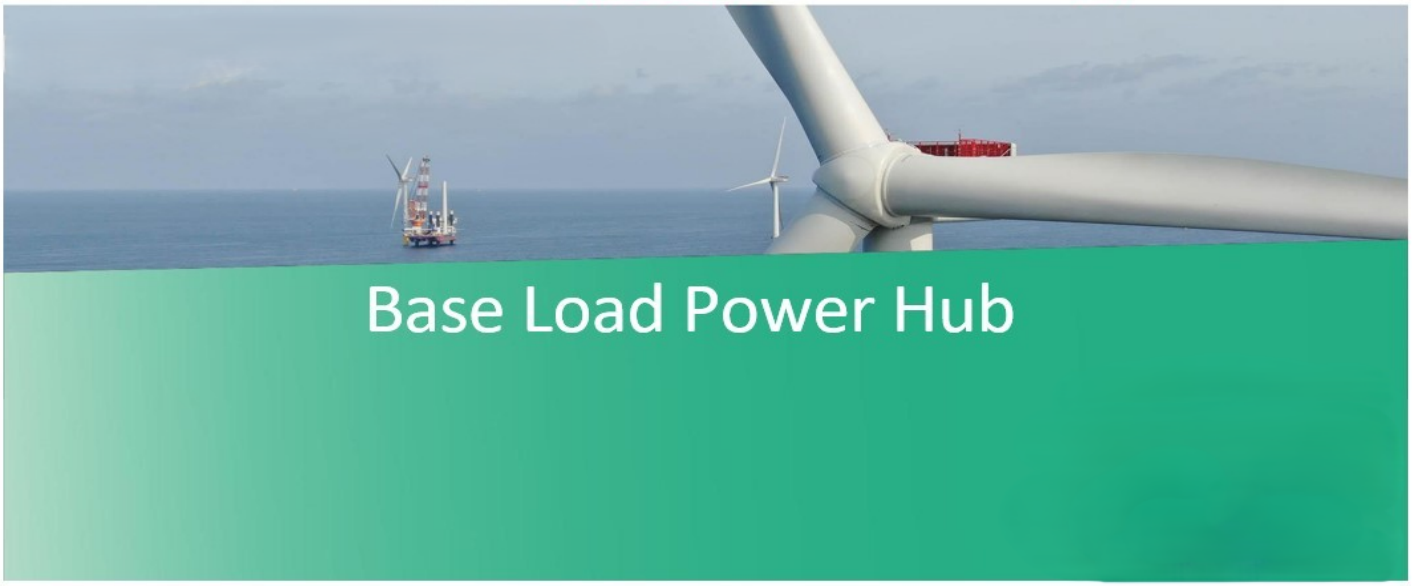
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	55 Waste Water
SUBSYSTEM	55-01 Waste Water Brine Discharge System

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

Sub System N°:	55-01	Tick as appropriate	ONSHORE	O
Description:	Waste Water Brine Discharge System		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*	NA
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:	2		Issued on:	2025-04-03	
System:	55	/	Waste Water		
SubSystem:	55-01	/	Waste Water Brine Discharge System		

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: 13

REMARKS: ONSHORE SOW completed, n. 6 outstanding tasks to be cleared in OFFSHORE phase.

	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	2025-04-07	2025-04-05	2025-04-07	2025-04-07
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-04-07T06:58:27.891Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-04-05T06:55:37.501Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-04-07T07:24:33.357Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-04-07T07:24:37.477Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-01 & process: MC

Building	55-01 Waste Water Brine Discharge System						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
B-50014	Brine Discharge Caisson Frame	ONSHORE	C10004523	CQX01	100	2025-04-01	RFC 2
		ONSHORE	C10004927	CXX03	100	2025-03-25	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-01 & process: MC

Instrumental	55-01 Waste Water Brine Discharge System

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
50-PT-014	Pressure Transmitter - Water Disposal Header to Caisson B-50014	ONSHORE	C10000903	CJX08	100	2025-02-21	RFC 1
		ONSHORE	C10000943	TJX04	100	2024-10-02	RFC 1
50-TT-002	Temperature Transmitter - Water Disposal Header to Caisson B-50014	ONSHORE	C10000905	CJX08	100	2025-02-21	RFC 1
		ONSHORE	C10000945	TJX04	100	2024-10-02	RFC 1
50-TW-002	Thermowell - Water Disposal Header to Caisson B-50014	ONSHORE	C10000907	CJX13	100	2025-02-21	RFC 1
		ONSHORE	C10001435	TJX13	100	2025-02-13	RFC 1
50-XV-005	On-Off Actuated Ball Valve	ONSHORE	C10004657	CJX23	100	2025-03-07	RFC 1
50-XY-005	Solenoid Valve - Brine Discharge Caisson B-50014	ONSHORE	C10004661	CJX00	100	2025-03-07	RFC 1
50-ZSHL-005	Limit Switch box Brine Discharge Caisson B-50014	ONSHORE	C10004662	CJX00	100	2025-03-07	RFC 1
AV-63009/50-XV-005	Pneumatic Connection	ONSHORE	C10004658	CJX06	100	2025-03-10	RFC 2
C-50-PT-014/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000057	CJX10	100	2025-02-21	RFC 1
C-50-TT-002/00-JE-11004	FLOW TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000052	CJX10	100	2025-02-21	RFC 1
C-50-XV-005/00-JE-12006	On-Off Actuated Ball Valve/DI JB to PCS	ONSHORE	C10004664	CJX10	100	2025-03-07	RFC 1
C-50-XY-005/00-JE-13003	Solenoid Valve/DO JB to PCS	ONSHORE	C10004665	CJX10	100	2025-03-07	RFC 1

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-01 & process: MC

Piping	55-01 Waste Water Brine Discharge System						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
004-1-J1	Joint 004-1-J1	ONSHORE	C10004177	TMX27	100	2025-02-14	RFC 1
004-1-J2	Joint 004-1-J2	ONSHORE	C10004178	TMX27	100	2025-01-28	RFC 1
004-1-J3	Joint 004-1-J3	ONSHORE	C10004179	TMX27	100	2025-02-14	RFC 1
007-1-J1	Joint 007-1-J1	ONSHORE	C10004180	TMX27	100	2025-01-31	RFC 1
029-1-J1	Joint 029-1-J1	ONSHORE	C10004210	TMX27	100	2025-03-06	RFC 1
030-3-J1	Joint 030-3-J1	OFFSHORE	C10004211	TMX27	0	-	-
031-2-J1	Joint 031-2-J1	ONSHORE	C10004212	TMX27	100	2025-02-17	RFC 1
031-2-J2	Joint 031-2-J2	ONSHORE	C10004213	TMX27	100	2025-01-17	RFC 1
031-2-J3	Joint 031-2-J3	ONSHORE	C10004214	TMX27	100	2025-03-06	RFC 1
031-2-J4	Joint 031-2-J4	ONSHORE	C10004215	TMX27	100	2025-03-06	RFC 1
031-2-J6	Joint 031-2-J6	ONSHORE	C10004217	TMX27	100	2025-02-17	RFC 1
031-2-J7	Joint 031-2-J7	ONSHORE	C10004542	TMX27	100	2025-03-06	RFC 1
031-2-J8	Joint 031-2-J8	ONSHORE	C10004543	TMX27	100	2025-03-06	RFC 1
031-2-J9	Joint 031-2-J9	ONSHORE	C10004544	TMX27	100	2025-01-17	RFC 1
031-3-J5	Joint 031-3-J5	OFFSHORE	C10004216	TMX27	0	-	-
55-01-TP-003	Test Pack 55-01-TP-003	ONSHORE	C10003247	CLX02A	100	2025-01-31	RFC 2
		ONSHORE	C10003248	CLX02B	100	2025-03-10	RFC 2
		ONSHORE	C10003249	CXX01	100	2025-03-28	RFC 2
		ONSHORE	C10003250	CXX02	100	2025-03-24	RFC 2
		ONSHORE	C10003251	TMX03	100	2025-01-31	RFC 2
		ONSHORE	C10003252	TMX05	100	2025-01-31	RFC 2
		ONSHORE	C10003254	TPLX05	100	2025-01-31	RFC 2
55-01-TP-021	Test Pack 55-01-TP-021	ONSHORE	C10003389	CLX02A	100	2024-12-10	RFC 2
		ONSHORE	C10003390	CLX02B	100	2025-02-14	RFC 2
		ONSHORE	C10003391	CXX01	100	2025-03-27	RFC 2
		ONSHORE	C10003392	CXX02	100	2025-02-19	RFC 2
		ONSHORE	C10003393	TMX03	100	2024-12-10	RFC 2
		ONSHORE	C10003394	TMX05	100	2024-12-10	RFC 2
		ONSHORE	C10003396	TPLX05	100	2024-12-11	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-01 & process: MC

Piping	55-01 Waste Water Brine Discharge System						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-01-TP-046	Test Pack 55-01-TP-046	ONSHORE	C10003581	CLX02A	100	2025-01-25	RFC 2
		ONSHORE	C10003582	CLX02B	100	2025-02-15	RFC 2
		ONSHORE	C10003583	CXX01	100	2025-03-28	RFC 2
		ONSHORE	C10003584	CXX02	100	2025-02-19	RFC 2
		ONSHORE	C10003585	TMX03	100	2025-01-25	RFC 2
		ONSHORE	C10003586	TMX05	100	2025-01-25	RFC 2
		ONSHORE	C10003588	TPLX05	100	2025-01-25	RFC 2
55-01-TP-103	Test Pack 55-01-TP-103	OFFSHORE	C10003728	CLX02A	0	-	-
		OFFSHORE	C10003729	CLX02B	0	-	-
		OFFSHORE	C10003730	CXX01	0	-	-
		OFFSHORE	C10003731	CXX02	0	-	-

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-01	Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002832	A	55-01-TP-003 C10003247	SK.032: piping at the terminal point is not aligned vertically with the connection points of the package.	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002833	A	55-01-TP-003 C10003247	SK.029: piping at the terminal point is not aligned vertically with the connection points of the package.	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002834	A	55-01-TP-003 C10003247	SK.007: piping at the terminal point is not aligned vertically with the connection points of the package.	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30003833	A	55-01-TP-046 C10003582	Earthing lug not connected to earth.	.		LNovaga 2025-02-15	2025-02-19	Ecarotenuto 2025-02-19	2025-02-19
C30004160	A	55-01-TP-003 C10003248	SK.007. Earthing lug not bonded to earth.	.		KAlbonetti 2025-02-27	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30001626	B	55-01-TP-021 C10003389	PS-02095.3 missing.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001627	B	55-01-TP-021 C10003389	PS-01042.2 is missing.	.		KAlbonetti 2024-12-10	2025-02-14	LNovaga 2025-02-14	2025-02-14
C30001628	B	55-01-TP-021 C10003389	PS-01039.1 pos.P1 missing	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001629	B	55-01-TP-021 C10003389	PS-01040.2 missing	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001630	B	55-01-TP-021 C10003389	PS-01036.1 pos.P1 missing.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001631	B	55-01-TP-021 C10003389	PS-01036.1 there is a gap of 30 mm between support and beam. Half the gap will be fixed by the pos.P1 (15mm plate) that shall be added but	.		KAlbonetti 2024-12-10	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30001633	B	55-01-TP-021 C10003389	PS-02086.2 missing.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001634	B	55-01-TP-021 C10003389	PS-02086.1: the clamp height is 4 mm higher than requested.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001636	B	55-01-TP-021 C10003389	PS-02095 is different from the drawing. F2 is HEA120 instead of a UPN120. Distance of calmp shoe from end is 380 mm in place of 263. See	.		KAlbonetti 2024-12-10			
C30001637	B	55-01-TP-021 C10003389	PS-02096 position F1 is a UPN120 instead of a HEA120. See attached PDF	.		KAlbonetti 2024-12-10			
C30001638	B	55-01-TP-021 C10003389	All piping supports' bolts have not been tightened.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30002835	B	55-01-TP-003 C10003247	SK.032: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002836	B	55-01-TP-003 C10003247	SK.031 (SH.2/3): All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002837	B	55-01-TP-003 C10003247	SK.031 (SH.1/3): All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002838	B	55-01-TP-003 C10003247	SK.029: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002839	B	55-01-TP-003 C10003247	SK.007: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002840	B	55-01-TP-003 C10003247	Flanges have not been torqued for finals. Connection points have not been joined before testing. All falnge management related points,	.		KAlbonetti 2025-01-14	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003179	B	55-01-TP-046 C10003581	All supports type "C-33" and "S-75" have not been assembled as for Standard. To be checked during reinstatement.	.		KAlbonetti 2025-01-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003180	B	55-01-TP-046 C10003581	Point n.4 not checked because the line has not been aligned in the correct position for the hydrotest.	.		KAlbonetti 2025-01-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003781	B	55-01-TP-021 C10003392	General touch up do to, especially near the supports of the piping line.	.		LNovaga 2025-02-13	2025-02-24	LNovaga 2025-02-24	2025-02-24
C30003782	B	55-01-TP-021 C10003392	There are holes in structural support PS-02095 (SK 30 2/3), they must be closed and painted.	.		LNovaga 2025-02-13			
C30003821	B	55-01-TP-021 C10003390	Support PS-01030.2 is C-33 and not C-34.	.		LNovaga 2025-02-14	2025-02-14	LNovaga 2025-02-14	2025-02-14

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water

SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003829	B	55-01-TP-046 C10003584	Joint 004-1-J3, 004-1-J2 and support PS-02121.4 needs several touch up. See attached photos.	.		LNovaga 2025-02-15	2025-02-22	LNovaga 2025-02-22	2025-02-22
C30003830	B	55-01-TP-046 C10003582	Support PS-02122.4 is not installed correctly, see attached photo.	.		LNovaga 2025-02-15	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30003831	B	55-01-TP-046 C10003582	Washer on the support PS-02121.4 is missing.	.		LNovaga 2025-02-15	2025-02-20	LNovaga 2025-02-20	2025-02-20
C30003832	B	55-01-TP-046 C10003582	Correct gap of support C-33 not yet achieved. It must be 2mm (PS-02123.3 SK 004)	.		LNovaga 2025-02-15	2025-02-20	LNovaga 2025-02-20	2025-02-20
C30003902	B	55-01-TP-046 C10003584	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-17	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003903	B	55-01-TP-021 C10003392	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-17	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30004217	B	55-01-TP-003 C10003248	The 50-PT-014 is oriented to the north, correct the isometric. SK-031 2/3.	.		LNovaga 2025-03-10	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004218	B	55-01-TP-003 C10003248	In isometric the 50-TT-002 seems to have inclination but the Nipoflange is orthogonal to the line. Correct isometric. SK.031 2/3.	.		LNovaga 2025-03-10	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004219	B	55-01-TP-003 C10003248	Spool A in modification isometric must be updated accordingly. SK029	.		LNovaga 2025-03-10	2025-04-02	LNovaga 2025-04-02	2025-04-02

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004220	B	55-01-TP-003 C10003248	In the sketch 007 the PS-02001.1 and PS-02140.2 supports touch partially the structure, correct the gap where possible.	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004221	B	55-01-TP-003 C10003248	In the sketch 031 2/3 the supports PS-01020.1 (S-64) / PS-01020.2 (C-34) and PS-01070.1 (S-64) PS-01070.2 (C-34) are not installed.	.		LNovaga 2025-03-10			
C30004222	B	55-01-TP-003 C10003248	In SK 031 2/3 PS-01022.1 (S-75) and PS-01022.2 (C-34) lock nut is missing.	.		LNovaga 2025-03-10			
C30004223	B	55-01-TP-003 C10003248	In PS-01022.1 (S-64) and PS-01022.2 (c-34) nuts not tightened. SK 032	.		LNovaga 2025-03-10			
C30004224	B	55-01-TP-003 C10003248	In the isometric 032 the Supports PS-02033.2 (S-75), PS-02027.3 (S-75), PS-02025.1 (S-75): Shoe partially touches the structure (shoe tilted	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004225	B	55-01-TP-003 C10003248	In the isometric 032 the supports PS-02026.3 and PS-02028.2: Shoe touches partially the structure, correct the gap where possible.	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004226	B	55-01-TP-003 C10003248	In the isometric 031 1/3 Support PS-02048.1 (S-75): The shoe does not touch the structural support.	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004227	B	55-01-TP-003 C10003248	In the sketch 031 1/3, support PS-02069.4 (C-33) is not installed.	.		LNovaga 2025-03-10			
C30004228	B	55-01-TP-003 C10003248	In the isometric 031 1/3, the supports PS-02066.1 (S-75), PS-02071.1 (S-75), PS-02072.1 (S-75), PS-02074.1 (S-75): shoes partially touches the	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004229	B	55-01-TP-003 C10003248	The slope of the line was not measurable in the insulated sections.	.		LNovaga 2025-03-10			
C30004259	B	55-01-TP-003 C10003250	Almost the entire line was not inspected because it was already insulated. (pending non-conformity report from quality dpt)	.		LNovaga 2025-03-24			
C30004298	B	55-01-TP-003 C10003249	Missing portion of insulation in isometrics 031 (2/3) and 029 for commissioning activities.	.		LNovaga 2025-03-28			
C30004299	B	55-01-TP-046 C10003583	Missing the insulation pillows around jonts 004-1-J1, 004-1-J2 and 004-1-J3.	.		LNovaga 2025-03-28			
C30004300	B	55-01-TP-046 C10003583	Missing portion of insulation, see attached.	.		LNovaga 2025-03-28			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004068	A	50-PT-014 C10000903	Missing the earth connection on the instrument.	.		APolo 2025-02-21	2025-02-25	JKrizanic 2025-02-25	2025-02-25
C30004071	A	50-TT-002 C10000905	Missing the earth connection on the instrument.	.		APolo 2025-02-21	2025-02-25	JKrizanic 2025-02-25	2025-02-25
C30004067	B	C-50-PT-014/00 -JE-11004 C10000057	The cable is not support .	.		APolo 2025-02-21	2025-02-27	JKrizanic 2025-02-27	2025-02-27
C30004069	B	50-PT-014 C10000903	Missing tag SS , on the instrument.	.		APolo 2025-02-21	2025-02-24	APolo 2025-02-24	2025-02-24
C30004070	B	C-50-TT-002/00- JE-11004 C10000052	The cable is not support .	.		APolo 2025-02-21	2025-02-27	JKrizanic 2025-02-27	2025-02-27
C30004072	B	50-TT-002 C10000905	Missing tag SS , on the instrument.	.		APolo 2025-02-21	2025-02-24	APolo 2025-02-24	2025-02-24
C30004205	B	C-50-XV-005/00 -JE-12006 C10004664	Missing all identification tag wires inside the limitswitch.(50-XV-005). See attached photo.	.		Gtangianu 2025-03-07	2025-03-27	Gtangianu 2025-03-27	2025-03-27
C30004206	B	C-50-XV-005/00 -JE-12006 C10004664	Missing cable tag on both side. (C-50-XV-005/00-JE-12006). See attached photo.	.		Gtangianu 2025-03-07	2025-03-12	JKrizanic 2025-03-12	2025-03-12
C30004209	B	C-50-XY-005/00 -JE-13003 C10004665	Missing all identification tag wires inside the Solenoid.(50-XY-005). See attached photo.	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004210	B	C-50-XY-005/00 -JE-13003 C10004665	Missing cable tag on both side. (C-50-XY-005/00-JE-13003). See attached photo.	.		Gtangianu 2025-03-07	2025-04-02	Gtangianu 2025-04-02	2025-04-02
C30004211	B	50-XV-005 C10004657	Missing tag plate SS on the valve.(50-XV-005).	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30004212	B	50-XY-005 C10004661	Missing tag plate SS on the Solenoid valve.(50-XY-005).See attached photo.	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30004213	B	50-ZSHL-005 C10004662	Missing tag plate SS on the LIMITSWITCH valve.(50-ZSHL-005).See attached photo.	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-01	Waste Water Brine Discharge System

Building

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004268	B	B-50014 C10004927	Some points needs touch up.	.		LNovaga 2025-03-25			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water

SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002832	A	55-01-TP-003 C10003247	SK.032: piping at the terminal point is not aligned vertically with the connection points of the package.	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002833	A	55-01-TP-003 C10003247	SK.029: piping at the terminal point is not aligned vertically with the connection points of the package.	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002834	A	55-01-TP-003 C10003247	SK.007: piping at the terminal point is not aligned vertically with the connection points of the package.	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30003833	A	55-01-TP-046 C10003582	Earthing lug not connected to earth.	.		LNovaga 2025-02-15	2025-02-19	Ecarotenuto 2025-02-19	2025-02-19
C30004160	A	55-01-TP-003 C10003248	SK.007. Earthing lug not bonded to earth.	.		KAlbonetti 2025-02-27	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30001626	B	55-01-TP-021 C10003389	PS-02095.3 missing.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001627	B	55-01-TP-021 C10003389	PS-01042.2 is missing.	.		KAlbonetti 2024-12-10	2025-02-14	LNovaga 2025-02-14	2025-02-14
C30001628	B	55-01-TP-021 C10003389	PS-01039.1 pos.P1 missing	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001629	B	55-01-TP-021 C10003389	PS-01040.2 missing	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-01	Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001630	B	55-01-TP-021 C10003389	PS-01036.1 pos.P1 missing.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001631	B	55-01-TP-021 C10003389	PS-01036.1 there is a gap of 30 mm between support and beam. Half the gap will be fixed by the pos.P1 (15mm plate) that shall be added but	.		KAlbonetti 2024-12-10	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30001633	B	55-01-TP-021 C10003389	PS-02086.2 missing.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001634	B	55-01-TP-021 C10003389	PS-02086.1: the clamp height is 4 mm higher than requested.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30001636	B	55-01-TP-021 C10003389	PS-02095 is different from the drawing. F2 is HEA120 instead of a UPN120. Distance of calmp shoe from end is 380 mm in place of 263. See	.	Changes have been recorded on RLMUs	KAlbonetti 2024-12-10	RDegliEsposti 2025-06-25	RDegliEsposti 2025-06-25	2025-06-25
C30001637	B	55-01-TP-021 C10003389	PS-02096 position F1 is a UPN120 instead of a HEA120. See attached PDF	.	Changes have been recorded on RLMUs	KAlbonetti 2024-12-10	RDegliEsposti 2025-06-25	RDegliEsposti 2025-06-25	2025-06-25
C30001638	B	55-01-TP-021 C10003389	All piping supports' bolts have not been tightened.	.		KAlbonetti 2024-12-10	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30002835	B	55-01-TP-003 C10003247	SK.032: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002836	B	55-01-TP-003 C10003247	SK.031 (SH.2/3): All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002837	B	55-01-TP-003 C10003247	SK.031 (SH.1/3): All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002838	B	55-01-TP-003 C10003247	SK.029: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002839	B	55-01-TP-003 C10003247	SK.007: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the	.		KAlbonetti 2025-01-14	2025-03-07	LNovaga 2025-03-07	2025-03-07
C30002840	B	55-01-TP-003 C10003247	Flanges have not been torqued for finals. Connection points have not been joined before testing. All falnge management related points,	.		KAlbonetti 2025-01-14	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003179	B	55-01-TP-046 C10003581	All supports type "C-33" and "S-75" have not been assembled as for Standard. To be checked during reinstatement.	.		KAlbonetti 2025-01-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003180	B	55-01-TP-046 C10003581	Point n.4 not checked because the line has not been aligned in the correct position for the hydrotest.	.		KAlbonetti 2025-01-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003781	B	55-01-TP-021 C10003392	General touch up do to, especially near the supports of the piping line.	.		LNovaga 2025-02-13	2025-02-24	LNovaga 2025-02-24	2025-02-24
C30003782	B	55-01-TP-021 C10003392	There are holes in structural support PS-02095 (SK 30 2/3), they must be closed and painted.	.		LNovaga 2025-02-13	2025-04-15	LNovaga 2025-04-15	2025-04-15
C30003821	B	55-01-TP-021 C10003390	Support PS-01030.2 is C-33 and not C-34.	.		LNovaga 2025-02-14	2025-02-14	LNovaga 2025-02-14	2025-02-14

