17. All water testing shall be completed prior to applying specified project coating systems.
	PROCESS NOTES :
	P1. Tank to be completed with a nitrogen blanket.
	P2. Operating pressure to be confirmed during EPC phase.



Section 8 MECHANICAL COMPLETION STATUS INDEX - TELECOMMUNICATION DISCIPLINE

NOT APPLICABLE

Section 9 MECHANICAL COMPLETION STATUS INDEX - HVAC DISCIPLINE

NOT APPLICABLE

Section 10 MECHANICAL COMPLETION STATUS INDEX - PIPING DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC & discipline : P

Piping	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
003-1-J1	Joint 003-1-J1	ONSHORE	C10004175	TMX27	100	2025-01-28	RFC 3
003-1-J2	Joint 003-1-J2	ONSHORE	C10004176	TMX27	100	2025-01-28	RFC 3
027-1-J1	Joint 027-1-J1	ONSHORE	C10004209	TMX27	100	2025-04-24	RFC 3
028-1-J1	Joint 028-1-J1	ONSHORE	C10004342	TMX27	100	2025-02-20	RFC 3
028-2-J2	Joint 028-2-J2	OFFSHORE	C10004343	TMX27	0	-	-
028-2-J3	Joint 028-2-J3	OFFSHORE	C10004344	TMX27	0	-	-
028-2-J4	Joint 028-2-J4	OFFSHORE	C10004345	TMX27	0	-	-
033-1-J1	Joint 033-1-J1	OFFSHORE	C10004221	TMX27	0	-	-
033-1-J2	Joint 033-1-J2	OFFSHORE	C10004222	TMX27	0	-	-
033-1-J3	Joint 033-1-J3	OFFSHORE	C10004223	TMX27	0	-	-
033-1-J4	Joint 033-1-J4	OFFSHORE	C10004224	TMX27	0	-	-
033-1-J5	Joint 033-1-J5	OFFSHORE	C10004225	TMX27	0	-	-
098-1-J1	Joint 098-1-J1	OFFSHORE	C10004267	TMX27	0	-	-
099-1-J1	Joint 099-1-J1	ONSHORE	C10004268	TMX27	100	2025-04-01	RFC 3
099-1-J2	Joint 099-1-J2	ONSHORE	C10004269	TMX27	100	2025-04-01	RFC 3
099-1-J3	Joint 099-1-J3	ONSHORE	C10004270	TMX27	100	2025-04-01	RFC 3
100-1-J1	Joint 100-1-J1	ONSHORE	C10004271	TMX27	100	2025-03-25	RFC 3
100-1-J2	Joint 100-1-J2	ONSHORE	C10004272	TMX27	100	2025-02-28	RFC 3
121-1-J1	Joint 121-1-J1	OFFSHORE	C10004289	TMX27	0	-	-
156-1-J1	Joint 156-1-J1	ONSHORE	C10004315	TMX27	100	2025-04-02	RFC 3
156-1-J2	Joint 156-1-J2	ONSHORE	C10004316	TMX27	100	2025-04-02	RFC 3
156-1-J3	Joint 156-1-J3	ONSHORE	C10004317	TMX27	100	2025-04-02	RFC 3
156-1-J4	Joint 156-1-J4	ONSHORE	C10004318	TMX27	100	2025-04-02	RFC 3
156-1-J5	Joint 156-1-J5	ONSHORE	C10004319	TMX27	100	2025-04-02	RFC 3
158-1-J1	Joint 158-1-J1	ONSHORE	C10004320	TMX27	100	2025-03-25	RFC 3

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC & discipline : P

Piping	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-00-TP-004	Test Pack 55-00-TP-004	ONSHORE	C10003255	CLX02A	100	2025-01-03	RFC 3
		ONSHORE	C10003256	CLX02B	100	2025-02-19	RFC 3
		ONSHORE	C10003257	CXX01	100	2025-04-03	RFC 3
		ONSHORE	C10003258	CXX02	100	2025-02-25	RFC 3
		ONSHORE	C10003259	TMX03	100	2025-01-03	RFC 3
		ONSHORE	C10003260	TMX05	100	2025-01-07	RFC 3
		ONSHORE	C10003262	TPLX05	100	2025-01-07	RFC 3
55-00-TP-005	Test Pack 55-00-TP-005	ONSHORE	C10003263	CLX02A	100	2025-02-18	RFC 3
		ONSHORE	C10003264	CLX02B	100	2025-03-04	RFC 3
		ONSHORE	C10003265	CXX01	100	2025-03-27	RFC 3
		ONSHORE	C10003266	TMX03	100	2025-02-20	RFC 3
		ONSHORE	C10003267	TMX05	100	2025-02-20	RFC 3
		ONSHORE	C10003269	TPLX05	100	2025-02-20	RFC 3
55-00-TP-026	Test Pack 55-00-TP-026	ONSHORE	C10003428	CLX02A	100	2025-01-21	RFC 3
		ONSHORE	C10003429	CLX02B	100	2025-02-11	RFC 3
		ONSHORE	C10003430	CXX01	100	2025-04-02	RFC 3
		ONSHORE	C10003431	CXX02	100	2025-02-19	RFC 3
		ONSHORE	C10003432	TMX03	100	2025-01-21	RFC 3
		ONSHORE	C10003433	TMX05	100	2025-01-21	RFC 3
		ONSHORE	C10003435	TPLX05	100	2025-01-21	RFC 3
55-00-TP-060	Test Pack 55-00-TP-060	ONSHORE	C10003673	CLX02A	100	2025-01-27	-
		ONSHORE	C10003674	CLX02B	100	2025-04-07	-
		ONSHORE	C10003675	CXX01	0	-	-
		ONSHORE	C10003676	CXX02	100	2025-04-07	-
		ONSHORE	C10003677	TMX03	100	2025-03-13	-
		ONSHORE	C10003678	TMX05	100	2025-03-13	-
		ONSHORE	C10003680	TPLX05	100	2025-03-13	-

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-00 & process: MC & discipline : P

Piping	55-00 Waste Water Disposal						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-00-TP-061	Test Pack 55-00-TP-061	ONSHORE	C10003681	CLX02A	100	2024-12-19	-
		ONSHORE	C10003682	CLX02B	100	2025-04-02	-
		ONSHORE	C10003683	CXX01	0	-	-
		ONSHORE	C10003684	CXX02	100	2025-04-07	-
55-00-TP-062	Test Pack 55-00-TP-062	ONSHORE	C10003686	CLX02A	100	2025-01-28	RFC 3
		ONSHORE	C10003687	CLX02B	100	2025-02-17	RFC 3
		ONSHORE	C10003688	CXX02	100	2025-02-25	RFC 3
55-00-TP-100	Test Pack 55-00-TP-100	ONSHORE	C10003711	CLX02A	100	2025-03-03	-
		OFFSHORE	C10003712	CLX02B	0	-	-
		OFFSHORE	C10003713	CXX01	0	-	-
		OFFSHORE	C10003714	CXX02	0	-	-
55-00-TP-101	Test Pack 55-00-TP-101	OFFSHORE	C10003716	CLX02A	0	-	-
		OFFSHORE	C10003717	CLX02B	0	-	-
		OFFSHORE	C10003718	CXX01	0	-	-
		OFFSHORE	C10003719	CXX02	0	-	-
		OFFSHORE	C10003720	TMX03	0	-	-
		OFFSHORE	C10003721	TMX05	0	-	-
		OFFSHORE	C10003723	TPLX05	0	-	-
55-00-TP-104	Test Pack 55-00-TP-104	OFFSHORE	C10003733	CLX02A	0	-	-
		OFFSHORE	C10003734	CLX02B	0	-	-
		OFFSHORE	C10003735	CXX01	0	-	-
		OFFSHORE	C10003736	TMX03	0	-	-
		OFFSHORE	C10003737	TMX05	0	-	-
		OFFSHORE	C10003739	TPLX05	0	-	-
T-55001	Waste Water Tank	ONSHORE	C10004926	TMX05	100	2025-02-24	RFC 3

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004			Dwg	123A90-DDL-PR-PID-80022-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003255		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	PL
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	NA
6	Check bolt tightening and flange management (excluded battery limit joints).	NA
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	NA
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	OK
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	NA
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-18	2025-01-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-18T05:19:55.118Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-03T16:32:39.394Z	

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004			Dwg	123A90-DDL-PR-PID-80022-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003256		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	OK
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	NA
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	OK
8	After the (re) installation of a valve check that it operates freely.	OK
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	OK
10	Check all locking device.	OK
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	PL
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-06	2025-02-19	
Signature	Digitaly signed by Emanuele Delfino 2025-02-06T15:28:28.910Z	Digitaly signed by Lorenzo Novaga 2025-02-19T09:01:11.789Z	

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004		Dwg	123A90-DDL-PR-PID-80022-26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003257	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Piping	Form	CXX01	Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.	OK
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.	OK
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.	NA
4	Check that the insulation and cladding materials conform to the specifications.	OK
5	Check that the insulation is compatible with the Heat tracing system.	NA
6	Check that the surface condition prior to the application of the insulation	OK
7	Check the installation of wire mesh	OK
8	Check the overlap of the metal cladding.	OK
9	Check that each joint is sealed with a suitable sealant specified for water proofing.	OK
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.	OK
11	Control that the locking devices boxes opretated satisfactorily.	NA
12	Check the blinds, the spectacles and the instruments are visible.	NA
13	Check the flange accessibility without damaging the insulation.	PL
14	Check that color coding/line marking/flow direction are correct	PL

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-03-21	2025-04-03	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:17:58.447Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-03T14:19:21.506Z	

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004			Dwg	123A90-DDL-PR-PID-80022-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003258		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	Note
3	Check that the fluid direction is correct.	Note
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	OK
6	If required produce Red Line Mark Up for "AS BUILT".	

Comments: 1. Checked the painting report made by Vendor and signed by RM coating Dpt.
Points 2 and 3 to be checked during thermal insulation.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (Rosetti Marino)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-02-11	2025-02-25	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T15:53:04.131Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-25T16:18:03.863Z	

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004		Dwg	123A90-DDL-PR-PID-80022-26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003259	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX03	Cleaning

CLEANING MEDIUM

Air		Water	●	Steam		Oil		Other		Mechanical	

Component	NA					
Chemical treatment	No	NA	Filtration	No	Screen size	NA

EQUIPMENTS

Equipment **removed**	No	Agreed list of removed fragile devices to be attached to this Test Sheet	NA
Excepted removed equipments, pipework installation is conform to the specifications & PID's			OK
Equipment **added**	No	Exhaustive list to be attached (temporary filters, spools…etc)	NA

TEST RESULTS

Test date	03/01/2025	Start time	10:00	End time	10:05
Flow rate		Duration		Medium T°	

Operation Description

Connected the water source to the lowest point of the piping system.
Maintained a high flow rate to help dislodging and carry away debrises.
Flushing flow kept until the water exiting the system was clear and free of visible contaminants. Expelled water inspected for any debris to be noted.

Safety Precautions

Restricting access to the area.

Result and comments

Water has been found clear of solid debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-03	2025-01-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-03T05:58:54.097Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-03T16:41:35.847Z	

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004		Dwg	123A90-DDL-PR-PID-80022-26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003260	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX05	Pressure Test

TEST DATA

Reference procedure: 123A90-PML-QHSE-PRO-00092

Design pressure: 3.5 barg | Max test pressure: 5.25 barg | Min hold period: 30 min

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)	Yes
Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)	Yes

Medium

Test medium: WATER

TEST RESULTS

Test date: See attachment | Start time: See attachment | End time: See attachment

Ambient temperature is recorded	NA			Test medium temperature is recorded	Yes
Pressure recorded during test hold period	Min: See attachment	Max: See attachment		Variation: See attachment	
Line has been depressurised to	NA			At maximum of bar/min: See attachment	
Pressure test completed sucessfully and approved	Yes			Temperature and pressure disc chart attached	NA
Instrument calibration certificates attached	Yes			Dead-weight tester log attached	NA
Record of failures and corrective action attached	No			Battery limits of the test attached	Yes

If required produce Red Line Mark Up for "AS BUILT".

Comments:

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-03	2025-01-07	
Signature	Digitaly signed by Emanuele Delfino 2025-01-03T05:59:06.855Z	Digitaly signed by Kangi Albonetti 2025-01-07T15:15:29.948Z	

Logger protocol
Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-43-00-TP22B+55-00-TP04

Instrument
Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A037FON32E
Log temperature *Registrazioni di Temperatura*	Active *Attivo*
Scale range *Campo scala*	(0 ... 1000) bar a
Accuracy *Accuratezza*	0.1 % FS
Tag number *Numero tag*	
Communication *Comunicazione*	Wireless (00:13:43:C5:19:D5)

Measurement conditions
Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	10000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	00:58:58
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	11:12:56 am

Logger protocol

Protocollo di acquisizione elenco dati

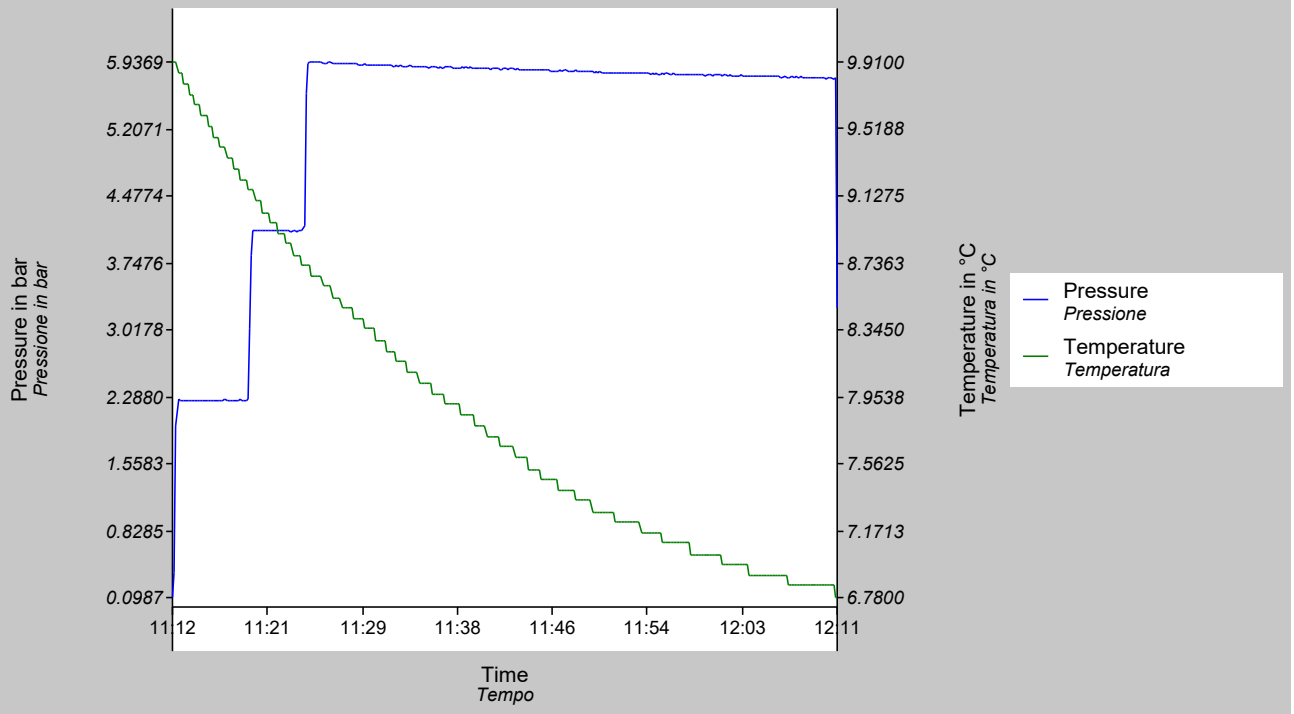
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-43-00-TP22B+55-00-TP04

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:12:56.000	0.0987	9.9100
01/03/2025 11:13:06.000	0.3721	9.9100
01/03/2025 11:13:16.000	1.9741	9.9100
01/03/2025 11:13:26.000	2.2635	9.8500
01/03/2025 11:13:36.000	2.2471	9.8500
01/03/2025 11:13:46.000	2.2514	9.8500
01/03/2025 11:13:56.000	2.2519	9.7800
01/03/2025 11:14:06.000	2.2439	9.7800
01/03/2025 11:14:16.000	2.2458	9.7800
01/03/2025 11:14:26.000	2.2448	9.7200
01/03/2025 11:14:36.000	2.2460	9.7200
01/03/2025 11:14:46.000	2.2476	9.7200
01/03/2025 11:14:56.000	2.2536	9.6600
01/03/2025 11:15:06.000	2.2458	9.6600
01/03/2025 11:15:16.000	2.2489	9.6600
01/03/2025 11:15:26.000	2.2442	9.6000
01/03/2025 11:15:36.000	2.2429	9.6000

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:15:46.000	2.2443	9.6000
01/03/2025 11:15:56.000	2.2400	9.6000
01/03/2025 11:16:06.000	2.2512	9.5300
01/03/2025 11:16:16.000	2.2447	9.5300
01/03/2025 11:16:26.000	2.2509	9.5300
01/03/2025 11:16:36.000	2.2435	9.4700
01/03/2025 11:16:46.000	2.2428	9.4700
01/03/2025 11:16:56.000	2.2462	9.4700
01/03/2025 11:17:06.000	2.2527	9.4100
01/03/2025 11:17:16.000	2.2469	9.4100
01/03/2025 11:17:26.000	2.2527	9.4100
01/03/2025 11:17:36.000	2.2562	9.4100
01/03/2025 11:17:46.000	2.2518	9.3500
01/03/2025 11:17:56.000	2.2485	9.3500
01/03/2025 11:18:06.000	2.2468	9.3500
01/03/2025 11:18:16.000	2.2404	9.3500
01/03/2025 11:18:26.000	2.2505	9.2800
01/03/2025 11:18:36.000	2.2533	9.2800
01/03/2025 11:18:46.000	2.2515	9.2800
01/03/2025 11:18:56.000	2.2537	9.2200
01/03/2025 11:19:06.000	2.2435	9.2200
01/03/2025 11:19:16.000	2.2475	9.2200
01/03/2025 11:19:26.000	2.2436	9.2200
01/03/2025 11:19:36.000	2.2658	9.1600
01/03/2025 11:19:46.000	3.0322	9.1600
01/03/2025 11:19:56.000	3.8277	9.1600
01/03/2025 11:20:06.000	4.0958	9.1600
01/03/2025 11:20:16.000	4.1063	9.1000
01/03/2025 11:20:26.000	4.1026	9.1000
01/03/2025 11:20:36.000	4.0948	9.1000
01/03/2025 11:20:46.000	4.1025	9.1000
01/03/2025 11:20:56.000	4.0977	9.0300
01/03/2025 11:21:06.000	4.0963	9.0300
01/03/2025 11:21:16.000	4.0989	9.0300
01/03/2025 11:21:26.000	4.1046	9.0300
01/03/2025 11:21:36.000	4.1032	8.9700
01/03/2025 11:21:46.000	4.0937	8.9700
01/03/2025 11:21:56.000	4.0963	8.9700
01/03/2025 11:22:06.000	4.1018	8.9700
01/03/2025 11:22:16.000	4.1001	8.9100
01/03/2025 11:22:26.000	4.0960	8.9100
01/03/2025 11:22:36.000	4.0952	8.9100
01/03/2025 11:22:46.000	4.0969	8.9100
01/03/2025 11:22:56.000	4.0986	8.8500
01/03/2025 11:23:06.000	4.0946	8.8500
01/03/2025 11:23:16.000	4.0964	8.8500
01/03/2025 11:23:26.000	4.0899	8.8500
01/03/2025 11:23:36.000	4.0950	8.7800
01/03/2025 11:23:46.000	4.0950	8.7800

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:23:56.000	4.0906	8.7800
01/03/2025 11:24:06.000	4.0946	8.7800
01/03/2025 11:24:16.000	4.0958	8.7800
01/03/2025 11:24:26.000	4.0946	8.7200
01/03/2025 11:24:36.000	4.1514	8.7200
01/03/2025 11:24:46.000	5.6016	8.7200
01/03/2025 11:24:56.000	5.9271	8.7200
01/03/2025 11:25:06.000	5.9358	8.7200
01/03/2025 11:25:16.000	5.9326	8.6600
01/03/2025 11:25:26.000	5.9345	8.6600
01/03/2025 11:25:36.000	5.9324	8.6600
01/03/2025 11:25:46.000	5.9369	8.6600
01/03/2025 11:25:56.000	5.9322	8.6600
01/03/2025 11:26:06.000	5.9292	8.6600
01/03/2025 11:26:16.000	5.9268	8.6000
01/03/2025 11:26:26.000	5.9273	8.6000
01/03/2025 11:26:36.000	5.9230	8.6000
01/03/2025 11:26:46.000	5.9291	8.6000
01/03/2025 11:26:56.000	5.9285	8.6000
01/03/2025 11:27:06.000	5.9245	8.5300
01/03/2025 11:27:16.000	5.9241	8.5300
01/03/2025 11:27:26.000	5.9221	8.5300
01/03/2025 11:27:36.000	5.9159	8.5300
01/03/2025 11:27:46.000	5.9171	8.5300
01/03/2025 11:27:56.000	5.9148	8.4700
01/03/2025 11:28:06.000	5.9185	8.4700
01/03/2025 11:28:16.000	5.9162	8.4700
01/03/2025 11:28:26.000	5.9242	8.4700
01/03/2025 11:28:36.000	5.9188	8.4700
01/03/2025 11:28:46.000	5.9160	8.4700
01/03/2025 11:28:56.000	5.9179	8.4100
01/03/2025 11:29:06.000	5.9141	8.4100
01/03/2025 11:29:16.000	5.9119	8.4100
01/03/2025 11:29:26.000	5.9078	8.4100
01/03/2025 11:29:36.000	5.9055	8.4100
01/03/2025 11:29:46.000	5.9051	8.4100
01/03/2025 11:29:56.000	5.9135	8.3500
01/03/2025 11:30:06.000	5.9069	8.3500
01/03/2025 11:30:16.000	5.9069	8.3500
01/03/2025 11:30:26.000	5.9049	8.3500
01/03/2025 11:30:36.000	5.9025	8.3500
01/03/2025 11:30:46.000	5.9054	8.3500
01/03/2025 11:30:56.000	5.9065	8.2800
01/03/2025 11:31:06.000	5.8959	8.2800
01/03/2025 11:31:16.000	5.9047	8.2800
01/03/2025 11:31:26.000	5.9018	8.2800
01/03/2025 11:31:36.000	5.8968	8.2800
01/03/2025 11:31:46.000	5.8984	8.2800
01/03/2025 11:31:56.000	5.8977	8.2200

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:32:06.000	5.9020	8.2200
01/03/2025 11:32:16.000	5.8973	8.2200
01/03/2025 11:32:26.000	5.8916	8.2200
01/03/2025 11:32:36.000	5.8915	8.2200
01/03/2025 11:32:46.000	5.8960	8.1600
01/03/2025 11:32:56.000	5.8876	8.1600
01/03/2025 11:33:06.000	5.8940	8.1600
01/03/2025 11:33:16.000	5.8921	8.1600
01/03/2025 11:33:26.000	5.8923	8.1600
01/03/2025 11:33:36.000	5.8869	8.1600
01/03/2025 11:33:46.000	5.8917	8.1000
01/03/2025 11:33:56.000	5.8971	8.1000
01/03/2025 11:34:06.000	5.8923	8.1000
01/03/2025 11:34:16.000	5.8873	8.1000
01/03/2025 11:34:26.000	5.8912	8.1000
01/03/2025 11:34:36.000	5.8915	8.1000
01/03/2025 11:34:46.000	5.8892	8.0300
01/03/2025 11:34:56.000	5.8846	8.0300
01/03/2025 11:35:06.000	5.8807	8.0300
01/03/2025 11:35:16.000	5.8873	8.0300
01/03/2025 11:35:26.000	5.8846	8.0300
01/03/2025 11:35:36.000	5.8760	8.0300
01/03/2025 11:35:46.000	5.8807	8.0300
01/03/2025 11:35:56.000	5.8914	7.9700
01/03/2025 11:36:06.000	5.8796	7.9700
01/03/2025 11:36:16.000	5.8798	7.9700
01/03/2025 11:36:26.000	5.8762	7.9700
01/03/2025 11:36:36.000	5.8878	7.9700
01/03/2025 11:36:46.000	5.8763	7.9700
01/03/2025 11:36:56.000	5.8719	7.9700
01/03/2025 11:37:06.000	5.8833	7.9100
01/03/2025 11:37:16.000	5.8850	7.9100
01/03/2025 11:37:26.000	5.8772	7.9100
01/03/2025 11:37:36.000	5.8777	7.9100
01/03/2025 11:37:46.000	5.8767	7.9100
01/03/2025 11:37:56.000	5.8726	7.9100
01/03/2025 11:38:06.000	5.8746	7.9100
01/03/2025 11:38:16.000	5.8698	7.9100
01/03/2025 11:38:26.000	5.8739	7.8500
01/03/2025 11:38:36.000	5.8783	7.8500
01/03/2025 11:38:46.000	5.8717	7.8500
01/03/2025 11:38:56.000	5.8808	7.8500
01/03/2025 11:39:06.000	5.8706	7.8500
01/03/2025 11:39:16.000	5.8801	7.8500
01/03/2025 11:39:26.000	5.8691	7.8500
01/03/2025 11:39:36.000	5.8660	7.8500
01/03/2025 11:39:46.000	5.8710	7.7800
01/03/2025 11:39:56.000	5.8658	7.7800
01/03/2025 11:40:06.000	5.8660	7.7800

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:40:16.000	5.8631	7.7800
01/03/2025 11:40:26.000	5.8628	7.7800
01/03/2025 11:40:36.000	5.8654	7.7800
01/03/2025 11:40:46.000	5.8644	7.7200
01/03/2025 11:40:56.000	5.8703	7.7200
01/03/2025 11:41:06.000	5.8564	7.7200
01/03/2025 11:41:16.000	5.8648	7.7200
01/03/2025 11:41:26.000	5.8610	7.7200
01/03/2025 11:41:36.000	5.8619	7.7200
01/03/2025 11:41:46.000	5.8651	7.7200
01/03/2025 11:41:56.000	5.8583	7.6600
01/03/2025 11:42:06.000	5.8596	7.6600
01/03/2025 11:42:16.000	5.8631	7.6600
01/03/2025 11:42:26.000	5.8602	7.6600
01/03/2025 11:42:36.000	5.8588	7.6600
01/03/2025 11:42:46.000	5.8601	7.6600
01/03/2025 11:42:56.000	5.8598	7.6600
01/03/2025 11:43:06.000	5.8616	7.6600
01/03/2025 11:43:16.000	5.8552	7.6000
01/03/2025 11:43:26.000	5.8606	7.6000
01/03/2025 11:43:36.000	5.8577	7.6000
01/03/2025 11:43:46.000	5.8562	7.6000
01/03/2025 11:43:56.000	5.8486	7.6000
01/03/2025 11:44:06.000	5.8532	7.6000
01/03/2025 11:44:16.000	5.8512	7.6000
01/03/2025 11:44:26.000	5.8524	7.5300
01/03/2025 11:44:36.000	5.8494	7.5300
01/03/2025 11:44:46.000	5.8478	7.5300
01/03/2025 11:44:56.000	5.8487	7.5300
01/03/2025 11:45:06.000	5.8507	7.5300
01/03/2025 11:45:16.000	5.8529	7.5300
01/03/2025 11:45:26.000	5.8484	7.5300
01/03/2025 11:45:36.000	5.8486	7.4700
01/03/2025 11:45:46.000	5.8474	7.4700
01/03/2025 11:45:56.000	5.8453	7.4700
01/03/2025 11:46:06.000	5.8432	7.4700
01/03/2025 11:46:16.000	5.8445	7.4700
01/03/2025 11:46:26.000	5.8385	7.4700
01/03/2025 11:46:36.000	5.8404	7.4700
01/03/2025 11:46:46.000	5.8379	7.4700
01/03/2025 11:46:56.000	5.8398	7.4700
01/03/2025 11:47:06.000	5.8411	7.4100
01/03/2025 11:47:16.000	5.8434	7.4100
01/03/2025 11:47:26.000	5.8401	7.4100
01/03/2025 11:47:36.000	5.8428	7.4100
01/03/2025 11:47:46.000	5.8426	7.4100
01/03/2025 11:47:56.000	5.8377	7.4100
01/03/2025 11:48:06.000	5.8373	7.4100
01/03/2025 11:48:16.000	5.8389	7.4100

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:48:26.000	5.8362	7.4100
01/03/2025 11:48:36.000	5.8428	7.3500
01/03/2025 11:48:46.000	5.8370	7.3500
01/03/2025 11:48:56.000	5.8341	7.3500
01/03/2025 11:49:06.000	5.8339	7.3500
01/03/2025 11:49:16.000	5.8330	7.3500
01/03/2025 11:49:26.000	5.8373	7.3500
01/03/2025 11:49:36.000	5.8333	7.3500
01/03/2025 11:49:46.000	5.8291	7.3500
01/03/2025 11:49:56.000	5.8259	7.3500
01/03/2025 11:50:06.000	5.8312	7.2800
01/03/2025 11:50:16.000	5.8242	7.2800
01/03/2025 11:50:26.000	5.8301	7.2800
01/03/2025 11:50:36.000	5.8235	7.2800
01/03/2025 11:50:46.000	5.8275	7.2800
01/03/2025 11:50:56.000	5.8233	7.2800
01/03/2025 11:51:06.000	5.8252	7.2800
01/03/2025 11:51:16.000	5.8210	7.2800
01/03/2025 11:51:26.000	5.8219	7.2800
01/03/2025 11:51:36.000	5.8208	7.2800
01/03/2025 11:51:46.000	5.8250	7.2800
01/03/2025 11:51:56.000	5.8221	7.2800
01/03/2025 11:52:06.000	5.8192	7.2200
01/03/2025 11:52:16.000	5.8199	7.2200
01/03/2025 11:52:26.000	5.8235	7.2200
01/03/2025 11:52:36.000	5.8183	7.2200
01/03/2025 11:52:46.000	5.8194	7.2200
01/03/2025 11:52:56.000	5.8165	7.2200
01/03/2025 11:53:06.000	5.8146	7.2200
01/03/2025 11:53:16.000	5.8156	7.2200
01/03/2025 11:53:26.000	5.8113	7.2200
01/03/2025 11:53:36.000	5.8167	7.2200
01/03/2025 11:53:46.000	5.8084	7.2200
01/03/2025 11:53:56.000	5.8145	7.2200
01/03/2025 11:54:06.000	5.8126	7.2200
01/03/2025 11:54:16.000	5.8166	7.2200
01/03/2025 11:54:26.000	5.8197	7.1600
01/03/2025 11:54:36.000	5.8152	7.1600
01/03/2025 11:54:46.000	5.8128	7.1600
01/03/2025 11:54:56.000	5.8088	7.1600
01/03/2025 11:55:06.000	5.8098	7.1600
01/03/2025 11:55:16.000	5.8080	7.1600
01/03/2025 11:55:26.000	5.8156	7.1600
01/03/2025 11:55:36.000	5.8077	7.1600
01/03/2025 11:55:46.000	5.8091	7.1600
01/03/2025 11:55:56.000	5.8076	7.1600
01/03/2025 11:56:06.000	5.8065	7.1600
01/03/2025 11:56:16.000	5.8090	7.1000
01/03/2025 11:56:26.000	5.8059	7.1000

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 11:56:36.000	5.8109	7.1000
01/03/2025 11:56:46.000	5.8087	7.1000
01/03/2025 11:56:56.000	5.8068	7.1000
01/03/2025 11:57:06.000	5.8012	7.1000
01/03/2025 11:57:16.000	5.8101	7.1000
01/03/2025 11:57:26.000	5.8060	7.1000
01/03/2025 11:57:36.000	5.8045	7.1000
01/03/2025 11:57:46.000	5.8033	7.1000
01/03/2025 11:57:56.000	5.7979	7.1000
01/03/2025 11:58:06.000	5.8045	7.1000
01/03/2025 11:58:16.000	5.7974	7.1000
01/03/2025 11:58:26.000	5.7987	7.1000
01/03/2025 11:58:36.000	5.8058	7.1000
01/03/2025 11:58:46.000	5.7969	7.0300
01/03/2025 11:58:56.000	5.8032	7.0300
01/03/2025 11:59:06.000	5.7983	7.0300
01/03/2025 11:59:16.000	5.8011	7.0300
01/03/2025 11:59:26.000	5.8007	7.0300
01/03/2025 11:59:36.000	5.7987	7.0300
01/03/2025 11:59:46.000	5.7935	7.0300
01/03/2025 11:59:56.000	5.7958	7.0300
01/03/2025 12:00:06.000	5.7884	7.0300
01/03/2025 12:00:16.000	5.7933	7.0300
01/03/2025 12:00:26.000	5.7969	7.0300
01/03/2025 12:00:36.000	5.7967	7.0300
01/03/2025 12:00:46.000	5.7863	7.0300
01/03/2025 12:00:56.000	5.7967	7.0300
01/03/2025 12:01:06.000	5.7934	7.0300
01/03/2025 12:01:16.000	5.7916	7.0300
01/03/2025 12:01:26.000	5.7926	7.0300
01/03/2025 12:01:36.000	5.7863	6.9700
01/03/2025 12:01:46.000	5.7939	6.9700
01/03/2025 12:01:56.000	5.7916	6.9700
01/03/2025 12:02:06.000	5.7850	6.9700
01/03/2025 12:02:16.000	5.7943	6.9700
01/03/2025 12:02:26.000	5.7805	6.9700
01/03/2025 12:02:36.000	5.7854	6.9700
01/03/2025 12:02:46.000	5.7864	6.9700
01/03/2025 12:02:56.000	5.7896	6.9700
01/03/2025 12:03:06.000	5.7854	6.9700
01/03/2025 12:03:16.000	5.7914	6.9700
01/03/2025 12:03:26.000	5.7835	6.9700
01/03/2025 12:03:36.000	5.7865	6.9700
01/03/2025 12:03:46.000	5.7864	6.9700
01/03/2025 12:03:56.000	5.7876	6.9100
01/03/2025 12:04:06.000	5.7849	6.9100
01/03/2025 12:04:16.000	5.7824	6.9100
01/03/2025 12:04:26.000	5.7796	6.9100
01/03/2025 12:04:36.000	5.7755	6.9100

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22B+55-00-TP04
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/03/2025 12:04:46.000	5.7884	6.9100
01/03/2025 12:04:56.000	5.7769	6.9100
01/03/2025 12:05:06.000	5.7840	6.9100
01/03/2025 12:05:16.000	5.7836	6.9100
01/03/2025 12:05:26.000	5.7781	6.9100
01/03/2025 12:05:36.000	5.7785	6.9100
01/03/2025 12:05:46.000	5.7806	6.9100
01/03/2025 12:05:56.000	5.7787	6.9100
01/03/2025 12:06:06.000	5.7804	6.9100
01/03/2025 12:06:16.000	5.7771	6.9100
01/03/2025 12:06:26.000	5.7742	6.9100
01/03/2025 12:06:36.000	5.7760	6.9100
01/03/2025 12:06:46.000	5.7736	6.9100
01/03/2025 12:06:56.000	5.7690	6.9100
01/03/2025 12:07:06.000	5.7738	6.9100
01/03/2025 12:07:16.000	5.7721	6.9100
01/03/2025 12:07:26.000	5.7684	6.8500
01/03/2025 12:07:36.000	5.7728	6.8500
01/03/2025 12:07:46.000	5.7758	6.8500
01/03/2025 12:07:56.000	5.7686	6.8500
01/03/2025 12:08:06.000	5.7763	6.8500
01/03/2025 12:08:16.000	5.7716	6.8500
01/03/2025 12:08:26.000	5.7711	6.8500
01/03/2025 12:08:36.000	5.7743	6.8500
01/03/2025 12:08:46.000	5.7703	6.8500
01/03/2025 12:08:56.000	5.7724	6.8500
01/03/2025 12:09:06.000	5.7626	6.8500
01/03/2025 12:09:16.000	5.7691	6.8500
01/03/2025 12:09:26.000	5.7691	6.8500
01/03/2025 12:09:36.000	5.7663	6.8500
01/03/2025 12:09:46.000	5.7644	6.8500
01/03/2025 12:09:56.000	5.7677	6.8500
01/03/2025 12:10:06.000	5.7663	6.8500
01/03/2025 12:10:16.000	5.7640	6.8500
01/03/2025 12:10:26.000	5.7678	6.8500
01/03/2025 12:10:36.000	5.7680	6.8500
01/03/2025 12:10:46.000	5.7558	6.8500
01/03/2025 12:10:56.000	5.7610	6.8500
01/03/2025 12:11:06.000	5.7600	6.8500
01/03/2025 12:11:16.000	5.7578	6.8500
01/03/2025 12:11:26.000	5.7565	6.8500
01/03/2025 12:11:36.000	5.7594	6.7800
01/03/2025 12:11:46.000	3.2552	6.7800

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24

Certificate of Calibration

- data di emissione date of issue	2024-12-10
- cliente customer	FAST AUTOMATION SRL VIA DELLA PREVIDENZA SOCIALE, 8 IT-42124 REGGIO EMILIA (RE)
- destinatario receiver	ROSETTI MARINO SPA - YARD PIOMBONI VIA DEL MARCHESATO, 37 IT-48122 MARINA DI RAVENNA (RA)

Il presente certificato di taratura è emesso in base all'accreditamento LAT N. 114 rilasciato in accordo ai decreti attuativi della legge n. 273/1991 che ha istituito il Sistema Nazionale di Taratura (SNT). ACCREDIA attesta le capacità di misura e di taratura, le competenze metrologiche del Centro e la riferibilità delle tarature eseguite ai campioni nazionali ed internazionali delle unità del Sistema Internazionale delle Unità (SI).
Questo certificato non può essere riprodotto in modo parziale, salvo espressa autorizzazione scritta da parte del Centro.

Si riferisce a
referring to

- oggetto *item*	Misuratore di pressione elettronico Electrical pressure gauge
- costruttore *manufacturer*	WIKA
- modello *model*	CPG1500
- matricola *serial number*	1A037FON32E
- data di ricev. oggetto *date of receipt of item*	2024-11-29
- data delle misure *date of measurements*	2024-12-10
- registro di laboratorio *laboratory reference*	0580-SM-24

This certificate of calibration is issued in compliance with the accreditation LAT No.114 granted according to decrees connected with Italian law No. 273/1991 which has established the National Calibration System. ACCREDIA attests the calibration and measurement capability, metrological competence of the Centre and the traceability of calibration results to the national and International standards of the International System of Units (SI).
This certificate may not be partially reproduced, except with the prior written permission of the issuing Centre.

I risultati di misura riportati nel presente Certificato sono stati ottenuti applicando le procedure di taratura citate alla pagina seguente, dove sono specificati anche i campioni o gli strumenti che garantiscono la catena di riferibilità del Centro e i rispettivi certificati di taratura in corso di validità. Essi si riferiscono esclusivamente all'oggetto in taratura e sono validi nel momento e nelle condizioni di taratura, salvo diversamente specificato.

The measurement results reported in this Certificate were obtained following the calibration procedures given in the following page, where the reference standards or instruments are indicated which guarantee the traceability chain of the laboratory, and the related calibration certificates in the course of validity are indicated as well. They relate only to the calibrated item and they are valid for the time and conditions of calibration, unless otherwise specified.

Le incertezze di misura dichiarate in questo documento sono state determinate conformemente alla Guida ISO/IEC 98 e al documento EA-4/02. Solitamente sono espresse come incertezza estesa ottenuta moltiplicando l'incertezza tipo per il fattore di copertura k corrispondente ad un livello di fiducia di circa il 95 %. Normalmente tale fattore k vale 2.

The measurement uncertainties stated in this document have been determined according to the ISO/IEC Guide 98 and to EA-4/02. Usually, they have been estimated as expanded uncertainty obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally, this factor k is 2.

Direzione Tecnica
(Approving Officer)

Enrico Reccagni

Enrico Reccagni

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

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LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

Misuratore di pressione elettronico *Electrical pressure gauge*	
Tipo *Model*	Misuratore di pressione elettronico Electrical pressure gauge
Numero di matricola *Serial No.*	1A037FON32E
Campo di misura *Scale range*	(0 ... 1000) bar g
Accuratezza dichiarata dal costruttore *Accuracy declared by the manufacturer*	0,1 % FS
Risoluzione *Resolution (scale division)*	0,1 bar
Tag. N. *Tag No.*	--

Procedura di taratura e catena di riferibilità
Calibration procedure and traceability chain

La taratura è stata effettuata in accordo alla linea guida DKD-R 6-1 "Taratura di strumenti di pressione" (versione 03/2014) procedura B, per confronto fra i valori dello strumento in taratura con quelli di riferimento dati dal campione di lavoro.

Calibration was carried out according to DKD-R 6-1 "Kalibrierung von Druckmessgeräten" (Ausgabe 03/2014) procedure B, by comparing the measured values of the calibration item with those of the reference or working standard.

I risultati riportati sono stati ottenuti applicando le procedure n° LMO-PT-01 rev.2

The results have been obtained using the procedures n° LMO-PT-01 rev.2

La catena di riferibilità ha inizio dai campioni di riferimento n° PM1-09

The traceability chain starts from the reference standards n° PM1-09

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

Laboratorio WIKA ITALIA - Laboratorio di Modugno (BA)
WIKA ITALY Laboratory - Modugno (BA)

Campione di lavoro
Working Standard

Norma di riferimento (RS) Bilancia di pressione *Reference standard (RS) Dead-weight tester*	
Tipo *Model*	PM1-09
Certificato di taratura *Calibration mark*	D-K-15105/D21090
Campo di misura *Scale range*	(10 ... 2500) bar g
Accuratezza *Accuracy*	0,015 % della lettura + 255 Pa

Operatore
Technichian

Francesco Donatelli

WIKA Italia S.r.l. & C. s.a.s.
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I Traversa, n. 8
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LAT N° 114

Condizioni di misura
Measurement conditions

Schema di collegamento *Assembly*	
Fluido utilizzato *Pressure medium*	Sebacate *Sebacate*
Livello di riferimento *Refence height (for reference value)*	Superficie di tenuta DUT *Sealing face DUT*
Posizione di montaggio *Position during calibration*	verticale *vertical*

Note di taratura
Calibration Note

Lo strumento è stato tarato e riconsegnato nelle stesse condizioni in cui è arrivato nel laboratorio, in accordo con il metodo "as found as left" / The device under test (DUT) was calibrated in the same conditions it was arrived in laboratory, according to the method "as found as left".

Condizioni Ambientali
Environmental conditions

Temperatura *Temperature*	(22 ± 1,5)	°C
Pressione atmoferica *Atmospheric pressure*	(1007,5 ± 0,2)	hPa
Umidità relativa *Rel. Humidity*	(50 ± 15)	% UR

I dati meteo sono stati acquisiti tramite stazione meteo WIKA CPU6000-W s/n.1A00VCX6GJ2

Weather data were acquired via the WIKA CPU6000-W weather station s/n.1A00VCX6GJ2

Misure rilevate
Measurement results

Valore di riferimento *Reference value RS* bar	**Letture** *Reading DUT* bar		
	M1	**M2**	**M3**
0,00	0,0	0,0	0,0
99,91	100,0	100,0	100,0
199,82	200,0	200,0	200,0
299,73	299,9	300,0	299,9
399,63	399,8	399,9	399,8
499,53	499,6	499,7	499,7
599,44	599,5	599,6	599,5
699,34	699,3	699,4	699,3
799,24	799,2	799,3	799,2
899,14	899,1	899,1	899,1
999,04	999,0	999,0	999,0

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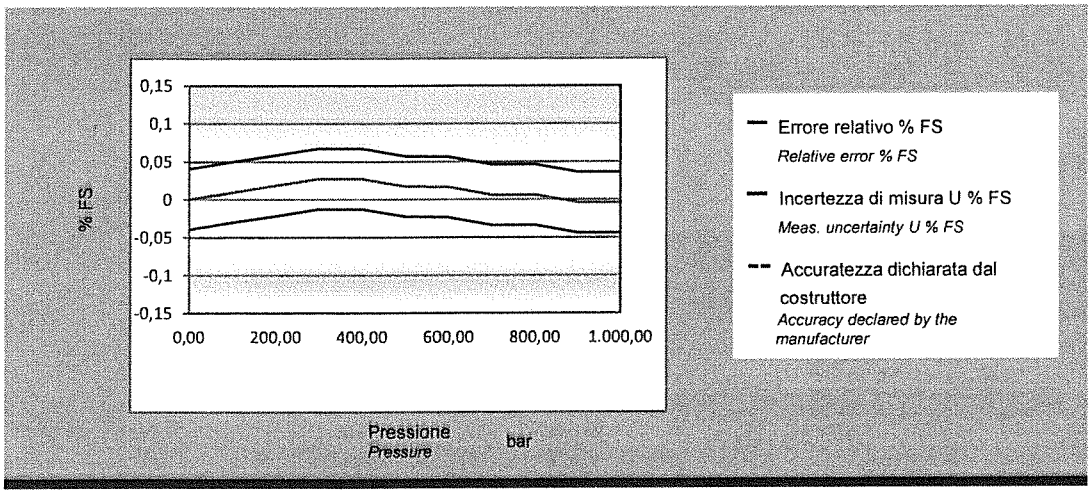
LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

Incertezza di misura
Uncertainty of measurement

Valori di riferimento *Reference value RS* bar	Media delle misure *Mean value* bar	Errore *Error* bar	Ripetibilità *Repeatability* bar	Isteresi *Hysteresis* bar	Incertezza di misura *Meas. Uncertainty* bar
0,00	0,0	0,0	0,0	0,0	0,40
99,91	100,0	0,1	0,0	0,0	0,40
199,82	200,0	0,2	0,0	0,0	0,40
299,73	300,0	0,3	0,0	0,1	0,40
399,63	399,9	0,3	0,0	0,1	0,40
499,53	499,7	0,2	0,1	0,1	0,40
599,44	599,6	0,2	0,0	0,1	0,40
699,34	699,4	0,1	0,0	0,1	0,40
799,24	799,3	0,1	0,0	0,1	0,40
899,14	899,1	0,0	0,0	0,0	0,40
999,04	999,0	0,0	0,0	0,0	0,40

Grafico degli errori di misura
Graphical representation of measurement uncertainty



L'incertezza estesa senza correzione del DUT è pari a 0,7 bar
The expanded uncertainty of the DUT without correction is equal to

Questo dato è ottenuto come MAX{Incertezza_di_misura$_i$ + |Errore$_i$|} della tabella precedente
This data is obatined as MAX{Meas._uncertainty$_i$ + |Error$_i$|} of the previous table

Il presente certificato non rappresenta una dichiarazione di conformità a specifica
This certificate is not a statement of compliance

Base Load Power Hub (BLPH)

TEST PACK

N°55-00-TP-004
SUB-SYSTEM N° 55-00

System	55
Sub-System	55-00
Test Pressure	5.25 barg
Test Fluid	WATER
Test Duration	30 min

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning
   - 8.6 TMX05 – Pressure test
   - 8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 - Drying

1. COLOURED MARKED P&IDs

DRAWING NO. DRAWING_NO.

REV. REV

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr

GAS CONFIRMED 50 XA 001 — F&G
SMOKE CONFIRMED 50 XA 002 — F&G
FAULT PACKAGE 50 XA 003 — ESD
50-XS-001 SHUT-DOWN — ESD
NOTE 6

CONTRACTOR | SUPPLIER

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

123A90-DDL-PR-PID-80025
TO 50-TDI-002
50 TI 001
BLOCKED OUTLET SET @ 6 barg
50 PSV 011 1D2
2"-SWR-291-01SD-N
BLPH-MV-471
SD LO
03
NOTE 7
1"-SWS-290-01SD-E
50 TT 001
50 TE 001
03
1.1/2"
TP 017 50
E
4"x1.1/2"
4"x1.1/2"
ECC. RED.
ECC. RED.
123A90-DDL-PR-PID-80021
FROM SEA WATER LIFT PUMP
1-1/2"-SWS-035-01SD-E
BLPH-MV-241
3/4"

A-50000
WATER TREATMENT PACKAGE
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

E
TP 005 50
03
123A90-DDL-PR-PID-80021
TO SEA WATER LIFT PUMP AND LIFT PUMP CAISSONS
1"-CI-029-01CP-E

1"-CI-043-01CP-E
TP 006 50
03
DECK
HOOK-UP 003
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

SUPPLIER | CONTRACTOR

TP 003 50
03
1.1/2"x1"
3"x1.1/2"
1"-SWR-045-01CS-H
123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

TP 007 50
03
1.1/2"x1"
1"-WW-038-01CS-H
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

55-00-TP-004
5.25 barg

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
7. ROUTED TO THE SEA. 03

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80022	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

T-55001

WASTE WATER TANK

CAPACITY : 16 m³
DESIGN P/T : 0.005 barg / 80°C
MATERIAL : CARBON STEEL

123A90-DDL-PR-PID-80022
BIOCIDE DOSING UNIT
E
1"-CI-043-01CP-E
NOTE 7

123A90-DDL-PR-PID-80029
FROM LIQUID SEAL DRUM
NNF
1"-WW-202-01CS-H

123A90-DDL-PR-PID-80011
FROM ELECTROLYSER PACKAGE
NNF
1"-WW-004-01CS-H

DECK
HOOK-UP 001
WW-004
WW-081

1"-WW-081-01CS-H

03
HOOK-UP 001
WASTE WATER TANK
RS
1"
I2

M1
24"

SP
0039

2"-AV-256-01CS-N

03
HOOK-UP 002
RS
2"
X
WAST WATER TANK
1"
I1

55
LI
001
H
L

55
LIT
001

HOOK-UP 003
3"
L
WASTE WATER TANK
03

T-55001
TRIM LINE:
3"-WW-200-01CS-H
NOTE 8

NOTE 1, 5

03

HOOK-UP
006
WASTE WATER
TANK
1"-WW-292-01CS-H
BLPH-MV-400
3/4"
1"x3/4"
1"
CONC. RED.
3/4"x1/2"
BLPH-MV-401
1/2"
SAMPLE
CONNECTION

DECK
HOOK-UP 001
123A90-DDL-PR-PID-80022
FROM WATER TREARMENT PACKAGE
NNF
1"-WW-038-01CS-H

WASTE WATER
TANK
HOOK-UP
008
03
3"-WW-201-01CS-H
NOTE 4
03
BLPH-MV-467
3"
LC

55-00-TP-004
5.25 barg

NOTES

1. DELETED. 03
2. DELETED.
3. DELETED.
4. DRAIN LINE TO SHIP DISPOSAL.
5. PERFORATED STILLING TUBE.
6. DELETED.
7. FOR PERIODIC DOSING OF THE WASTE WATER TANK.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR WASTE WATER TANK - T-55001, DOC. N. "123A90-DDL-MAC-DS-50008"

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

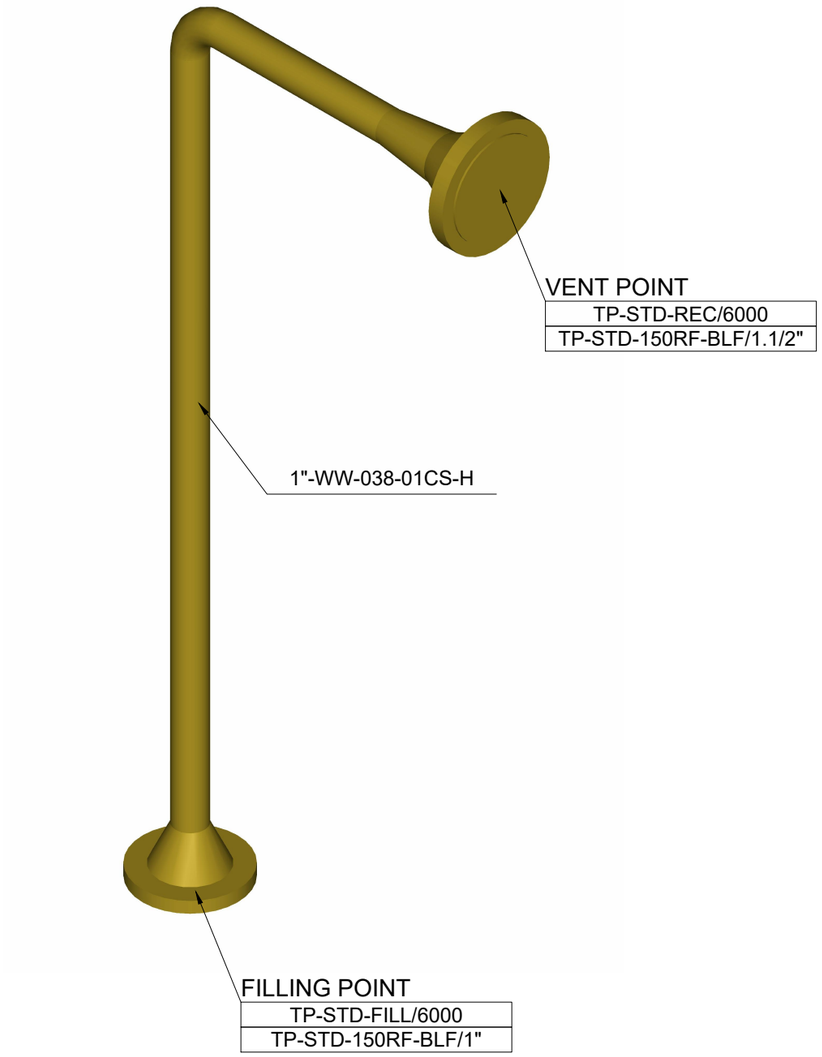
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PR-PID-80026	001	03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



50-00-TP-004

5.25 barg

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
50-00-TP-004

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

CROSSWIND / ROSETTI MARINO	CONTRACTOR: Rosetti Marino SpA	JOB :	123A90
	PROJECT: Base Load Power Hub (BLPH)	DATE :	20/09/2024
	TITLE: MATERIAL LIST FOR HYDROSTATIC TEST	REV. :	00

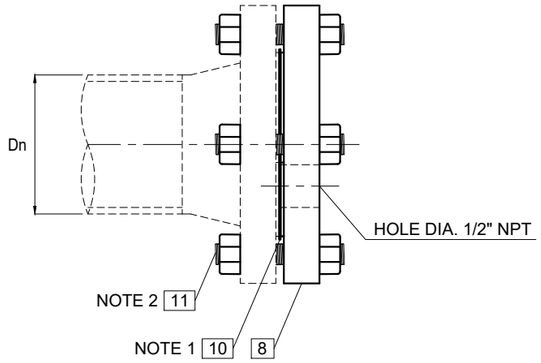
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL TEST	TP-STD-FILL/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3	1	3	
ALL TEST	TP-STD-FILL/6000	1MECH069	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4	1	4	
ALL TEST	TP-STD-REC/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9	1	9	
ALL TEST	TP-STD-REC/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	CAPFSS00200H00	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	CPL0SS00240H00	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	E900SS00340H00	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-PLGNPT/1/2"	PLGHSS00090H00	Plug Hex. Head THRD-M NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
TP-004	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-004	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-004	TP-STD-150RF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1	4	
TP-004	TP-STD-150RF-BLF/1.1/2"	FLBHCS00241H0H	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-004	TP-STD-150RF-BLF/1.1/2"	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ø1.1/2" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-004	TP-STD-150RF-BLF/1.1/2"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1	4	

STD NAME	RATING	DESCRIPTION
TP-STD-150RF	150 RF	STANDARD FOR BLIND POINT

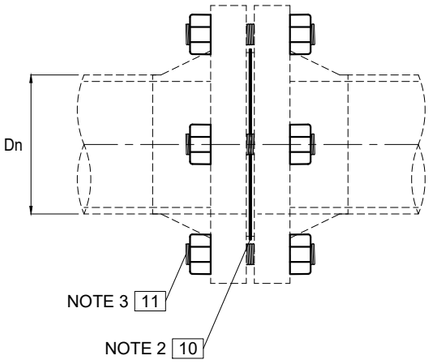
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-150RF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=60 MM	4
TP-STD-150RF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=85 MM	4
TP-STD-150RF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-150RF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø6" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-150RF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø8" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-150RF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø10" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=120 MM	12
TP-STD-150RF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø12" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=125 MM	12
TP-STD-150RF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø14" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=135 MM	12
TP-STD-150RF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø16" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=140 MM	16
TP-STD-150RF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø18" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=150 MM	16
TP-STD-150RF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø20" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=160 MM	20
TP-STD-150RF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø24" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=175 MM	20



TP-STD-150RF-BLF/Dn
BLIND FLANGE



TP-STD-150RF-GSK/Dn
GASKET ONLY

NOTES

1. GASKET MATERIAL AS PER PIPING CLASS
2. STUD BOLTS AND NUTS MATERIAL AS PER TEST MTO

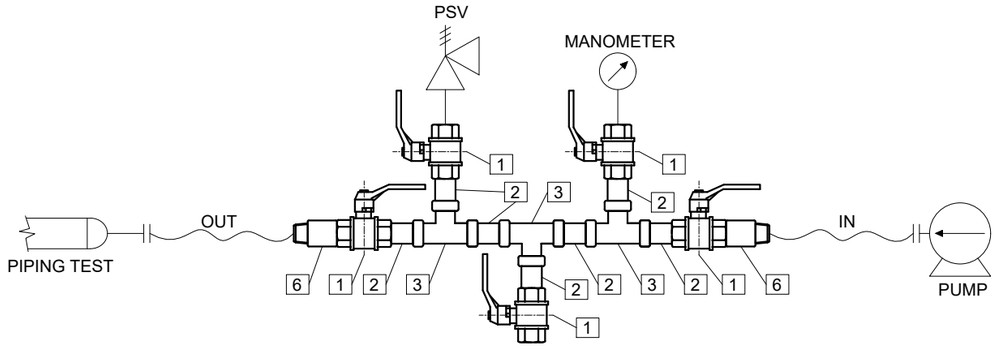
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-150RF
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_150RF	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-FILL	3000 / 6000 / 9000	STANDARD FOR FILLING POINT
TP-STD-FILL/RATING		



TP-STD-FILL/RATING

FILLING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-FILL/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 523 bar 304SS	2

NOTES

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING

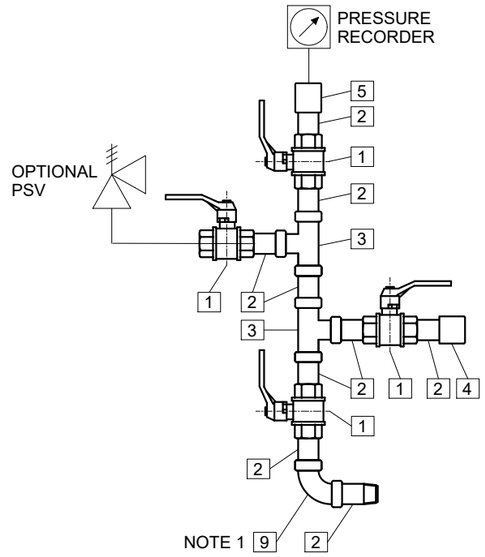
TP-STD-FILL

TP-STD-FILL/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_FILL	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-REC	3000 / 6000 / 9000	STANDARD FOR RECORDING POINT

TP-STD-REC/RATING



TP-STD-REC/RATING
RECORDING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-REC/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1

NOTES

1. 90 DEG ELBOW SHALL BE INSTALLED WHERE APPLICABLE ONLY

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-REC
TP-STD-REC/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_REC	00	1 OF 1

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
27	WW-038	038	1	01CS	H	4,55	80	N/A	1"-WW-038-01CS-H	123A90-DDL-PR-PID-80022	3,50	55	55-00	TP-004	Water	5.25	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

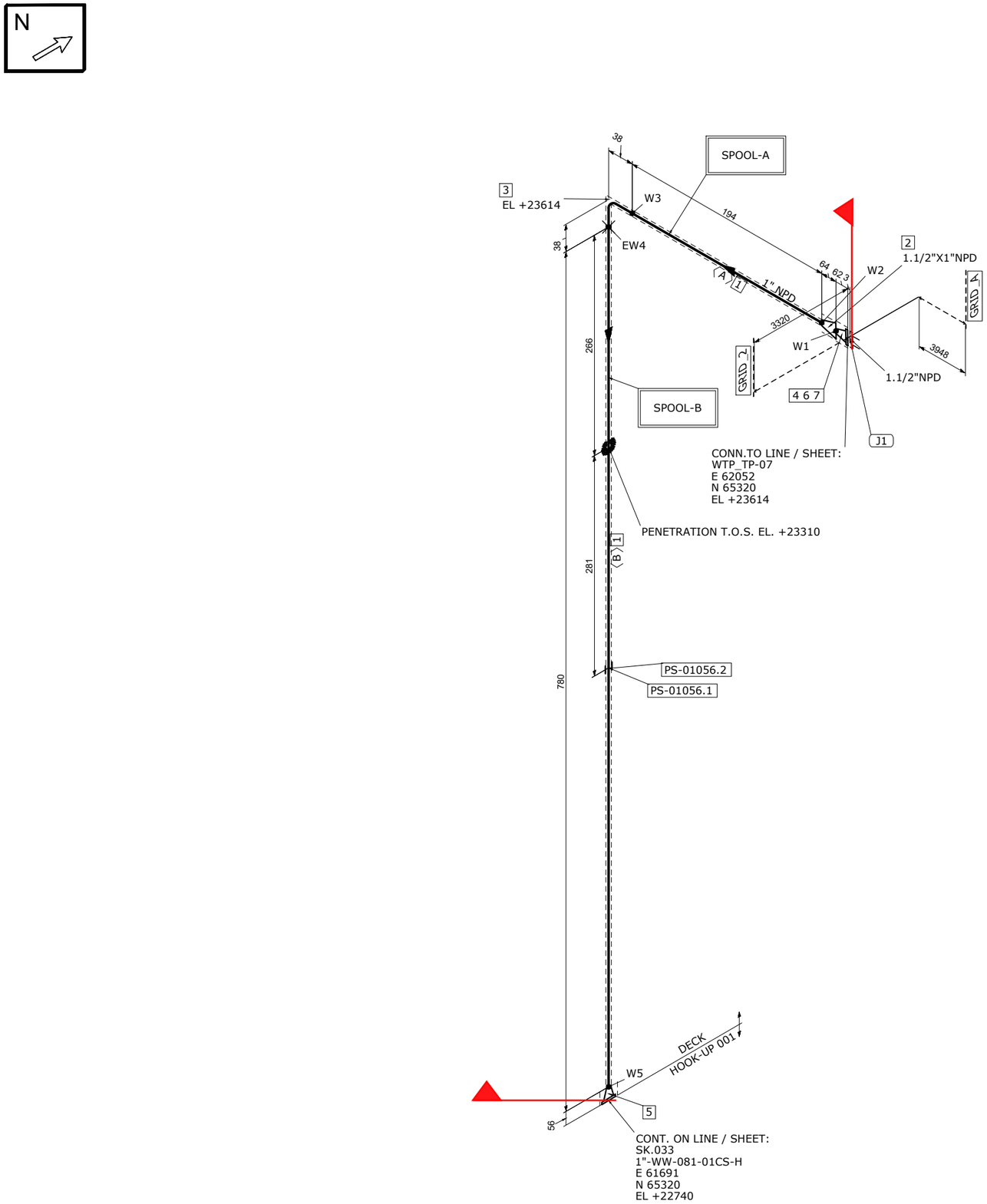
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
34	123A90-FDL-PP-DI-00027-01	**027**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-038-01CS-H	27/08/2024													**00**	**03**		**TP-004**



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.0M	3.2
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.4
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.8
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
7	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	7.0
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	7.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1.1/2	BW
W2	1	BW
W3	1	BW
EW4	1	BW
W5	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	194	BEVEL	BEVEL
B	1	780	BEVEL	BEVEL

SUPPORT LIST

PS-01056.1
PS-01056.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	3.0
B	1	3.9
MONT	1	0.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

55-00-TP-004

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5,25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80022
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-038-01CS-H

SK.027

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

SCALE: N/A

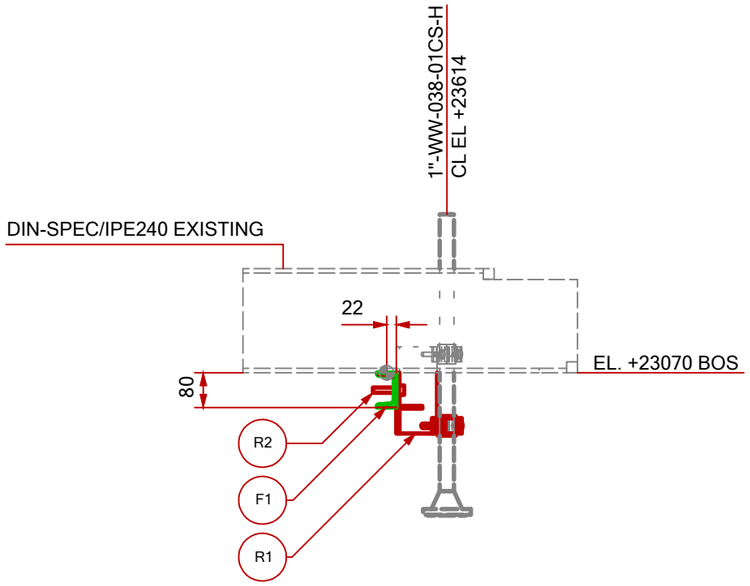
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00027 | SHEET / OF: 1/1 | REV.: 00

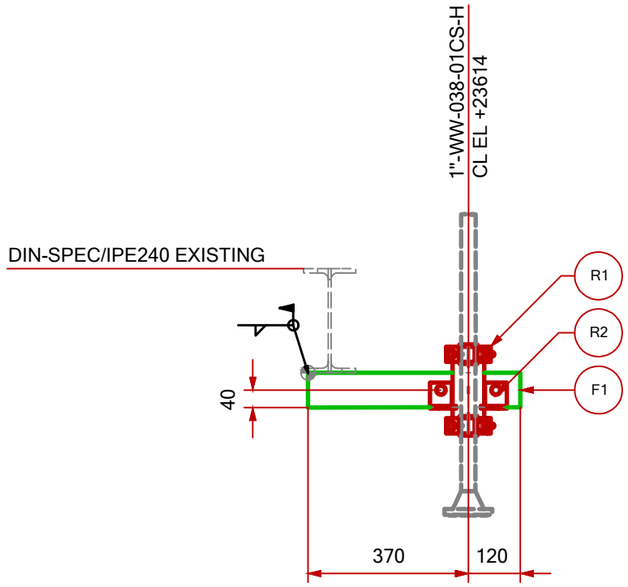
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

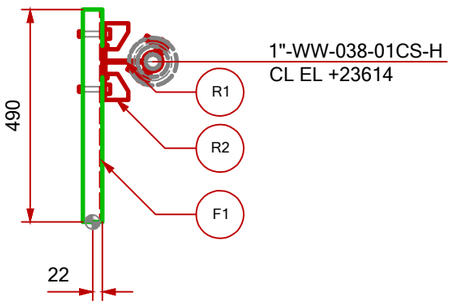
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01056	B1	PIP	LOWER DECK		1"-WW-038-01CS-H	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-004
PS-01056	B2	PIP	LOWER DECK		1"-WW-038-01CS-H	C-33 - 1 - I - 2		1	2,280	0,028	00	19/08/2024	IFR		TP-004



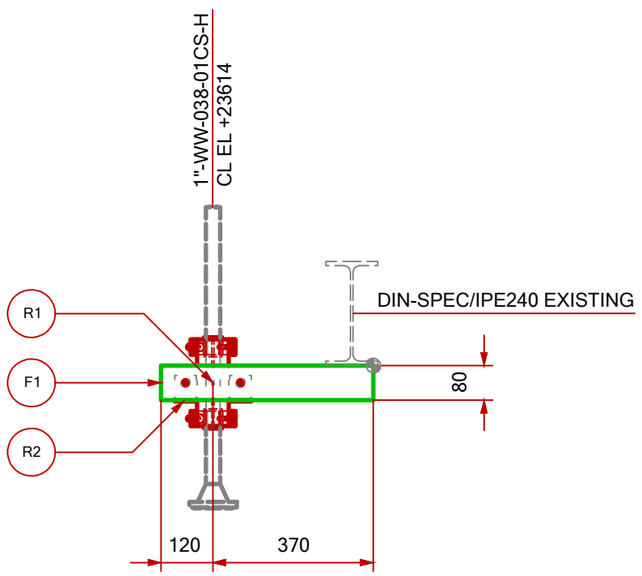
VIEW LOOKING NORTH



VIEW LOOKING WEST



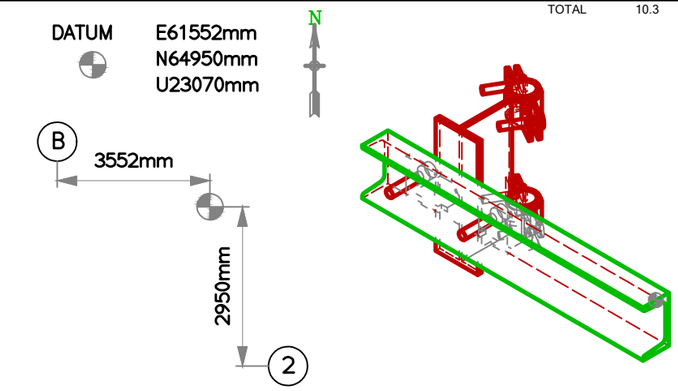
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	C-33-1-I-2	-	-	1	-	2.28	0.028
F1	BEAM	UPN80	Carbon Steel	490	1	8.66	4.24	0.157
						TOTAL	10.3	0.29



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01056

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

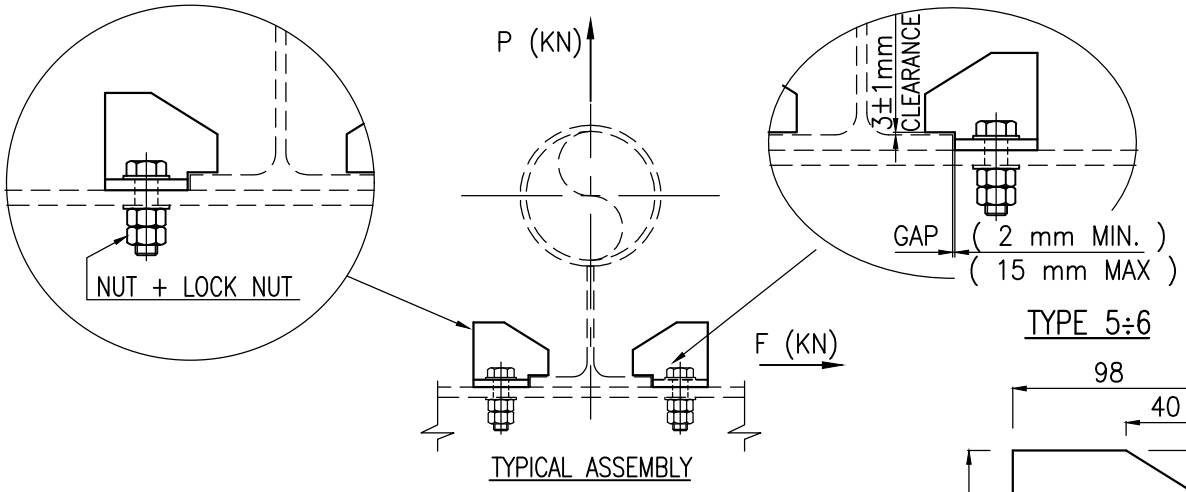
Document Number: STD–PP–DD–0001

Revision: 0

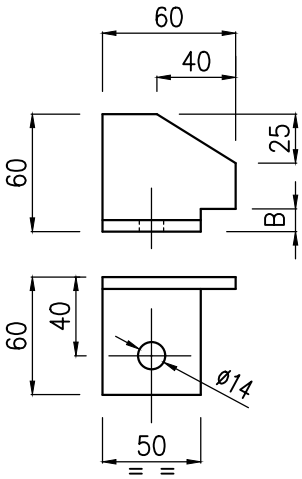
Date: –

GUIDA BULLONATA CON HOLD–DOWN PER SCARPETTE
BOLTED GUIDE WITH HOLD DOWN FOR SHOES

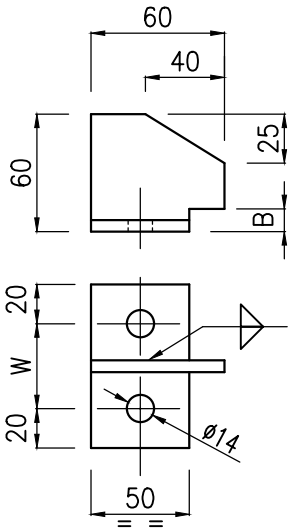
C–33



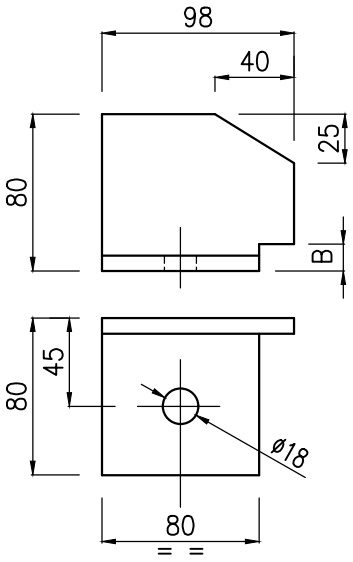
TYPE 1 (NOTE 4)



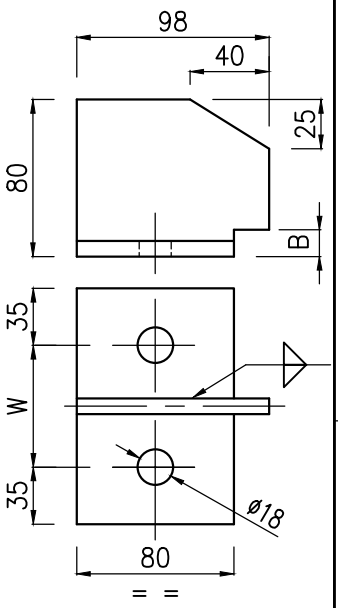
TYPE 2



TYPE 3÷4 (NOTE 4)



TYPE 5÷6



Example of designation : STD – TYPE – SIZE – GAP
(C–33 – 6 – M – 2)

TYPE	SHOE THK.	B	DIM. HOLE	SECTION	BOLTING	F (KN)	P (KN)
1	9–10	12	13	L60x60x6	M12x60	10	32
2	9–10	12	13	PLT. 10THK	M12x60	20	32
3	11–12	14	18	L80x80x8	M16x70	18	59
4	13–14	16	18	L80x80x8	M16x70	18	59
5	11–12	14	18	PLT. 10THK	M16x70	36	71
6	13–14	16	18	PLT. 10THK	M16x70	36	71

SIZE	EXIST. BEAM	W mm
A	HEA 100	58
B	HEA 120	66
C	HEA 140	76
D	HEA 160	86
E	HEA 180	96
F	HEA 200	106
	HEA 220	
G	HEA 240	120
	HEA 260	
	HEA 280	
H	HEA 300	126
I	UPN 100	46
	UPN 120	
J	UPN 140	60
K	UPN 200	100
L	IPE 200	64
	IPE 220	
M	IPE 270	70
N	IPE 300	72
O	IPE 600	94
Z	–	0

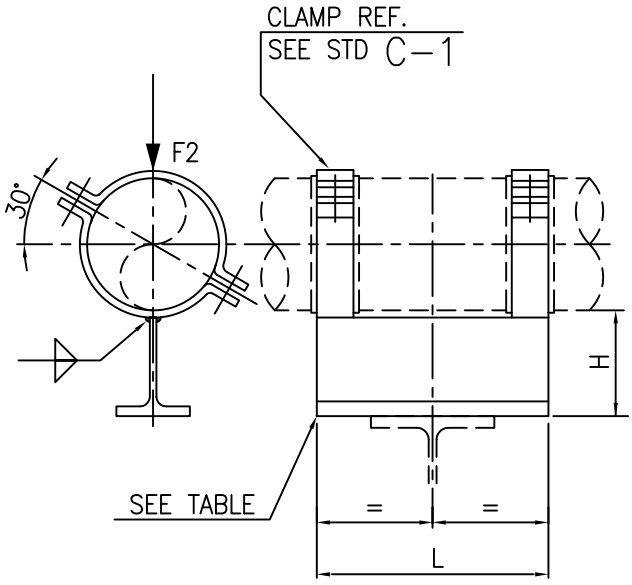
NOTES:
1– PLATES MATERIAL: CARBON STEEL
2– BOLTS (UNI 5739 Cl 8.8), NUTS (UNI 5588 Cl 8.8), LOCK NUT (UNI 7474 Cl.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– GUIDE TO BE SITE LOCATED UNLESS NOTED OTHERWISE ON THE PIPE SUPPORT DRAWING.
4– REALIZE A PIECE AS DRAWING AND A PIECE SYMMETRIC.
5– VARIABLE WEIGHT ADDICTED TO THE THE "TYPE" SELECTED AND "W" DIMENSION INDICATED.
6– TYPES 1, 3 & 4 SHALL BE USED PREFERABLY WHEN EXISTING BEAMS ARE ANGULARS

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

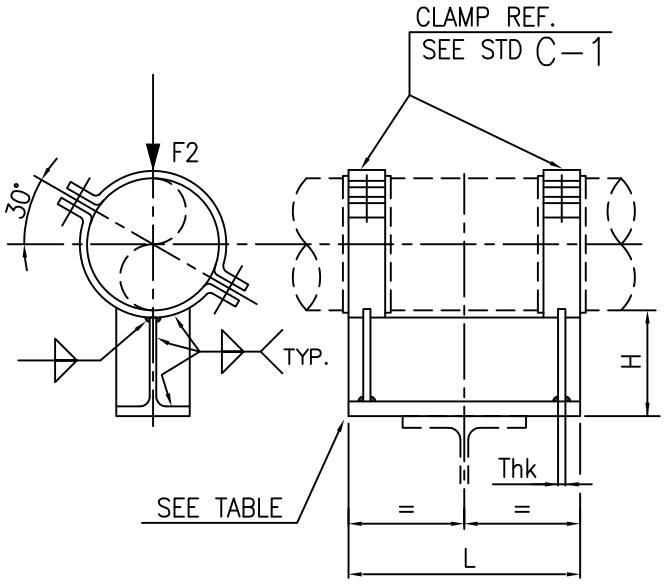
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

Example of designation : STD – PIPE ND" – H – L
(S–64 – 4" – 150 – 400)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

ALLOWABLE RANGE FOR SHOE LENGTH		
ø PIPE	MIN. "L" mm	MAX. "L" mm
½" ÷ 6"	200	600
8" ÷ 24"	250	600

NOTES:

1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	27	**To**	27
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
	ITEM				
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH) Order Number CW-I-WP4-2023-05

Client CRWIND CROSSWIND

Discipline PP Piping ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Item type / Oper.	Dimension / Exam. %	Thickness / N. Rep	Bevel / Films n.	Weld Length / Result	P/M / WPS Rip.	Material / Techn. Weld.	WPS / Defect length	Techn. Weld. / CND date	Type Cont. / NOTE	Accept. Date	Spool
1/27/1/_		**00**	**13-09-2024**	**8**	**AZ52**		**FWN**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				19-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable							
2/27/1/_		**00**	**17-09-2024**	**9**	**AZ53**		**RED**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				18-09-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000082	4	Acceptable				26-09-2024			
3/27/1/_		**00**	**17-09-2024**	**9**	**AZ53**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				18-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable							
4/27/1/_		**00**	**02-01-2025**	**113**	**AX 453**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				04-01-2025			
		RT	FIN	Weld Completion				10 %			Acceptable							
5/27/1/_		**00**	**18-09-2024**	**10**	**AZ53**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				19-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable							

Totals per DWG	**27**	**Prefabrication**	**0,45 m**	**4 Nr. Welds**	**4,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,55 m**	**5 Nr. Welds**	**5,50 inch**
		Accepted	**0,55 m**	**5 Nr. Welds**	**5,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,45 m**	**4 Nr. Welds**	**4,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,55 m**	**5 Nr. Welds**	**5,50 inch**
		Accepted	**0,55 m**	**5 Nr. Welds**	**5,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,45 m**	**4 Nr. Welds**	**4,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,55 m**	**5 Nr. Welds**	**5,50 inch**
		Accepted	**0,55 m**	**5 Nr. Welds**	**5,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**	Antonio Galesi		
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date:
RosettiDoc.Num.	**123A90MTR001**			17/12/2024

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
27	00	1	A	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32-J9K6232	1724000839	00740	4527-P9	W1-W2	
27	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W3	
27	00	1	A	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	W1	
27	00	1	A	01CS	1A	0,194	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
27	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W5	
27	00	1	B	01CS	1B	0,78	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test - NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	55-00-TP-004	: Test Pack 55-00-TP-004			Dwg	123A90-DDL-PR-PID-80022-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003262		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult to reach. After drying, inlet and outlet points were closed with covers.
3	Temporary means :	Blind flanges and plugs, if necessary, to isolate inlet and outlet points during process. Covers to close all openings after the drying.
4	Dew point (obtain after soaking and nitrogen purging):	NA
5	Valve body cavity, branches, etc.. Have been drained form residual water	
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	Restricting access to the area.
11	REMARKS:	None.