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003829	B	55-01-TP-046 C10003584	Joint 004-1-J3, 004-1-J2 and support PS-02121.4 needs several touch up. See attached photos.	.		LNovaga 2025-02-15	2025-02-22	LNovaga 2025-02-22	2025-02-22
C30003830	B	55-01-TP-046 C10003582	Support PS-02122.4 is not installed correctly, see attached photo.	.		LNovaga 2025-02-15	2025-02-21	LNovaga 2025-02-21	2025-02-21
C30003831	B	55-01-TP-046 C10003582	Washer on the support PS-02121.4 is missing.	.		LNovaga 2025-02-15	2025-02-20	LNovaga 2025-02-20	2025-02-20
C30003832	B	55-01-TP-046 C10003582	Correct gap of support C-33 not yet achieved. It must be 2mm (PS-02123.3 SK 004)	.		LNovaga 2025-02-15	2025-02-20	LNovaga 2025-02-20	2025-02-20
C30003902	B	55-01-TP-046 C10003584	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-17	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003903	B	55-01-TP-021 C10003392	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-17	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30004217	B	55-01-TP-003 C10003248	The 50-PT-014 is oriented to the north, correct the isometric. SK-031 2/3.	.		LNovaga 2025-03-10	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004218	B	55-01-TP-003 C10003248	In isometric the 50-TT-002 seems to have inclination but the Nipoflange is orthogonal to the line. Correct isometric. SK.031 2/3.	.		LNovaga 2025-03-10	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30004219	B	55-01-TP-003 C10003248	Spool A in modification isometric must be updated accordingly. SK029	.		LNovaga 2025-03-10	2025-04-02	LNovaga 2025-04-02	2025-04-02

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water

SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004220	B	55-01-TP-003 C10003248	In the sketch 007 the PS-02001.1 and PS-02140.2 supports touch partially the structure, correct the gap where possible.	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004221	B	55-01-TP-003 C10003248	In the sketch 031 2/3 the supports PS-01020.1 (S-64) / PS-01020.2 (C-34) and PS-01070.1 (S-64) PS-01070.2 (C-34) are not installed.	.	Supports installed	LNovaga 2025-03-10	RDegliEsposti 2025-07-22	RDegliEsposti 2025-07-22	2025-07-22
C30004222	B	55-01-TP-003 C10003248	In SK 031 2/3 PS-01022.1 (S-75) and PS-01022.2 (C-34) lock nut is missing.	.		LNovaga 2025-03-10	2025-05-07	LNovaga 2025-05-07	2025-05-07
C30004223	B	55-01-TP-003 C10003248	In PS-01022.1 (S-64) and PS-01022.2 (C-34) nuts not tightened. SK 032	.		LNovaga 2025-03-10	2025-04-14	LNovaga 2025-04-14	2025-04-14
C30004224	B	55-01-TP-003 C10003248	In the isometric 032 the Supports PS-02033.2 (S-75), PS-02027.3 (S-75), PS-02025.1 (S-75): Shoe partially touches the structure (shoe tilted	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004225	B	55-01-TP-003 C10003248	In the isometric 032 the supports PS-02026.3 and PS-02028.2: Shoe touches partially the structure, correct the gap where possible.	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004226	B	55-01-TP-003 C10003248	In the isometric 031 1/3 Support PS-02048.1 (S-75): The shoe does not touch the structural support.	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30004227	B	55-01-TP-003 C10003248	In the sketch 031 1/3, support PS-02069.4 (C-33) is not installed.	.		LNovaga 2025-03-10	2025-04-14	LNovaga 2025-04-14	2025-04-14
C30004228	B	55-01-TP-003 C10003248	In the isometric 031 1/3, the supports PS-02066.1 (S-75), PS-02071.1 (S-75), PS-02072.1 (S-75), PS-02074.1 (S-75): shoes partially touches the	.		LNovaga 2025-03-10	2025-03-11	LNovaga 2025-03-11	2025-03-11

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004229	B	55-01-TP-003 C10003248	The slope of the line was not measurable in the insulated sections.	.	The line is fully insulated, and verifying the slope would require removing and	LNovaga 2025-03-10	RDegliEsposti 2025-06-24	RDegliEsposti 2025-06-24	2025-06-24
C30004259	B	55-01-TP-003 C10003250	Almost the entire line was not inspected because it was already insulated. (pending non-conformity report from quality dpt)	.	NCR No. 2025-Q-123A90-0005 has been formally issued and	LNovaga 2025-03-24	RDegliEsposti 2025-05-29	RDegliEsposti 2025-05-29	2025-05-29
C30004298	B	55-01-TP-003 C10003249	Missing portion of insulation in isometrics 031 (2/3) and 029 for commissioning activities.	.	Insulation installed.	LNovaga 2025-03-28	RDegliEsposti 2025-07-22	RDegliEsposti 2025-07-22	2025-07-22
C30004299	B	55-01-TP-046 C10003583	Missing the insulation pillows around jonts 004-1-J1, 004-1-J2 and 004-1-J3.	.		LNovaga 2025-03-28	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004300	B	55-01-TP-046 C10003583	Missing portion of insulation, see attached.	.		LNovaga 2025-03-28	2025-04-07	LNovaga 2025-04-07	2025-04-07

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water
SUBSYSTEM 55-01 Waste Water Brine Discharge System

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004068	A	50-PT-014 C10000903	Missing the earth connection on the instrument.	.		APolo 2025-02-21	2025-02-25	JKrizanic 2025-02-25	2025-02-25
C30004071	A	50-TT-002 C10000905	Missing the earth connection on the instrument.	.		APolo 2025-02-21	2025-02-25	JKrizanic 2025-02-25	2025-02-25
C30004067	B	C-50-PT-014/00 -JE-11004 C10000057	The cable is not support .	.		APolo 2025-02-21	2025-02-27	JKrizanic 2025-02-27	2025-02-27
C30004069	B	50-PT-014 C10000903	Missing tag SS , on the instrument.	.		APolo 2025-02-21	2025-02-24	APolo 2025-02-24	2025-02-24
C30004070	B	C-50-TT-002/00- JE-11004 C10000052	The cable is not support .	.		APolo 2025-02-21	2025-02-27	JKrizanic 2025-02-27	2025-02-27
C30004072	B	50-TT-002 C10000905	Missing tag SS , on the instrument.	.		APolo 2025-02-21	2025-02-24	APolo 2025-02-24	2025-02-24
C30004205	B	C-50-XV-005/00 -JE-12006 C10004664	Missing all identification tag wires inside the limitswitch.(50-XV-005). See attached photo.	.		Gtangianu 2025-03-07	2025-03-27	Gtangianu 2025-03-27	2025-03-27
C30004206	B	C-50-XV-005/00 -JE-12006 C10004664	Missing cable tag on both side. (C-50-XV-005/00-JE-12006). See attached photo.	.		Gtangianu 2025-03-07	2025-03-12	JKrizanic 2025-03-12	2025-03-12
C30004209	B	C-50-XY-005/00 -JE-13003 C10004665	Missing all identification tag wires inside the Solenoid.(50-XY-005). See attached photo.	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 55 Waste Water

SUBSYSTEM 55-01 Waste Water Brine Discharge System

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004210	B	C-50-XY-005/00 -JE-13003 C10004665	Missing cable tag on both side. (C-50-XY-005/00-JE-13003). See attached photo.	.		Gtangianu 2025-03-07	2025-04-02	Gtangianu 2025-04-02	2025-04-02
C30004211	B	50-XV-005 C10004657	Missing tag plate SS on the valve.(50-XV-005).	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30004212	B	50-XY-005 C10004661	Missing tag plate SS on the Solenoid valve.(50-XY-005).See attached photo.	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30004213	B	50-ZSHL-005 C10004662	Missing tag plate SS on the LIMITSWITCH valve.(50-ZSHL-005).See attached photo.	.		Gtangianu 2025-03-07	2025-03-25	Gtangianu 2025-03-25	2025-03-25

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	55	Waste Water
SUBSYSTEM	55-01	Waste Water Brine Discharge System

Building									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004268	B	B-50014 C10004927	Some points needs touch up.	.	Touch up completed	LNovaga 2025-03-25	RDegliEsposti 2025-07-10	RDegliEsposti 2025-07-10	2025-07-10

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004298

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003249	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing portion of insulation in isometrics 031 (2/3) and 029 for commissioning activities.

Name: Lorenzo Novaga
Date: 2025-03-28
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	2025-03-28
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

Flange management completed.

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-22
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004299

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003583	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing the insulation pillows around jonts 004-1-J1, 004-1-J2 and 004-1-J3.

Name: Lorenzo Novaga

Date: 2025-03-28

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	2025-03-28
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

C30004300

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003583	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing portion of insulation, see attached.

Name: Lorenzo Novaga

Date: 2025-03-28

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	2025-03-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-07

Signature:

5 - CLEARANCE CHECK

Installed.

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

C30004205

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004664	1.4 Discipline	Instrumental
1.2 Item	C-50-XV-005/00-JE-12006		On-Off Actuated Ball Valve/DI JB to PCS
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing all identification tag wires inside the limitswitch.(50-XV-005). See attached photo.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-03-27

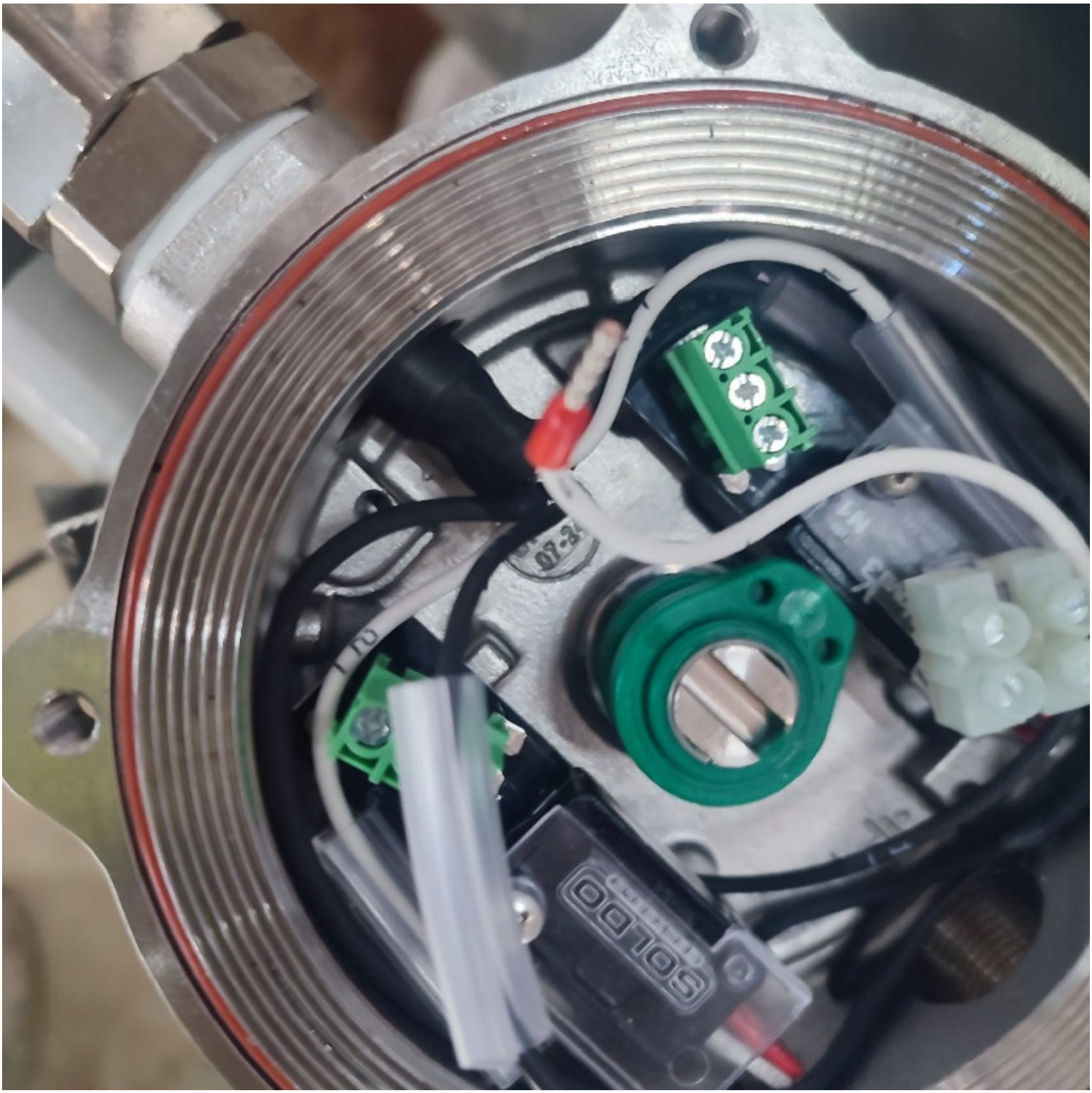
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004206

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004664	1.4 Discipline	Instrumental
1.2 Item	C-50-XV-005/00-JE-12006	On-Off Actuated Ball Valve/DI JB to PCS	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing cable tag on both side. (C-50-XV-005/00-JE-12006). See attached photo.

Name: Giovanni Tangianu
Date: 2025-03-07
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-12
Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-03-12
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-12
Signature:




00-JE-12006

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004209

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004665	1.4 Discipline	Instrumental
1.2 Item	C-50-XY-005/00-JE-13003		Solenoid Valve/DO JB to PCS
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing all identification tag wires inside the Solenoid.(50-XY-005). See attached photo.

Name: Giovanni Tangianu
Date: 2025-03-07
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

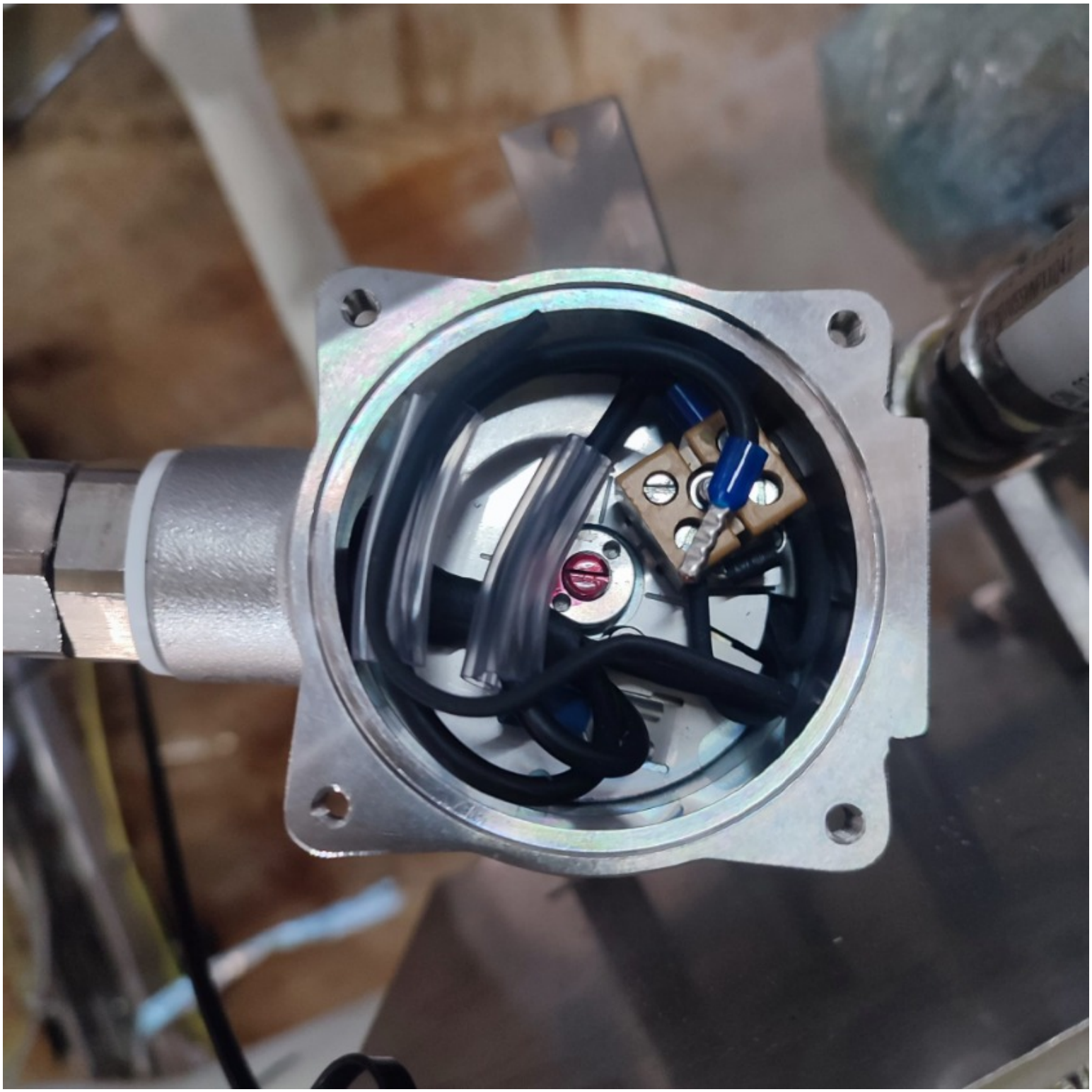
5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu
Date: 2025-03-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004210

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004665	1.4 Discipline	Instrumental
1.2 Item	C-50-XY-005/00-JE-13003	Solenoid Valve/DO JB to PCS	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing cable tag on both side. (C-50-XY-005/00-JE-13003). See attached photo.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-04-02

Signature:

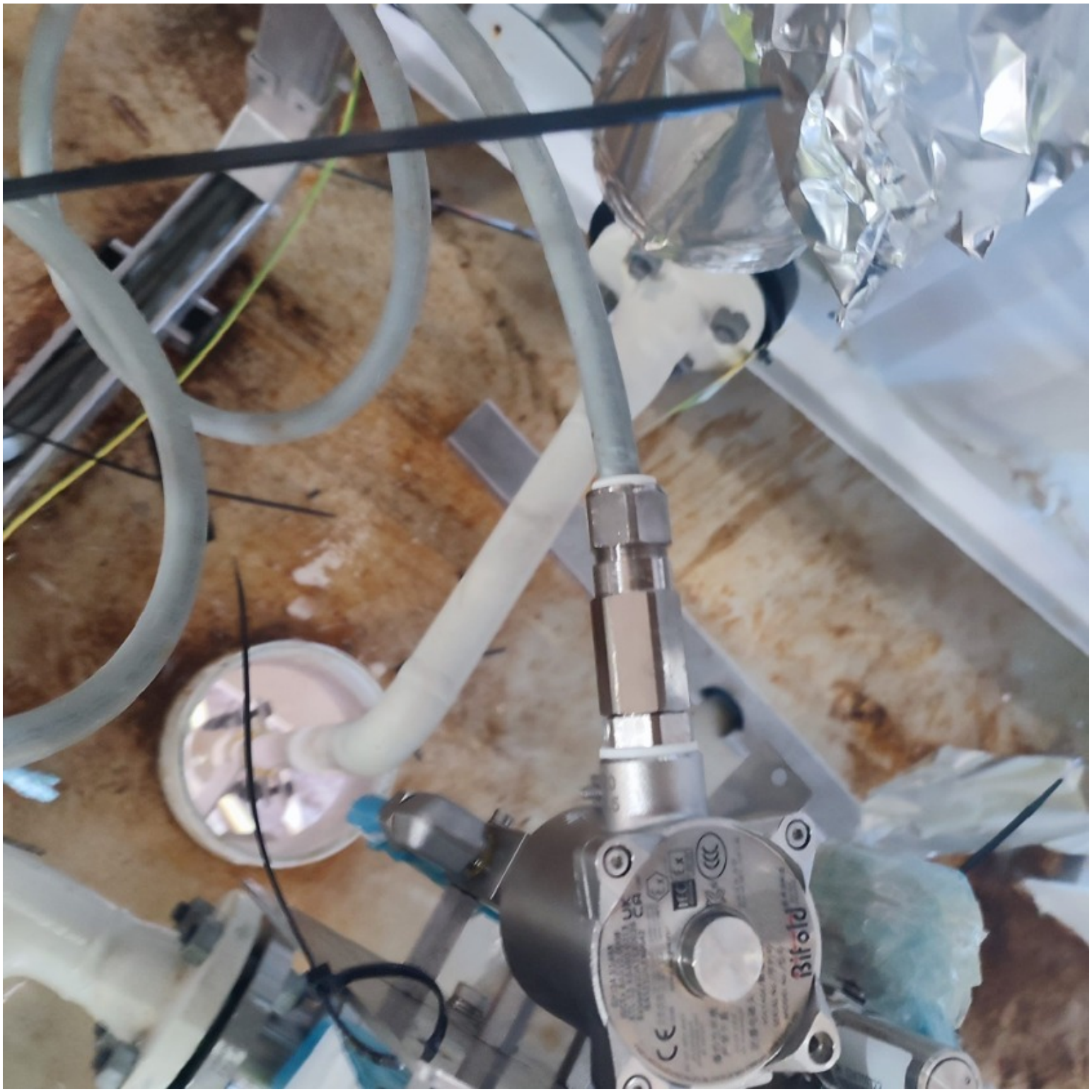
6- CLEARANCE APPROVAL

Name:

Date:

Signature:


00-JE-13003
CORTEC
Date Installed
Replacement Date


Bifold

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004211

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004657	1.4 Discipline	Instrumental
1.2 Item	50-XV-005	On-Off Actuated Ball Valve	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing tag plate SS on the valve.(50-XV-005).

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-03-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004212

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004661	1.4 Discipline	Instrumental
1.2 Item	50-XY-005	Solenoid Valve - Brine Discharge Caisson B-50014	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Missing tag plate SS on the Solenoid valve.(50-XY-005).See attached photo.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-03-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004213

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004662	1.4 Discipline	Instrumental
1.2 Item	50-ZSHL-005		Limit Switch box Brine Discharge Caisson B-50014
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing tag plate SS on the LIMITSWITCH valve.(50-ZSHL-005).See attached photo.

Name: Giovanni Tangianu

Date: 2025-03-07

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-03-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-03-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004217

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

The 50-PT-014 is oriented to the north, correct the isometric. SK-031 2/3.

Name: Lorenzo Novaga

Date: 2025-03-10

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	2025-03-10
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

C30004218

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In isometric the 50-TT-002 seems to have inclination but the Nipoflange is orthogonal to the line. Correct isometric. SK.031 2/3.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
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

C30004219

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Spool A in modification isometric must be updated accordingly.
SK029

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
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

C30004220

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the sketch 007 the PS-02001.1 and PS-02140.2 supports touch partially the structure, correct the gap where possible.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-11
Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-11
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004221

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the sketch 031 2/3 the supports PS-01020.1 (S-64) / PS-01020.2 (C-34) and PS-01070.1 (S-64) PS-01070.2 (C-34) are not installed.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Supports installed

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

5 - CLEARANCE CHECK

Flange management completed.

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-22
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004222

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In SK 031 2/3 PS-01022.1 (S-75) and PS-01022.2 (C-34) lock nut is missing.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-05-07
Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga
Date: 2025-05-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-05-07
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004223

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In PS-01022.1 (S-64) and PS-01022.2 (C-34) nuts not tightened.
SK 032

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-14
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-04-14
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-14
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004224

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the isometric 032 the Supports PS-02033.2 (S-75), PS-02027.3 (S-75), PS-02025.1 (S-75): Shoe partially touches the structure (shoe tilted upwards).

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-11
Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-11
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004225

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the isometric 032 the supports PS-02026.3 and PS-02028.2: Shoe touches partially the structure, correct the gap where possible.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-11
Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-11
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004226

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the isometric 031 1/3 Support PS-02048.1 (S-75): The shoe does not touch the structural support.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-11
Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-11
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004227

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the sketch 031 1/3, support PS-02069.4 (C-33) is not installed.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-14
Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga
Date: 2025-04-14
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-14
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004228

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

In the isometric 031 1/3, the supports PS-02066.1 (S-75), PS-02071.1 (S-75), PS-02072.1 (S-75), PS-02074.1 (S-75): shoes partially touches the structure, correct the gap where possible.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-11
Signature:

5 - CLEARANCE CHECK

Accepted by Rosetti Marino.

Name: Lorenzo Novaga
Date: 2025-03-11
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-11
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004229

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

The slope of the line was not measurable in the insulated sections.

Name: Lorenzo Novaga
Date: 2025-03-10
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	2025-03-10
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

The line is fully insulated, and verifying the slope would require removing and reinstalling the insulation, leading to disproportionate effort and potential damage for a minor check.

As the line was installed according to the approved design and no functional issues have been reported, we close this punch as-is.

Name: Raffaele Degli Esposti
Date: 2025-06-24
Signature:

5 - CLEARANCE CHECK

Flange management completed.

Name: Raffaele Degli Esposti
Date: 2025-06-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-24
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004259

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003250	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Almost the entire line was not inspected because it was already insulated.
(pending non-conformity report from quality dpt)

Name: Lorenzo Novaga
Date: 2025-03-24
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	2025-03-24
3.5 Action by	RM Rosetti Marino Quality	Signature	

4 - PERFORMED ACTION

NCR No. 2025-Q-123A90-0005 has been formally issued and successfully closed with positive outcome. All verification activities were completed in accordance with the defined resolution plan, and the closure was duly recorded in the system.

Name: Raffaele Degli Esposti
Date: 2025-05-29
Signature:

5 - CLEARANCE CHECK

Refer to above

Name: Raffaele Degli Esposti
Date: 2025-05-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-05-29
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004268

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004927	1.4 Discipline	Building
1.2 Item	B-50014	Brine Discharge Caisson Frame	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Some points needs touch up.

Name: Lorenzo Novaga
Date: 2025-03-25
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	2025-03-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Touch up completed

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

5 - CLEARANCE CHECK

Flange management completed.

Name: Raffaele Degli Esposti
Date: 2025-07-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-07-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003179

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003581	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

All supports type "C-33" and "S-75" have not been assembled as for Standard. To be checked during reinstatement.

Name: Kangi Albonetti
Date: 2025-01-24
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	2025-01-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Kangi Albonetti
Date: 2025-02-19
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003180

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003581	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Point n.4 not checked because the line has not been aligned in the correct position for the hydrotest.

Name: Kangi Albonetti

Date: 2025-01-24

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	2025-01-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Kangi Albonetti

Date: 2025-02-19

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003781

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003392	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

General touch up do to, especially near the supports of the piping line.

Name: Lorenzo Novaga

Date: 2025-02-13

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	2025-02-13
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003782

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003392	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

There are holes in structural support PS-02095 (SK 30 2/3), they must be closed and painted.

Name: Lorenzo Novaga
Date: 2025-02-13
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	2025-02-13
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-15
Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga
Date: 2025-04-15
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-15
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003821

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003390	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Support PS-01030.2 is C-33 and not C-34.

Name: Lorenzo Novaga
Date: 2025-02-14
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	2025-02-14
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

As agreed with Engineering Dpt. standard C-33 is better than C-34.

Name: Lorenzo Novaga
Date: 2025-02-14
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003829

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003584	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Joint 004-1-J3, 004-1-J2 and support PS-02121.4 needs several touch up. See attached photos.

Name: Lorenzo Novaga
Date: 2025-02-15
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	2025-02-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga
Date: 2025-02-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:







FLANGE TAG
FLANGE TESTED
TORQUED
TENSIONED
RETURNED TO SUPERVISOR

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003830

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003582	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Support PS-02122.4 is not installed correctly, see attached photo.

Name: Lorenzo Novaga

Date: 2025-02-15

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	2025-02-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003831

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003582	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Washer on the support PS-02121.4 is missing.

Name: Lorenzo Novaga

Date: 2025-02-15

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	2025-02-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga

Date: 2025-02-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003832

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003582	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Correct gap of support C-33 not yet achieved. It must be 2mm (PS-02123.3 SK 004)

Name: Lorenzo Novaga
Date: 2025-02-15
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	2025-02-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-02-20
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003833

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003582	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Earthing lug not connected to earth.

Name: Lorenzo Novaga

Date: 2025-02-15

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-15
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Eleonora Carotenuto

Date: 2025-02-19

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003902

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003584	1.4 Discipline	Piping
1.2 Item	55-01-TP-046	Test Pack 55-01-TP-046	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Color coding and fluid direction are missing.

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: 2025-03-21

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-03-21

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003903

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003392	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Color coding and fluid direction are missing.

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

Done.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004067

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000057	1.4 Discipline	Instrumental
1.2 Item	C-50-PT-014/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-02-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-27

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

50-PT-014

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004068

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000903	1.4 Discipline	Instrumental
1.2 Item	50-PT-014		Pressure Transmitter - Water Disposal Header to Caisson B-50014
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing the earth connection on the instrument.

Name: Alessio Polo
Date: 2025-02-21
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

50-PT-014

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004069

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000903	1.4 Discipline	Instrumental
1.2 Item	50-PT-014		Pressure Transmitter - Water Disposal Header to Caisson B-50014
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo

Date: 2025-02-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004070

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000052	1.4 Discipline	Instrumental
1.2 Item	C-50-TT-002/00-JE-11004	FLOW TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo
Date: 2025-02-21
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-27
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


50-TT-002
316L

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004071

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000905	1.4 Discipline	Instrumental
1.2 Item	50-TT-002		Temperature Transmitter - Water Disposal Header to Caisson B-50014
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing the earth connection on the instrument.

Name: Alessio Polo

Date: 2025-02-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


50-TT-002
316L

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004072

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000905	1.4 Discipline	Instrumental
1.2 Item	50-TT-002		Temperature Transmitter - Water Disposal Header to Caisson B-50014
1.3 Subsystem	55-01		Waste Water Brine Discharge System

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo
Date: 2025-02-21
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-21
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-02-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004160

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003248	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.007. Earthing lug not bonded to earth.

Name: Kangi Albonetti

Date: 2025-02-27

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Connected.

Name: Giovanni Tangianu

Date: 2025-03-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001626

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-02095.3 missing.

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Support Installed.

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001627

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-01042.2 is missing.

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga

Date: 2025-02-14

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001628

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-01039.1 pos.P1 missing

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Support Installed.

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001629

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-01040.2 missing

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Support Installed.

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001630

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-01036.1 pos.P1 missing.

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM Rosetti Marino Quality	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Support Installed.

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001631

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-01036.1 there is a gap of 30 mm between support and beam. Half the gap will be fixed by the pos.P1 (15mm plate) that shall be added but there is still a 15/20 mm gap to to be fixed.

Name: Kangi Albonetti
Date: 2024-12-10
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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Metal plate and teflon added to bridge the gap.

Name: Kangi Albonetti
Date: 2025-02-19
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001633

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-02086.2 missing.

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Support Installed.

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001634

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-02086.1: the clamp height is 4 mm higher than requested.

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001636

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-02095 is different from the drawing. F2 is HEA120 instead of a UPN120. Distance of calmp shoe from end is 380 mm in place of 263. See attached PDF

Name: Kangi Albonetti
Date: 2024-12-10
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	2024-12-10
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:

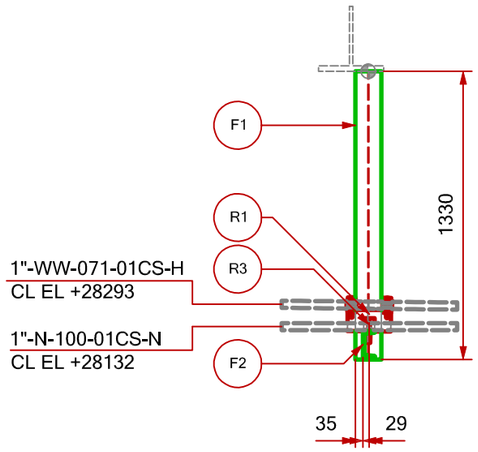
5 - CLEARANCE CHECK

Ref. to RLMU 123A90-DDL-PP-DD-72000-PS-02095_01_01A

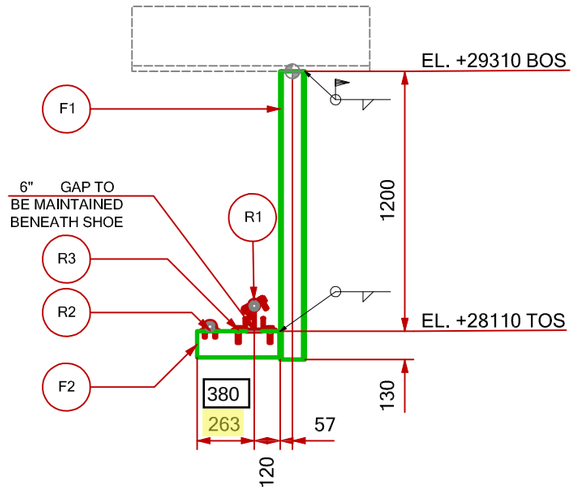
Name: Raffaele Degli Esposti
Date: 2025-06-25
Signature:

6- CLEARANCE APPROVAL

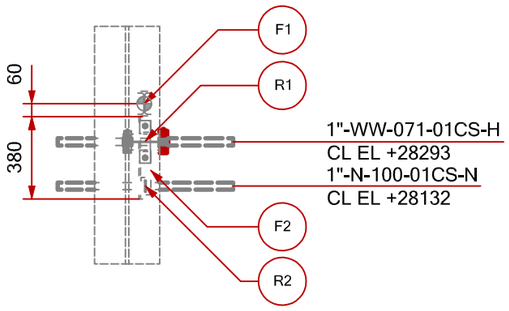
Name:
Date: 2025-06-25
Signature:



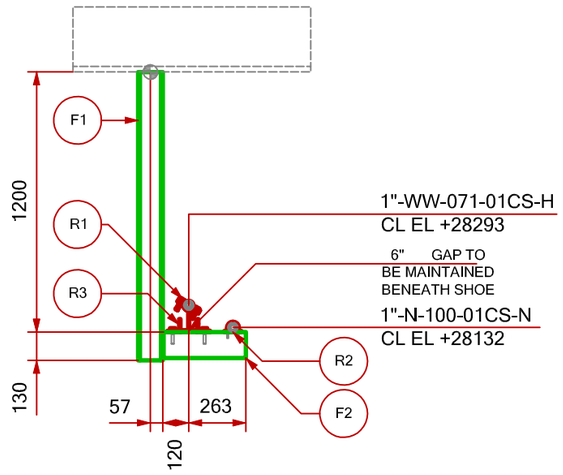
VIEW LOOKING NORTH



VIEW LOOKING WEST



PLAN VIEW

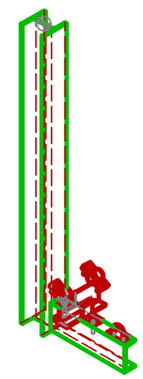


VIEW LOOKING EAST

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	S-211-1"	-	-	1	-	0.29	-
R3	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	HEA120	Carbon Steel	1330	1	19.98	26.57	0.905
F2	BEAM	UPN120 HEA120	Carbon Steel	383	1	13.35	5.07	0.166
						TOTAL	38.6	1.13





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-02095

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

File Name :

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001637

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

PS-02096 position F1 is a UPN120 instead of a HEA120. See attached PDF

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
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-02096_01_01A

Name: Raffaele Degli Esposti

Date: 2025-06-25

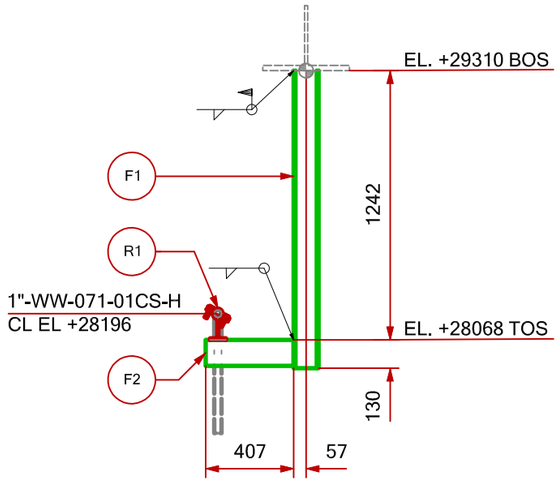
Signature:

6- CLEARANCE APPROVAL

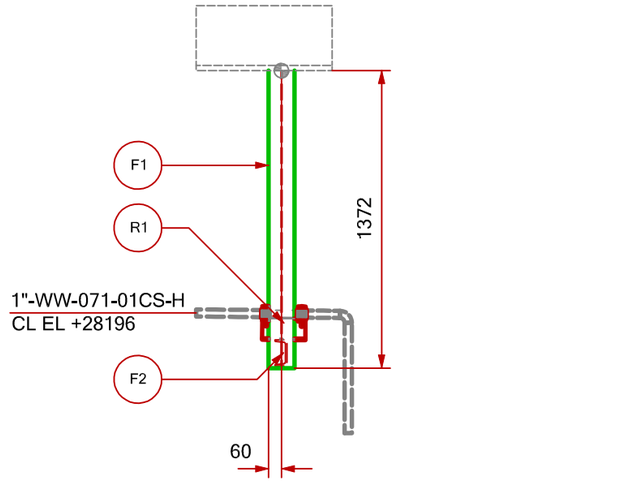
Name:

Date: 2025-06-25

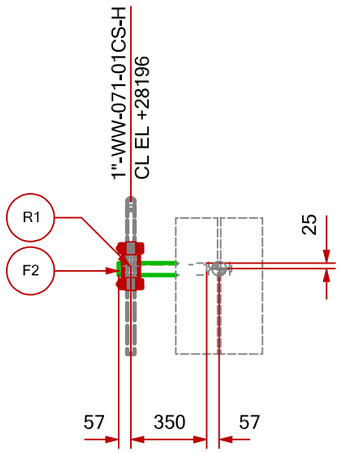
Signature:



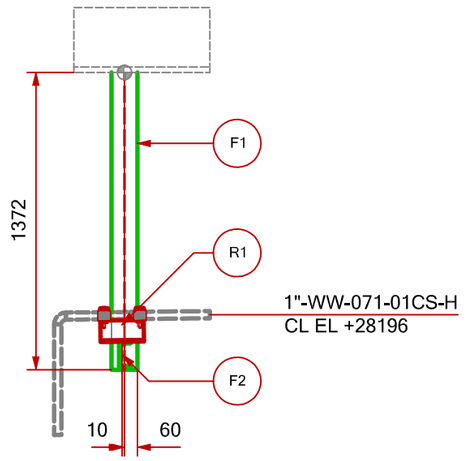
VIEW LOOKING NORTH



VIEW LOOKING WEST



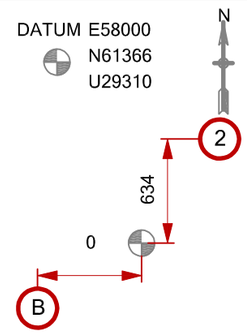
PLAN VIEW

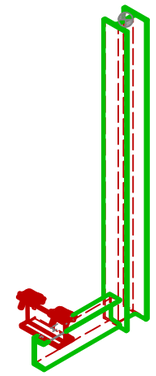


VIEW LOOKING EAST

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 UPN 120	Carbon Steel	1372	1	19.98	27.41	0.934
F2	BEAM	UPN120	Carbon Steel	407	1	13.35	5.39	0.176
						TOTAL	37.4	1.14





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-02096

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

File Name :

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001638

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003389	1.4 Discipline	Piping
1.2 Item	55-01-TP-021	Test Pack 55-01-TP-021	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

All piping supports' bolts have not been tightened.

Name: Kangi Albonetti

Date: 2024-12-10

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	2024-12-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002832

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.032: piping at the terminal point is not aligned vertically with the connection points of the package.

Name: Kangi Albonetti

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002833

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.029: piping at the terminal point is not aligned vertically with the connection points of the package.

Name: Kangi Albonetti

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002834

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.007: piping at the terminal point is not aligned vertically with the connection points of the package.

Name: Kangi Albonetti

Date: 2025-01-14

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002835

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.032: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the specification). To be all re-checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-14

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	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002836

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.031 (SH.2/3): All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the specification). To be all re-checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-14

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	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002837

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.031 (SH.1/3): All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the specification). To be all re-checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-14

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	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002838

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.029: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the specification). To be all re-checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-14

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	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002839

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

SK.007: All piping supports type "C-33", "C-34", "S-64", "-S-71" and "S-75" have been assembled in erection uncorrectly (nonconforming to the specification). To be all re-checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-14

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	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement

Name: Lorenzo Novaga

Date: 2025-03-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002840

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003247	1.4 Discipline	Piping
1.2 Item	55-01-TP-003	Test Pack 55-01-TP-003	
1.3 Subsystem	55-01	Waste Water Brine Discharge System	

2 - OBSERVATION

Flanges have not been torqued for finals. Connection points have not been joined before testing. All falnge management related points, Inspection points from 4 to 6 of the ITR, to be checked during flange management and reinstatement.

Name: Kangi Albonetti
Date: 2025-01-14
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	2025-01-14
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Flange management completed.

Name: Kangi Albonetti
Date: 2025-02-19
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

DRAWING NO. DRAWING_NO.