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-03	2025-01-07	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-03T05:59:21.892Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-07T15:15:58.591Z	

ITEM	Tag	55-00-TP-005	: Test Pack 55-00-TP-005			Dwg	123A90-DDL-PR-PID-80020
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003263		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	NA
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	NA
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	NA
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	Note
6	Check bolt tightening and flange management (excluded battery limit joints).	Note
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	NA
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	NA
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	NA
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Spool to be tested not erected. Flanges alignment to be checked during reinstatement.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	R.F. Montaggi	RM (Rosetti Marino)	
Name	Raffaele Forioso	Kangi Albonetti	
Date	2025-02-18	2025-02-18	
Signature	PROVERLIS Digitaly signed by Raffaele Forioso 2025-02-18T06:22:17.116Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-18T06:22:24.405Z	

ITEM	Tag	55-00-TP-005	: Test Pack 55-00-TP-005			Dwg	123A90-DDL-PR-PID-80020
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003264		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	OK
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	NA
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	OK
8	After the (re) installation of a valve check that it operates freely.	NA
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	NA
10	Check all locking device.	NA
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	PL
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-06	2025-03-04	
Signature	Digitaly signed by Emanuele Delfino 2025-02-06T15:28:42.295Z	Digitaly signed by Lorenzo Novaga 2025-03-04T14:39:05.460Z	

ITEM	Tag	55-00-TP-005	: Test Pack 55-00-TP-005			Dwg	123A90-DDL-PR-PID-80020
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10003265		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.	OK
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.	OK
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.	OK
4	Check that the insulation and cladding materials conform to the specifications.	PL
5	Check that the insulation is compatible with the Heat tracing system.	OK
6	Check that the surface condition prior to the application of the insulation	OK
7	Check the installation of wire mesh	OK
8	Check the overlap of the metal cladding.	OK
9	Check that each joint is sealed with a suitable sealant specified for water proofing.	PL
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.	PL
11	Control that locking devices boxes operate satisfactorily.	NA
12	Check the blinds, the spectacles and the instruments are visible.	NA
13	Check the flange accessibility without damaging the insulation.	PL
14	Check that color coding/line marking/flow direction are correct	OK

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-03-21	2025-03-27	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:18:15.364Z GDM	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-27T16:08:27.121Z	

ROSETTI MARINO — CROSSWIND

ITEM	Tag	55-00-TP-005	: Test Pack 55-00-TP-005		Dwg	123A90-DDL-PR-PID-80020	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003266	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX03	Cleaning

CLEANING MEDIUM

Air	Water	Steam	Oil	Other	Mechanical
☐	●	☐	☐	☐	☐

Component: NA

Chemical treatment: No — NA | Filtration: No | Screen size: NA

EQUIPMENTS

Equipment **removed**	Yes	Agreed list of removed fragile devices to be attached to this Test Sheet	NA
Excepted removed equipments, pipework installation is conform to the specifications & PID's			OK
Equipment **added**	No	Exhaustive list to be attached (temporary filters, spools…etc)	NA

TEST RESULTS

Test date	19/02/2025	Start time	08:55	End time	09:00
Flow rate	NA	Duration	5 min	Medium T°	NA

Operation Description

Connected the water source to the lowest point of the piping system.
Maintained a high flow rate to help dislodging and carry away debrises.
Flushing flow kept until the water exiting the system was clear and free of visible contaminants. Expelled water inspected for any debris to be noted.

Safety Precautions

Restricting access to the area.

Result and comments

Water has been found clear of solid debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-20	2025-02-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-20T05:14:31.291Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-20T10:03:14.899Z	

ROSETTI MARINO

CROSSWIND

ITEM	Tag	55-00-TP-005	: Test Pack 55-00-TP-005			Dwg	123A90-DDL-PR-PID-80020
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003267		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX05 Pressure Test

TEST DATA

Reference procedure	123A90-PML-QHSE-PRO-00092				
Design pressure	4.5 barg	Max test pressure	6.75 barg	Min hold period	30 min

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)	Yes
Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)	Yes

Medium

Test medium	WATER

TEST RESULTS

Test date	See attachment	Start time	See attachment	End time	See attachment
Ambient temperature is recorded	NA			Test medium temperature is recorded	Yes
Pressure recorded during test hold period	Min See attachment	Max	See attachment	Variation	See attachment
Line has been depressurised to	NA			At maximum of bar/min	See attachment
Pressure test completed sucessfully and approved	Yes			Temperature and pressure disc chart attached	NA
Instrument calibration certificates attached	Yes			Dead-weight tester log attached	NA
Record of failures and corrective action attached	No			Battery limits of the test attached	Yes
If required produce Red Line Mark Up for "AS BUILT".					

Comments:

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-20	2025-02-20	
Signature	Digitaly signed by Emanuele Delfino 2025-02-20T05:14:42.914Z	Digitaly signed by Massimo Bruschi 2025-02-20T10:04:03.581Z	

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-00-TP-005

Instrument

Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A014ILNH2N
Log temperature *Registrazioni di Temperatura*	Active *Attivo*
Scale range *Campo scala*	(0 ... 1000) bar a
Accuracy *Accuratezza*	0.1 % FS
Tag number *Numero tag*	
Communication *Comunicazione*	Wireless (00:13:43:85:E0:AF)

Measurement conditions

Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	60000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	01:02:47
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	09:05:46 am

Logger protocol

Protocollo di acquisizione elenco dati

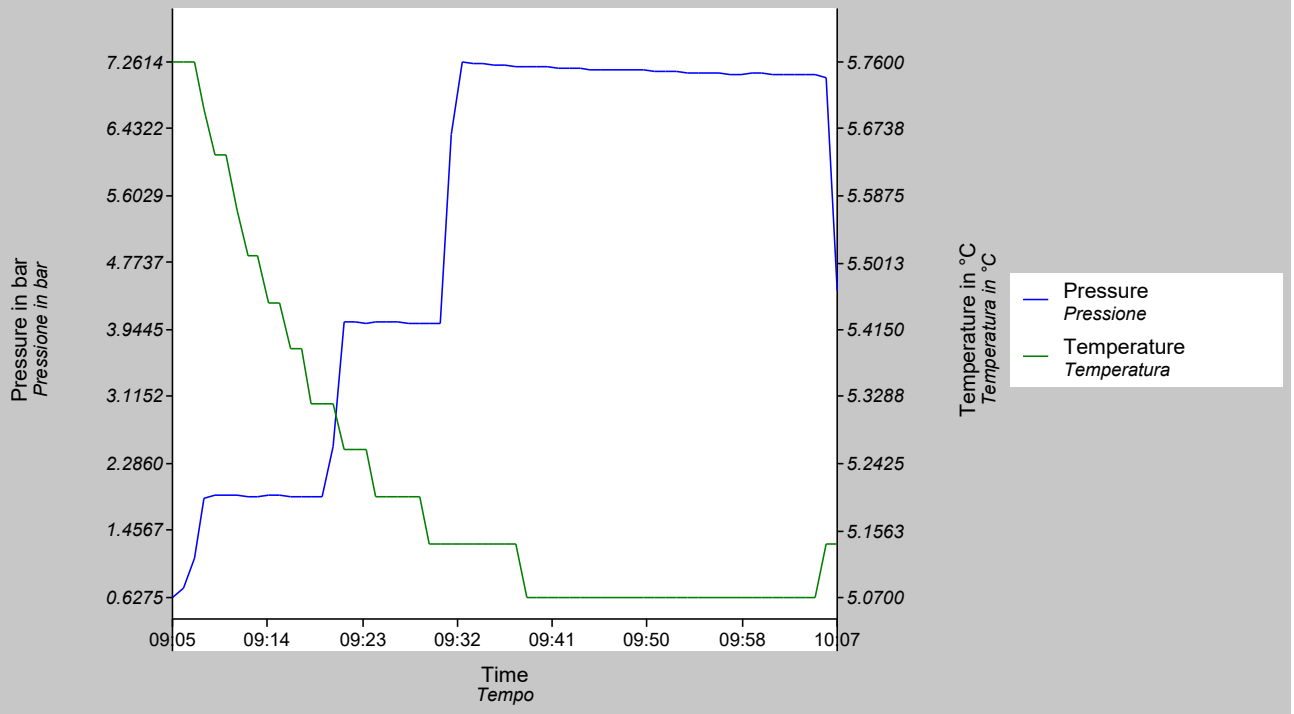
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-00-TP-005

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/19/2025 09:05:46.000	0.6275	5.7600
02/19/2025 09:06:46.000	0.7373	5.7600
02/19/2025 09:07:46.000	1.1214	5.7600
02/19/2025 09:08:46.000	1.8589	5.7000
02/19/2025 09:09:46.000	1.8963	5.6400
02/19/2025 09:10:46.000	1.8938	5.6400
02/19/2025 09:11:46.000	1.9007	5.5700
02/19/2025 09:12:46.000	1.8752	5.5100
02/19/2025 09:13:46.000	1.8812	5.5100
02/19/2025 09:14:46.000	1.9019	5.4500
02/19/2025 09:15:46.000	1.8981	5.4500
02/19/2025 09:16:46.000	1.8818	5.3900
02/19/2025 09:17:46.000	1.8761	5.3900
02/19/2025 09:18:46.000	1.8709	5.3200
02/19/2025 09:19:46.000	1.8737	5.3200
02/19/2025 09:20:46.000	2.4919	5.3200
02/19/2025 09:21:46.000	4.0424	5.2600

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-00-TP-005

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/19/2025 09:22:46.000	4.0343	5.2600
02/19/2025 09:23:46.000	4.0240	5.2600
02/19/2025 09:24:46.000	4.0329	5.2000
02/19/2025 09:25:46.000	4.0352	5.2000
02/19/2025 09:26:46.000	4.0343	5.2000
02/19/2025 09:27:46.000	4.0295	5.2000
02/19/2025 09:28:46.000	4.0299	5.2000
02/19/2025 09:29:46.000	4.0272	5.1400
02/19/2025 09:30:46.000	4.0166	5.1400
02/19/2025 09:31:46.000	6.3574	5.1400
02/19/2025 09:32:46.000	7.2614	5.1400
02/19/2025 09:33:46.000	7.2473	5.1400
02/19/2025 09:34:46.000	7.2360	5.1400
02/19/2025 09:35:46.000	7.2285	5.1400
02/19/2025 09:36:46.000	7.2189	5.1400
02/19/2025 09:37:46.000	7.2052	5.1400
02/19/2025 09:38:46.000	7.1976	5.0700
02/19/2025 09:39:46.000	7.2019	5.0700
02/19/2025 09:40:46.000	7.1933	5.0700
02/19/2025 09:41:46.000	7.1920	5.0700
02/19/2025 09:42:46.000	7.1864	5.0700
02/19/2025 09:43:46.000	7.1796	5.0700
02/19/2025 09:44:46.000	7.1735	5.0700
02/19/2025 09:45:46.000	7.1569	5.0700
02/19/2025 09:46:46.000	7.1711	5.0700
02/19/2025 09:47:46.000	7.1658	5.0700
02/19/2025 09:48:46.000	7.1608	5.0700
02/19/2025 09:49:46.000	7.1570	5.0700
02/19/2025 09:50:46.000	7.1534	5.0700
02/19/2025 09:51:46.000	7.1475	5.0700
02/19/2025 09:52:46.000	7.1425	5.0700
02/19/2025 09:53:46.000	7.1207	5.0700
02/19/2025 09:54:46.000	7.1170	5.0700
02/19/2025 09:55:46.000	7.1158	5.0700
02/19/2025 09:56:46.000	7.1238	5.0700
02/19/2025 09:57:46.000	7.1138	5.0700
02/19/2025 09:58:46.000	7.1032	5.0700
02/19/2025 09:59:46.000	7.1240	5.0700
02/19/2025 10:00:46.000	7.1207	5.0700
02/19/2025 10:01:46.000	7.1119	5.0700
02/19/2025 10:02:46.000	7.1147	5.0700
02/19/2025 10:03:46.000	7.1112	5.0700
02/19/2025 10:04:46.000	7.1084	5.0700
02/19/2025 10:05:46.000	7.1001	5.0700
02/19/2025 10:06:46.000	7.0744	5.1400
02/19/2025 10:07:46.000	4.4246	5.1400

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0514-SM-24

Certificate of Calibration

- data di emissione date of issue	2024-10-31
- cliente customer	FAST AUTOMATION SRL VIA DELLA PREVIDENZA SOCIALE, 8 IT-42124 REGGIO EMILIA (RE)
- destinatario receiver	ROSETTI MARINO SPA - YARD PIOMBONI VIA DEL MARCHESATO, 37 IT-48122 MARINA DI RAVENNA (RA)

Il presente certificato di taratura è emesso in base all'accreditamento LAT N. 114 rilasciato in accordo ai decreti attuativi della legge n. 273/1991 che ha istituito il Sistema Nazionale di Taratura (SNT). ACCREDIA attesta le capacità di misura e di taratura, le competenze metrologiche del Centro e la riferibilità delle tarature eseguite ai campioni nazionali ed internazionali delle unità del Sistema Internazionale delle Unità (SI).
Questo certificato non può essere riprodotto in modo parziale, salvo espressa autorizzazione scritta da parte del Centro.

Si riferisce a
referring to

- oggetto *item*	Misuratore di pressione elettronico Electrical pressure gauge
- costruttore *manufacturer*	WIKA
- modello *model*	CPG1500
- matricola *serial number*	1A014ILNH2N
- data di ricev. oggetto *date of receipt of item*	2024-10-24
- data delle misure *date of measurements*	2024-10-31
- registro di laboratorio *laboratory reference*	0514-SM-24

This certificate of calibration is issued in compliance with the accreditation LAT No.114 granted according to decrees connected with Italian law No. 273/1991 which has established the National Calibration System. ACCREDIA attests the calibration and measurement capability, metrological competence of the Centre and the traceability of calibration results to the national and International standards of the International System of Units (SI).
This certificate may not be partially reproduced, except with the prior written permission of the issuing Centre.

I risultati di misura riportati nel presente Certificato sono stati ottenuti applicando le procedure di taratura citate alla pagina seguente, dove sono specificati anche i campioni o gli strumenti che garantiscono la catena di riferibilità del Centro e i rispettivi certificati di taratura in corso di validità. Essi si riferiscono esclusivamente all'oggetto in taratura e sono validi nel momento e nelle condizioni di taratura, salvo diversamente specificato.

The measurement results reported in this Certificate were obtained following the calibration procedures given in the following page, where the reference standards or instruments are indicated which guarantee the traceability chain of the laboratory, and the related calibration certificates in the course of validity are indicated as well. They relate only to the calibrated item and they are valid for the time and conditions of calibration, unless otherwise specified.

Le incertezze di misura dichiarate in questo documento sono state determinate conformemente alla Guida ISO/IEC 98 e al documento EA-4/02. Solitamente sono espresse come incertezza estesa ottenuta moltiplicando l'incertezza tipo per il fattore di copertura *k* corrispondente ad un livello di fiducia di circa il 95 %. Normalmente tale fattore *k* vale 2.

The measurement uncertainties stated in this document have been determined according to the ISO/IEC Guide 98 and to EA-4/02. Usually, they have been estimated as expanded uncertainty obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally, this factor k is 2.

Direzione Tecnica
(Approving Officer)

Enrico Reccagni

Enrico Reccagni

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
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LAT N° 114

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

Misuratore di pressione elettronico *Electrical pressure gauge*	
Tipo *Model*	Misuratore di pressione elettronico Electrical pressure gauge
Numero di matricola *Serial No.*	1A014ILNH2N
Campo di misura *Scale range*	(0 ... 1000) bar g
Accuratezza dichiarata dal costruttore *Accuracy declared by the manufacturer*	0,1 % FS
Risoluzione *Resolution (scale division)*	0,1 bar
Tag. N. *Tag No.*	--

Procedura di taratura e catena di riferibilità
Calibration procedure and traceability chain

La taratura è stata effettuata in accordo alla linea guida DKD-R 6-1 "Taratura di strumenti di pressione" (versione 03/2014) procedura B, per confronto fra i valori dello strumento in taratura con quelli di riferimento dati dal campione di lavoro.

Calibration was carried out according to DKD-R 6-1 "Kalibrierung von Druckmessgeräten" (Ausgabe 03/2014) procedure B, by comparing the measured values of the calibration item with those of the reference or working standard.

I risultati riportati sono stati ottenuti applicando le procedure n° LMO-PT-01 rev.2

The results have been obtained using the procedures n° LMO-PT-01 rev.2

La catena di riferibilità ha inizio dai campioni di riferimento n° PM1-09

The traceability chain starts from the reference standards n° PM1-09

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

Laboratorio WIKA ITALIA - Laboratorio di Modugno (BA)
WIKA ITALY Laboratory - Modugno (BA)

Campione di lavoro
Working Standard

Norma di riferimento (RS) Bilancia di pressione *Reference standard (RS) Dead-weight tester*	
Tipo *Model*	PM1-09
Certificato di taratura *Calibration mark*	D-K-15105/D21090
Campo di misura *Scale range*	(10 ... 2500) bar g
Accuratezza *Accuracy*	0,015 % della lettura + 255 Pa

Operatore
Technichian

Francesco Donatelli

WIKA Italia S.r.l. & C. s.a.s.
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Condizioni di misura
Measurement conditions

Schema di collegamento *Assembly*	
Fluido utilizzato	Sebacate
Pressure medium	*Sebacate*
Livello di riferimento	Superficie di tenuta DUT
Refence height (for reference value)	*Sealing face DUT*
Posizione di montaggio	verticale
Position during calibration	*vertical*

Note di taratura
Calibration Note

Lo strumento è stato tarato e riconsegnato nelle stesse condizioni in cui è arrivato nel laboratorio, in accordo con il metodo "as found as left" / The device under test (DUT) was calibrated in the same conditions it was arrived in laboratory, according to the method "as found as left".

Condizioni Ambientali
Environmental conditions

Temperatura *Temperature*	(22 ± 1,5)	°C
Pressione atmoferica *Atmospheric pressure*	(1016,6 ± 0,2)	hPa
Umidità relativa *Rel. Humidity*	(50 ± 15)	% UR

I dati meteo sono stati acquisiti tramite stazione meteo WIKA CPU6000-W s/n.1A00VCX6GJ2

Weather data were acquired via the WIKA CPU6000-W weather station s/n.1A00VCX6GJ2

Misure rilevate
Measurement results

Valore di riferimento *Reference value RS* bar	**Letture** *Reading DUT* bar		
	M1	**M2**	**M3**
0,00	0,0	0,0	0,0
99,91	99,9	100,0	99,9
199,82	199,9	199,9	199,9
299,72	299,8	299,9	299,8
399,63	399,7	399,8	399,7
499,53	499,6	499,6	499,6
599,43	599,5	599,5	599,5
699,33	699,3	699,4	699,4
799,24	799,2	799,2	799,2
899,13	899,1	899,1	899,1
999,03	999,0	999,0	999,0

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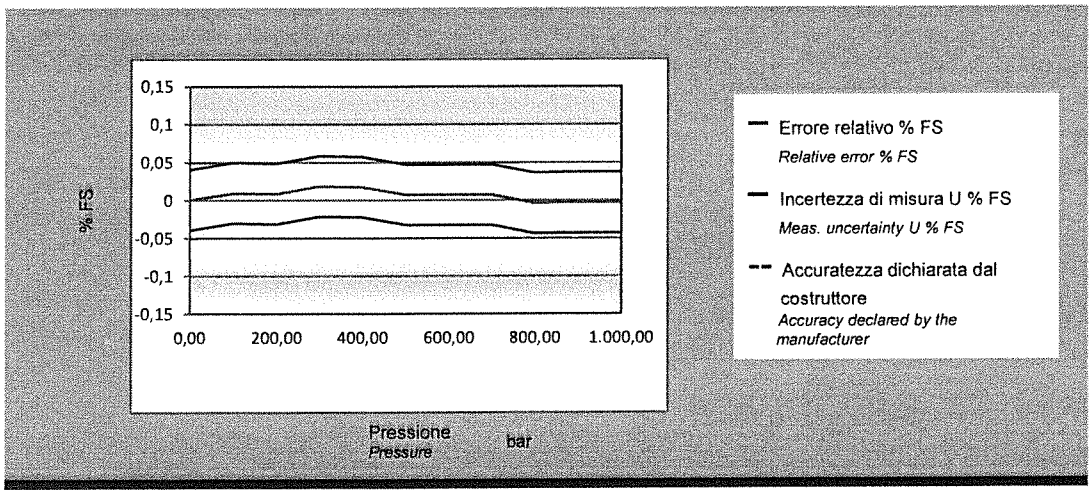
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Incertezza di misura
Uncertainty of measurement

Valori di riferimento *Reference value RS* bar	Media delle misure *Mean value* bar	Errore *Error* bar	Ripetibilità *Repeatability* bar	Isteresi *Hysteresis* bar	Incertezza di misura *Meas. Uncertainty* bar
0,00	0,0	0,0	0,0	0,0	0,40
99,91	100,0	0,1	0,0	0,1	0,40
199,82	199,9	0,1	0,0	0,0	0,40
299,72	299,9	0,2	0,0	0,1	0,40
399,63	399,8	0,2	0,0	0,1	0,40
499,53	499,6	0,1	0,0	0,0	0,40
599,43	599,5	0,1	0,0	0,0	0,40
699,33	699,4	0,1	0,1	0,1	0,40
799,24	799,2	0,0	0,0	0,0	0,40
899,13	899,1	0,0	0,0	0,0	0,40
999,03	999,0	0,0	0,0	0,0	0,40

Grafico degli errori di misura
Graphical representation of measurement uncertainty



L'incertezza estesa senza correzione del DUT è pari a 0,6 bar
The expanded uncertainty of the DUT without correction is equal to

Questo dato è ottenuto come MAX{Incertezza_di_misura$_i$ + |Errore$_i$|} della tabella precedente
This data is obatined as MAX{Meas._uncertainty$_i$ + |Error$_i$|} of the previous table

Il presente certificato non rappresenta una dichiarazione di conformità a specifica
This certificate is not a statement of compliance

Base Load Power Hub (BLPH)

TEST PACK

N°55-00-TP-005
SUB-SYSTEM N° 55-00

System	55
Sub-System	55-00
Test Pressure	6.75 barg
Test Fluid	WATER
Test Duration	30 min

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
   - 8.4 CXX02 – Painting Line - NOT APPLICABLE
   - 8.5 TMX03 – Cleaning
   - 8.6 TMX05 – Pressure test
   - 8.7 TMX25 – Gross Air Leak Test - NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 - Drying

1. COLOURED MARKED P&IDs

DRAWING NO. DRAWING_NO.

REV. REV

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr

GAS CONFIRMED 50 XA 001 — F&G
SMOKE CONFIRMED 50 XA 002 — F&G
FAULT PACKAGE 50 XA 003 — ESD
50-XS-001 SHUT-DOWN — ESD
NOTE 6

CONTRACTOR | SUPPLIER

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

123A90-DDL-PR-PID-80025
TO 50-TDI-002
50 TI 001
BLOCKED OUTLET SET @ 6 barg
50 PSV 011 1D2
2"-SWR-291-01SD-N
BLPH-MV-471
SD LO
03
NOTE 7
1"-SWS-290-01SD-E
50 TT 001
50 TE 001
03
1.1/2"
TP 017 50
E
4"x1.1/2" ECC. RED.
4"x1.1/2" ECC. RED.
123A90-DDL-PR-PID-80021
FROM SEA WATER LIFT PUMP
1-1/2"-SWS-035-01SD-E
BLPH-MV-241 3/4"

A-50000
WATER TREATMENT PACKAGE
SEE VENDOR DRAWING
DOC. N. 1724000448-PR-PID-00013

FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

E
TP 005 50 03
123A90-DDL-PR-PID-80021
TO SEA WATER LIFT PUMP AND LIFT PUMP CAISSONS
1"-CI-029-01CP-E
1"-CI-043-01CP-E
TP 006 50 03
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK
DECK
HOOK-UP 003

SUPPLIER | CONTRACTOR

TP 003 50 03
1.1/2"x1"
3"x1.1/2"
1"-SWR-045-01CS-H
123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

TP 007 50 03
1.1/2"x1"
1"-WW-038-01CS-H
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

55-10-TP-005
6.75 barg

NOTES

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
7. ROUTED TO THE SEA 03

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.
6. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

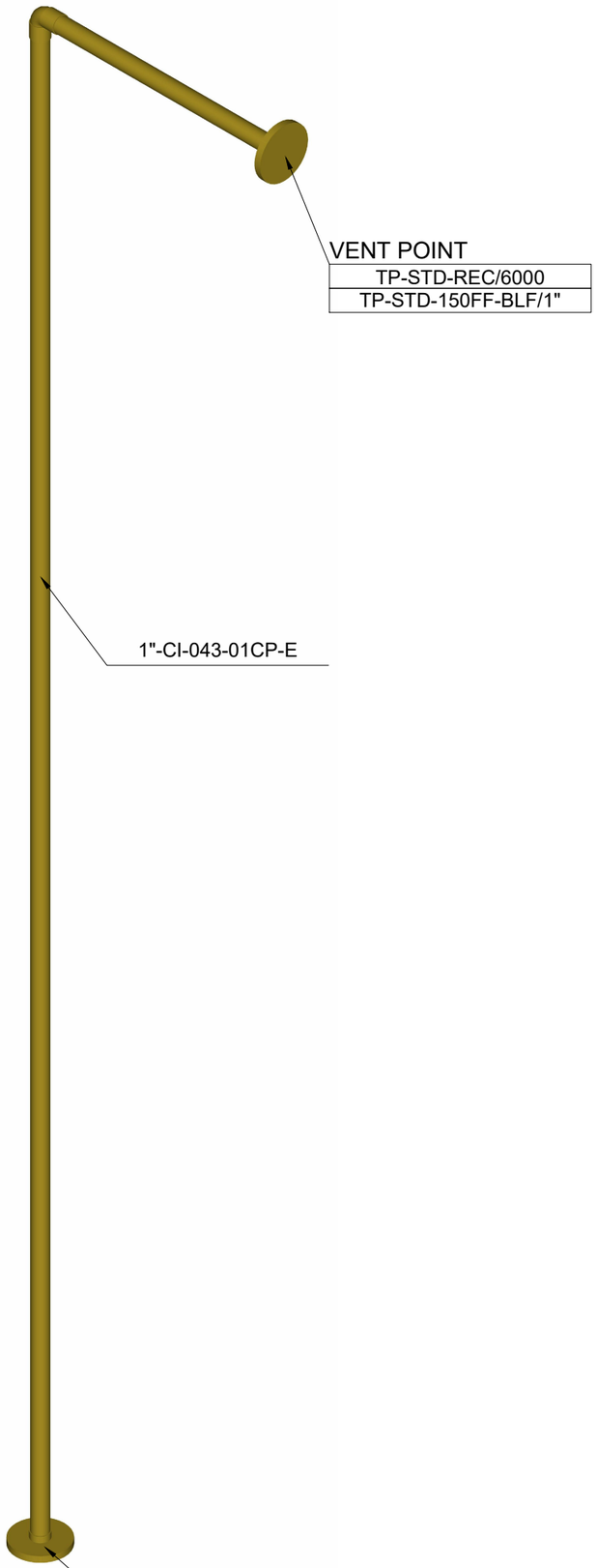
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE	
A1	DRAWING NO. 123A90-DDL-PR-PID-80022		SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-00-TP-005

6.75 barg

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
55-00-TP-005

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

CROSSWIND / ROSETTI MARINO	CONTRACTOR: Rosetti Marino SpA	JOB :	123A90
	PROJECT: Base Load Power Hub (BLPH)	DATE :	20/09/2024
	TITLE: MATERIAL LIST FOR HYDROSTATIC TEST	REV. :	00

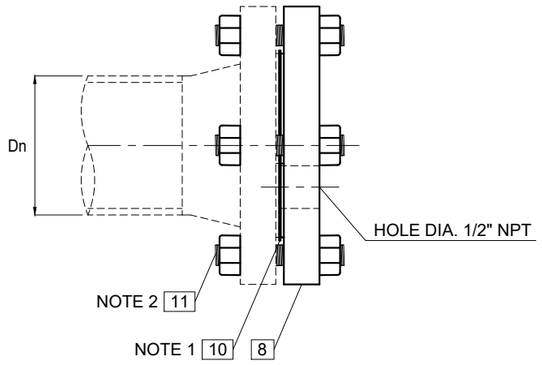
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL TEST	TP-STD-FILL/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3	1	3	
ALL TEST	TP-STD-FILL/6000	1MECH069	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4	1	4	
ALL TEST	TP-STD-REC/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9	1	9	
ALL TEST	TP-STD-REC/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	CAPFSS00200H00	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	CPL0SS00240H00	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	E900SS00340H00	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-PLGNPT/1/2"	PLGHSS00090H00	Plug Hex. Head THRD-M NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
TP-005	TP-STD-150FF-BLF/1"	FLBHCS0244010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB FF ASTM/ASME A/SA105	1	2	2	
TP-005	TP-STD-150FF-BLF/1"	GFL3GK13690100	Gasket Flat Thk. 3 mm ø1" 150LB FF NITRILE RUBBER	1	2	2	
TP-005	TP-STD-150FF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	2	8	

STD NAME	RATING	DESCRIPTION
TP-STD-150FF	150 FF	STANDARD FOR BLIND POINT

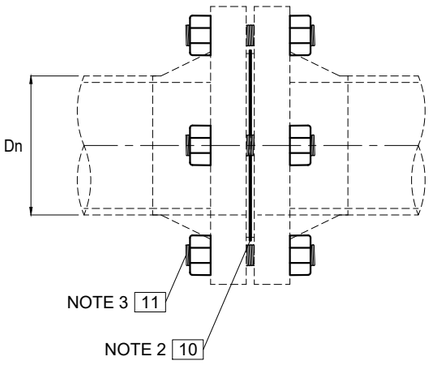
TP-STD-150FF-BLF/Dn
TP-STD-150FF-GSK/Dn

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-150FF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=60 MM	4
TP-STD-150FF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150FF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø1" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150FF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150FF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150FF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø2" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=85 MM	4
TP-STD-150FF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150FF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø3" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150FF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø4" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-150FF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø6" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-150FF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø8" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-150FF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø10" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=120 MM	12
TP-STD-150FF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø12" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=125 MM	12
TP-STD-150FF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø14" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=135 MM	12
TP-STD-150FF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø16" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=140 MM	16
TP-STD-150FF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø18" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=150 MM	16
TP-STD-150FF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø20" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=160 MM	20
TP-STD-150FF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 150LB FF ASTM/ASME A/SA105	1
	10	Gasket ø24" 150LB FF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=175 MM	20



TP-STD-150FF-BLF/Dn
BLIND FLANGE



TP-STD-150FF-GSK/Dn
GASKET ONLY

NOTES

1. GASKET MATERIAL AS PER PIPING CLASS
2. STUD BOLTS AND NUTS MATERIAL AS PER TEST MTO

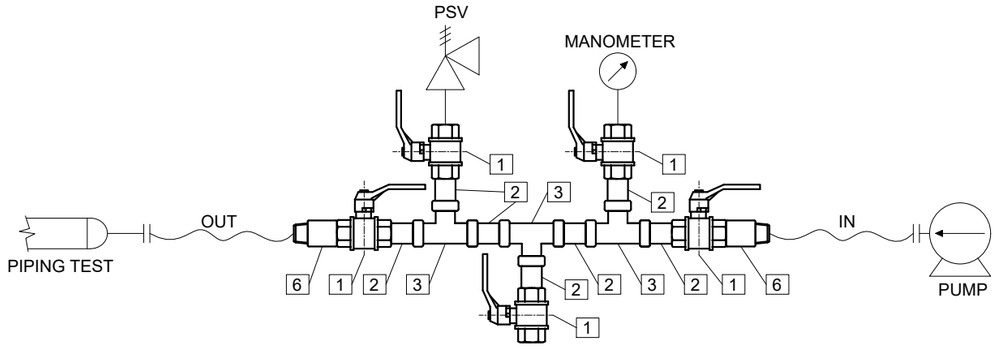
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-150FF
TP-STD-150FF-BLF/Dn
TP-STD-150FF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_150FF	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-FILL	3000 / 6000 / 9000	STANDARD FOR FILLING POINT
TP-STD-FILL/RATING		



TP-STD-FILL/RATING

FILLING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-FILL/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 523 bar 304SS	2

NOTES

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING

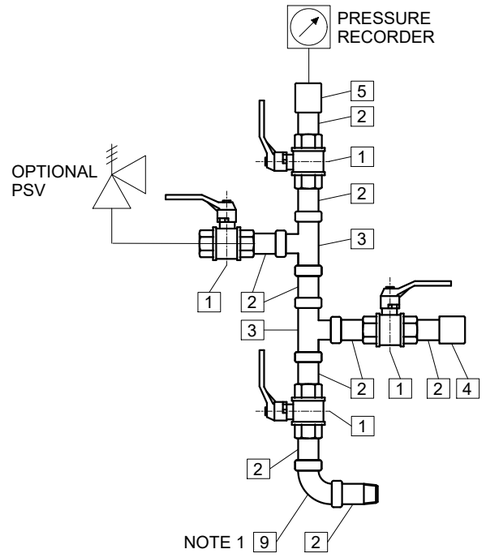
TP-STD-FILL

TP-STD-FILL/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_FILL	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-REC	3000 / 6000 / 9000	STANDARD FOR RECORDING POINT

TP-STD-REC/RATING



TP-STD-REC/RATING
RECORDING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-REC/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1

NOTES

1. 90 DEG ELBOW SHALL BE INSTALLED WHERE APPLICABLE ONLY

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-REC
TP-STD-REC/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_REC	00	1 OF 1

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
28	CI-043	043	1	01CP	E	4,55	80	Yes	1"-CI-043-01CP-E	123A90-DDL-PR-PID-80022	4,50	55	55-00	TP-005/TP-104	Water	6.75	Chemical Injection	CPVC	INF	Art. 4, par. 3	N/A	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

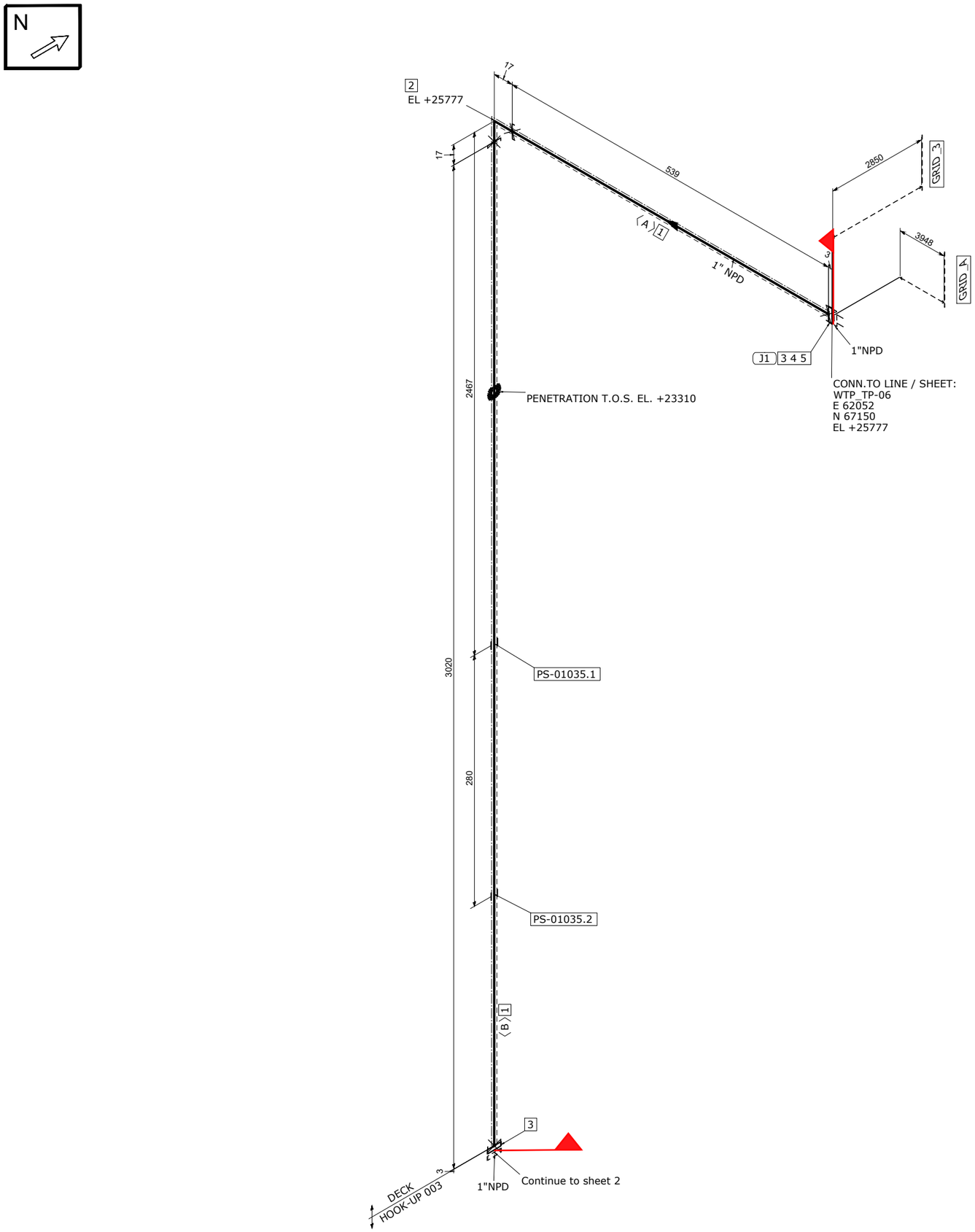
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
35	123A90-FDL-PP-DI-00028-01	**028**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-CI-043-01CP-E	03/09/2024													**00**	**04**		**TP-005**



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	3.6M	1.4
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
3	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.4
4	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
5	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	2.5
OVERALL WEIGHT [kg]	2.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	539	SQ.CUT	SQ.CUT
B	1	3020	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01035.1
PS-01035.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		2.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	03-09-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-043-01CP-E

SK.028

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

SCALE: N/A

DRAWN	CHECKED	APPROVED	DATE
STAFF SRL	RT	LM	03-09-2024

FORMAT: A3

DRAWING NO.: 123A90-FDL-PP-DI-00028

SHEET / OF: 1/2

REV.: 00

55-00-TP-005

MASTER

LINE DATA

NDT INSPECTION CATEGORY	N/A			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A	BASE RAL N/A		FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20	[mm]	DESIGN	PRESS. 4.5	[barg]	TEMP. 5 / 50	[°C]	
HEAT TRACING	Yes			TEST	PRESS. 6.75	[barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

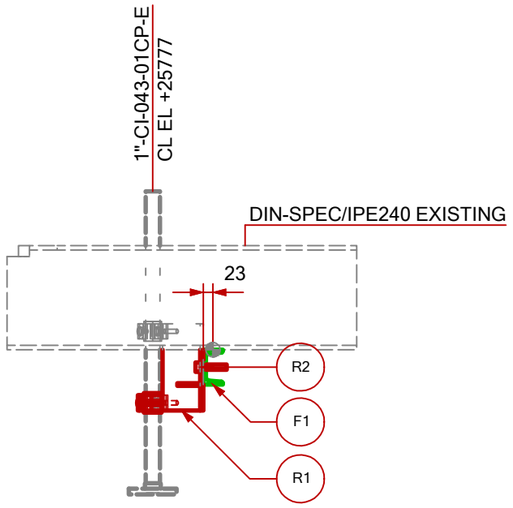
P&ID	123A90-DDL-PR-PID-80022
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

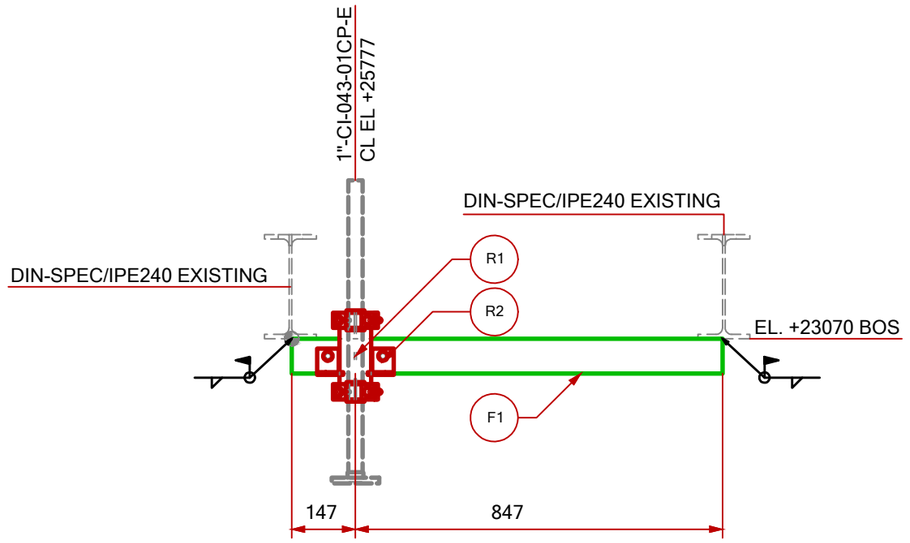
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

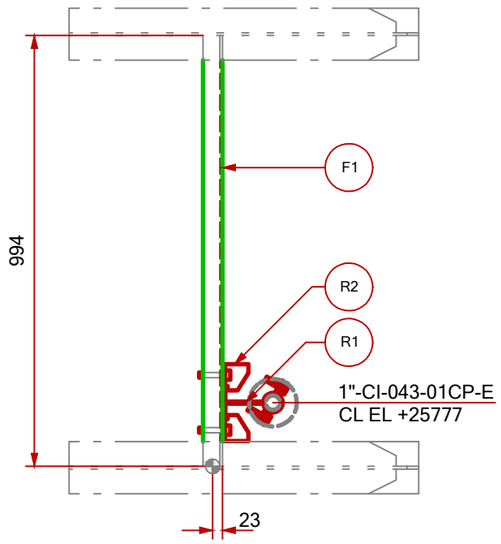
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01035	B1	PIP	LOWER DECK		1"-CI-043-01CP-E	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-005
PS-01035	B2	PIP	LOWER DECK		1"-CI-043-01CP-E	C-33 - 1 - I - 2		1	0,980	0,028	00	19/08/2024	IFR		TP-005



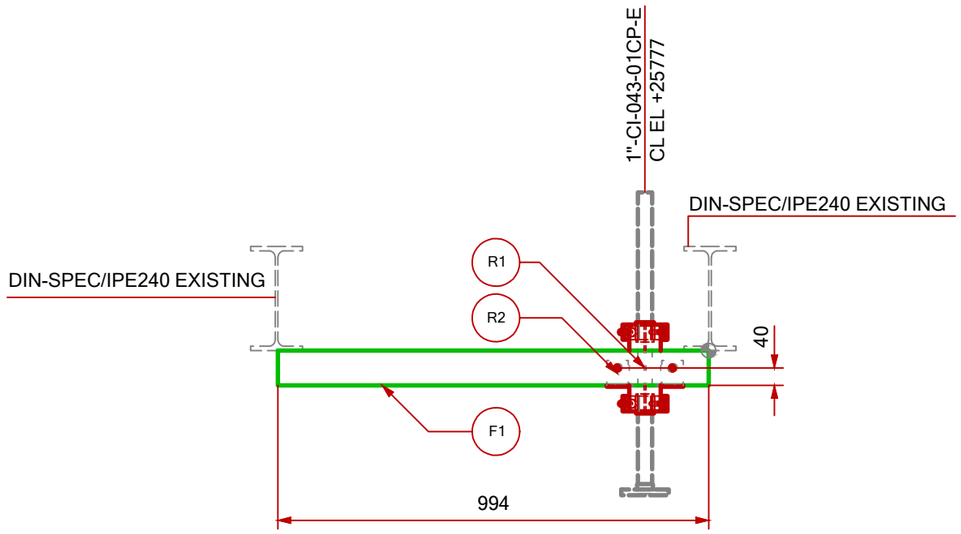
VIEW LOOKING SOUTH



VIEW LOOKING WEST



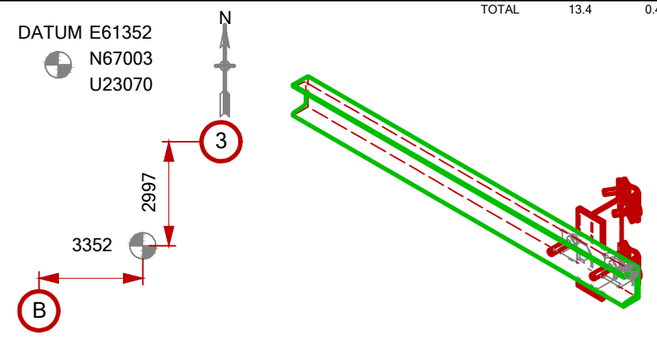
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	C-33-1-I-2	-	-	1	-	0.98	0.028
F1	BEAM	UPN80	Carbon Steel	994	1	8.66	8.61	0.313
						TOTAL	13.4	0.44



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

PS-01035

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

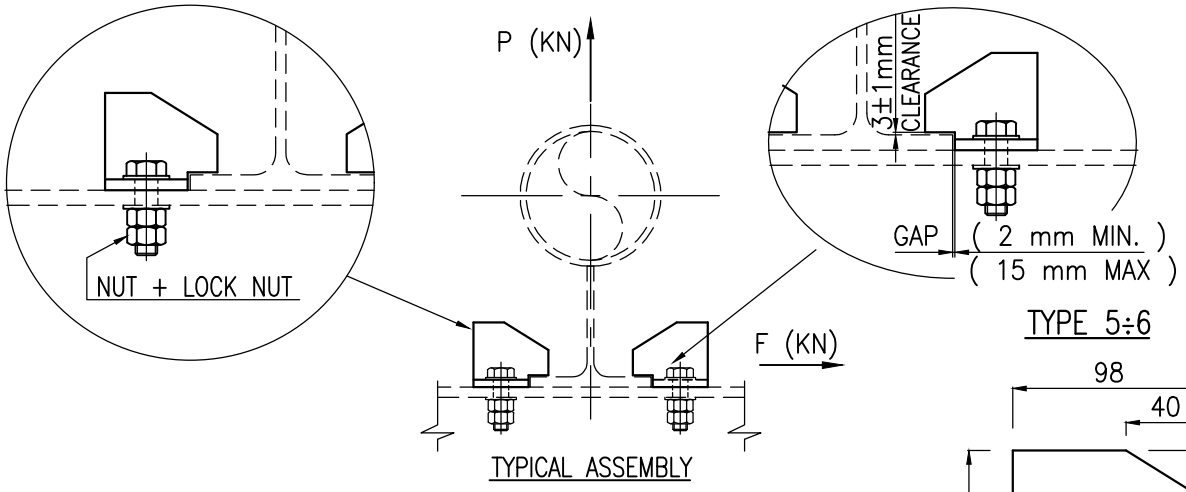
Document Number: STD–PP–DD–0001

Revision: 0

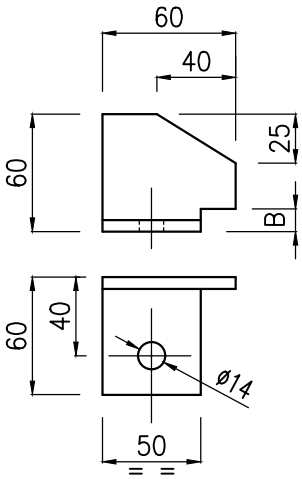
Date: –

GUIDA BULLONATA CON HOLD–DOWN PER SCARPETTE
BOLTED GUIDE WITH HOLD DOWN FOR SHOES

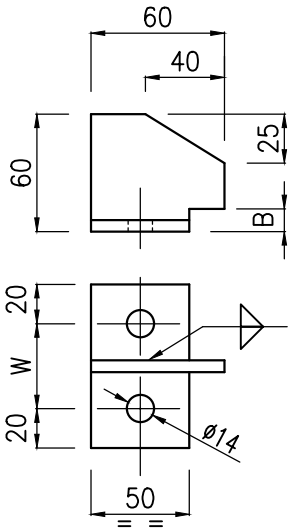
C–33



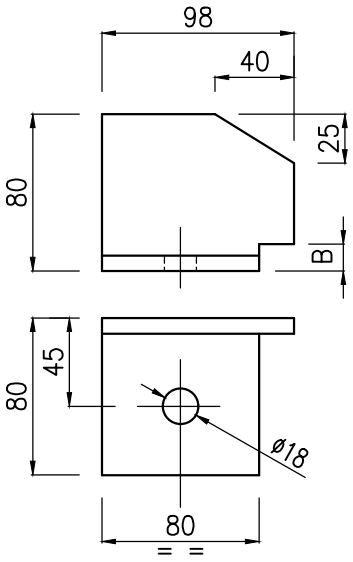
TYPE 1 (NOTE 4)



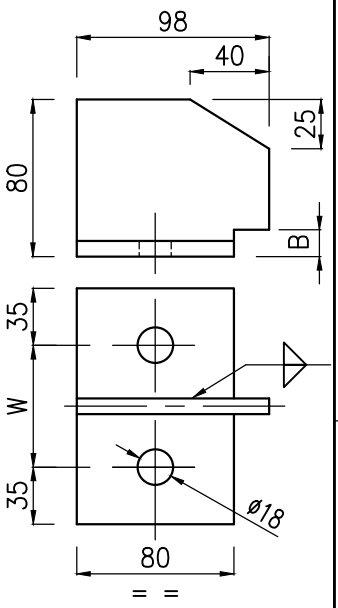
TYPE 2



TYPE 3÷4 (NOTE 4)



TYPE 5÷6



Example of designation : STD – TYPE – SIZE – GAP
(C–33 – 6 – M – 2)

TYPE	SHOE THK.	B	DIM. HOLE	SECTION	BOLTING	F (KN)	P (KN)
1	9–10	12	13	L60x60x6	M12x60	10	32
2	9–10	12	13	PLT. 10THK	M12x60	20	32
3	11–12	14	18	L80x80x8	M16x70	18	59
4	13–14	16	18	L80x80x8	M16x70	18	59
5	11–12	14	18	PLT. 10THK	M16x70	36	71
6	13–14	16	18	PLT. 10THK	M16x70	36	71

SIZE	EXIST. BEAM	W mm
A	HEA 100	58
B	HEA 120	66
C	HEA 140	76
D	HEA 160	86
E	HEA 180	96
F	HEA 200	106
	HEA 220	
G	HEA 240	120
	HEA 260	
	HEA 280	
H	HEA 300	126
I	UPN 100	46
	UPN 120	
J	UPN 140	60
K	UPN 200	100
L	IPE 200	64
	IPE 220	
M	IPE 270	70
N	IPE 300	72
O	IPE 600	94
Z	–	0

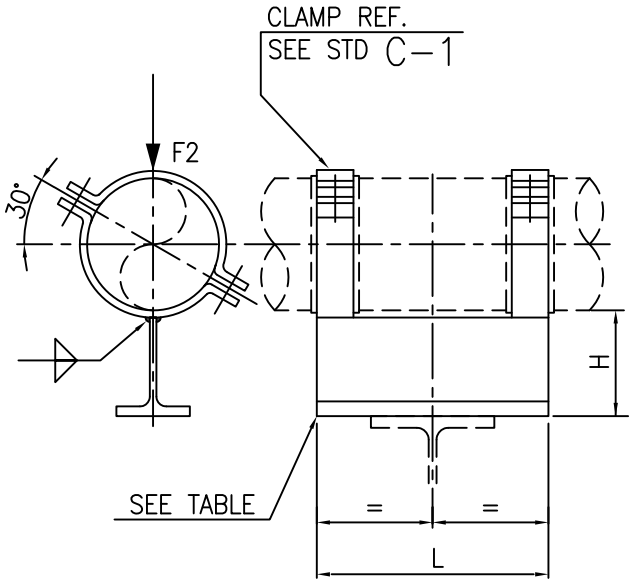
NOTES:
1– PLATES MATERIAL: CARBON STEEL
2– BOLTS (UNI 5739 Cl 8.8), NUTS (UNI 5588 Cl 8.8), LOCK NUT (UNI 7474 Cl.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– GUIDE TO BE SITE LOCATED UNLESS NOTED OTHERWISE ON THE PIPE SUPPORT DRAWING.
4– REALIZE A PIECE AS DRAWING AND A PIECE SYMMETRIC.
5– VARIABLE WEIGHT ADDICTED TO THE THE "TYPE" SELECTED AND "W" DIMENSION INDICATED.
6– TYPES 1, 3 & 4 SHALL BE USED PREFERABLY WHEN EXISTING BEAMS ARE ANGULARS

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

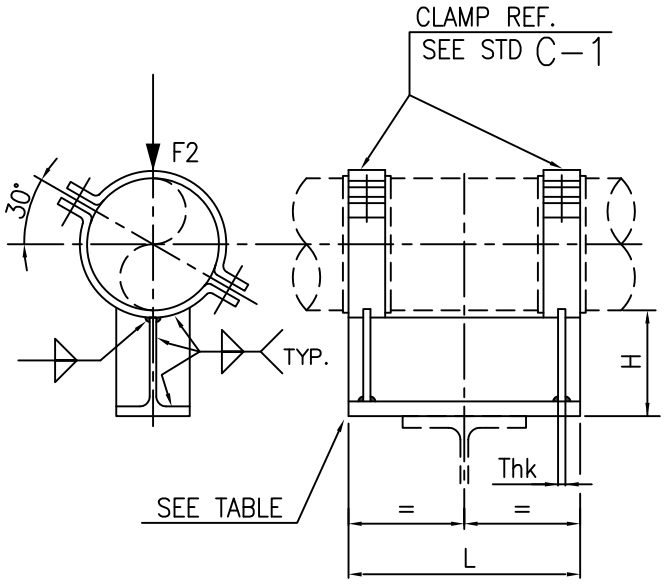
Documento di proprietà aziendale.La Società tutelerà i propri diritti a termine di legge.This document is Company property. The Company lawfulliy reserves all rights.

	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

Example of designation : STD – PIPE ND" – H – L
(S–64 – 4" – 150 – 400)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

ALLOWABLE RANGE FOR SHOE LENGTH		
ø PIPE	MIN. "L" mm	MAX. "L" mm
½" ÷ 6"	200	600
8" ÷ 24"	250	600

NOTES:

1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line – NOT APPLICABLE

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	55-00-TP-005	: Test Pack 55-00-TP-005			Dwg	123A90-DDL-PR-PID-80020
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003269		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult to reach. After drying, inlet and outlet points were closed with covers.
3	Temporary means :	Blind flanges and plugs, if necessary, to isolate inlet and outlet points during process. Covers to close all openings after the drying.
4	Dew point (obtain after soaking and nitrogen purging):	NA
5	Valve body cavity, branches, etc.. Have been drained form residual water	●
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	Restricting access to the area.
11	REMARKS:	

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-20	2025-02-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-20T05:14:56.243Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-20T10:04:15.916Z	

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026			Dwg	123A90-DDL-PR-PID-80011-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003428		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	PL
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	Note
6	Check bolt tightening and flange management (excluded battery limit joints).	Note
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	NA
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	NA
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	OK
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Points 5 and 6 have not been checked due having only temporary flanged joint. Final joint to be checked during flange management.
Slopes are all wrong now, but need to checked after reinstatement as for ITR.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-17	2025-01-21	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:24:09.851Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-21T13:56:20.723Z	

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026			Dwg	123A90-DDL-PR-PID-80011-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003429		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	OK
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	OK
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	OK
8	After the (re) installation of a valve check that it operates freely.	OK
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	OK
10	Check all locking device.	OK
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	OK
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-31	2025-02-11	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-31T12:05:42.819Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-11T16:53:53.015Z	

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026		Dwg	123A90-DDL-PR-PID-80011-26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003430	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Piping	Form	CXX01	Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.	OK
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.	OK
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.	OK
4	Check that the insulation and cladding materials conform to the specifications.	PL
5	Check that the insulation is compatible with the Heat tracing system.	OK
6	Check that the surface condition prior to the application of the insulation	OK
7	Check the installation of wire mesh	OK
8	Check the overlap of the metal cladding.	PL
9	Check that each joint is sealed with a suitable sealant specified for water proofing.	OK
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.	PL
11	Control that the locking devices boxes opretated satisfactorily.	PL
12	Check the blinds, the spectacles and the instruments are visible.	NA
13	Check the flange accessibility without damaging the insulation.	PL
14	Check that color coding/line marking/flow direction are correct	OK

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-03-21	2025-04-02	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:19:23.682Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-02T06:49:26.697Z	

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026			Dwg	123A90-DDL-PR-PID-80011-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003431		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	Note
3	Check that the fluid direction is correct.	Note
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	OK
6	If required produce Red Line Mark Up for "AS BUILT".	

Comments: 1. Checked the painting report made by Vendor and signed by RM coating Dpt.
Points 2 and 3 to be checked after thermal insulation.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (ROSETTI MARINO)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-01-31	2025-02-19	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-01-31T13:57:32.854Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-19T14:43:20.787Z	

ROSETTI MARINO — CROSSWIND

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026		Dwg	123A90-DDL-PR-PID-80011-26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003432	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX03	Cleaning

CLEANING MEDIUM

Air		Water	●	Steam		Oil		Other		Mechanical	

Component	NA					
Chemical treatment	No	NA	Filtration	No	Screen size	NA

EQUIPMENTS

Equipment **removed**	NA	Agreed list of removed fragile devices to be attached to this Test Sheet	NA
Excepted removed equipments, pipework installation is conform to the specifications & PID's			OK
Equipment **added**	No	Exhaustive list to be attached (temporary filters, spools…etc)	NA

TEST RESULTS

Test date	18/01/2025	Start time	12:30	End time	12:45
Flow rate	NA	Duration	15 min	Medium T°	NA

Operation Description

Connected the water source to the lowest point of the piping system.
Maintained a high flow rate to help dislodging and carry away debrises.
Flushing flow kept until the water exiting the system was clear and free of visible contaminants. Expelled water inspected for any debris to be noted.

Safety Precautions

Restricting access to the area.

Result and comments

Water has been found clear of solid debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-17	2025-01-21	
Signature	Digitaly signed by Emanuele Delfino 2025-01-17T14:24:24.138Z	Digitaly signed by Kangi Albonetti 2025-01-21T14:34:28.514Z	

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026		Dwg	123A90-DDL-PR-PID-80011-26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003433	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX05	Pressure Test

TEST DATA

Reference procedure: 123A90-PML-QHSE-PRO-00092

Design pressure: 6 barg | Max test pressure: 5.25 barg | Min hold period: 30 min

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)	Yes
Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)	Yes

Medium

Test medium: WATER

TEST RESULTS

Test date: See attachment | Start time: See attachment | End time: See attachment

Ambient temperature is recorded	NA			Test medium temperature is recorded	Yes
Pressure recorded during test hold period	Min: See attachment	Max: See attachment		Variation	See attachment
Line has been depressurised to	NA			At maximum of bar/min	See attachment
Pressure test completed sucessfully and approved	Yes			Temperature and pressure disc chart attached	NA
Instrument calibration certificates attached	Yes			Dead-weight tester log attached	NA
Record of failures and corrective action attached	No			Battery limits of the test attached	Yes

If required produce Red Line Mark Up for "AS BUILT".

Comments: The pressure graph shows a lowering of 0,3 Barg in 30 minutes with a related lowering of 1,5°C in the same time. After that, for additional 15 minutes Pressure and Temperature stabilized. No leaks have been found. Accepted.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-17	2025-01-21	
Signature	Digitaly signed by Emanuele Delfino 2025-01-17T14:24:38.260Z	Digitaly signed by Kangi Albonetti 2025-01-21T14:40:36.574Z	

Logger protocol
Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-00-TP026/43-00-TP065

Instrument
Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A037FON32E
Log temperature *Registrazioni di Temperatura*	Active *Attivo*
Scale range *Campo scala*	(0 ... 1000) bar a
Accuracy *Accuratezza*	0.1 % FS
Tag number *Numero tag*	
Communication *Comunicazione*	Wireless (00:13:43:C5:19:D5)

Measurement conditions
Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	60000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	01:04:33
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	12:51:33 pm

Logger protocol

Protocollo di acquisizione elenco dati

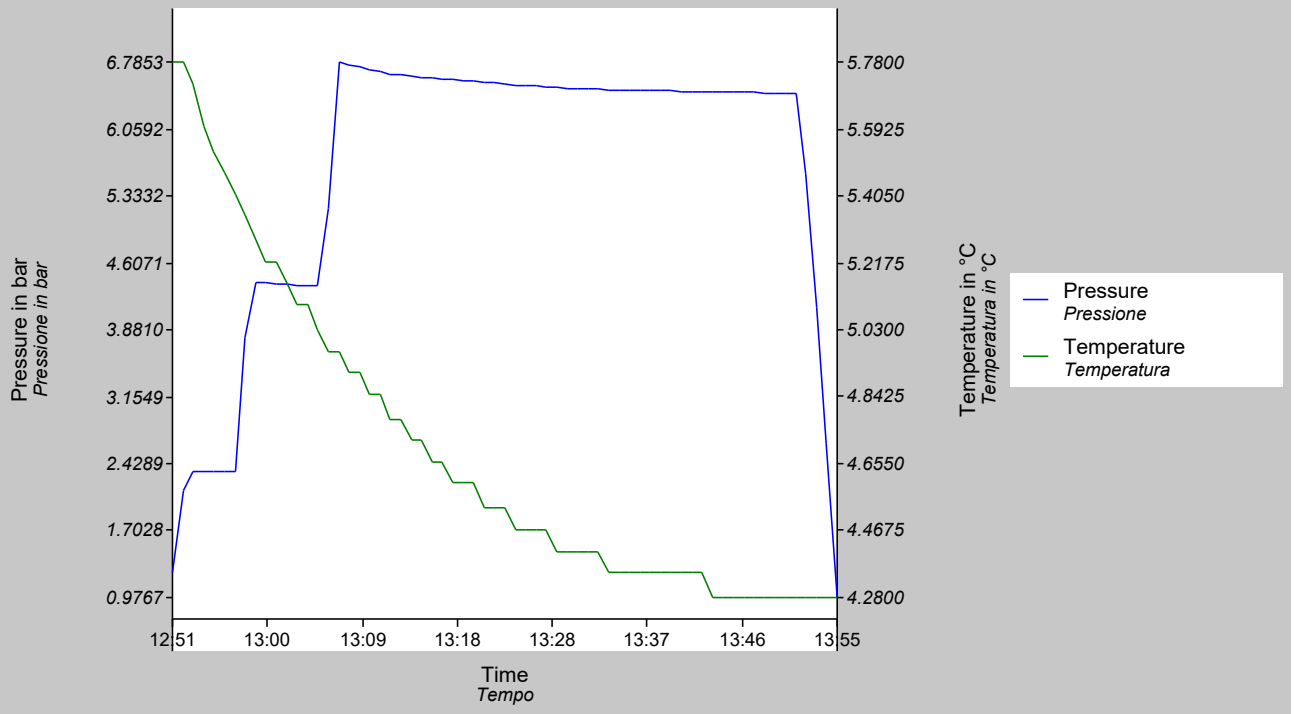
ROSETTI MARINO
Group of Companies

Log no. 123A90-55-00-TP026/43-00-TP065
N. elenco dati

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/18/2025 12:51:33.000	1.2517	5.7800
01/18/2025 12:52:33.000	2.1424	5.7800
01/18/2025 12:53:33.000	2.3510	5.7200
01/18/2025 12:54:33.000	2.3499	5.6000
01/18/2025 12:55:33.000	2.3462	5.5300
01/18/2025 12:56:33.000	2.3457	5.4700
01/18/2025 12:57:33.000	2.3464	5.4100
01/18/2025 12:58:33.000	3.7963	5.3500
01/18/2025 12:59:33.000	4.3985	5.2800
01/18/2025 13:00:33.000	4.3887	5.2200
01/18/2025 13:01:33.000	4.3785	5.2200
01/18/2025 13:02:33.000	4.3684	5.1600
01/18/2025 13:03:33.000	4.3594	5.1000
01/18/2025 13:04:33.000	4.3571	5.1000
01/18/2025 13:05:33.000	4.3537	5.0300
01/18/2025 13:06:33.000	5.1980	4.9700
01/18/2025 13:07:33.000	6.7853	4.9700

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-55-00-TP026/43-00-TP065
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/18/2025 13:08:33.000	6.7541	4.9100
01/18/2025 13:09:33.000	6.7287	4.9100
01/18/2025 13:10:33.000	6.7027	4.8500
01/18/2025 13:11:33.000	6.6794	4.8500
01/18/2025 13:12:33.000	6.6560	4.7800
01/18/2025 13:13:33.000	6.6403	4.7800
01/18/2025 13:14:33.000	6.6283	4.7200
01/18/2025 13:15:33.000	6.6177	4.7200
01/18/2025 13:16:33.000	6.6090	4.6600
01/18/2025 13:17:33.000	6.5992	4.6600
01/18/2025 13:18:33.000	6.5940	4.6000
01/18/2025 13:19:33.000	6.5825	4.6000
01/18/2025 13:20:33.000	6.5731	4.6000
01/18/2025 13:21:33.000	6.5644	4.5300
01/18/2025 13:22:33.000	6.5559	4.5300
01/18/2025 13:23:33.000	6.5474	4.5300
01/18/2025 13:24:33.000	6.5375	4.4700
01/18/2025 13:25:33.000	6.5282	4.4700
01/18/2025 13:26:33.000	6.5213	4.4700
01/18/2025 13:27:33.000	6.5115	4.4700
01/18/2025 13:28:33.000	6.5041	4.4100
01/18/2025 13:29:33.000	6.4979	4.4100
01/18/2025 13:30:33.000	6.4959	4.4100
01/18/2025 13:31:33.000	6.4922	4.4100
01/18/2025 13:32:33.000	6.4881	4.4100
01/18/2025 13:33:33.000	6.4858	4.3500
01/18/2025 13:34:33.000	6.4842	4.3500
01/18/2025 13:35:33.000	6.4768	4.3500
01/18/2025 13:36:33.000	6.4775	4.3500
01/18/2025 13:37:33.000	6.4749	4.3500
01/18/2025 13:38:33.000	6.4731	4.3500
01/18/2025 13:39:33.000	6.4699	4.3500
01/18/2025 13:40:33.000	6.4632	4.3500
01/18/2025 13:41:33.000	6.4617	4.3500
01/18/2025 13:42:33.000	6.4586	4.3500
01/18/2025 13:43:33.000	6.4605	4.2800
01/18/2025 13:44:33.000	6.4580	4.2800
01/18/2025 13:45:33.000	6.4567	4.2800
01/18/2025 13:46:33.000	6.4562	4.2800
01/18/2025 13:47:33.000	6.4539	4.2800
01/18/2025 13:48:33.000	6.4514	4.2800
01/18/2025 13:49:33.000	6.4463	4.2800
01/18/2025 13:50:33.000	6.4450	4.2800
01/18/2025 13:51:33.000	6.4423	4.2800
01/18/2025 13:52:33.000	5.5675	4.2800
01/18/2025 13:53:33.000	4.1124	4.2800
01/18/2025 13:54:33.000	2.6588	4.2800
01/18/2025 13:55:33.000	0.9767	4.2800

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24

Certificate of Calibration

- data di emissione date of issue	2024-12-10
- cliente customer	FAST AUTOMATION SRL VIA DELLA PREVIDENZA SOCIALE, 8 IT-42124 REGGIO EMILIA (RE)
- destinatario receiver	ROSETTI MARINO SPA - YARD PIOMBONI VIA DEL MARCHESATO, 37 IT-48122 MARINA DI RAVENNA (RA)

Il presente certificato di taratura è emesso in base all'accreditamento LAT N. 114 rilasciato in accordo ai decreti attuativi della legge n. 273/1991 che ha istituito il Sistema Nazionale di Taratura (SNT). ACCREDIA attesta le capacità di misura e di taratura, le competenze metrologiche del Centro e la riferibilità delle tarature eseguite ai campioni nazionali ed internazionali delle unità del Sistema Internazionale delle Unità (SI).
Questo certificato non può essere riprodotto in modo parziale, salvo espressa autorizzazione scritta da parte del Centro.

Si riferisce a
referring to

- oggetto *item*	Misuratore di pressione elettronico Electrical pressure gauge
- costruttore *manufacturer*	WIKA
- modello *model*	CPG1500
- matricola *serial number*	1A037FON32E
- data di ricev. oggetto *date of receipt of item*	2024-11-29
- data delle misure *date of measurements*	2024-12-10
- registro di laboratorio *laboratory reference*	0580-SM-24

This certificate of calibration is issued in compliance with the accreditation LAT No.114 granted according to decrees connected with Italian law No. 273/1991 which has established the National Calibration System. ACCREDIA attests the calibration and measurement capability, metrological competence of the Centre and the traceability of calibration results to the national and International standards of the International System of Units (SI).
This certificate may not be partially reproduced, except with the prior written permission of the issuing Centre.

I risultati di misura riportati nel presente Certificato sono stati ottenuti applicando le procedure di taratura citate alla pagina seguente, dove sono specificati anche i campioni o gli strumenti che garantiscono la catena di riferibilità del Centro e i rispettivi certificati di taratura in corso di validità. Essi si riferiscono esclusivamente all'oggetto in taratura e sono validi nel momento e nelle condizioni di taratura, salvo diversamente specificato.

The measurement results reported in this Certificate were obtained following the calibration procedures given in the following page, where the reference standards or instruments are indicated which guarantee the traceability chain of the laboratory, and the related calibration certificates in the course of validity are indicated as well. They relate only to the calibrated item and they are valid for the time and conditions of calibration, unless otherwise specified.

Le incertezze di misura dichiarate in questo documento sono state determinate conformemente alla Guida ISO/IEC 98 e al documento EA-4/02. Solitamente sono espresse come incertezza estesa ottenuta moltiplicando l'incertezza tipo per il fattore di copertura k corrispondente ad un livello di fiducia di circa il 95 %. Normalmente tale fattore k vale 2.

The measurement uncertainties stated in this document have been determined according to the ISO/IEC Guide 98 and to EA-4/02. Usually, they have been estimated as expanded uncertainty obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally, this factor k is 2.

Direzione Tecnica
(Approving Officer)

Enrico Reccagni

Enrico Reccagni

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
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Centro di Taratura LAT N°114
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LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

Misuratore di pressione elettronico *Electrical pressure gauge*	
Tipo *Model*	Misuratore di pressione elettronico Electrical pressure gauge
Numero di matricola *Serial No.*	1A037FON32E
Campo di misura *Scale range*	(0 ... 1000) bar g
Accuratezza dichiarata dal costruttore *Accuracy declared by the manufacturer*	0,1 % FS
Risoluzione *Resolution (scale division)*	0,1 bar
Tag. N. *Tag No.*	--

Procedura di taratura e catena di riferibilità
Calibration procedure and traceability chain

La taratura è stata effettuata in accordo alla linea guida DKD-R 6-1 "Taratura di strumenti di pressione" (versione 03/2014) procedura B, per confronto fra i valori dello strumento in taratura con quelli di riferimento dati dal campione di lavoro.

Calibration was carried out according to DKD-R 6-1 "Kalibrierung von Druckmessgeräten" (Ausgabe 03/2014) procedure B, by comparing the measured values of the calibration item with those of the reference or working standard.

I risultati riportati sono stati ottenuti applicando le procedure n° LMO-PT-01 rev.2

The results have been obtained using the procedures n° LMO-PT-01 rev.2

La catena di riferibilità ha inizio dai campioni di riferimento n° PM1-09

The traceability chain starts from the reference standards n° PM1-09

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

Laboratorio WIKA ITALIA - Laboratorio di Modugno (BA)
WIKA ITALY Laboratory - Modugno (BA)

Campione di lavoro
Working Standard

Norma di riferimento (RS) Bilancia di pressione *Reference standard (RS) Dead-weight tester*	
Tipo *Model*	PM1-09
Certificato di taratura *Calibration mark*	D-K-15105/D21090
Campo di misura *Scale range*	(10 ... 2500) bar g
Accuratezza *Accuracy*	0,015 % della lettura + 255 Pa

Operatore
Technichian

Francesco Donatelli

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LAT N° 114

Condizioni di misura
Measurement conditions

Schema di collegamento *Assembly*	
Fluido utilizzato *Pressure medium*	Sebacate *Sebacate*
Livello di riferimento *Refence height (for reference value)*	Superficie di tenuta DUT *Sealing face DUT*
Posizione di montaggio *Position during calibration*	verticale *vertical*

Note di taratura
Calibration Note

Lo strumento è stato tarato e riconsegnato nelle stesse condizioni in cui è arrivato nel laboratorio, in accordo con il metodo "as found as left" / The device under test (DUT) was calibrated in the same conditions it was arrived in laboratory, according to the method "as found as left".

Condizioni Ambientali
Environmental conditions

Temperatura *Temperature*	(22 ± 1,5)	°C
Pressione atmoferica *Atmospheric pressure*	(1007,5 ± 0,2)	hPa
Umidità relativa *Rel. Humidity*	(50 ± 15)	% UR

I dati meteo sono stati acquisiti tramite stazione meteo WIKA CPU6000-W s/n.1A00VCX6GJ2

Weather data were acquired via the WIKA CPU6000-W weather station s/n.1A00VCX6GJ2

Misure rilevate
Measurement results

Valore di riferimento *Reference value RS* bar	**Letture** *Reading DUT* bar		
	M1	**M2**	**M3**
0,00	0,0	0,0	0,0
99,91	100,0	100,0	100,0
199,82	200,0	200,0	200,0
299,73	299,9	300,0	299,9
399,63	399,8	399,9	399,8
499,53	499,6	499,7	499,7
599,44	599,5	599,6	599,5
699,34	699,3	699,4	699,3
799,24	799,2	799,3	799,2
899,14	899,1	899,1	899,1
999,04	999,0	999,0	999,0

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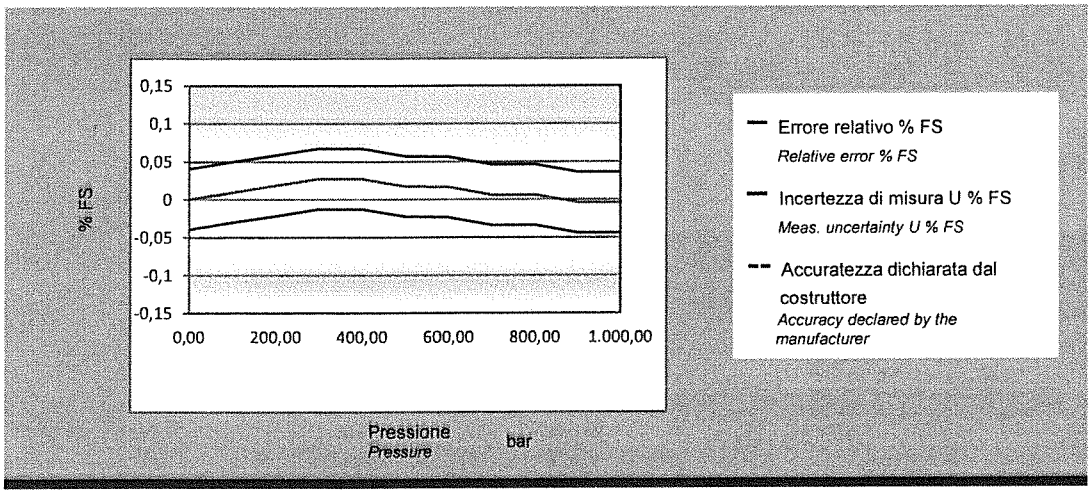
LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

Incertezza di misura
Uncertainty of measurement

Valori di riferimento *Reference value RS* bar	Media delle misure *Mean value* bar	Errore *Error* bar	Ripetibilità *Repeatability* bar	Isteresi *Hysteresis* bar	Incertezza di misura *Meas. Uncertainty* bar
0,00	0,0	0,0	0,0	0,0	0,40
99,91	100,0	0,1	0,0	0,0	0,40
199,82	200,0	0,2	0,0	0,0	0,40
299,73	300,0	0,3	0,0	0,1	0,40
399,63	399,9	0,3	0,0	0,1	0,40
499,53	499,7	0,2	0,1	0,1	0,40
599,44	599,6	0,2	0,0	0,1	0,40
699,34	699,4	0,1	0,0	0,1	0,40
799,24	799,3	0,1	0,0	0,1	0,40
899,14	899,1	0,0	0,0	0,0	0,40
999,04	999,0	0,0	0,0	0,0	0,40

Grafico degli errori di misura
Graphical representation of measurement uncertainty



L'incertezza estesa senza correzione del DUT è pari a 0,7 bar
The expanded uncertainty of the DUT without correction is equal to

Questo dato è ottenuto come MAX{Incertezza_di_misura$_i$ + |Errore$_i$|} della tabella precedente
This data is obatined as MAX{Meas._uncertainty$_i$ + |Error$_i$|} of the previous table

Il presente certificato non rappresenta una dichiarazione di conformità a specifica
This certificate is not a statement of compliance

Base Load Power Hub (BLPH)

TEST PACK

N°55-00-TP-026
SUB-SYSTEM N° 55-00

System	55
Sub-System	55-00
Test Pressure	5.25 barg
Test Fluid	WATER
Test Duration	30 min

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning
   - 8.6 TMX05 – Pressure test
   - 8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 - Drying

1. COLOURED MARKED P&IDs

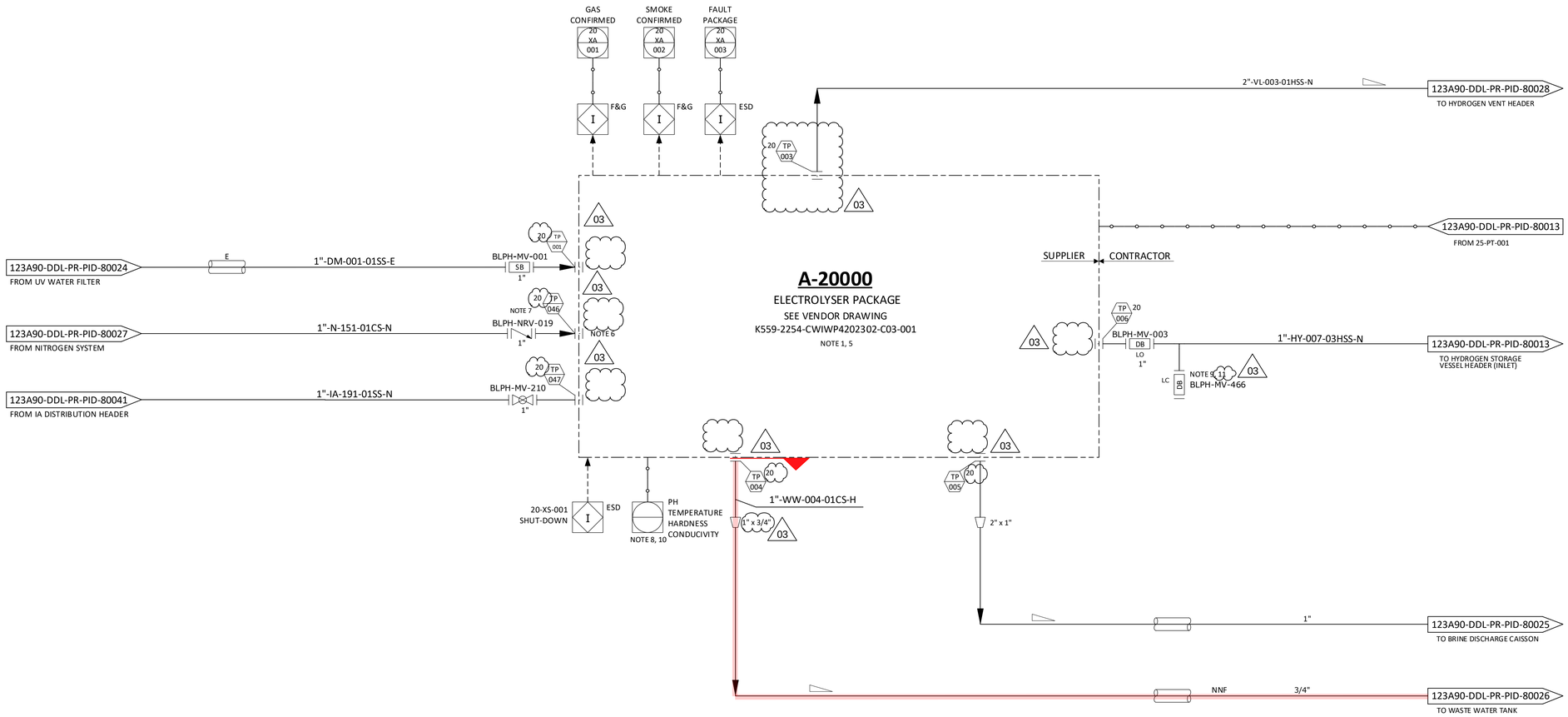
DRAWING NO. DRAWING_NO.

REV. REV

A-20000

ELECTROLYSER PACKAGE

DUTY: 2.5MW
DESIGN PRESSURE: 40 barg
DESIGN TEMPERATURE: 80 °C
H2 GENERATING CAPACITY: 500 Nm³/h



55-00-TP-026
5.25 barg

NOTES

1. PACKAGE SUPPLIED WITH POWER FROM THE BLPH ELECTRICAL SYSTEM.
2. DELETED.
3. DELETED.
4. DELETED.
5. ELECTROLYSER PACKAGE INCLUDES AN OXYGEN VENT LINE WHICH IS IN THE SCOPE OF SUPPLY OF THE ELECTROLYSER PACKAGE UP TO THE ATMOSPHERE. NO PHYSICAL INTERFACE IS PRESENT BETWEEN ELECTROLYSER PACKAGE AND CONTRACTOR ON THIS LINE.
6. AN ISOLATION VALVE DOWNSTREAM THE CHECK VALVE NRV-019 IS PROVIDED WITHIN THE PACKAGE A-20000.
7. CHECK VALVE NRV-019 TO BE INSTALLED AS CLOSE AS POSSIBLE TO THE ELECTROLYSER PACKAGE A-20000.
8. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
9. NITROGEN PURGING CONNECTION TO BE LOCATED AS CLOSE AS POSSIBLE TO MANUAL VALVE BLPH-MV-003.
10. PH, TEMPERATURE, HARDNESS AND CONDUCTIVITY SHALL BE SENT FROM CONTROL SYSTEM TO ELECTROLISER UCP IN ADDITION TO THE OTHER SOFTWARE SIGNALS. 03
11. MANUAL VALVE BLPH-MV-466 TO BE CONNECTED WITH MANUAL VALVE BLPH-MV-275 (INSTALLED ON NITROGEN GENERATION PACKAGE EXIT LINE) BY MEAN ON A FLEXIBLE HOSE DURING COMMISSIONING PHASE FOR PURGING OPERATION.