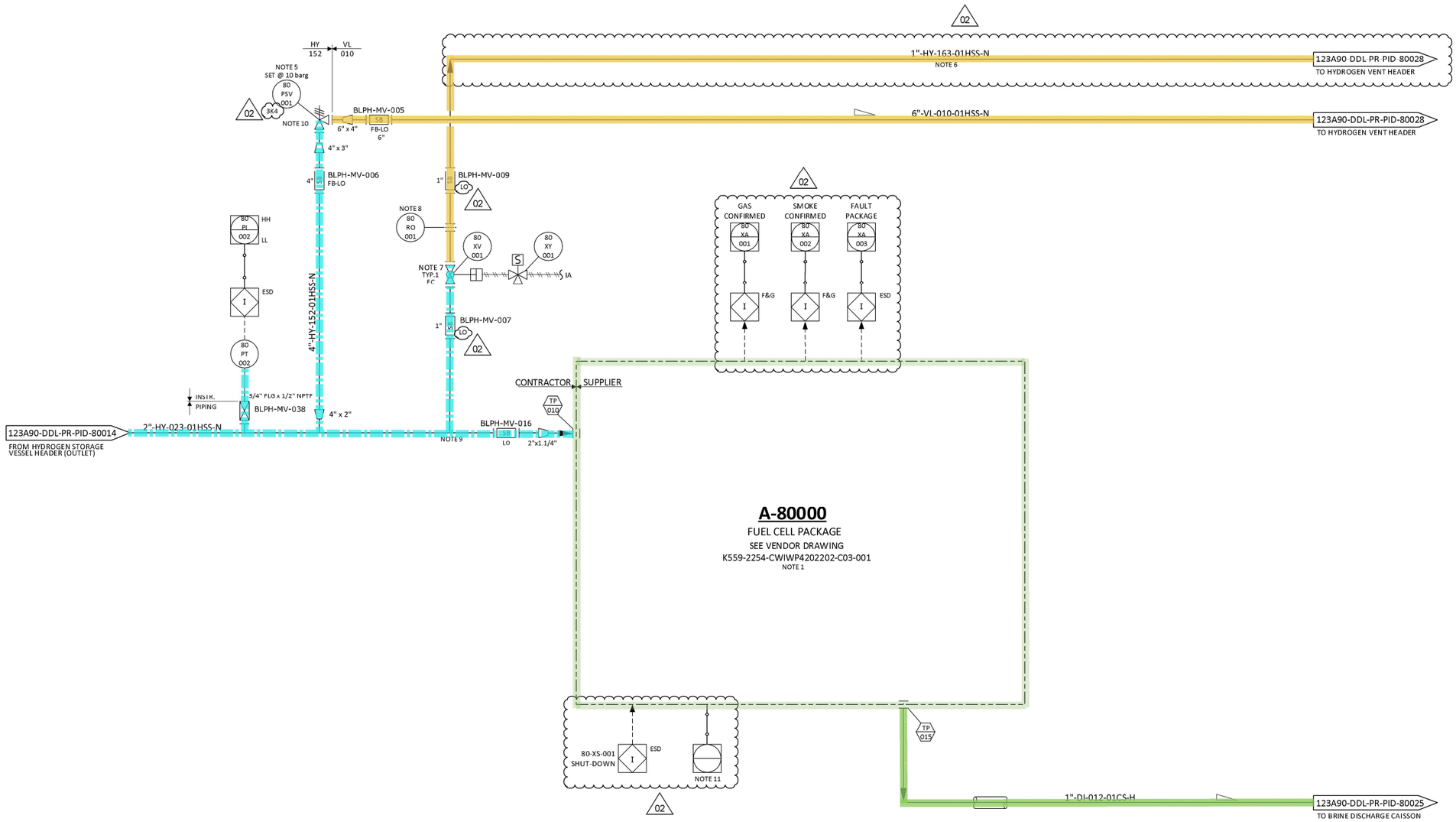
REV. REV

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (Outlet) SS 25-08

Waste Water Brine Discharge System SS 55-01

Hydrogen Fuel Cell Package SS 80-00



NOTES

1. THE VENDOR PACKAGE WILL CONTAIN AIR INTAKE AND EXHAUST, SUITABLY SAFEGUARDED AND SEPARATED.
2. DELETED.
3. DELETED.
4. DELETED
5. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
6. LINE REQUIRED FOR PURGING OF PIPING WORK.
7. TIGHT SHUT-OFF VALVE.
8. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
9. LINE 1"-HY-163-01HSS-N WILL BE LOCATED AS CLOSE TO THE PACKAGE AS POSSIBLE TO ENSURE COMPLETE PURGING OF THE LINE.
10. 80PSV001 SIZED FOR CV FAILURE OF UPSTREAM CONTROL VAVE 25PV055A/B.
11. SERIAL COMMUNICATION WITH CONTROL SYSTEM. 02

HOLDS

1. DELETED.
2. 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
FUEL CELL 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-80012	SHEET 001	REV. 02

File Name : FILE_NAME

DRAWING_NO.

REV.

Sea Water Intake System	SS 50-00
Electrochlorinated Water	SS 50-11
Waste Water Disposal System	SS 55-00
Waste Water Brine Disharge System	SS 55-01
Water Desalination & Distribution System	SS 50-10

A-50000
WATER TREATMENT PACKAGE
CAPACITY : 2.5 m³/hr
02

02

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
02
BLPH-MV-471
SB
1"-SWS-290-01SD-E
50 TT 001
50 TE 001
1.1/2"
4"x1.1/2"
ECC. RED.
TP 017
E
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

02
FOR CONTINUATION SEE DOC N. 123A90-DDL-PR-PID-80023

E
TP 005
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
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK
DECK HOOK-UP 003
02

SUPPLIER | CONTRACTOR

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

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

NOTES

1. DELETED. 02
2. DELETED.
3. DELETED.
4. DELETED.
5. DELETED. 02
6. SERIAL COMMUNICATION WITH CONTROL SYSTEM.

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED. 02
5. DELETED.
6. 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
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. 02

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Waste Water Brine Discharge System SS 55-01

B-50014
BRINE DISCHARGE CAISSON
SIZE : 323 mm (ID) x 21808 mm (H) 02
MATERIAL : CARBON STEEL) 02

123A90-DDL-PR-PID-80022
FROM 50-TI-001

02

123A90-DDL-PR-PID-80027 — 1"-WW-079-01CS-H
FROM INSTRUMENT AIR PACKAGE

123A90-DDL-PR-PID-80012 — 1"-DI-012-01CS-H
FROM FUEL CELL PACKAGE

123A90-DDL-PR-PID-80011 — 1"-DM-005-01CS-H
FROM ELECTROLYSER PACKAGE

123A90-DDL-PR-PID-80022 — 1"-SWR-045-01CS-H
FROM WATER TREATMENT PACKAGE

123A90-DDL-PR-PID-80029 — 1"-WW-071-01CS-H NNF
FROM HYDROGEN VENT KO DRUM

02 1-1/2"-WW-073-01CS-H

50 PI 014 H
50 PT 014
50 TDI 002 H
50 TI 002
50 TT 002
50 TE 002

3/4" FLG x 1/2" NPTF BLPH-MV-411 INSTR. PIPING
E
3/4"
4"x1.1/2" ECC. RED.
1.1/2"
4"x1.1/2" ECC. RED.
BLPH-MV-412 LO
BLPH-NRV-028
1-1/2"-WW-073-01CS-H

DECK HOOK-UP 005 02

1"-WW-071-01CS-H

02 DECK HOOK-UP 004

02

EL. +21.8 m

NOTE 2

B-50014
NOTE 1

ELEVATION
0.00m (L.A.T.)

NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 0.00 mm BELOW SEAWATER LEVEL (LAT).

02

HOLDS

1. DELETED 02

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 1

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-80025	SHEET 001	REV. 02

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
CAPACITY : 313 Sm3/h (PRODUCTION)

A-64000
NITROGEN GENERATION SYSTEM
CAPACITY : 52.7 Sm3/h (PRODUCTION)

Waste Water Brine Discharge System	SS 55-01
Instrument Air Distrubution Network	SS 63-30
Instrument Air Package	SS 63-00
Nitrogen Distribution Network	SS 64-10
Nitrogen Generator Package	SS 64-00

SUCTION 63 PI 001 · DISCHARGE 63 PI 002 · COMMON ALARM 63 XA 001 · MCC DEVICE COMMS FAIL 63 XI 001 · AVAILABLE STATUS 63 XI 002 · RUN/STOP STATUS 63 XI 003 · SHUTDOWN STATUS 63 XI 004 · SHUTDOWN ALARM 63 XA 002 · ESD I

FAULT PACKAGE 63 XA 003

ESD I — 63-XS-001 SHUT-DOWN

NOTE 14

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
SEE VENDOR DIAGRAM
NOTE 2, 3, 4, 5, 6

V-63001
AIR RECEIVER

1-1/2"-IA-263-01SS-N

63 PI 004 LL · ESD I · 63 PI 003 L · 63 PT 003 · 63 PT 004

INSTR. PIPING

BLPH-MV-149 LO

BLPH-MV-150 3/4" FLG x 1/2" NPTF

BLPH-MV-151 3/4" FLG x 1/2" NPTF

1-1/2"-IA-108-01SS-N

123A90-DDL-PR-PID-80041
TO INSTRUMENT AIR DISTRIBUTION HEADER

TP 041 · TP 039 · TP 043 · TP 045 · TP 042

BLPH-MV-269 SB LO

1"-WW-079-01CS-H

123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

BLPH-MV-270 LO 1.1/2"

1-1/2"-IA-204-01SS-N

TO SAFE LOCATION

2"-AV-224-01CS-N

A-64000
NITROGEN SYSTEM
SEE VENDOR DIAGRAM

64 HS 031 · 64 PIC 031A H L · 64 PIC 031B H L · 64 PI 002 L · NOTE 1, 12 SET @ 10 barg · 64 PSV 001 · NOTE 10 TO ATM · 2"-AV-160-01CS-N

64 PT 031A · 64 PT 031B · 64 PT 002

64 PV 031A · 64 PV 031B

INSTR. PIPING

BLPH-MV-386 3/4" FLG x 1/2" NPTF · BLPH-MV-166 3/4" FLG x 1/2" NPTF · BLPH-MV-167 3/4" FLG x 1/2" NPTF

BLPH-MV-278 FB-LO 1.1/2" · 1.5" x 1" · 1-1/2"-N-197-01CS-N · 1.5" x 1"

BLPH-MV-271 SB LO · 3/4" BLPH-MV-275

1"-N-158-01CS-N · 1"-N-100-01CS-N

FL-DC TYP.6 1" · N-158 · N-100

1"-N-262-01CS-N

1"-N-101-01CS-N — 123A90-DDL-PR-PID-80028 TO HYDROGEN VENT HEADER

1"-N-125-03HSS-N — 123A90-DDL-PR-PID-80017 TO HYDROGEN STORAGE VESSEL C

1"-N-124-03HSS-N — 123A90-DDL-PR-PID-80016 TO HYDROGEN STORAGE VESSEL B

1"-N-028-03HSS-N — 123A90-DDL-PR-PID-80015 TO HYDROGEN STORAGE VESSEL A

1" N-257-03HSS-N

UPPER LEVEL · LOWER LEVEL

64 SDY 001 · IA

1"-N-126-03HSS-N — 123A90-DDL-PR-PID-80018 TO HYDROGEN STORAGE VESSEL D

64 SDV 001 · NOTE 13 · NC FC TYP.2

1"-N-127-03HSS-N — 123A90-DDL-PR-PID-80019 TO HYDROGEN STORAGE VESSEL E

1"-N-128-03HSS-N — 123A90-DDL-PR-PID-80020 TO HYDROGEN STORAGE VESSEL F

1"-N-151-01CS-N — 123A90-DDL-PR-PID-80011 TO ELECTROLYSER PACKAGE

01CS · 03HSS

ESD I — 64-XS-001 SHUT-DOWN — ESD I — NOTE 14

64 XA 003 FAULT PACKAGE

V-64001
NITROGEN RECEIVER

NOTES

1. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
2. COMPRESSORS AND DRIERS DESIGNED FOR 2 X 100% CONFIGURATION. INSTRUMENT AIR RECEIVER DESIGNED FOR 1 X 100%.
3. VENDOR TO PROVIDE NECESSARY CONTROLS, INSTRUMENTATIONS AND ISOLATIONS IN ORDER TO OPERATE THE PLANT IN SAFE MANNER.
4. COMPRESSORS WILL OPERATE ON THE BASIS OF ONE WORKING AND ONE ON STANDBY.
5. COMPRESSORS TO BE ROTARY SCREW TYPE OIL FREE.
6. AIR COMPRESSOR INLET TO BE LOCATED AWAY FROM ANY VENTS.
7. DELETED. 02
8. DELETED.
9. DELETED.
10. TO SAFE LOCATION, ROUTED AWAY FROM WALKWAYS.
11. DELETED. 02
12. 64PSV001 SIZED FOR UPSTREAM CV FAILURE.
13. 64SDV001 IS NORMALLY CLOSED. IF REQUIRED THE OPERATOR CAN REMOTELY OPEN THE VALVE TO ALLOW PURGING OPERATION. VALVE 64SDV001 IS ALSO CONNECTED TO THE PCS SYSTEM.
14. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
15. THE ALARM 64-PAL-002 WILL CLOSE 64-SDV-001 THROUGH SAFETY SYSTEM.

02

HOLDS

1. DELETED.
2. DELETED. 02
3. DELETED.
4. 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
INSTRUMENT AIR 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-80027		SHEET 001	REV. 02

File Name : FILE_NAME

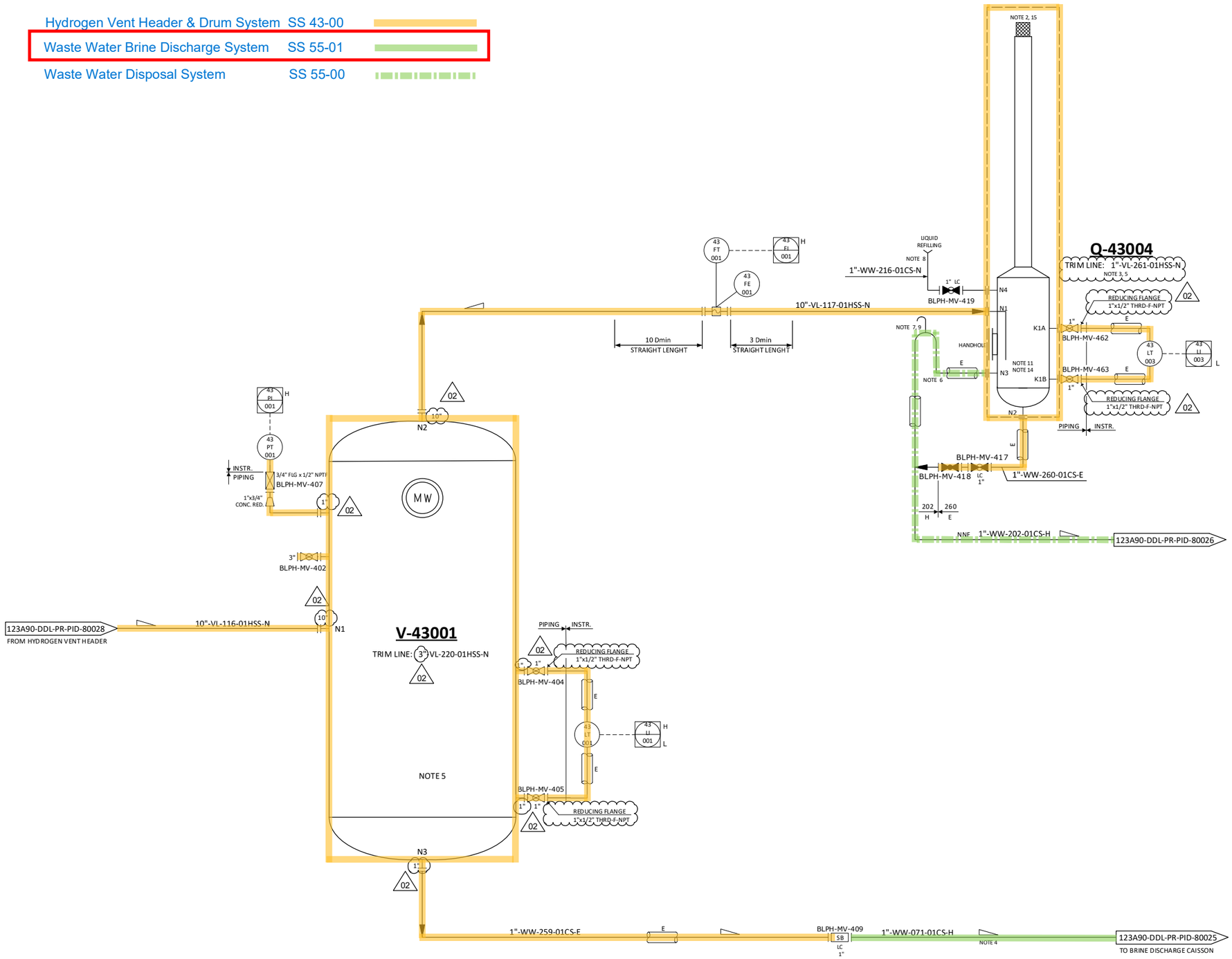
DRAWING NO. DRAWING_NO.

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.
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

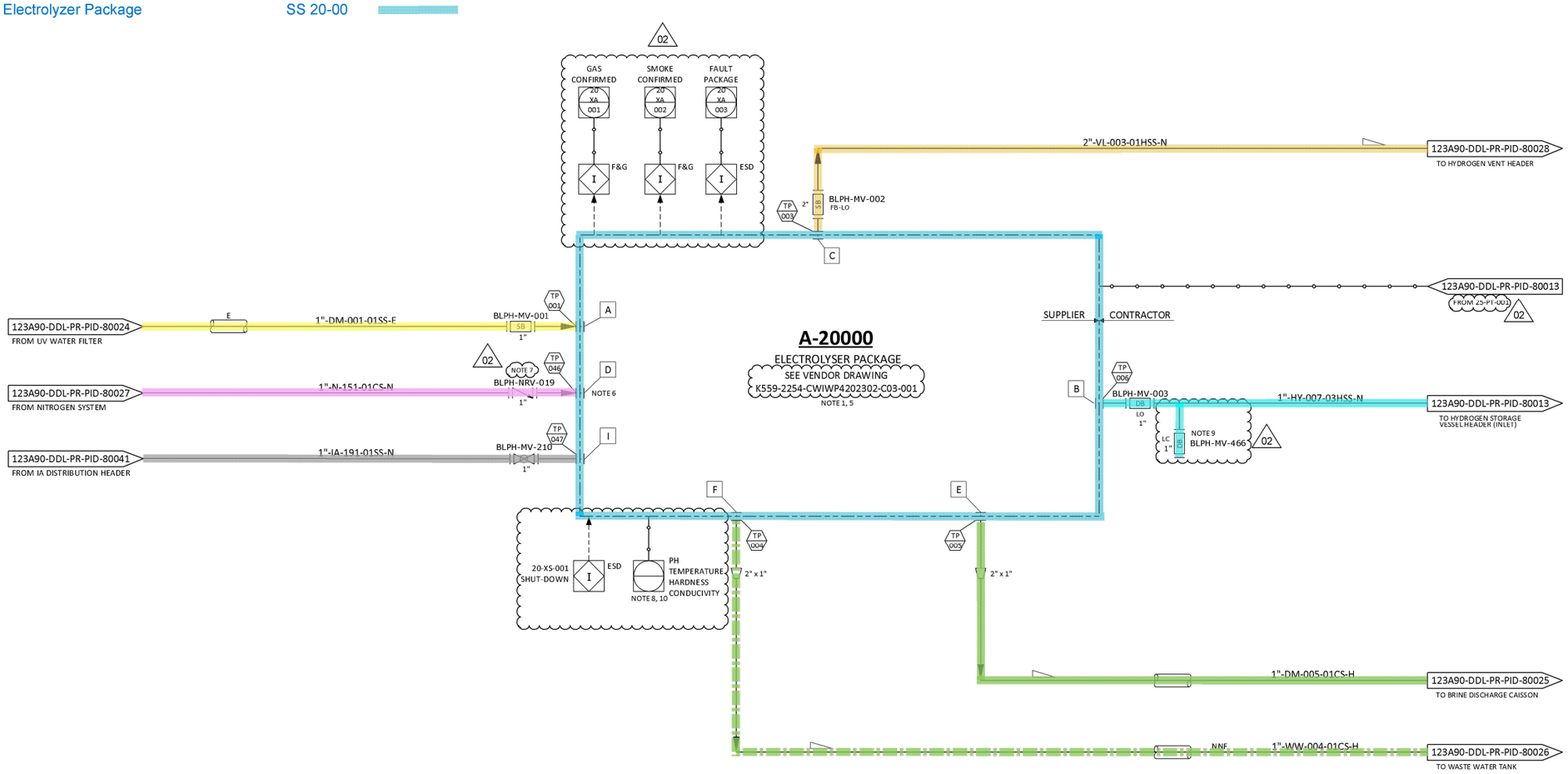
DRAWING NO. DRAWING_NO.

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: 55-01 & process: MC & discipline : I

Instrumental	55-01 Waste Water Brine Discharge System

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
50-PT-014	Pressure Transmitter - Water Disposal Header to Caisson B-50014	ONSHORE	C10000903	CJX08	100	2025-02-21	RFC 1
		ONSHORE	C10000943	TJX04	100	2024-10-02	RFC 1
50-TT-002	Temperature Transmitter - Water Disposal Header to Caisson B-50014	ONSHORE	C10000905	CJX08	100	2025-02-21	RFC 1
		ONSHORE	C10000945	TJX04	100	2024-10-02	RFC 1
50-TW-002	Thermowell - Water Disposal Header to Caisson B-50014	ONSHORE	C10000907	CJX13	100	2025-02-21	RFC 1
		ONSHORE	C10001435	TJX13	100	2025-02-13	RFC 1
50-XV-005	On-Off Actuated Ball Valve	ONSHORE	C10004657	CJX23	100	2025-03-07	RFC 1
50-XY-005	Solenoid Valve - Brine Discharge Caisson B-50014	ONSHORE	C10004661	CJX00	100	2025-03-07	RFC 1
50-ZSHL-005	Limit Switch box Brine Discharge Caisson B-50014	ONSHORE	C10004662	CJX00	100	2025-03-07	RFC 1
AV-63009/50-XV-005	Pneumatic Connection	ONSHORE	C10004658	CJX06	100	2025-03-10	RFC 2
C-50-PT-014/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000057	CJX10	100	2025-02-21	RFC 1
C-50-TT-002/00-JE-11004	FLOW TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000052	CJX10	100	2025-02-21	RFC 1
C-50-XV-005/00-JE-12006	On-Off Actuated Ball Valve/DI JB to PCS	ONSHORE	C10004664	CJX10	100	2025-03-07	RFC 1
C-50-XY-005/00-JE-13003	Solenoid Valve/DO JB to PCS	ONSHORE	C10004665	CJX10	100	2025-03-07	RFC 1

ROSETTI MARINO

CROSSWIND

ITEM	Tag	C-50-TT-002/00-JE-11004	: FLOW TRANSMITTER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	55-01	: Waste Water Brine Discharge System	Module	LD/LD_B-100_Ext		
TASK	code	C10000052	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	50-TT-002	To	00-JE-11004		

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.	PL
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		1,3	Ω
	SCREEN		1,3	Ω
	EARTH		NA	Ω
	ARMr		1,3	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

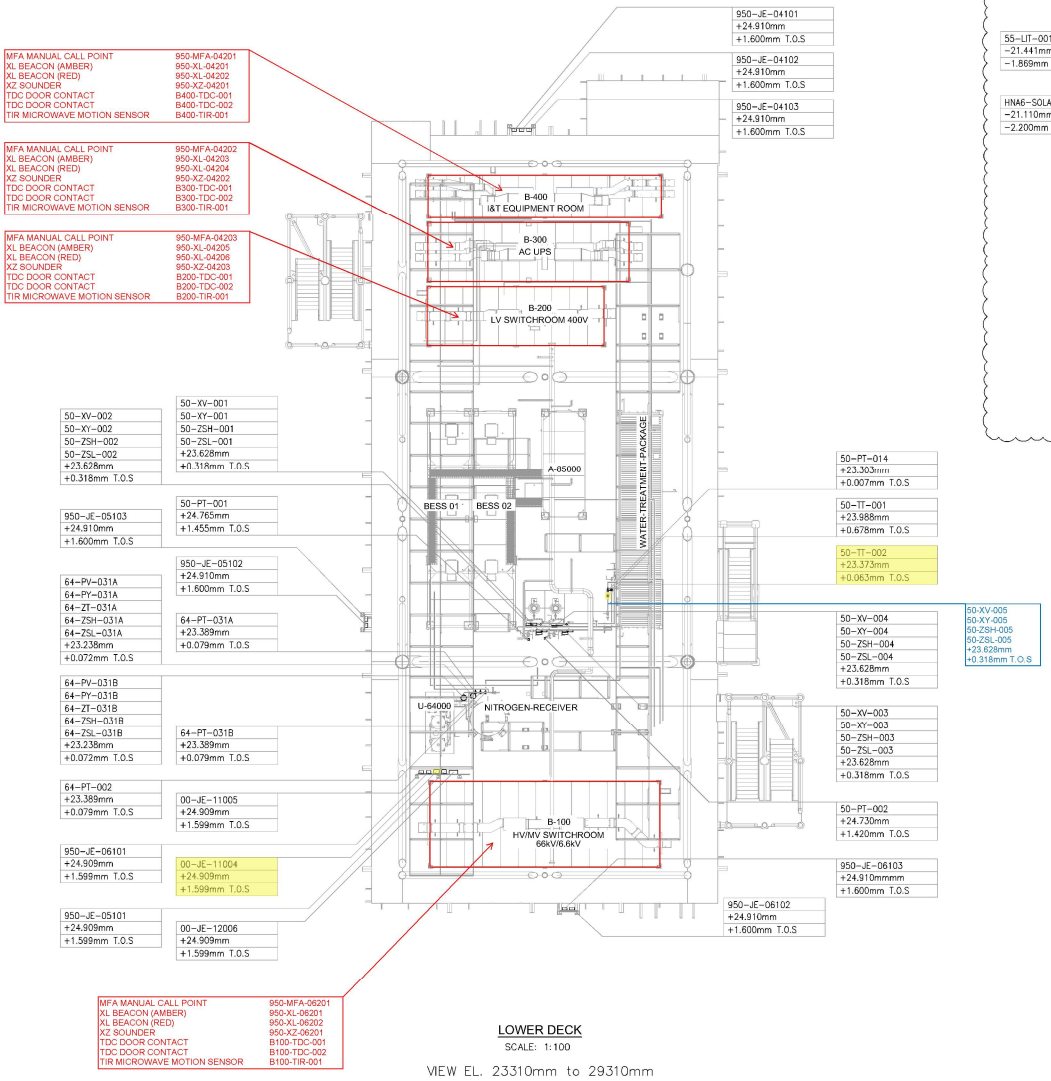
Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Nota 5: refer to PL C30000680

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-08	2025-02-21	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-08T09:38:01.474Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-21T12:52:58.475Z	

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

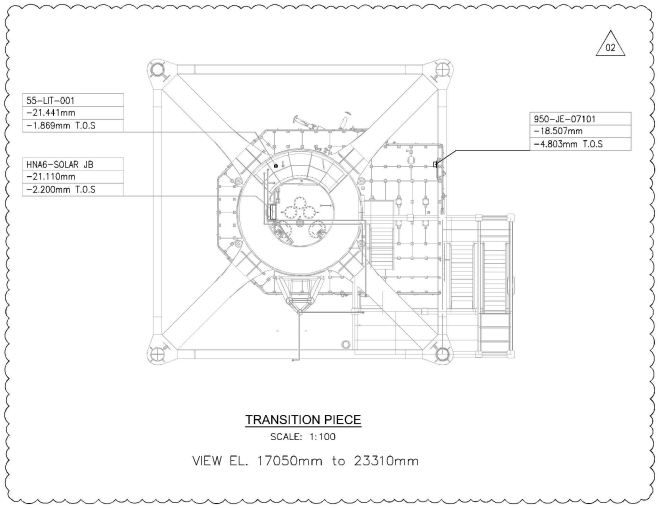
REV. 02



LOWER DECK

SCALE: 1:100

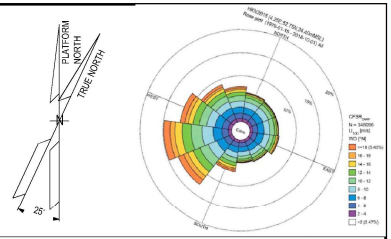
VIEW EL. 23310mm to 29310mm



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)

VALID FOR CONSTRUCTION

FDL DWG: 123A90-FDL-IN-DL-40080

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

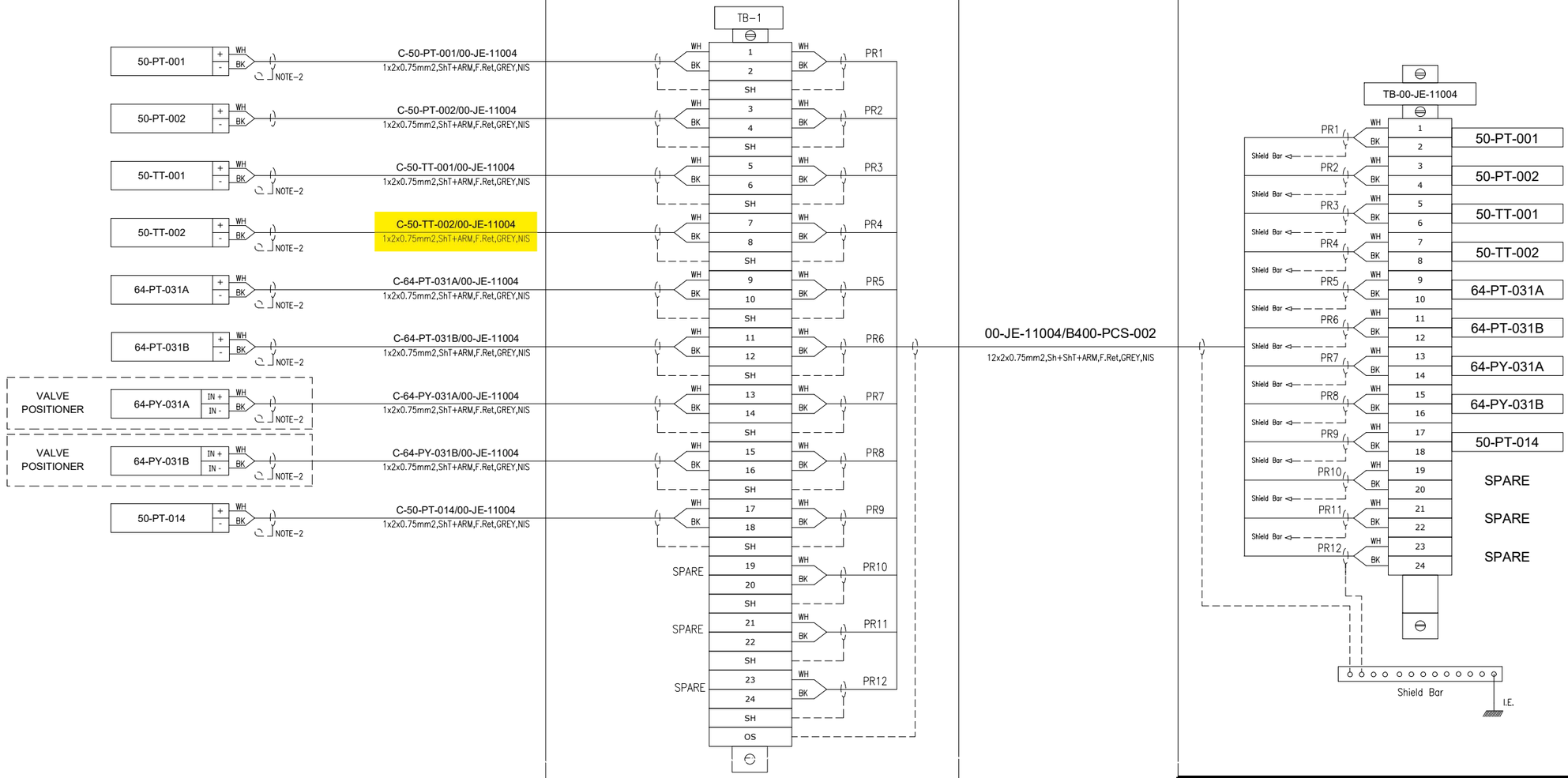
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11004	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-11004-SH.1 OF 2

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 009	REV. 01

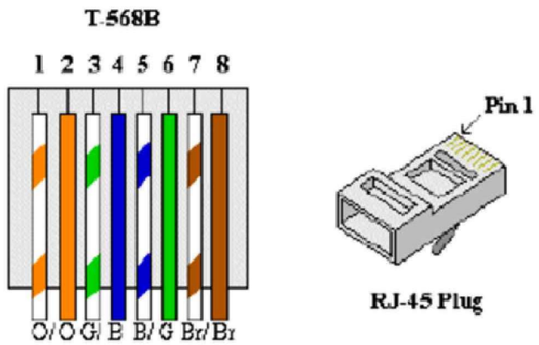
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DRAWING NO. 123A90-DDL-IN-DG-40015

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:



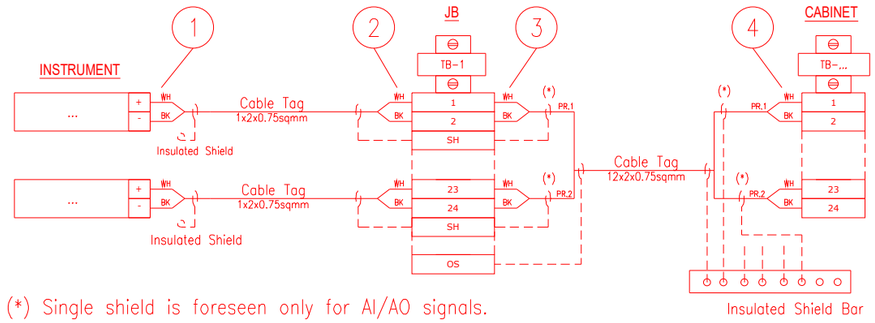
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

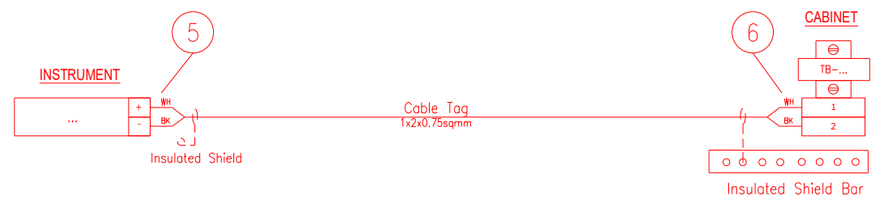
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

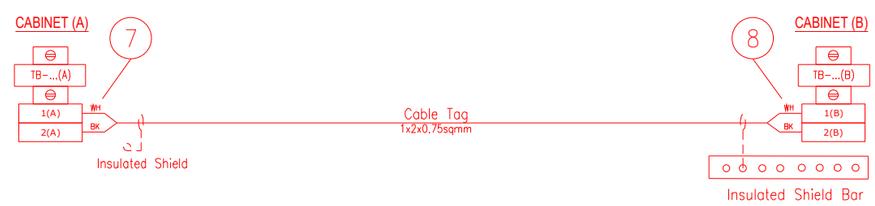
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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

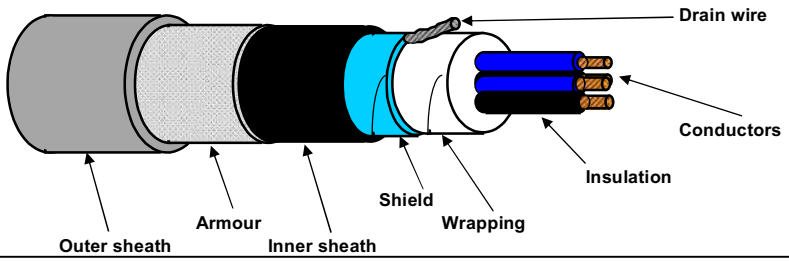
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Info	Category	Discipline	Eng Status	NativeDoc	Layout	Wiring	TDS	Typical 1	Typical 2	Service	Parent Tag	Grouping	Entity Type	Main Function	Secondary Function	Module	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.	PO Number	PO Position	RFID	Eng Gross Qty	Over All Gross Qty	UM	Production Year	Serial Number	Is Barrier Ex Cert	Overall Prj Part Number	Parent Support	Install Remarks	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-SD-TT-002/SD-JE-11004		Cable	IN	VFC	123A90-DDL-IN-UG-40091								Ext-Cat						SD-TT-002	Flow Transmitter	Lower Deck		SD-JE-11004	AI/AO JB to PCS	Lower Deck (B-10d) Ext.	Junction Box	SMICV01-1X2X0.75	Cable Cu Cl.2/XLPE/DSLS2H/SWB/LSZH 1SQ/250V (300V) 1x2x0.75mm² - Gray	1724001170	10-240.1			28		28	M						M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-18E / L-SEC-13 / L-SEC-1L / L-SEC-1M / L-SEC-1G

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.

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ROSETTI MARINO | CROSSWIND

ITEM	Tag	C-50-PT-014/00-JE-11004	: PRESSURE TRANSMITTER / MARSHALLING PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/LD_B-100_Ext	
TASK	code	C10000057	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	50-PT-014	To	00-JE-11004		

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.	PL
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		1,2	Ω
	SCREEN		1,2	Ω
	EARTH		NA	Ω
	ARMr		1,2	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

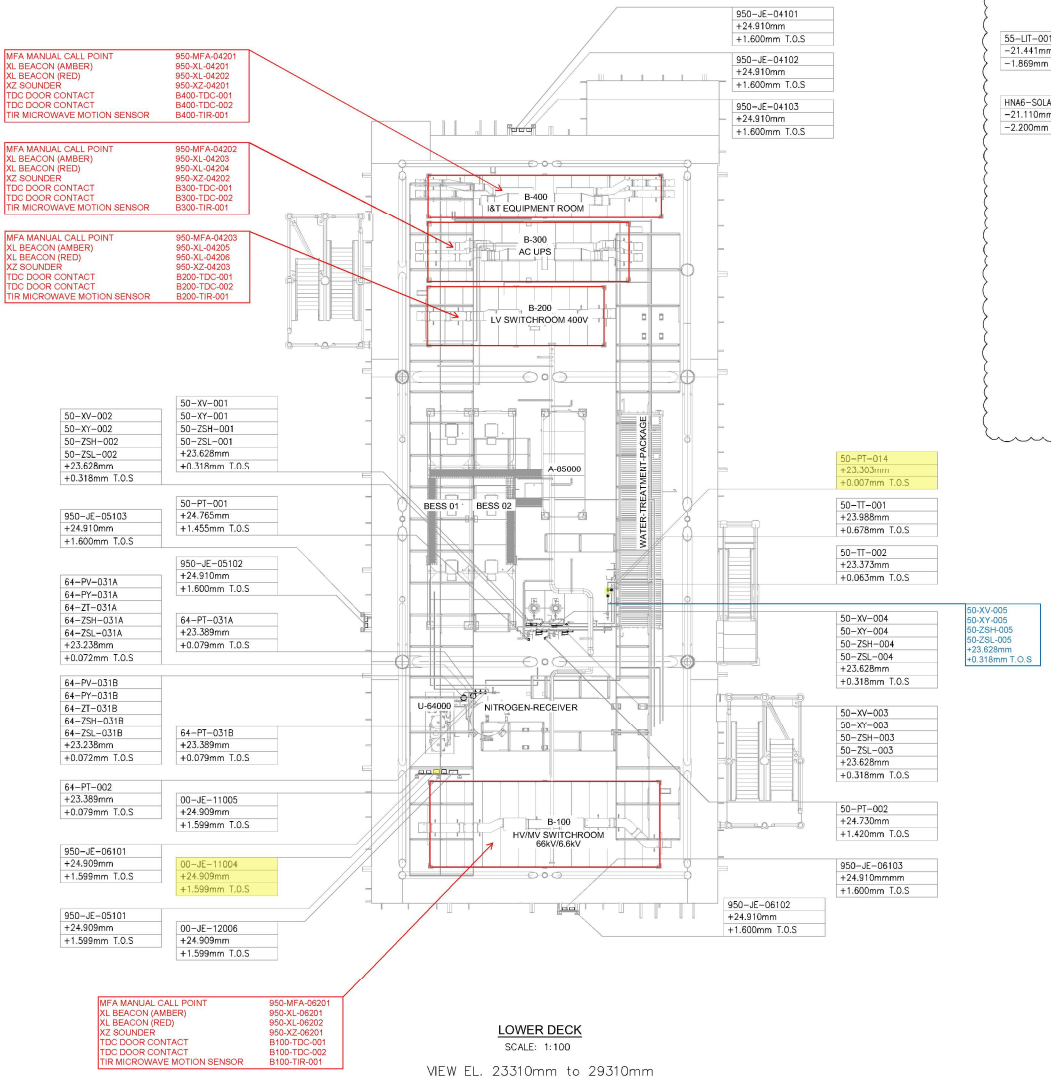
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680

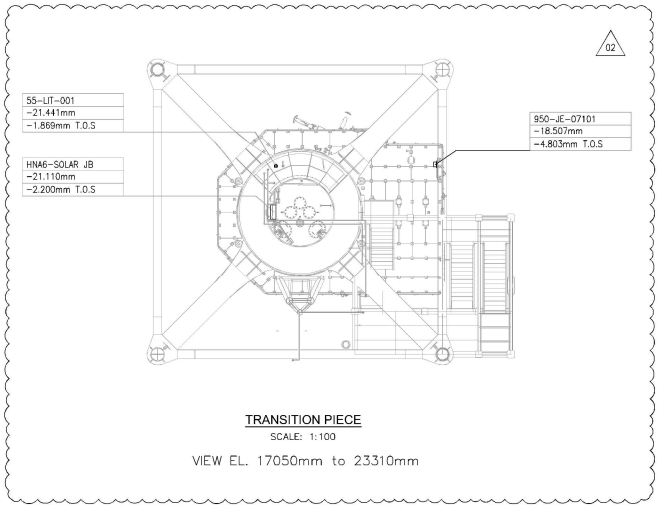
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-08	2025-02-21	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-08T09:38:11.655Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-21T12:38:52.534Z	

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

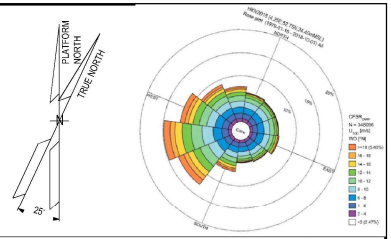
REV. 02



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)

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

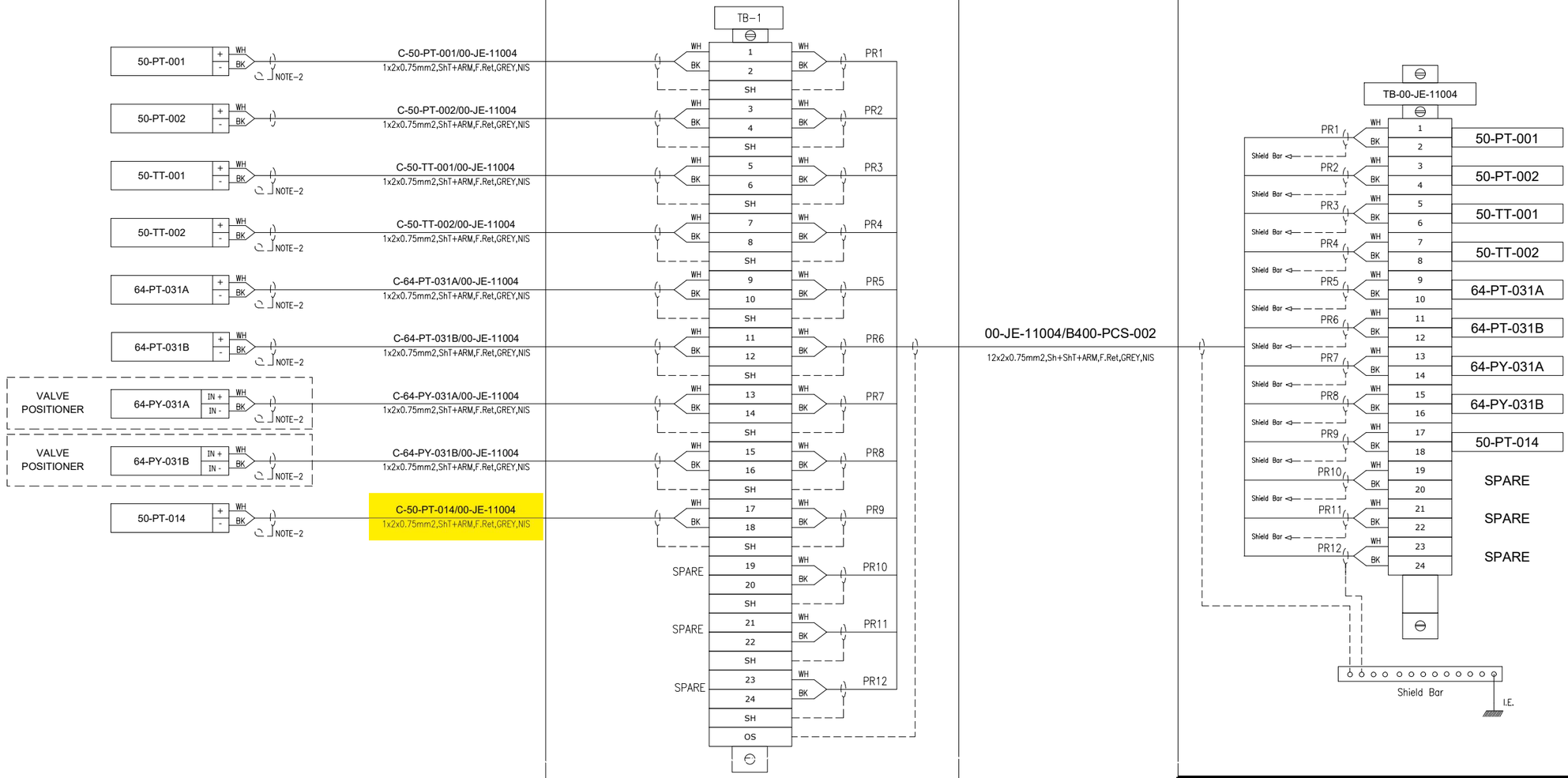
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DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11004	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-11004-SH.1 OF 2