HOLDS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
ELECTROLYSER PACKAGE

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80011	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

T-55001

WASTE WATER TANK

CAPACITY : 16 m³
DESIGN P/T : 0.005 barg / 80°C
MATERIAL : CARBON STEEL

123A90-DDL-PR-PID-80022
BIOCIDE DOSING UNIT

E

1"-CI-043-01CP-E

NOTE 7

55-00-TP-026
5.25 barg

123A90-DDL-PR-PID-80029
FROM LIQUID SEAL DRUM

NNF

1"-WW-202-01CS-H

123A90-DDL-PR-PID-80011
FROM ELECTROLYSER PACKAGE

NNF

1"-WW-004-01CS-H

DECK
HOOK-UP 001

WW-004
WW-081

1"-WW-081-01CS-H

SP
0039

2"-AV-256-01CS-N

03

HOOK-UP 002

RS

WAST WATER TANK

HOOK-UP 001

WASTE WATER TANK

1"

I2

M1
24"

55
LI
001

H
L

55
LIT
001

HOOK-UP 003

WASTE WATER TANK

3"

L

I1

T-55001
TRIM LINE:
3"-WW-200-01CS-H
NOTE 8

NOTE 1, 5

HOOK-UP
006

WASTE WATER
TANK

1"-WW-292-01CS-H

BLPH-MV-400
3/4"
1"x3/4"

CONC. RED.
3/4"x1/2"

BLPH-MV-401
1/2"

SAMPLE
CONNECTION

123A90-DDL-PR-PID-80022
FROM WATER TREARMENT PACKAGE

NNF

1"-WW-038-01CS-H

DECK
HOOK-UP 001

WASTE WATER
TANK

HOOK-UP
008

3"-WW-201-01CS-H
NOTE 4

BLPH-MV-467
3"
LC

NOTES

1. DELETED. 03
2. DELETED.
3. DELETED.
4. DRAIN LINE TO SHIP DISPOSAL.
5. PERFORATED STILLING TUBE.
6. DELETED.
7. FOR PERIODIC DOSING OF THE WASTE WATER TANK.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR WASTE WATER TANK - T-55001, DOC. N. "123A90-DDL-MAC-DS-50008"

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PR-PID-80026	001	03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

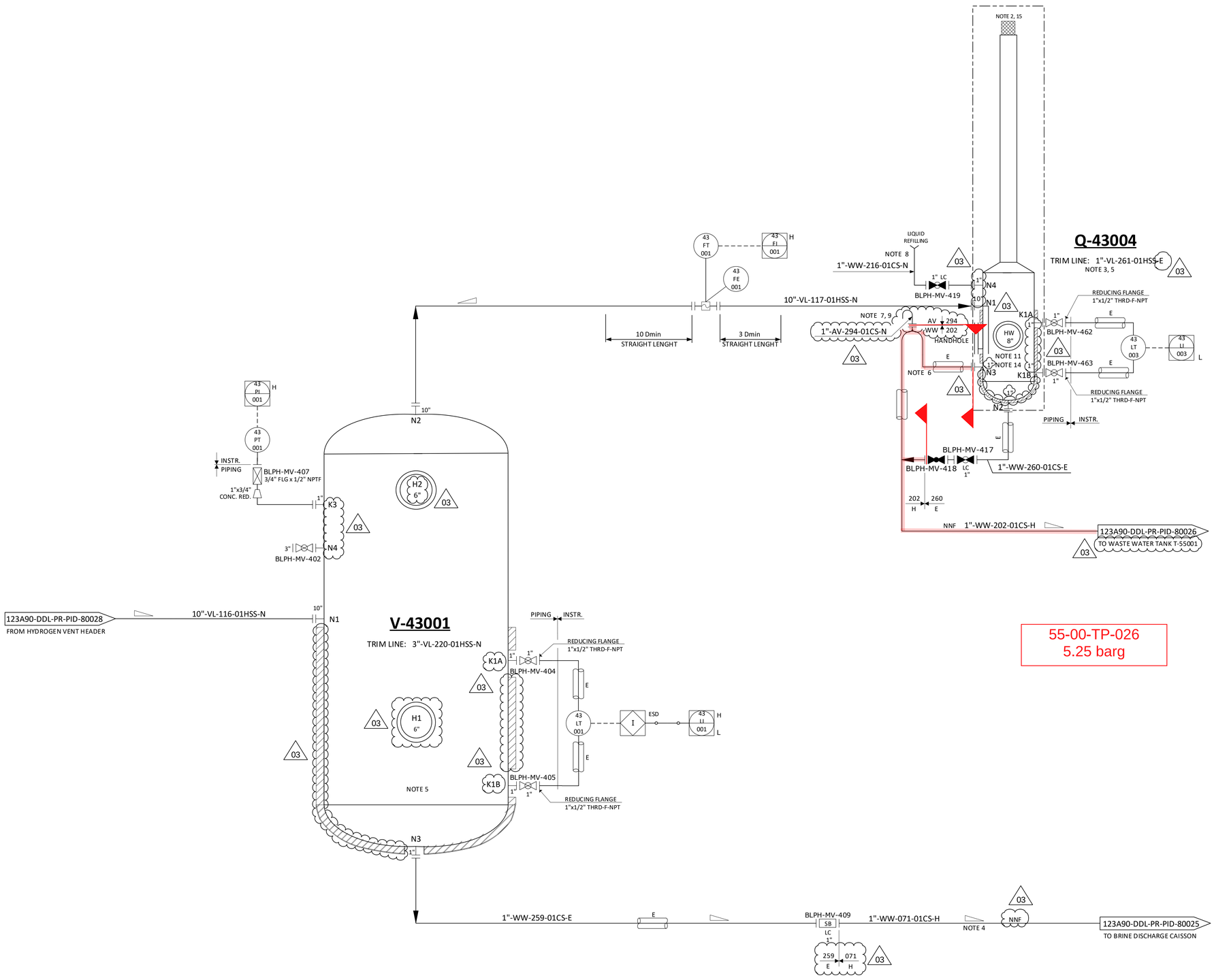
REV. REV

V-43001

HYDROGEN VENT KO DRUM
SIZE : 600 mm (ID) x 2350 mm (H)
DESIGN P/T : 3.5 barg / -10 / 80°C
MATERIAL : LTCS + 1 mm CA

Q-43004

HYDROGEN VENT NOTE 1
SIZE : 254 mm (ID)
DESIGN P/T : 3.5 barg / -10 / 80°C
MATERIAL : LTCS + 3 mm CA



NOTES

1. VENT TO SAFE LOCATION SEGREGATED FROM OTHER VENTS.
2. VENT TO BE EQUIPPED WITH BIRD SCREEN.
3. LIQUID SEAL DRUM IS PART OF THE VENT SYSTEM.
4. LIQUID DRAIN LINES TO BE ROUTED TO ENSURE GRAVITY DRAIN.
5. HYDROGEN VENT KO DRUM AND LIQUID SEAL DRUM TO BE HEAT TRACING.
   - V-43001 HEAT TRACED FROM B.T.L. UP TO 600 mm, BOTTOM HEAD ALSO TO BE HEAT TRACED.
6. SEAL LEG WILL BE DETERMINATED ON THE MAXIMUM BACK PRESSURE IN THE VENT.
7. SEAL VENT TO BE PLACED INTO A SAFE POSITION.
8. FILLING LINE TO BE PLACED IN AN ACCESSIBLE POSITION.
9. TRACED FROM NOZZLE N3 UP TO SWAN NECK.
10. DELETED.
11. INLET DIP LEG SUBMERSION HEIGHT OF 0.6 m.
12. DELETED.
13. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 VENT KOD.
14. LIQUID INSIDE SEAL DRUM IS A WATER - GLYCOL MIXTURE WITH 50% VOLUME OF GLYCOL. (03)
15. TOP OF TIP OF H2 VENT SHALL BE AT AS MINIMUM 6.2 m FROM HIGHEST REACHABLE PLATFORM.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

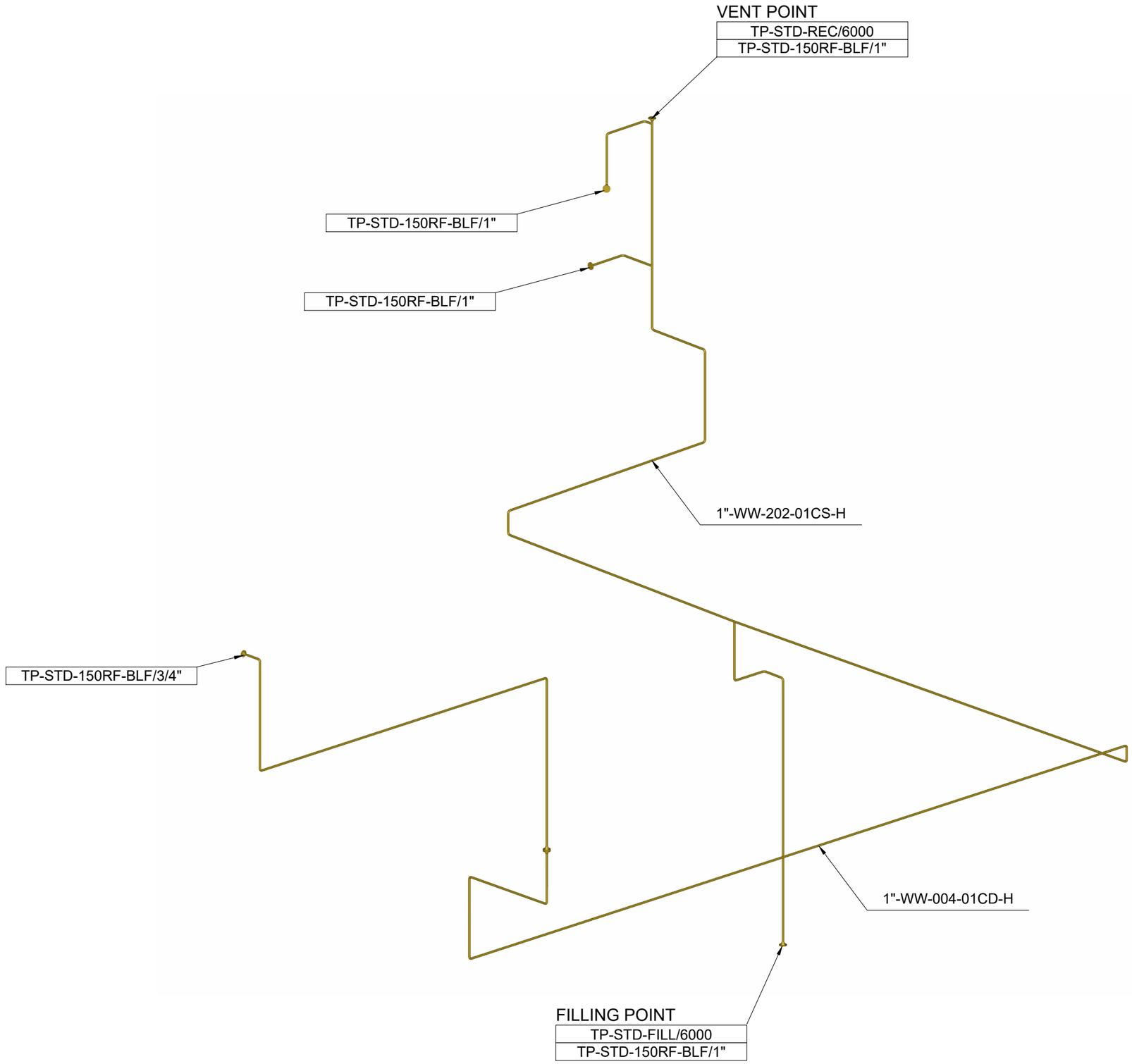
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN VENT DRUM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80029	SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-00-TP-026

5.25 barg

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
55-00-TP-026

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

CROSSWIND / ROSETTI MARINO	CONTRACTOR: Rosetti Marino SpA	JOB :	123A90
	PROJECT: Base Load Power Hub (BLPH)	DATE :	20/09/2024
	TITLE: MATERIAL LIST FOR HYDROSTATIC TEST	REV. :	00

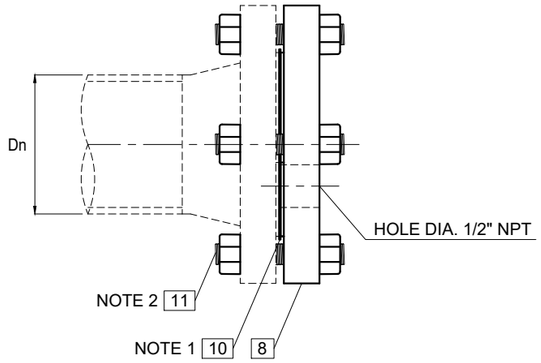
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL TEST	TP-STD-FILL/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3	1	3	
ALL TEST	TP-STD-FILL/6000	1MECH069	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4	1	4	
ALL TEST	TP-STD-REC/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9	1	9	
ALL TEST	TP-STD-REC/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	CAPFSS00200H00	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	CPL0SS00240H00	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	E900SS00340H00	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-PLGNPT/1/2"	PLGHSS00090H00	Plug Hex. Head THRD-M NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
TP-026	TP-STD-150RF-BLF/3/4"	FLBHCS01363Q0H	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-026	TP-STD-150RF-BLF/3/4"	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ø3/4" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-026	TP-STD-150RF-BLF/3/4"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1	4	
TP-026	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	4	4	
TP-026	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	4	4	
TP-026	TP-STD-150RF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	4	16	

STD NAME	RATING	DESCRIPTION
TP-STD-150RF	150 RF	STANDARD FOR BLIND POINT

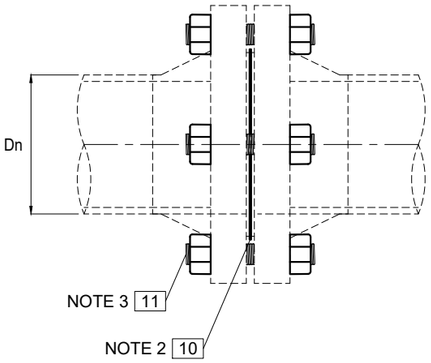
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-150RF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=60 MM	4
TP-STD-150RF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=85 MM	4
TP-STD-150RF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-150RF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø6" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-150RF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø8" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-150RF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø10" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=120 MM	12
TP-STD-150RF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø12" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=125 MM	12
TP-STD-150RF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø14" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=135 MM	12
TP-STD-150RF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø16" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=140 MM	16
TP-STD-150RF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø18" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=150 MM	16
TP-STD-150RF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø20" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=160 MM	20
TP-STD-150RF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø24" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=175 MM	20



TP-STD-150RF-BLF/Dn
BLIND FLANGE



TP-STD-150RF-GSK/Dn
GASKET ONLY

NOTES

1. GASKET MATERIAL AS PER PIPING CLASS
2. STUD BOLTS AND NUTS MATERIAL AS PER TEST MTO

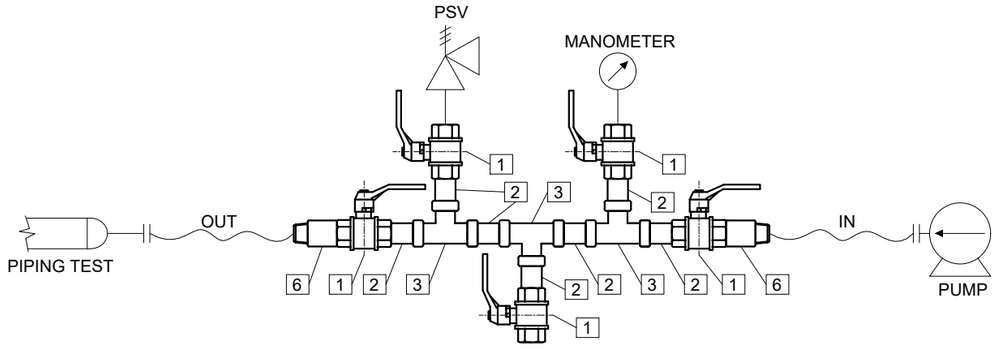
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-150RF
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_150RF	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-FILL	3000 / 6000 / 9000	STANDARD FOR FILLING POINT
TP-STD-FILL/RATING		



TP-STD-FILL/RATING

FILLING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-FILL/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 523 bar 304SS	2

NOTES

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING

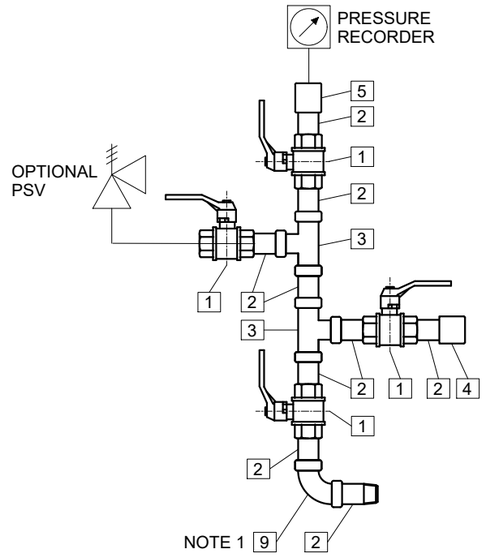
TP-STD-FILL

TP-STD-FILL/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_FILL	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-REC	3000 / 6000 / 9000	STANDARD FOR RECORDING POINT

TP-STD-REC/RATING



TP-STD-REC/RATING
RECORDING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-REC/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1

NOTES

1. 90 DEG ELBOW SHALL BE INSTALLED WHERE APPLICABLE ONLY

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-REC
TP-STD-REC/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_REC	00	1 OF 1

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
3	WW-004	004	1	01CS	H	4,55	80	N/A	1"-WW-004-01CS-H	123A90-DDL-PR-PID-80011	3,50	55	55-00	TP-026	Water	5.25	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
100	WW-202	202	1	01CS	H/E/N	4,55	80	Partially	1"-WW-202-01CS-H	123A90-DDL-PR-PID-80026	3,50	55	55-00	TP-026	Water	5.25	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

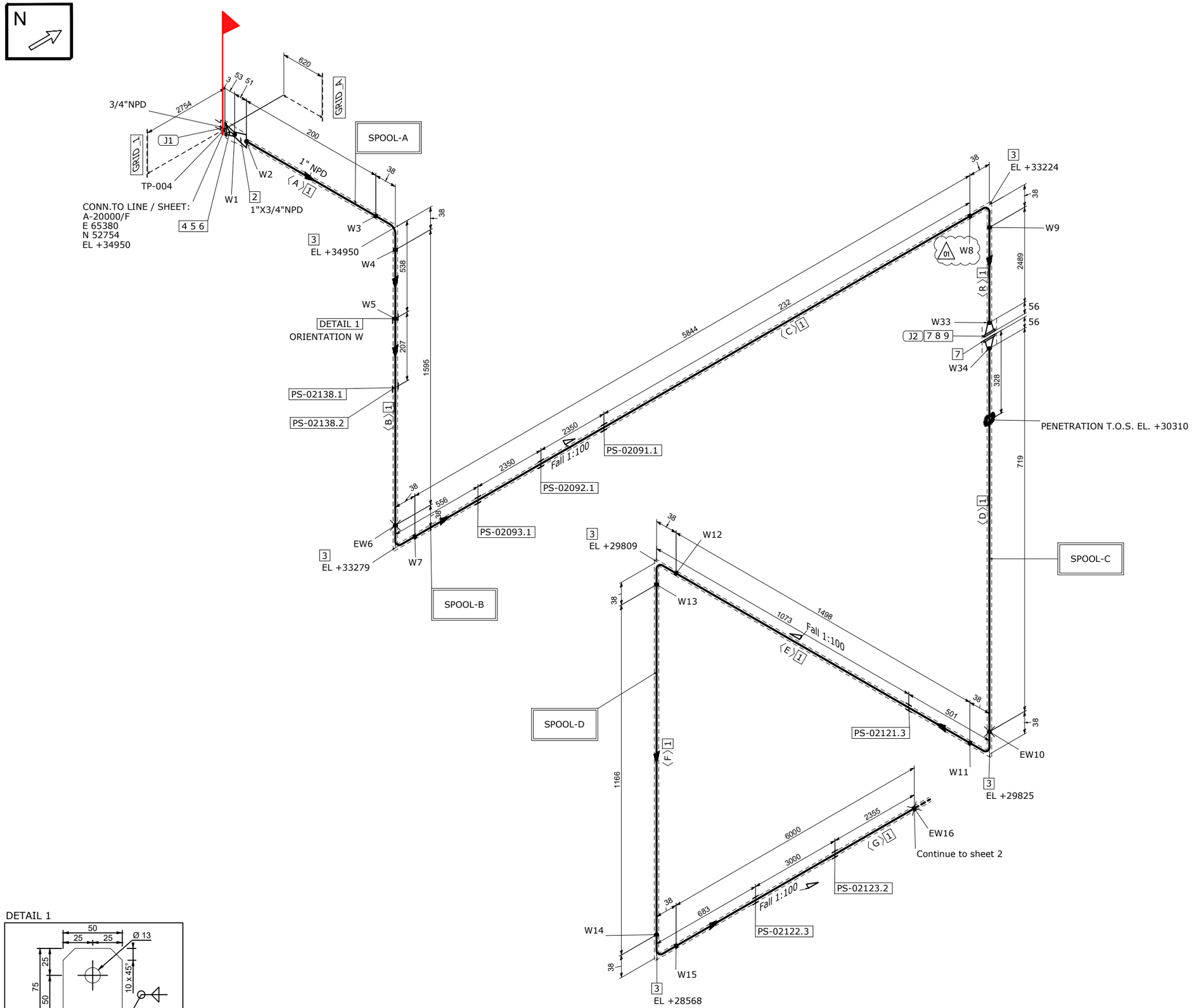
REV. **06**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **03/10/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
4	123A90-FDL-PP-DI-00003-01	**003**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-004-01CS-H	27/08/2024	03/10/2024												**01**	**06**		**TP-026**
5	123A90-FDL-PP-DI-00003-02	**003**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-004-01CS-H	27/08/2024													**00**	**03**		**TP-026**
130	123A90-FDL-PP-DI-00100-01	**100**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-202-01CS-H	27/08/2024													**00**	**03**		**TP-026**
131	123A90-FDL-PP-DI-00100-02	**100**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-202-01CS-H	27/08/2024													**00**	**03**		**TP-026**



DETAIL 1

EARTHING PLATE
DIMENSIONS: 75 x 50 x 5 thk, HOLE Ø13
MATERIAL: 316L STAINLESS STEEL
ORIENTATION: UP UNLESS OTHERWISE NOTED

55-00-TP-026

MASTER

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	19.2M	62.2
2	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	6	1.1
4	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
7	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
5	3/4	SPIKNN01213Q00	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
6	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6
8	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
9	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	67.2
ERECTION WEIGHT [kg]	1.3
OVERALL WEIGHT [kg]	68.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3/4	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5		FW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W33	1	BW
W34	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	200	BEVEL	BEVEL
B	1	1595	BEVEL	BEVEL
C	1	5488	BEVEL	BEVEL
D	1	719	BEVEL	BEVEL
E	1	1498	BEVEL	BEVEL
F	1	1166	BEVEL	BEVEL
G	1	6000	BEVEL	BEVEL
R	1	2489	BEVEL	BEVEL

SUPPORT LIST

PS-02138.1
PS-02138.2
PS-02093.1
PS-02092.1
PS-02091.1
PS-02121.3
PS-02122.3
PS-02123.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.75	7.1
B	4	27.8
C	1	3.7
D	5	28.6
MONT	3	1.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-004-01CS-H

SK.003

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 03-10-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00003
SHEET / OF: 1/2
REV.: 01

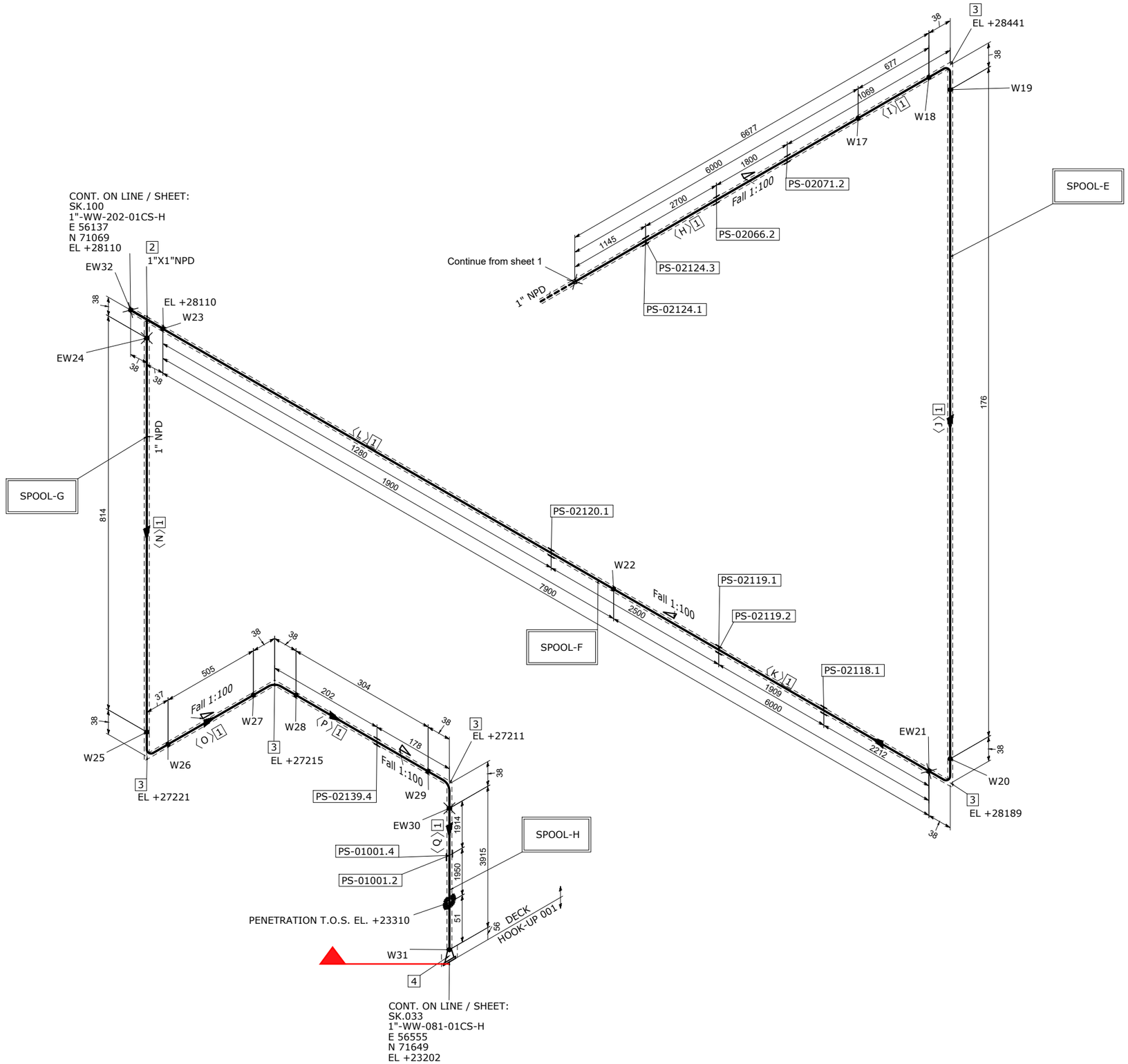
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5,25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	20.3M	65.7
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.5
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	5	0.9
4	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]

FABRICATION WEIGHT [kg]	68.5
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	68.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
EW21	1	BW
W22	1	BW
W23	1	BW
EW24	1	BW
W25	1	BW
W26	1	BW
W27	1	BW
W28	1	BW
W29	1	BW
EW30	1	BW
W31	1	BW
EW32	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
H	1	6000	BEVEL	BEVEL
I	1	677	BEVEL	BEVEL
J	1	176	BEVEL	BEVEL
K	1	6000	BEVEL	BEVEL
L	1	1901	BEVEL	BEVEL
N	1	814	BEVEL	BEVEL
O	1	505	BEVEL	BEVEL
P	1	304	BEVEL	BEVEL
Q	1	3915	BEVEL	BEVEL

SUPPORT LIST

PS-02124.3
PS-02124.1
PS-02066.2
PS-02071.2
PS-02118.1
PS-02119.1
PS-02119.2
PS-02120.1
PS-02139.4
PS-01001.2
PS-01001.4

SPOOL	WELD [inches]	WEIGHT [kg]
E	4	22.6
F	2	26.1
G	5	5.8
H	1	14.1
MONT	4	0.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-004-01CS-H

SK.003

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
				DATE	27-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00003	SHEET / OF	2/2
				REV.	00

55-00-TP-026

MASTER

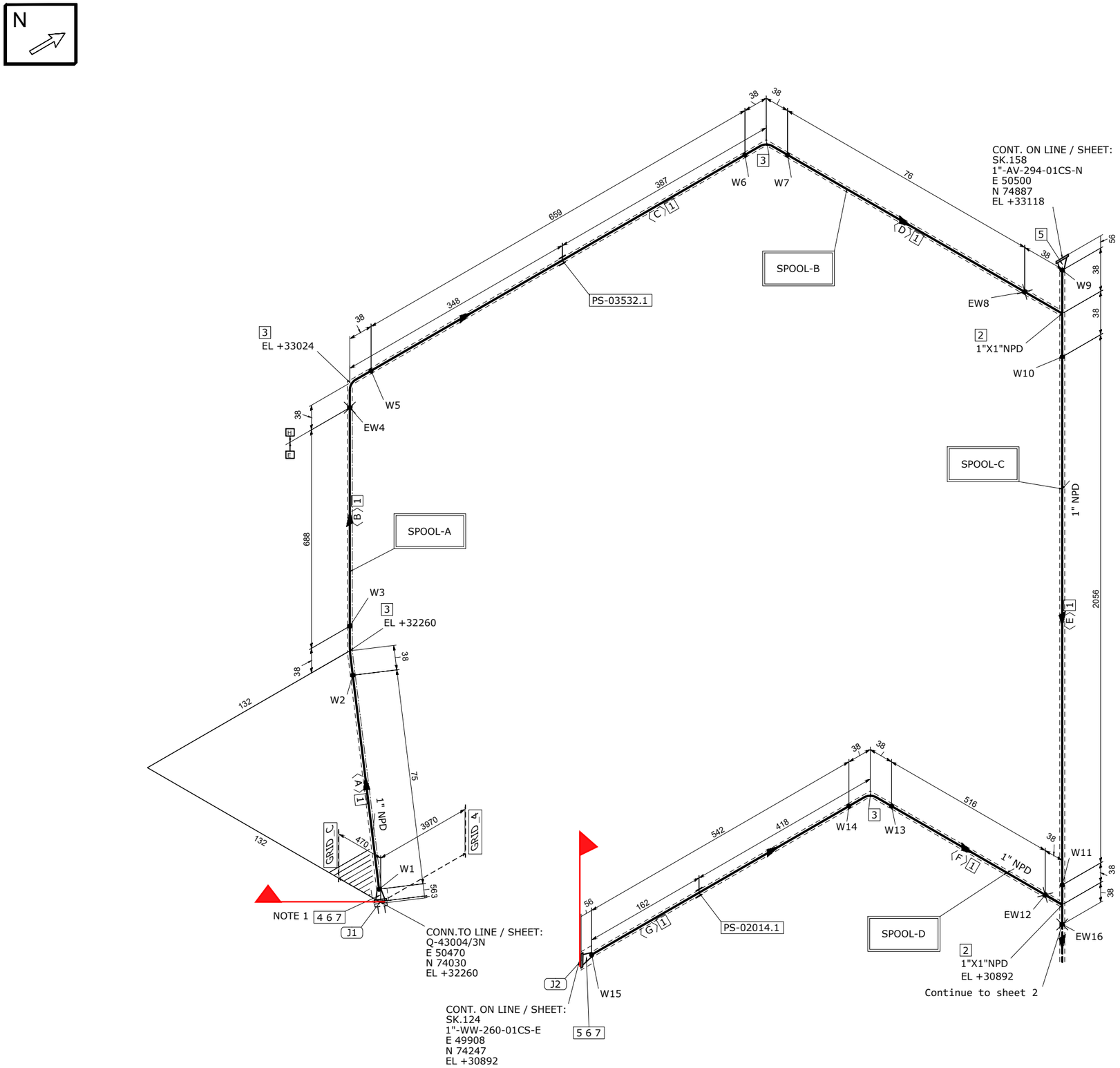
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5,25 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	4.6M	15.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
4	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	20.8
ERECTION WEIGHT [kg]	1.1
OVERALL WEIGHT [kg]	21.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
EW4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
EW12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	75	BEVEL	BEVEL
B	1	688	BEVEL	BEVEL
C	1	659	BEVEL	BEVEL
D	1	76	BEVEL	BEVEL
E	1	2056	BEVEL	BEVEL
F	1	516	BEVEL	BEVEL
G	1	543	BEVEL	BEVEL

SUPPORT LIST

PS-03532.1
PS-02014.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.1
B	3	2.7
C	3	9.0
D	3	5.0
MONT	4	1.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-202-01CS-H

SK.100

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00100	SHEET / OF	1/2
				DATE	27-08-2024
				REV.	00

55-00-TP-026

MASTER

LINE DATA

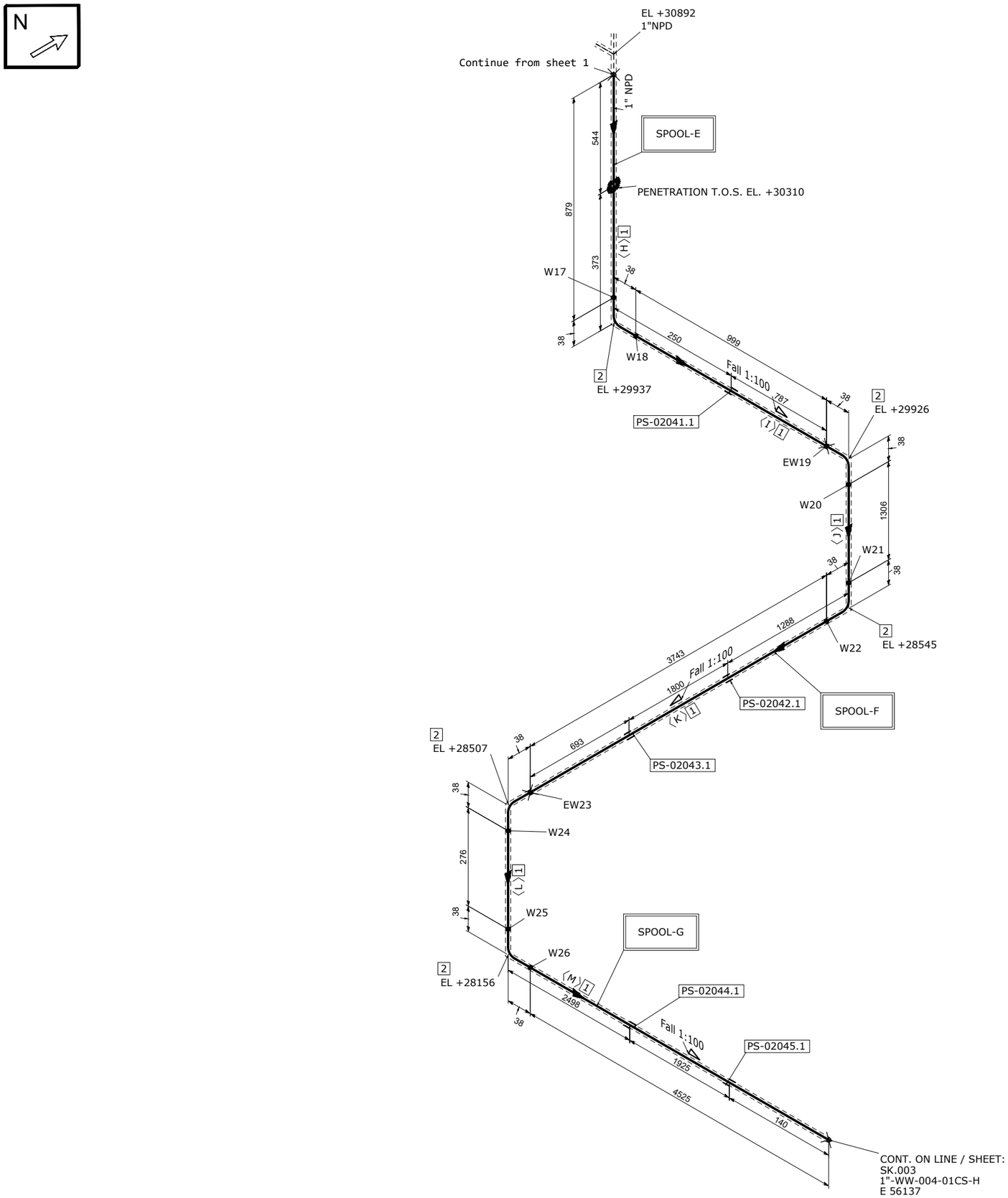
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 mm [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION NE\SW



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	11.7M	38.0
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	5	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]

FABRICATION WEIGHT [kg]	38.9
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	38.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W17	1	BW
W18	1	BW
EW19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
EW23	1	BW
W24	1	BW
W25	1	BW
W26	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
H	1	879	BEVEL	BEVEL
I	1	999	BEVEL	BEVEL
J	1	1306	BEVEL	BEVEL
K	1	3743	BEVEL	BEVEL
L	1	276	BEVEL	BEVEL
M	1	4525	BEVEL	BEVEL

SUPPORT LIST

PS-02041.1
PS-02042.1
PS-02043.1
PS-02044.1
PS-02045.1

SPOOL	WELD [inches]	WEIGHT [kg]
E	2	6.3
F	3	16.7
G	3	15.9
MONT	2	0.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-202-01CS-H

SK.100

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00100	SHEET / OF	2/2
				REV.	00

55-00-TP-026

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25	[barg]	TEMP. AMB	MEDIUM	Water	

REFERENCE DOCUMENTS

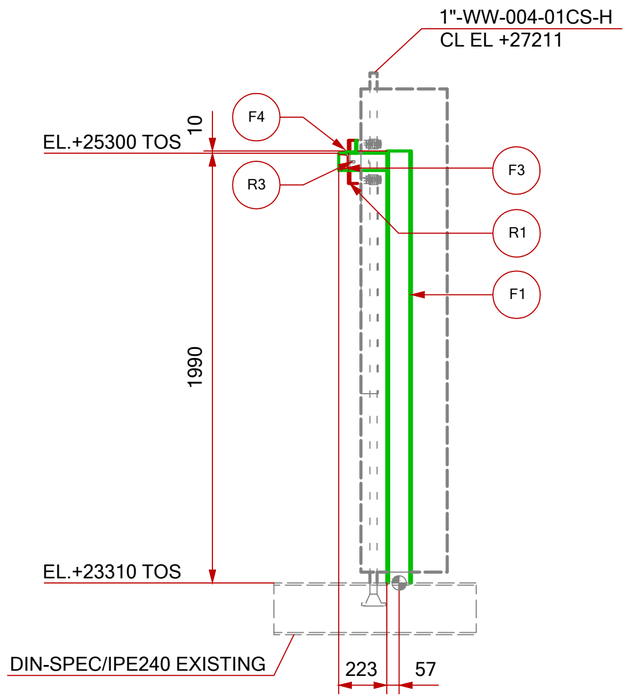
P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

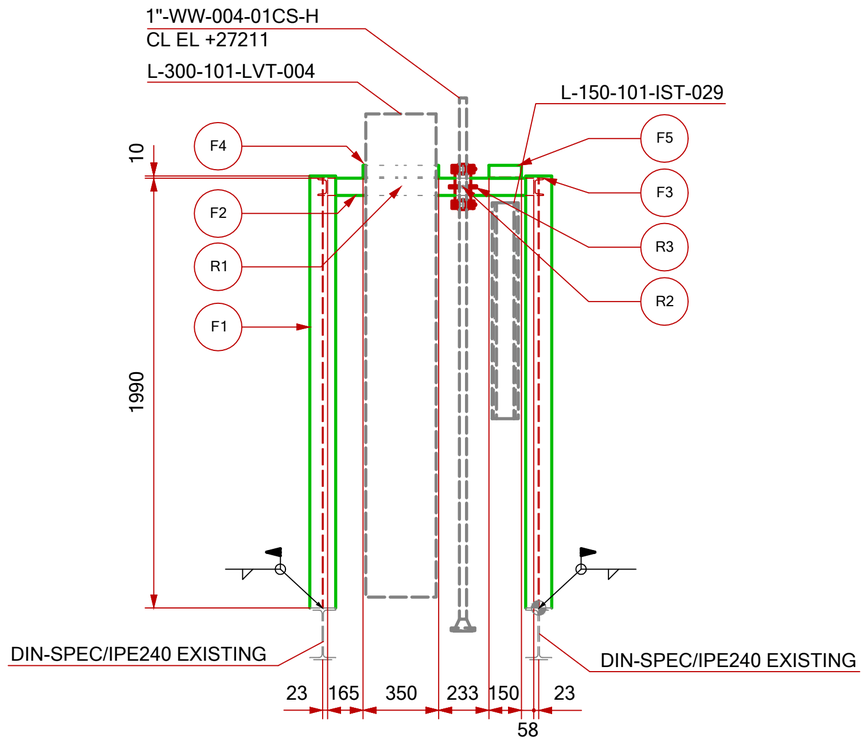
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01001	B2	PIP	LOWER DECK		1"-WW-004-01CS-H	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-026
PS-01001	B4	PIP	LOWER DECK		1"-WW-004-01CS-H	C-32 - 1 - 2		1	0,260	0,008	00	19/08/2024	IFR		TP-026
PS-02014	B1	PIP	UPPER DECK		1"-WW-202-01CS-H	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-026
PS-02041	B1	PIP	UPPER DECK		1"-WW-202-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02042	B1	PIP	UPPER DECK		1"-WW-202-01CS-H	S-75 - 1" - 100 - 94 - 200		1	4,656	0,034	00	19/08/2024	IFR		TP-026
PS-02043	B1	PIP	UPPER DECK		1"-WW-202-01CS-H	S-75 - 1" - 80 - 74 - 200		1	4,508	0,034	00	19/08/2024	IFR		TP-026
PS-02044	B1	PIP	UPPER DECK		1"-WW-202-01CS-H	S-75 - 1" - 99 - 94 - 200		1	4,651	0,034	00	19/08/2024	IFR		TP-026
PS-02045	B1	PIP	UPPER DECK		1"-WW-202-01CS-H	S-75 - 1" - 80 - 76 - 200		1	4,513	0,034	00	19/08/2024	IFR		TP-026
PS-02066	B2	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02071	B2	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02091	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 49 - 43 - 200		1	4,279	0,034	00	19/08/2024	IFR		TP-026
PS-02092	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 73 - 67 - 200		1	4,456	0,034	00	19/08/2024	IFR		TP-026
PS-02093	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 94 - 102 - 200		1	4,654	0,034	00	19/08/2024	IFR		TP-026
PS-02118	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02119	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02119	B2	PIP	UPPER DECK		1"-WW-004-01CS-H	C-33 - 2 - I - 2		1	4,205	0,040	00	19/08/2024	IFR		TP-026
PS-02120	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02121	B3	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02122	B3	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02123	B2	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02124	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-026
PS-02124	B3	PIP	UPPER DECK		1"-WW-004-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	00	19/08/2024	IFR		TP-026
PS-02138	B1	PIP	UPPER DECK		1"-WW-004-01CS-H	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-026
PS-02138	B2	PIP	UPPER DECK		1"-WW-004-01CS-H	C-33 - 1 - I - 2		1	2,280	0,028	00	19/08/2024	IFR		TP-026
PS-02139	B4	PIP	UPPER DECK		1"-WW-004-01CS-H	S-71 - 1" - 100		1	2,666	0,075	00	19/08/2024	IFR		TP-026
PS-03532	B1	PIP	PAU		1"-WW-202-01CS-H	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-026



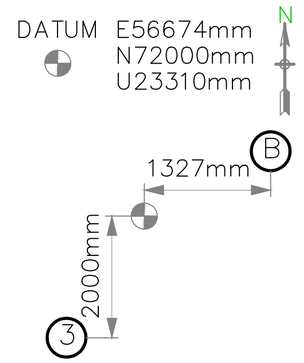
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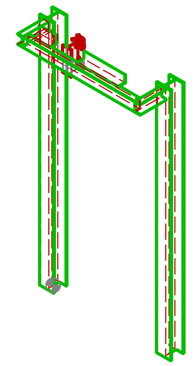


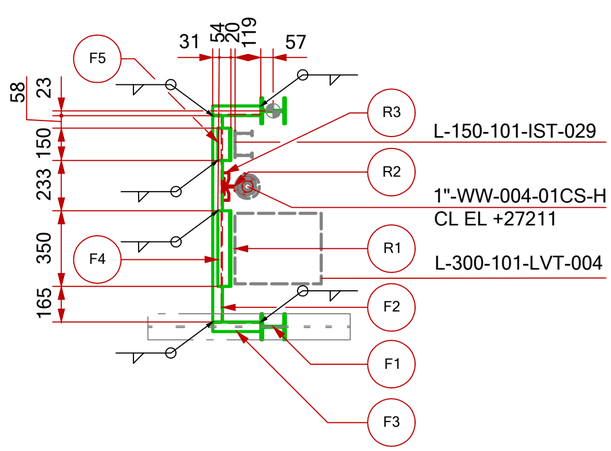
VIEW LOOKING WEST

SUPPORT MATERIAL LIST

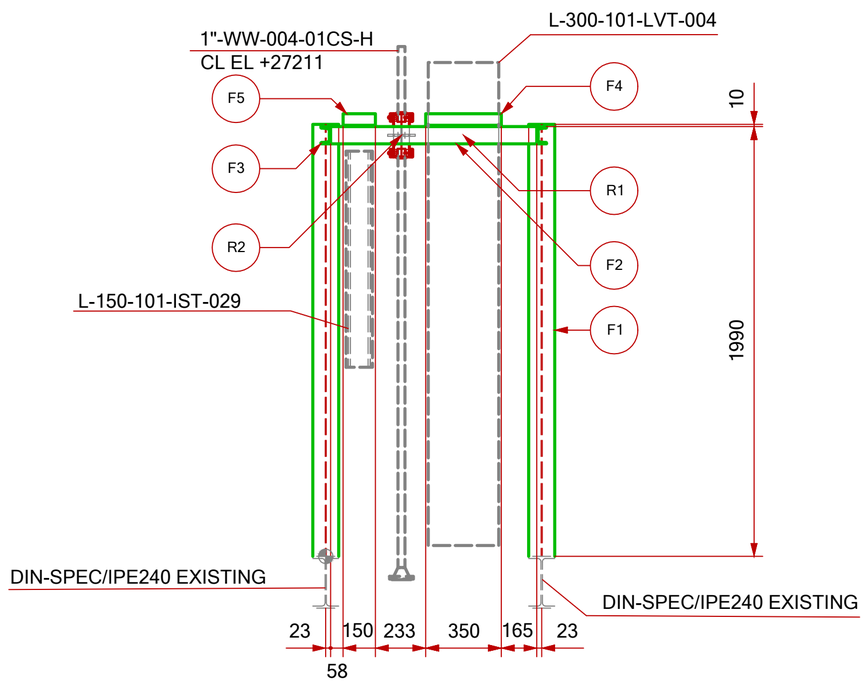
POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	RACK SUPPORT	-	-	2	-	0.00	-
R2	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R3	STD	C-32-1-2	-	-	1	-	0.26	0.008
F1	BEAM	HEA120	Carbon Steel	2000	2	19.98	79.92	2.718
F2	BEAM	UPN80	Carbon Steel	955	1	8.66	8.27	0.301
F3	BEAM	UPN80	Carbon Steel	223	2	8.66	3.86	0.144
F4	BEAM	L60x6	Carbon Steel	350	1	5.42	1.90	0.083
F5	BEAM	L60x6	Carbon Steel	150	1	5.42	0.81	0.036
						TOTAL	98.8	3.39







PLAN VIEW



VIEW LOOKING EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

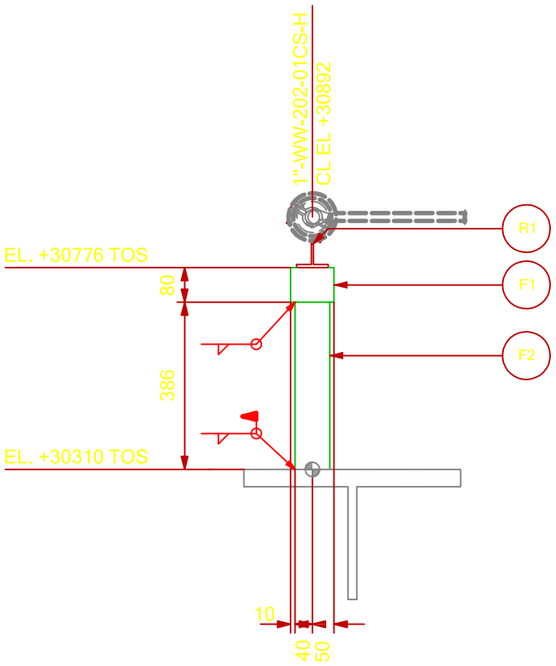
ROSETTI MARINO

TITLE :

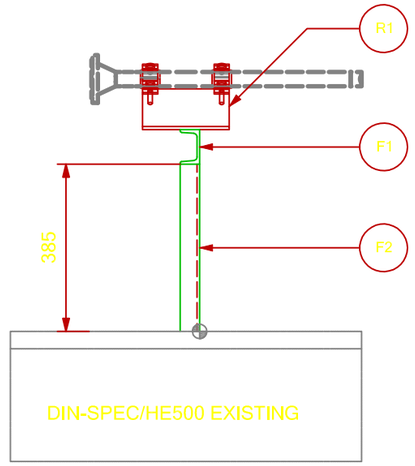
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01001

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 :20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

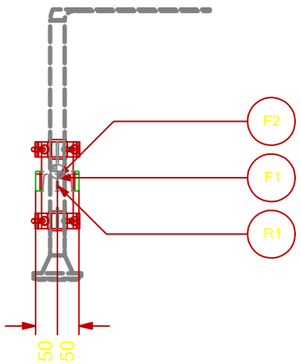
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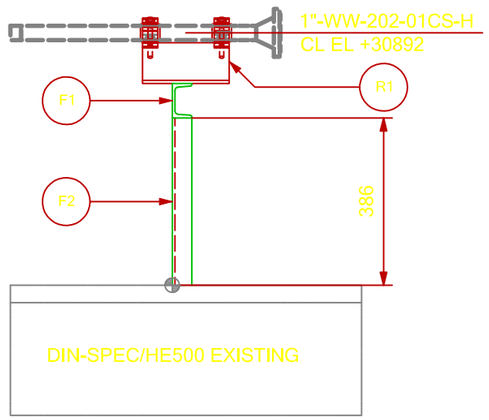
VIEW LOOKING NORTH



VIEW LOOKING WEST



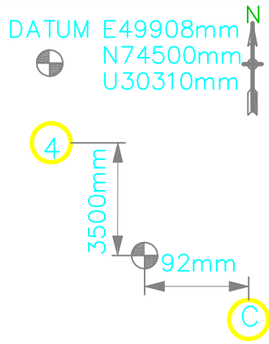
PLAN VIEW

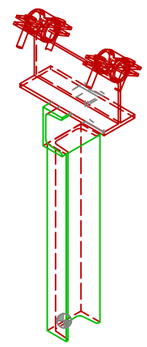


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3,81	0,102
F1	BEAM	UPN80	Carbon Steel	100	1	8,66	0,87	0,034
F2	BEAM	UPN80	Carbon Steel	386	1	8,66	3,34	0,123
						TOTAL	8.0	0.26





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

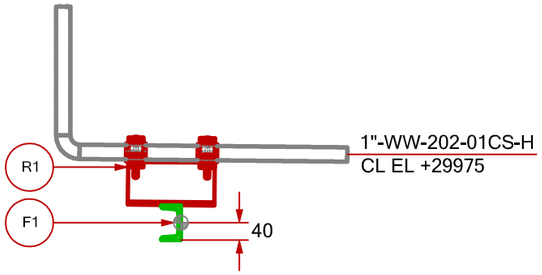
ROSETTI MARINO

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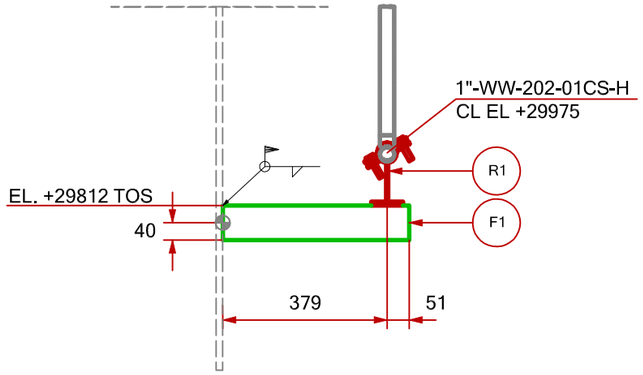
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02014

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
	DRAWING NO. 123A90-DDL-PP-DD-72000		SHEET 1 of 1 / REV. 00

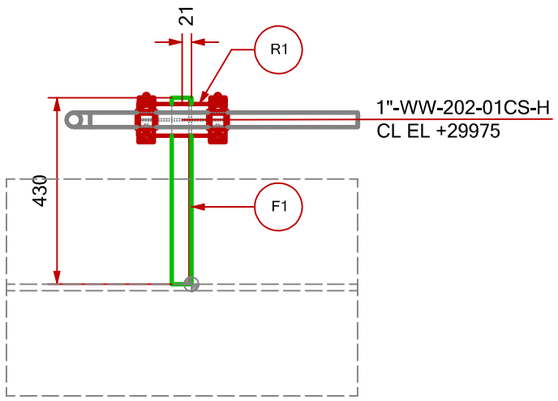
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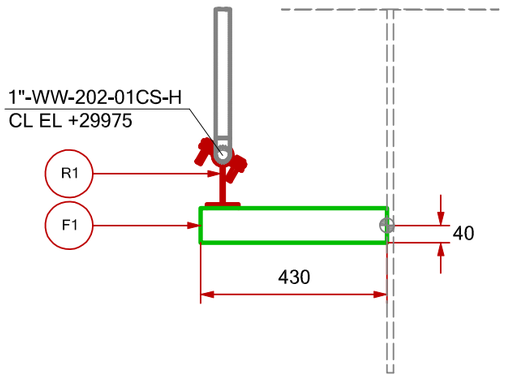
VIEW LOOKING NORTH



VIEW LOOKING WEST



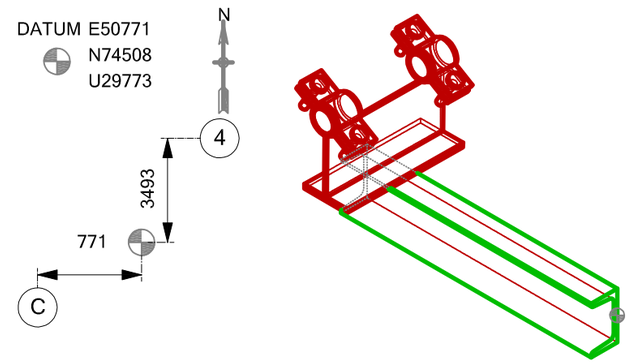
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN80	Carbon Steel	430	1	8.66	3.73	0.137
						TOTAL	8.4	0.17



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

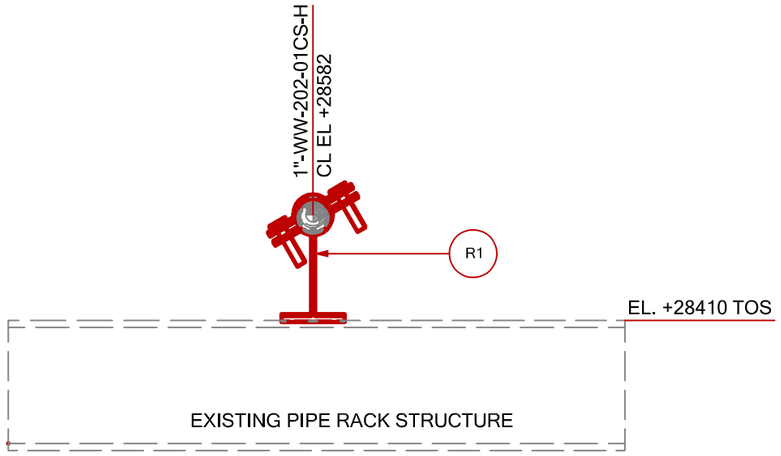
ROSETTI MARINO

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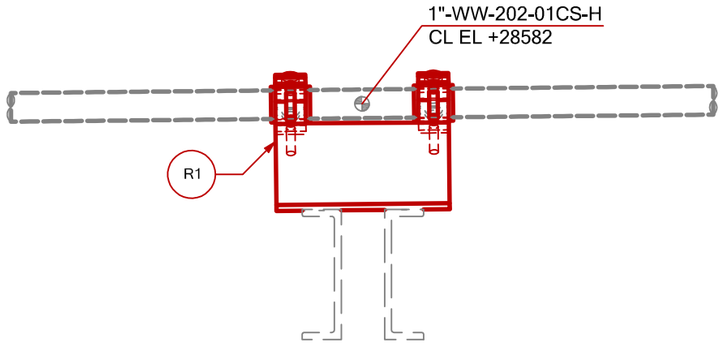
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02041

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	1 : 10
DRAWN	CHECKED	APPROVED	DATE	19/08/24
	DRAWING NO. 123A90-DDL-PP-DD-72000		SHEET 1 of 1	REV. 00

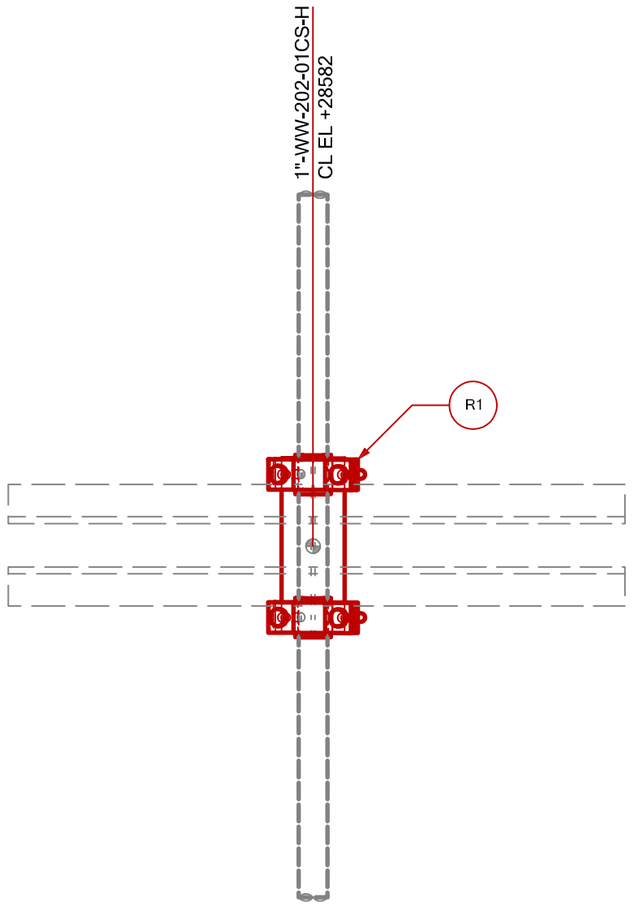
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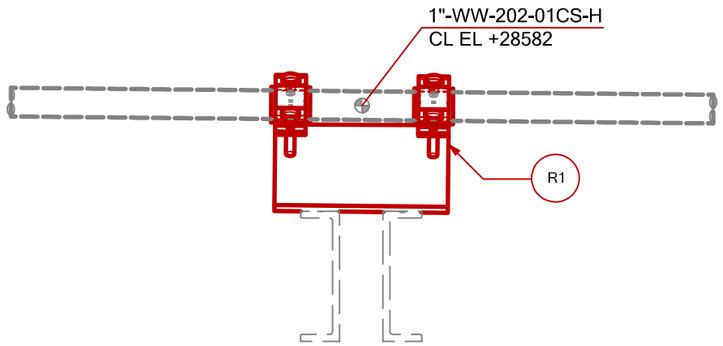
VIEW LOOKING NORTH



VIEW LOOKING WEST



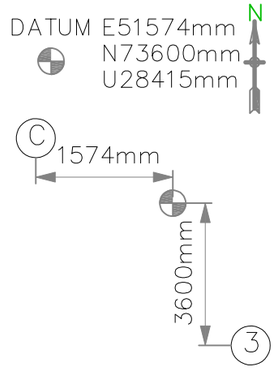
PLAN VIEW

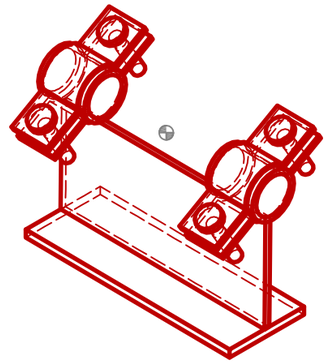


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-100-94-200	-	-	1	-	4.66	0.034
						TOTAL	4.7	0.03





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

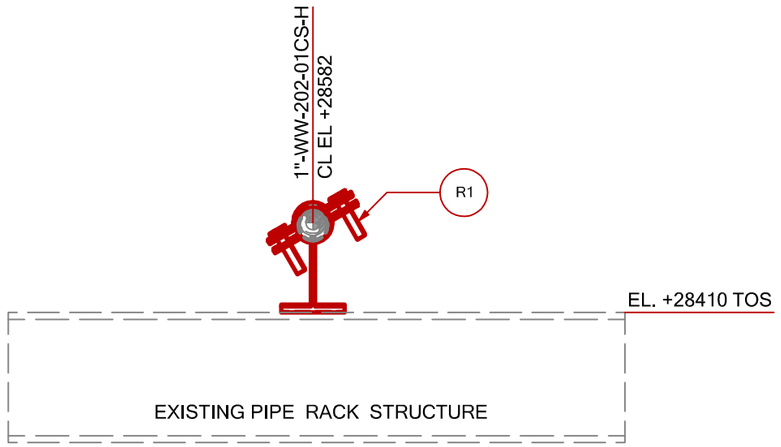
ROSETTI MARINO

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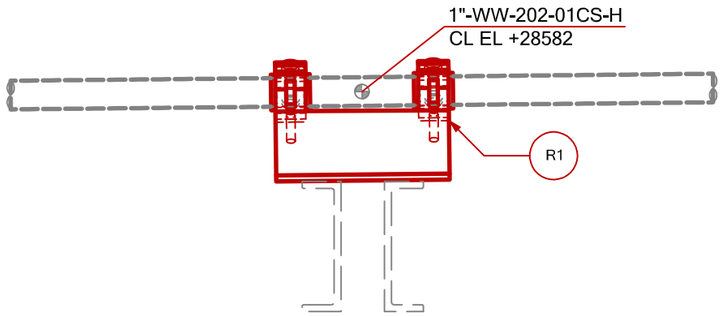
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02042

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 5
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

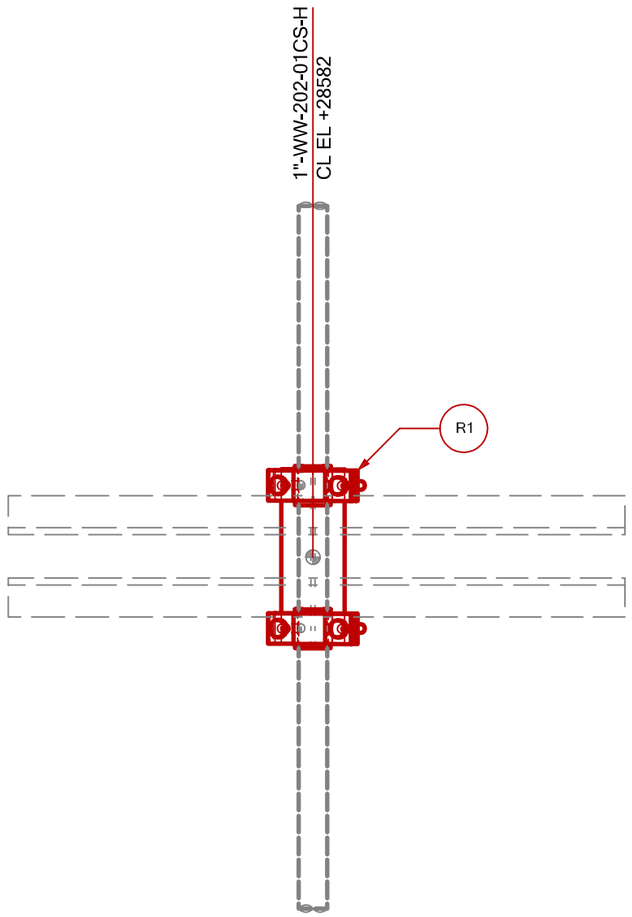
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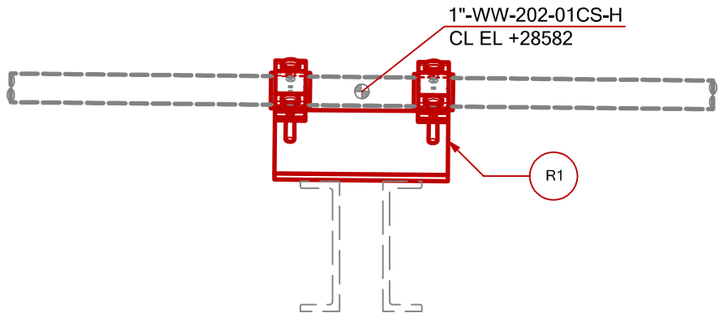
VIEW LOOKING NORTH



VIEW LOOKING WEST



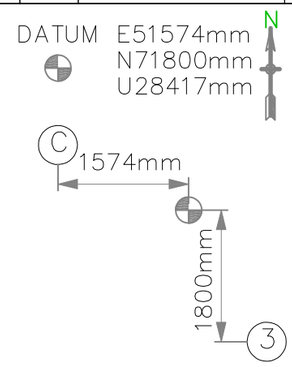
PLAN VIEW

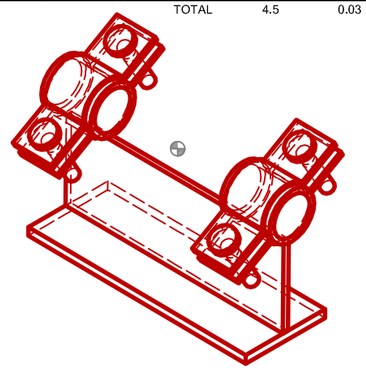


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-80-74-200	-	-	1	-	4.51	0.034
						TOTAL	4.5	0.03





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

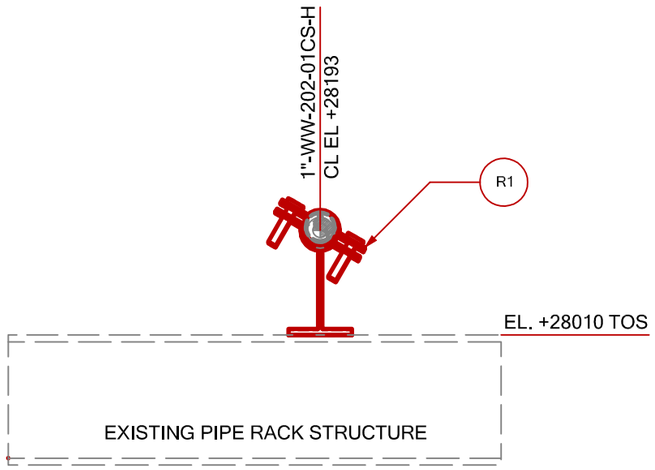
ROSETTI MARINO

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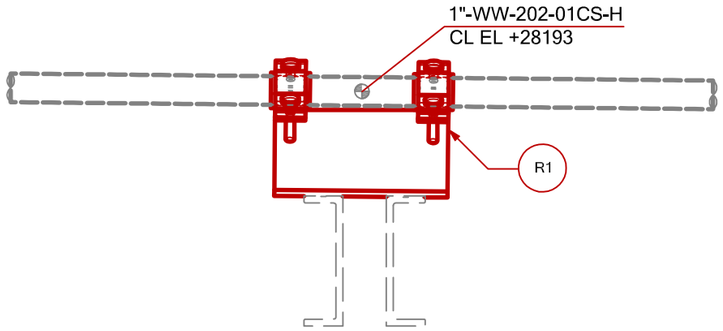
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02043

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1 : 5
DRAWN	CHECKED / APPROVED	DATE	19/08/24
DRAWING NO.	123A90-DDL-PP-DD-72000	SHEET	1 of 1
		REV.	00

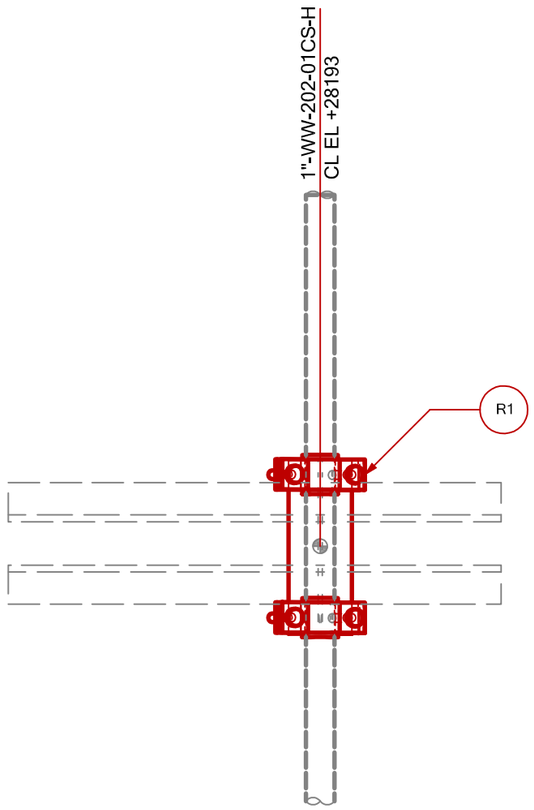
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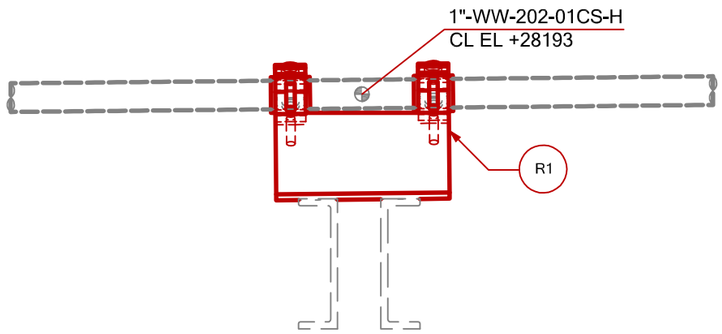
VIEW LOOKING EAST



VIEW LOOKING NORTH



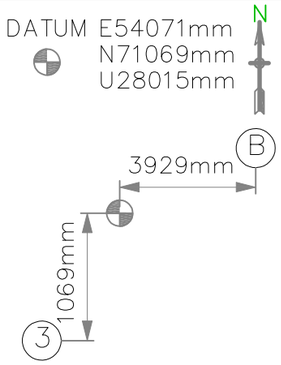
PLAN VIEW

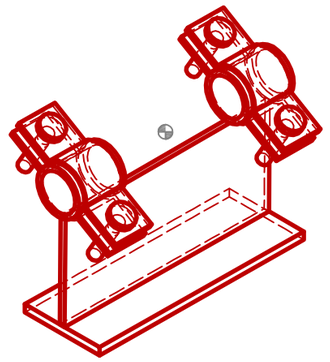


VIEW LOOKING SOUTH

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-99-94-200	-	-	1	-	4.65	0.034
						TOTAL	4.7	0.03





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

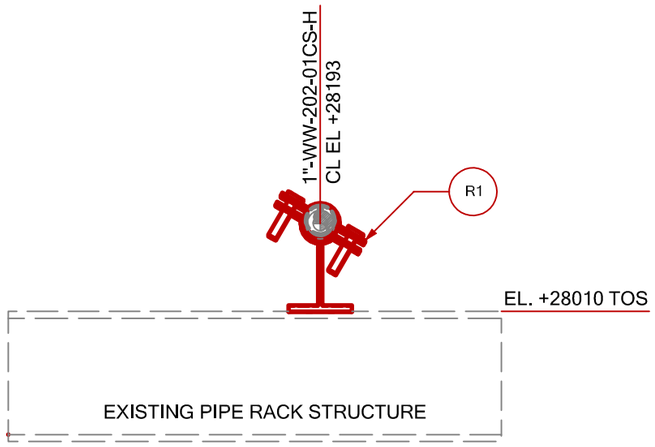
ROSETTI MARINO

TITLE :

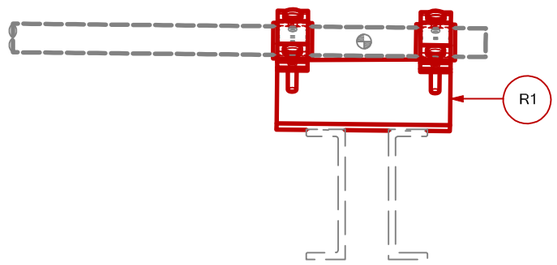
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02044

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 5
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

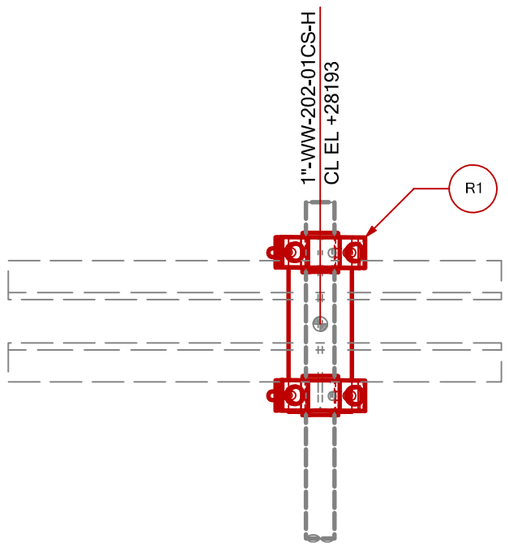
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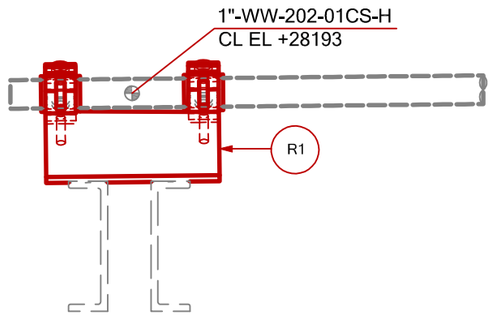
VIEW LOOKING EAST



VIEW LOOKING NORTH



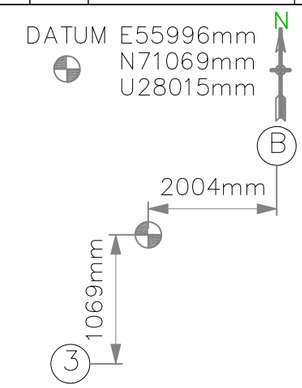
PLAN VIEW

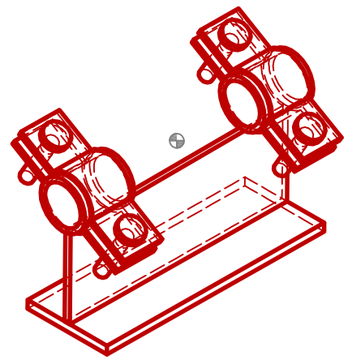


VIEW LOOKING SOUTH

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-80-76-200	-	-	1	-	4.51	0.034
						TOTAL	4.5	0.03





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

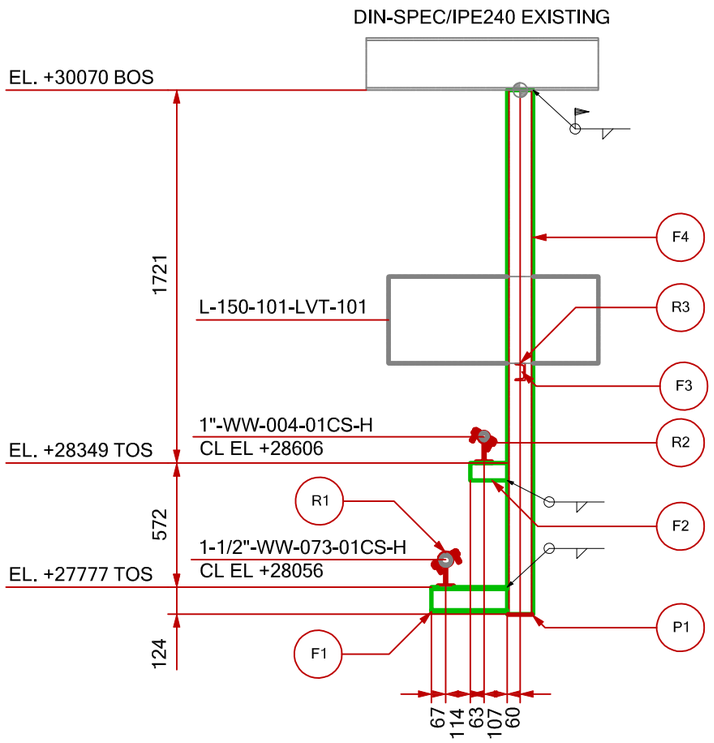
ROSETTI MARINO

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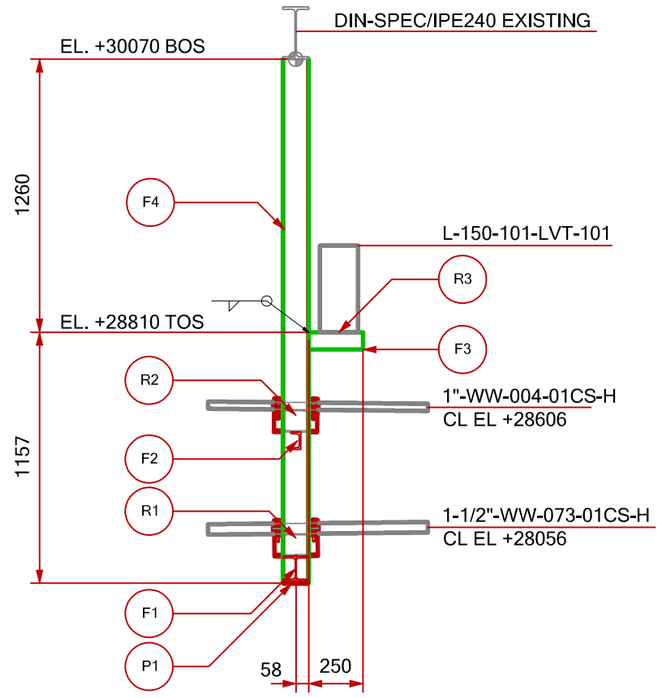
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02045

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 5
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

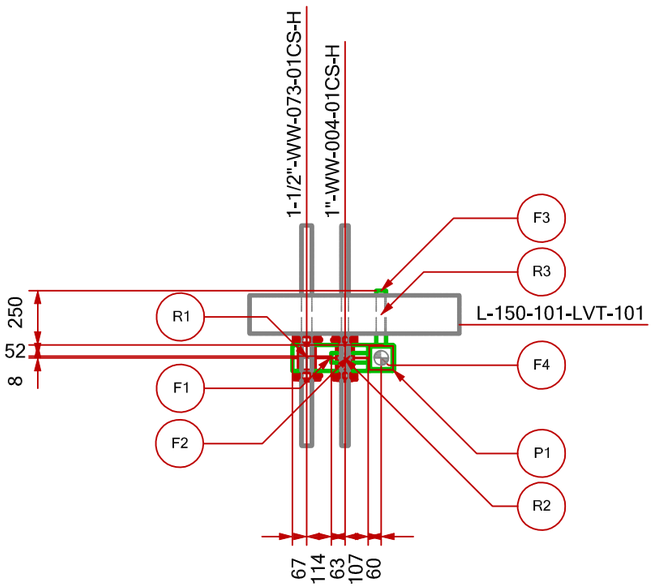
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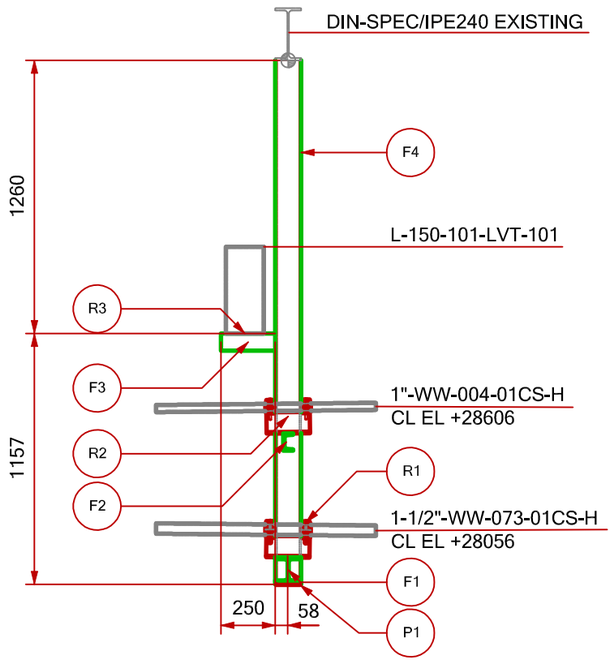
VIEW LOOKING NORTH



VIEW LOOKING WEST



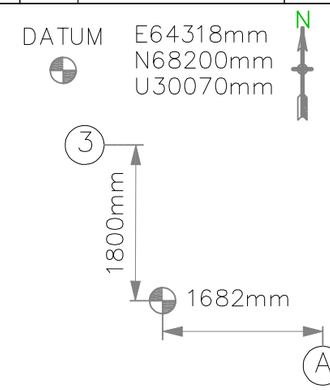
PLAN VIEW

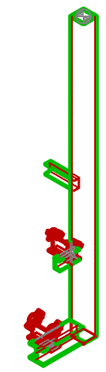


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R3	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	HEA120	Carbon Steel	350	1	19.98	6.99	0.242
F2	BEAM	UPN80	Carbon Steel	170	1	8.66	1.47	0.055
F3	BEAM	UPN80	Carbon Steel	250	1	8.66	2.17	0.081
F4	BEAM	RHS120x120x8	Carbon Steel	2417	1	27.79	67.18	2.122
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	87.8	2.59





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

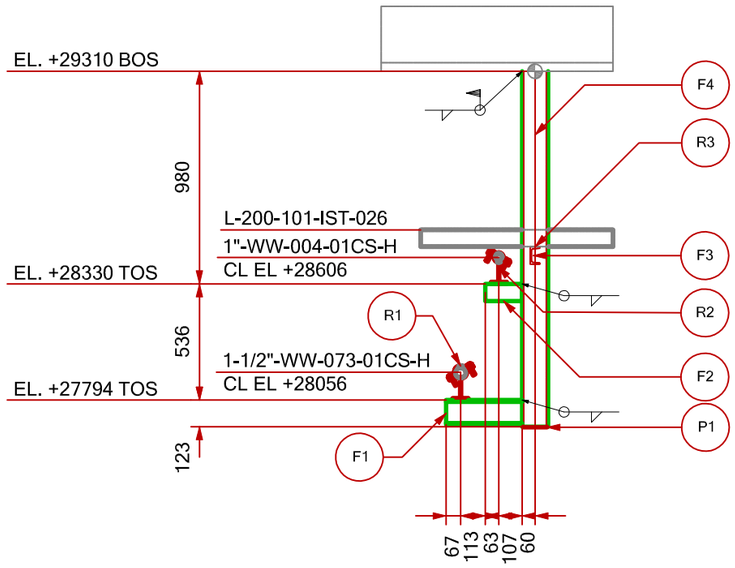
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TITLE :

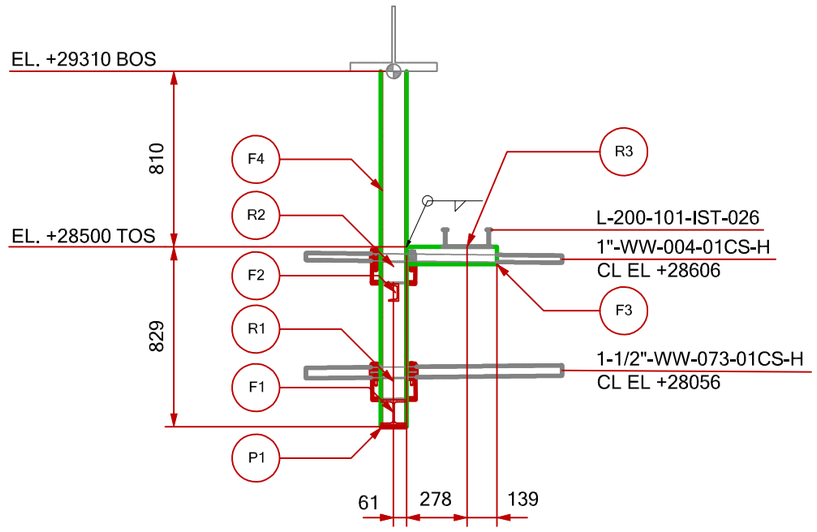
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02066

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
	DRAWING NO. 123A90-DDL-PP-DD-72000	SHEET 1 of 1	REV. 00

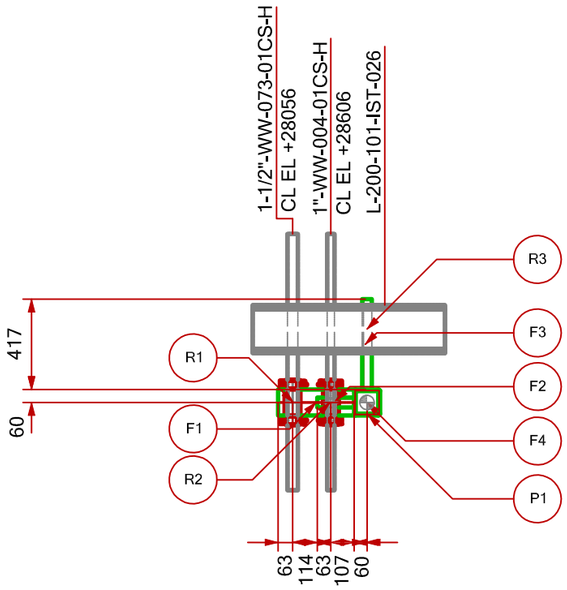
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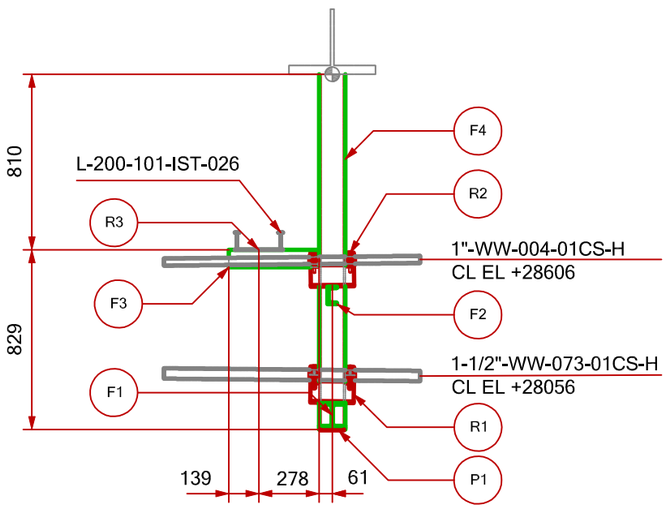
VIEW LOOKING NORTH



VIEW LOOKING WEST



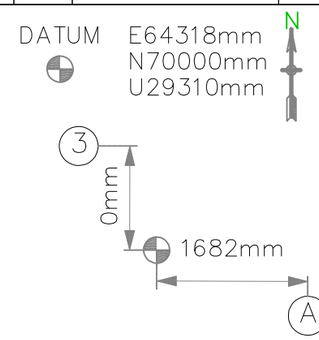
PLAN VIEW

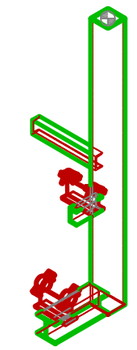


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R3	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	HEA120	Carbon Steel	350	1	19.98	6.99	0.242
F2	BEAM	UPN80	Carbon Steel	170	1	8.66	1.47	0.055
F3	BEAM	UPN80	Carbon Steel	417	1	8.66	3.61	0.133
F4	BEAM	RHS120x120x8	Carbon Steel	1639	1	27.79	45.56	1.441
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	67.6	1.96





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

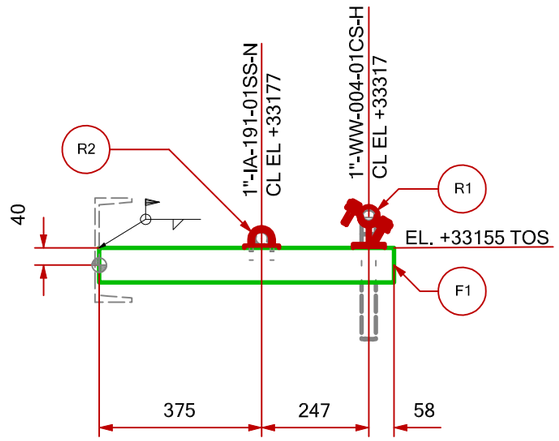
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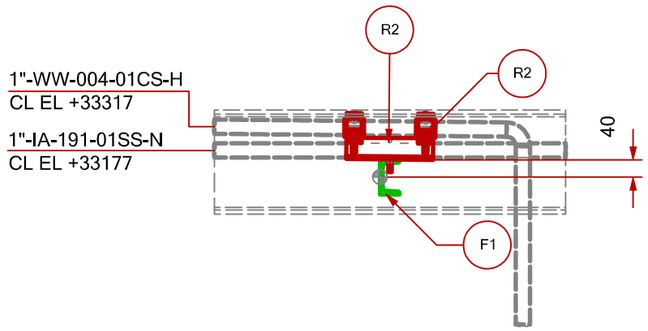
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02071

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

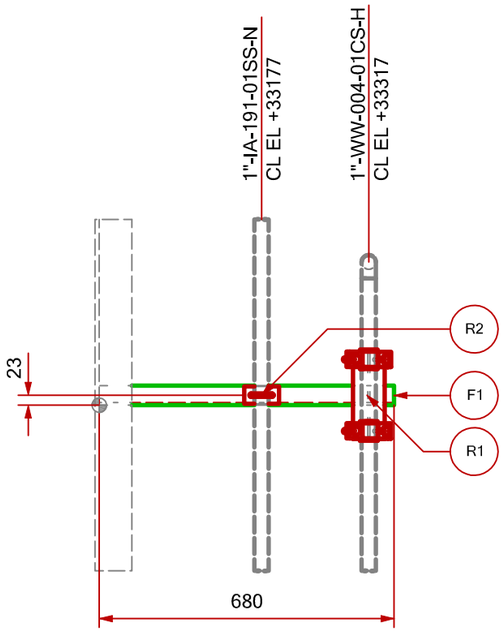
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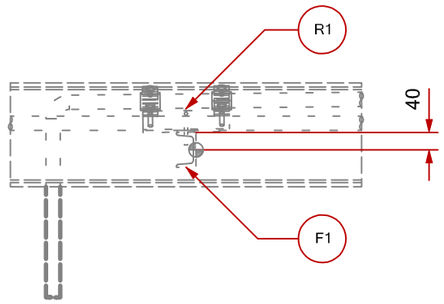
VIEW LOOKING NORTH



VIEW LOOKING WEST



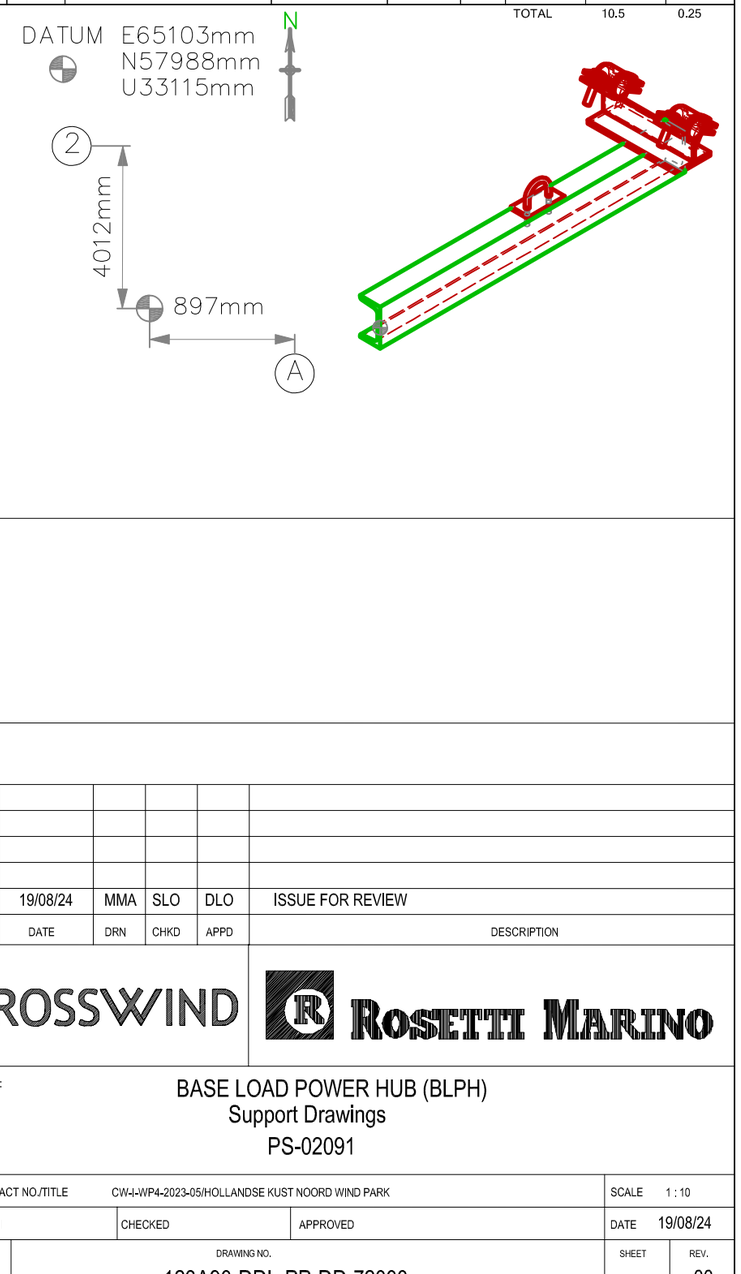
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-49-43-200	-	-	1	-	4.28	0.034
R2	STD	S-211-1"	-	-	1	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	680	1	8.66	5.89	0.215
						TOTAL	10.5	0.25



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

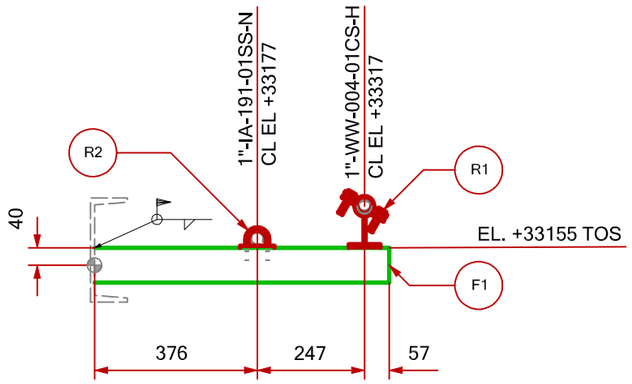
ROSETTI MARINO

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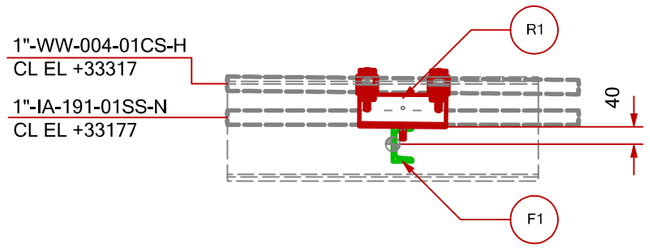
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02091

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1 : 10
DRAWN	CHECKED / APPROVED	DATE	19/08/24
DRAWING NO.	123A90-DDL-PP-DD-72000	SHEET	1 of 1
		REV.	00

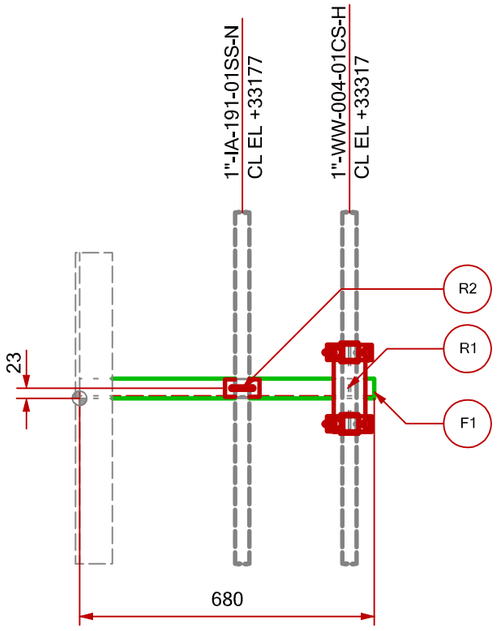
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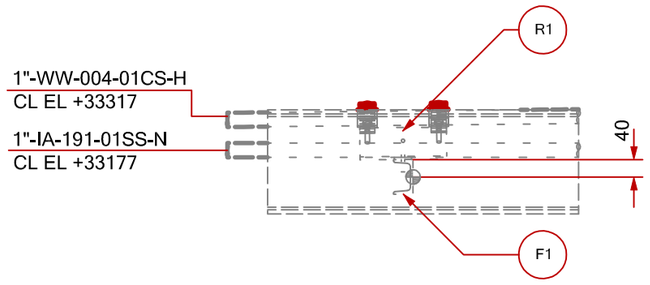
VIEW LOOKING NORTH



VIEW LOOKING WEST



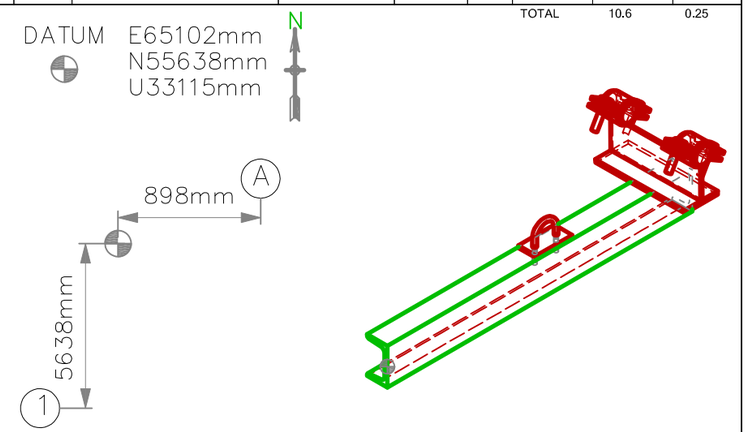
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-73-67-200	-	-	1	-	4.46	0.034
R2	STD	S-211-1"	-	-	1	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	680	1	8,66	5,89	0,215
						TOTAL	10.6	0.25



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

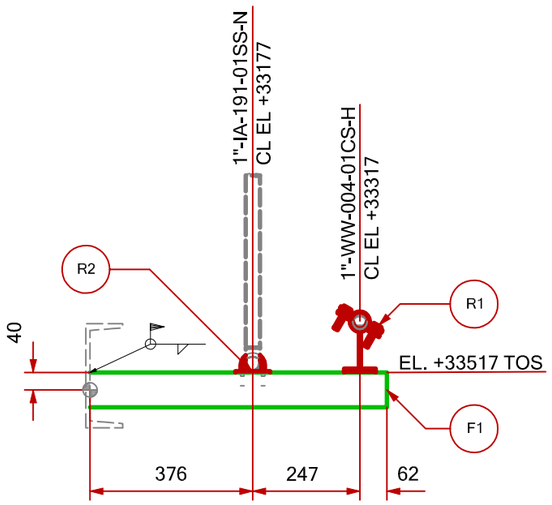
ROSETTI MARINO

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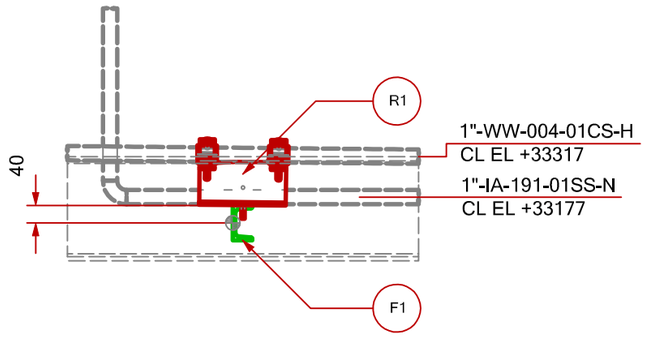
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02092

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	1 : 10
DRAWN	CHECKED	APPROVED		DATE	19/08/24
	DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1	REV. 00

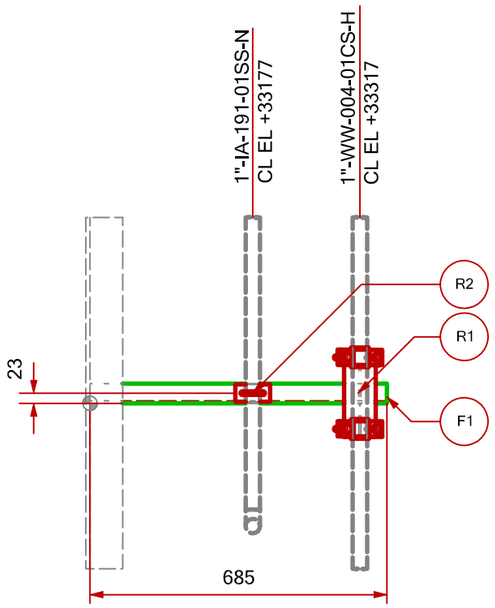
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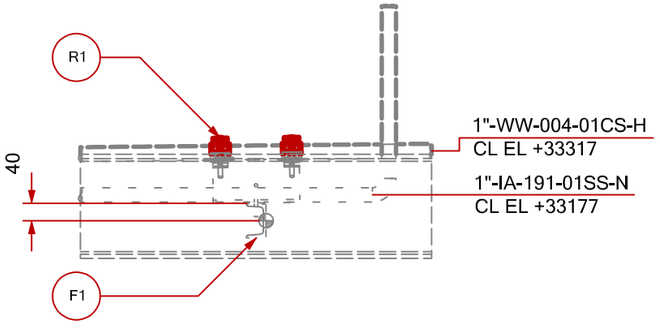
VIEW LOOKING NORTH



VIEW LOOKING WEST



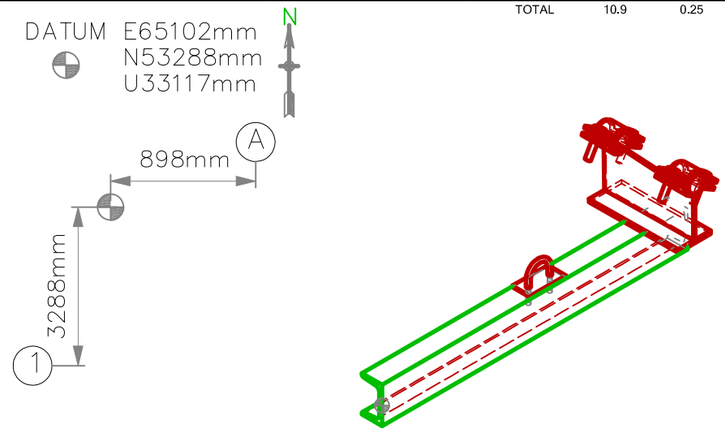
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-94-102-200	-	-	1	-	4.65	0.034
R2	STD	S-211-1"	-	-	1	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	685	1	8.66	5.93	0.217
						TOTAL	10.9	0.25



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

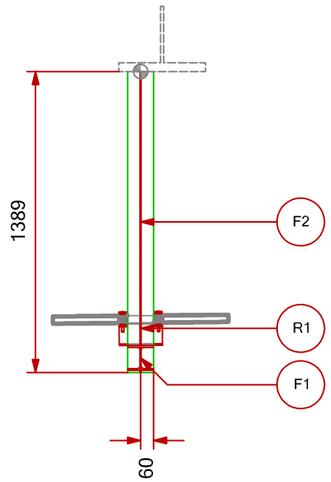
ROSETTI MARINO

TITLE :

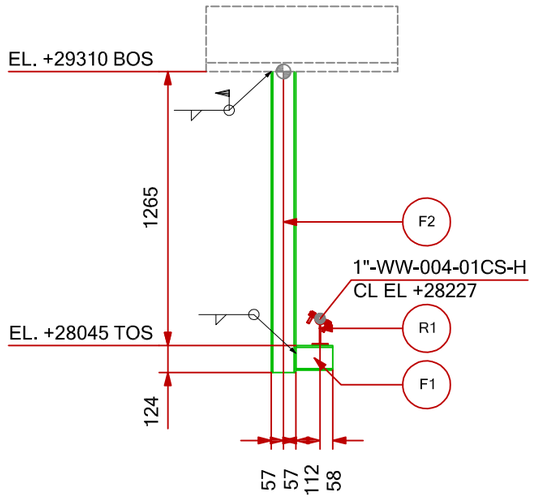
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02093

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1 : 10
DRAWN	CHECKED	APPROVED		DATE 19/08/24
	DRAWING NO. 123A90-DDL-PP-DD-72000		SHEET 1 of 1	REV. 00

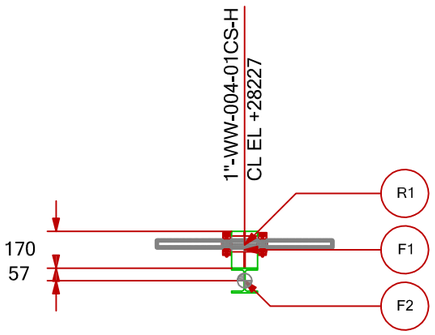
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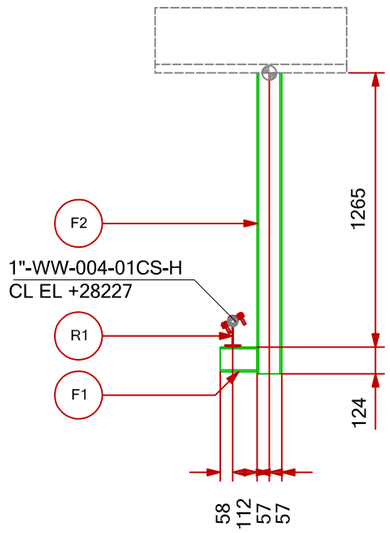
VIEW LOOKING NORTH



VIEW LOOKING WEST



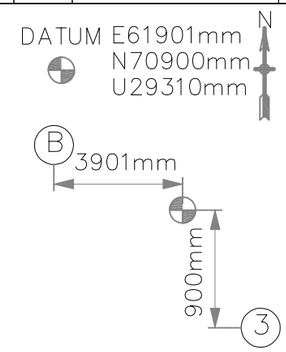
PLAN VIEW

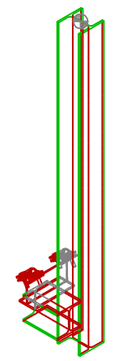


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	170	1	19.98	3.40	0.120
F2	BEAM	HEA120	Carbon Steel	1389	1	19.98	27.74	0.945
						TOTAL	35.8	1.10





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

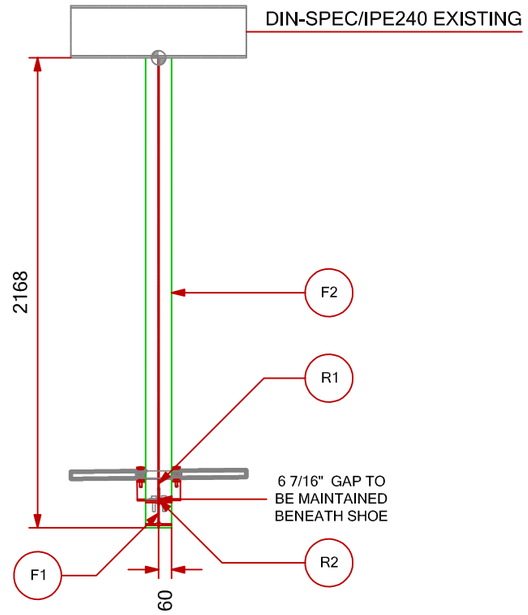
ROSETTI MARINO

TITLE :

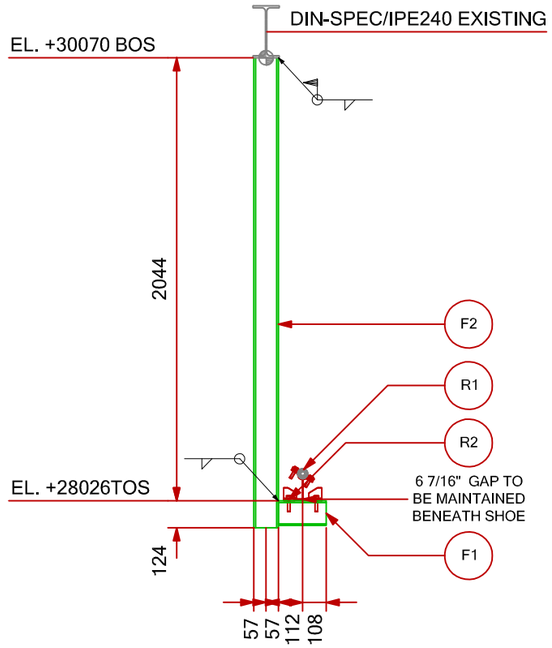
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02118

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
	DRAWING NO. 123A90-DDL-PP-DD-72000		SHEET 1 of 1 / REV. 00

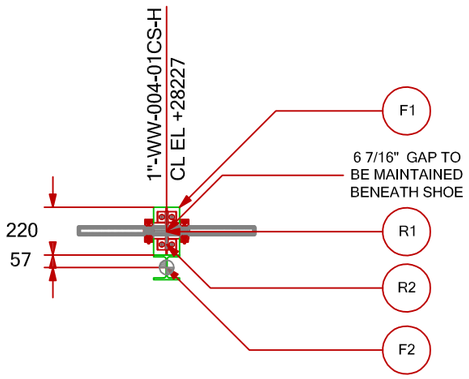
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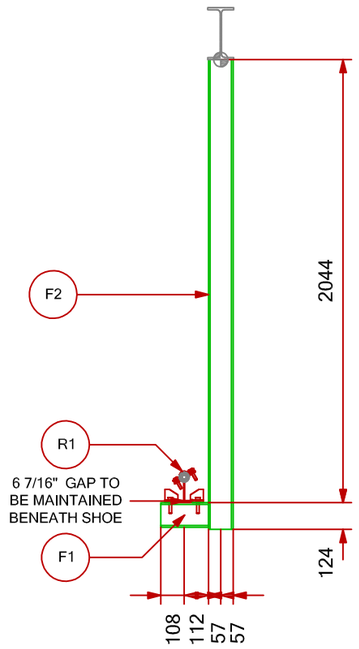
VIEW LOOKING NORTH



VIEW LOOKING WEST



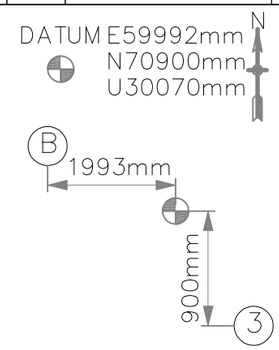
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R2	STD	C-33-2-I-2	-	-	1	-	4.21	0.040
F1	BEAM	HEA120	Carbon Steel	220	1	19.98	4.40	0.154
F2	BEAM	HEA120	Carbon Steel	2168	1	19.98	43.31	1.472
						TOTAL	56.6	1.70





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

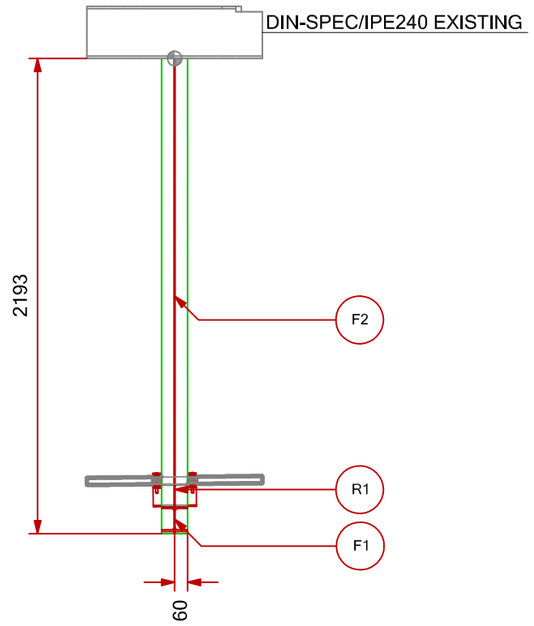
ROSETTI MARINO

TITLE :

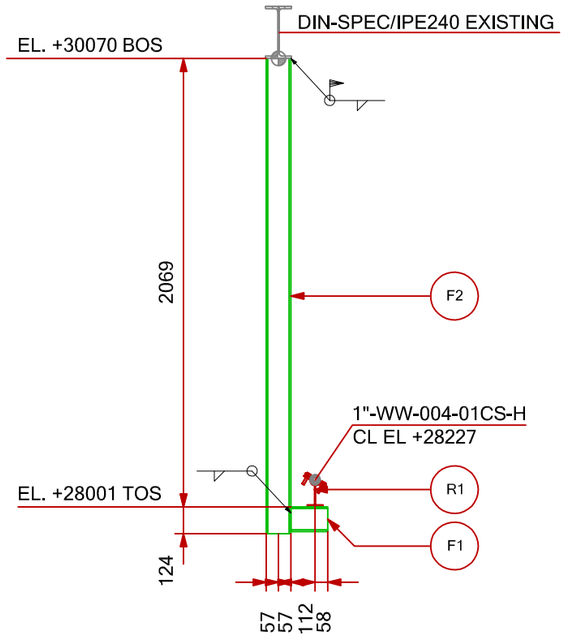
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02119

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

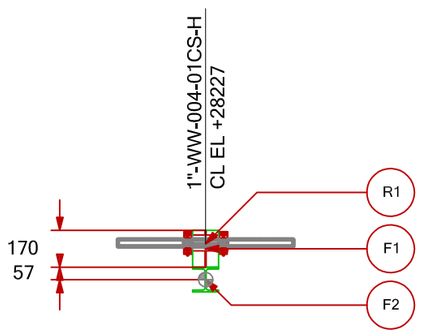
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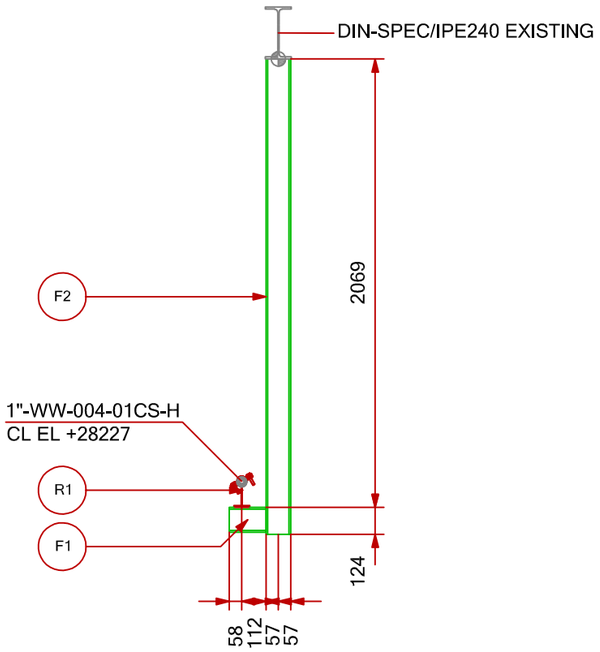
VIEW LOOKING NORTH



VIEW LOOKING WEST



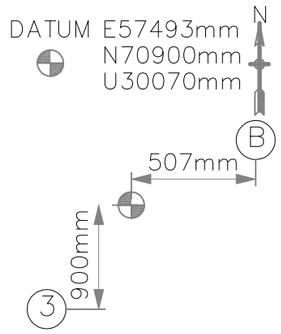
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	170	1	19.98	3.40	0.120
F2	BEAM	HEA120	Carbon Steel	2193	1	19,98	43,81	1,489
						TOTAL	51.8	1.64





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

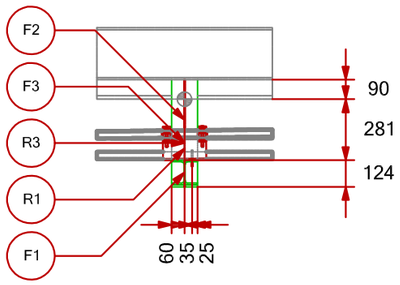
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

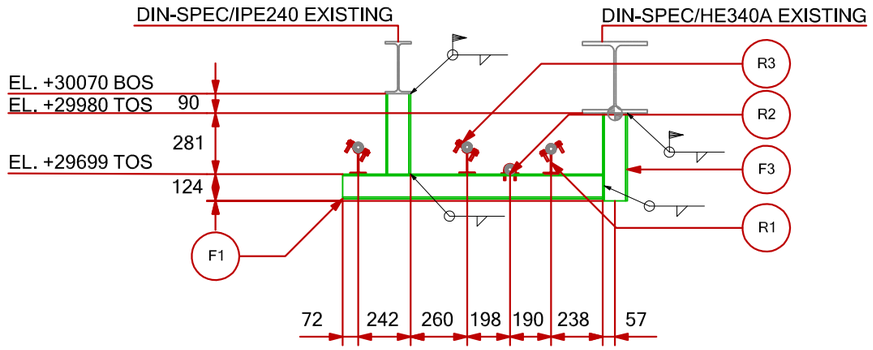
PS-02120

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	1 : 20
DRAWN	CHECKED	APPROVED		DATE	19/08/24
DRAWING NO.				SHEET	REV.
123A90-DDL-PP-DD-72000				1 of 1	00

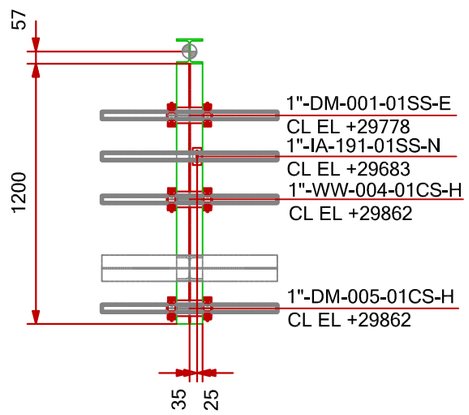
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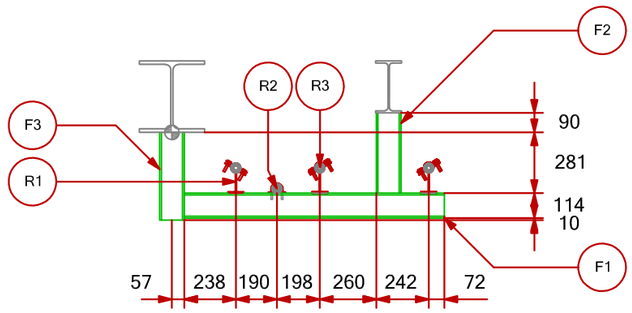
VIEW LOOKING NORTH



VIEW LOOKING WEST



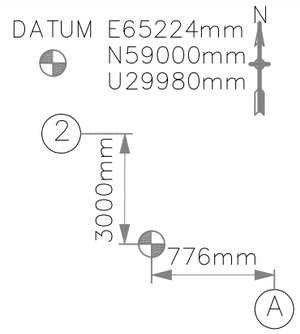
PLAN VIEW

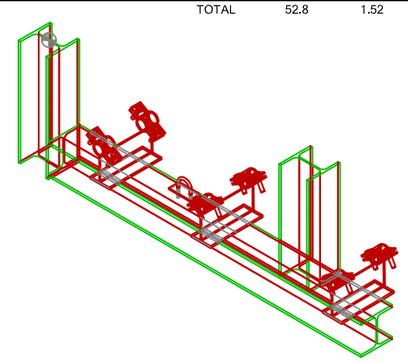


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	S-211-1"	-	-	1	-	0.29	-
R3	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	1200	1	19.98	23.98	0.817
F2	BEAM	HEA120	Carbon Steel	371	1	19.98	7.41	0.256
F3	BEAM	HEA120	Carbon Steel	405	1	19.98	8.09	0.279
						TOTAL	52.8	1.52





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

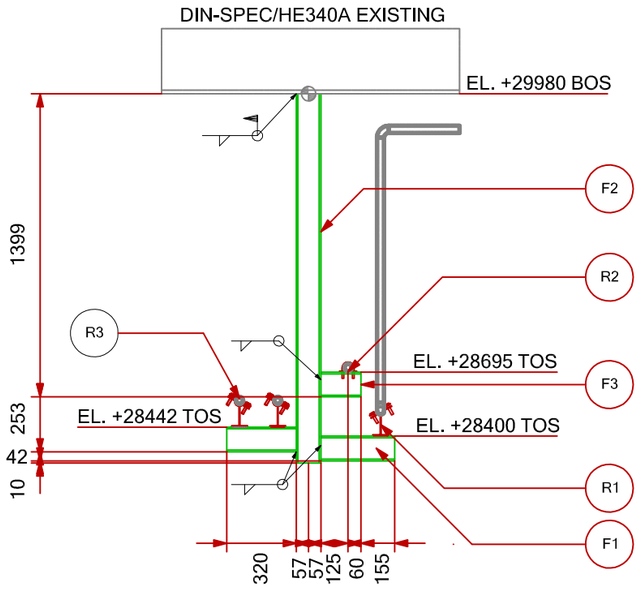
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

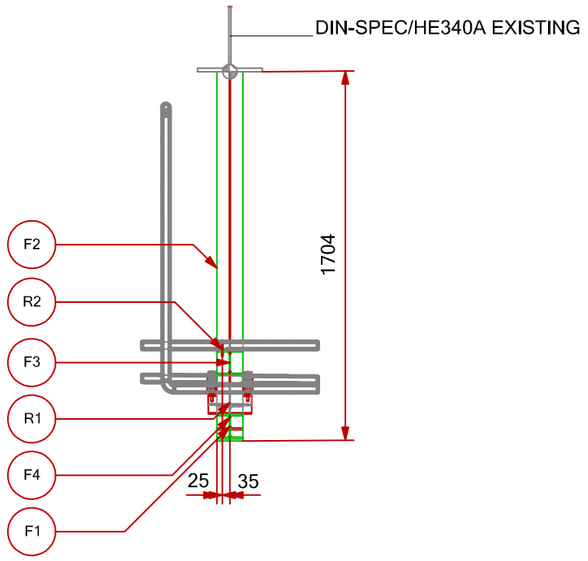
PS-02121

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

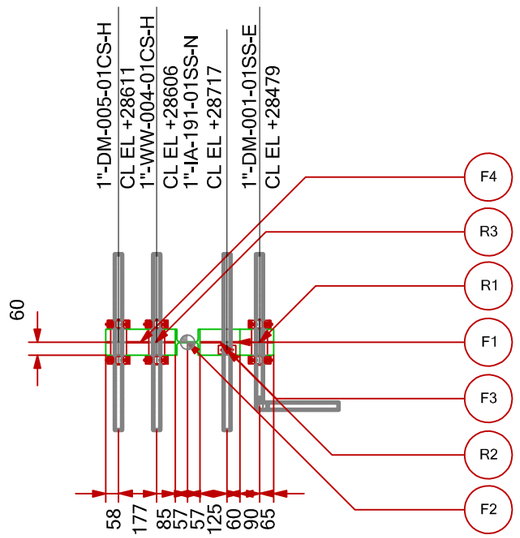
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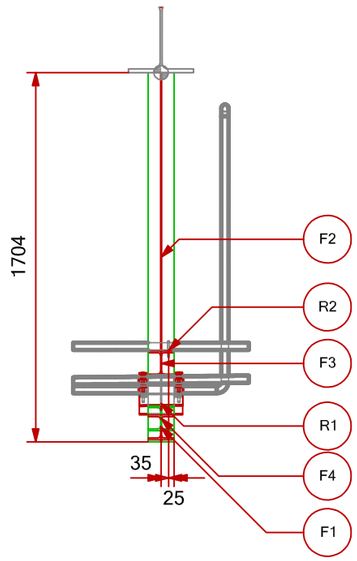
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VIEW LOOKING WEST



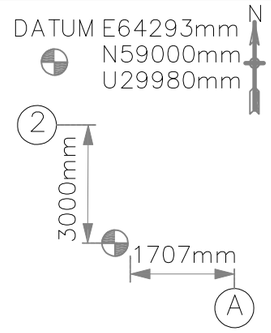
PLAN VIEW

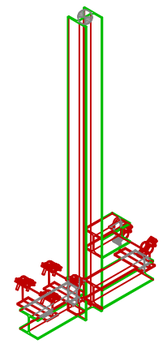


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	S-211-1"	-	-	1	-	0.29	-
R3	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	340	1	19.98	6.79	0.235
F2	BEAM	HEA120	Carbon Steel	1704	1	19.98	34.04	1.158
F3	BEAM	HEA120	Carbon Steel	185	1	19.98	3.70	0.130
F4	BEAM	HEA120	Carbon Steel	320	1	19.98	6.39	0.222
						TOTAL	64.3	1.91





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

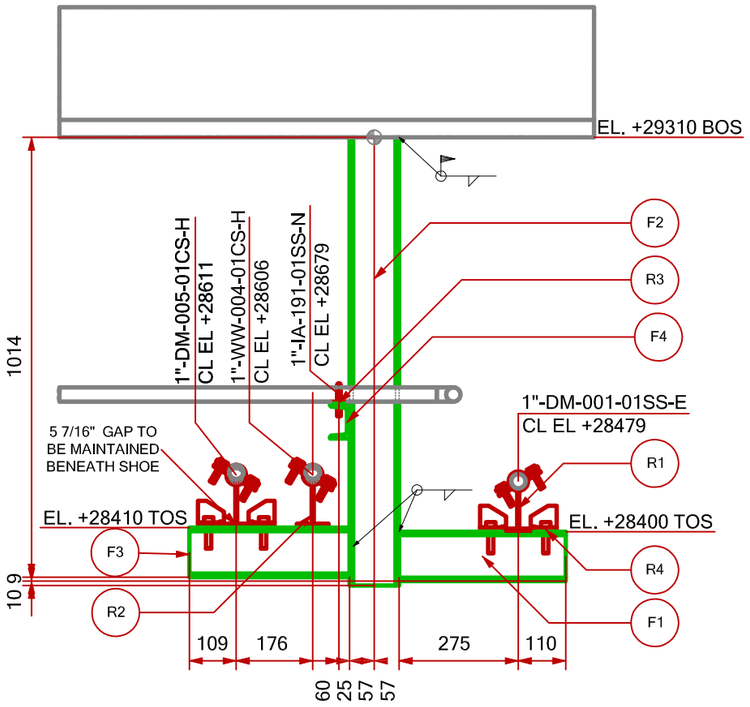
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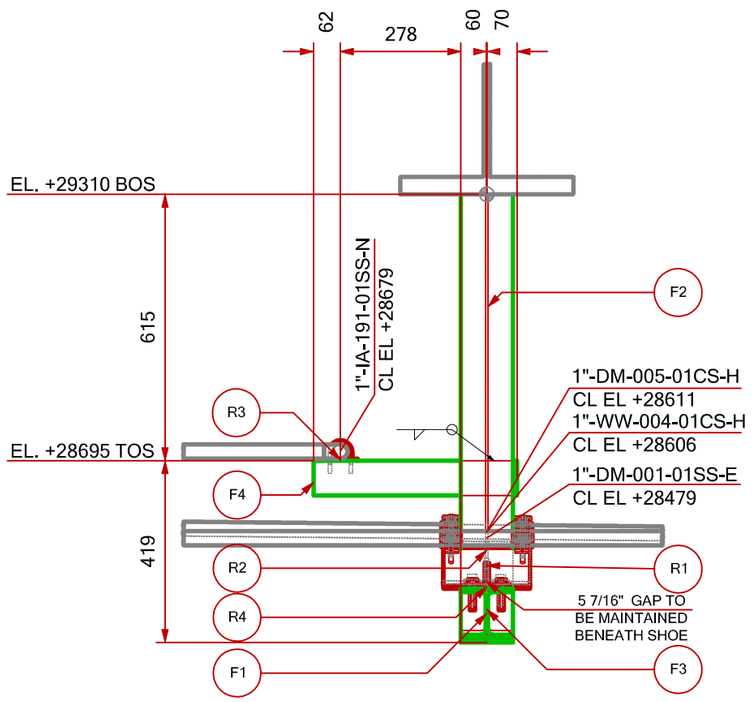
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02122

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

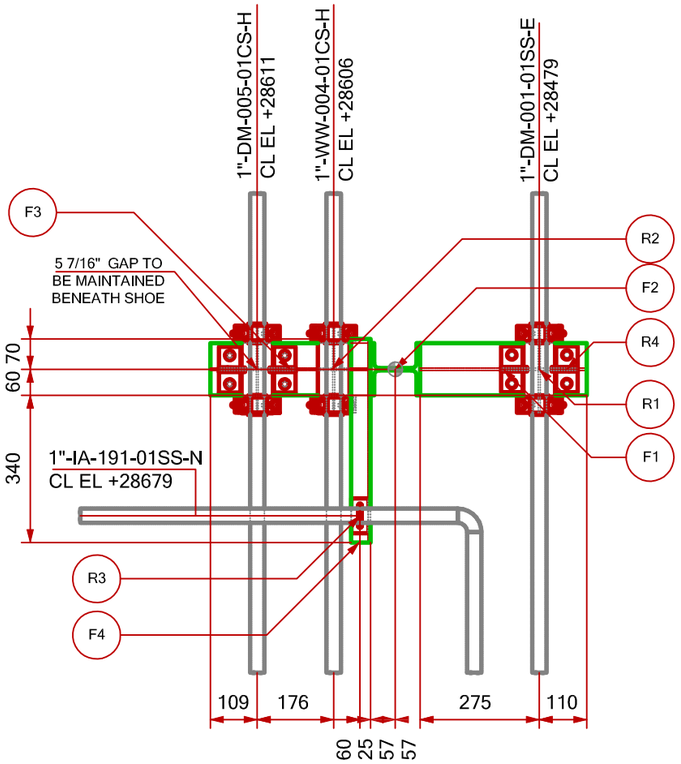
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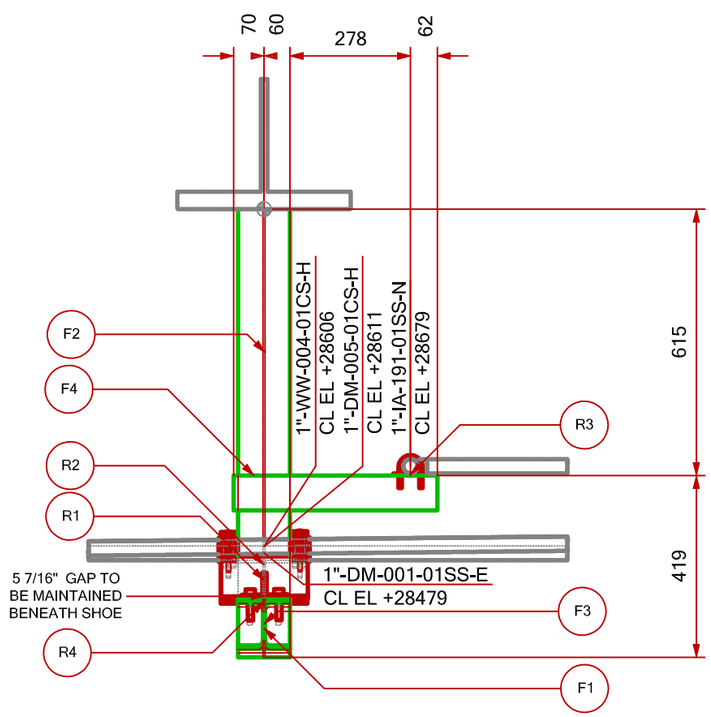
VIEW LOOKING NORTH



VIEW LOOKING WEST



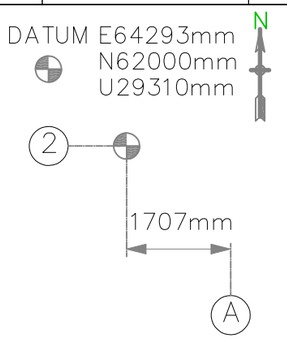
PLAN VIEW

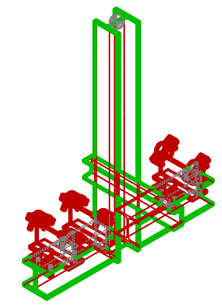


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
R3	STD	S-211-1"	-	-	1	-	0.29	-
R4	STD	C-33-2-B-2	-	-	2	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	385	1	19.98	7.69	0.266
F2	BEAM	HEA120	Carbon Steel	1034	1	19.98	20.65	0.705
F3	BEAM	HEA120	Carbon Steel	370	1	19.98	7.39	0.256
F4	BEAM	UPN80	Carbon Steel	470	1	8.66	4.07	0.149
						TOTAL	61.9	1.64





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

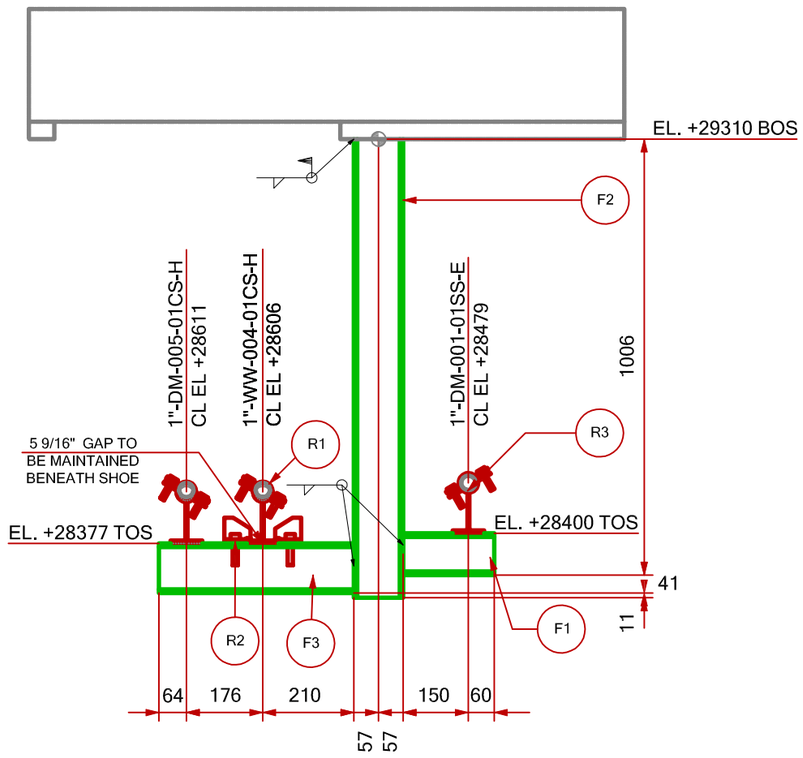
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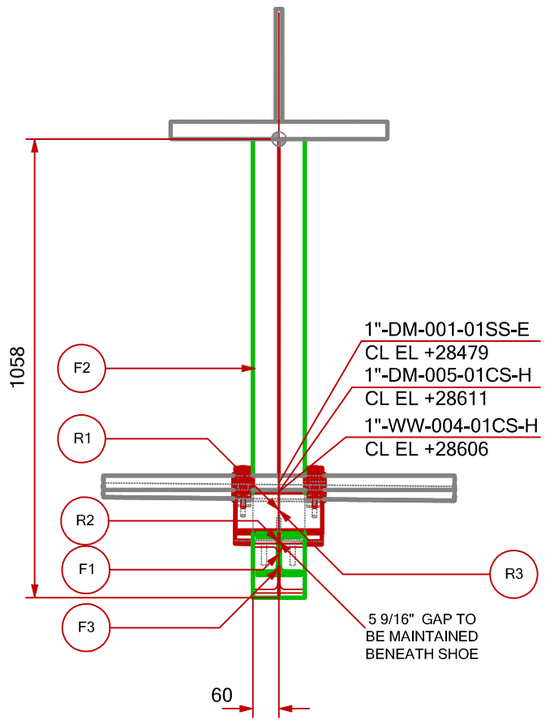
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02123

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

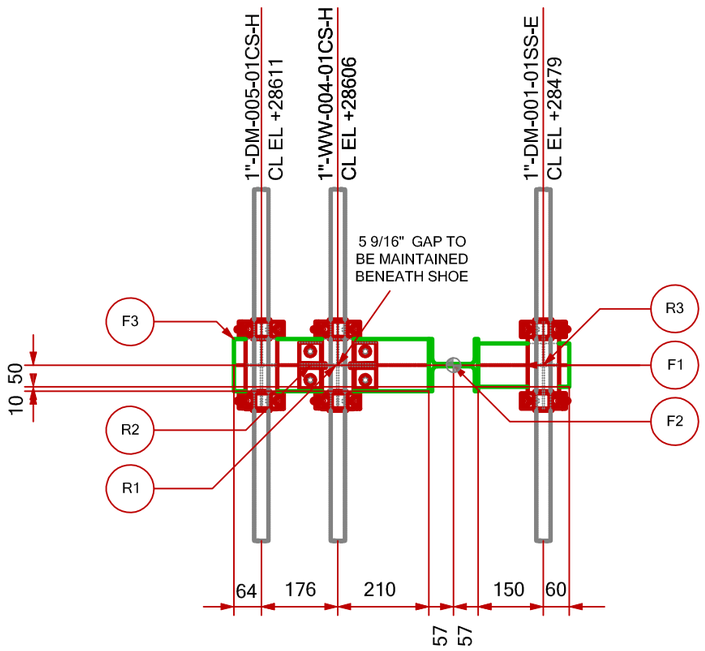
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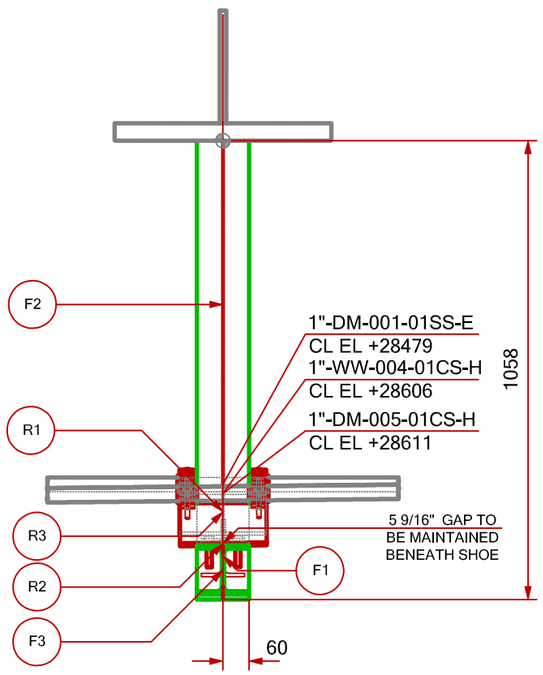
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VIEW LOOKING WEST



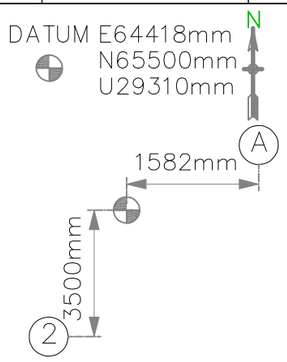
PLAN VIEW

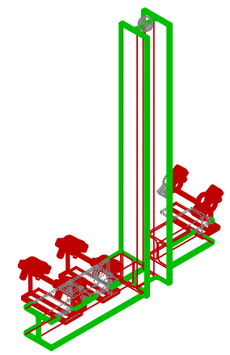


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-75-1"-98-92-200	-	-	2	-	4.64	0.034
R2	STD	C-33-2-B-2	-	-	1	-	4.36	0.048
R3	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	HEA100	Carbon Steel	210	1	16.76	3.52	0.122
F2	BEAM	HEA120	Carbon Steel	1058	1	19.98	21.14	0.721
F3	BEAM	HEA120	Carbon Steel	450	1	19.98	8.99	0.310
						TOTAL	51.1	1.37





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

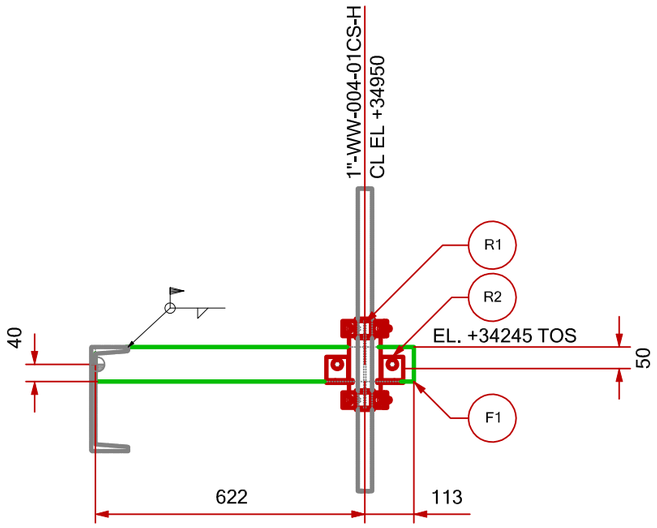
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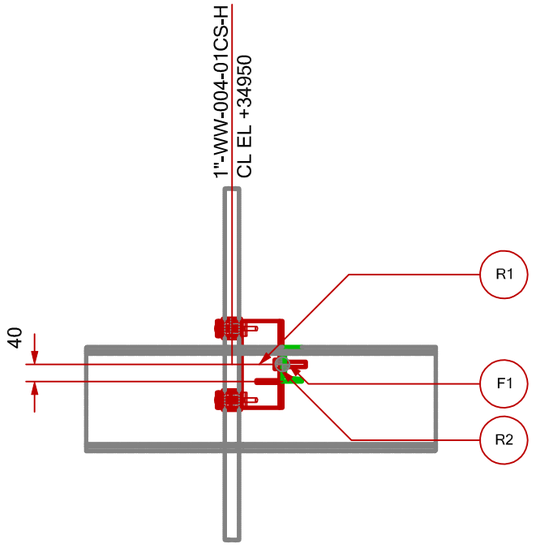
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02124

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1 : 10
DRAWN	CHECKED / APPROVED	DATE	19/08/24
DRAWING NO.	123A90-DDL-PP-DD-72000	SHEET	1 of 1
		REV.	00

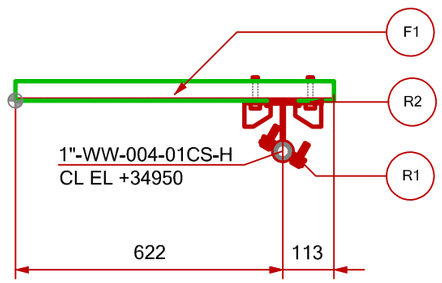
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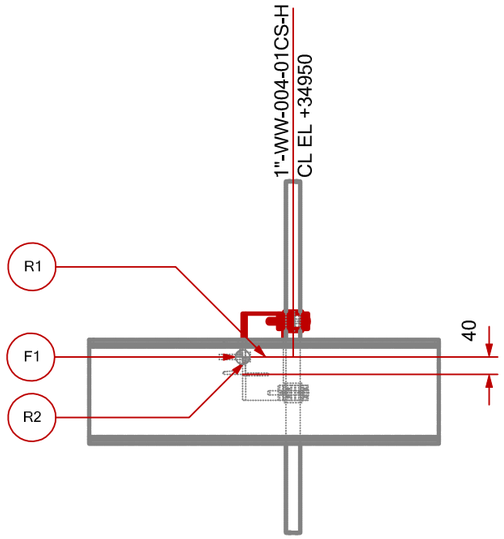
VIEW LOOKING NORTH



VIEW LOOKING WEST



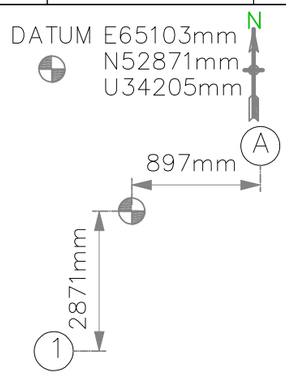
PLAN VIEW

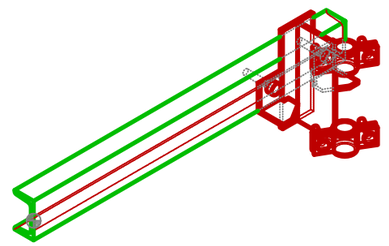


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R2	STD	C-33-1-I-2	-	-	1	-	2.28	0.028
F1	BEAM	UPN80	Carbon Steel	735	1	8,66	6,37	0,232
						TOTAL	12.5	0.36





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

ROSETTI MARINO

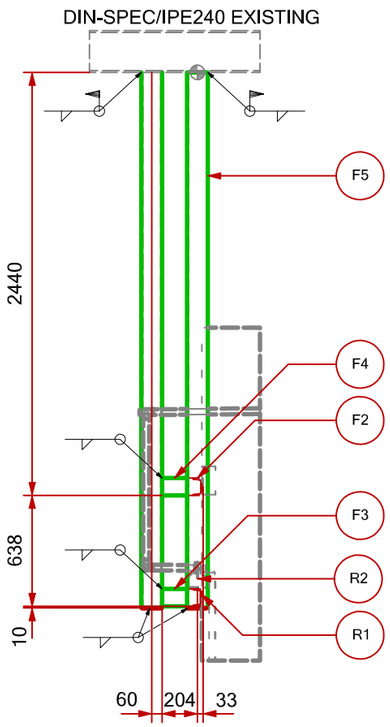
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

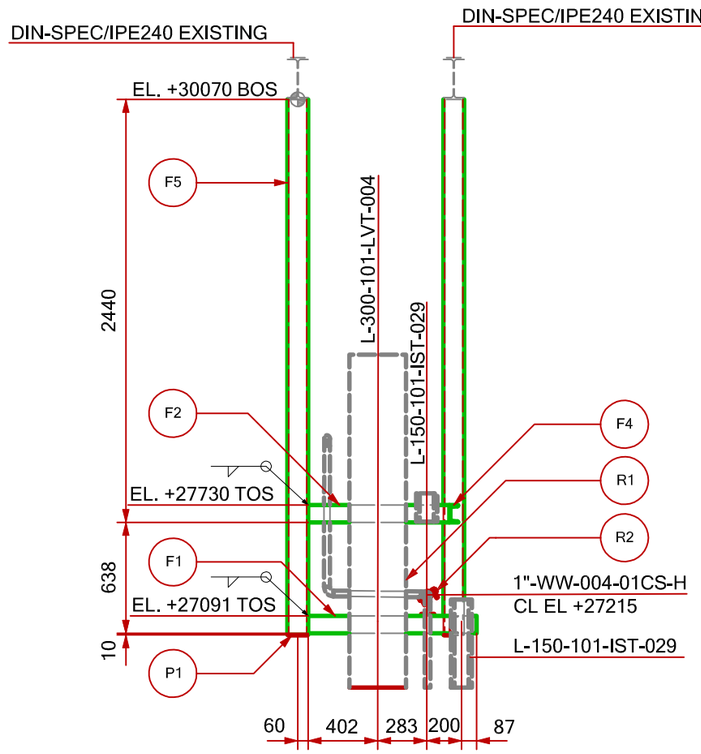
PS-02138

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

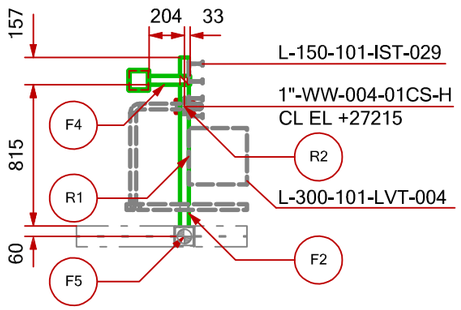
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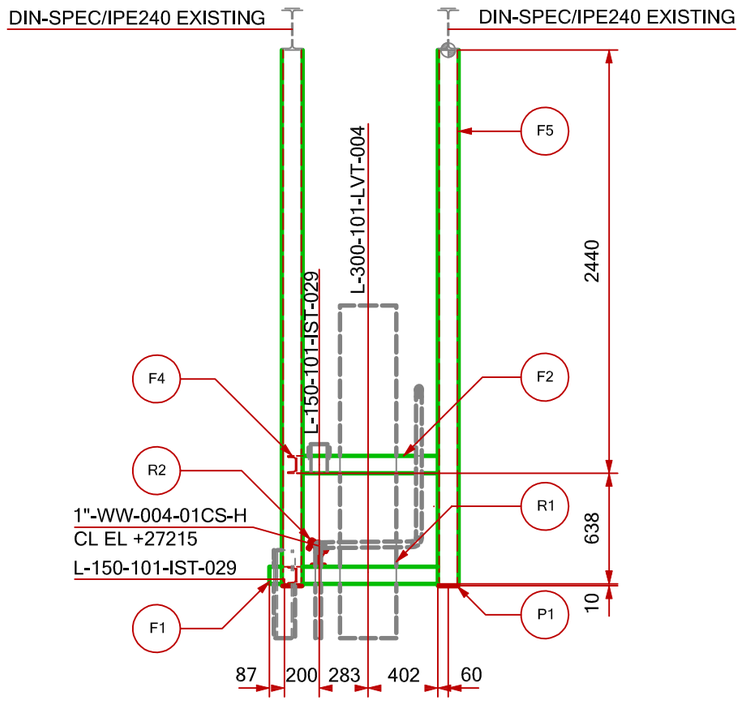
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VIEW LOOKING WEST



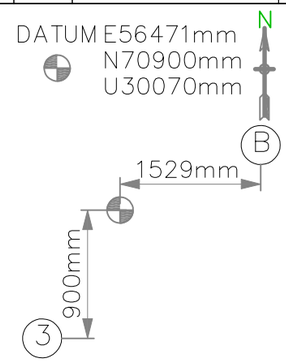
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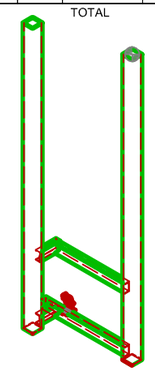


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	RACK SUPPORT	-	-	3	-	0.00	-
R2	STD	S-71-1"-100	-	-	1	-	2.67	0.075
F1	BEAM	UPN100	Carbon Steel	972	1	10.57	10.28	0.364
F2	BEAM	UPN100	Carbon Steel	815	1	10.57	8.62	0.306
F3	BEAM	UPN100	Carbon Steel	221	1	10.57	2.33	0.085
F4	BEAM	UPN100	Carbon Steel	237	1	10.57	2.50	0.091
F5	BEAM	RHS120x120x8	Carbon Steel	3089	2	27.79	171.66	5.418
P1	PLATE	3	Carbon Steel	110x110	2	-	0.56	0.024
						TOTAL	198.6	6.36





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

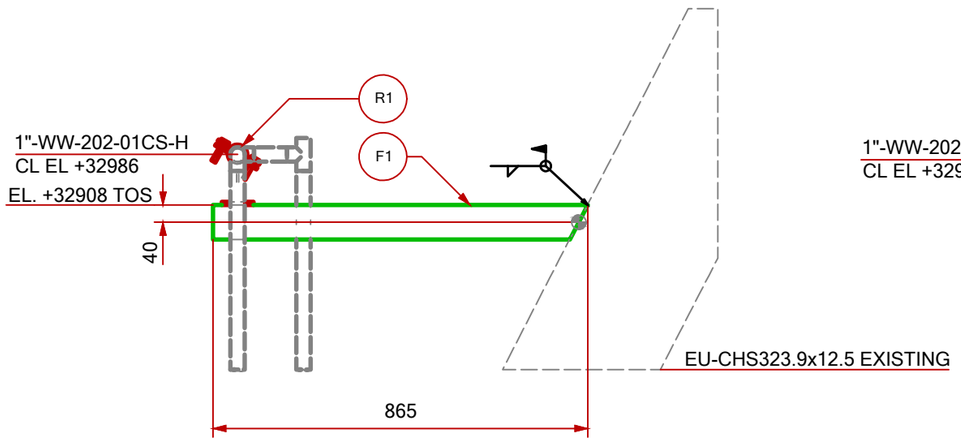
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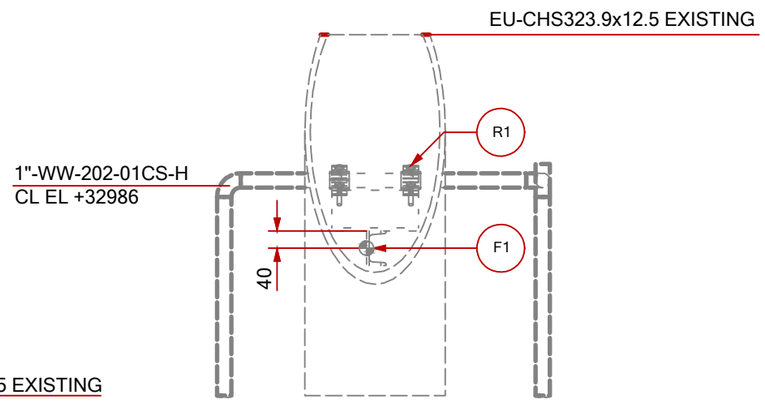
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02139

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 25
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

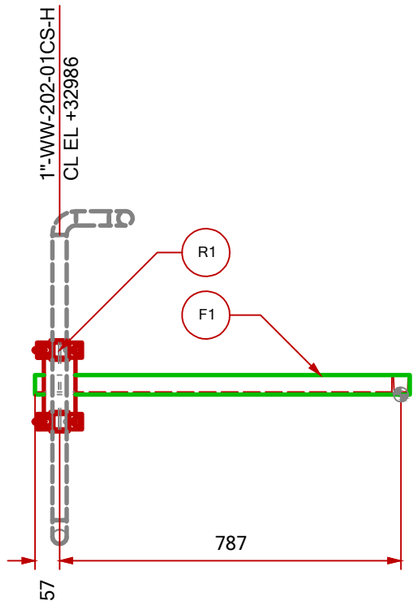
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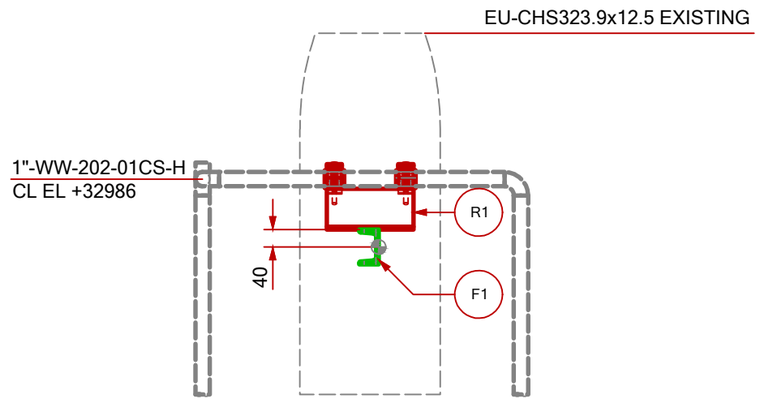
VIEW LOOKING NORTH



VIEW LOOKING WEST



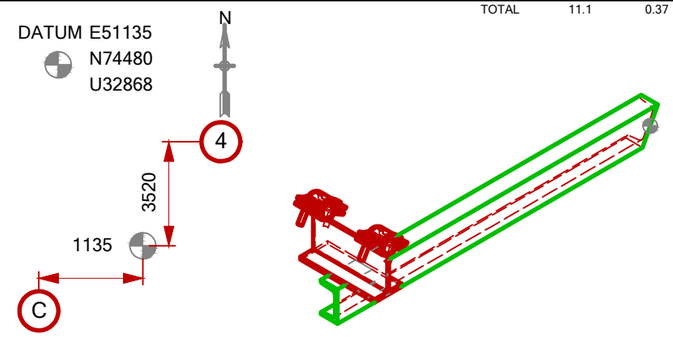
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	UPN80	Carbon Steel	865	1	8.46	7.31	0.267
						TOTAL	11.1	0.37



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03532

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

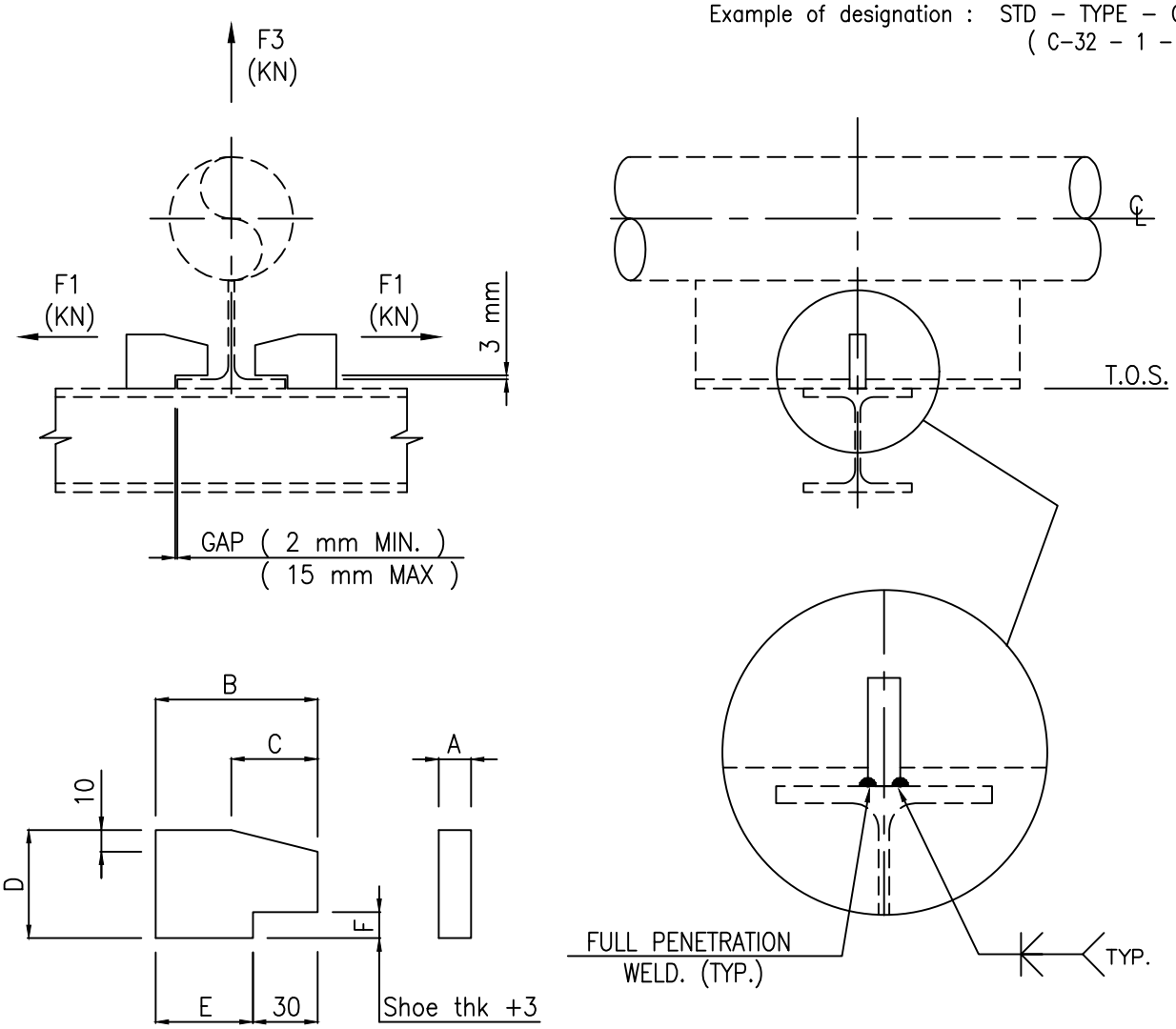
Revision: 0

Date: –

GUIDA CON HOLD–DOWN PER SCARPETTE
GUIDE WITH HOLD–DOWN FOR SHOES

C–32

Example of designation : STD – TYPE – GAP
(C–32 – 1 – 2)



TYPE	F	A	B	C	D	E	WEGHT Kg.	MAX LOAD	
								F1 (KN)	F3 (KN)
1	8	10	55	25	30	25	0.2	25	12
2	13	15	75	40	50	45	0.7	60	40
3	15	20	105	40	70	75	2.1	100	100
4	18	20	105	40	70	75	2.1	100	100
5	23	25	105	40	70	75	2.6	100	100

NOTES:
1– PLATE MATERIAL : CARBON STEEL

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

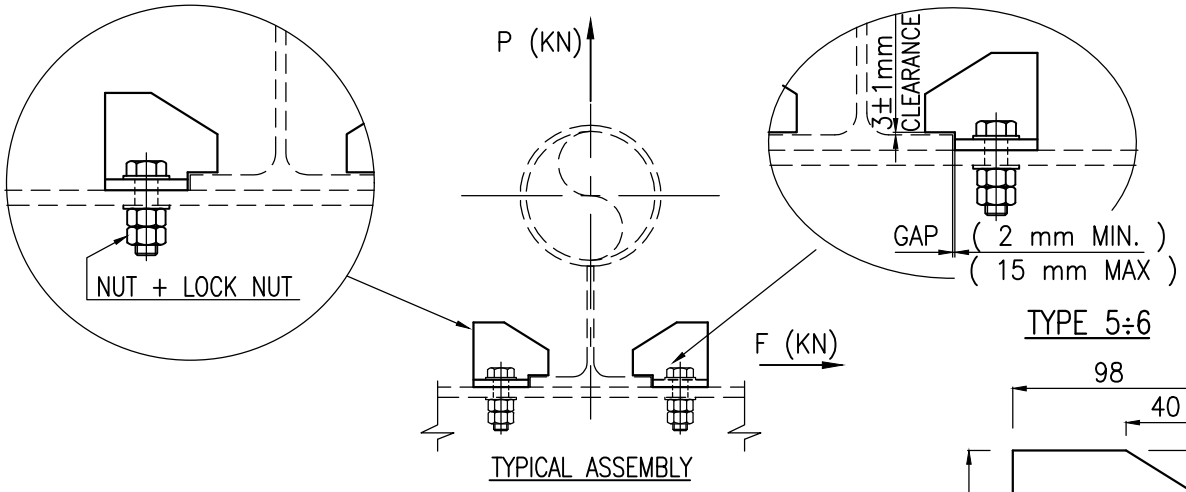
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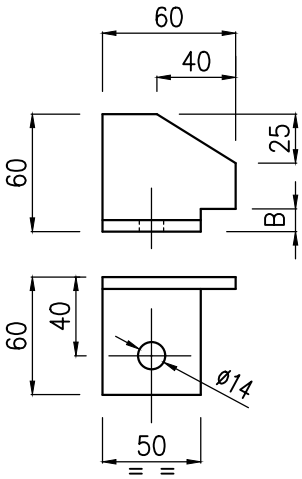
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GUIDA BULLONATA CON HOLD–DOWN PER SCARPETTE
BOLTED GUIDE WITH HOLD DOWN FOR SHOES