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 009	REV. 01

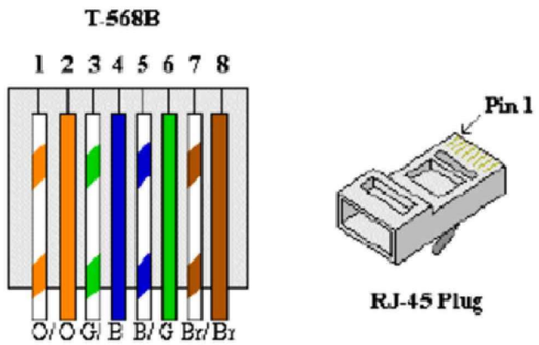
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



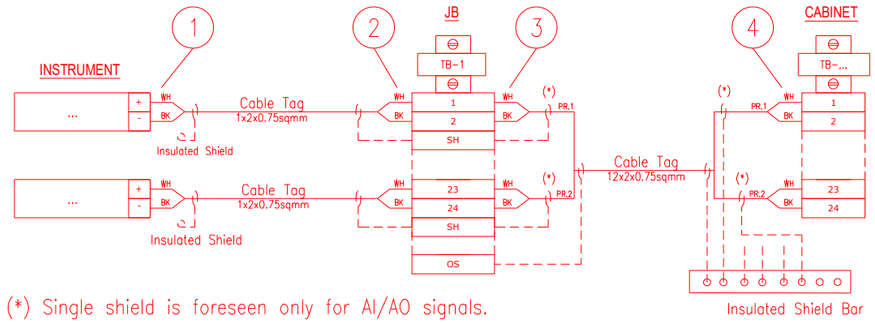
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

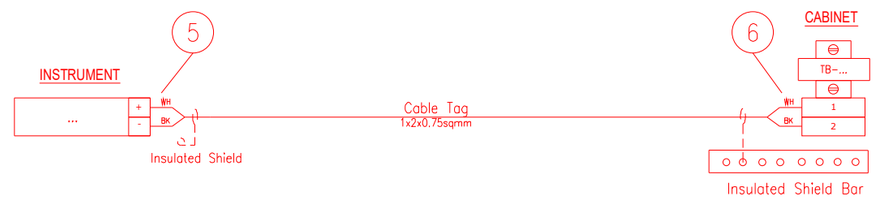
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

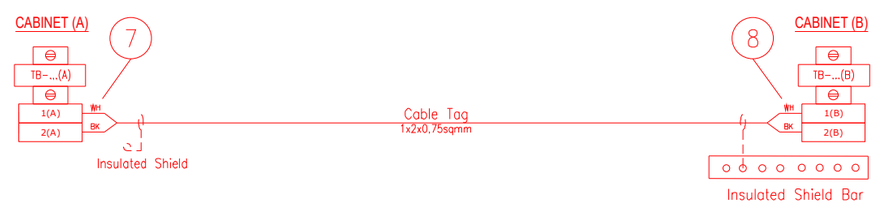
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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

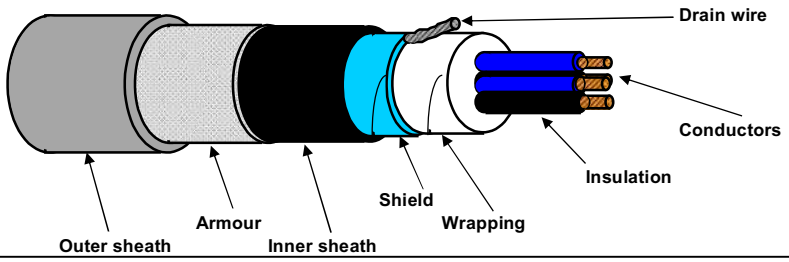
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Info	Category	Discipline	Eng Status	NativeDoc	Layout	Wiring	TDS	Typical 1	Typical 2	Service	Parent Tag	Grouping	Entity Type	Main Function	Secondary Function	Module	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.	PO Number	PO Position	RFID	Eng Gross Qty	Over All Gross Qty	UM	Production Year	Serial Number	Is Barrier Ex Cert	Overall Prj Part Number	Parent Support	Install Remarks	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-50-PT-014/00-IE-11004		Cable	IN	VFC	123A90-DDL-IN-UG-40091								Ext-Cat						50-PT-014	Pressure Transmitter	Lower Deck		00-IE-11004	Aj/NO-IB to PCS	Lower Deck (B-100) Ext.	Junction Box	SMICV01-1X240_75	Cable Cu Cl.2/XLPE/DSLS2H/SWB/LSZH 1SQ/2SQV (1000V) 1x240.75mm² - Grow	1724001170	10-240.1		28	28	M								M20S	T2_M20S_Double			T2_M20S_Double				I-SEC-18E / I-SEC-13 / I-SEC-IL / I-SEC-1M / I-SEC-1G

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.

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ITEM	Tag	50-PT-014	: Pressure Transmitter - Water Disposal Header to Caisson B-50014			Dwg	123A90-DDL-PR-PID-80025
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10000903		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX08 Electrical Instrument

Installation Check

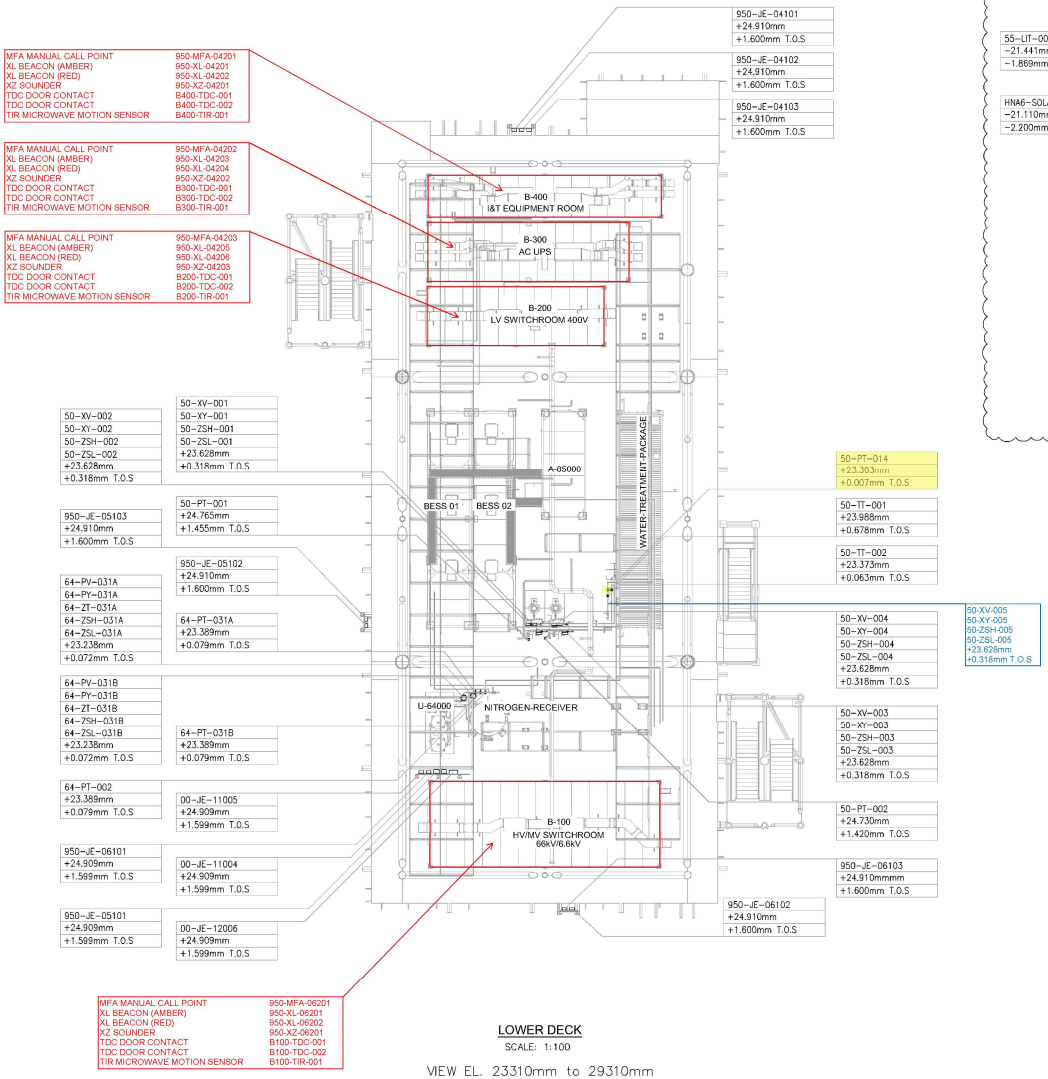
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check identification (tag number, tag plates).	PL
5	Check supporting and protection against vibrations.	OK
6	Check calibration certificate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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-18	2025-02-21	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-18T09:40:38.986Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-21T13:39:23.284Z	

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

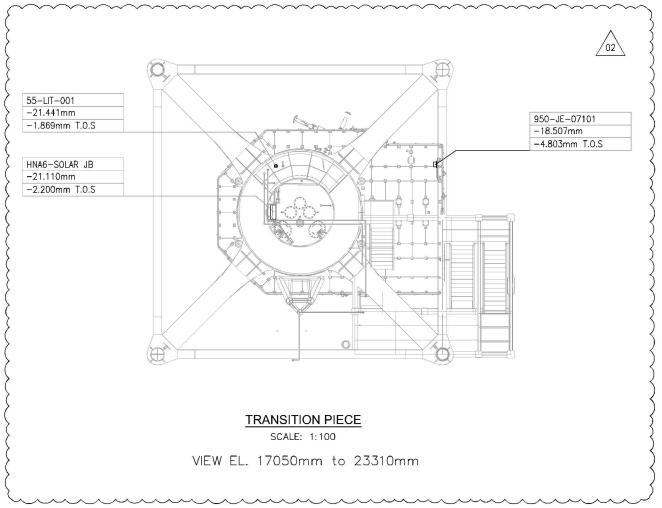
REV. 02



LOWER DECK

SCALE: 1:100

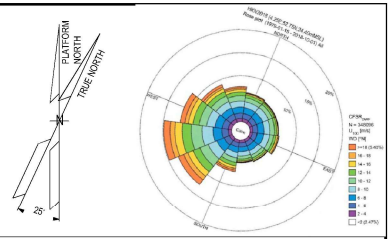
VIEW EL. 23310mm to 29310mm



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)

VALID FOR CONSTRUCTION

FDL DWG: 123A90-FDL-IN-DL-40080

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

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

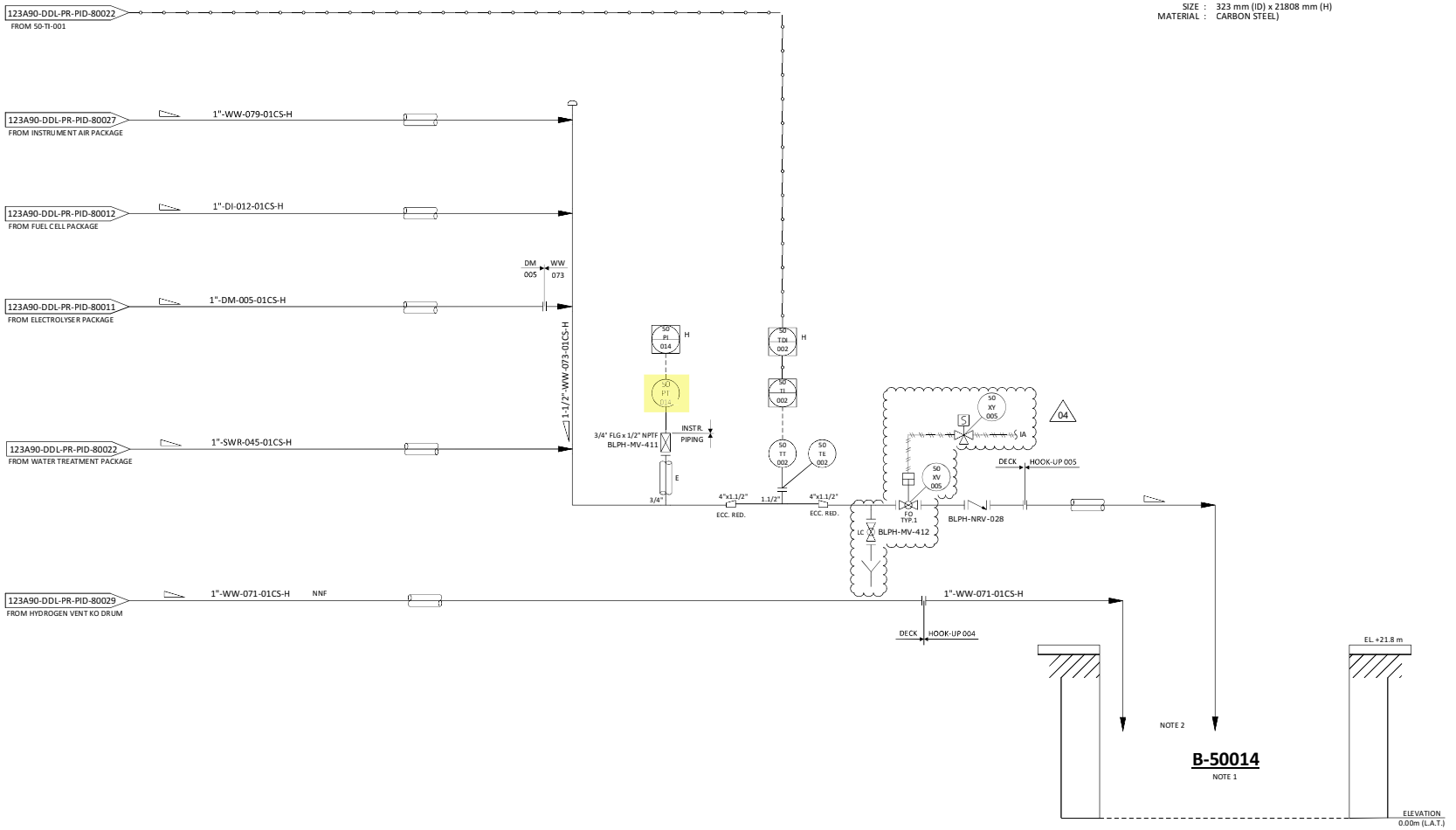
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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. DRAWING_NO.

REV. REV.



NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025		SHEET 001	REV. 04

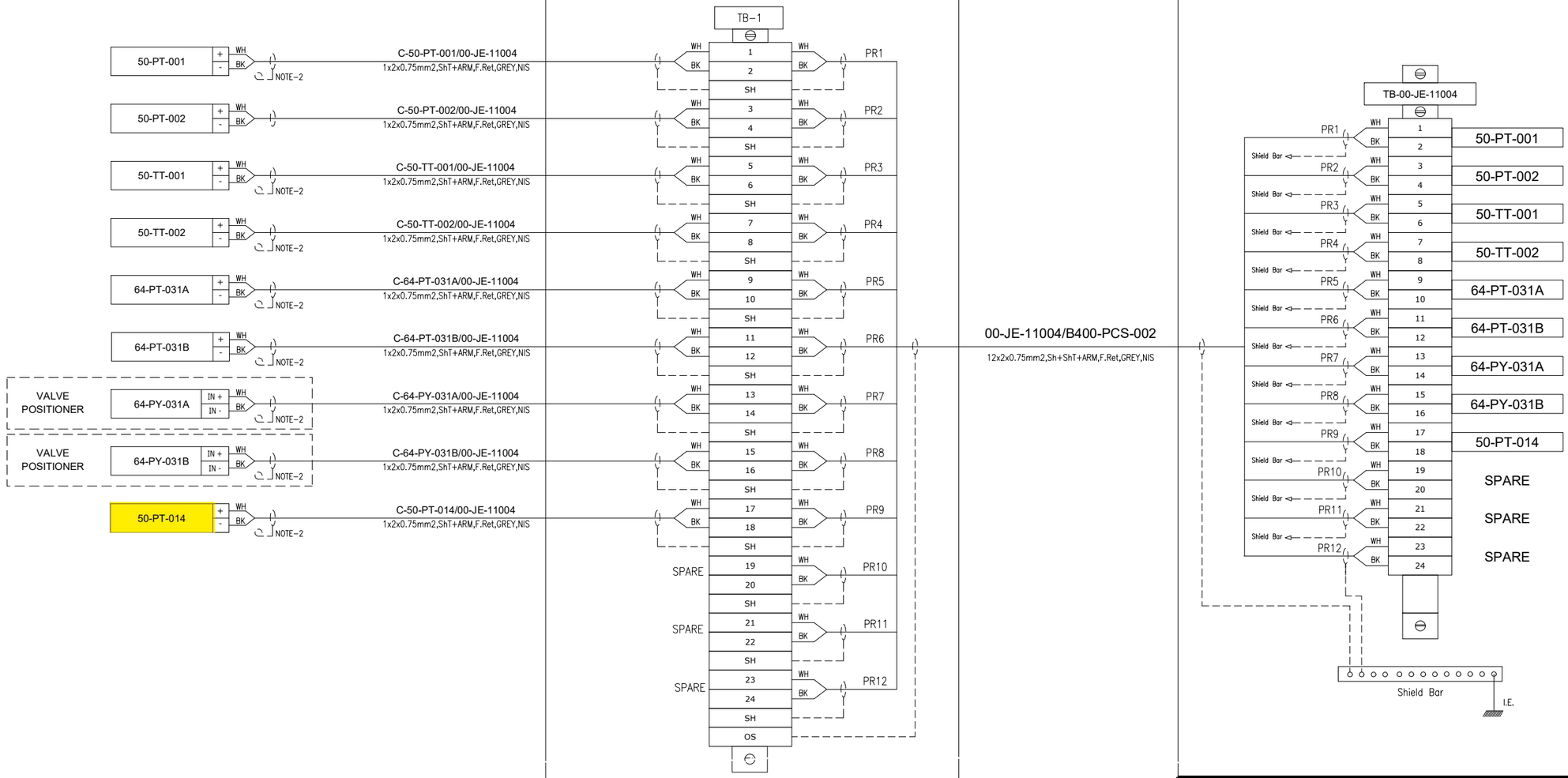
File Name : FILE_NAME

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11004	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

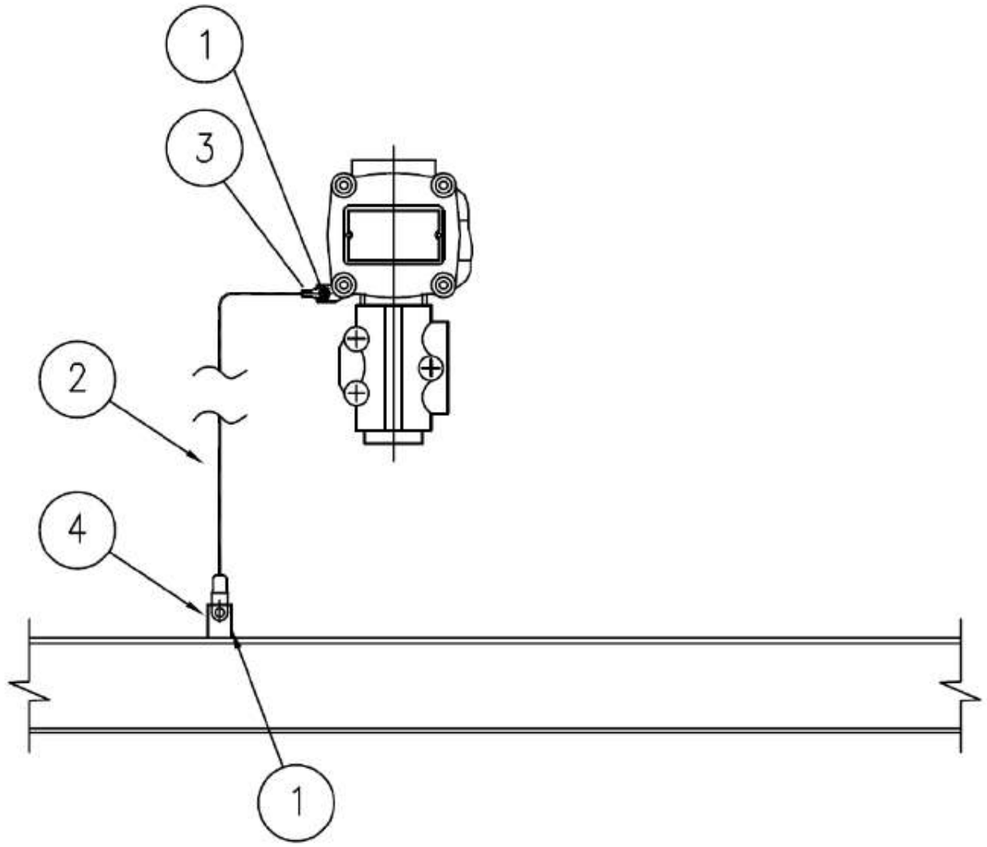
TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-11004-SH.1 OF 2