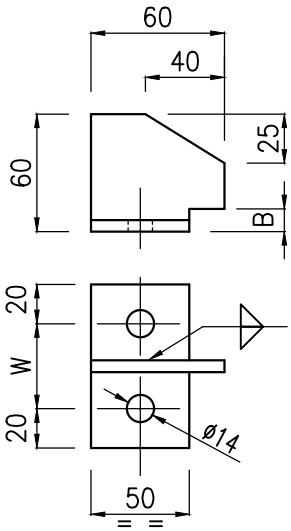
C–33



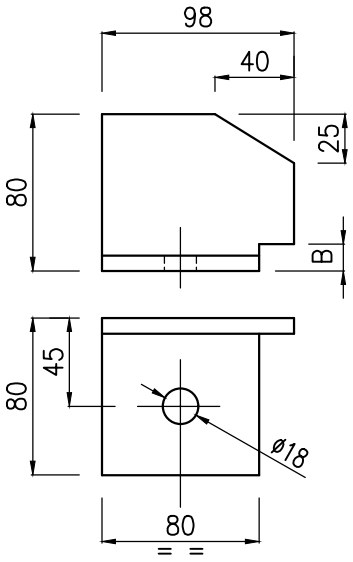
TYPE 1 (NOTE 4)



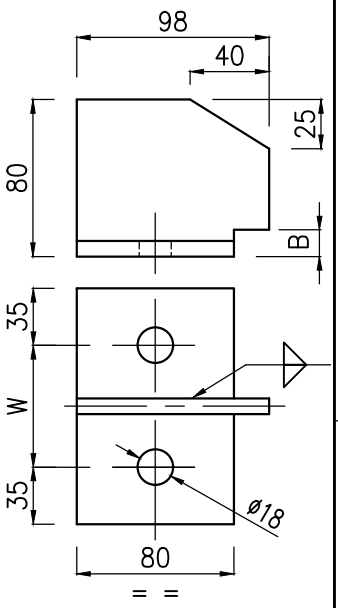
TYPE 2



TYPE 3÷4 (NOTE 4)



TYPE 5÷6



Example of designation : STD – TYPE – SIZE – GAP
(C–33 – 6 – M – 2)

TYPE	SHOE THK.	B	DIM. HOLE	SECTION	BOLTING	F (KN)	P (KN)
1	9–10	12	13	L60x60x6	M12x60	10	32
2	9–10	12	13	PLT. 10THK	M12x60	20	32
3	11–12	14	18	L80x80x8	M16x70	18	59
4	13–14	16	18	L80x80x8	M16x70	18	59
5	11–12	14	18	PLT. 10THK	M16x70	36	71
6	13–14	16	18	PLT. 10THK	M16x70	36	71

SIZE	EXIST. BEAM	W mm
A	HEA 100	58
B	HEA 120	66
C	HEA 140	76
D	HEA 160	86
E	HEA 180	96
F	HEA 200	106
	HEA 220	
G	HEA 240	120
	HEA 260	
	HEA 280	
H	HEA 300	126
I	UPN 100	46
	UPN 120	
J	UPN 140	60
K	UPN 200	100
L	IPE 200	64
	IPE 220	
M	IPE 270	70
N	IPE 300	72
O	IPE 600	94
Z	–	0

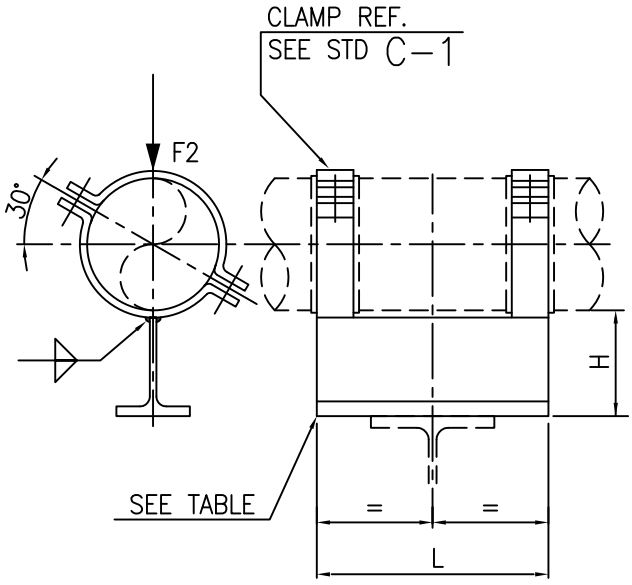
NOTES:
1– PLATES MATERIAL: CARBON STEEL
2– BOLTS (UNI 5739 Cl 8.8), NUTS (UNI 5588 Cl 8.8), LOCK NUT (UNI 7474 Cl.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– GUIDE TO BE SITE LOCATED UNLESS NOTED OTHERWISE ON THE PIPE SUPPORT DRAWING.
4– REALIZE A PIECE AS DRAWING AND A PIECE SYMMETRIC.
5– VARIABLE WEIGHT ADDICTED TO THE THE "TYPE" SELECTED AND "W" DIMENSION INDICATED.
6– TYPES 1, 3 & 4 SHALL BE USED PREFERABLY WHEN EXISTING BEAMS ARE ANGULARS

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

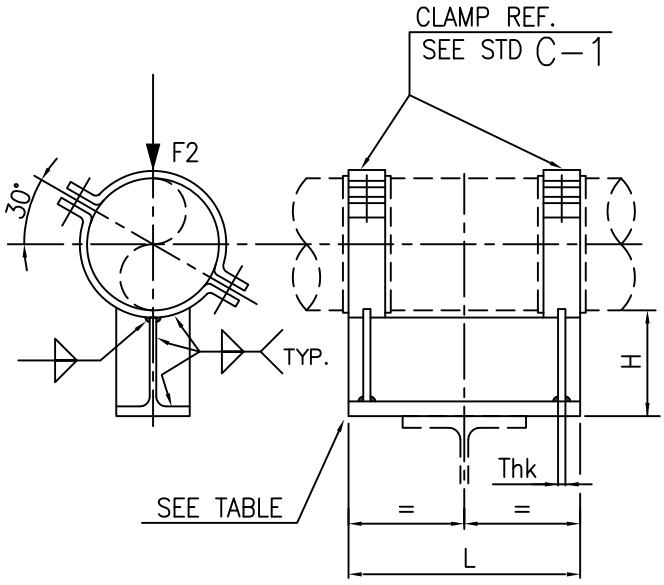
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

Example of designation : STD – PIPE ND" – H – L
(S–64 – 4" – 150 – 400)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

ALLOWABLE RANGE FOR SHOE LENGTH		
ø PIPE	MIN. "L" mm	MAX. "L" mm
½" ÷ 6"	200	600
8" ÷ 24"	250	600

NOTES:

1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

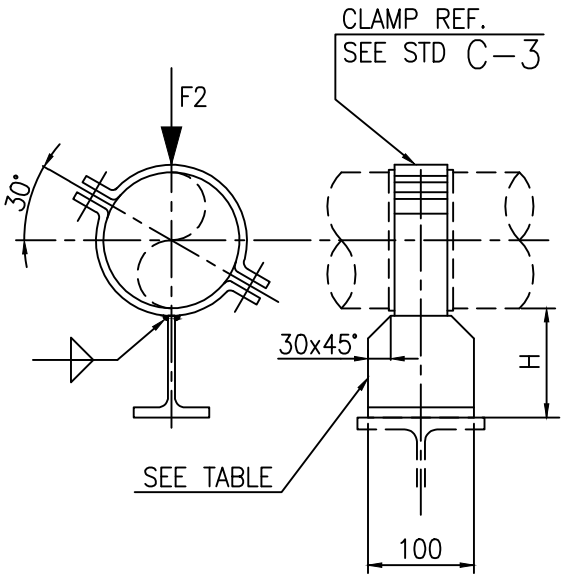
Revision: 0

Date: –

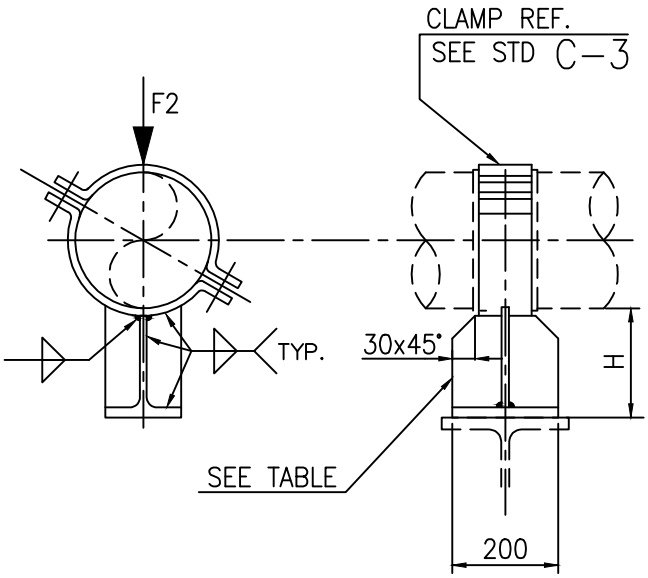
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY
CLAMPED SHOE FOR C.S.–S.S. AND ALLOY PIPES

S–71

Example of designation : STD – PIPE ND" – H
(S–71 – 4" – 150)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

NOTES:

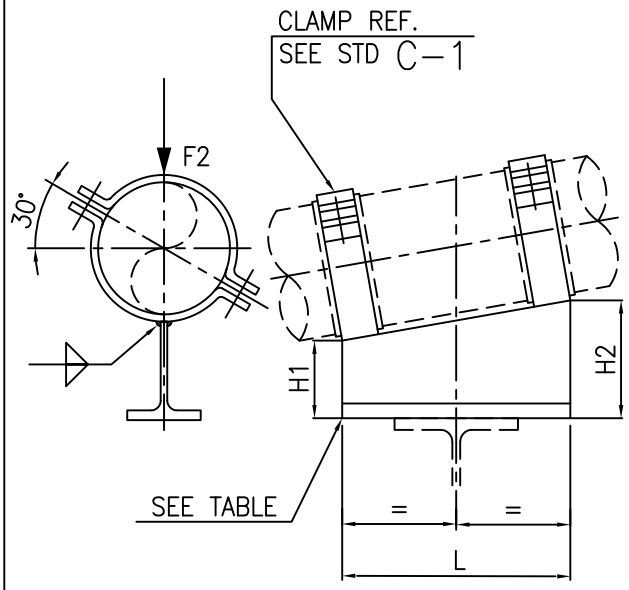
1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT IN FUNCTION OF THE "PIPE ND" SELECTED AND THE "H" DIMENSION.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

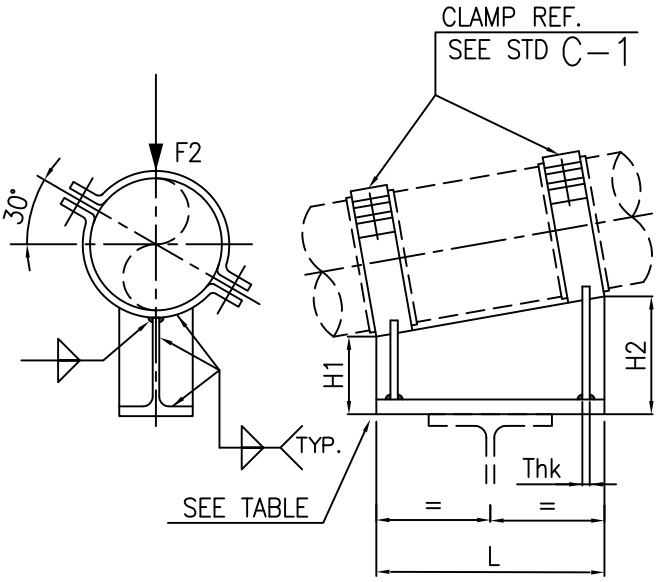
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI IN PENDENZA IN C.S.–S.S. E ALLOY CLAMPED SHOE FOR SLOPED PIPE IN C.S. – S.S. AND ALLOY		S–75

Example of designation : STD – PIPE ND" – H1 – H2 – L
(S–75 – 4" – 148 – 152 – 400)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

ALLOWABLE RANGE FOR SHOE LENGTH		
ø PIPE	MIN. "L" mm	MAX. "L" mm
½" ÷ 6"	200	600
8" ÷ 24"	250	600

NOTES:
1– THIS STANDARD SHALL BE USE ONLY FOR LINE WITH SLOPE >= 1%
2– MATERIAL TO BE CARBON STEEL
3– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
4– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.
5– "H" DIMENSIONS ARE REFFERED FROM BOTTOM OF THE CLAMP & NOT FROM BOTTOM OF THE PIPE

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	3	**To**	3
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cont.	Accept. Date	Spool
1/3/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**FWN**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/3/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**RED**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
3/3/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
5/3/1/_		**01**	**08-10-2024**	**25**	**AZ53**			**PL**		**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**09-10-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				09-10-2024				
		LP	FIN	Weld Completion				10 %				Acceptable								
6/3/1/_		**01**	**17-12-2024**	**95**	**AX416**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				18-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
7/3/1/_		**01**	**26-09-2024**	**17**	**AZ52**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/3/1/_		**01**	**07-10-2024**	**24**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**08-10-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				08-10-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
9/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cont.	Accept. Date	Spool
9/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**B**
10/3/1/_		**01**	**25-11-2024**	**47**	**AX416**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					25-11-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
11/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					28-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
12/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					28-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
13/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-10-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					28-09-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000101	4	Acceptable					03-10-2024			
14/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					28-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
15/3/1/_		**01**	**27-09-2024**	**19**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					30-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
16/3/1/_		**01**	**05-11-2024**	**24**	**AX416**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					06-11-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	001033	4	Acceptable					04-12-2024			
33/3/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					28-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
34/3/1/_		**01**	**26-09-2024**	**2**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					28-09-2024			

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
34/3/1/_		**01**	**26-09-2024**	**2**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**C**
		RT	FIN	Weld Completion				10 %				Acceptable								
17/3/2/_		**00**	**08-10-2024**	**25**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**09-10-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					09-10-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
18/3/2/_		**00**	**26-09-2024**	**17**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					28-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
19/3/2/_		**00**	**23-09-2024**	**13**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable					24-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
20/3/2/_		**00**	**23-09-2024**	**13**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable					24-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
21/3/2/_		**00**	**05-11-2024**	**24**	**AX416**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**06-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					06-11-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
22/3/2/_		**00**	**27-09-2024**	**19**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					30-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
23/3/2/_		**00**	**25-09-2024**	**15**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					26-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
24/3/2/_		**00**	**29-10-2024**	**19-36**	**AX416**	**Welding + Repair done**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					01-11-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	PR	10 %	001006		4	Cut					15-11-2024			
Cut 18-11-2024		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable	A1A		GTAW		19-11-2024			
		RT	C 1 DTA	After Cutting		IDL-QCI-RT 0036 00	AA	10 %	001034		4	Acceptable					04-12-2024			

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
24/3/2/_		**00**	**29-10-2024**	**19-36**	**AX416**	**Welding + Repair done**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-12-2024**	
25/3/2/_		**00**	**25-09-2024**	**15**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable							26-09-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
26/3/2/_		**00**	**17-09-2024**	**9**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable							18-09-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
27/3/2/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable							18-09-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
28/3/2/_		**00**	**25-09-2024**	**15**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable							26-09-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
29/3/2/_		**00**	**23-09-2024**	**13**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable							24-09-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
30/3/2/_		**00**	**30-10-2024**	**18**	**AX416**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**01-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable							01-11-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
31/3/2/_		**00**	**08-10-2024**	**25**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**09-10-2024**	**H**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable							09-10-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								
32/3/2/_		**00**	**17-12-2024**	**95**	**AX410**			**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable							18-12-2024	
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number		Rev.	Prod. Date	Prod. Sheet	Welders		Item type	Dimension	Thickness	Bevel	Weld Length	P/M	Material	WPS	Techn. Weld.	Type Conn	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase		Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.	Defect length	CND date	NOTE			
32/3/2/_		**00**	**17-12-2024**	**95**	**AX410**		**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	

Totals per DWG	**3**	**Prefabrication**	**2,53 m**	**26 Nr. Welds**	**24,75 inch**
		Erection	**0,80 m**	**8 Nr. Welds**	**8,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,33 m**	**34 Nr. Welds**	**32,75 inch**
		Accepted	**3,33 m**	**34 Nr. Welds**	**32,75 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**2,53 m**	**26 Nr. Welds**	**24,75 inch**
		Erection	**0,80 m**	**8 Nr. Welds**	**8,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,33 m**	**34 Nr. Welds**	**32,75 inch**
		Accepted	**3,33 m**	**34 Nr. Welds**	**32,75 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**2,53 m**	**26 Nr. Welds**	**24,75 inch**
		Erection	**0,80 m**	**8 Nr. Welds**	**8,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,33 m**	**34 Nr. Welds**	**32,75 inch**
		Accepted	**3,33 m**	**34 Nr. Welds**	**32,75 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 20/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
3	01	1	A	01CS	2	1	Reducer Concentric BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	56-123056	1724000839	00730	4527-P8	W1-W2	
3	01	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W3-W4	
3	01	1	A	01CS	4	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	W1	
3	01	1	A	01CS	1A	0,2	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	A	01CS	1B	1,595	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W5	
3	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W7	
3	01	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	EW8-W9	
3	01	1	B	01CS	7	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W33	
3	01	1	B	01CS	1C	5,488	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	B	01CS	1R	2,489	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	C	01CS	7	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W34	
3	01	1	C	01CS	1D	0,719	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
3	01	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
3	01	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
3	01	1	D	01CS	1E	1,498	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	D	01CS	1F	1,166	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	01	1	D	01CS	1G	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 20/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
3	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W18-W19	
3	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W20	
3	00	2	E	01CS	1H	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	E	01CS	1I	0,677	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	E	01CS	1J	0,176	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W23	
3	00	2	F	01CS	1K	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	F	01CS	1L	1,901	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	G	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W25-W26	
3	00	2	G	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W27-W28	
3	00	2	G	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W29	
3	00	2	G	01CS	1N	0,814	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	G	01CS	1O	0,505	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	G	01CS	1P	0,304	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
3	00	2	H	01CS	4	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W31	
3	00	2	H	01CS	1Q	3,915	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	100	**To**	100
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension / Films n.	Thickness	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
1/100/1/_		**01**	**21-09-2024**	**12**	**AZ53**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**23-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				23-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/100/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
3/100/1/_		**01**	**23-09-2024**	**13**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				24-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/100/1/_		**01**	**18-12-2024**	**96**	**AX 453**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				18-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
5/100/1/_		**01**	**24-09-2024**	**14**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
6/100/1/_		**01**	**24-09-2024**	**14**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
7/100/1/_		**01**	**24-09-2024**	**14**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/100/1/_		**01**	**18-12-2024**	**96**	**AX 453**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				18-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
9/100/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cont.	Accept. Date	Spool
9/100/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**C**
10/100/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-10-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					26-09-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000105	4	Acceptable					03-10-2024			
11/100/1/_		**01**	**25-09-2024**	**15**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					26-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
12/100/1/_		**01**	**18-12-2024**	**97**	**AX416**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					19-12-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
13/100/1/_		**01**	**21-09-2024**	**12**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**23-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					23-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
14/100/1/_		**01**	**21-09-2024**	**12**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					23-09-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000088	4	Acceptable					26-09-2024			
15/100/1/_		**01**	**21-09-2024**	**12**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**23-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					23-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
16/100/1/_		**01**	**18-12-2024**	**97**	**AX416**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					19-12-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension / Films n.	Thickness	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
17/100/2/_		**01**	**25-09-2024**	**15**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**26-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				26-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
18/100/2/_		**01**	**08-10-2024**	**25**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**09-10-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				09-10-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
19/100/2/_		**01**	**17-12-2024**	**95**	**AX416**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				18-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
20/100/2/_		**01**	**23-09-2024**	**13**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				24-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
21/100/2/_		**01**	**23-09-2024**	**13**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				24-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
22/100/2/_		**01**	**26-09-2024**	**17**	**AZ52**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
23/100/2/_		**01**	**18-12-2024**	**96**	**AX84**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				18-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
24/100/2/_		**01**	**23-09-2024**	**13**	**AZ53**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				24-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
25/100/2/_		**01**	**23-09-2024**	**13**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				24-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders / Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cont.	Accept. Date	Spool
25/100/2/_		**01**	**23-09-2024**	**13**	**AZ53**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**G**
26/100/2/_		**01**	**27-09-2024**	**19**	**AZ52**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					30-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								

Totals per DWG	**100**	**Prefabrication**	**2,00 m**	**20 Nr. Welds**	**20,00 inch**
		Erection	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,60 m**	**26 Nr. Welds**	**26,00 inch**
		Accepted	**2,60 m**	**26 Nr. Welds**	**26,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**2,00 m**	**20 Nr. Welds**	**20,00 inch**
		Erection	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,60 m**	**26 Nr. Welds**	**26,00 inch**
		Accepted	**2,60 m**	**26 Nr. Welds**	**26,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**2,00 m**	**20 Nr. Welds**	**20,00 inch**
		Erection	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,60 m**	**26 Nr. Welds**	**26,00 inch**
		Accepted	**2,60 m**	**26 Nr. Welds**	**26,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 20/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
100	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W2-W3	
100	00	1	A	01CS	4	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	W1	
100	00	1	A	01CS	1A	0,075	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	1	A	01CS	1B	0,688	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W5	
100	00	1	B	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W6-W7	
100	00	1	B	01CS	1C	0,659	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	1	B	01CS	1D	0,076	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	1	C	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W9-W10	
100	00	1	C	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W11	
100	00	1	C	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W9	
100	00	1	C	01CS	1E	2,056	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	1	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W13-W14	
100	00	1	D	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W15	
100	00	1	D	01CS	1F	0,516	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	1	D	01CS	1G	0,543	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 20/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
100	00	2	E	01CS	2	1	90 Deg Elbow Long Radius BW >1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W17-W18	
100	00	2	E	01CS	1H	0,879	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	2	E	01CS	1I	0,999	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	2	F	01CS	2	1	90 Deg Elbow Long Radius BW >1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W20	
100	00	2	F	01CS	2	1	90 Deg Elbow Long Radius BW >1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W21-W22	
100	00	2	F	01CS	1J	1,306	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	2	F	01CS	1K	3,743	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	2	G	01CS	2	1	90 Deg Elbow Long Radius BW >1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W24	
100	00	2	G	01CS	2	1	90 Deg Elbow Long Radius BW >1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W25-W26	
100	00	2	G	01CS	1L	0,276	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
100	00	2	G	01CS	1M	4,525	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	55-00-TP-026	: Test Pack 55-00-TP-026			Dwg	123A90-DDL-PR-PID-80011-26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003435		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult to reach. After drying, inlet and outlet points were closed with covers.
3	Temporary means :	Blind flanges and plugs, if necessary, to isolate inlet and outlet points during process. Covers to close all openings after the drying.
4	Dew point (obtain after soaking and nitrogen purging):	NA
5	Valve body cavity, branches, etc.. Have been drained form residual water	●
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	Restricting access to the area.
11	REMARKS:	None

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-17	2025-01-21	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:24:56.531Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-21T14:41:29.983Z	

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003673		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	PL
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	PL
6	Check bolt tightening and flange management (excluded battery limit joints).	PL
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	PL
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	OK
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	OK
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Visual check of the TP performed on spools not assembled in erection.

All flanges to be checked during flange management. All valves have not been installed before test.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti marino)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-01-27	2025-01-27	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-27T05:42:13.758Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-27T17:35:36.570Z	

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003674		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	OK
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	OK
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	OK
8	After the (re) installation of a valve check that it operates freely.	OK
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	OK
10	Check all locking device.	OK
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	PL
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-07	2025-04-07	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:20:39.341Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-07T09:00:23.710Z	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003675		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.	OK
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.	OK
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.	NA
4	Check that the insulation and cladding materials conform to the specifications.	
5	Check that the insulation is compatible with the Heat tracing system.	NA
6	Check that the surface condition prior to the application of the insulation	
7	Check the installation of wire mesh	
8	Check the overlap of the metal cladding.	
9	Check that each joint is sealed with a suitable sealant specified for water proofing.	
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.	
11	Control that the locking devices boxes opretated satisfactorily.	
12	Check the blinds, the spectacles and the instruments are visible.	
13	Check the flange accessibility without damaging the insulation.	
14	Check that color coding/line marking/flow direction are correct	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie		
Date	2025-03-21		
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:20:39.675Z		

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003676		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	Note
3	Check that the fluid direction is correct.	Note
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	OK
6	If required produce Red Line Mark Up for "AS BUILT".	

Comments: 1. Checked the painting report made by Vendor and signed by RM Coating Dpt.
Points 2 and 3 to be checked during thermal insulation.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (ROSETTI MARINO)	
Name	Alex Sanna	Lorenzo Novaga	
Date	2025-03-24	2025-04-07	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-03-24T09:44:47.749Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-07T09:01:14.156Z	

ROSETTI MARINO — CROSSWIND

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060		Dwg	123A90-DDL-PR-PID-80026	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003677	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form TMX03	Cleaning	

CLEANING MEDIUM

Air	Water	Steam	Oil	Other	Mechanical
☐	●	☐	☐	☐	☐

Component	NA					
Chemical treatment	No	NA	Filtration	No	Screen size	NA

EQUIPMENTS

Equipment **removed**	Yes	Agreed list of removed fragile devices to be attached to this Test Sheet	NA
Excepted removed equipments, pipework installation is conform to the specifications & PID's			OK
Equipment **added**	No	Exhaustive list to be attached (temporary filters, spools…etc)	NA

TEST RESULTS

Test date	12/03/2025	Start time	9:30	End time	9:35
Flow rate	NA	Duration	5 min	Medium T°	NA

Operation Description

Connected the water source to the lowest point of the piping system.
Maintained a high flow rate to help dislodging and carry away debrises.
Flushing flow kept until the water exiting the system was clear and free of visible contaminants. Expelled water inspected for any debris to be noted.

Safety Precautions

Restricting access to the area.

Result and comments

Water has been found clear of solid debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Massimo Bravetti	Massimo Bruschi	
Date	2025-03-12	2025-03-13	
Signature	PROVERLIS Digitaly signed by Massimo Bravetti 2025-03-12T10:48:47.582Z MB	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-13T07:35:57.207Z MB	

ROSETTI MARINO

CROSSWIND

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003678		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX05 Pressure Test

TEST DATA

Reference procedure	123A90-PML-QHSE-PRO-00092				
Design pressure	3.5 barg	Max test pressure	5.25 barg	Min hold period	30 min

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)	Yes
Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)	Yes

Medium

Test medium	WATER

TEST RESULTS

Test date	See attachment	Start time	See attachment	End time	See attachment
Ambient temperature is recorded	NA			Test medium temperature is recorded	Yes
Pressure recorded during test hold period	Min See attachment	Max See attachment		Variation	See attachment
Line has been depressurised to	NA			At maximum of bar/min	See attachment
Pressure test completed sucessfully and approved	Yes			Temperature and pressure disc chart attached	NA
Instrument calibration certificates attached	Yes			Dead-weight tester log attached	NA
Record of failures and corrective action attached	No			Battery limits of the test attached	Yes
If required produce Red Line Mark Up for "AS BUILT".					

Comments:

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Massimo Bravetti	Massimo Bruschi	
Date	2025-03-12	2025-03-13	
Signature	Digitaly signed by Massimo Bravetti 2025-03-12T10:48:30.515Z	Digitaly signed by Massimo Bruschi 2025-03-13T07:36:19.310Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	123A90-55-00-TP-060

Instrument

Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A037FON32E
Log temperature *Registrazioni di Temperatura*	Active *Attivo*
Scale range *Campo scala*	(0 ... 1000) bar a
Accuracy *Accuratezza*	0.1 % FS
Tag number *Numero tag*	
Communication *Comunicazione*	Wireless (00:13:43:C5:19:D5)

Measurement conditions

Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	60000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	00:45:49
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	09:38:51 am

Logger protocol

Protocollo di acquisizione elenco dati

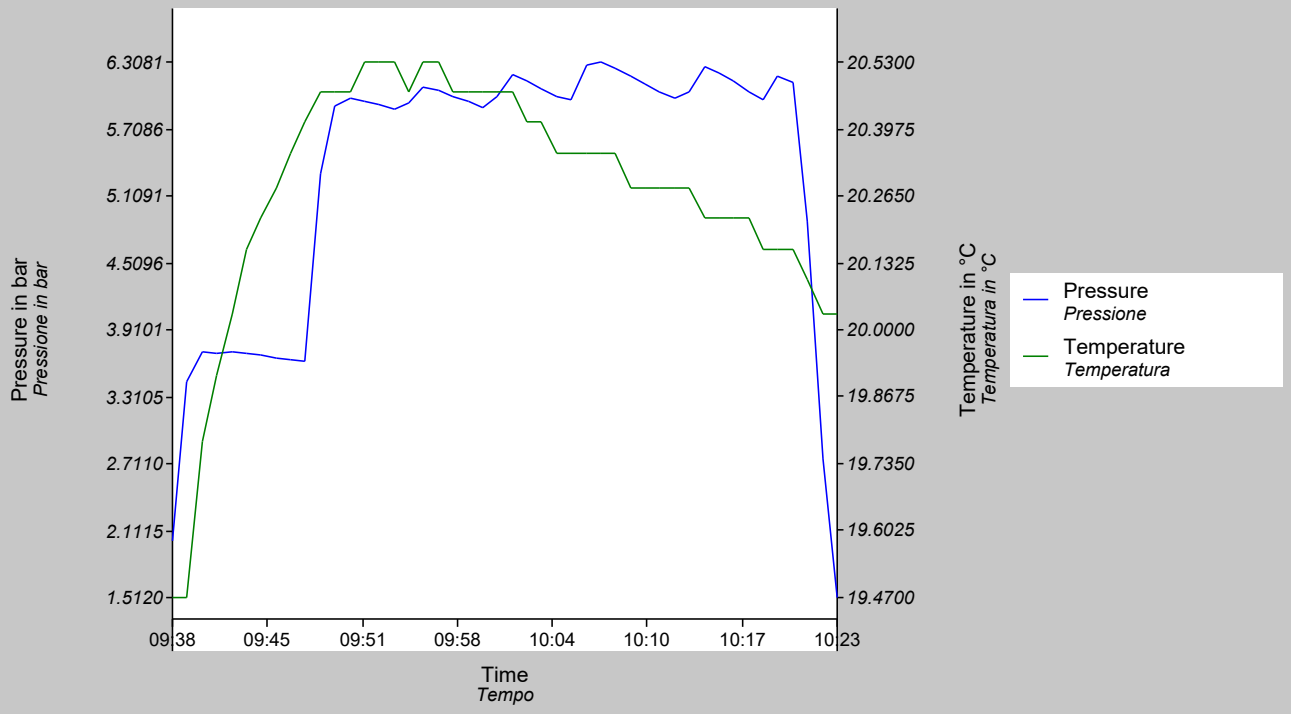
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-00-TP-060

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
03/12/2025 09:38:51.000	2.0206	19.4700
03/12/2025 09:39:51.000	3.4420	19.4700
03/12/2025 09:40:51.000	3.7087	19.7800
03/12/2025 09:41:51.000	3.7004	19.9100
03/12/2025 09:42:51.000	3.7095	20.0300
03/12/2025 09:43:51.000	3.6980	20.1600
03/12/2025 09:44:51.000	3.6810	20.2200
03/12/2025 09:45:51.000	3.6628	20.2800
03/12/2025 09:46:51.000	3.6431	20.3500
03/12/2025 09:47:51.000	3.6273	20.4100
03/12/2025 09:48:51.000	5.2996	20.4700
03/12/2025 09:49:51.000	5.9119	20.4700
03/12/2025 09:50:51.000	5.9828	20.4700
03/12/2025 09:51:51.000	5.9575	20.5300
03/12/2025 09:52:51.000	5.9219	20.5300
03/12/2025 09:53:51.000	5.8803	20.5300
03/12/2025 09:54:51.000	5.9412	20.4700

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-00-TP-060

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
03/12/2025 09:55:51.000	6.0845	20.5300
03/12/2025 09:56:51.000	6.0532	20.5300
03/12/2025 09:57:51.000	6.0046	20.4700
03/12/2025 09:58:51.000	5.9512	20.4700
03/12/2025 09:59:51.000	5.8953	20.4700
03/12/2025 10:00:51.000	5.9990	20.4700
03/12/2025 10:01:51.000	6.1893	20.4700
03/12/2025 10:02:51.000	6.1406	20.4100
03/12/2025 10:03:51.000	6.0635	20.4100
03/12/2025 10:04:51.000	6.0033	20.3500
03/12/2025 10:05:51.000	5.9647	20.3500
03/12/2025 10:06:51.000	6.2730	20.3500
03/12/2025 10:07:51.000	6.3081	20.3500
03/12/2025 10:08:51.000	6.2493	20.3500
03/12/2025 10:09:51.000	6.1814	20.2800
03/12/2025 10:10:51.000	6.1114	20.2800
03/12/2025 10:11:51.000	6.0444	20.2800
03/12/2025 10:12:51.000	5.9839	20.2800
03/12/2025 10:13:51.000	6.0416	20.2800
03/12/2025 10:14:51.000	6.2611	20.2200
03/12/2025 10:15:51.000	6.2156	20.2200
03/12/2025 10:16:51.000	6.1321	20.2200
03/12/2025 10:17:51.000	6.0447	20.2200
03/12/2025 10:18:51.000	5.9758	20.1600
03/12/2025 10:19:51.000	6.1825	20.1600
03/12/2025 10:20:51.000	6.1280	20.1600
03/12/2025 10:21:51.000	4.8860	20.1000
03/12/2025 10:22:51.000	2.7469	20.0300
03/12/2025 10:23:51.000	1.5120	20.0300

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24

Certificate of Calibration

- data di emissione date of issue	2024-12-10
- cliente customer	FAST AUTOMATION SRL VIA DELLA PREVIDENZA SOCIALE, 8 IT-42124 REGGIO EMILIA (RE)
- destinatario receiver	ROSETTI MARINO SPA - YARD PIOMBONI VIA DEL MARCHESATO, 37 IT-48122 MARINA DI RAVENNA (RA)

Il presente certificato di taratura è emesso in base all'accreditamento LAT N. 114 rilasciato in accordo ai decreti attuativi della legge n. 273/1991 che ha istituito il Sistema Nazionale di Taratura (SNT). ACCREDIA attesta le capacità di misura e di taratura, le competenze metrologiche del Centro e la riferibilità delle tarature eseguite ai campioni nazionali ed internazionali delle unità del Sistema Internazionale delle Unità (SI).
Questo certificato non può essere riprodotto in modo parziale, salvo espressa autorizzazione scritta da parte del Centro.

Si riferisce a
referring to

- oggetto *item*	Misuratore di pressione elettronico Electrical pressure gauge
- costruttore *manufacturer*	WIKA
- modello *model*	CPG1500
- matricola *serial number*	1A037FON32E
- data di ricev. oggetto *date of receipt of item*	2024-11-29
- data delle misure *date of measurements*	2024-12-10
- registro di laboratorio *laboratory reference*	0580-SM-24

This certificate of calibration is issued in compliance with the accreditation LAT No.114 granted according to decrees connected with Italian law No. 273/1991 which has established the National Calibration System. ACCREDIA attests the calibration and measurement capability, metrological competence of the Centre and the traceability of calibration results to the national and International standards of the International System of Units (SI).
This certificate may not be partially reproduced, except with the prior written permission of the issuing Centre.

I risultati di misura riportati nel presente Certificato sono stati ottenuti applicando le procedure di taratura citate alla pagina seguente, dove sono specificati anche i campioni o gli strumenti che garantiscono la catena di riferibilità del Centro e i rispettivi certificati di taratura in corso di validità. Essi si riferiscono esclusivamente all'oggetto in taratura e sono validi nel momento e nelle condizioni di taratura, salvo diversamente specificato.

The measurement results reported in this Certificate were obtained following the calibration procedures given in the following page, where the reference standards or instruments are indicated which guarantee the traceability chain of the laboratory, and the related calibration certificates in the course of validity are indicated as well. They relate only to the calibrated item and they are valid for the time and conditions of calibration, unless otherwise specified.

Le incertezze di misura dichiarate in questo documento sono state determinate conformemente alla Guida ISO/IEC 98 e al documento EA-4/02. Solitamente sono espresse come incertezza estesa ottenuta moltiplicando l'incertezza tipo per il fattore di copertura k corrispondente ad un livello di fiducia di circa il 95 %. Normalmente tale fattore k vale 2.

The measurement uncertainties stated in this document have been determined according to the ISO/IEC Guide 98 and to EA-4/02. Usually, they have been estimated as expanded uncertainty obtained multiplying the standard uncertainty by the coverage factor k corresponding to a confidence level of about 95%. Normally, this factor k is 2.

Direzione Tecnica
(Approving Officer)

Enrico Reccagni

Enrico Reccagni

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

Misuratore di pressione elettronico *Electrical pressure gauge*	
Tipo *Model*	Misuratore di pressione elettronico Electrical pressure gauge
Numero di matricola *Serial No.*	1A037FON32E
Campo di misura *Scale range*	(0 ... 1000) bar g
Accuratezza dichiarata dal costruttore *Accuracy declared by the manufacturer*	0,1 % FS
Risoluzione *Resolution (scale division)*	0,1 bar
Tag. N. *Tag No.*	--

Procedura di taratura e catena di riferibilità
Calibration procedure and traceability chain

La taratura è stata effettuata in accordo alla linea guida DKD-R 6-1 "Taratura di strumenti di pressione" (versione 03/2014) procedura B, per confronto fra i valori dello strumento in taratura con quelli di riferimento dati dal campione di lavoro.

Calibration was carried out according to DKD-R 6-1 "Kalibrierung von Druckmessgeräten" (Ausgabe 03/2014) procedure B, by comparing the measured values of the calibration item with those of the reference or working standard.

I risultati riportati sono stati ottenuti applicando le procedure n° LMO-PT-01 rev.2

The results have been obtained using the procedures n° LMO-PT-01 rev.2

La catena di riferibilità ha inizio dai campioni di riferimento n° PM1-09

The traceability chain starts from the reference standards n° PM1-09

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

Laboratorio WIKA ITALIA - Laboratorio di Modugno (BA)
WIKA ITALY Laboratory - Modugno (BA)

Campione di lavoro
Working Standard

Norma di riferimento (RS) Bilancia di pressione *Reference standard (RS) Dead-weight tester*	
Tipo *Model*	PM1-09
Certificato di taratura *Calibration mark*	D-K-15105/D21090
Campo di misura *Scale range*	(10 ... 2500) bar g
Accuratezza *Accuracy*	0,015 % della lettura + 255 Pa

Operatore
Technichian

Francesco Donatelli

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

Condizioni di misura
Measurement conditions

Schema di collegamento *Assembly*	
Fluido utilizzato *Pressure medium*	Sebacate *Sebacate*
Livello di riferimento *Refence height (for reference value)*	Superficie di tenuta DUT *Sealing face DUT*
Posizione di montaggio *Position during calibration*	verticale *vertical*

Note di taratura
Calibration Note

Lo strumento è stato tarato e riconsegnato nelle stesse condizioni in cui è arrivato nel laboratorio, in accordo con il metodo "as found as left" / The device under test (DUT) was calibrated in the same conditions it was arrived in laboratory, according to the method "as found as left".

Condizioni Ambientali
Environmental conditions

Temperatura *Temperature*	(22 ± 1,5)	°C
Pressione atmoferica *Atmospheric pressure*	(1007,5 ± 0,2)	hPa
Umidità relativa *Rel. Humidity*	(50 ± 15)	% UR

I dati meteo sono stati acquisiti tramite stazione meteo WIKA CPU6000-W s/n.1A00VCX6GJ2

Weather data were acquired via the WIKA CPU6000-W weather station s/n.1A00VCX6GJ2

Misure rilevate
Measurement results

Valore di riferimento *Reference value RS* bar	**Letture** *Reading DUT* bar		
	M1	**M2**	**M3**
0,00	0,0	0,0	0,0
99,91	100,0	100,0	100,0
199,82	200,0	200,0	200,0
299,73	299,9	300,0	299,9
399,63	399,8	399,9	399,8
499,53	499,6	499,7	499,7
599,44	599,5	599,6	599,5
699,34	699,3	699,4	699,3
799,24	799,2	799,3	799,2
899,14	899,1	899,1	899,1
999,04	999,0	999,0	999,0

WIKA Italia S.r.l. & C. s.a.s.
Viale dell'Artigianato,
I Traversa, n. 8
70026 - Modugno (BA) • Italy
www.wika.it

Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

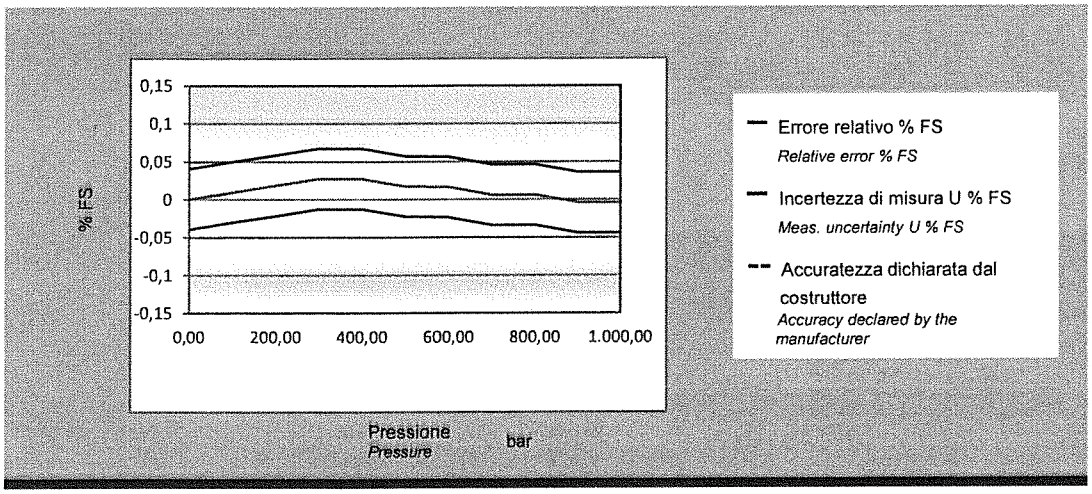
LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24
Certificate of calibration

Incertezza di misura
Uncertainty of measurement

Valori di riferimento *Reference value RS* bar	Media delle misure *Mean value* bar	Errore *Error* bar	Ripetibilità *Repeatability* bar	Isteresi *Hysteresis* bar	Incertezza di misura *Meas. Uncertainty* bar
0,00	0,0	0,0	0,0	0,0	0,40
99,91	100,0	0,1	0,0	0,0	0,40
199,82	200,0	0,2	0,0	0,0	0,40
299,73	300,0	0,3	0,0	0,1	0,40
399,63	399,9	0,3	0,0	0,1	0,40
499,53	499,7	0,2	0,1	0,1	0,40
599,44	599,6	0,2	0,0	0,1	0,40
699,34	699,4	0,1	0,0	0,1	0,40
799,24	799,3	0,1	0,0	0,1	0,40
899,14	899,1	0,0	0,0	0,0	0,40
999,04	999,0	0,0	0,0	0,0	0,40

Grafico degli errori di misura
Graphical representation of measurement uncertainty



L'incertezza estesa senza correzione del DUT è pari a 0,7 bar
The expanded uncertainty of the DUT without correction is equal to

Questo dato è ottenuto come MAX{Incertezza_di_misura$_i$ + |Errore$_i$|} della tabella precedente
This data is obatined as MAX{Meas._uncertainty$_i$ + |Error$_i$|} of the previous table

Il presente certificato non rappresenta una dichiarazione di conformità a specifica
This certificate is not a statement of compliance

Base Load Power Hub (BLPH)

TEST PACK

N°55-00-TP-060
SUB-SYSTEM N° 55-00

System	55
Sub-System	55-00
Test Pressure	5.25 barg
Test Fluid	WATER
Test Duration	30 min

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

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1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
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   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning
   - 8.6 TMX05 – Pressure test
   - 8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 - Drying

1. COLOURED MARKED P&IDs

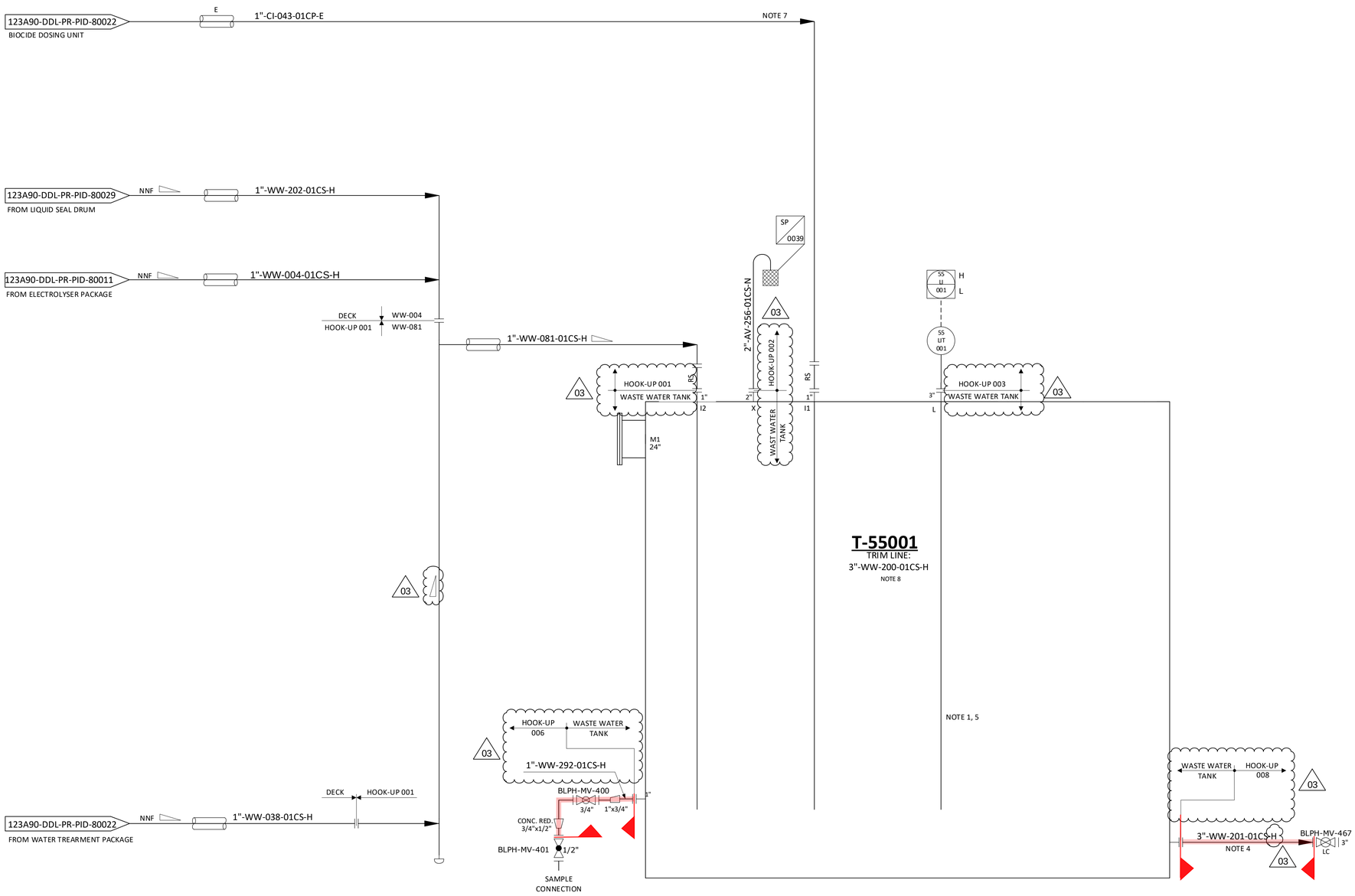
DRAWING NO. DRAWING_NO.

REV. REV

T-55001

WASTE WATER TANK

CAPACITY : 16 m³
DESIGN P/T : 0.005 barg / 80°C
MATERIAL : CARBON STEEL



NOTES

1. DELETED. 03
2. DELETED.
3. DELETED.
4. DRAIN LINE TO SHIP DISPOSAL.
5. PERFORATED STILLING TUBE.
6. DELETED.
7. FOR PERIODIC DOSING OF THE WASTE WATER TANK.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR WASTE WATER TANK - T-55001, DOC. N. "123A90-DDL-MAC-DS-50008"

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

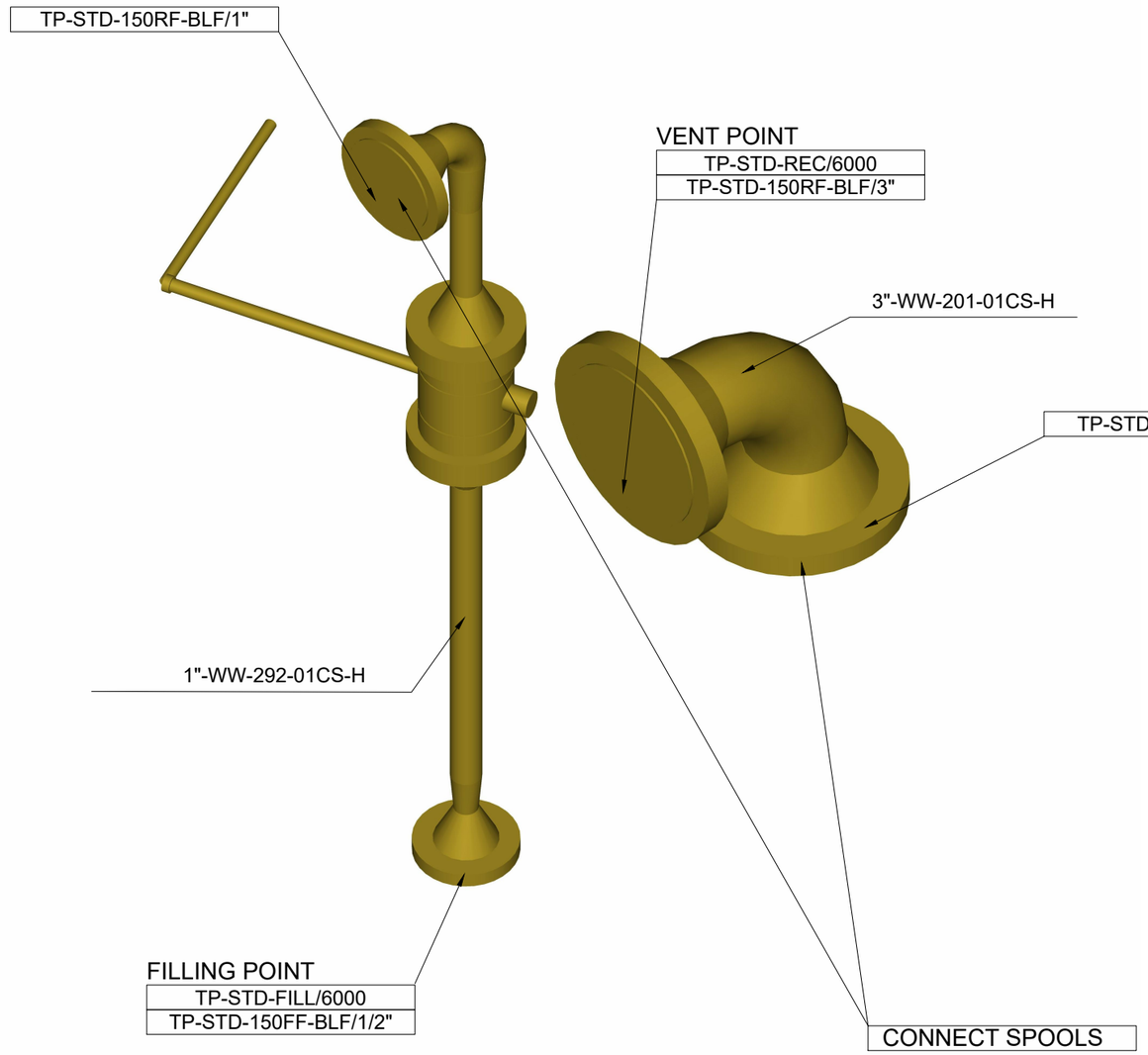
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80026	SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-00-TP-060

5.25 barg

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
55-00-TP-060

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

CROSSWIND / ROSETTI MARINO	CONTRACTOR: Rosetti Marino SpA	JOB :	123A90
	PROJECT: Base Load Power Hub (BLPH)	DATE :	20/09/2024
	TITLE: MATERIAL LIST FOR HYDROSTATIC TEST	REV. :	00

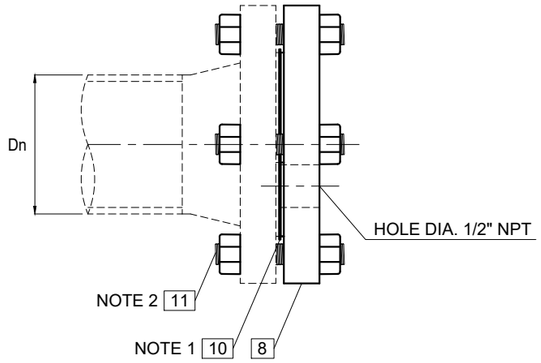
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL TEST	TP-STD-FILL/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3	1	3	
ALL TEST	TP-STD-FILL/6000	1MECH069	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4	1	4	
ALL TEST	TP-STD-REC/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9	1	9	
ALL TEST	TP-STD-REC/6000	TEEFSS00060H00	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2	1	2	
ALL TEST	TP-STD-REC/6000	CAPFSS00200H00	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	CPL0SS00240H00	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-REC/6000	E900SS00340H00	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
ALL TEST	TP-STD-PLGNPT/1/2"	PLGHSS00090H00	Plug Hex. Head THRD-M NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1	1	1	
TP-060	TP-STD-150RF-BLF/1/2"	FLBHCS02420H0H	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB FF ASTM/ASME A/SA105	1	1	1	
TP-060	TP-STD-150RF-BLF/1/2"	GFL3GK13690100	Gasket Flat Thk. 3 mm ø1" 150LB FF NITRILE RUBBER	1	1	1	
TP-060	TP-STD-150RF-BLF/1/2"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1	4	
TP-060	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-060	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-060	TP-STD-150RF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1	4	
TP-060	TP-STD-150RF-BLF/3"	FLBHCS0137030H	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1	2	2	
TP-060	TP-STD-150RF-BLF/3"	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ø3" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	2	2	
TP-060	TP-STD-150RF-BLF/3"	SB20BO00680300	Stud Bolt + 2 Heavy Nuts 5/8" L=100MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	2	8	

STD NAME	RATING	DESCRIPTION
TP-STD-150RF	150 RF	STANDARD FOR BLIND POINT

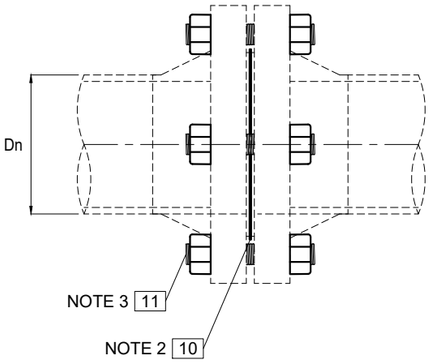
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-150RF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=60 MM	4
TP-STD-150RF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-150RF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=70 MM	4
TP-STD-150RF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=85 MM	4
TP-STD-150RF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-150RF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø4" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-150RF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø6" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-150RF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø8" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-150RF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø10" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=120 MM	12
TP-STD-150RF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø12" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=125 MM	12
TP-STD-150RF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø14" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=135 MM	12
TP-STD-150RF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø16" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=140 MM	16
TP-STD-150RF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø18" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=150 MM	16
TP-STD-150RF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø20" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=160 MM	20
TP-STD-150RF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 150LB RF ASTM/ASME A/SA105	1
	10	Gasket ø24" 150LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=175 MM	20



TP-STD-150RF-BLF/Dn
BLIND FLANGE



TP-STD-150RF-GSK/Dn
GASKET ONLY

NOTES

1. GASKET MATERIAL AS PER PIPING CLASS
2. STUD BOLTS AND NUTS MATERIAL AS PER TEST MTO

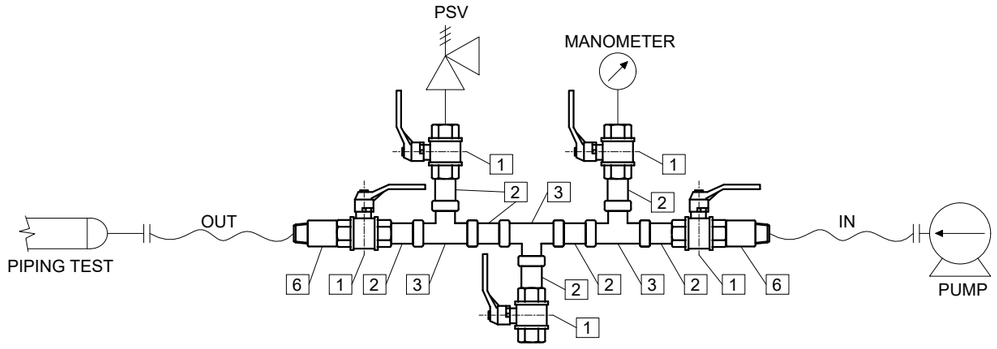
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-150RF
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_150RF	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-FILL	3000 / 6000 / 9000	STANDARD FOR FILLING POINT
TP-STD-FILL/RATING		



TP-STD-FILL/RATING

FILLING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-FILL/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 400 bar ASTM A182 Gr.F316/316L	2
TP-STD-FILL/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	7
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	3
	6	Adapter THRD-M NPT x BSPP ø1/2" 523 bar 304SS	2

NOTES

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING

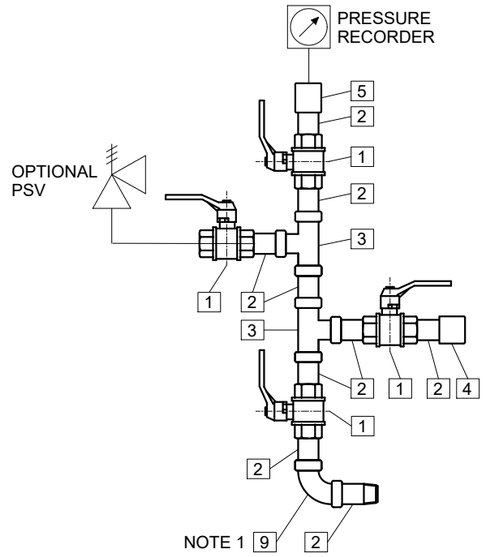
TP-STD-FILL

TP-STD-FILL/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_FILL	00	1 OF 1

STD NAME	RATING	DESCRIPTION
TP-STD-REC	3000 / 6000 / 9000	STANDARD FOR RECORDING POINT

TP-STD-REC/RATING



TP-STD-REC/RATING
RECORDING POINT 3000/6000/9000

MATERIAL LIST

STD	POS.	DESCRIPTION	Q.TY
TP-STD-REC/3000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.3.73mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 3000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/6000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	9
	3	Tee THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 6000# ASTM A182 Gr.F316/316L	1
TP-STD-REC/9000	1	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	4
	2	Nipple L=100mm TBE ø1/2" Thk.7,47mm ASTM A312 Gr.TP316/316L	9
	3	Tee Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	2
	4	Cap Forged THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	5	Coupling THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1
	9	90 Deg Elbow THRD-F NPT ø1/2" 9000# ASTM A182 Gr.F316/316L	1

NOTES

1. 90 DEG ELBOW SHALL BE INSTALLED WHERE APPLICABLE ONLY

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-REC
TP-STD-REC/RATING

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_REC	00	1 OF 1

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
99	WW-201	201	3	01CS	H	5,49	40	N/A	3"-WW-201-01CS-H	123A90-DDL-PR-PID-80026	3,50	55	55-00	TP-060	Water	5.25	Waste Water	Carbon Steel	SUP	Art. 4, par. 3	1D	N/A
156	WW-292	292	1	01CS	H	4,55	80	N/A	1"-WW-292-01CS-H	123A90-DDL-PR-PID-80026	3,50	55	55-00	TP-060/TP-061	Water	5.25/N/A	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

REV. **05**

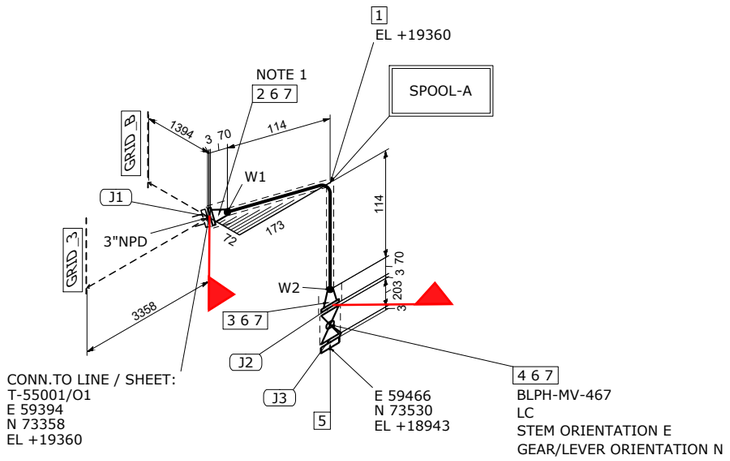
TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
129	123A90-FDL-PP-DI-00099-01	**099**	01	SHOP DRAWING ISOMETRIC - LINE NR 3"-WW-201-01CS-H	27/08/2024													**00**	**03**		**TP-060**
193	123A90-FDL-PP-DI-00156-01	**156**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-292-01CS-H	27/08/2024													**00**	**03**	**HOOK-UP 006**	**TP-060/TP-061**

N



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3	E90RCS02830300	90 Deg Elbow Long Radius ASME B16.9 BW 5,49 WRS ASTM/ASME A/SA420 Gr.WPL6	1	2.0
2	3	FLWDCS00240300	Flange WN For Jackscrews ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
3	3	FLW0CS03180300	Flange WN ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	3	VBD0NN16610300	Ball Valve Split Body RB API 6D FLG 150LB RF BC01B01RF	1	25.0
5	3	FLB0CS07900300	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
6	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.5
7	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	3.0

FABRICATION WEIGHT [kg]	11.0
ERECTION WEIGHT [kg]	33.0
OVERALL WEIGHT [kg]	44.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	3	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	11.0
MONT	0	33.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

55-00-TP-060

MASTER

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 3"-WW-201-01CS-H
SK.099

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00099
SHEET / OF: 1/1
REV.: 00

LINE DATA

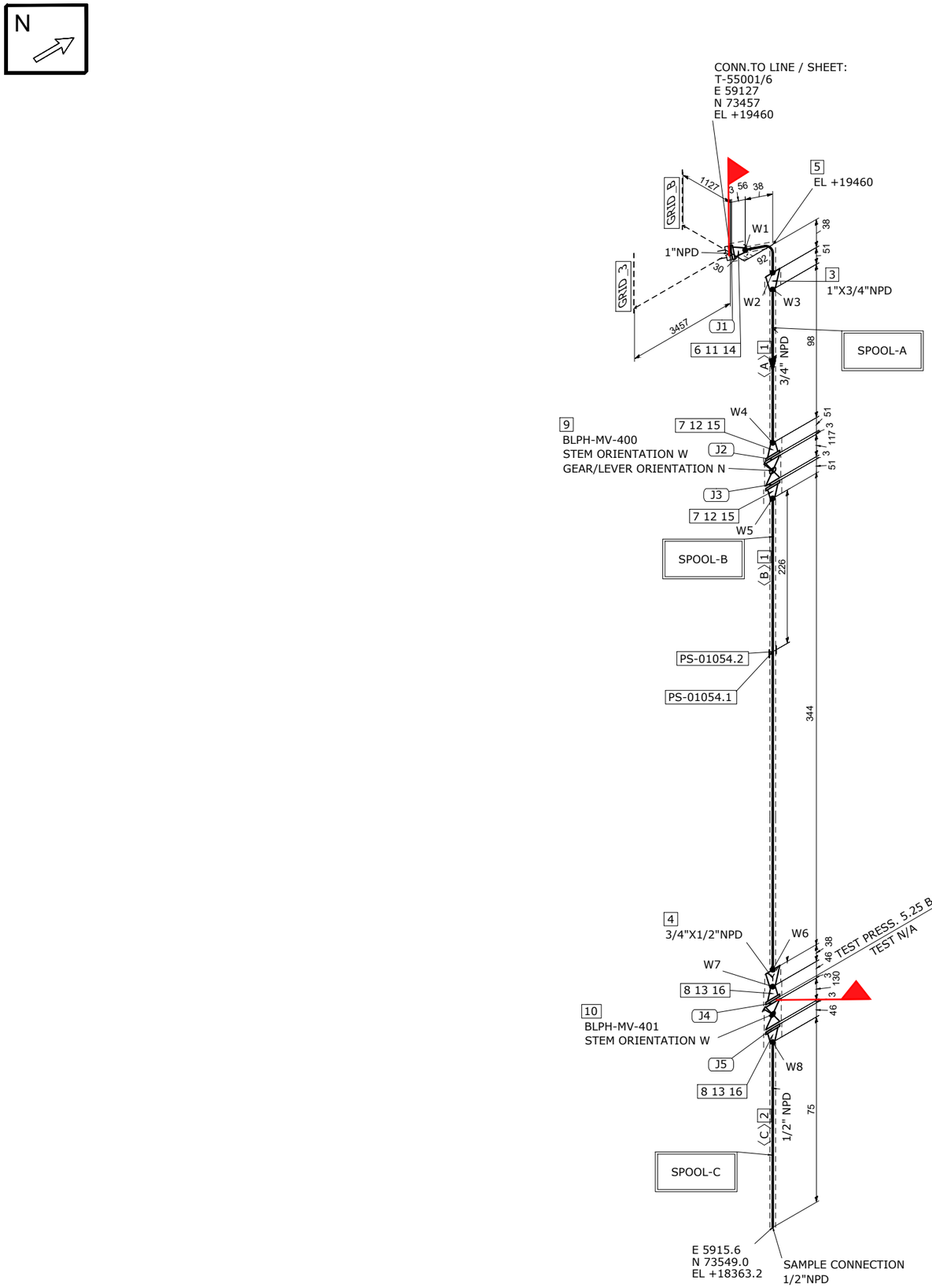
NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A		FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 25	[mm]	DESIGN	PRESS. 3.5	[barg]	TEMP. -46 / 100	[°C]	
HEAT TRACING	N/A			TEST	PRESS. 5.25	[barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION E\W



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

HOOK-UP 006

55-00-TP-060

MASTER

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00156 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

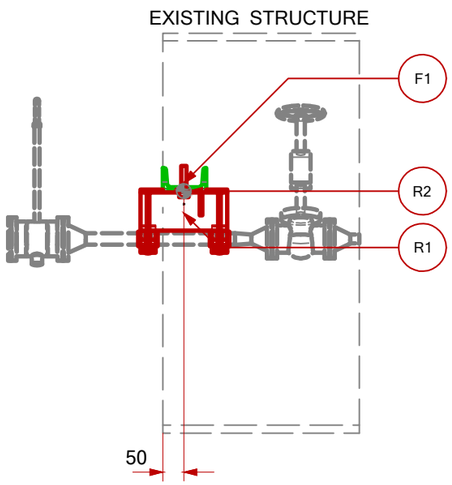
P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

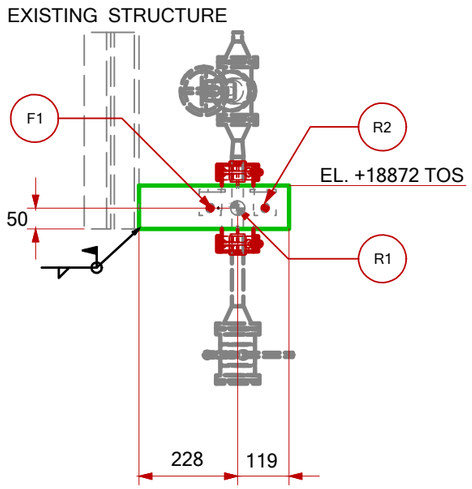
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

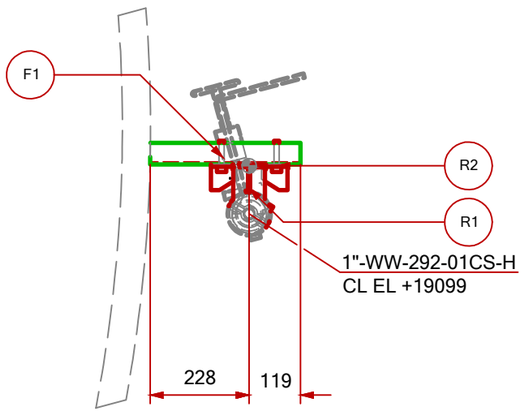
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01054	B1	PIP	LOWER DECK		1"-WW-292-01CS-H	S-64 - 3/4" - 101 - 200		1	3,687	0,099	00	19/08/2024	IFR		TP-060
PS-01054	B2	PIP	LOWER DECK		1"-WW-292-01CS-H	C-33 - 1 - I - 2		1	2,280	0,028	00	19/08/2024	IFR		TP-060



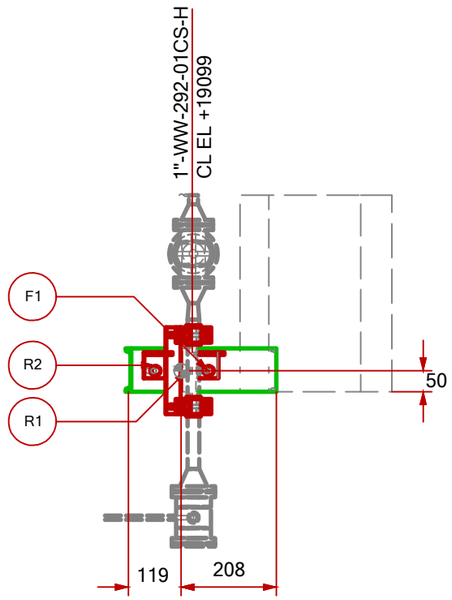
VIEW LOOKING S 15 W



VIEW LOOKING E 15 S



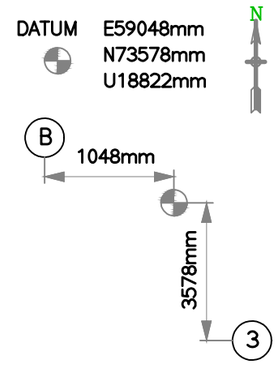
PLAN VIEW

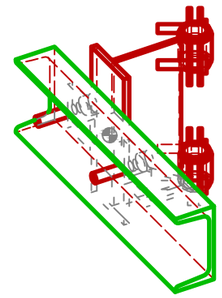


VIEW LOOKING WEST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-3/4"-100-200	-	-	1	-	3.68	0.098
R2	STD	C-33-1-I-2	-	-	1	-	2.28	0.028
F1	BEAM	UPN100	Carbon Steel	358	1	10.57	3.78	0.136
						TOTAL	9.7	0.26





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01054

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

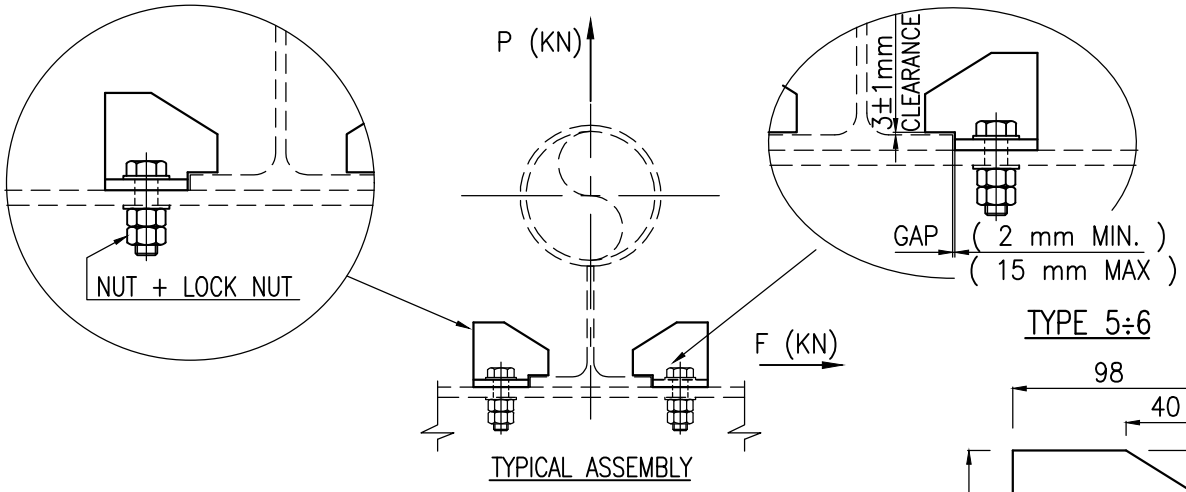
Document Number: STD–PP–DD–0001

Revision: 0

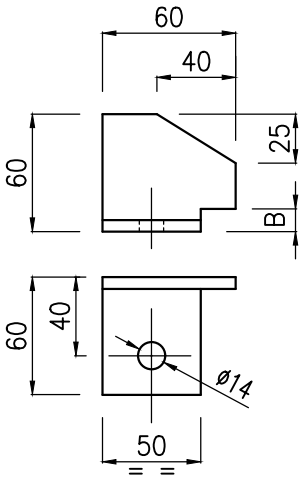
Date: –

GUIDA BULLONATA CON HOLD–DOWN PER SCARPETTE
BOLTED GUIDE WITH HOLD DOWN FOR SHOES

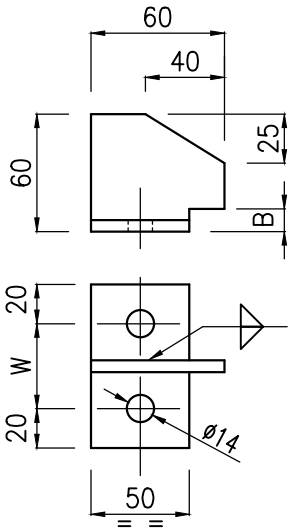
C–33



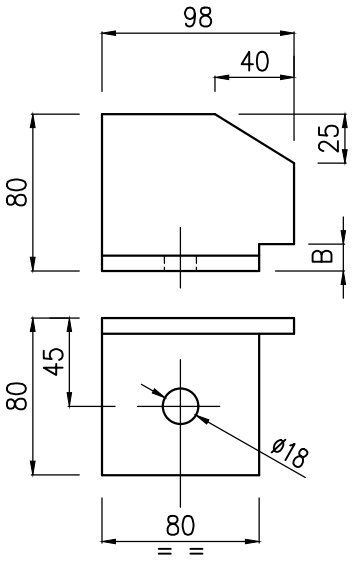
TYPE 1 (NOTE 4)



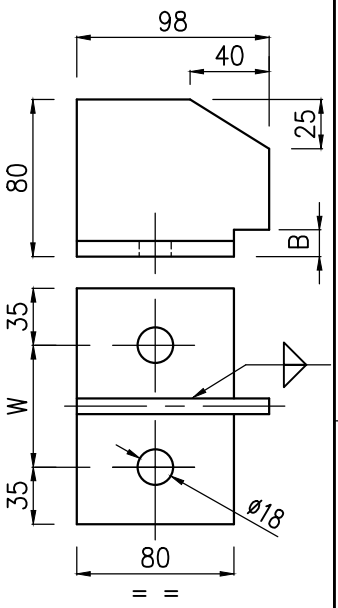
TYPE 2



TYPE 3÷4 (NOTE 4)



TYPE 5÷6



Example of designation : STD – TYPE – SIZE – GAP
(C–33 – 6 – M – 2)

TYPE	SHOE THK.	B	DIM. HOLE	SECTION	BOLTING	F (KN)	P (KN)
1	9–10	12	13	L60x60x6	M12x60	10	32
2	9–10	12	13	PLT. 10THK	M12x60	20	32
3	11–12	14	18	L80x80x8	M16x70	18	59
4	13–14	16	18	L80x80x8	M16x70	18	59
5	11–12	14	18	PLT. 10THK	M16x70	36	71
6	13–14	16	18	PLT. 10THK	M16x70	36	71

SIZE	EXIST. BEAM	W mm
A	HEA 100	58
B	HEA 120	66
C	HEA 140	76
D	HEA 160	86
E	HEA 180	96
F	HEA 200	106
	HEA 220	
G	HEA 240	120
	HEA 260	
	HEA 280	
H	HEA 300	126
I	UPN 100	46
	UPN 120	
J	UPN 140	60
K	UPN 200	100
L	IPE 200	64
	IPE 220	
M	IPE 270	70
N	IPE 300	72
O	IPE 600	94
Z	–	0

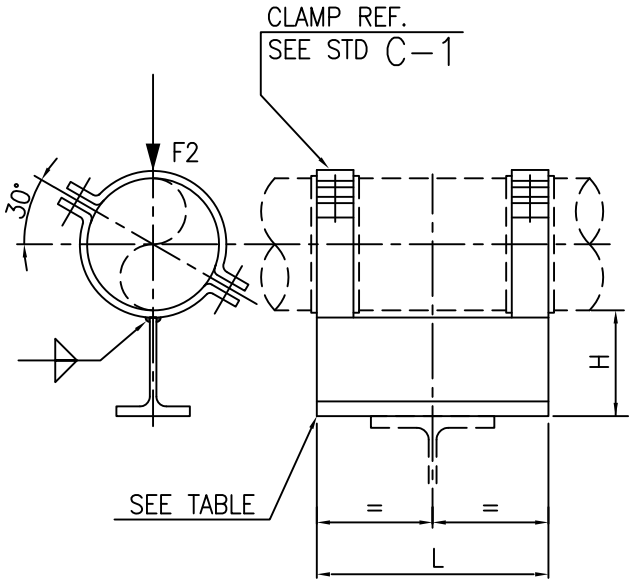
NOTES:
1– PLATES MATERIAL: CARBON STEEL
2– BOLTS (UNI 5739 Cl 8.8), NUTS (UNI 5588 Cl 8.8), LOCK NUT (UNI 7474 Cl.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– GUIDE TO BE SITE LOCATED UNLESS NOTED OTHERWISE ON THE PIPE SUPPORT DRAWING.
4– REALIZE A PIECE AS DRAWING AND A PIECE SYMMETRIC.
5– VARIABLE WEIGHT ADDICTED TO THE THE "TYPE" SELECTED AND "W" DIMENSION INDICATED.
6– TYPES 1, 3 & 4 SHALL BE USED PREFERABLY WHEN EXISTING BEAMS ARE ANGULARS

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

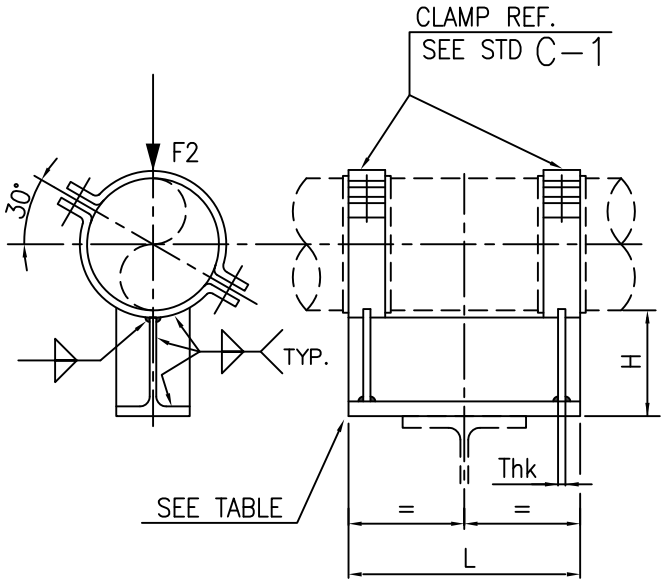
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

Example of designation : STD – PIPE ND" – H – L
(S–64 – 4" – 150 – 400)



PIPES ½" TO 4"



PIPES 6" TO 24"

PIPE		TEE CUT FROM	GUSSET Thk	"H" MAX	MAX LOAD (KN)
ND"	ND				F2
½"	15	IPE 140	–	120	2
3/4"	20	IPE 140	–		
1"	25	IPE 140	–		
1½"	40	IPE 140	–		
2"	50	IPE 220	–	190	4.5
3"	80	IPE 220	–		
4"	100	IPE 220	–		
6"	150	IPE 270	10	240	7.9
8"	200	IPE 270	10		
10"	250	HE220A	10	180	47
12"	300	HE220A	10		
14"	350	HE220A	10		
16"	400	HE220A	10		
18"	450	HE300A	15	230	64
20"	500	HE300A	15		
24"	600	HE300A	15		

ALLOWABLE RANGE FOR SHOE LENGTH		
ø PIPE	MIN. "L" mm	MAX. "L" mm
½" ÷ 6"	200	600
8" ÷ 24"	250	600

NOTES:

1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	99	**To**	99
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders / Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
1/99/1/_		**01**	**28-09-2024**	**20**	**AZ53**		**FWN**	**3,00 in**	**5,49 mm**	**V**	**0,279 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					30-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								
2/99/1/_		**01**	**28-09-2024**	**20**	**AZ53**		**ELB**	**3,00 in**	**5,49 mm**	**V**	**0,279 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					30-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								

Totals per DWG	**99**	**Prefabrication**	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Accepted	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Accepted	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Accepted	**0,56 m**	**2 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 25/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
99	00	1	A	01CS	1	1	90 Deg Elbow Long Radius BW ›3" Thk.5.49mm ASTM/ASME A/SA420 Gr.WPL6	130896	1724000994	00030	4724-P10	W1-W2	
99	00	1	A	01CS	2	1	Flange WN For Jackscrews ›3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	1724001267	00140	2924-C_MFF-01793	W1	
99	00	1	A	01CS	3	1	Flange WN ›3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	1724001267	00100	2924-C_MFF-01793	W2	

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	156	**To**	156
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
1/156/1/_		**01**	**19-11-2024**	**31**	**AZ 32**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-11-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/156/1/_		**01**	**19-11-2024**	**31**	**AZ 32**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-11-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
3/156/1/_		**01**	**14-11-2024**	**28**	**AZ 32**			**RED**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				15-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/156/1/_		**01**	**14-11-2024**	**28**	**AZ 32**			**PIPE**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				15-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
5/156/1/_		**01**	**15-11-2024**	**29**	**AZ 32**			**FWN**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
6/156/1/_		**01**	**15-11-2024**	**29**	**AZ 32**			**PIPE**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
7/156/1/_		**01**	**15-11-2024**	**29**	**AZ 32**			**RED**		**0,50 in**	**3,73 mm**	**V**	**0,066 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/156/1/_		**01**	**15-11-2024**	**30**	**AZ 32**			**FWN**		**0,50 in**	**3,73 mm**	**V**	**0,066 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-11-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number		Rev.	Prod. Date	Prod. Sheet	Welders		Item type	Dimension	Thickness	Bevel	Weld Length	P/M	Material	WPS	Techn. Weld.	Type Conn.	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase		Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.		Defect length	CND date	NOTE		
8/156/1/_		01	15-11-2024	30	AZ 32		FWN	0,50 in	3,73 mm	V	0,066 m	P	C.S.	A1A	GTAW	BW	28-11-2024	C

Totals per DWG	**156**	**Prefabrication**	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Accepted	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Accepted	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Accepted	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**	Antonio Galesi		
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 25/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
156	00	1	A	01CS	3	1	Reducer Concentric BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	56-123056	1724000839	00730	4527-P8	W2-W3	
156	00	1	A	01CS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W1-W2	
156	00	1	A	01CS	6	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	W1	
156	00	1	A	01CS	7	1	Flange WN ›3/4" Thk.3,91mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724001828	00070	2024-C_MFF-02265	W4	
156	00	1	A	01CS	1A	0,098	Pipe 26,7mm(3/4") thk.3.91mm ASTM/ASME A/SA333 Gr.6	129308	1724000838	00040	0000360564/1		
156	00	1	B	01CS	4	1	Reducer Concentric BW ›3/4"x1/2" Thk.3.91mmx3.73mm ASTM/ASME A/SA420 Gr.WPL6	0F-0F2350	1724000839	00720	4527-P7	W6-W7	
156	00	1	B	01CS	7	1	Flange WN ›3/4" Thk.3,91mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724001828	00070	2024-C_MFF-02265	W5	
156	00	1	B	01CS	8	1	Flange WN ›1/2" Thk.3,73mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	22/75635	1724001828	00060	2024-C_MFF-02265	W7	
156	00	1	B	01CS	1B	0,344	Pipe 26,7mm(3/4") thk.3.91mm ASTM/ASME A/SA333 Gr.6	129308	1724000838	00040	0000360564/1		
156	00	1	C	01CS	8	1	Flange WN ›1/2" Thk.3,73mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	22/75635	1724001828	00060	2024-C_MFF-02265	W8	
156	00	1	C	01CS	2C	0,075	Pipe 21.3mm(1/2") thk.3.73mm ASTM/ASME A/SA333 Gr.6	720280	1724000838	00060	02-23-29899		

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	55-00-TP-060	: Test Pack 55-00-TP-060			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003680		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult to reach. After drying, inlet and outlet points were closed with covers.
3	Temporary means :	Blind flanges and plugs, if necessary, to isolate inlet and outlet points during process. Covers to close all openings after the drying.
4	Dew point (obtain after soaking and nitrogen purging):	NA
5	Valve body cavity, branches, etc.. Have been drained form residual water	●
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	Restricting access to the area.
11	REMARKS:	.