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 009	REV. 01

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

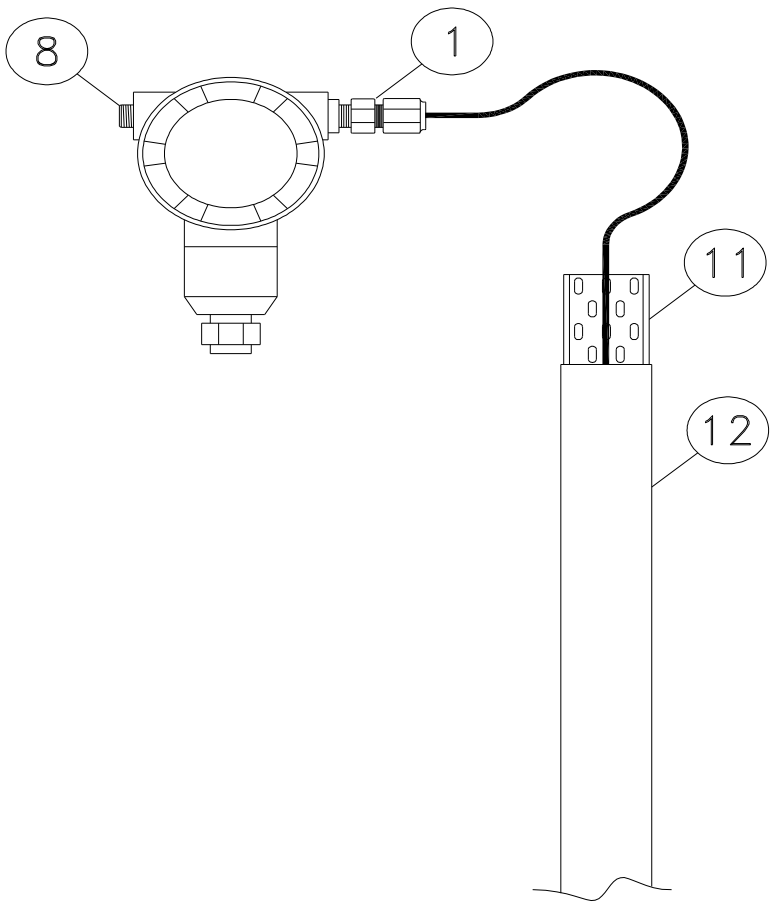
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 6 of 37 Date: 27/09/2024 Rev. 02

ELECTRICAL HOOK-UP FOR PRESSURE TRANSMITTERS



INSTRUMENT TAG	
1	25-PT-001
2	25-PT-035
3	25-PT-037
4	25-PT-040
5	25-PT-043
6	25-PT-046
7	25-PT-049
8	25-PT-055A
9	25-PT-055B
10	43-PT-001
11	50-PT-014
12	63-PT-003
13	64-PT-031A
14	64-PT-031B
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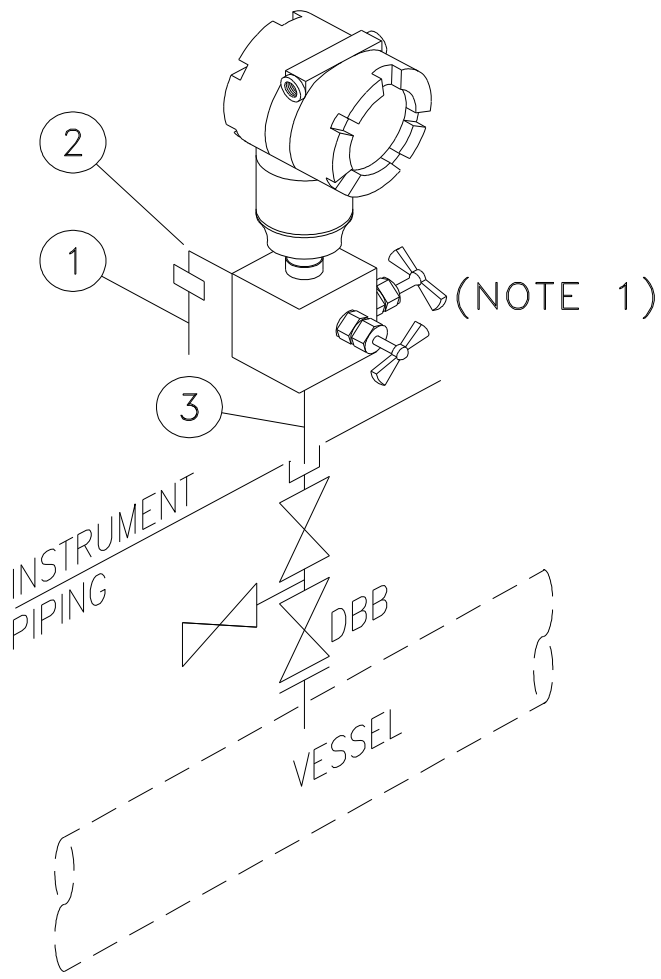
NOTE:

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	1

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File: 123A90-DDL-IN-HD-40079_Rev.02 - Instrument Electrical Hook-up its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Process Hook-Ups	Sh. 6 of 8 Date: 06/12/2024 Rev. 02

PRESSURE TRANSMITTERS - Installation for Gas Service



	INSTRUMENT TAG
1	25-PT-004
2	25-PT-006
3	25-PT-008
4	25-PT-009
5	25-PT-011
6	25-PT-012
7	25-PT-035
8	25-PT-037
9	25-PT-040
10	25-PT-043
11	25-PT-046
12	25-PT-049
13	25-PT-001
14	25-PT-002
15	25-PT-055A
16	25-PT-055B
17	43-PT-001
18	50-PT-014
19	63-PT-003
20	63-PT-004
21	~~64-PT-031A~~
22	64-PT-031B
23	64-PT-002
24	80-PT-002
25	
26	
27	
28	
29	
30	

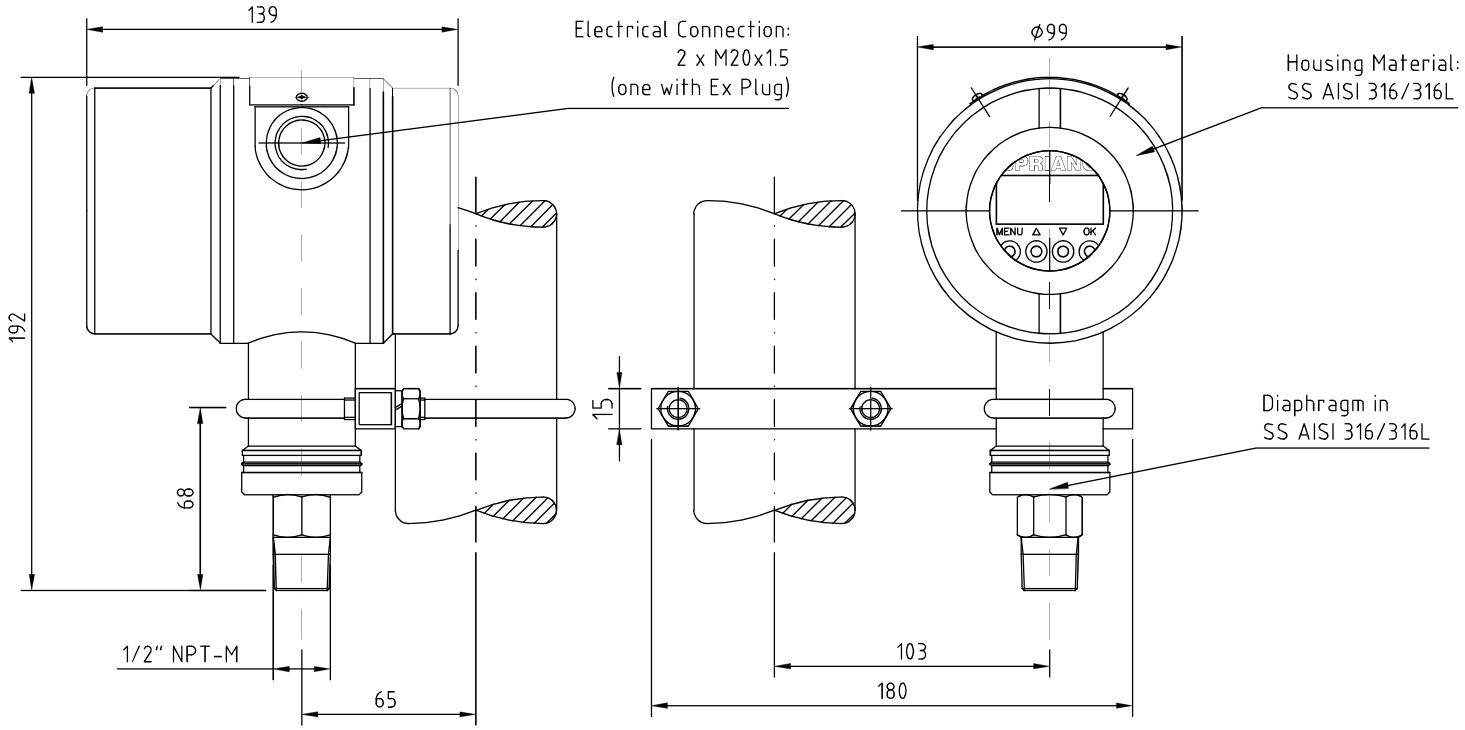
NOTES:
(1) MANIFOLD IS SUPPLIED WITH INSTRUMENT.
(2) VENDOR SHALL GUARANTEE THE MATERIAL COUPLING BETWEEN TUBING AND FITTINGS.

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-HD-40077
REV.: 2_C | DATE: 11/02/25 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
3		SS316 NIPPLE	1/2" NPT L=100mm	N. 1
2		ELBOW SS316	1/4" NPT-M x 1/2" O.D	N. 1
1		SS 316L TUBING (NOTE 2)	1/2" x 0,049"Thk	m 0.5

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Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

SST76 PRESSURE TRANSMITTERS

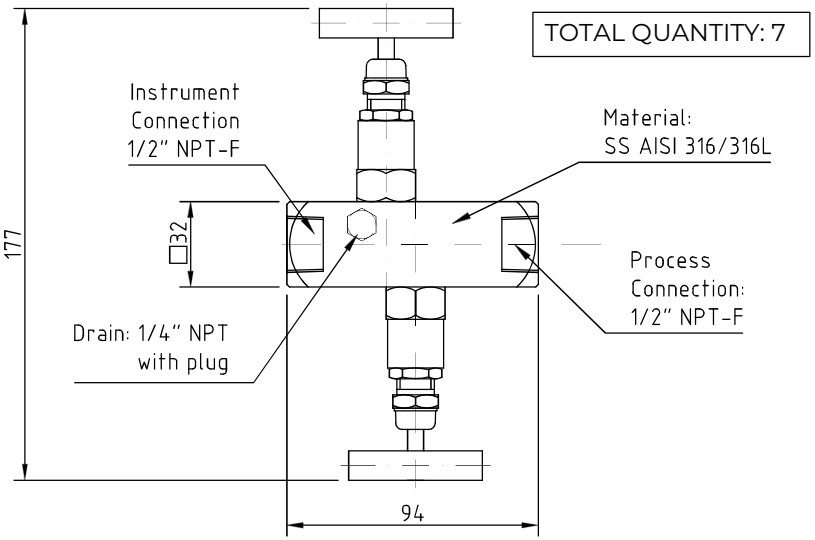


TAG LIST

#	TAG	RANGE	CALIBRATION
18	50-PT-014	0 ÷ 30 barg	0 ÷ 18 barg
19	63-PT-003	0 ÷ 30 barg	0 ÷ 11 barg
20	63-PT-004	0 ÷ 30 barg	0 ÷ 11 barg
21	64-PT-031A	0 ÷ 30 barg	0 ÷ 10 barg
22	64-PT-031B	0 ÷ 30 barg	0 ÷ 10 barg
23	64-PT-002	0 ÷ 30 barg	0 ÷ 10 barg
24	80-PT-002	0 ÷ 30 barg	0 ÷ 10 barg

TOTAL QUANTITY: 7

MAN2-R6 TWO WAYS AND TWO VALVES MANIFOLD



NOTES

SST76 PRESSURE TRANSMITTERS
SST76-H-7-K-2-0-2-1-4 + MAN2-R6

H - OUTPUT: 4-20 mA + HART
7 - PROCESS CONNECTION: 1/2" NPT M;
K - NOMINAL RANGE: 0 ÷ 30 barg
2 - CALIBRATION: refer to TAG LIST TABLE
0 - DIAPHRAGM MATERIAL: SS AISI 316/316L
2 - OPTIONS: HOUSING MATERIAL STAINLESS STEEL WITH ELECTRICAL CONNECTIONS 2 x 1/2" NPT-F
1 - OPTIONS: MOUNTING BRACKET FOR 2" PIPE MOUNTING
4 - EXPLOSION PROTECTION 2014/34/EU: ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1G Ex ia IIC T6/T5/T4 Ga

to be coupled with:
1. MAN2-R6 TWO VALVES AND TWO WAYS MANIFOLD, MATERIAL SS AISI 316/316L, CONNECTION TO INSTRUMENT 1/2" NPT-F, PROCESS CONNECTION 1/2" NPT-F.

NOTES:
1. OVERALL ACCURACY OF PT (COMPREHENSIVE OF HYSTERESIS, NON-LINEARITY, REPEATABILITY) IS WITHIN +/- 0,07% FS;
2. ALL ITEMS ARE EQUIPPED WITH SS NAMEPLATE;
3. FILLING OF ELEMENT IS FORESEEN WITH DOW CORNING SILICONIC OIL;
4. ELECTRICAL CONNECTION ARE: 2 X 1/2" NPT-F (ONE PLUGGED);
5. INTEGRAL LCD /CONFIGURABLE ENGINEERING UNITS;
6. INGRESS PROTECTION EN 60529: IP66;
7. HOUSING MATERIAL STAINLESS STEEL;
8. ALL INSTRUMENT ARE SIL2/SIL3 CERTIFIED;
9. HART 6.

CERTIFICATES

1. ATEX Ex-d CERTIFICATE (2014/34/EU)
2. IP66 GRADE (EN/IEC 60529)
3. MATERIAL 3.1 (EN 10204) & HYDROTEST CERTIFICATES
4. CALIBRATION CERTIFICATES (IEC 60770)

REV	DATE	STATUS	PURPOSE OF ISSUE	PRE'D.	CHC'D.	APP'D.	AUTH'D.
03	18/JULY/24	FOURTH ISSUE	FOR CONSTRUCTION	M. Sassi	G. Abolini	G. Abolini	S. Valletti
02	02/JULY/24	THIRD ISSUE	FOR CONSTRUCTION	M. Sassi	G. Abolini	G. Abolini	S. Valletti
01	13/JUN/24	SECOND ISSUE	FOR CONSTRUCTION	M. Sassi	G. Abolini	G. Abolini	S. Valletti
00	24/MAY/24	FIRST ISSUE	FOR APPROVAL	M. Sassi	G. Abolini	G. Abolini	S. Valletti

CROSSWIND ROSETTI MARINO

P.O. No.: 24/01611/PO | Mod_CAR_Rev17-01 | SCALE – 1:2

TERRANOVA

TERRANOVA SRL

DRAWING TITLE: DIMENSIONAL DRAWINGS

JOB: 4718_OS | SHEET No. 6 OF 10 | REV. 03

GENERAL	1	Tag Number		50-PT-014	
	2	Service		WASTE WATER FROM HEADER TO BRINE DISCHARGE CAISSON (B-50014)	
	3	P&ID Number	Location	123A90-DDL-PR-PID-80025	1-1/2"-WW-073-01CS-H
	4	Function		PRESSURE MEASUREMENT	
	5	Mounting		DIRECT ON-LINE	
	6	Area Classification		ATEX Zone2 - IIC (IIB+H2) T1	
	7	Ambient Temperature		Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.	
PROCESS CONDITIONS	8	Fluid		WASTE WATER	
	9	Pressure Des.	Oper. [barg]	17.7	Atm
	10	Temperature Des.	Oper. [°C]	100	Amb
	11	Oper. Spec. Gravity	Oper. Viscosity	-	-
	12	Flow Rate	Allowable Temp.	-	-
	13				
TRANSMITTER	14	Instrument Range Min.	Max.	0	30
	15	Calibration Range Min.	Max. [barg]	0	18
	16	Elevation	Suppresion	-	-
	17	Element Type		Diaphragm	
	18	Element Material		AISI 316/316L + Gold Plate (17)	
	19	Body Material	Body Rating	AISI 316/316L	200 bar
	20	Process Flanges Material		Integral 2 Way Manifold (22)	
	21	Wetted O-Rings Material		-	
	22	Fill Fluid		-	
	23	Bolts	Housing	Manifold/Instrument assembly	AISI 316/316L
	24	Paint		-	
	25	ATEX Certification	Ingress Protection	Atex Ex II 2G Ex db IIC T5	IP66
	26	Process Connection	Electrical Connection	1/2" NPT(F)	N. 2 M20x1.5mm
	27	Repeatability	Accuracy	-	0.07 % of Nominal Range
	28	SIL Certification	PED Certification	-	Required
DIAPHRAGM SEAL	29	Process Connection & Rating		-	
	30	Diaphragm Material	Housing Material	-	-
	31	Fill Fluid	Capillary Material	-	-
	32	Capillary Type	Capillary Length	-	-
	33	Flushing Connection		-	
	34				
OPTIONS	35	Integral Meter	Scale	Integral LCD Display	-
	36	Hydrostatic Testing	Cleaning	Required	-
	37	Mounting Brackets	Manifold Model No	Required	MAN2-R6
	38	Lightning Protection	Barrier Manuf./Model	-	-
COMMUNICATION AND SOFTWARE	39	Communication Type	Signal Type	HART 6	4-20mA Loop Powered 24 Vdc
	40	D D Revision	CFF Revision	-	-
	41	Device Tag	Hart Tag	-	-
	42	Internal Diagnostics	Capacitance	-	-
	43	Segment	Device Address	-	-
	44	Device Class	Simulate	-	-
	45	Nominal Current	Operating Voltage	-	-
	46				
PURCHASE	47	Manufacturer		TERRANOVA	
	48	Model		SST76-H-7-K-2-0-2-1-4 + MAN2-R6	
	49	Purchase Order Number		1724000979	

Notes:

No.	Date	By	Chkd	Appr	Description
02	06/12/2024	VBA	LCA	DLO	Accepted for Construcion (AFC)
01	29/08/2024	VBA	LCA	DLO	Accepted for Construcion (AFC)
00	16/01/2024	VBA	LCA	DLO	ISSUED FOR REVIEW (IFR)

INSTRUMENT DATASHEET

Pressure Transmitter

CROSSWIND

ROSETTI MARINO

Sheet 27 of 35

Code: 605 | Dwg. No.: 123A90-DDL-IN-DS-40039 Rev 02

ITEM	Tag	50-TT-002	: Temperature Transmitter - Water Disposal Header to Caisson B-50014			Dwg	123A90-DDL-PR-PID-80025
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10000905		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX08 Electrical Instrument

Installation Check

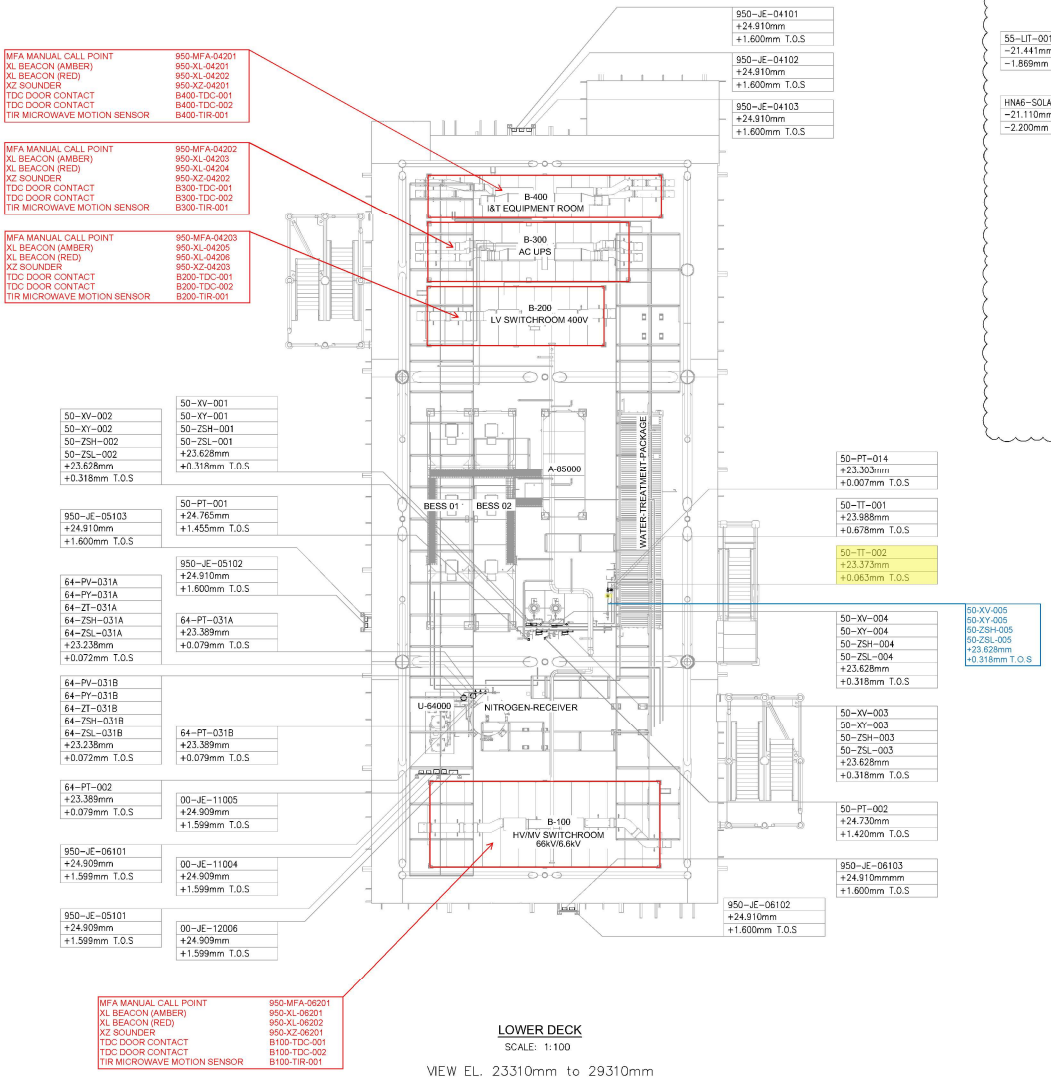
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check identification (tag number, tag plates).	PL
5	Check supporting and protection against vibrations.	OK
6	Check calibration certificate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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-18	2025-02-21	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-18T09:41:02.717Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-21T13:38:18.062Z	