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Massimo Bravetti	Massimo Bruschi	
Date	2025-03-12	2025-03-13	
Signature	PROVERLIS Digitaly signed by Massimo Bravetti 2025-03-12T10:48:12.287Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-13T07:36:34.096Z	

ITEM	Tag	55-00-TP-061	: Test Pack 55-00-TP-061			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003681		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	PL
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	PL
6	Check bolt tightening and flange management (excluded battery limit joints).	PL
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	NA
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	NA
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	NA
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	NA
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Visual check performed on spool not assembled in erection.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	Rodeo	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-05	2024-12-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-05T08:46:15.976Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-19T16:48:38.386Z	

Base Load Power Hub (BLPH)

TEST PACK

N°55-00-TP-061
SUB-SYSTEM N° 55-00

System	55
Sub-System	55-00
Test Pressure	N/A
Test Fluid	N/A
Test Duration	N/A

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS – NOT APPLICABLE
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8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning – NOT APPLICABLE
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   - 8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 – Drying – NOT APPLICABLE

1. COLOURED MARKED P&IDs

DRAWING NO. DRAWING_NO.

REV. REV

T-55001

WASTE WATER TANK

CAPACITY : 16 m³
DESIGN P/T : 0.005 barg / 80°C
MATERIAL : CARBON STEEL

123A90-DDL-PR-PID-80022
BIOCIDE DOSING UNIT
E
1"-CI-043-01CP-E
NOTE 7

123A90-DDL-PR-PID-80029
FROM LIQUID SEAL DRUM
NNF
1"-WW-202-01CS-H

123A90-DDL-PR-PID-80011
FROM ELECTROLYSER PACKAGE
NNF
1"-WW-004-01CS-H

DECK
HOOK-UP 001
WW-004
WW-081

1"-WW-081-01CS-H

03
HOOK-UP 001
WASTE WATER TANK
RS
1"
I2

M1
24"

SP
0039

2"-AV-256-01CS-N

03
HOOK-UP 002
RS
2"
X
WAST WATER TANK
1"
I1

55
LI
001
H
L

55
LIT
001

HOOK-UP 003
3"
L
WASTE WATER TANK
03

03

T-55001
TRIM LINE:
3"-WW-200-01CS-H
NOTE 8

NOTE 1, 5

03
HOOK-UP
006
WASTE WATER
TANK
1"-WW-292-01CS-H
BLPH-MV-400
3/4"
1"x3/4"
1"
CONC. RED.
3/4"x1/2"
BLPH-MV-401
1/2"
SAMPLE
CONNECTION

DECK
HOOK-UP 001
123A90-DDL-PR-PID-80022
FROM WATER TREARMENT PACKAGE
NNF
1"-WW-038-01CS-H

WASTE WATER
TANK
HOOK-UP
008
03
3"-WW-201-01CS-H
NOTE 4
03
BLPH-MV-467
3"
LC

55-00-TP-061
N/A

NOTES

1. DELETED. 03
2. DELETED.
3. DELETED.
4. DRAIN LINE TO SHIP DISPOSAL.
5. PERFORATED STILLING TUBE.
6. DELETED.
7. FOR PERIODIC DOSING OF THE WASTE WATER TANK.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR WASTE WATER TANK - T-55001, DOC. N. "123A90-DDL-MAC-DS-50008"

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

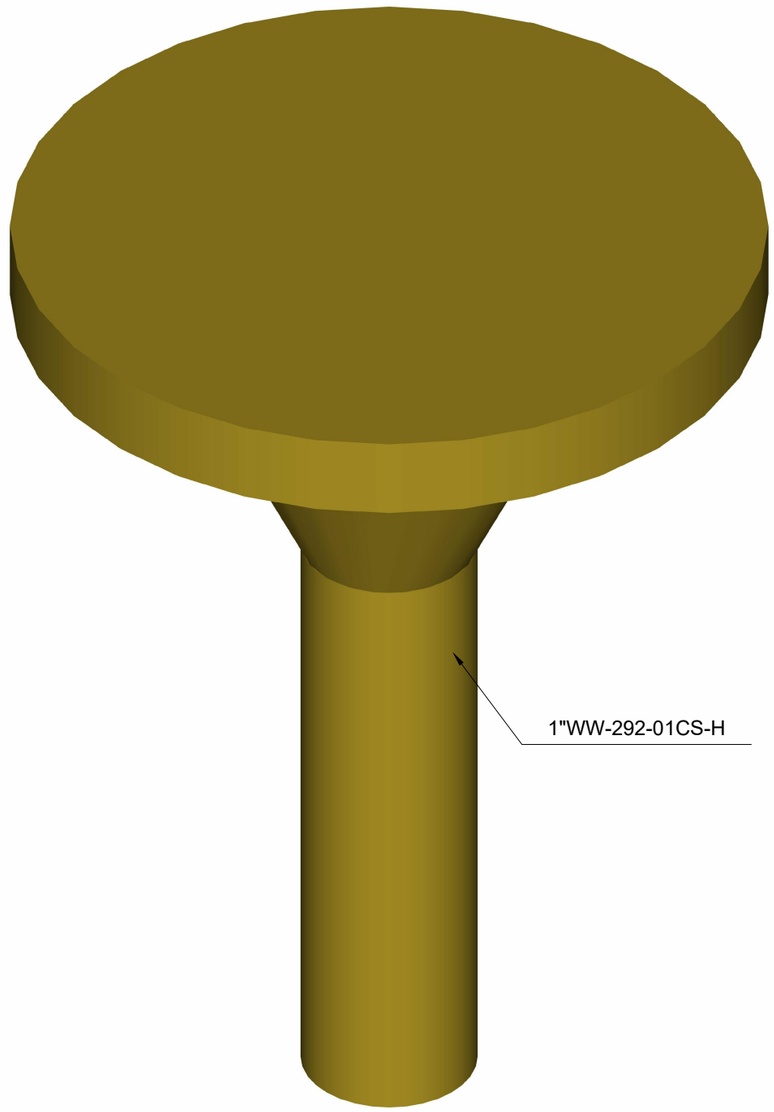
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 2

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO. 123A90-DDL-PR-PID-80026	SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-00-TP-061

N/A

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
55-00-TP-061

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

NOT APPLICABLE

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
156	WW-292	292	1	01CS	H	4,55	80	N/A	1"-WW-292-01CS-H	123A90-DDL-PR-PID-80026	3,50	55	55-00	TP-060/TP-061	Water	5.25/N/A	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

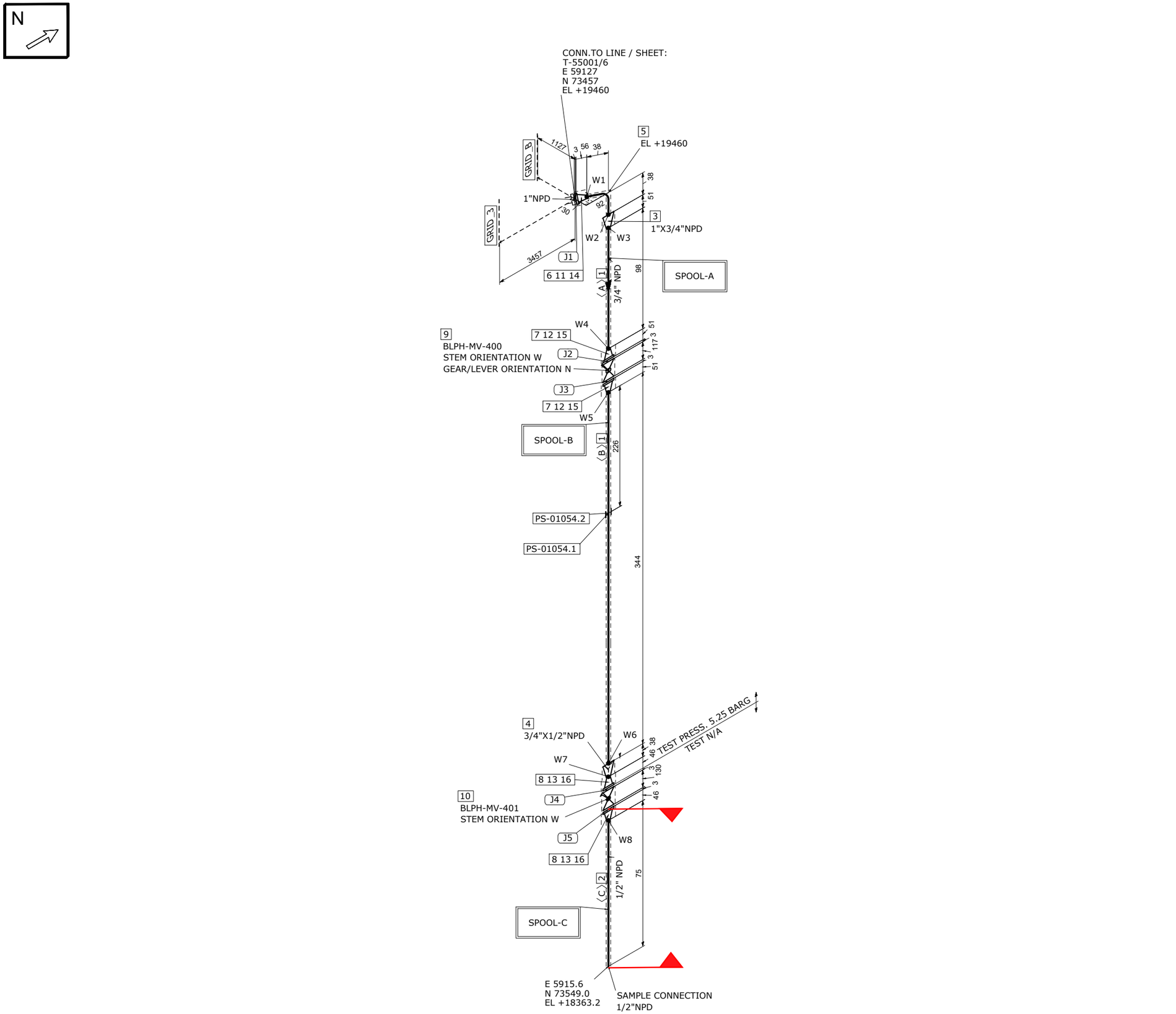
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
193	123A90-FDL-PP-DI-00156-01	**156**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-292-01CS-H	27/08/2024													**00**	**03**	**HOOK-UP 006**	**TP-060/TP-061**



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

HOOK-UP 006

55-00-TP-061

MASTER

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00156 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

6. EXTRACT OF SUPPORT LIST & DETAILS

NOT APPLICABLE

7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	156	**To**	156
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
1/156/1/_		**01**	**19-11-2024**	**31**	**AZ 32**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-11-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/156/1/_		**01**	**19-11-2024**	**31**	**AZ 32**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-11-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
3/156/1/_		**01**	**14-11-2024**	**28**	**AZ 32**			**RED**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				15-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/156/1/_		**01**	**14-11-2024**	**28**	**AZ 32**			**PIPE**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				15-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
5/156/1/_		**01**	**15-11-2024**	**29**	**AZ 32**			**FWN**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
6/156/1/_		**01**	**15-11-2024**	**29**	**AZ 32**			**PIPE**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
7/156/1/_		**01**	**15-11-2024**	**29**	**AZ 32**			**RED**		**0,50 in**	**3,73 mm**	**V**	**0,066 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/156/1/_		**01**	**15-11-2024**	**30**	**AZ 32**			**FWN**		**0,50 in**	**3,73 mm**	**V**	**0,066 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-11-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number		Rev.	Prod. Date	Prod. Sheet	Welders		Item type	Dimension	Thickness	Bevel	Weld Length	P/M	Material	WPS	Techn. Weld.	Type Conn.	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase		Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.		Defect length	CND date	NOTE		
8/156/1/_		01	15-11-2024	30	AZ 32		FWN	0,50 in	3,73 mm	V	0,066 m	P	C.S.	A1A	GTAW	BW	28-11-2024	C

Totals per DWG	**156**	**Prefabrication**	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Accepted	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Accepted	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Accepted	**0,66 m**	**8 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name:	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**	Antonio Galesi		
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 25/01/2025
RosettiDoc.Num.	**123A90MTR001**			

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
156	00	1	A	01CS	3	1	Reducer Concentric BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	56-123056	1724000839	00730	4527-P8	W2-W3	
156	00	1	A	01CS	5	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W1-W2	
156	00	1	A	01CS	6	1	Flange WN For Jackscrews ›1" Thk.4,55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01260	2024-C_MMF-01566	W1	
156	00	1	A	01CS	7	1	Flange WN ›3/4" Thk.3,91mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724001828	00070	2024-C_MFF-02265	W4	
156	00	1	A	01CS	1A	0,098	Pipe 26,7mm(3/4") thk.3.91mm ASTM/ASME A/SA333 Gr.6	129308	1724000838	00040	0000360564/1		
156	00	1	B	01CS	4	1	Reducer Concentric BW ›3/4"x1/2" Thk.3.91mmx3.73mm ASTM/ASME A/SA420 Gr.WPL6	0F-0F2350	1724000839	00720	4527-P7	W6-W7	
156	00	1	B	01CS	7	1	Flange WN ›3/4" Thk.3,91mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724001828	00070	2024-C_MFF-02265	W5	
156	00	1	B	01CS	8	1	Flange WN ›1/2" Thk.3,73mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	22/75635	1724001828	00060	2024-C_MFF-02265	W7	
156	00	1	B	01CS	1B	0,344	Pipe 26,7mm(3/4") thk.3.91mm ASTM/ASME A/SA333 Gr.6	129308	1724000838	00040	0000360564/1		
156	00	1	C	01CS	8	1	Flange WN ›1/2" Thk.3,73mm 150LB FF ASTM/ASME A/SA350 Gr.LF2	22/75635	1724001828	00060	2024-C_MFF-02265	W8	
156	00	1	C	01CS	2C	0,075	Pipe 21.3mm(1/2") thk.3.73mm ASTM/ASME A/SA333 Gr.6	720280	1724000838	00060	02-23-29899		

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning – NOT APPLICABLE

8.6 TMX05 – Pressure test – NOT APPLICABLE

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 – Drying – NOT APPLICABLE

ITEM	Tag	55-00-TP-061	: Test Pack 55-00-TP-061			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003682		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	OK
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	NA
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	NA
8	After the (re) installation of a valve check that it operates freely.	NA
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	NA
10	Check all locking device.	NA
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	OK
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-07	2025-04-02	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:21:01.826Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-02T06:35:41.508Z	

ITEM	Tag	55-00-TP-061	: Test Pack 55-00-TP-061			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003683		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.	OK
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.	OK
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.	NA
4	Check that the insulation and cladding materials conform to the specifications.	
5	Check that the insulation is compatible with the Heat tracing system.	NA
6	Check that the surface condition prior to the application of the insulation	
7	Check the installation of wire mesh	
8	Check the overlap of the metal cladding.	
9	Check that each joint is sealed with a suitable sealant specified for water proofing.	
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.	
11	Control that the locking devices boxes opretated satisfactorily.	
12	Check the blinds, the spectacles and the instruments are visible.	
13	Check the flange accessibility without damaging the insulation.	
14	Check that color coding/line marking/flow direction are correct	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie		
Date	2025-03-21		
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:20:26.262Z		

ITEM	Tag	55-00-TP-061	: Test Pack 55-00-TP-061			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003684		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	Note
3	Check that the fluid direction is correct.	Note
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	OK
6	If required produce Red Line Mark Up for "AS BUILT".	

Comments: 1. Checked the painting report made by Vendor and signed by RM Coating Dpt.
Points 2 and 3 to be checked during thermal insulation.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (ROSETTI MARINO)	
Name	Alex Sanna	Lorenzo Novaga	
Date	2025-02-11	2025-04-07	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T15:55:53.988Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-07T09:01:00.125Z	

ITEM	Tag	55-00-TP-062	: Test Pack 55-00-TP-062			Dwg	123A90-DDL-PR-PID-80029
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10003686		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	NA
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	NA
6	Check bolt tightening and flange management (excluded battery limit joints).	NA
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	NA
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	NA
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	NA
10	Check the Blind list.	NA
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Visual check of the TP performed on spools not assembled in erection.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-28	2025-01-28	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-28T05:42:29.143Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-28T08:14:19.115Z	

Base Load Power Hub (BLPH)

TEST PACK

N°55-00-TP-062
SUB-SYSTEM N° 55-00

System	55
Sub-System	55-00
Test Pressure	N/A
Test Fluid	N/A
Test Duration	N/A

Rev.	Date	Prepared by	Checked by
0	27/09/2024	J.Q.	L.M.

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   - 8.2 CLX02B - Pipework After Test
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   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning – NOT APPLICABLE
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1. COLOURED MARKED P&IDs

DRAWING NO. DRAWING_NO.

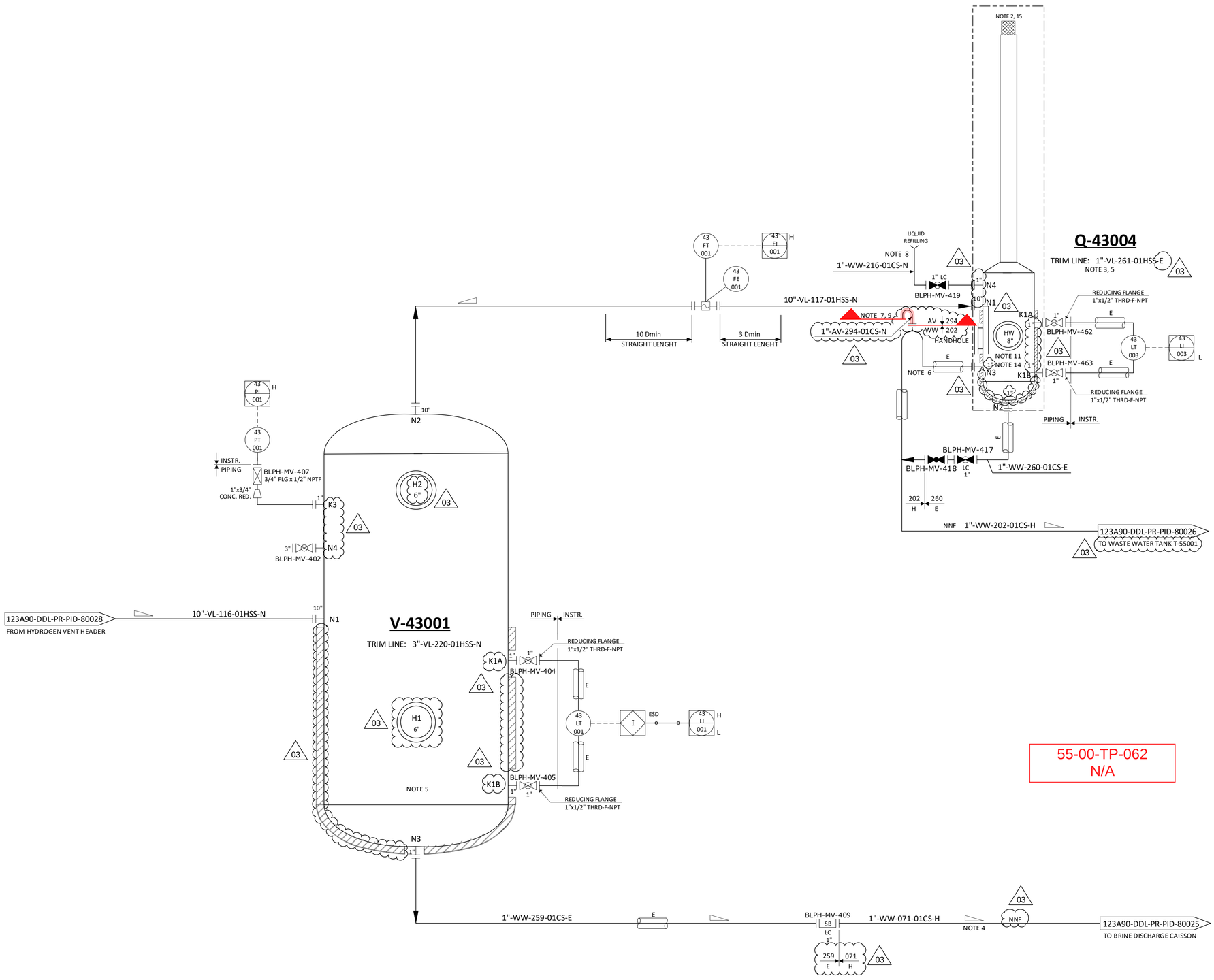
REV. REV

V-43001

HYDROGEN VENT KO DRUM
SIZE : 600 mm (ID) x 2350 mm (H)
DESIGN P/T : 3.5 barg / -10 / 80°C
MATERIAL : LTCS + 1 mm CA

Q-43004

HYDROGEN VENT NOTE 1
SIZE : 254 mm (ID)
DESIGN P/T : 3.5 barg / -10 / 80°C
MATERIAL : LTCS + 3 mm CA



NOTES

1. VENT TO SAFE LOCATION SEGREGATED FROM OTHER VENTS.
2. VENT TO BE EQUIPPED WITH BIRD SCREEN.
3. LIQUID SEAL DRUM IS PART OF THE VENT SYSTEM.
4. LIQUID DRAIN LINES TO BE ROUTED TO ENSURE GRAVITY DRAIN.
5. HYDROGEN VENT KO DRUM AND LIQUID SEAL DRUM TO BE HEAT TRACING.
   - V-43001 HEAT TRACED FROM B.T.L. UP TO 600 mm, BOTTOM HEAD ALSO TO BE HEAT TRACED.
6. SEAL LEG WILL BE DETERMINATED ON THE MAXIMUM BACK PRESSURE IN THE VENT.
7. SEAL VENT TO BE PLACED INTO A SAFE POSITION.
8. FILLING LINE TO BE PLACED IN AN ACCESSIBLE POSITION.
9. TRACED FROM NOZZLE N3 UP TO SWAN NECK.
10. DELETED.
11. INLET DIP LEG SUBMERSION HEIGHT OF 0.6 m.
12. DELETED.
13. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 VENT KOD.
14. LIQUID INSIDE SEAL DRUM IS A WATER - GLYCOL MIXTURE WITH 50% VOLUME OF GLYCOL. (03)
15. TOP OF TIP OF H2 VENT SHALL BE AT AS MINIMUM 6.2 m FROM HIGHEST REACHABLE PLATFORM.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.

55-00-TP-062
N/A

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

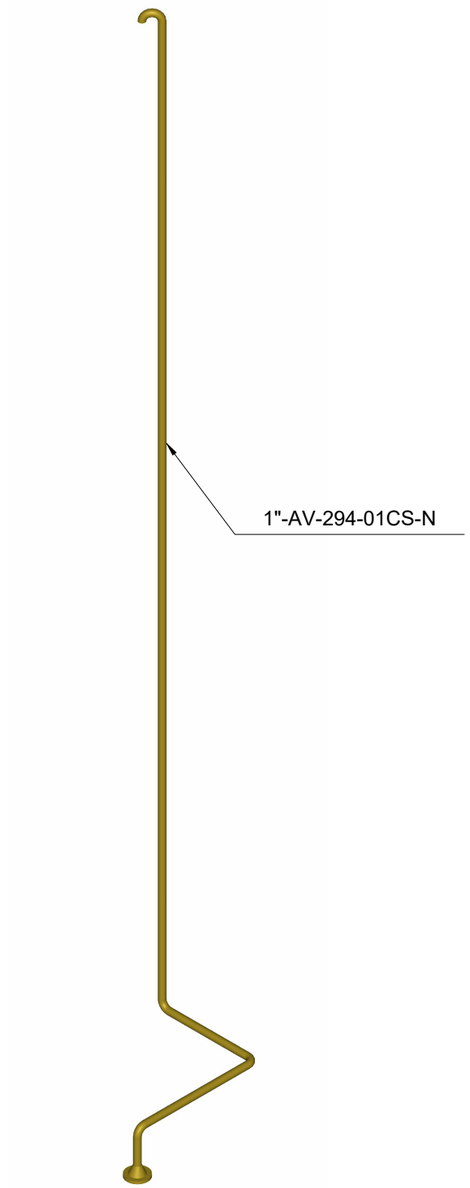
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN VENT DRUM

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80029		SHEET 001 / REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-00-TP-062

N/A

NOTES

- MANUAL VALVES MAY BE EXCLUDED FROM THE TEST
- ALL INSTRUMENTS (PG, TT, etc.) SHALL BE EXCLUDED FROM THE TEST
- ALL INSTRUMENT VALVES (SDV, PCV, etc.) SHALL BE EXCLUDED FROM THE TEST
- FILLING POINT, VENTS & DRAINS SHALL BE DEFINED ON SITE AS FOR REAL TEST CIRCUIT CONFIGURATION

REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	27-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
55-00-TP-062

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	N/A	00	1 OF 1

3. MATERIAL LIST FOR TEST

NOT APPLICABLE

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
158	AV-294	294	1	01CS	N	4,55	80	N/A	1"-AV-294-01CS-N	123A90-DDL-PR-PID-80026	3,50	55	55-00	TP-062	N/A	N/A		Carbon Steel	INF	Art. 4, par. 3	1	RAL 9002

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

DOCUMENT NR **123A90-FDL-ST-LIS-00001**

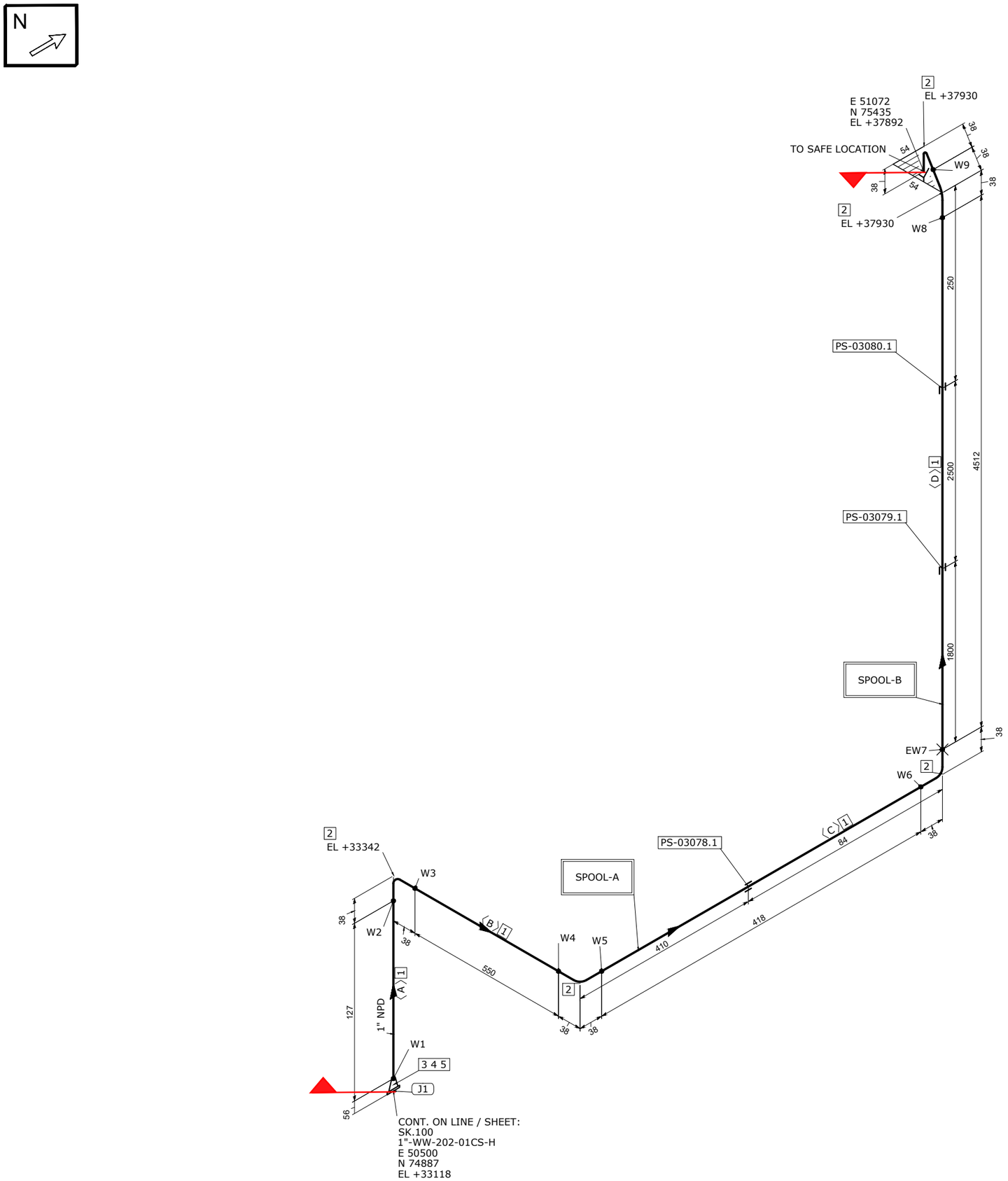
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
195	123A90-FDL-PP-DI-00158-01	**158**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-AV-294-01CS-N	27/08/2024													**00**	**03**		**TP-062**



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	5	0.9
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
5	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	20.5
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	21.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
EW7	1	BW
W8	1	BW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	127	BEVEL	BEVEL
B	1	550	BEVEL	BEVEL
C	1	418	BEVEL	BEVEL
D	1	4512	BEVEL	BEVEL

SUPPORT LIST

PS-03078.1
PS-03079.1
PS-03080.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	5.5
B	2	15.0
MONT	1	0.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-AV-294-01CS-N

SK.158

55-00-TP-062

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. / [°C]		
HEAT TRACING	N/A		TEST	PRESS. N/A [barg]	TEMP. AMB	MEDIUM N/A	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80029
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

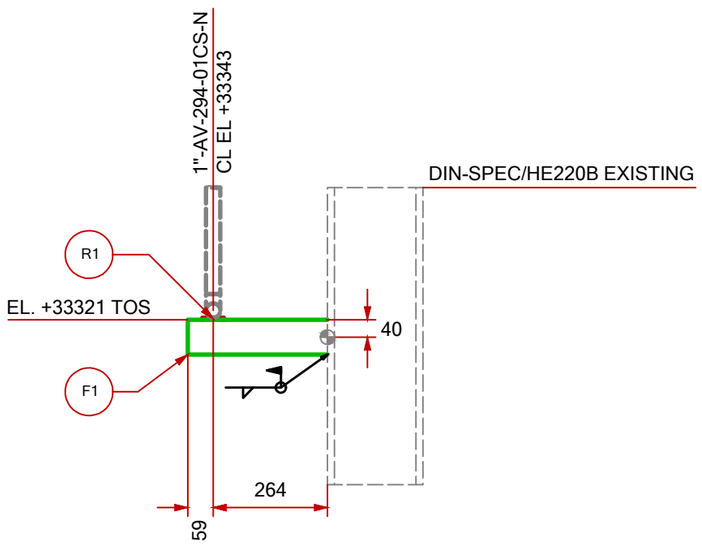
NOTES

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00158		SHEET / OF 1/1	REV. 00

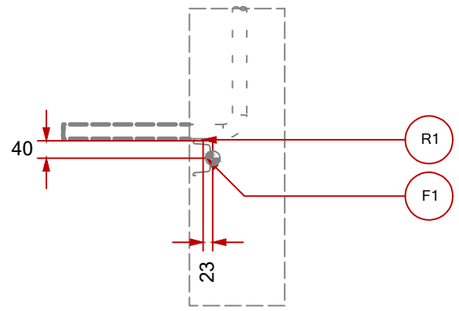
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

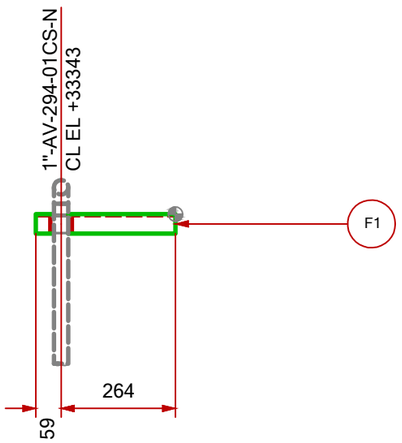
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-03078	B1	PIP	PAU		1"-AV-294-01CS-N	C-16 - 50 - 40 - 5		1	0,022	0,000	00	19/08/2024	IFR		TP-062
PS-03079	B1	PIP	PAU		1"-AV-294-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-062
PS-03080	B1	PIP	PAU		1"-AV-294-01CS-N	S-212 - 1"		1	0,246	0,000	00	19/08/2024	IFR		TP-062



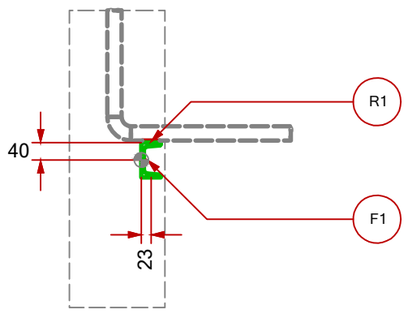
VIEW LOOKING NORTH



VIEW LOOKING WEST



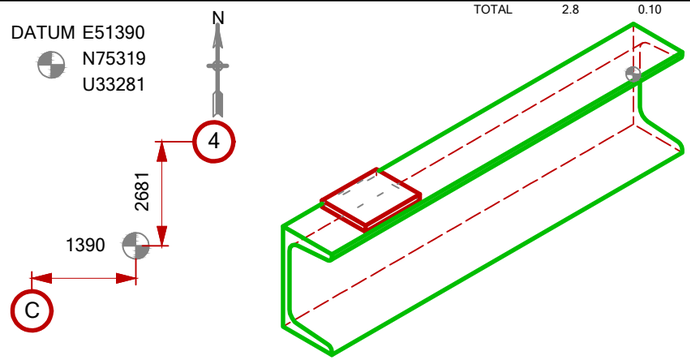
PLAN VIEW



VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	C-16-50-40-5	-	-	1	-	0.02	-
F1	BEAM	UPN80	Carbon Steel	323	1	8.66	2.79	0.103
						TOTAL	2.8	0.10



REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

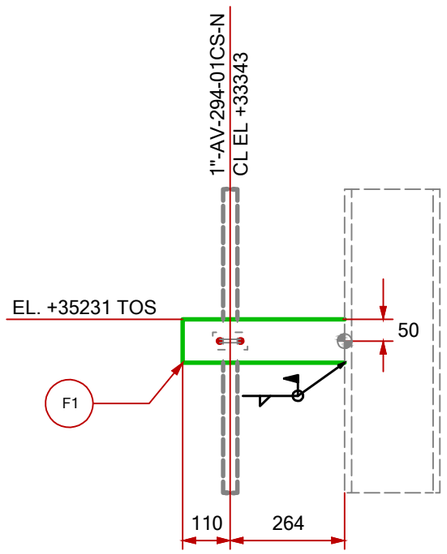
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

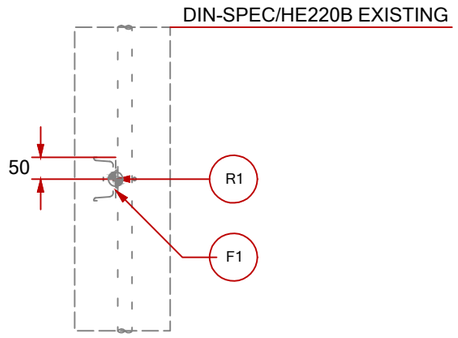
PS-03078

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

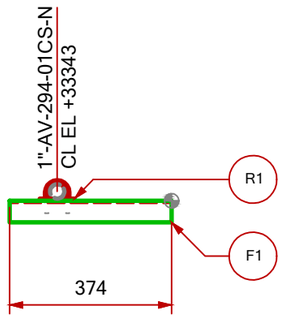
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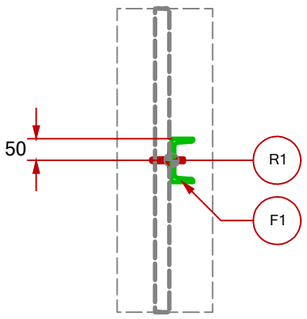
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VIEW LOOKING WEST



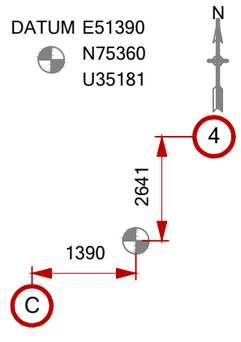
PLAN VIEW

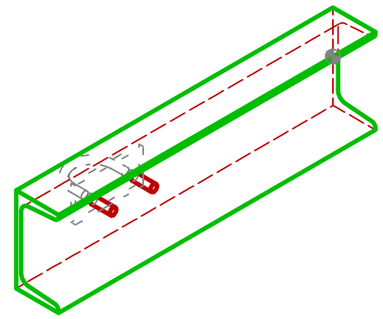


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1"	-	-	1	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	374	1	10.57	3.95	0.142
						TOTAL	4.2	0.14





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

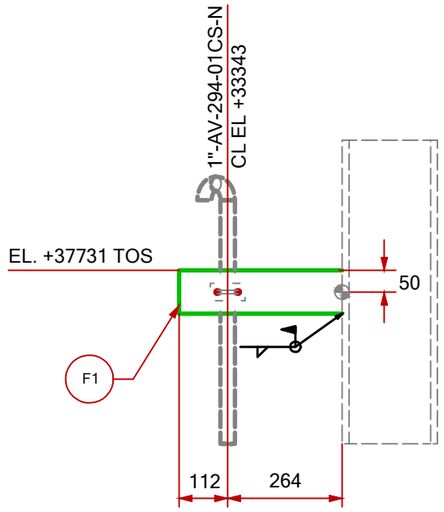
ROSETTI MARINO

TITLE :

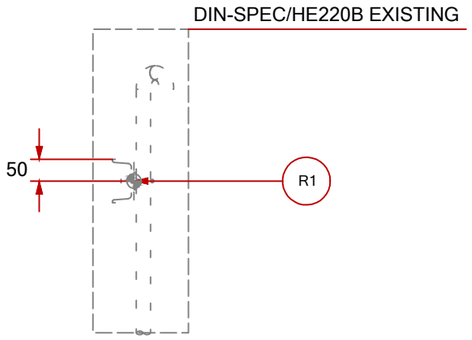
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03079

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

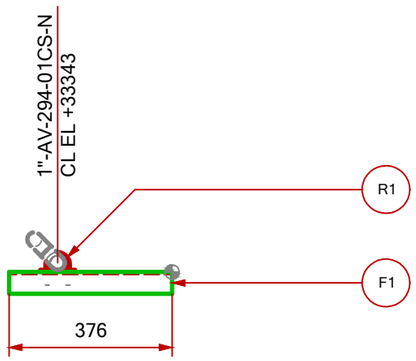
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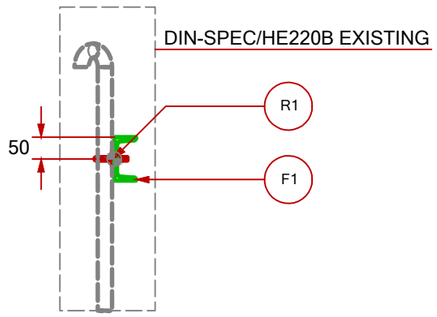
VIEW LOOKING NORTH



VIEW LOOKING WEST



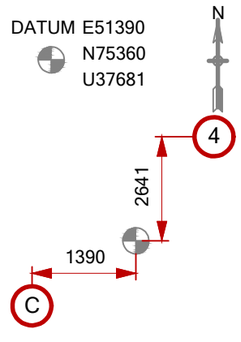
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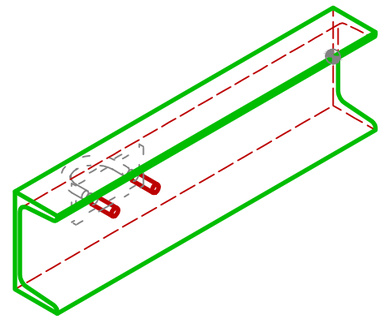


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-212-1"	-	-	1	-	0.25	-
F1	BEAM	UPN100	Carbon Steel	376	1	10.57	3.97	0.142
						TOTAL	4.2	0.14





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

PS-03080

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:10
DRAWN	CHECKED	APPROVED	DATE 19/08/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 00

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

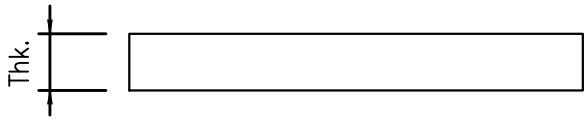
Revision: 0

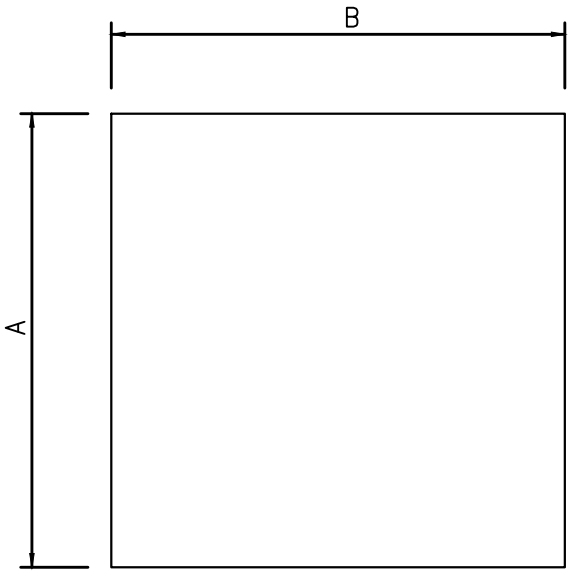
Date: –

PIATTO DI ISOLAMENTO IN PTFE Sp=VARIABILE
PTFE ISOLATING PAD Thk=VARIABLE

C–16

Example of designation : STD – A – B – Thk.
(C–16 – 70 – 100 – 5)





NOTES:
1– MATERIAL: PTFE
2– STRENGHT FOR COMPRESSION (1% DI DEFORMATION) = 5 N/mm² x Thk. (mm)
3– THE PTFE PAD SHALL BE COVERED ALSO AFTER THE POSSIBLE DISPLACEMENTS OF THE PIPING LINE

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

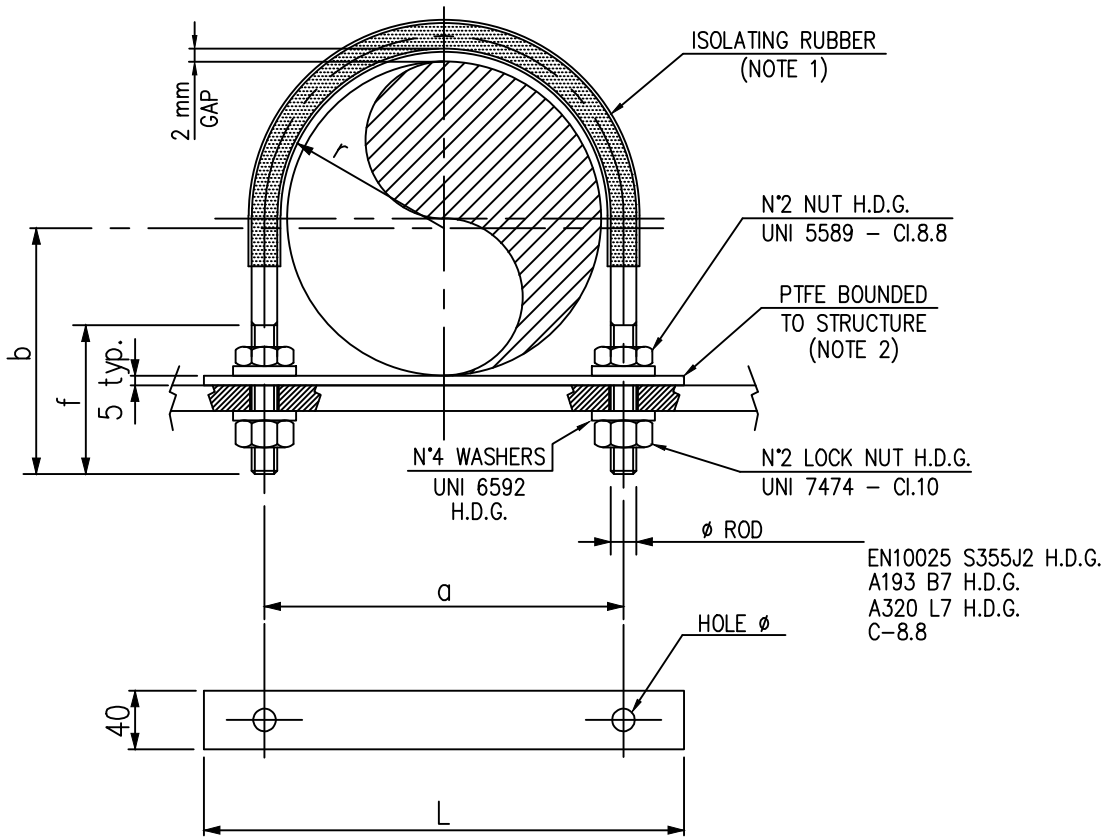
Revision: 0

Date: –

CAVALLOTTI GALVANIZZATI DI GUIDA PER TUBAZIONI IN C.S S.S. E ALLOY
GALVANIZED U–BOLTS GUIDE FOR C.S. S.S. AND ALLOY PIPES (NON GRIP)

S–211

Example of designation : STD – PIPE ND"
(S–211 – 10")



SIZE ND	ROD DIA	r	a	b	f	L	HOLE ø	DEV	DEV. RUBBER	WEIGHT Kg
½"	M8	14	36	55	52	65	10	167	62	0.16
3/4"	M8	17	42	55	52	70	10	176	75	0.16
1"	M8	20	48	60	55	80	10	196	90	0.18
1½"	M10	27	64	70	65	100	12	240	120	0.32
2"	M10	33	76	80	70	110	12	280	150	0.35
3"	M12	48	108	100	80	150	14	370	210	0.60
4"	M12	60	132	110	80	180	14	430	260	0.67
6"	M16	87	190	150	100	250	18	600	380	1.39
8"	M16	113	242	170	100	300	18	720	500	1.60
10"	M16	140	296	200	100	350	18	865	650	1.86
12"	M20	165	350	240	120	420	22	1030	750	3.31
14"	M20	181	382	260	120	450	22	1120	840	3.55
16"	M24	207	438	290	130	520	26	1270	1000	5.76
18"	M24	232	488	320	130	570	26	1410	1100	6.28
20"	M30	257	544	360	160	640	32	1570	1200	11.02
24"	M30	308	646	410	160	750	32	1830	1450	12.52

NOTES:

1) HEAT SHRINK TUBE TYPE FLAME RETARDANT, WITH RATIO 2:1
2) MULTIPLE SHEETS OF PTFE CAN BE ADDED IN ORDER TO ENSURE THE CORRECT ELEVATION AND SLOPE OF THE LINES.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

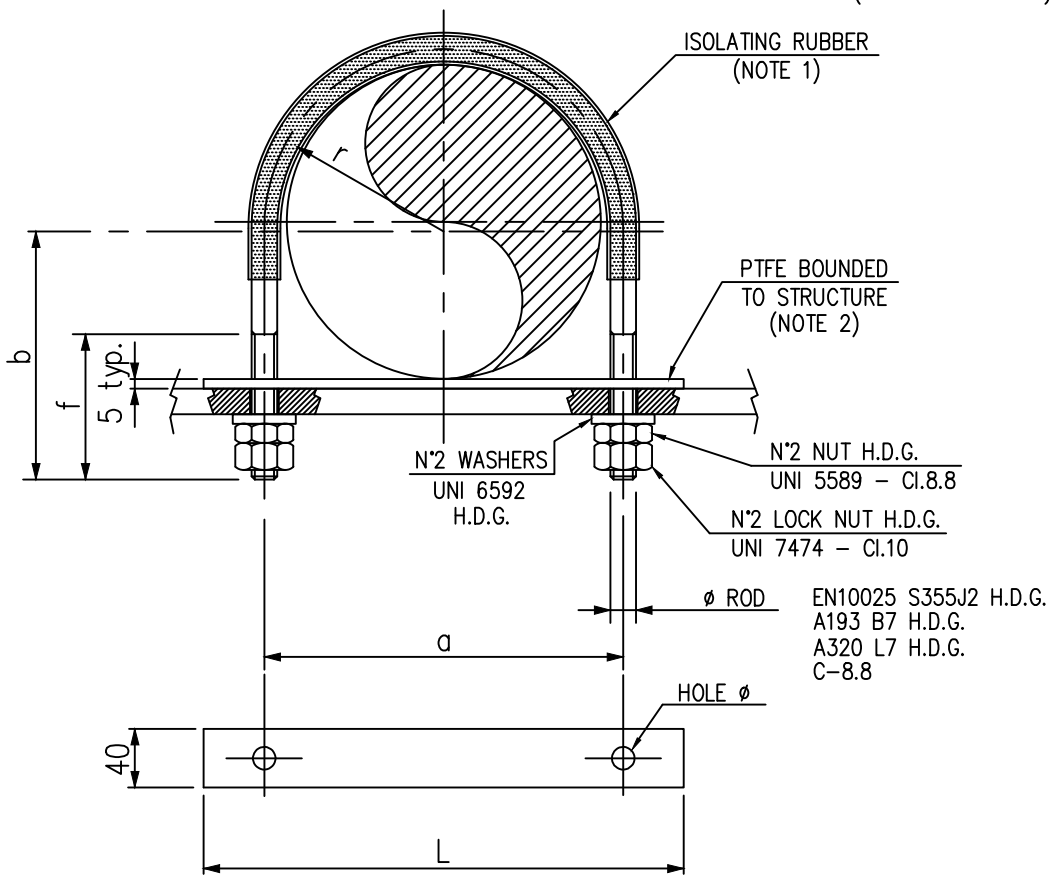
Revision: 0

Date: –

CAVALLOTTI DI FISSAGGIO GALVANIZZATI PER TUBAZIONI IN C.S S.S. E ALLOY
GALVANIZED U–BOLTS STOP FOR C.S. S.S. AND ALLOY PIPES

S–212

Example of designation : STD – PIPE ND"
(S–212 – 10")



SIZE ND	ROD DIA	r	a	b	f	L	HOLE ø	DEV. ROD	DEV. RUBBER	WEIGHT Kg
½"	M8	14	36	55	52	65	10	167	62	0.16
3/4"	M8	17	42	55	52	70	10	176	75	0.16
1"	M8	20	48	60	55	80	10	196	90	0.18
1½"	M10	27	64	70	65	100	12	240	120	0.32
2"	M10	33	76	80	70	110	12	280	150	0.35
3"	M12	48	108	100	80	150	14	370	210	0.60
4"	M12	60	132	110	80	180	14	430	260	0.67
6"	M16	87	190	150	100	250	18	600	380	1.39
8"	M16	113	242	170	100	300	18	720	500	1.60
10"	M16	140	296	200	100	350	18	865	650	1.86
12"	M20	165	350	240	120	420	22	1030	750	3.31
14"	M20	181	382	260	120	450	22	1120	840	3.55
16"	M24	207	438	290	130	520	26	1270	1000	5.76
18"	M24	232	488	320	130	570	26	1410	1100	6.28
20"	M30	257	544	360	160	640	32	1570	1200	11.02
24"	M30	308	646	410	160	750	32	1830	1450	12.52

NOTES:

1) HEAT SHRINK TUBE TYPE FLAME RETARDANT, WITH RATIO 2:1

2) MULTIPLE SHEETS OF PTFE CAN BE ADDED IN ORDER TO ENSURE THE CORRECT ELEVATION AND SLOPE OF THE LINES.

Revision Number	Date	Description	DRAW	CHKD.	APPR.
00	–	ISSUED FOR REVIEW	SLO	GMA	MCO

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	158	**To**	158
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
1/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**FWN**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
4/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-10-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000106	4	Acceptable				03-10-2024				
5/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
6/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-10-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000108	4	Acceptable				03-10-2024				
7/158/1/_		**01**	**21-12-2024**	**103**	**AX84**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**27-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				23-12-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	001094	4	Acceptable				27-12-2024				
8/158/1/_		**01**	**27-09-2024**	**19**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				30-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
9/158/1/_		**01**	**26-09-2024**	**17**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number	Rev.	Prod. Date	Prod. Sheet	Welders	Item type	Dimension	Thickness	Bevel	Weld Length	P/M	Material	WPS	Techn. Weld.	Type Cons	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase	Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.	Defect length	CND date	NOTE		
9/158/1/_		01	26-09-2024	17	AZ53	ELB	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	28-09-2024	B

Totals per DWG	**158**	**Prefabrication**	**0,80 m**	**8 Nr. Welds**	**8,00 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Accepted	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,80 m**	**8 Nr. Welds**	**8,00 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Accepted	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,80 m**	**8 Nr. Welds**	**8,00 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Accepted	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**		
Commessa/Job	**123A90 - Piping**		
Disciplina/Discipline	**PIPING**		
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:	
RosettiDoc.Num.	**123A90MTR001**		

Approvato da/Approved by	
Nome/Name:	
Data/Date:	25/01/2025

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
158	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
158	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
158	00	1	A	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
158	00	1	A	01CS	3	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243		
158	00	1	A	01CS	1A	0,127	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
158	00	1	A	01CS	1B	0,55	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
158	00	1	A	01CS	1C	0,418	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
158	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
158	00	1	B	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4		
158	00	1	B	01CS	1D	4,512	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation – NOT APPLICABLE

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning – NOT APPLICABLE

8.6 TMX05 – Pressure test – NOT APPLICABLE

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 – Drying – NOT APPLICABLE

ITEM	Tag	55-00-TP-062	: Test Pack 55-00-TP-062			Dwg	123A90-DDL-PR-PID-80029
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10003687		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.	OK
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.	OK
3	All plugs installed on vents and drains for test have been removed.	OK
4	Check that all removed devices and valves have been re-installed.	NA
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.	OK
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.	NA
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.	OK
8	After the (re) installation of a valve check that it operates freely.	NA
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.	NA
10	Check all locking device.	NA
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	OK
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.	NA
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).	NA
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.	OK
17	If required produce Red Line Mark Up for "AS BUILT".	

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-07	2025-02-17	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:21:15.018Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-17T17:04:24.049Z	

ITEM	Tag	55-00-TP-062	: Test Pack 55-00-TP-062			Dwg	123A90-DDL-PR-PID-80029
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10003688		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	PL
3	Check that the fluid direction is correct.	PL
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	OK
6	If required produce Red Line Mark Up for "AS BUILT".	

Comments: 1. Checked the painting report made by Vendor and signed by RM coating Dpt.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (Rosetti Marino)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-02-11	2025-02-25	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T15:56:04.969Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-25T16:17:22.962Z	

ITEM	Tag	55-00-TP-100	: Test Pack 55-00-TP-100			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	TP
TASK	code	C10003711		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	Note
4	Check that pipework at pump and vessel nozzles are free from spring.	Note
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	Note
6	Check bolt tightening and flange management (excluded battery limit joints).	Note
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).	NA
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.	OK
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.	OK
10	Check the Blind list.	OK
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Note: spool has been inspected unmounted, points from 3 to 6 will be checked during flange management and reinstatement activities.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	rodeo	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-03-01	2025-03-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-03-01T09:06:26.185Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-03T07:59:11.821Z	

ITEM	Tag	55-00-TP-100	: Test Pack 55-00-TP-100			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003712		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form CLX02B	Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.
3	All plugs installed on vents and drains for test have been removed.
4	Check that all removed devices and valves have been re-installed.
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.
8	After the (re) installation of a valve check that it operates freely.
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.
10	Check all locking device.
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.
13	Check that the bolts have been tightned at opened joints.
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.
17	If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-100	: Test Pack 55-00-TP-100			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003713		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.
4	Check that the insulation and cladding materials conform to the specifications.
5	Check that the insulation is compatible with the Heat tracing system.
6	Check that the surface condition prior to the application of the insulation
7	Check the installation of wire mesh
8	Check the overlap of the metal cladding.
9	Check that each joint is sealed with a suitable sealant specified for water proofing.
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.
11	Control that locking devices boxes operate satisfactorily.
12	Check the blinds, the spectacles and the instruments are visible.
13	Check the flange accessibility without damaging the insulation.
14	Check that color coding/line marking/flow direction are correct

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-100	: Test Pack 55-00-TP-100			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003714		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1 Check that the completed painting is in accordance with the specifications covering quality and thickness.

2 Check that the color coding conforms to the specifications.

3 Check that the fluid direction is correct.

4 Check that line marking is correct.

5 Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.

6 If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003716		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.
4	Check that pipework at pump and vessel nozzles are free from spring.
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).
6	Check bolt tightening and flange management (excluded battery limit joints).
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.
10	Check the Blind list.
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.
12	If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003717		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form CLX02B	Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.
3	All plugs installed on vents and drains for test have been removed.
4	Check that all removed devices and valves have been re-installed.
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.
8	After the (re) installation of a valve check that it operates freely.
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.
10	Check all locking device.
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.
13	Check that the bolts have been tightned at opened joints.
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.
17	If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003718		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.
4	Check that the insulation and cladding materials conform to the specifications.
5	Check that the insulation is compatible with the Heat tracing system.
6	Check that the surface condition prior to the application of the insulation
7	Check the installation of wire mesh
8	Check the overlap of the metal cladding.
9	Check that each joint is sealed with a suitable sealant specified for water proofing.
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.
11	Control that locking devices boxes operate satisfactorily.
12	Check the blinds, the spectacles and the instruments are visible.
13	Check the flange accessibility without damaging the insulation.
14	Check that color coding/line marking/flow direction are correct

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003719		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1 Check that the completed painting is in accordance with the specifications covering quality and thickness.

2 Check that the color coding conforms to the specifications.

3 Check that the fluid direction is correct.

4 Check that line marking is correct.

5 Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.

6 If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003720		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX03 — Cleaning

CLEANING MEDIUM

Air ☐ Water ☐ Steam ☐ Oil ☐ Other ☐ Mechanical ☐

Component

Chemical treatment ☐ Filtration ☐ Screen size

EQUIPMENTS

Equipment **removed** ☐ Agreed list of removed fragile devices to be attached to this Test Sheet ☐

Excepted removed equipments, pipework installation is conform to the specifications & PID's ☐

Equipment **added** ☐ Exhaustive list to be attached (temporary filters, spools…etc) ☐

TEST RESULTS

Test date | Start time | End time

Flow rate | Duration | Medium T°

Operation Description

Safety Precautions

Result and comments

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003721		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX05 Pressure Test

TEST DATA

Reference procedure

Design pressure | Max test pressure | Min hold period

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)

Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)

Medium

Test medium

TEST RESULTS

Test date | Start time | End time

Ambient temperature is recorded | Test medium temperature is recorded

Pressure recorded during test hold period | Min | Max | Variation

Line has been depressurised to | At maximum of bar/min

Pressure test completed sucessfully and approved | Temperature and pressure disc chart attached

Instrument calibration certificates attached | Dead-weight tester log attached

Record of failures and corrective action attached | Battery limits of the test attached

If required produce Red Line Mark Up for "AS BUILT".

Comments:

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Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-101	: Test Pack 55-00-TP-101			Dwg	123A90-DDL-PR-PID-80026
	S/Sys	55-00	: Waste Water Disposal			Module	
TASK	code	C10003723		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

1	Drying out method :	
2	Operation description :	
3	Temporary means :	
4	Dew point (obtain after soaking and nitrogen purging):	
5	Valve body cavity, branches, etc.. Have been drained form residual water	
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	
11	REMARKS:	

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-104	: Test Pack 55-00-TP-104			Dwg	123A90-DDL-PR-PID-80022/26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003733		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.
4	Check that pipework at pump and vessel nozzles are free from spring.
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).
6	Check bolt tightening and flange management (excluded battery limit joints).
7	Check that the flow direction of the valves and check – valve is in the correct sense / direction (ball valves to be set at half open).
8	Check that the removed equipment is in accordance with the agreed list of fragile devices. Check valve should be removed or flappers locked.
9	Check that spool pieces or other substitution means have been put in place instead of the removed fragile device.
10	Check the Blind list.
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.
12	If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-104	: Test Pack 55-00-TP-104			Dwg	123A90-DDL-PR-PID-80022/26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003734		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

1	Check that the pipework and equipment are drained as per procedure.
2	Check if all temporary equipment (test spades, filters ,spool pieces..etc) have been removed.
3	All plugs installed on vents and drains for test have been removed.
4	Check that all removed devices and valves have been re-installed.
5	Check that the new gaskets have been installed after pipework and equipment reinstallation.
6	All specific blinds and / or spectacle blinds have been correctly installed as per P&ID.
7	Check that the pipework, valves , check valves are undamaged. Also check the ancillaries and any other components.
8	After the (re) installation of a valve check that it operates freely.
9	Check that the flow direction of the valves and check – valve is in correct sense /direction in correct open/closed position as per P&ID.
10	Check all locking device.
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.
13	Check that the bolts have been tightned at opened joints.
14	Check that all golden welds (final tie-ins without hydrotest) have been performed as per procedure.
15	Check for the correct tagging, labeling and colour coding of pipework and equipment (only for bare pipe lines).
16	Check that the pipework and equipment (re) installation conforms to the specifications, drawings and to the P&ID's.
17	If required produce Red Line Mark Up for "AS BUILT".

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-104	: Test Pack 55-00-TP-104			Dwg	123A90-DDL-PR-PID-80022/26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003735		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

1	Ensure CLX02B Pipework After Test (reinstatement) check completed.
2	Ensure CXX02 "Painting Line" check (for the concerned insulated lines) completed.
3	Ensure CPX22A "Heat tracing Before Insulation" check completed.
4	Check that the insulation and cladding materials conform to the specifications.
5	Check that the insulation is compatible with the Heat tracing system.
6	Check that the surface condition prior to the application of the insulation
7	Check the installation of wire mesh
8	Check the overlap of the metal cladding.
9	Check that each joint is sealed with a suitable sealant specified for water proofing.
10	Check the staggering of the metal cladding joints and verify that they have been applied as per the specifications.
11	Control that locking devices boxes operate satisfactorily.
12	Check the blinds, the spectacles and the instruments are visible.
13	Check the flange accessibility without damaging the insulation.
14	Check that color coding/line marking/flow direction are correct

Comments:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	55-00-TP-104	: Test Pack 55-00-TP-104			Dwg	123A90-DDL-PR-PID-80022/26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003736		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX03 Cleaning

CLEANING MEDIUM

Air ☐ Water ☐ Steam ☐ Oil ☐ Other ☐ Mechanical ☐

Component

Chemical treatment ☐ Filtration ☐ Screen size

EQUIPMENTS

Equipment **removed** ☐ Agreed list of removed fragile devices to be attached to this Test Sheet ☐

Excepted removed equipments, pipework installation is conform to the specifications & PID's ☐

Equipment **added** ☐ Exhaustive list to be attached (temporary filters, spools…etc) ☐

TEST RESULTS

Test date | Start time | End time

Flow rate | Duration | Medium T°

Operation Description

Safety Precautions

Result and comments

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	55-00-TP-104	: Test Pack 55-00-TP-104		Dwg	123A90-DDL-PR-PID-80022/26	
	S/Sys	55-00	: Waste Water Disposal		Module	LD	
TASK	code	C10003737	Location	Offshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX05	Pressure Test

TEST DATA

Reference procedure

Design pressure | Max test pressure | Min hold period

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)

Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)

Medium

Test medium

TEST RESULTS

Test date | Start time | End time

Ambient temperature is recorded | Test medium temperature is recorded

Pressure recorded during test hold period | Min | Max | Variation

Line has been depressurised to | At maximum of bar/min

Pressure test completed sucessfully and approved | Temperature and pressure disc chart attached

Instrument calibration certificates attached | Dead-weight tester log attached

Record of failures and corrective action attached | Battery limits of the test attached

If required produce Red Line Mark Up for "AS BUILT".

Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	55-00-TP-104	: Test Pack 55-00-TP-104			Dwg	123A90-DDL-PR-PID-80022/26
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10003739		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

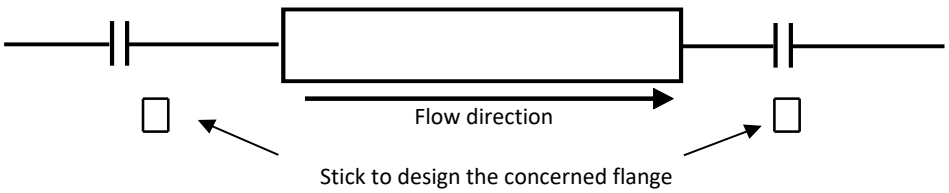
1	Drying out method :	
2	Operation description :	
3	Temporary means :	
4	Dew point (obtain after soaking and nitrogen purging):	
5	Valve body cavity, branches, etc.. Have been drained form residual water	
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	
10	SAFETY PRECAUTIONS:	
11	REMARKS:	

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	003-1-J1	: Joint 003-1-J1			Dwg	123A90-FDL-PP-DI-00003-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004175	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	60		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	18	60	18	36	60
2	18	60	18	36	60
3	18	60	18	36	60
4	18	60	18	36	60
5			18	36	60
6			18	36	60
7			18	36	60
8			18	36	60
9			18	36	60
10			18	36	60
11			18	36	60
12			18	36	60
13			18	36	60
14			18	36	60
15			18	36	60
16			18	36	60
17			18	36	60
18			18	36	60
19			18	36	60
20			18	36	60

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

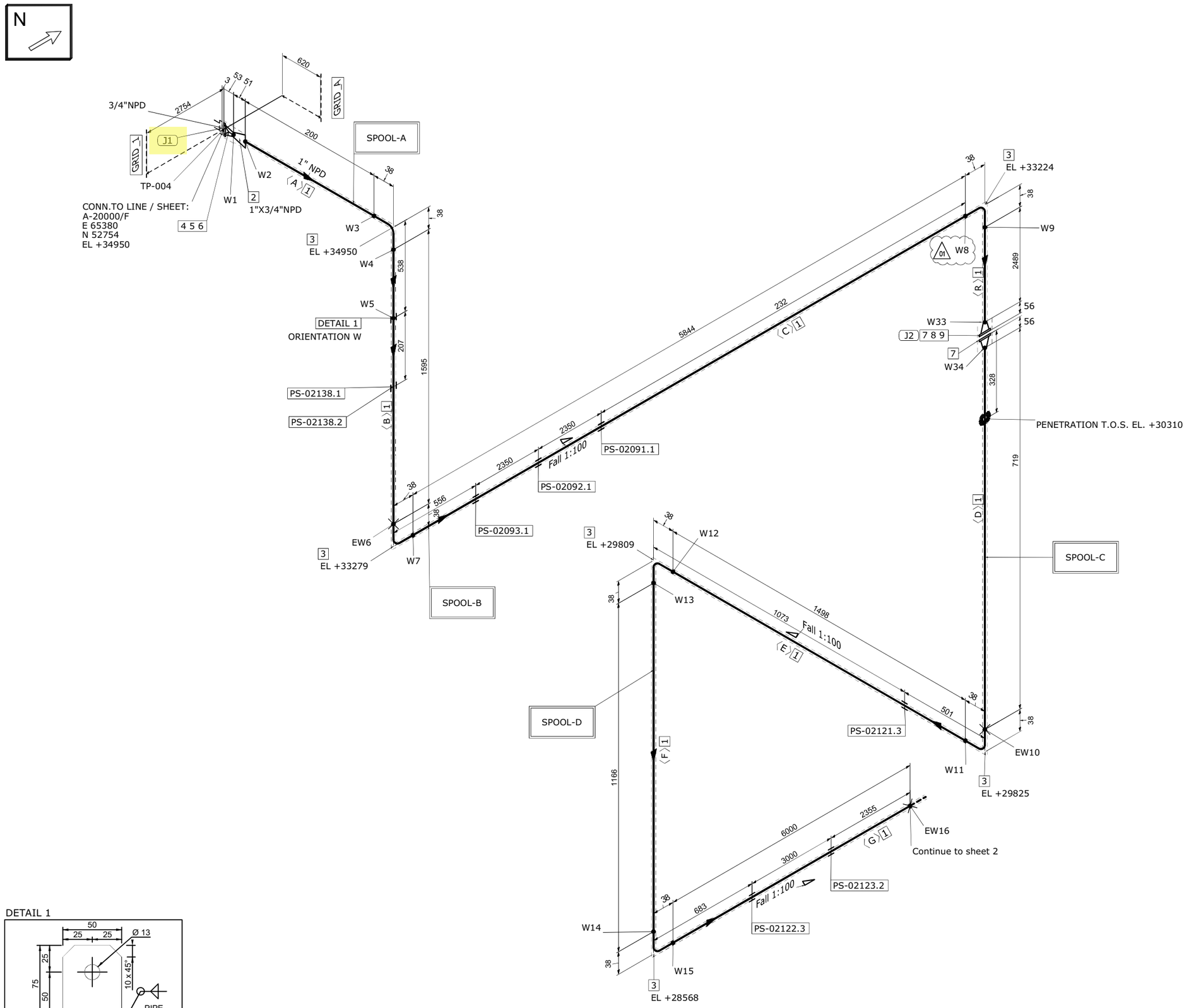
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Andrea Mancini	
Date	2025-01-17	2025-01-28	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:25:33.813Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-28T09:54:30.852Z	



DETAIL 1

EARTHING PLATE
DIMENSIONS: 75 x 50 x 5 thk. HOLE Ø13
MATERIAL: 316L STAINLESS STEEL
ORIENTATION: UP UNLESS OTHERWISE NOTED

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	19.2M	62.2
2	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	6	1.1
4	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
7	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
5	3/4	SPIKNN01213Q00	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
6	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6
8	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
9	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	67.2
ERECTION WEIGHT [kg]	1.3
OVERALL WEIGHT [kg]	68.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3/4	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5		FW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W33	1	BW
W34	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	200	BEVEL	BEVEL
B	1	1595	BEVEL	BEVEL
C	1	5488	BEVEL	BEVEL
D	1	719	BEVEL	BEVEL
E	1	1498	BEVEL	BEVEL
F	1	1166	BEVEL	BEVEL
G	1	6000	BEVEL	BEVEL
R	1	2489	BEVEL	BEVEL

SUPPORT LIST

PS-02138.1
PS-02138.2
PS-02093.1
PS-02092.1
PS-02091.1
PS-02121.3
PS-02122.3
PS-02123.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.75	7.1
B	4	27.8
C	1	3.7
D	5	28.6
MONT	3	1.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-004-01CS-H

SK.003

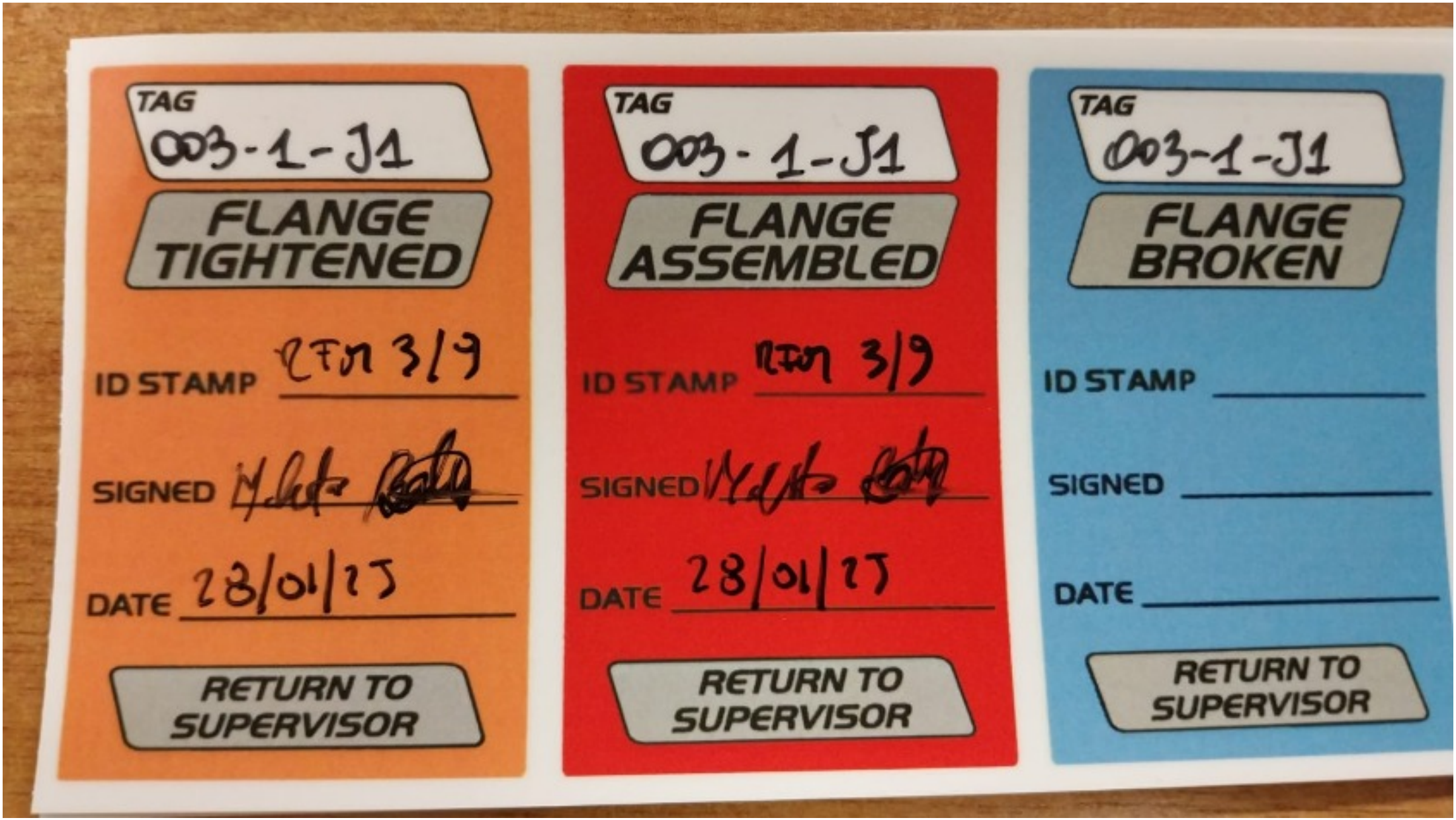
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK				SCALE	N/A	
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-10-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00003			SHEET / OF	1/2
						REV.	01

LINE DATA								
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5,25 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

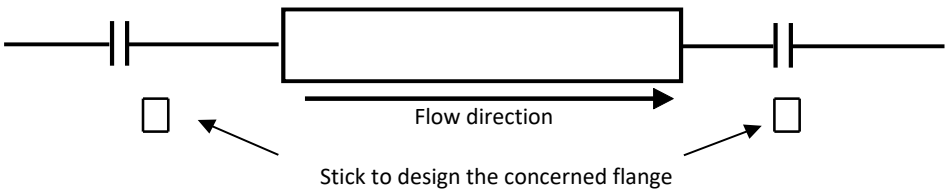
MASTER


TAG
003-1-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 28/01/23
RETURN TO SUPERVISOR
TAG
003-1-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 28/01/23
RETURN TO SUPERVISOR
TAG
003-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	003-1-J2	: Joint 003-1-J2			Dwg	123A90-FDL-PP-DI-00003-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004176		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



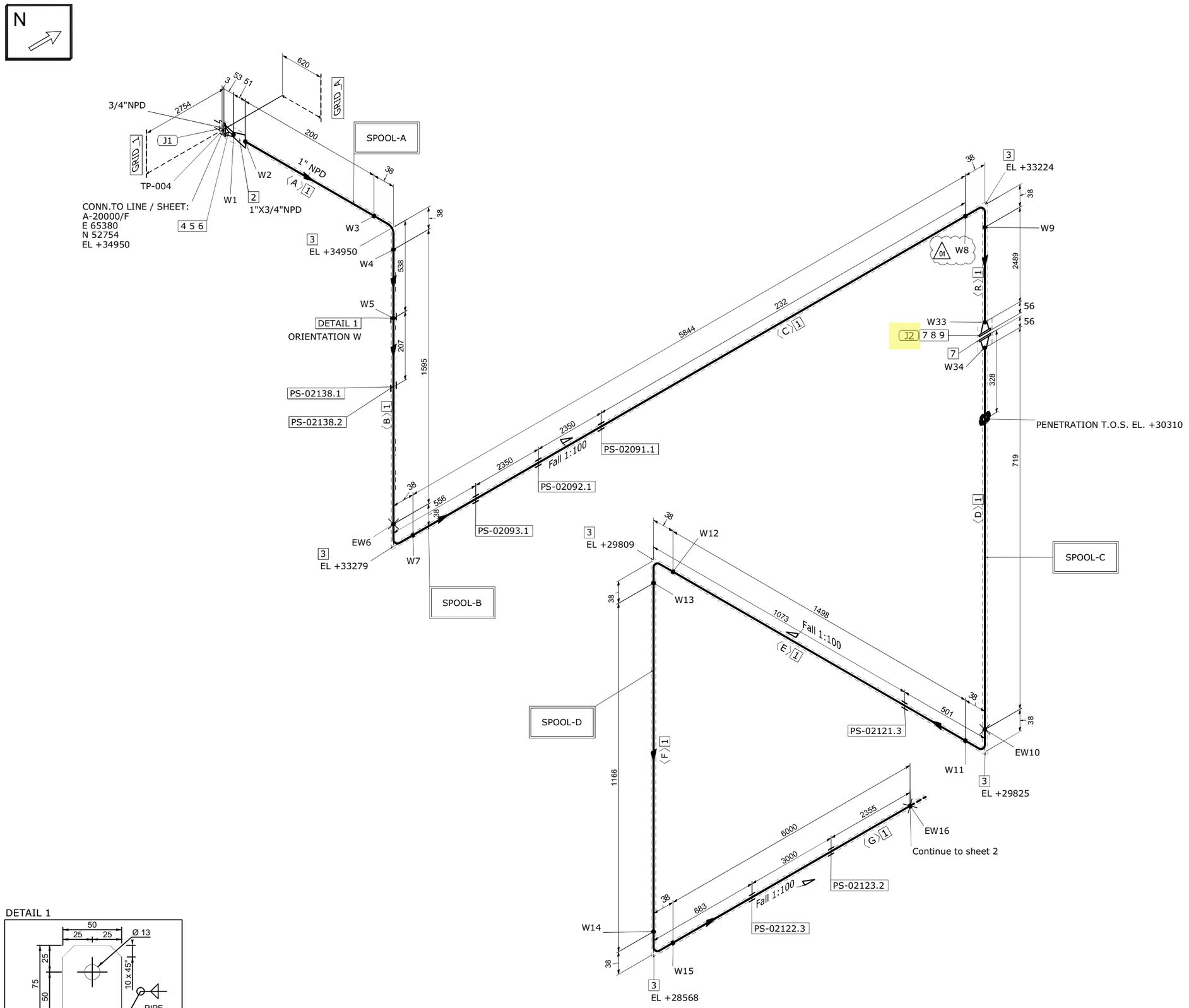
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Andrea Mancini	
Date	2025-01-17	2025-01-28	
Signature	Digitaly signed by Emanuele Delfino 2025-01-17T14:25:45.995Z	Digitaly signed by Andrea Mancini 2025-01-28T09:54:57.112Z	



DETAIL 1

EARTHING PLATE
DIMENSIONS: 75 x 50 x 5 thk. HOLE Ø13
MATERIAL: 316L STAINLESS STEEL
ORIENTATION: UP UNLESS OTHERWISE NOTED

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	19.2M	62.2
2	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	6	1.1
4	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
7	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
5	3/4	SPIKNN01213Q00	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
6	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6
8	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
9	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	67.2
ERECTION WEIGHT [kg]	1.3
OVERALL WEIGHT [kg]	68.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3/4	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5		FW
EW6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W33	1	BW
W34	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	200	BEVEL	BEVEL
B	1	1595	BEVEL	BEVEL
C	1	5488	BEVEL	BEVEL
D	1	719	BEVEL	BEVEL
E	1	1498	BEVEL	BEVEL
F	1	1166	BEVEL	BEVEL
G	1	6000	BEVEL	BEVEL
R	1	2489	BEVEL	BEVEL

SUPPORT LIST

PS-02138.1
PS-02138.2
PS-02093.1
PS-02092.1
PS-02091.1
PS-02121.3
PS-02122.3
PS-02123.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.75	7.1
B	4	27.8
C	1	3.7
D	5	28.6
MONT	3	1.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	03-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-004-01CS-H

SK.003

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-10-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00003			SHEET / OF	1/2
						REV.	01

LINE DATA								
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5,25 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

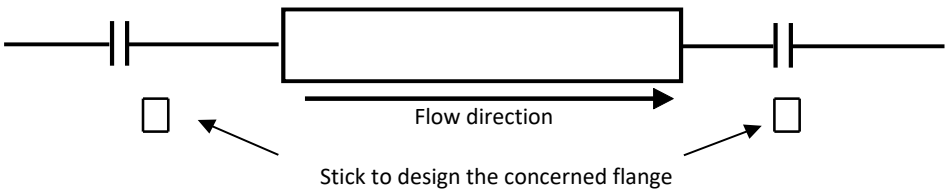
MASTER


TAG
003-1-J2
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 28/01/25
RETURN TO SUPERVISOR
TAG
003-1-J2
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 28/01/25
RETURN TO SUPERVISOR
TAG
003-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	027-1-J1	: Joint 027-1-J1			Dwg	123A90-FDL-PP-DI-00027-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004209		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-004

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	62.5	19	38	62.5
2	19	62.5	19	38	62.5
3	19	62.5	19	38	62.5
4	19	62.5	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

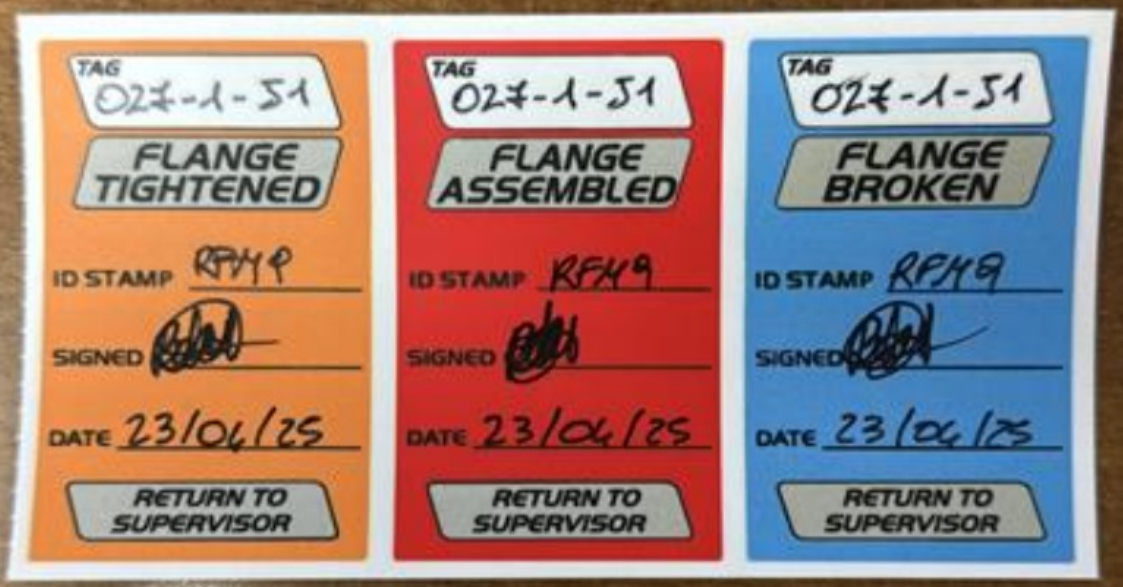
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

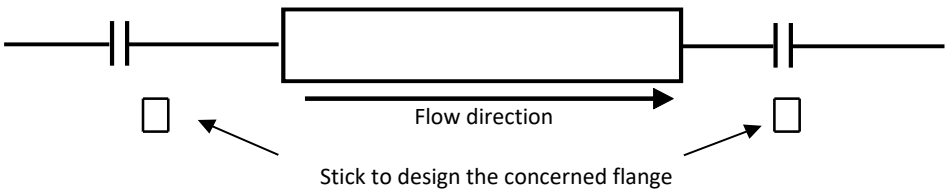
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM CONSTRUCION	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-04-24	2025-04-24	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-04-24T06:49:52.725Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-24T09:42:23.416Z	


TAG
027-1-51
FLANGE TIGHTENED
ID STAMP RFH9
SIGNED
DATE 23/04/25
RETURN TO SUPERVISOR
TAG
027-1-51
FLANGE ASSEMBLED
ID STAMP RFH9
SIGNED
DATE 23/04/25
RETURN TO SUPERVISOR
TAG
027-1-51
FLANGE BROKEN
ID STAMP RFH9
SIGNED
DATE 23/04/25
RETURN TO SUPERVISOR

ITEM	Tag	027-1-J1	: Joint 027-1-J1			Dwg	123A90-FDL-PP-DI-00027-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004209	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-004

EQUIPMENT TAG



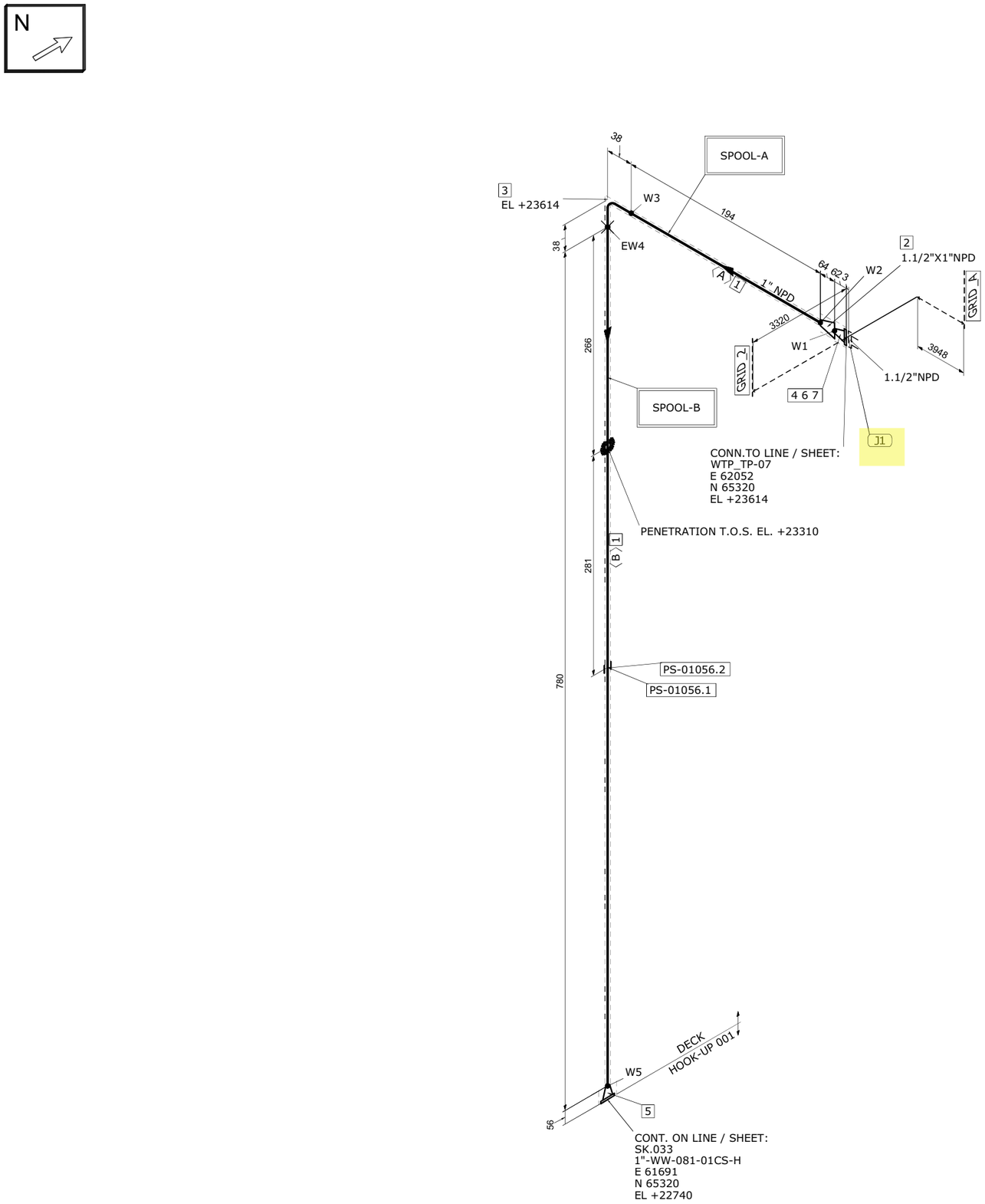
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-01-17	2025-02-17	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:26:46.984Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-17T16:16:35.846Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.0M	3.2
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.4
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.8
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
7	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	7.0
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	7.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1.1/2	BW
W2	1	BW
W3	1	BW
EW4	1	BW
W5	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	194	BEVEL	BEVEL
B	1	780	BEVEL	BEVEL

SUPPORT LIST

PS-01056.1
PS-01056.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	3.0
B	1	3.9
MONT	1	0.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-038-01CS-H

SK.027

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00027 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80022
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

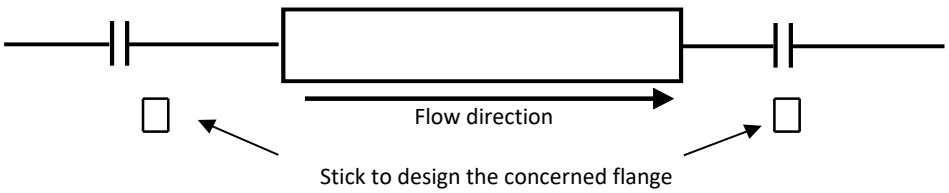
MASTER


TAG
027-1-J1
FLANGE TIGHTENED
ID STAMP RFH3/RFH9
SIGNED
DATE 17/02/25
RETURN TO SUPERVISOR
TAG
027-1-J1
FLANGE ASSEMBLED
ID STAMP RFH3/RFH9
SIGNED
DATE 17/02/25
RETURN TO SUPERVISOR
TAG
027-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	033-1-J1	: Joint 033-1-J1			Dwg	123A90-FDL-PP-DI-00033-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004221		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-101

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			19	38	62.5
2			19	38	62.5
3			19	38	62.5
4			19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

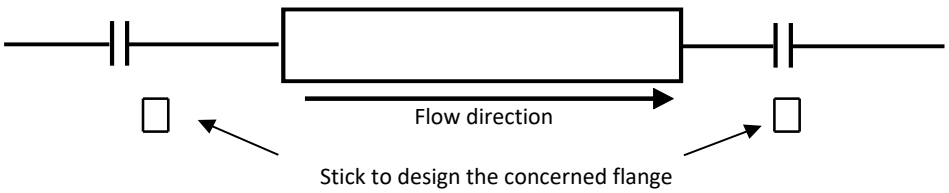
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	033-1-J2	: Joint 033-1-J2			Dwg	123A90-FDL-PP-DI-00033-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004222		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-101

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			19	38	62.5
2			19	38	62.5
3			19	38	62.5
4			19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

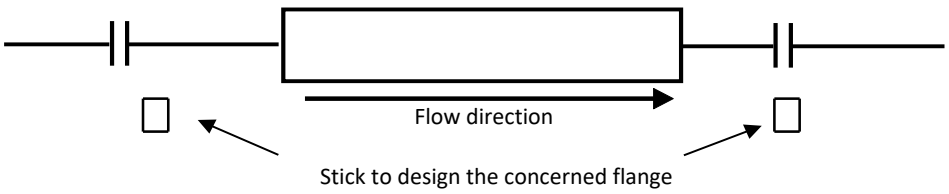
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	033-1-J3	: Joint 033-1-J3			Dwg	123A90-FDL-PP-DI-00033-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004223	Location	Offshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-101

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			19	38	62.5
2			19	38	62.5
3			19	38	62.5
4			19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

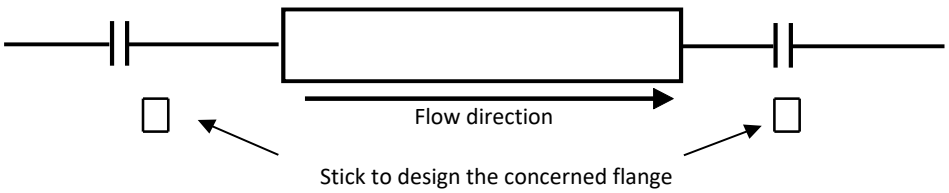
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	033-1-J4	: Joint 033-1-J4			Dwg	123A90-FDL-PP-DI-00033-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004224	Location	Offshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-101

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			19	38	62.5
2			19	38	62.5
3			19	38	62.5
4			19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

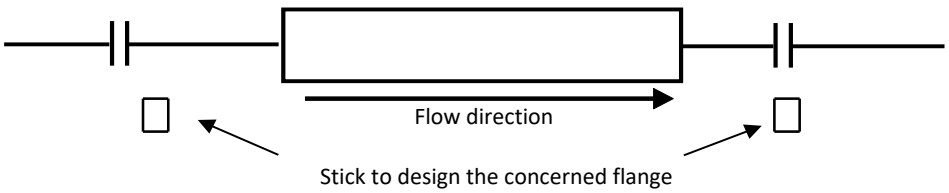
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	033-1-J5	: Joint 033-1-J5			Dwg	123A90-FDL-PP-DI-00033-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004225	Location	Offshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-101

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			19	38	62.5
2			19	38	62.5
3			19	38	62.5
4			19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

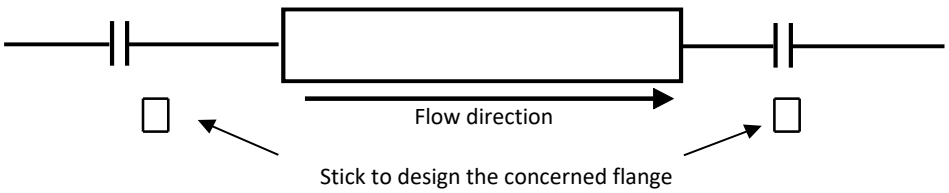
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	098-1-J1	: Joint 098-1-J1			Dwg	123A90-FDL-PP-DI-00098-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004267		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-100

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	
Bolt tensioning/Torquing value	120		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			36	72	120
2			36	72	120
3			36	72	120
4			36	72	120
5			36	72	120
6			36	72	120
7			36	72	120
8			36	72	120
9			36	72	120
10			36	72	120
11			36	72	120
12			36	72	120
13			36	72	120
14			36	72	120
15			36	72	120
16			36	72	120
17			36	72	120
18			36	72	120
19			36	72	120
20			36	72	120

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

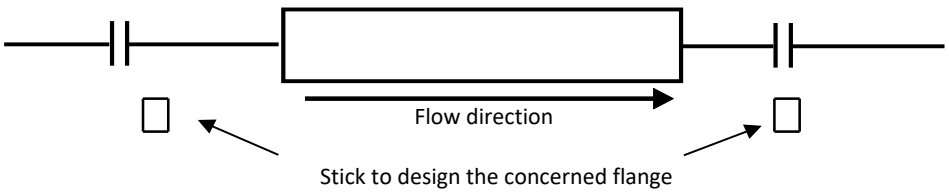
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	099-1-J1	: Joint 099-1-J1			Dwg	123A90-FDL-PP-DI-00099-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004268		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RD00261
Bolt tensioning/Torquing value	122.2		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	37	122	37	73	122.2
2	37	122	37	73	122.2
3	37	122	37	73	122.2
4	37	122	37	73	122.2
5			37	73	122.2
6			37	73	122.2
7			37	73	122.2
8			37	73	122.2
9			37	73	122.2
10			37	73	122.2
11			37	73	122.2
12			37	73	122.2
13			37	73	122.2
14			37	73	122.2
15			37	73	122.2
16			37	73	122.2
17			37	73	122.2
18			37	73	122.2
19			37	73	122.2
20			37	73	122.2

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

2 **Flange Face Check:** Both flanges clean and free from damage. Yes

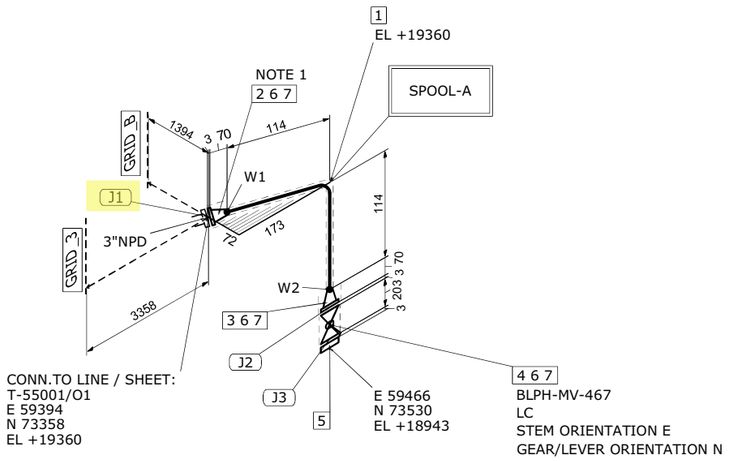
3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-17	2025-04-01	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:30:43.656Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-01T09:44:06.709Z	

N



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3	E90RCS02830300	90 Deg Elbow Long Radius ASME B16.9 BW 5,49 WRS ASTM/ASME A/SA420 Gr.WPL6	1	2.0
2	3	FLWDCS00240300	Flange WN For Jackscrews ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
3	3	FLW0CS03180300	Flange WN ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	3	VBD0NN16610300	Ball Valve Split Body RB API 6D FLG 150LB RF BC01B01RF	1	25.0
5	3	FLB0CS07900300	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
6	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.5
7	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	3.0

FABRICATION WEIGHT [kg]	11.0
ERECTION WEIGHT [kg]	33.0
OVERALL WEIGHT [kg]	44.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	3	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	11.0
MONT	0	33.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 3"-WW-201-01CS-H

SK.099

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00099 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 25 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB.	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION E\W

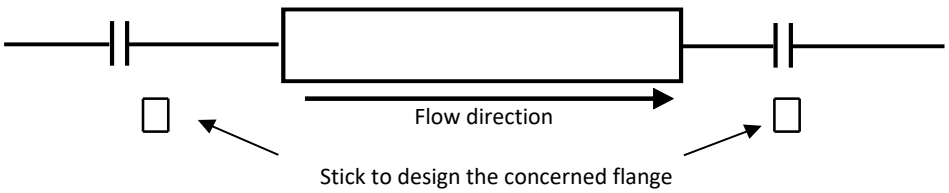
MASTER


TAG
088-1-J1
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
088-1-J1
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
088-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	099-1-J2	: Joint 099-1-J2			Dwg	123A90-FDL-PP-DI-00099-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004269	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RD00261
Bolt tensioning/Torquing value	122.2		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	37	122	37	73	122.2
2	37	122	37	73	122.2
3	37	122	37	73	122.2
4	37	122	37	73	122.2
5			37	73	122.2
6			37	73	122.2
7			37	73	122.2
8			37	73	122.2
9			37	73	122.2
10			37	73	122.2
11			37	73	122.2
12			37	73	122.2
13			37	73	122.2
14			37	73	122.2
15			37	73	122.2
16			37	73	122.2
17			37	73	122.2
18			37	73	122.2
19			37	73	122.2
20			37	73	122.2

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

2 **Flange Face Check:** Both flanges clean and free from damage. Yes

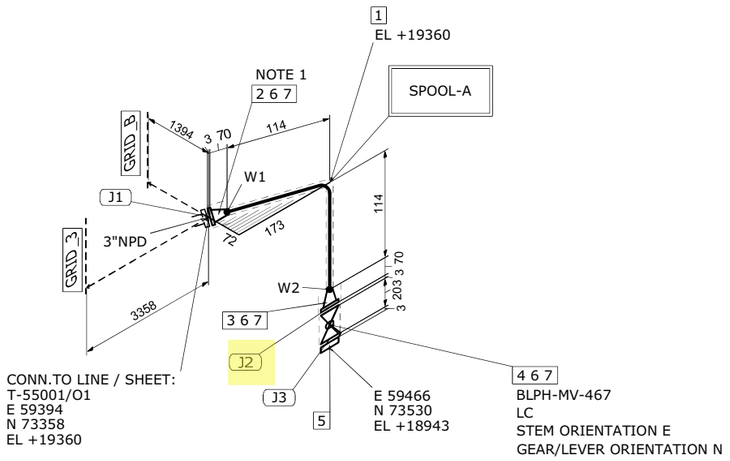
3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-17	2025-04-01	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:30:57.367Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-01T09:44:49.681Z	

N



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3	E90RCS02830300	90 Deg Elbow Long Radius ASME B16.9 BW 5,49 WRS ASTM/ASME A/SA420 Gr.WPL6	1	2.0
2	3	FLWDCS00240300	Flange WN For Jackscrews ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
3	3	FLW0CS03180300	Flange WN ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	3	VBD0NN16610300	Ball Valve Split Body RB API 6D FLG 150LB RF BC01B01RF	1	25.0
5	3	FLB0CS07900300	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
6	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.5
7	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	3.0

FABRICATION WEIGHT [kg]	11.0
ERECTION WEIGHT [kg]	33.0
OVERALL WEIGHT [kg]	44.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	3	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	11.0
MONT	0	33.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 3"-WW-201-01CS-H

SK.099

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 25 [mm]	DESIGN	PRESS. 3.5	[barg]	TEMP. -46 / 100	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 5.25	[barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

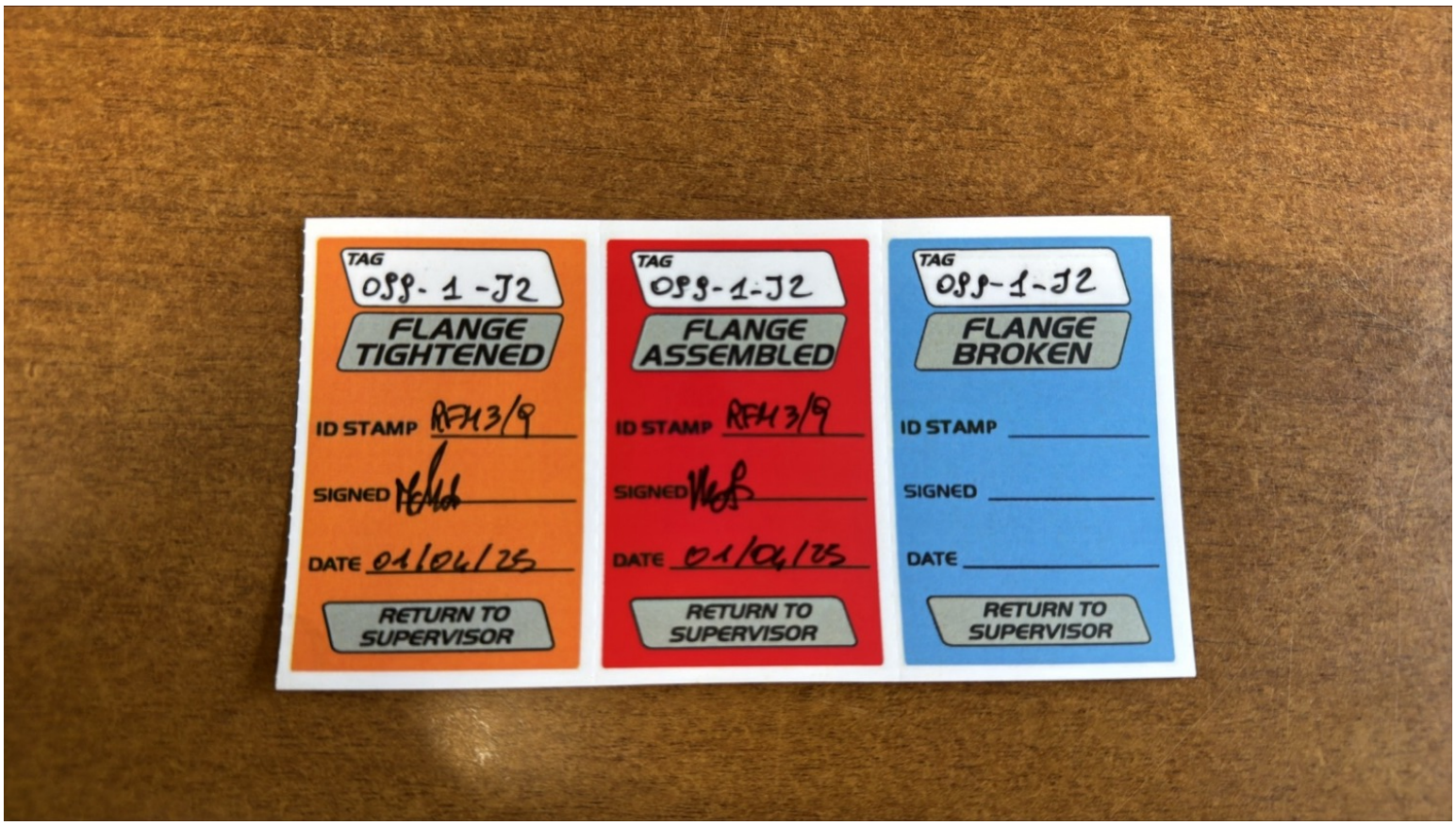
P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION E\W

MASTER

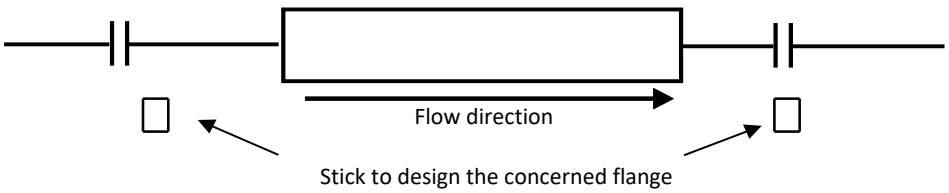
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00099		SHEET / OF 1/1	REV. 00


TAG
088-1-J2
FLANGE TIGHTENED
ID STAMP RFH3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
088-1-J2
FLANGE ASSEMBLED
ID STAMP RFH3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
088-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	099-1-J3	: Joint 099-1-J3			Dwg	123A90-FDL-PP-DI-00099-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004270	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RD00261
Bolt tensioning/Torquing value	122.2		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	37	122	37	73	122.2
2	37	122	37	73	122.2
3	37	122	37	73	122.2
4	37	122	37	73	122.2
5			37	73	122.2
6			37	73	122.2
7			37	73	122.2
8			37	73	122.2
9			37	73	122.2
10			37	73	122.2
11			37	73	122.2
12			37	73	122.2
13			37	73	122.2
14			37	73	122.2
15			37	73	122.2
16			37	73	122.2
17			37	73	122.2
18			37	73	122.2
19			37	73	122.2
20			37	73	122.2

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

2 **Flange Face Check:** Both flanges clean and free from damage. Yes

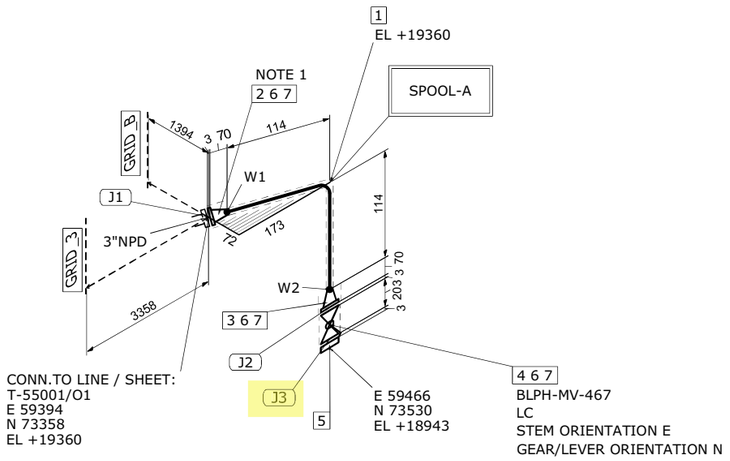
3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-17	2025-04-01	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:31:09.118Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-01T09:45:22.431Z	

N



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3	E90RCS02830300	90 Deg Elbow Long Radius ASME B16.9 BW 5,49 WRS ASTM/ASME A/SA420 Gr.WPL6	1	2.0
2	3	FLWDCS00240300	Flange WN For Jackscrews ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
3	3	FLW0CS03180300	Flange WN ASME B16.5 150LB RF 5,49 FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	3	VBD0NN16610300	Ball Valve Split Body RB API 6D FLG 150LB RF BC01B01RF	1	25.0
5	3	FLB0CS07900300	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	4.5
6	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.5
7	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	3.0

FABRICATION WEIGHT [kg]	11.0
ERECTION WEIGHT [kg]	33.0
OVERALL WEIGHT [kg]	44.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	3	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	11.0
MONT	0	33.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 3"-WW-201-01CS-H

SK.099

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

SCALE: N/A

DRAWN	CHECKED	APPROVED	DATE
STAFF SRL	RT	LM	27-08-2024

FORMAT: A3

DRAWING NO.: 123A90-FDL-PP-DI-00099

SHEET / OF: 1/1

REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A		FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 25	[mm]	DESIGN	PRESS. 3.5	[barg]	TEMP. -46 / 100	[°C]
HEAT TRACING	N/A			TEST	PRESS. 5.25	[barg]	TEMP. AMB	MEDIUM Water

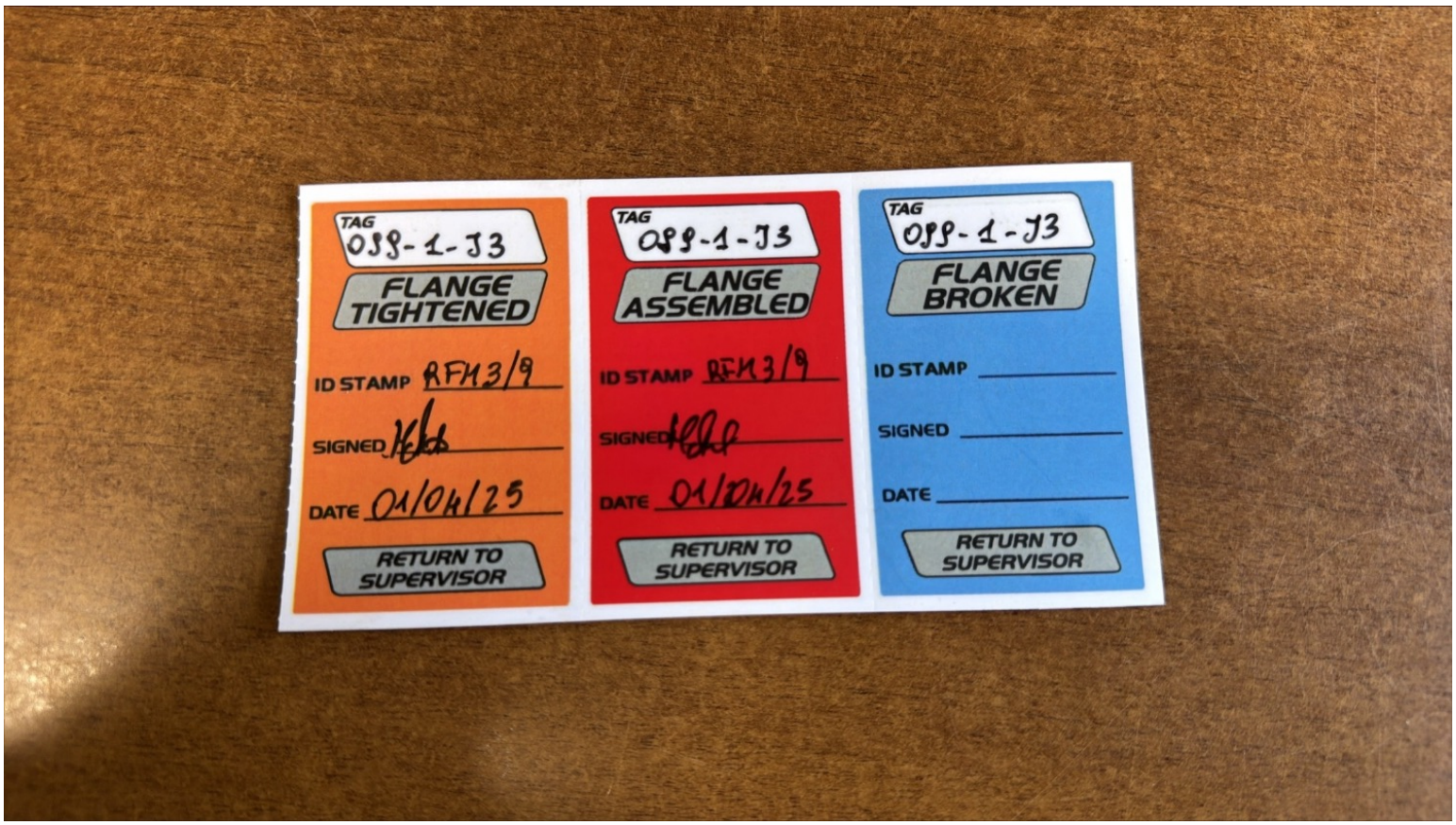
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION E\W

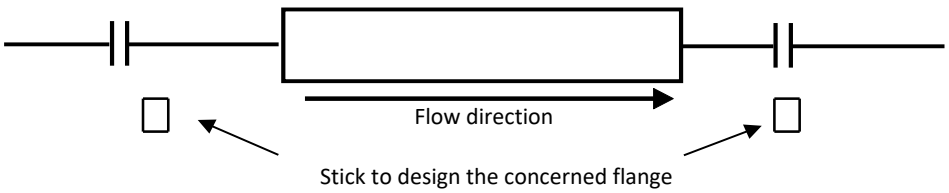
MASTER


TAG
088-1-J3
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
088-1-J3
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
088-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	100-1-J1	: Joint 100-1-J1			Dwg	123A90-FDL-PP-DI-00100-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

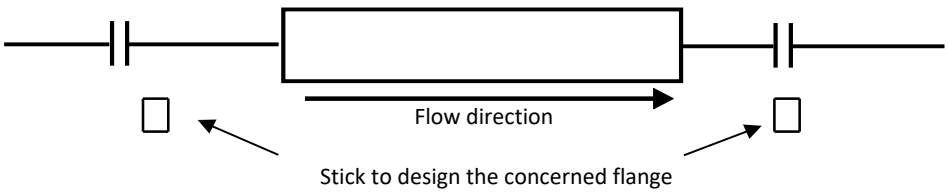
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-03-25	2025-03-25	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-03-25T06:21:57.570Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-25T09:51:33.896Z	


TAG 100-1-J1
FLANGE TIGHTENED
ID STAMP RFM2
SIGNED
DATE 24/03/25
RETURN TO SUPERVISOR
TAG 100-1-J1
FLANGE ASSEMBLED
ID STAMP RFM2
SIGNED
DATE 24/03/25
RETURN TO SUPERVISOR
TAG 100-1-J1
FLANGE BROKEN
ID STAMP RFM2
SIGNED
DATE 24/03/25
RETURN TO SUPERVISOR

ITEM	Tag	100-1-J1	: Joint 100-1-J1			Dwg	123A90-FDL-PP-DI-00100-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

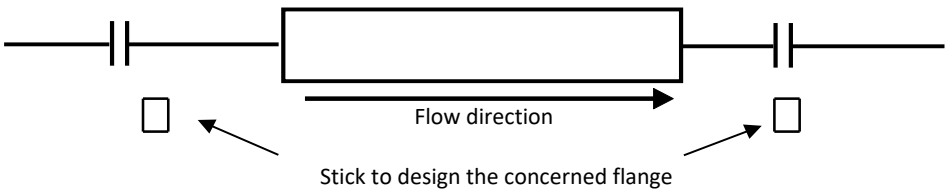
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-28	2025-02-28	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-28T07:49:21.040Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-28T09:59:24.821Z	


TAG
100-1-J1
FLANGE TIGHTENED
ID STAMP RMF 3/9
SIGNED
DATE 28/01/25
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE ASSEMBLED
ID STAMP RMF 3/9
SIGNED
DATE 28/01/25
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE TIGHTENED
ID STAMP RFH2
SIGNED
DATE 27/02/25
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE ASSEMBLED
ID STAMP RFH2
SIGNED
DATE 27/02/25
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE BROKEN
ID STAMP RFH2
SIGNED
DATE 27/02/25
RETURN TO SUPERVISOR

ITEM	Tag	100-1-J1	: Joint 100-1-J1			Dwg	123A90-FDL-PP-DI-00100-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004271		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



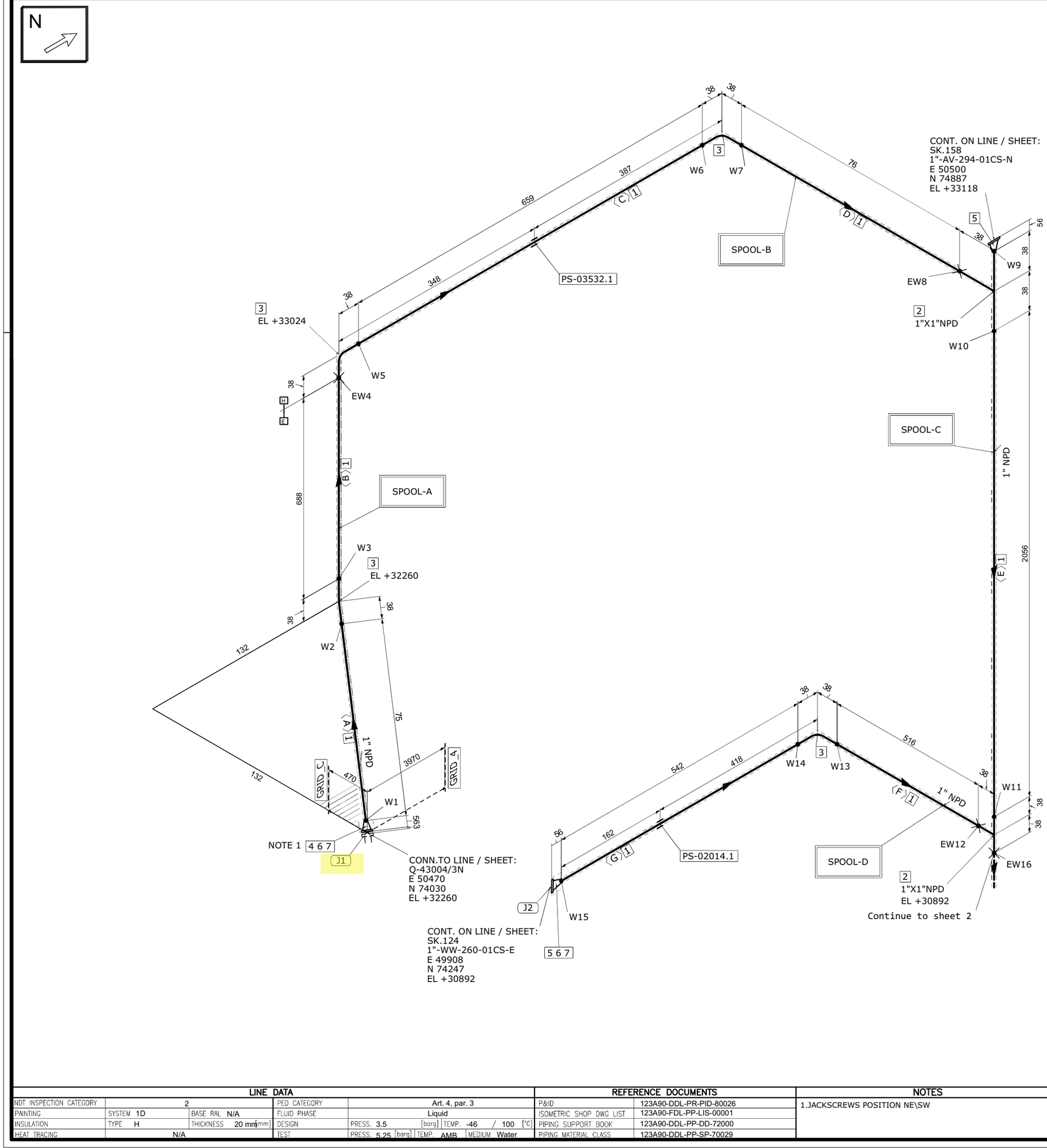
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
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14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Andrea Mancini	
Date	2025-01-17	2025-01-28	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:31:19.934Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-28T16:06:32.117Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	4.6M	15.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
4	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	20.8
ERECTION WEIGHT [kg]	1.1
OVERALL WEIGHT [kg]	21.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
EW4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
EW12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	75	BEVEL	BEVEL
B	1	688	BEVEL	BEVEL
C	1	659	BEVEL	BEVEL
D	1	76	BEVEL	BEVEL
E	1	2056	BEVEL	BEVEL
F	1	516	BEVEL	BEVEL
G	1	543	BEVEL	BEVEL

SUPPORT LIST

PS-03532.1
PS-02014.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.1
B	3	2.7
C	3	9.0
D	3	5.0
MONT	4	1.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-202-01CS-H

SK.100

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00100 | SHEET / OF: 1/2 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 mm[mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

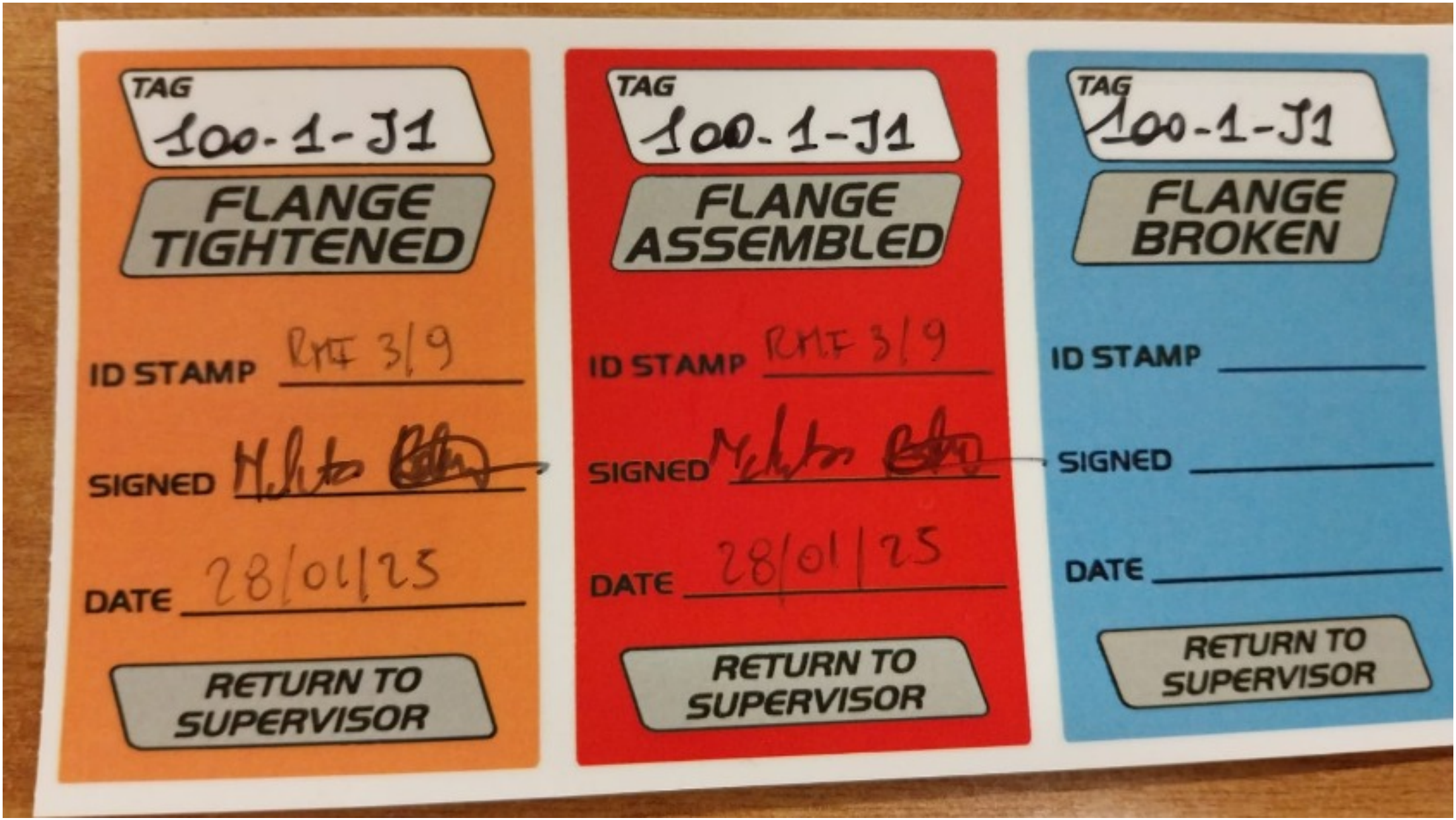
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION NE\SW

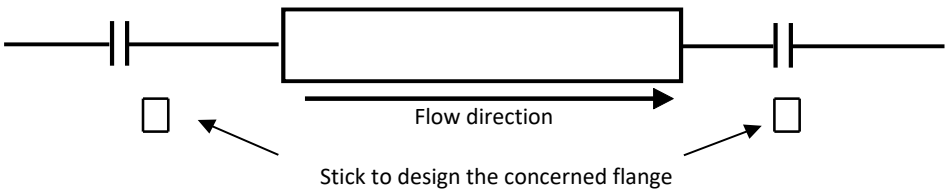
MASTER


TAG
100-1-J1
FLANGE TIGHTENED
ID STAMP RMF 3/9
SIGNED
DATE 28/01/25
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE ASSEMBLED
ID STAMP RMF 3/9
SIGNED
DATE 28/01/25
RETURN TO SUPERVISOR
TAG
100-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	100-1-J2	: Joint 100-1-J2			Dwg	123A90-FDL-PP-DI-00100-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004272		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

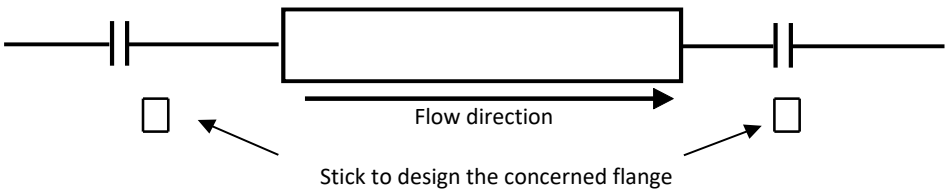
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-28	2025-02-28	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-28T07:49:39.741Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-28T09:59:37.642Z	


TAG
100-1-J2
FLANGE TIGHTENED
ID STAMP RFH 6/2
SIGNED
DATE 25/01/25
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE ASSEMBLED
ID STAMP RFH 6/2
SIGNED
DATE 25/01/25
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE TIGHTENED
ID STAMP RFH2
SIGNED
DATE 27/02/25
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE ASSEMBLED
ID STAMP RFH2
SIGNED
DATE 27/02/25
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE BROKEN
ID STAMP RFH2
SIGNED
DATE 27/02/25
RETURN TO SUPERVISOR

ITEM	Tag	100-1-J2	: Joint 100-1-J2			Dwg	123A90-FDL-PP-DI-00100-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004272		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-026

EQUIPMENT TAG



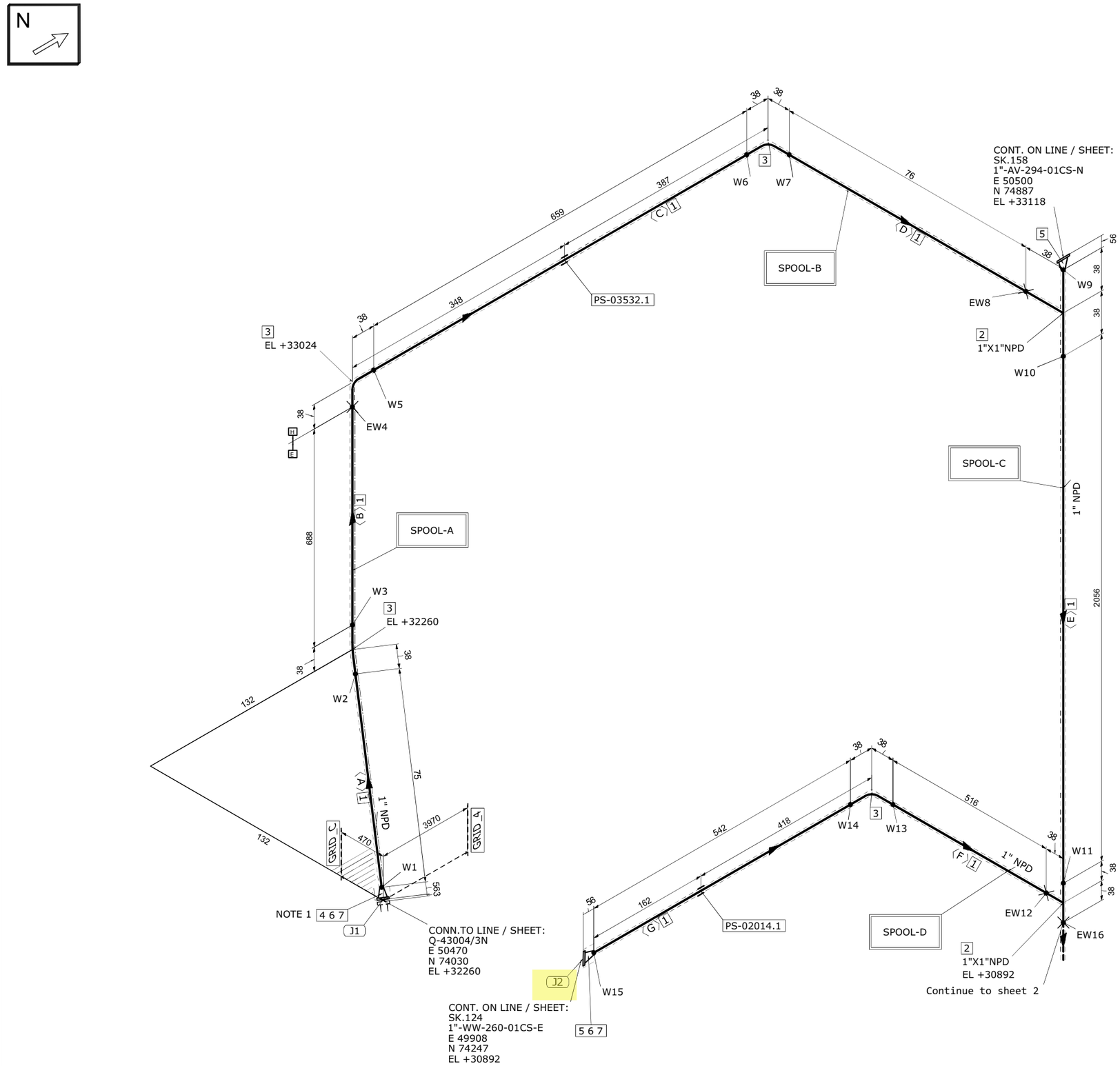
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-17	2025-01-27	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:31:34.862Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-27T17:23:22.656Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	4.6M	15.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
4	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	20.8
ERECTION WEIGHT [kg]	1.1
OVERALL WEIGHT [kg]	21.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
EW4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
EW12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	75	BEVEL	BEVEL
B	1	688	BEVEL	BEVEL
C	1	659	BEVEL	BEVEL
D	1	76	BEVEL	BEVEL
E	1	2056	BEVEL	BEVEL
F	1	516	BEVEL	BEVEL
G	1	543	BEVEL	BEVEL

SUPPORT LIST

PS-03532.1
PS-02014.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.1
B	3	2.7
C	3	9.0
D	3	5.0
MONT	4	1.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-202-01CS-H

SK.100

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 27-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00100 | SHEET / OF: 1/2 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 mm[mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

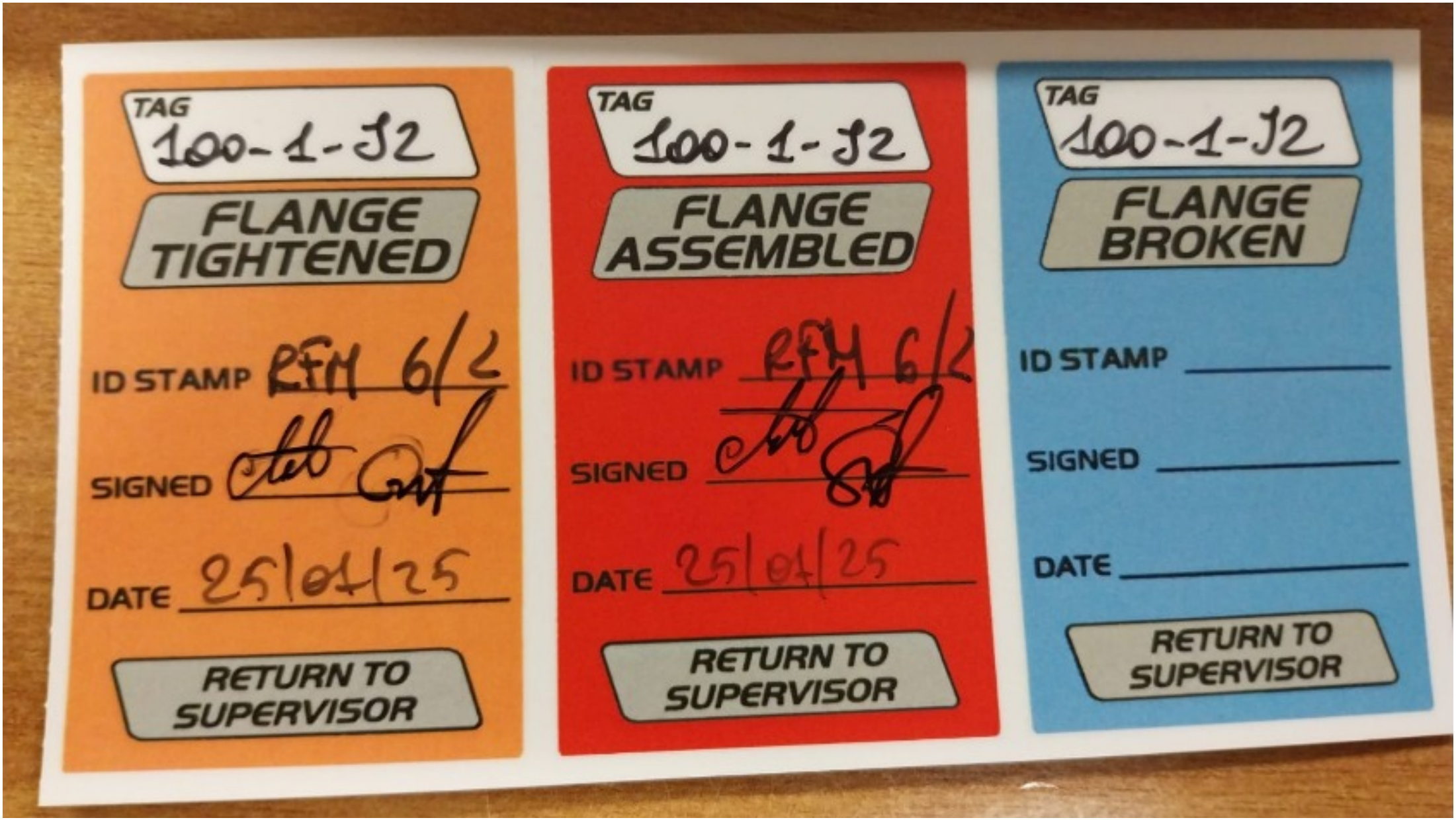
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION NE\SW

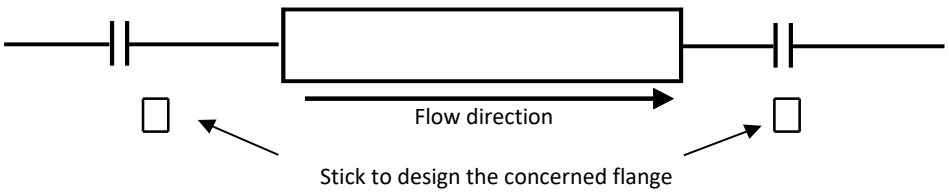
MASTER


TAG
100-1-J2
FLANGE TIGHTENED
ID STAMP RFH 6/2
SIGNED
DATE 25/01/25
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE ASSEMBLED
ID STAMP RFH 6/2
SIGNED
DATE 25/01/25
RETURN TO SUPERVISOR
TAG
100-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	121-1-J1	: Joint 121-1-J1			Dwg	123A90-FDL-PP-DI-00121-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD/TP
TASK	code	C10004289		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-100

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	
Bolt tensioning/Torquing value	122.2		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			37	73	122.2
2			37	73	122.2
3			37	73	122.2
4			37	73	122.2
5			37	73	122.2
6			37	73	122.2
7			37	73	122.2
8			37	73	122.2
9			37	73	122.2
10			37	73	122.2
11			37	73	122.2
12			37	73	122.2
13			37	73	122.2
14			37	73	122.2
15			37	73	122.2
16			37	73	122.2
17			37	73	122.2
18			37	73	122.2
19			37	73	122.2
20			37	73	122.2

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

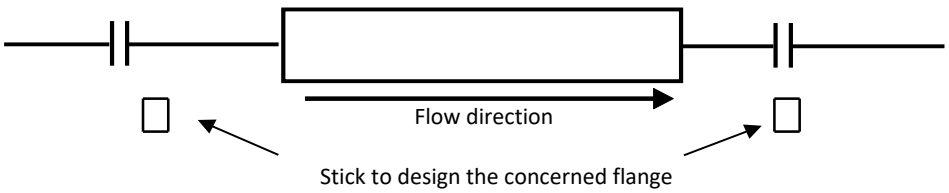
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	156-1-J1	: Joint 156-1-J1			Dwg	123A90-FDL-PP-DI-00156-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004315		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	62.5	19	38	62.5
2	19	62.5	19	38	62.5
3	19	62.5	19	38	62.5
4	19	62.5	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

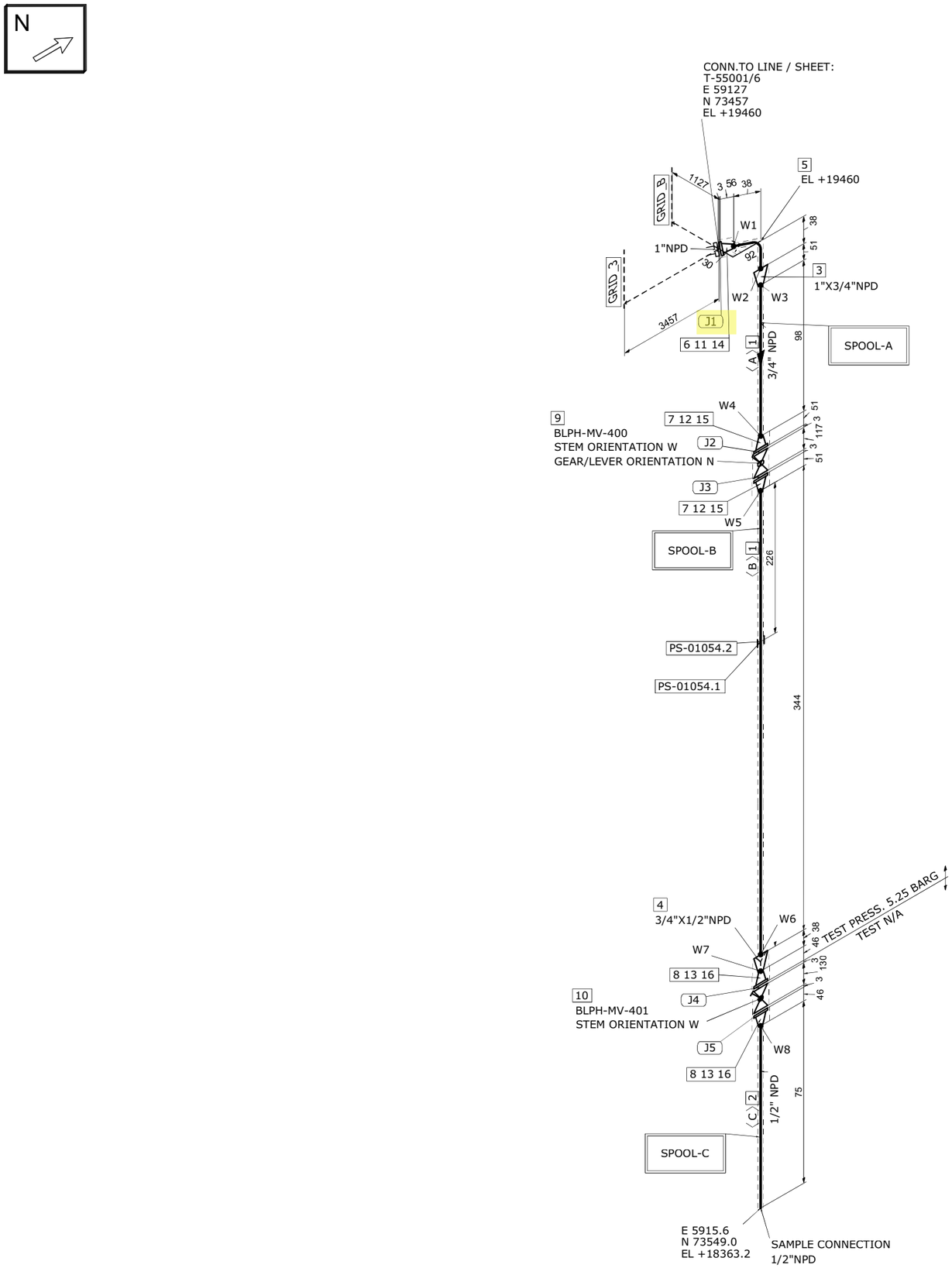
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-04-02	2025-04-02	
Signature	Digitaly signed by Emanuele Delfino 2025-04-02T04:17:46.583Z	Digitaly signed by Lorenzo Novaga 2025-04-02T06:28:17.126Z	



HOOK-UP 006

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	27-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00156			SHEET / OF	1/1
						REV.	00

LINE DATA

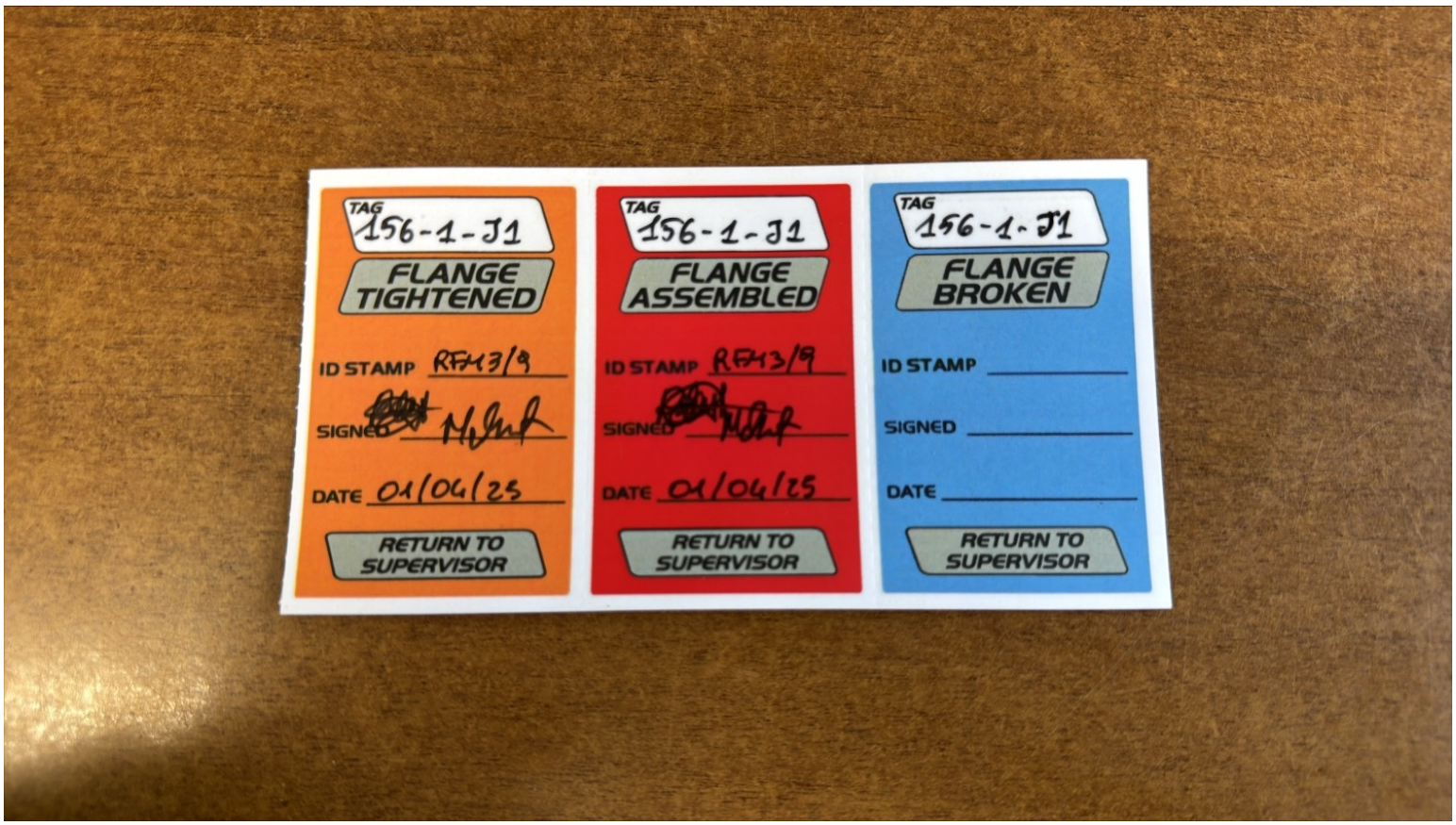
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3	
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid	
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB. MEDIUM Water

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

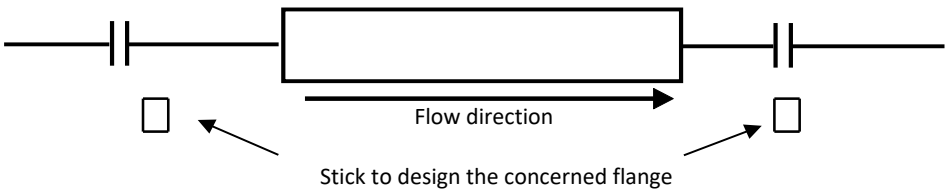
MASTER


TAG
156-1-J1
FLANGE TIGHTENED
ID STAMP RFH13/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J1
FLANGE ASSEMBLED
ID STAMP RFH13/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	156-1-J2	: Joint 156-1-J2			Dwg	123A90-FDL-PP-DI-00156-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004316	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	60		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	18	60	18	36	60
2	18	60	18	36	60
3	18	60	18	36	60
4	18	60	18	36	60
5			18	36	60
6			18	36	60
7			18	36	60
8			18	36	60
9			18	36	60
10			18	36	60
11			18	36	60
12			18	36	60
13			18	36	60
14			18	36	60
15			18	36	60
16			18	36	60
17			18	36	60
18			18	36	60
19			18	36	60
20			18	36	60

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

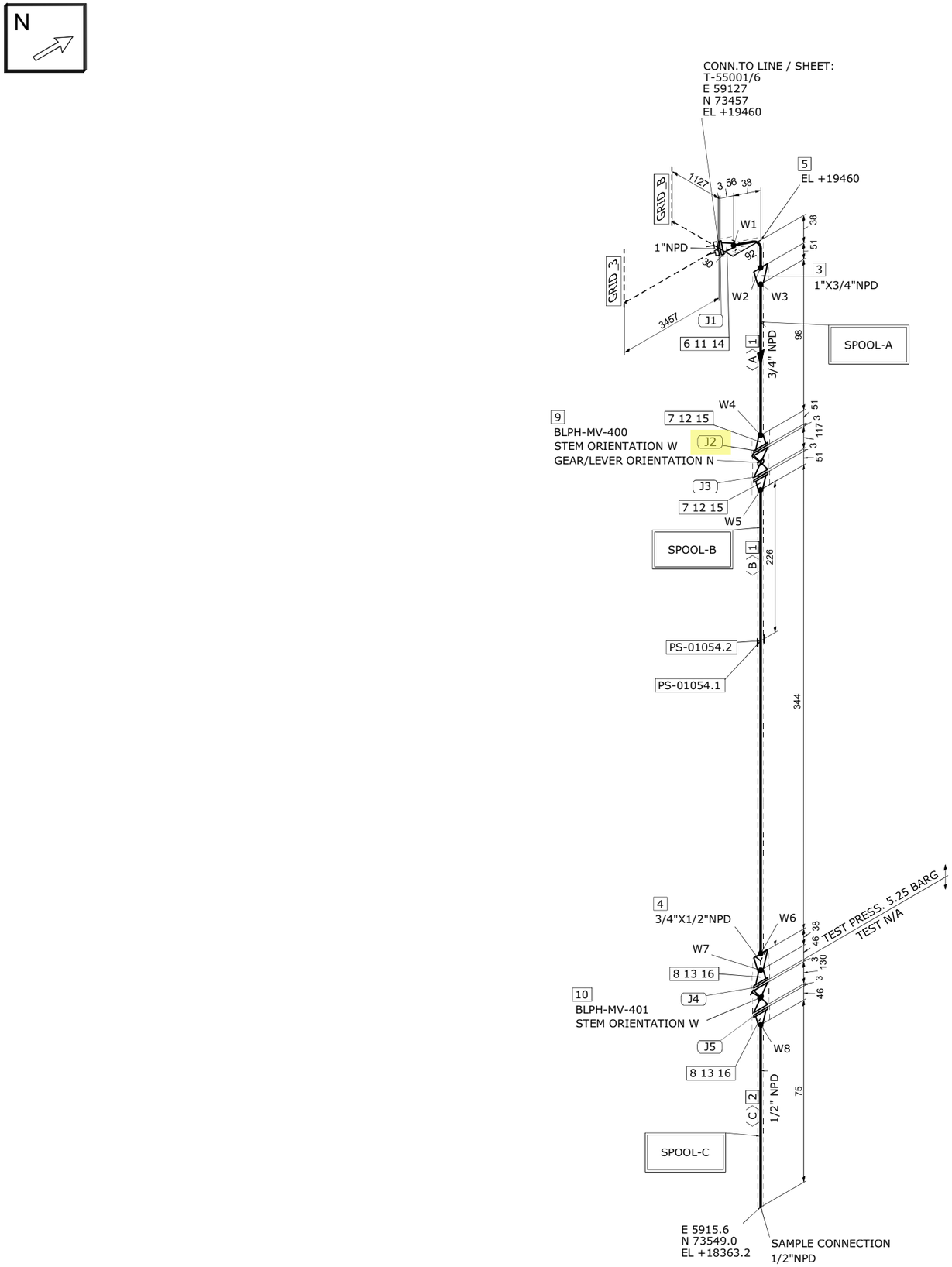
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-04-02	2025-04-02	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-04-02T04:17:59.343Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-02T06:29:38.224Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

HOOK-UP 006

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

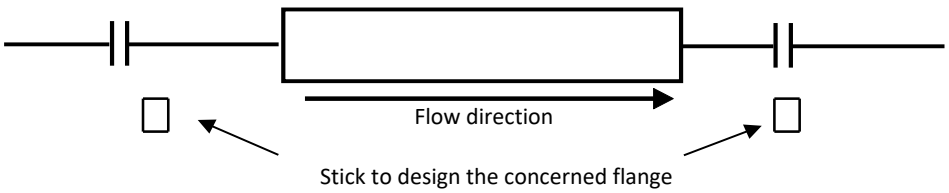
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00156		SHEET / OF 1/1	REV. 00


TAG
156-1-J2
FLANGE TIGHTENED
ID STAMP RFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J2
FLANGE ASSEMBLED
ID STAMP RFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	156-1-J3	: Joint 156-1-J3			Dwg	123A90-FDL-PP-DI-00156-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004317		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	60		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	18	60	18	36	60
2	18	60	18	36	60
3	18	60	18	36	60
4	18	60	18	36	60
5			18	36	60
6			18	36	60
7			18	36	60
8			18	36	60
9			18	36	60
10			18	36	60
11			18	36	60
12			18	36	60
13			18	36	60
14			18	36	60
15			18	36	60
16			18	36	60
17			18	36	60
18			18	36	60
19			18	36	60
20			18	36	60

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

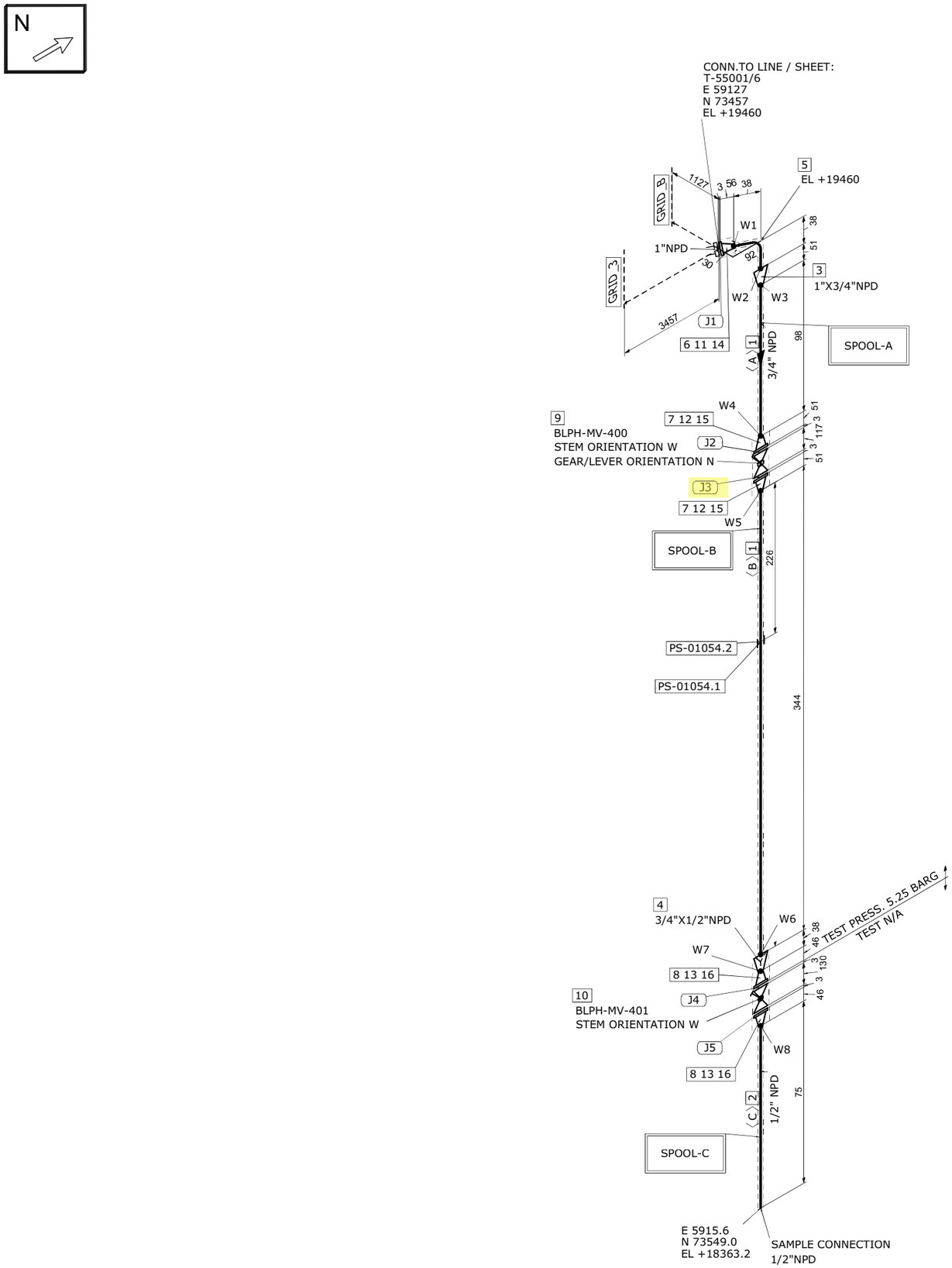
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-04-02	2025-04-02	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-04-02T04:18:11.961Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-02T06:30:22.837Z	



HOOK-UP 006

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	27-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00156			SHEET / OF	1/1
						REV.	00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

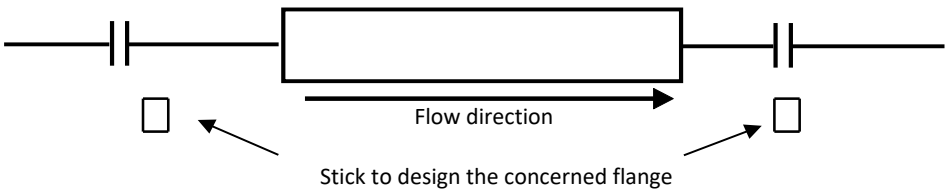
MASTER


TAG
156-1-J3
FLANGE TIGHTENED
ID STAMP RFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J3
FLANGE ASSEMBLED
ID STAMP RFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	156-1-J4	: Joint 156-1-J4			Dwg	123A90-FDL-PP-DI-00156-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004318	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



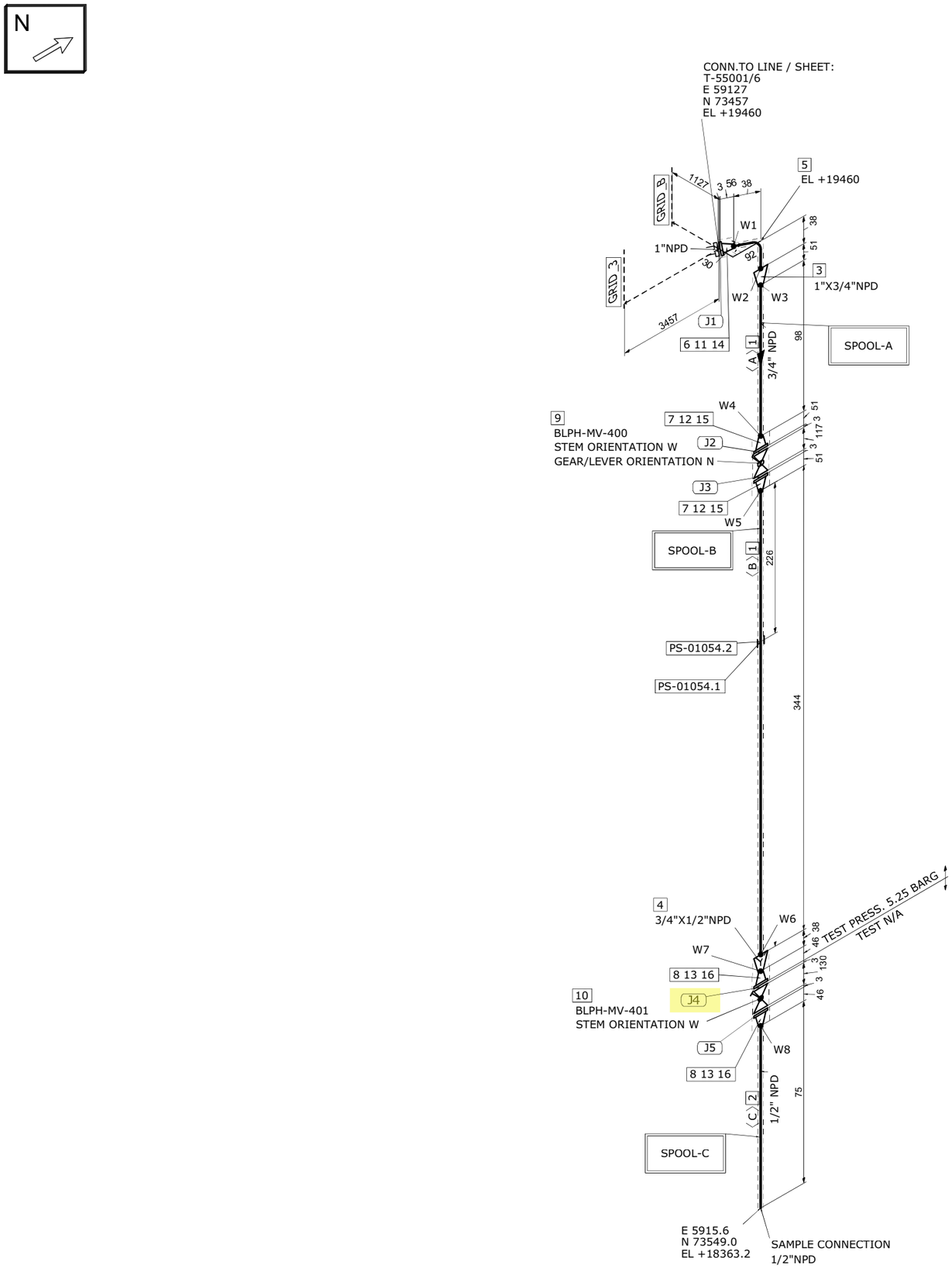
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	55		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	17	55	17	33	55
2	17	55	17	33	55
3	17	55	17	33	55
4	17	55	17	33	55
5			17	33	55
6			17	33	55
7			17	33	55
8			17	33	55
9			17	33	55
10			17	33	55
11			17	33	55
12			17	33	55
13			17	33	55
14			17	33	55
15			17	33	55
16			17	33	55
17			17	33	55
18			17	33	55
19			17	33	55
20			17	33	55

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments: The metal washers on the handwheel side of the valve were not installed because there was insufficient space in accordance with the engineering dpt.

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-04-02	2025-04-02	
Signature	Digitaly signed by Emanuele Delfino 2025-04-02T04:18:25.660Z	Digitaly signed by Lorenzo Novaga 2025-04-02T06:32:03.389Z	



HOOK-UP 006

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	27-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00156			SHEET / OF	1/1
						REV.	00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

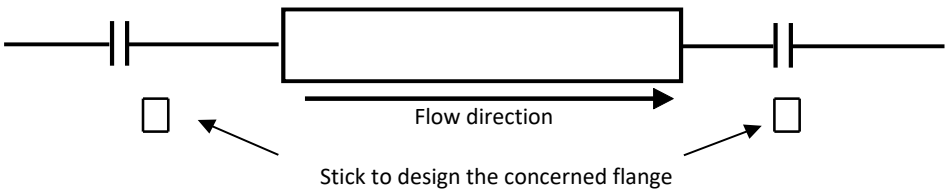
MASTER


TAG
156-1-J4
FLANGE TIGHTENED
ID STAMP RFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J4
FLANGE ASSEMBLED
ID STAMP RFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	156-1-J5	: Joint 156-1-J5			Dwg	123A90-FDL-PP-DI-00156-01
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004319		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-060

EQUIPMENT TAG



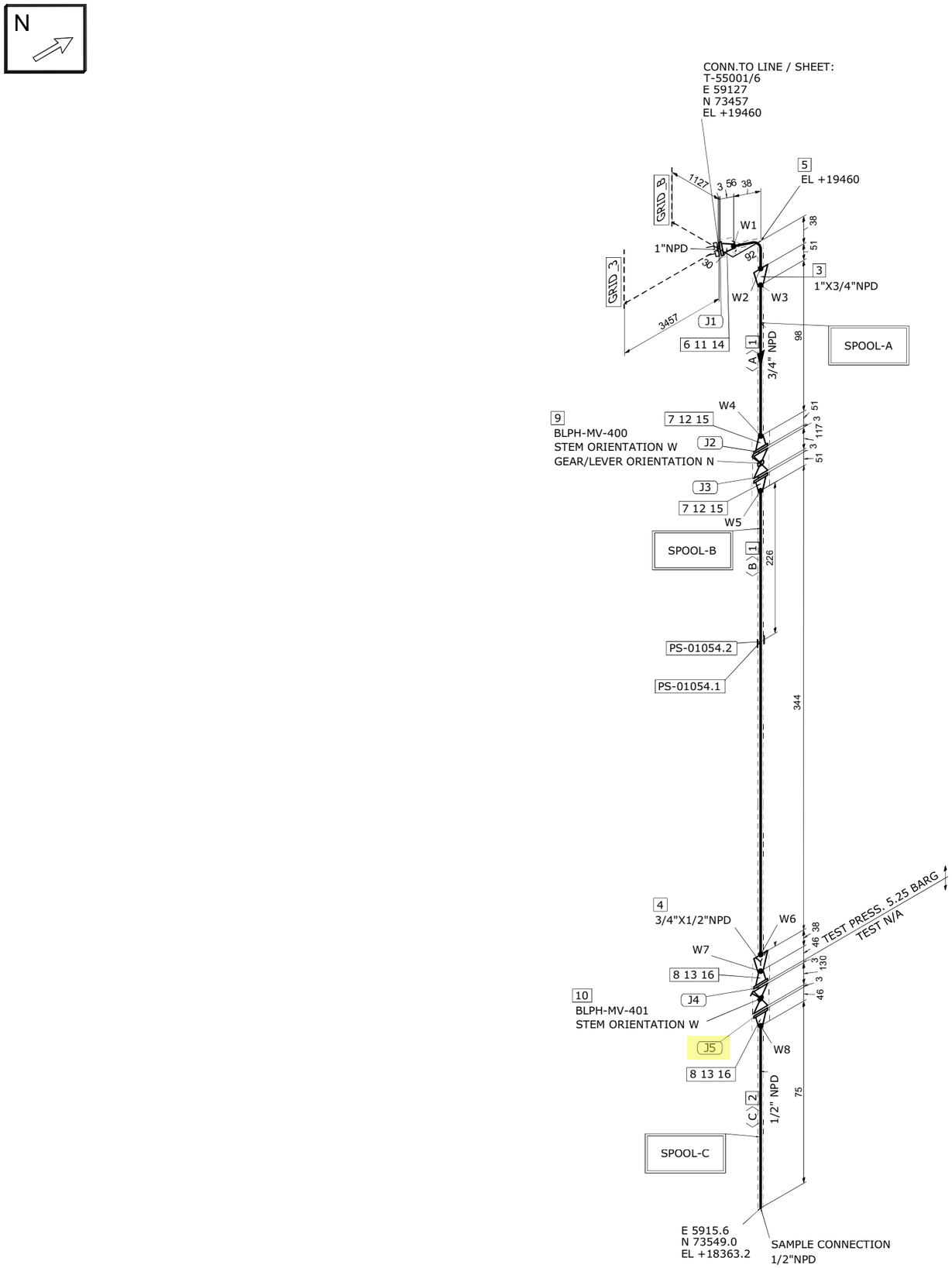
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	55		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	17	55	17	33	55
2	17	55	17	33	55
3	17	55	17	33	55
4	17	55	17	33	55
5			17	33	55
6			17	33	55
7			17	33	55
8			17	33	55
9			17	33	55
10			17	33	55
11			17	33	55
12			17	33	55
13			17	33	55
14			17	33	55
15			17	33	55
16			17	33	55
17			17	33	55
18			17	33	55
19			17	33	55
20			17	33	55

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments: The metal washers on the handwheel side of the valve were not installed because there was insufficient space in accordance with the engineering dpt.

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-04-02	2025-04-02	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-04-02T04:18:40.126Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-02T06:33:04.817Z	



HOOK-UP 006

MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	3/4	PIPECS08293Q00	Pipe ASME B36.10M PE 3,91 SML ASTM/ASME A/SA333 Gr.6	0.4M	1.0
2	1/2	PIPECS10360H00	Pipe ASME B36.10M PE 3,73 SML ASTM/ASME A/SA333 Gr.6	0.1M	0.1
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	3/4X1/2	REC0CS22003Q0H	Reducer Concentric ASME B16.9 BW 3,91x3,73 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.1
5	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
6	1	FLWDCS02740100	Flange WN For Jackscrews ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4
7	3/4	FLW0CS22243Q00	Flange WN ASME B16.5 150LB FF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8
8	1/2	FLW0CS22230H00	Flange WN ASME B16.5 150LB FF 3,73 FRG ASTM/ASME A/SA350 Gr.LF2	2	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
10	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
12	3/4	SPIKNN01253Q00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
13	1/2	SPIKNN01240H00	Insulation Kit Ends as per ASME B16.5 150LB FF	2	0.1
14	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
15	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
16	1/2	SB20BO00940200	75 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	6.6
ERECTION WEIGHT [kg]	13.6
OVERALL WEIGHT [kg]	20.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	3/4	BW
W4	3/4	BW
W5	3/4	BW
W6	3/4	BW
W7	1/2	BW
W8	1/2	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	3/4	98	BEVEL	BEVEL
B	3/4	344	BEVEL	BEVEL
C	1/2	75	BEVEL	SQ.CUT

SUPPORT LIST

PS-01054.1
PS-01054.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3.5	2.9
B	2.0	2.6
C	0.5	1.0
MONT	0	13.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80026
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-292-01CS-H

SK.156

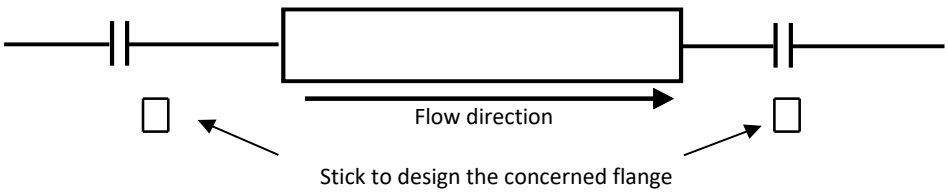
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
FORMAT	DRAWING NO.			SHEET / OF	REV.
A3	123A90-FDL-PP-DI-00156			1/1	00


TAG
156-1-J5
FLANGE TIGHTENED
ID STAMP RPH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J5
FLANGE ASSEMBLED
ID STAMP AFH 3/9
SIGNED
DATE 01/04/25
RETURN TO SUPERVISOR
TAG
156-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	158-1-J1	: Joint 158-1-J1			Dwg	123A90-FDL-PP-DI-00158-01
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10004320		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-062

EQUIPMENT TAG



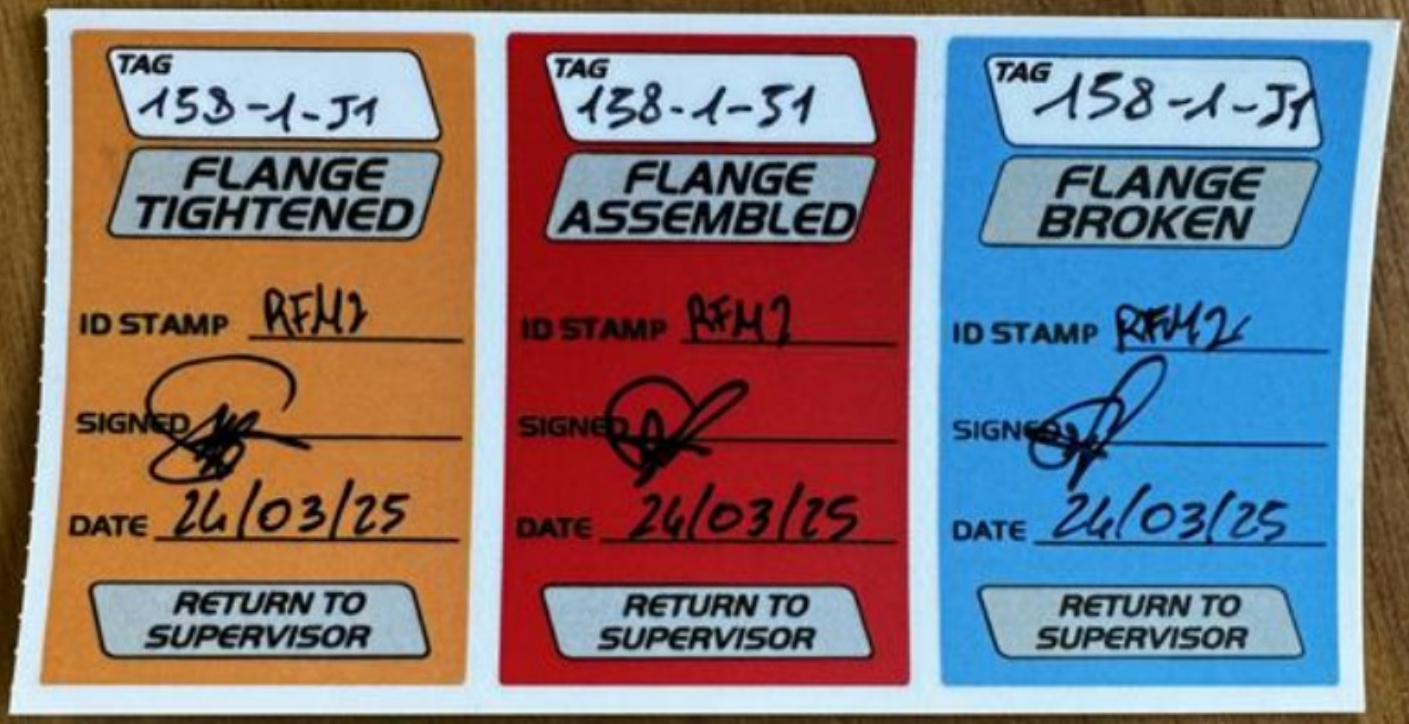
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

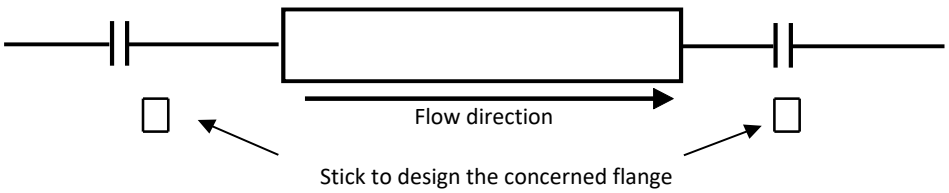
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-03-25	2025-03-25	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-03-25T06:22:10.049Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-25T07:21:05.926Z	


TAG
153-1-J1
FLANGE TIGHTENED
ID STAMP RFH7
SIGNED
DATE 24/03/25
RETURN TO SUPERVISOR
TAG
158-1-J1
FLANGE ASSEMBLED
ID STAMP RFH7
SIGNED
DATE 24/03/25
RETURN TO SUPERVISOR
TAG
158-1-J1
FLANGE BROKEN
ID STAMP RFH7
SIGNED
DATE 24/03/25
RETURN TO SUPERVISOR

ITEM	Tag	158-1-J1	: Joint 158-1-J1			Dwg	123A90-FDL-PP-DI-00158-01
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10004320		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-062

EQUIPMENT TAG



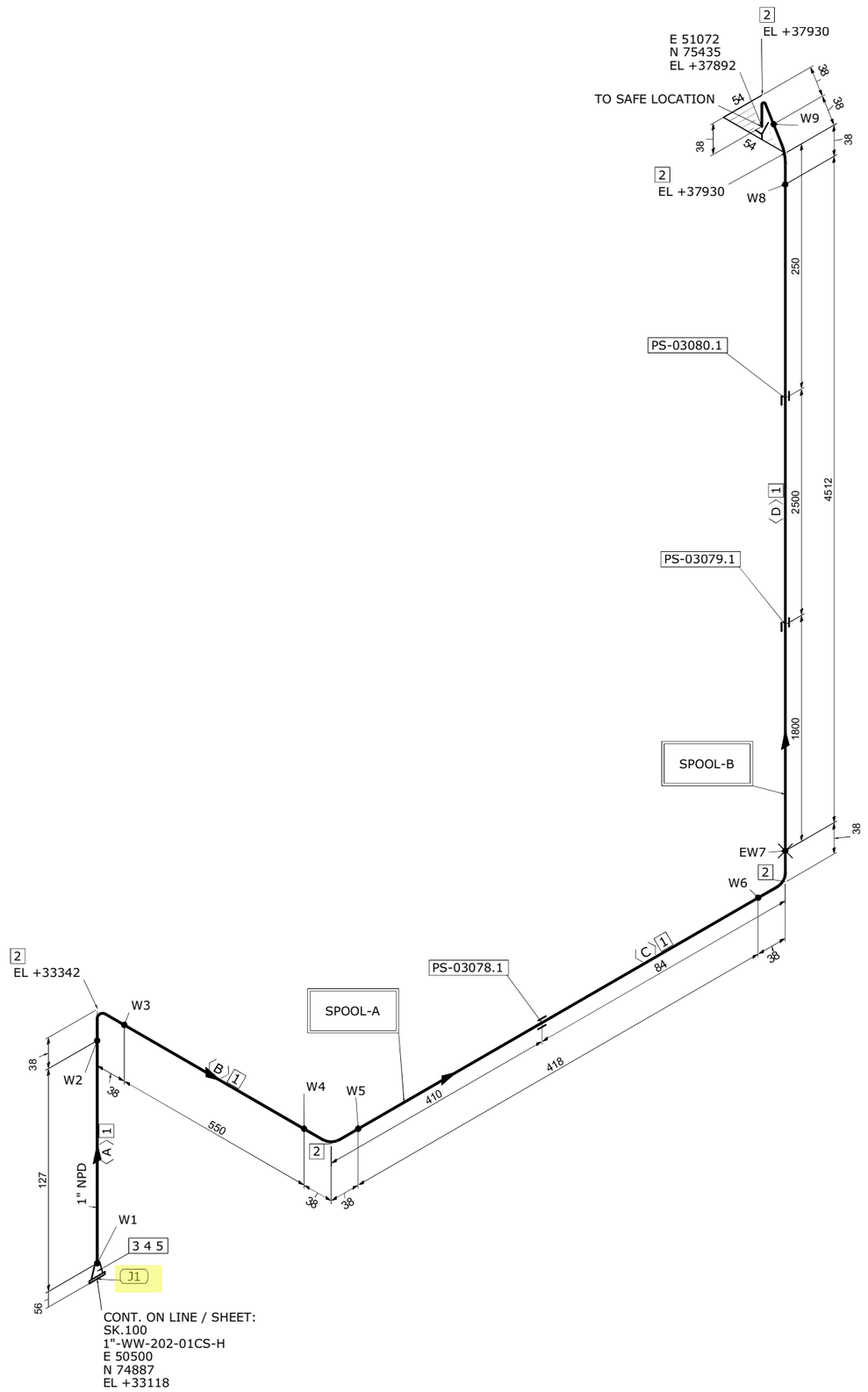
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☒ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Andrea Mancini	
Date	2025-01-17	2025-01-31	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:33:28.283Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-31T09:14:48.339Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	5	0.9
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
5	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	20.5
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	21.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
EW7	1	BW
W8	1	BW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	127	BEVEL	BEVEL
B	1	550	BEVEL	BEVEL
C	1	418	BEVEL	BEVEL
D	1	4512	BEVEL	BEVEL

SUPPORT LIST

PS-03078.1
PS-03079.1
PS-03080.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	5.5
B	2	15.0
MONT	1	0.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	27-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-AV-294-01CS-N

SK.158

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	27-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00158			SHEET / OF	1/1
						REV.	00

LINE DATA

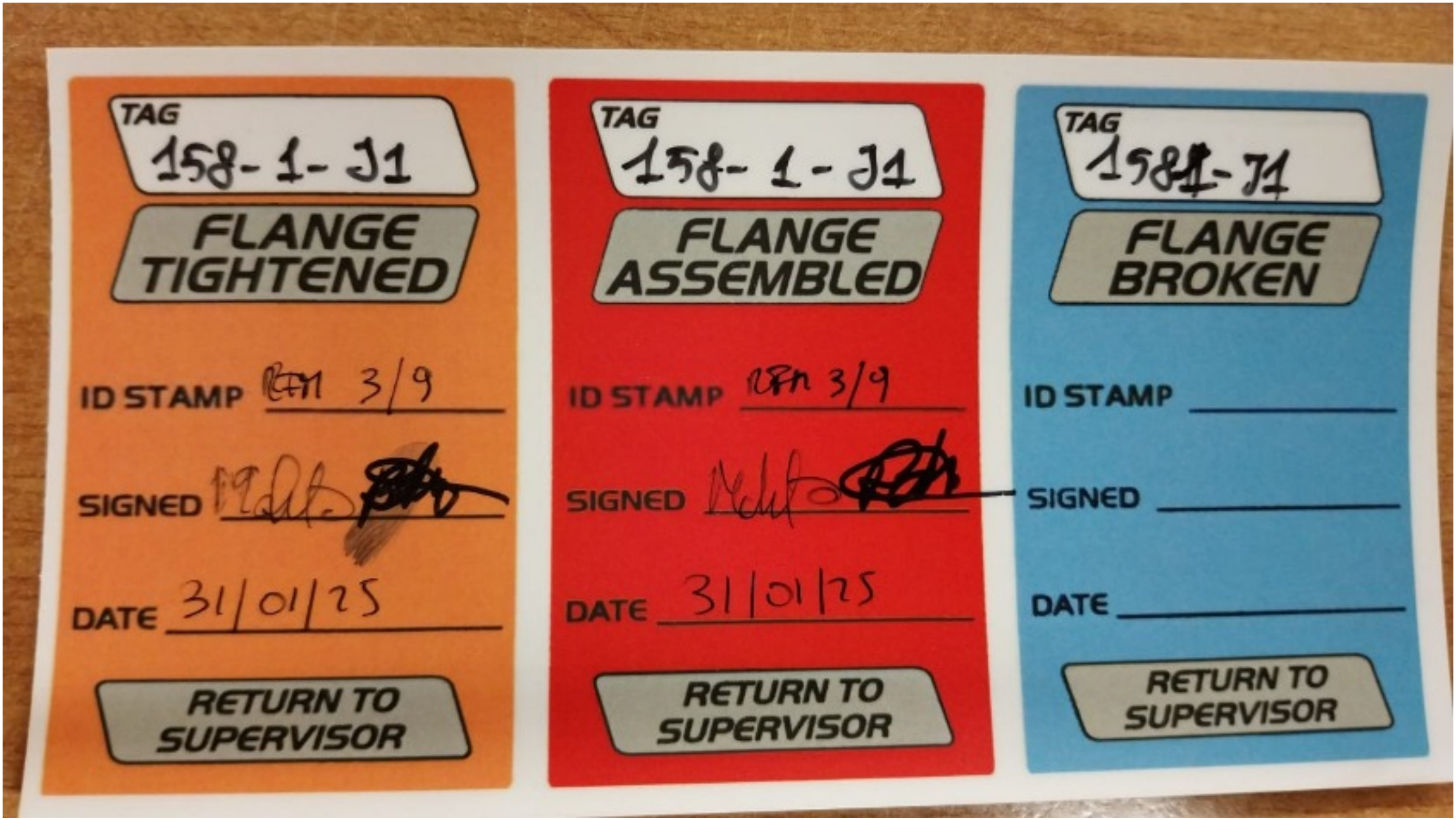
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. / [°C]		
HEAT TRACING	N/A		TEST	PRESS. N/A [barg]	TEMP. AMB	MEDIUM N/A	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80029
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

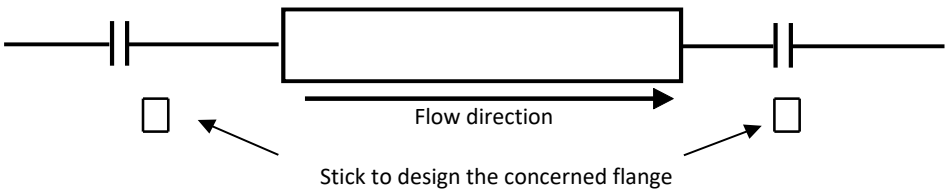
MASTER


TAG
158-1-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 31/01/25
RETURN TO SUPERVISOR
TAG
158-1-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 31/01/25
RETURN TO SUPERVISOR
TAG
158-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	028-1-J1	: Joint 028-1-J1			Dwg	123A90-FDL-PP-DI-00028-01
	S/Sys	55-00	: Waste Water Disposal			Module	UD
TASK	code	C10004342	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-005

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	Torque wrench V030390
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

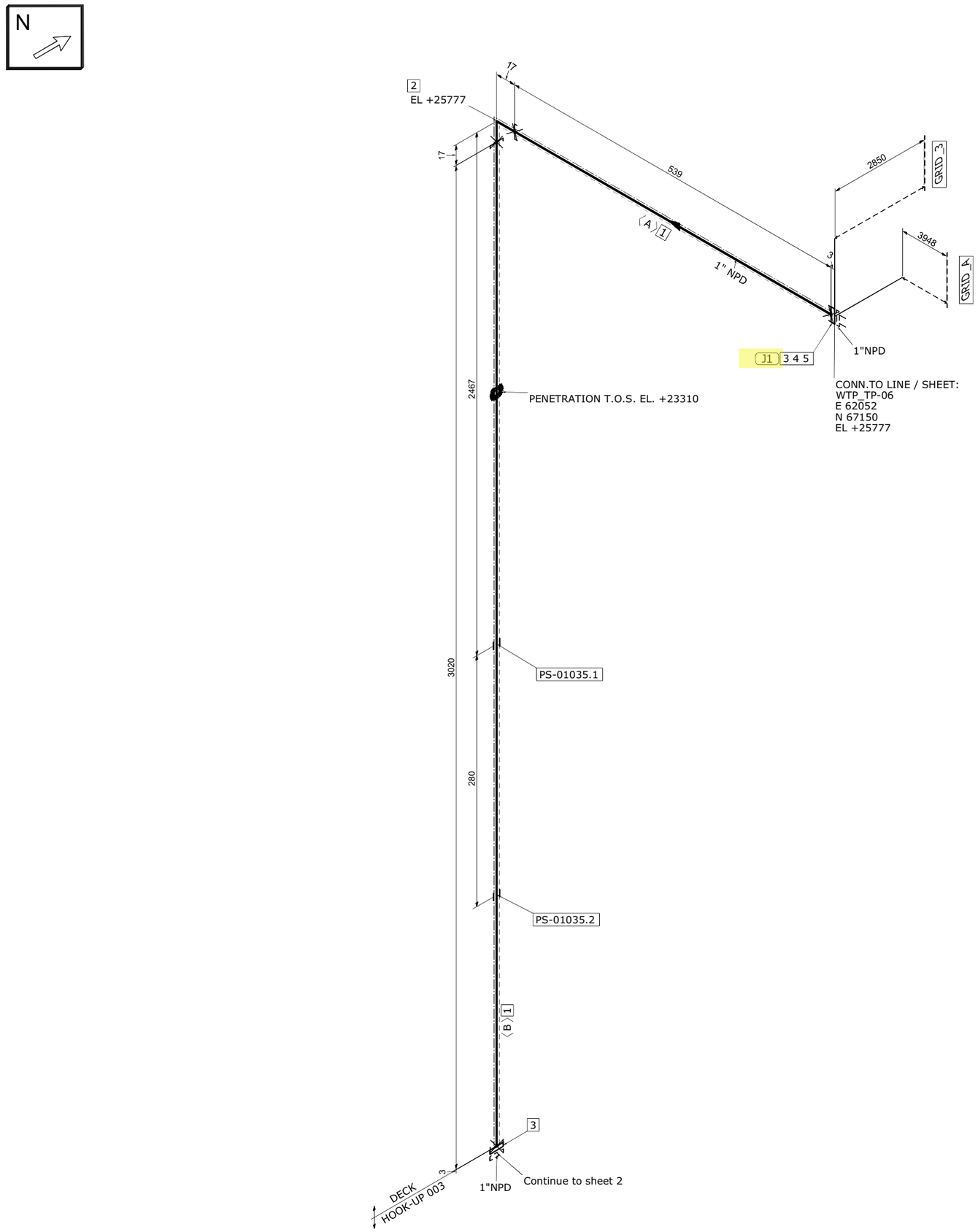
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-01-17	2025-02-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:33:43.915Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-20T10:02:52.241Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	3.6M	1.4
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
3	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.4
4	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
5	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	2.5
OVERALL WEIGHT [kg]	2.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	539	SQ.CUT	SQ.CUT
B	1	3020	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01035.1
PS-01035.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		2.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	03-09-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-043-01CP-E

SK.028

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 03-09-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00028 | SHEET / OF: 1/2 | REV.: 00

LINE DATA

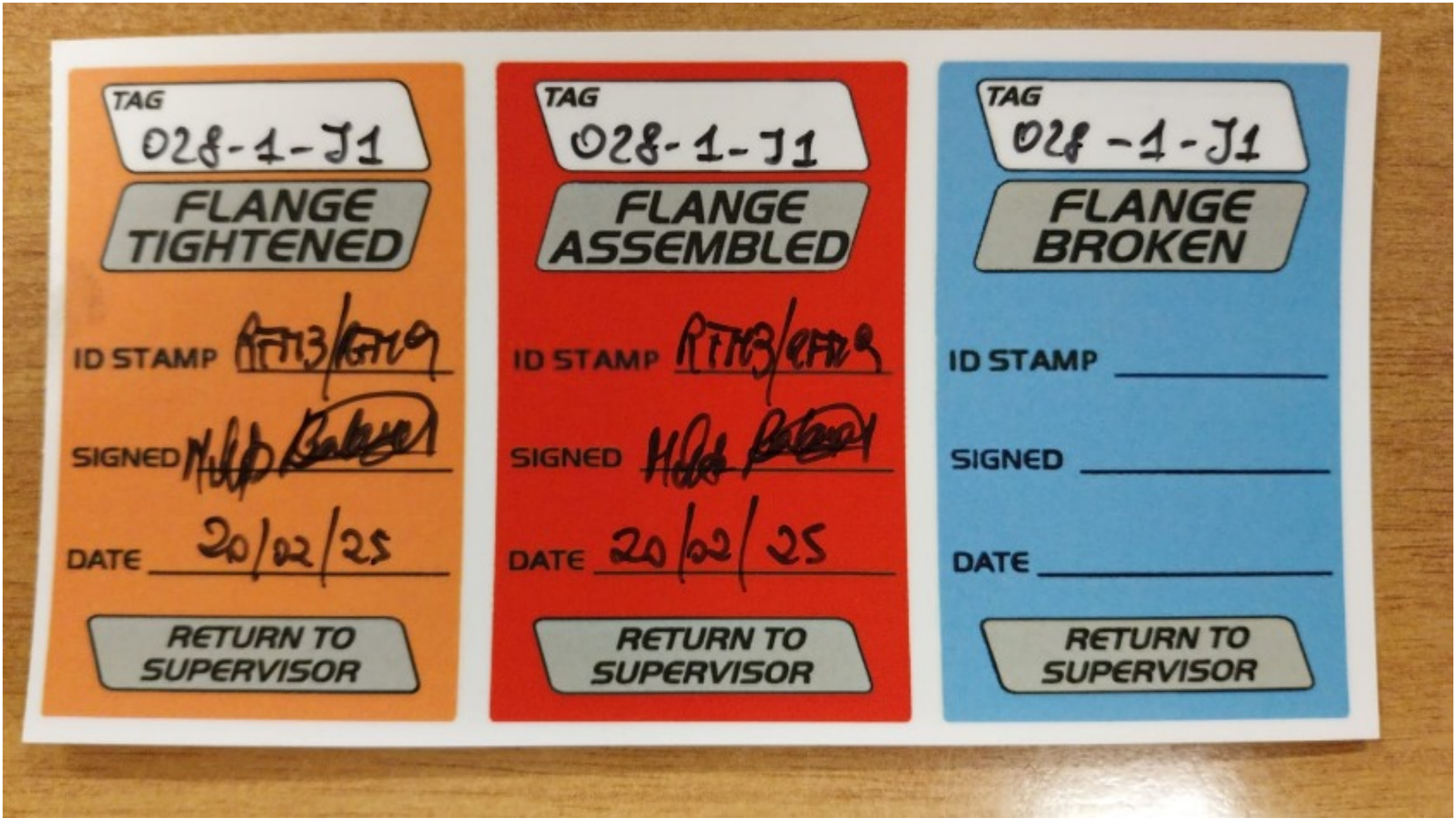
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5	[barg]	TEMP. 5 / 50	[°C]		
HEAT TRACING	Yes		TEST	PRESS. 6.75	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80022
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

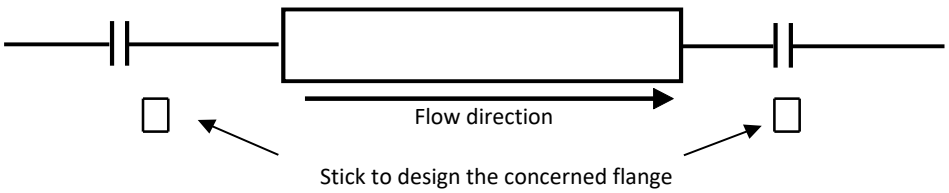
MASTER


TAG
028-1-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 20/02/25
RETURN TO SUPERVISOR
TAG
028-1-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 20/02/25
RETURN TO SUPERVISOR
TAG
028-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	028-2-J2	: Joint 028-2-J2			Dwg	123A90-FDL-PP-DI-00028-02
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004343	Location	Offshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-104

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			5	9	15
2			5	9	15
3			5	9	15
4			5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

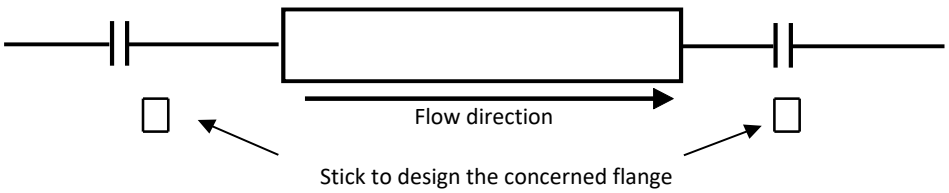
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	028-2-J3	: Joint 028-2-J3			Dwg	123A90-FDL-PP-DI-00028-02
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004344	Location	Offshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-104

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			5	9	15
2			5	9	15
3			5	9	15
4			5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

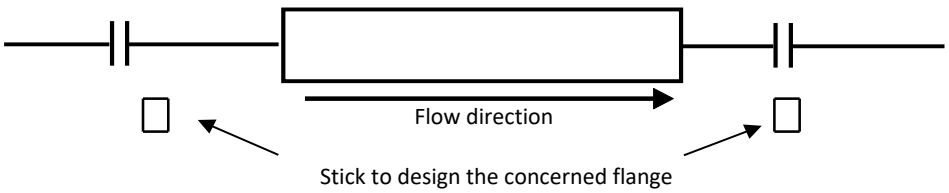
Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	028-2-J4	: Joint 028-2-J4			Dwg	123A90-FDL-PP-DI-00028-02
	S/Sys	55-00	: Waste Water Disposal			Module	LD
TASK	code	C10004345		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-104

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1			5	9	15
2			5	9	15
3			5	9	15
4			5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.

2 **Flange Face Check:** Both flanges clean and free from damage.

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.

4 **Alignment:** Check alignment according to code.

Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company			
Name			
Date			
Signature			

ITEM	Tag	T-55001	: Waste Water Tank		Dwg	123A90-DDL-PR-PID-80026	
	S/Sys	55-00	: Waste Water Disposal		Module	TP	
TASK	code	C10004926	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX05	Pressure Test

TEST DATA

Reference procedure	Note				
Design pressure	NA	Max test pressure	1.5 barg	Min hold period	NA

TEST PREPARATION

Check all equipments used for the test are safe for use under pressure (valide certificate)	Yes
Pressure relief devices are installed and in line and set to correct pressure (calibration certificate)	Yes

Medium

Test medium	AIR

TEST RESULTS

Test date	21/02/25	Start time	14:00	End time	14:30
Ambient temperature is recorded	NA			Test medium temperature is recorded	No
Pressure recorded during test hold period	Min NA	Max NA		Variation	NA
Line has been depressurised to	NA			At maximum of bar/min	NA
Pressure test completed sucessfully and approved	Yes			Temperature and pressure disc chart attached	NA
Instrument calibration certificates attached	No			Dead-weight tester log attached	NA
Record of failures and corrective action attached	No			Battery limits of the test attached	Yes
If required produce Red Line Mark Up for "AS BUILT".					

Comments: Attached procedure for test and inspected welds.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Alberto Cavazzi	Lorenzo Novaga	
Date	2025-02-24	2025-02-24	
Signature	PROVERLIS Digitaly signed by Alberto Cavazzi 2025-02-24T09:05:52.715Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-24T09:06:03.388Z	

Outlook

123A90 Leak test water tank Transition Piece

Da Cavazzi Alberto (Rosetti) <Alberto.Cavazzi@rosetti.it>

Data gio 20/02/2025 10:03

A Borghi Wolmer (Rosetti) <Wolmer.Borghi@rosetti.it>; Bravetti Massimo (Rosetti) <Massimo.Bravetti@rosetti.it>; De Maglie Gianluca (Rosetti) <Gianluca.DeMaglie@rosetti.it>; salvatore spadafora <Salvatore.spadafora@omgkr.it>; Albonetti Kangi (ERM) <Kangi.Albonetti@rosetti.it>; Bruschi Massimo (ERM) <Massimo.Bruschi@rosetti.it>; Carotenuto Eleonora (ERM) <Eleonora.Carotenuto@rosetti.it>; Spadoni Mirella (ERM) <Mirella.Spadoni@rosetti.it>; Mussi Luca (ERM) <Luca.Mussi@rosetti.it>; Novaga Lorenzo (ERM) <Lorenzo.Novaga@rosetti.it>

Cc Degli Esposti Raffaele (Rosetti) <Raffaele.DegliEsposti@rosetti.it>; Patane Mario (Rosetti) <Mario.Patane@rosetti.it>; Giunchi Claudia (Rosetti) <Claudia.Giunchi@rosetti.it>; Francolino Luca (ERM) <Luca.Francolino@rosetti.it>; Ricci Picciloni Daniele (Rosetti) <Daniele.RicciPicciloni@rosetti.it>; Gulminelli Giacomo (Rosetti) <Giacomo.Gulminelli@rosetti.it>; Domi Andi (ERM) <Andi.Domi@rosetti.it>

1 allegato (3 MB)

doc11628220250220083049.pdf;

Buongiorno,

vorrei fare un poco di chiarezza in merito al test in oggetto e allego i dwg con indicate le saldature del serbatoio, ho volutamente escluso le parti strutturali del corpo centrale in quanto si tratta di spessori da 50/65mm a piena penetrazione con controlli UT/MT al 100% ed escluderei la possibilità di perdite.
Il test sarà ad aria e con una pressione di 1,5 bar massimo, non supererei questo valore anche per motivi di sicurezza in quanto il volume in gioco è importante e per la verifica che dobbiamo fare è più che sufficiente.
Per verificare la tenuta delle saldature utilizzeremo una soluzione di acqua e sapone spruzzata sulla parte esterna delle saldature, verificando visivamente che non ci siano fuoriuscite di aria.
Se lo ritenete necessario possiamo testare tutte le saldature evidenziate, anche se mi focalizzerei solo sulle saldature fillet e quelle in cat.III (testate al 50%), in quanto tutte le altre sono a piena penetrazione con controlli UT/MT al 100%.
Non testiamo gli accoppiamenti flangiati in quanto temporanei.

Saldature da testare al 100%

W164,W165 dwg 90653 mark CWTPWT001
W67 dwg 90656 mark CWTPWT001

W8 dwg 90773 mark CWTPMD001
W1 sk 032 mark CWLWN001/002/003/004/005/006

Se ci sono dubbi o commenti in merito possiamo organizzare un incontro.

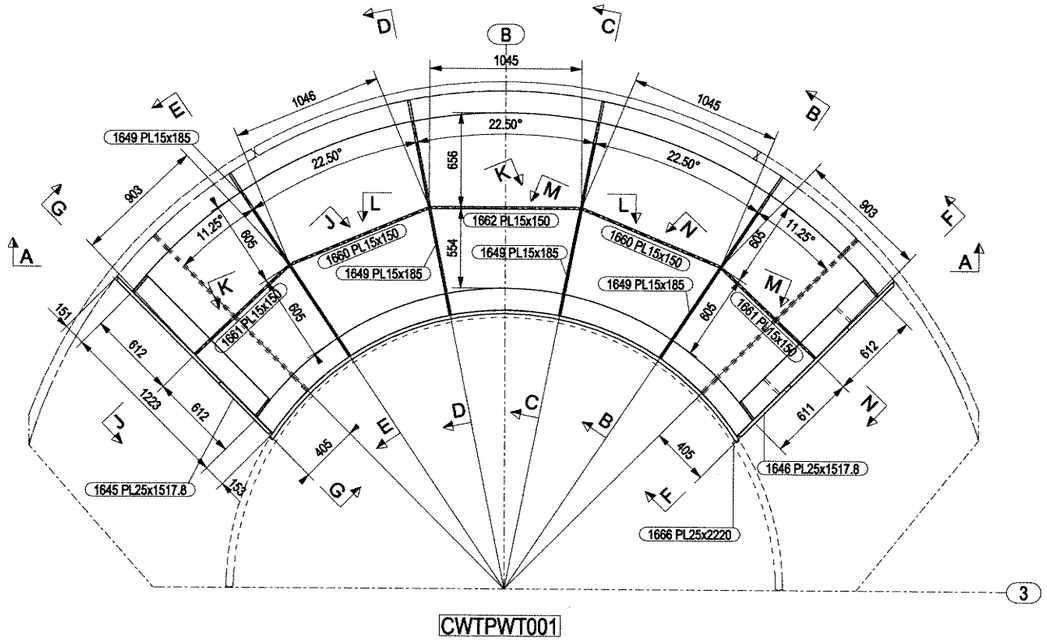
Ciao

Alberto Cavazzi
Q.C. Welding/NDT Inspector

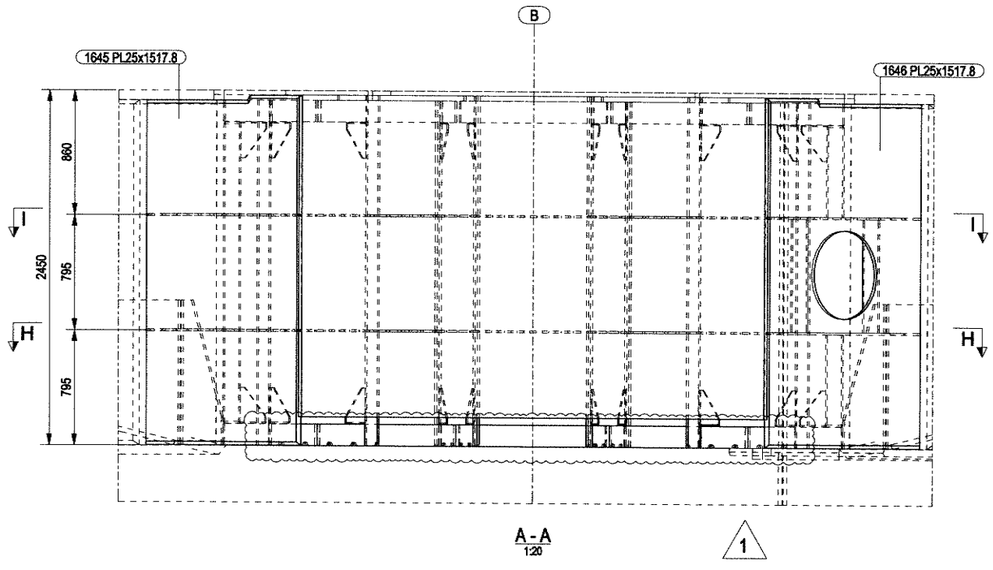
ROSETTI MARINO SPA

Piomboni Yard
Via del Marchesato 37
48122 Marina di Ravenna (RA) – ITALY
mobile: +39 389 5326074
email: alberto.cavazzi@rosetti.it

www.rosetti.it



CWTPWT001



A - A
1:20

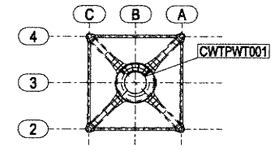
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MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWTPWT001	1645	1	PL25x1517.8	2414	S355J2	3	696.0	7.35	
CWTPWT001	1646	1	PL25x1517.8	2414	S355J2	3	638.7	6.81	
CWTPWT001	1647	4	PL15x150	2385	S355J2	3	168.5	3.17	
CWTPWT001	1648	4	PL15x150	2420	S355J2	3	171.0	3.21	
CWTPWT001	1649	4	PL15x185	1204	S355J2	3	90.0	1.70	
CWTPWT001	1650	4	PL15x150	1204	S355J2	3	84.3	1.60	
CWTPWT001	1651	20	PL10x247	247	S355J2	3	61.9	1.77	
CWTPWT001	1654	6	PL15x293.4	780	S355J2	3	81.6	1.55	
CWTPWT001	1655	4	PL15x187.4	777	S355J2	3	54.2	1.03	
CWTPWT001	1656	6	PL15x397.5	1300	S355J2	3	138.2	2.61	
CWTPWT001	1657	4	PL15x309.3	1031	S355J2	3	73.0	1.38	
CWTPWT001	1658	2	PL15x150	619	S355J2	3	21.4	0.41	
CWTPWT001	1659	2	PL15x150	597	S355J2	3	20.5	0.39	
CWTPWT001	1660	4	PL15x150	1021	S355J2	3	71.6	1.36	
CWTPWT001	1661	4	PL15x150	891	S355J2	3	62.7	1.19	
CWTPWT001	1662	2	PL15x150	1021	S355J2	3	35.8	0.68	
CWTPWT001	1663	1	PL15x150	2079	S355J2	3	36.5	0.69	
CWTPWT001	1664	2	PL15x150	1228	S355J2	3	42.4	0.80	
CWTPWT001	1665	2	PL15x150	635	S355J2	3	22.2	0.43	
CWTPWT001	1666	1	PL25x2220	3837	S355J2	3	1670.7	17.34	
CWTPWT001	1667	2	PL15x150	780	S355J2	3	27.6	0.52	
						TOTALE	4268.8	55.98	

NOTES

1 - ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 - ALL ELEVATIONS ARE REFERED TO C.D.
3 - FOR SECTIONS B-B TO G-G SEE DWG 123A90-FDL-ST-DD-90653
4 - FOR SECTIONS H-H & N-N SEE DWG 123A90-FDL-ST-DD-90654

KEY PLAN



TP LAYOUT

HOLDS

1

REFERENCE DRAWINGS

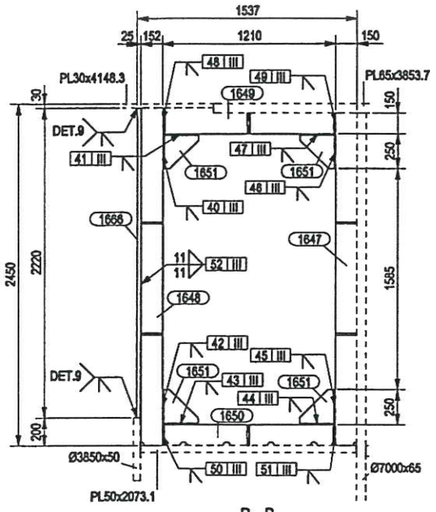
DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90123-001	TP - WASTE WATER TANK ASSEMBLY AND DETAILS
123A90-DDL-ST-DD-90123-002	TP - WASTE WATER TANK ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
1	28/08/2024	CM-TS	MR	DC	REVISED WHERE INDICATED/ HOLD REMOVED
0	14/06/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND | ROSETTI MARINO

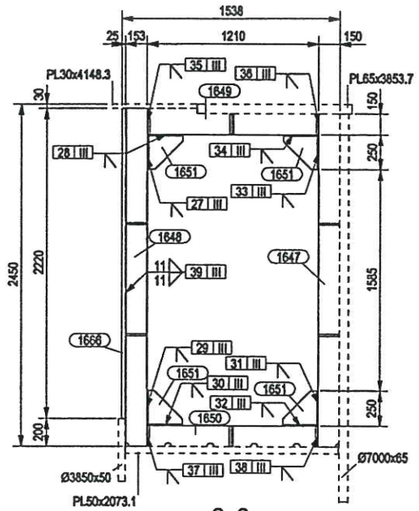
TITLE :
BASE LOAD POWER HUB (BLPH)
TP - WASTE WATER TANK
MARK CWTPWT001

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 28/08/2024
A1	DRAWING NO. 123A90-FDL-ST-DD-90652	SHEET 001	REV. 1



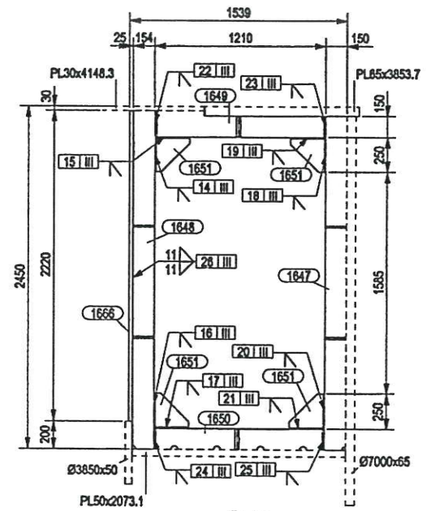
B - B
1:20

ALL DETAIL ARE DET. 24 U.N.O.



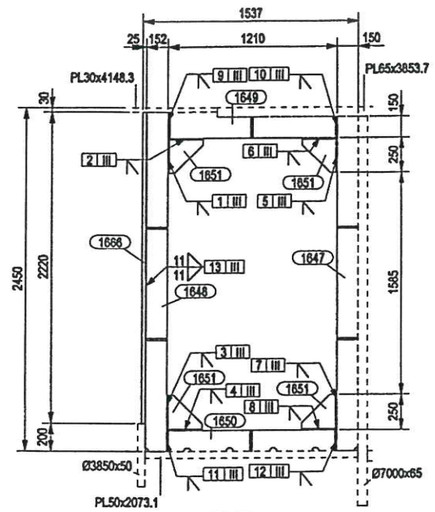
C - C
1:20

ALL DETAIL ARE DET. 24 U.N.O.



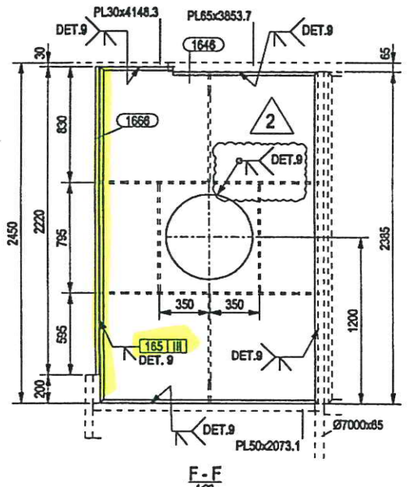
D - D
1:20

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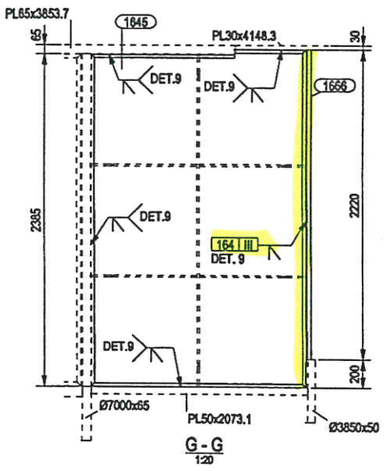


E - E
1:20

ALL DETAIL ARE DET. 24 U.N.O.



F - F
1:20

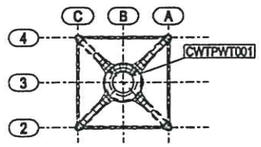


G - G
1:20

NOTES

1 - ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 - ALL ELEVATIONS ARE REFERED TO C.D.
3 - FOR PLAN VIEW & MATETRIAL LIST SEE DWG 123A90-FDL-ST-DD-90652

KEY PLAN



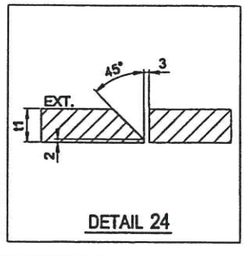
TP LAYOUT

HOLDS

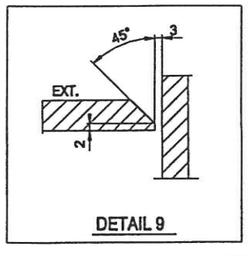
REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90123-001	TP - WASTE WATER TANK ASSEMBLY AND DETAILS
123A90-DDL-ST-DD-90123-002	TP - WASTE WATER TANK ASSEMBLY AND DETAILS

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	29/11/2024	CM-TS	MR	DC	REVISED WHERE INDICATED
1	28/08/2024	CM-TS	MR	DC	REVISED WHERE INDICATED/ HOLD REMOVED
0	14/08/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION



DETAIL 24



DETAIL 9

CROSSWIND

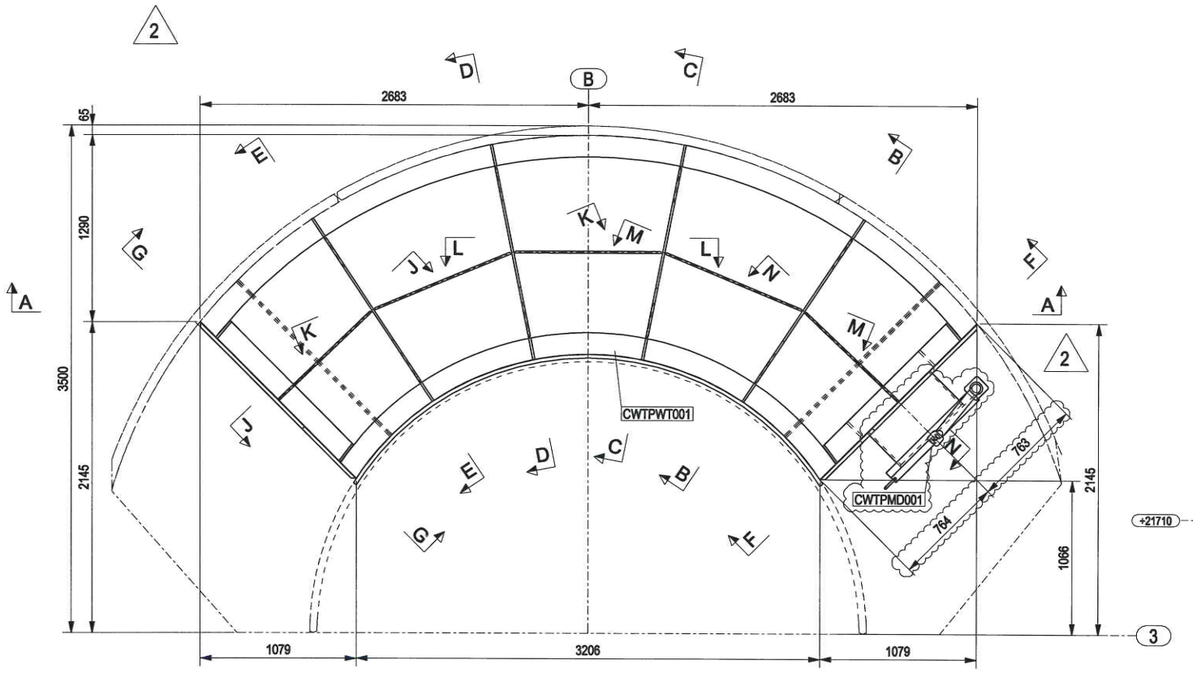
ROSETTI MARINO

TITLE :

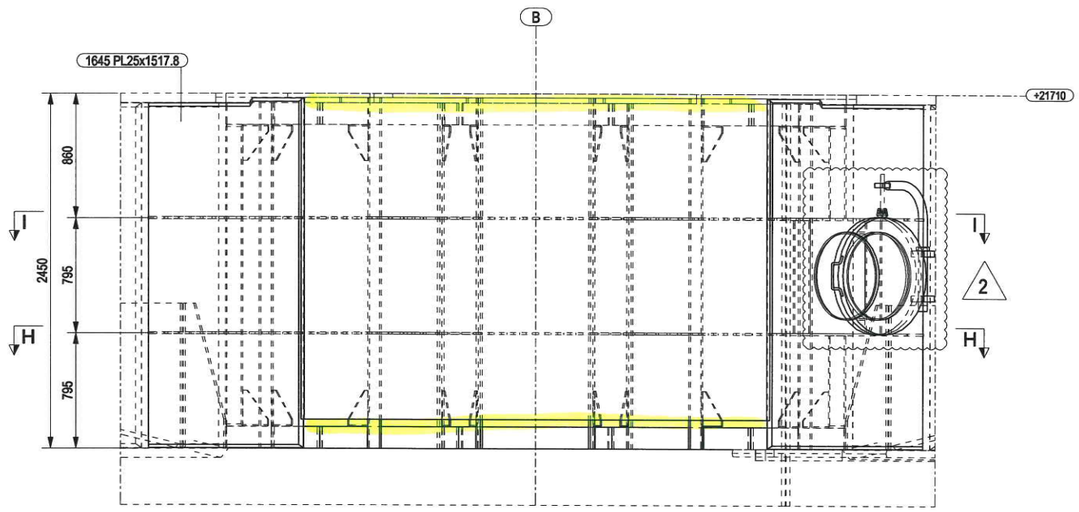
BASE LOAD POWER HUB (BLPH)
TP - WASTE WATER TANK
MARK CWTPWT001

CONTRACT NO./TITLE CW-1-WF4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:10
DRAWN CM-TS	CHECKED M.ROSSI	APPROVED D.CASADIO	DATE 29/11/2024
A1	DRAWING NO. 123A90-FDL-ST-DD-90653	SHEET 001	REV. 2

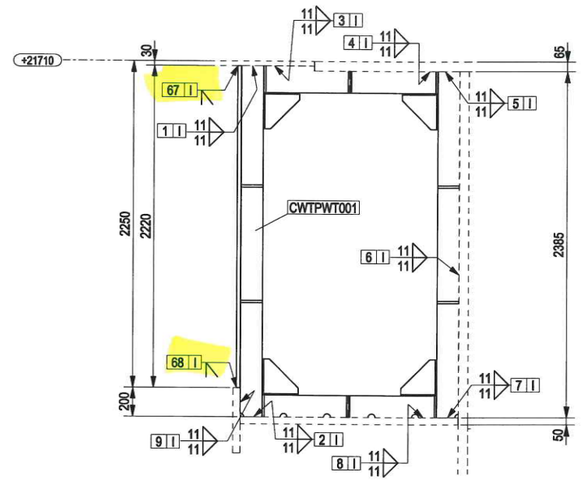
MARKS	DRAWING NUMBER	NOTES
CWTPMD001	123A90-FDL-ST-DD-90773	
CWTPWT001	123A90-FDL-ST-DD-90652	



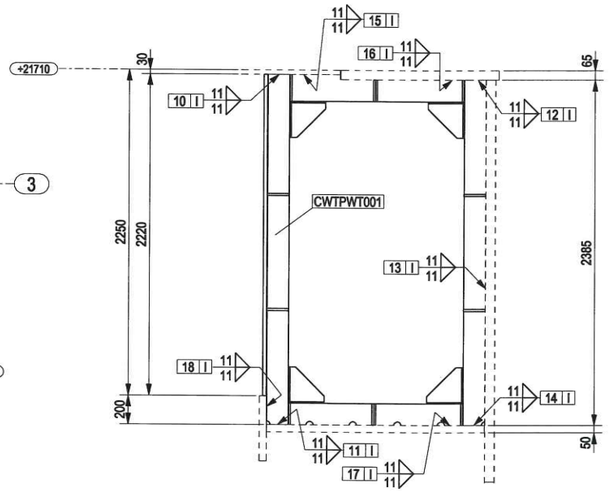
ASSEMBLY WASTE WATER TANK



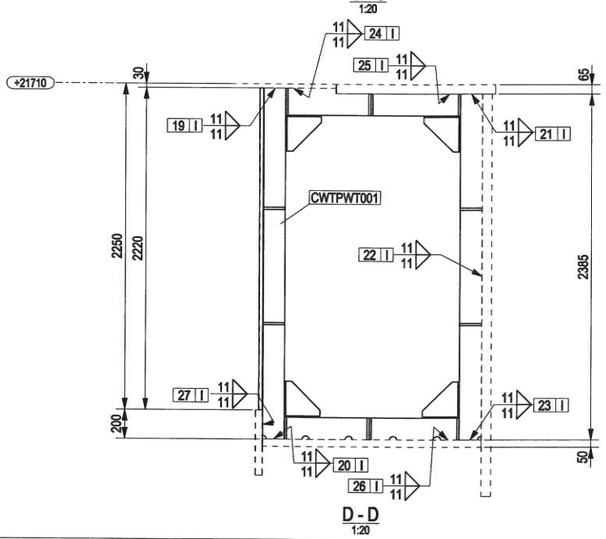
A - A
1:20



B - B
1:20



C - C
1:20

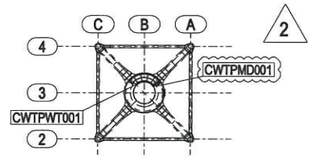


D - D
1:20

NOTES

1 – ALL DIMENSIONS AND ELEVATIONS ARE IN MILLIMETERS U.N.O.
2 – ALL ELEVATIONS ARE REFERED TO C.D.
3 – FOR SECTIONS E–E TO N–N SEE DWG 123A90–FDL–ST–DD–90656

KEY PLAN



TP LAYOUT

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DDL-ST-DD-90123-001	TP - WASTE WATER TANK ASSEMBLY AND DETAILS
123A90-DDL-ST-DD-90123-002	TP - WASTE WATER TANK ASSEMBLY AND DETAILS

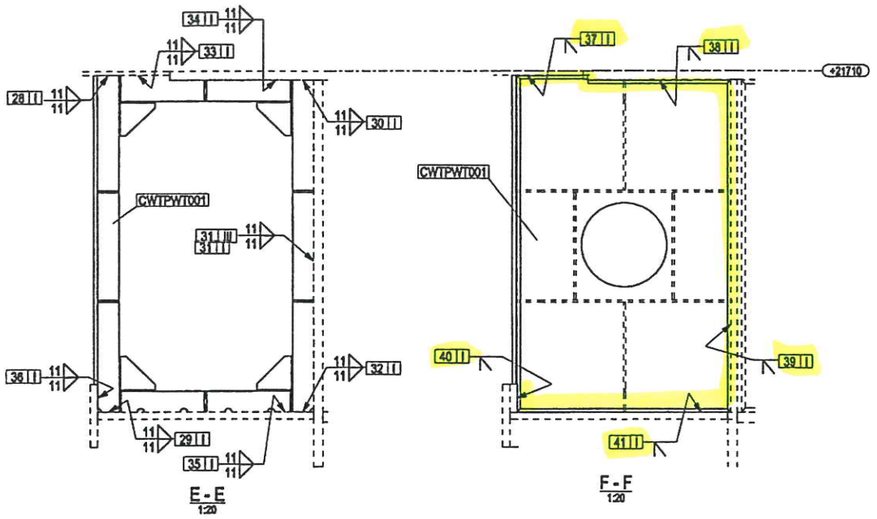
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	29/11/2024	CM–TS	MR	DC	REVISED WHERE INDICATED
1	28/08/2024	CM–TS	MR	DC	REVISED WHERE INDICATED/ HOLD REMOVED
0	14/06/2024	CM–TS	MR	DC	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

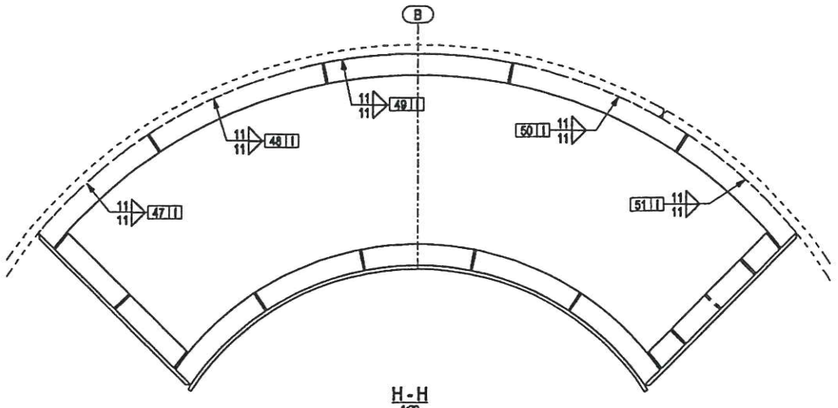
TITLE :
BASE LOAD POWER HUB (BLPH)
TP – WASTE WATER TANK AT EL.+21710 TOS
ASSEMBLY TP WASTE WATER TANK

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 29/11/2024
A1	DRAWING NO. 123A90–FDL–ST–DD–90655	SHEET 001	REV. 2

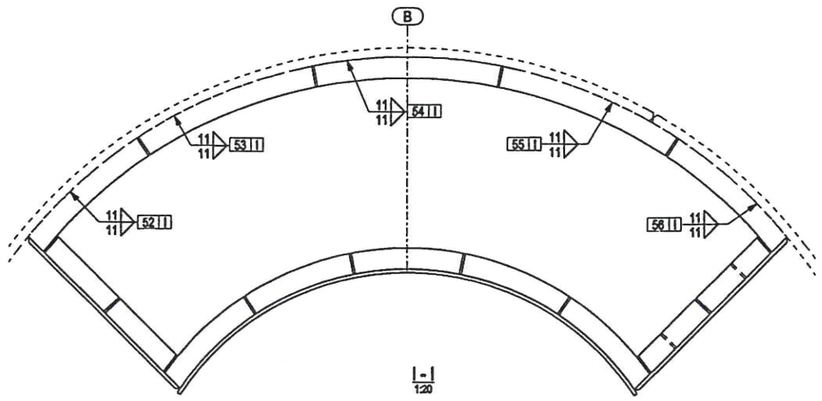


E - E
1:20

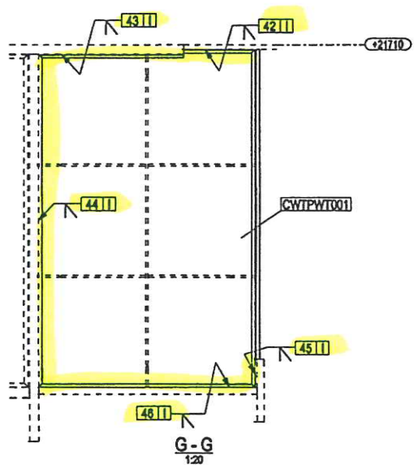
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1:20



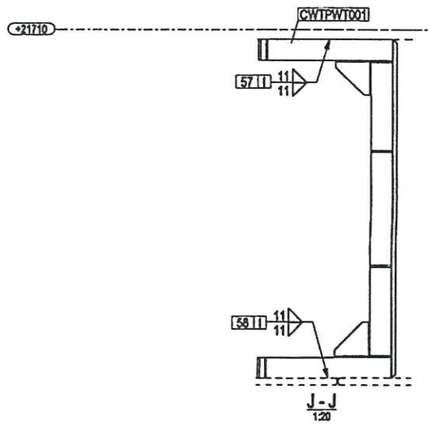
H - H
1:20



I - I
1:20



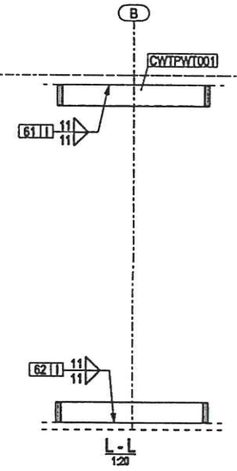
G - G
1:20



J - J
1:20



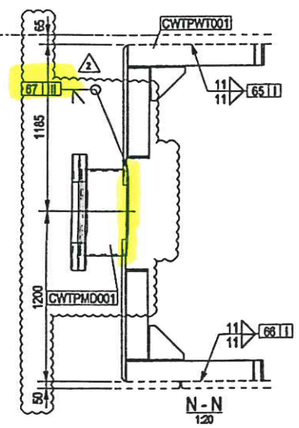
K - K
1:20



L - L
1:20



M - M
1:20

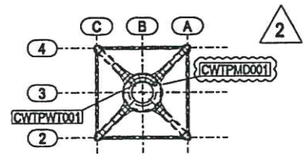


N - N
1:20

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 DRAWING LIST SEE DWG 123A90-FDL-ST-DD-90655

KEY PLAN



TP LAYOUT

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
123A90-DOL-ST-DD-90123-001	TP - WASTE WATER TANK ASSEMBLY AND DETAILS
123A90-DOL-ST-DD-90123-002	TP - WASTE WATER TANK ASSEMBLY AND DETAILS

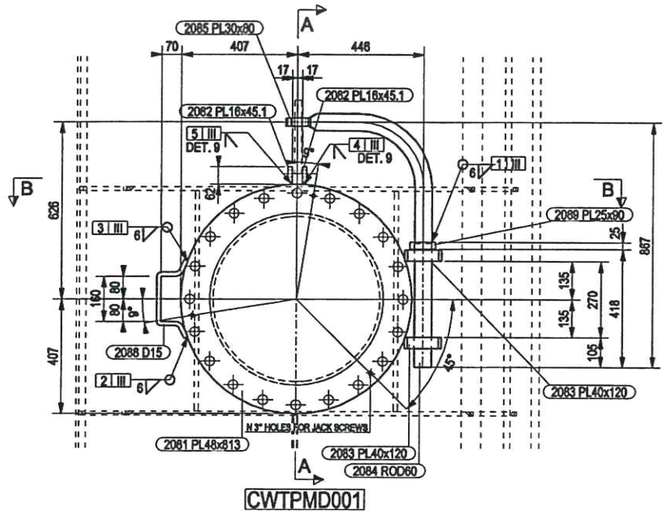
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
2	29/11/2024	CM-TS	MR	DC	REVISED WHERE INDICATED
1	28/08/2024	CM-TS	MR	DC	REVISED WHERE INDICATED/ HOLD REMOVED
0	14/06/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

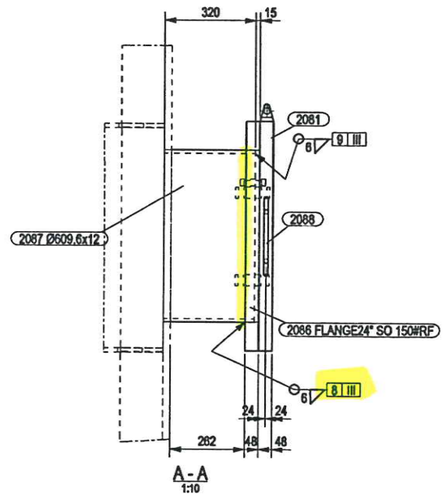
CROSSWIND

ROSETTI MARINO

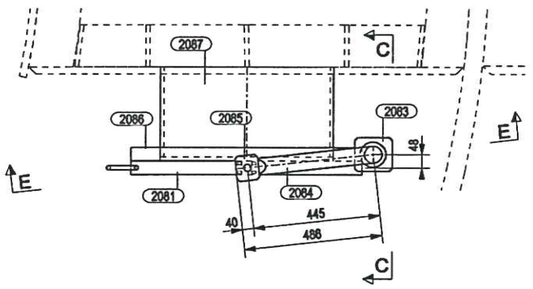
TITLE :
BASE LOAD POWER HUB (BLPH)
TP – WASTE WATER TANK AT EL.+21710 TOS
ASSEMBLY TP WASTE WATER TANK

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 29/11/2024
A1	DRAWING NO. 123A90-FDL-ST-DD-90656	SHEET 001	REV. 2

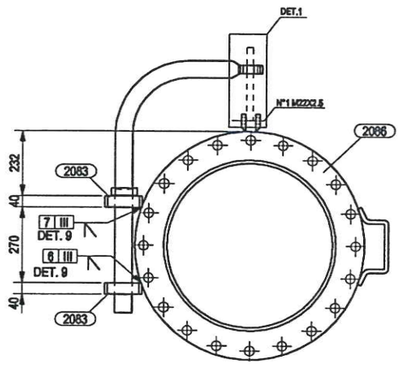




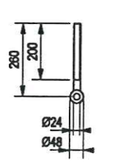
MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWTPMD001	2081	1	MANHOLE FLANGE	813	ASTM A182	3	194.0	1.15	
CWTPMD001	2082	2	PL16x45.1	65	A516 GR.70	3	0.3	0.01	
CWTPMD001	2083	2	PL40x120	130	A516 GR.70	3	7.8	0.10	
CWTPMD001	2084	1	ROD60	1174	A36	3	25.5	0.22	
CWTPMD001	2085	1	PL30x80	90	A516 GR.70	3	1.5	0.02	
CWTPMD001	2086	1	FLANGE24" SO 150#RF	813	ASTM A182	3	84.2	0.66	
CWTPMD001	2087	1	Ø609.6x12	320	API5LX52	3	56.5	0.64	
CWTPMD001	2088	1	D15	418	A36	3	0.6	0.02	
CWTPMD001	2089	1	PL25x90	90	A516 GR.70	3	0.8	0.02	
						TOTALE	371.1	2.86	



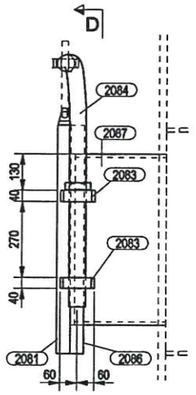
B - B
1:10



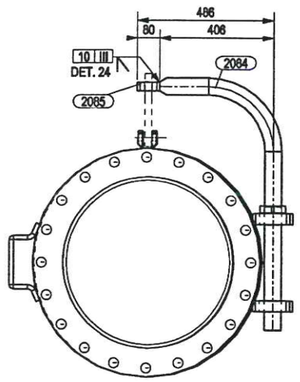
D - D
1:10



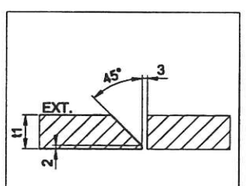
DET.1
EYE BOLT



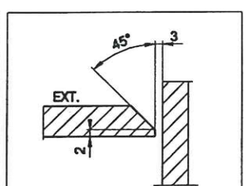
C - C
1:10



E - E
1:10



DETAIL 24

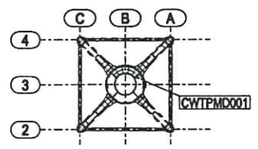


DETAIL 9

NOTES

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

KEY PLAN



TP LAYOUT

HOLDS

REFERENCE DRAWINGS

DWG No.	DESCRIPTION
1723001756-MAC-DD-00023	MANHOLE DAVIT - H2 STORAGE VASSEL ITEM : V-25001A/F

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
0	28/11/2024	CM-TS	MR	DC	ISSUED FOR CONSTRUCTION

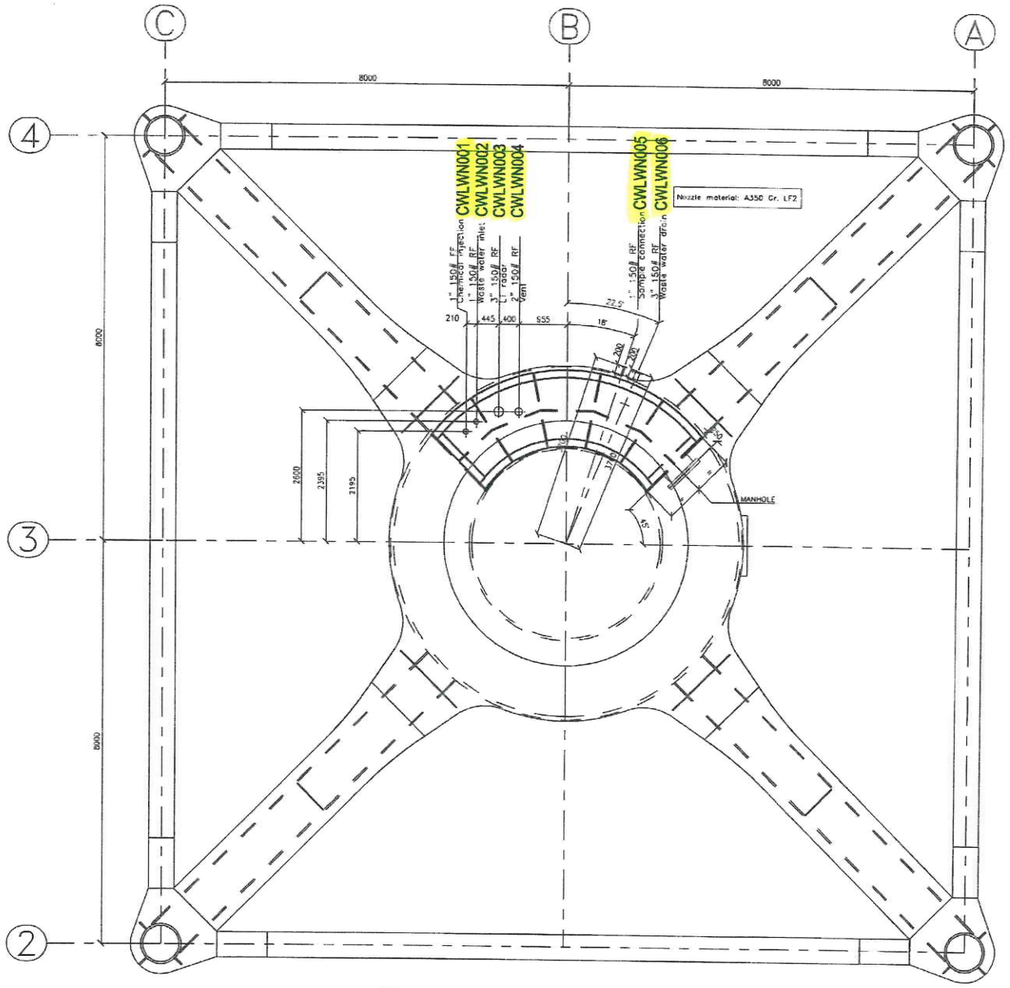
CROSSWIND

ROSETTI MARINO

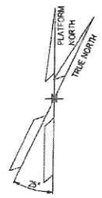
TITLE :
BASE LOAD POWER HUB (BLPH)
TP – MANHOLE DAVIT
MARK CWTPMD001

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 28/11/2024

A1	DRAWING NO. 123A90-FDL-ST-DD-90773	SHEET 001	REV. 0



TP – WASTE WATER TANK – KEY PLAN

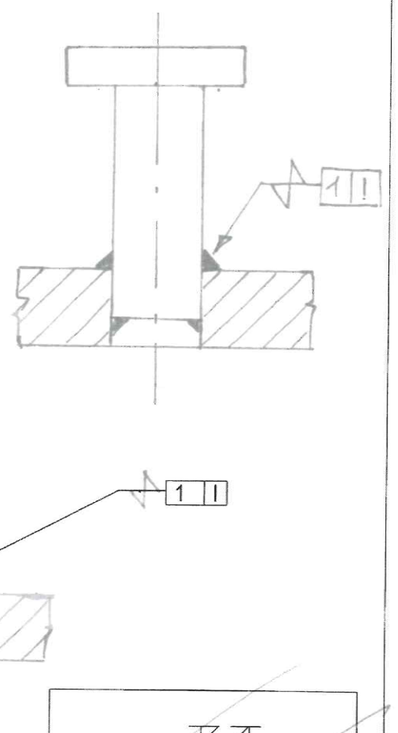


MARK	POS.	Q.TY	DENOMINATION	LENGTH (mm)	MATERIAL GRADE	STR. CAT.	WEIGHT (Kg)	P. SURF. (m^2)	NOTES
CWLWN001	001	1	LWN 1" FF 150LB ASME	1"	A/SA350 Gr. LF2	2			
CWLWN002	001	1	LWN 1" RF 150LB ASME	1"	A/SA350 Gr. LF2	2			
CWLWN003	001	1	LWN 3" RF 150LB ASME	3"	A/SA350 Gr. LF2	2			
CWLWN004	001	1	LWN 2" RF 150LB ASME	2"	A/SA350 Gr. LF2	2			
CWLWN005	001	1	LWN 1" RF 150LB ASME	1"	A/SA350 Gr. LF2	2			
CWLWN006	001	1	LWN 3" RF 150LB ASME	3"	A/SA350 Gr. LF2	2			

MARKS:

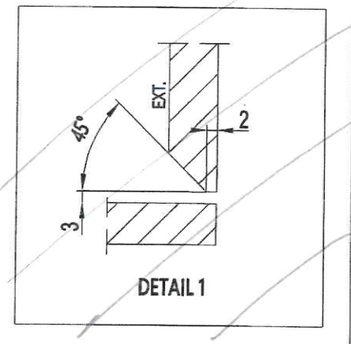
- CWLWN001 (1)
- CWLWN002 (1)
- (2) CWLWN003
- CWLWN004 (1)
- CWLWN005 (1)
- (2) CWLWN006

(1) TYP. 1" & 2"

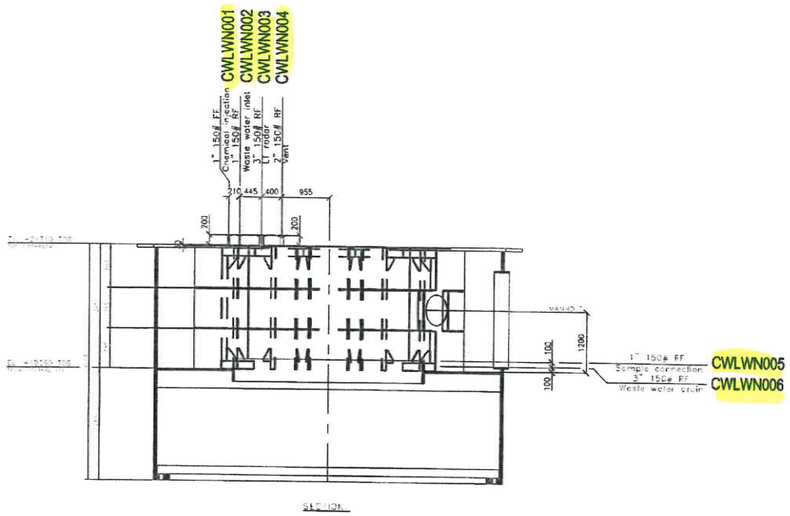


(2) TYPICAL WELD DETAIL

3"



DETAIL 1



SECTION

Quality Control Dept.
Alberto Cavazzi
Rosetti Marino SpA
11/02/25

ROSETTI MARINO			
CLIENTE / CUSTOMER: CROSSWIND	COMMESSA / JOB No: 123A90	DISEGNO N° / DWG No: 123A90-SK-032	
DESCRIPTION / DESCRIZIONE: BOCCHELLI TP	FILE N° / FILE No:	REV. N° / REV. No: 0	DATA / DATE: 10/02/25

A3

Section 11 MECHANICAL COMPLETION INDEX - SAFETY DISCIPLINE

NOT APPLICABLE

Section 12 FAT / VENDOR REPORTS

NOT APPLICABLE

Section 13 MECHANICAL COMPLETION CHANGES / MARK-UPS

NOT APPLICABLE