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

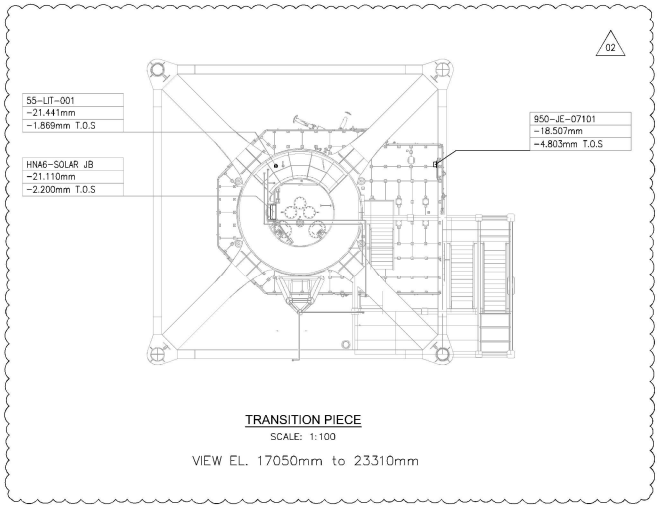
REV. 02



LOWER DECK

SCALE: 1:100

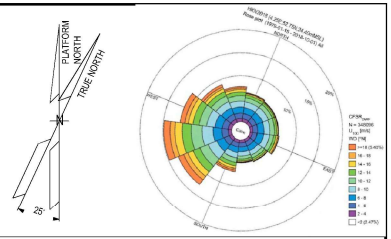
VIEW EL. 23310mm to 29310mm



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)

VALID FOR CONSTRUCTION

FDL DWG: 123A90-FDL-IN-DL-40080

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

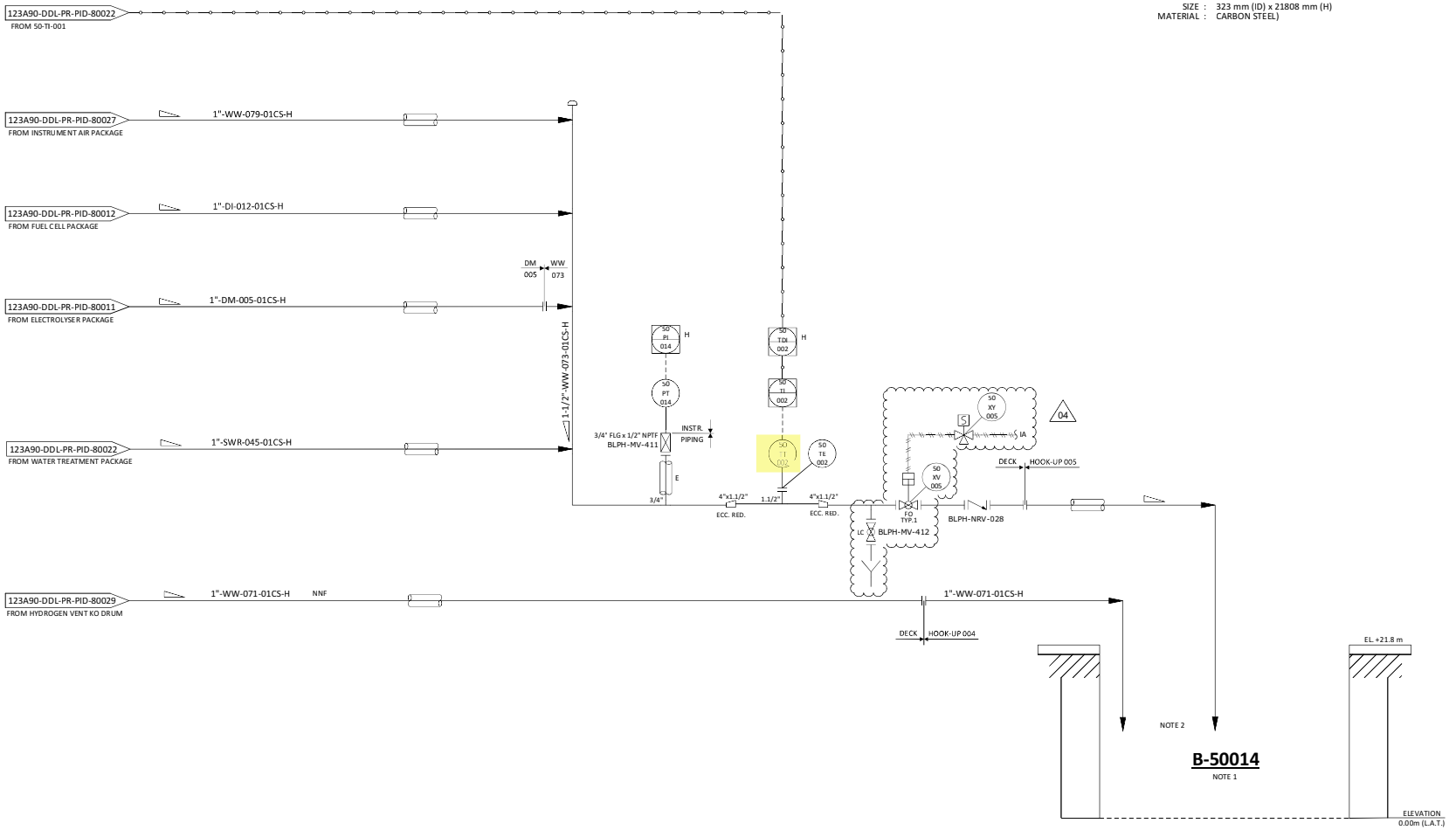
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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. DRAWING_NO.

REV. REV.



NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025		SHEET 001	REV. 04

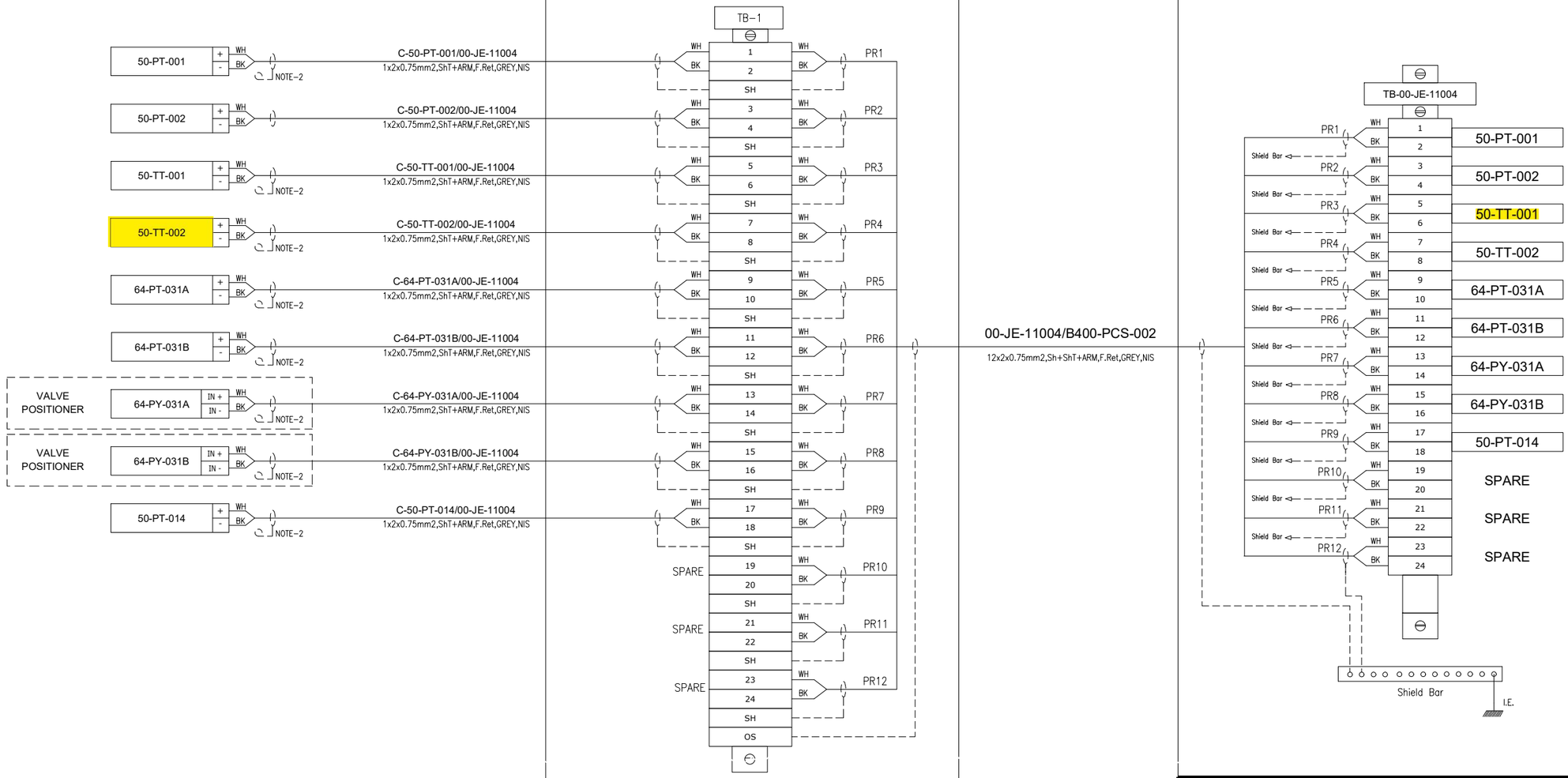
File Name : FILE_NAME

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11004	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

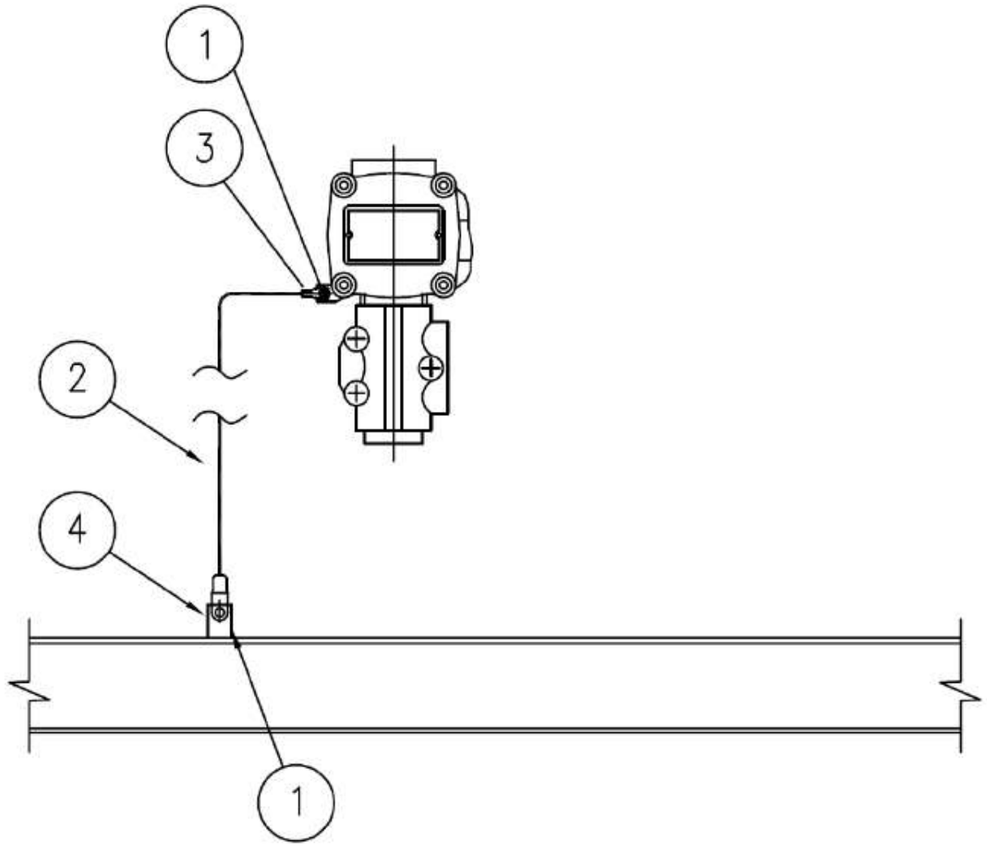
TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-11004-SH.1 OF 2

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 009	REV. 01

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

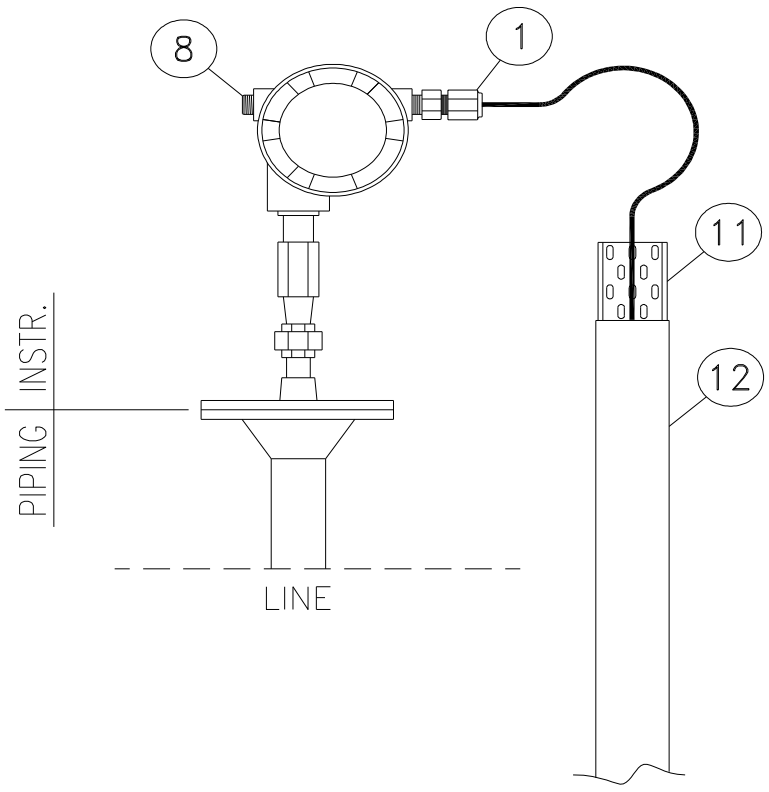
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 14 of 37 Date: 27/09/2024 Rev. 02

ELECTRICAL HOOK-UP FOR TEMPERATURE TRANSMITTERS



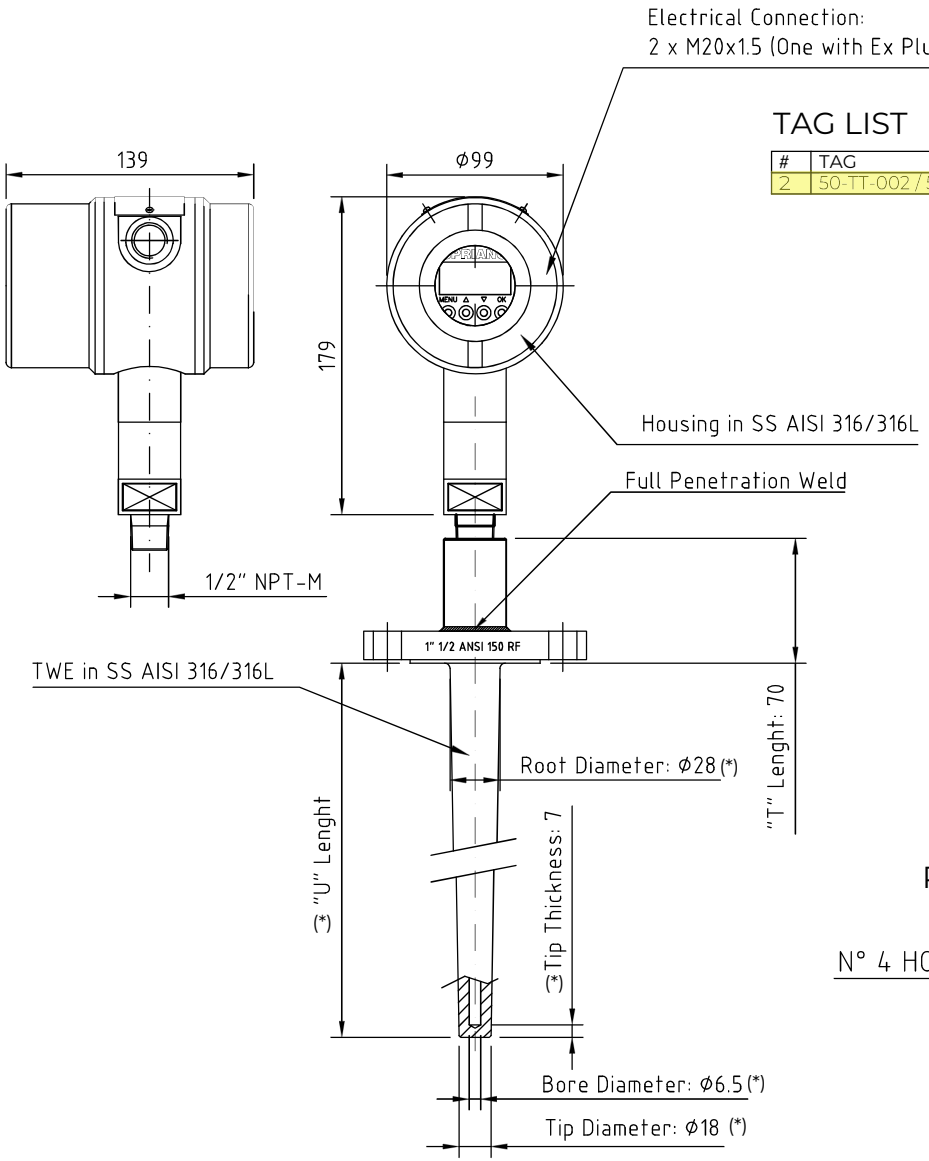
INSTRUMENT TAG	
1	50-TT-001
2	50-TT-002
3	
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NOTE:

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	1

This document undergoes an issuance cycle within EDMS "Fusionlive".
File: 123A90-DDL-IN-HD-40079_Rev.02 - Instrument Electrical Hook-up its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

SST72 TEMPERATURE TRANSMITTERS

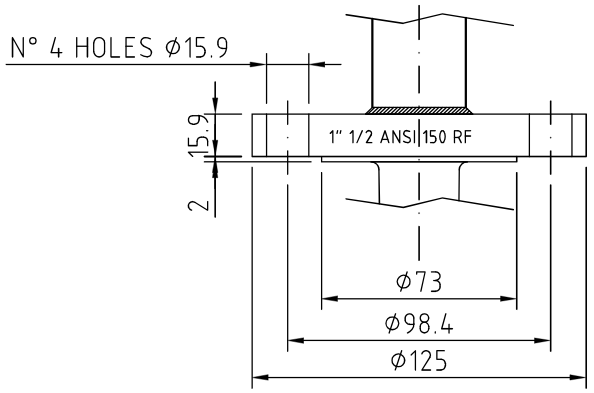


TAG LIST

#	TAG	CALIBRATION RANGE	"U" LENGHT
2	50-TT-002 / 50-TE-002 / 50-TW-002	0 ÷ 80 °C	220 mm

TOTAL QUANTITY: 1

PROCESS CONNECTION: 1" 1/2 ANSI 150 RF



(*) TWE dimensions will be confirmed after Wake Frequencies Calculation approval

NOTES

SST72 TEMPERATURE TRANSMITTER
SST72-TH-1-C-9-1-B-4-3 + TWE

TH - OUTPUT: 4-20 mA + HART
1 - PROCESS CONNECTION: 1/2" NPT-M, SPRING LOADED (PROBE Ø6mm)
C - TYPE OF SENSOR (EXTENSION PROBE): RIGID INOX MGO Ø6mm AISI 316
9 - CALIBRATION RANGE: 0 ÷ 80 °C
1 - RTD TYPE: CLASS A (SINGLE ELEMENT, 3 WIRES)
B - HOUSING TYPE/MATERIAL: BOTTOM CONNECTION, STAINLESS STEEL
4 - EXPLOSION PROTECTION 2014/34/EU: ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb
3 - LOCAL MOUNTING WITH ELECTRICAL CONNECTIONS 2x M20x1.5

COMPLETE WITH:
1. TWE, BARSTOCK THERMOWELL, MATERIAL: SS AISI 316L, FLANGED 1" 1/2 ANSI 150 RF.

NOTES:
1. OVERALL ACCURACY IS WITHIN +/-0,1% FS;
2. ALL ITEMS ARE EQUIPPED WITH SS 316 NAMEPLATE;
3. ALL ITEMS HAVE INGRESS PROTECTION EN 60529: IP66;
4. HOUSING MATERIAL: STAINLESS STEEL;
5. ELECTRICAL CONNECTIONS ARE 2 x M20x1.5 (ONE PLUGGED);
6. INTEGRAL LCD DISPLAY FOR ALL ITEMS, as PER SPRIANO STD;
7. SHEAT MATERIAL SS AISI 316;
8. HART 6.

CERTIFICATES

1. ATEX Ex-d CERTIFICATE (2014/34/EU)
2. IP66 GRADE (EN/IEC 60529)
3. MATERIAL 3.1 (EN 10204) & HYDRAULIC TEST CERTIFICATES
4. CALIBRATION CERTIFICATES (IEC 60770)
5. WAKE FREQUENCIES CALCULATIONS
6. DYE PENETRANT TEST ON THERMOWELLS

REV	DATE	STATUS	PURPOSE OF ISSUE	PRE'D.	CHC'D.	APP'D.	AUTH'D.
03	18/JULY/24	FOURTH ISSUE	FOR CONSTRUCTION	M. Sarti	G. Abbate	G. Abbate	E. Valletti
02	02/JULY/24	THIRD ISSUE	FOR CONSTRUCTION	M. Sarti	G. Abbate	G. Abbate	E. Valletti
01	13/JUN/24	SECOND ISSUE	FOR CONSTRUCTION	M. Sarti	G. Abbate	G. Abbate	E. Valletti
00	24/MAY/24	FIRST ISSUE	FOR APPROVAL	M. Sarti	G. Abbate	G. Abbate	E. Valletti

CROSSWIND ROSETTI MARINO

P.O. No.: 24/01611/PO | Mod_CAR_Rev17-01 | SCALE – 1:3

TERRANOVA

TERRANOVA SRL

DRAWING TITLE: DIMENSIONAL DRAWINGS

JOB:	4718_OS	SHEET No.	8 OF 10	REV. 03

GENERAL	1	Tag Number					50-TT-002 / 50-TE-002 / 50-TW-002			
	2	Service					WASTE WATER FROM HEADER TO BRINE DISCHARGE CAISSON (B-50014)			
	3	P&ID Number	Area Classification				123A90-DDL-PR-PID-80025			ATEX Zone2-IIC(IIB+H2) T1
PIPE LINE	4	Line Number	Equipment Numbrer				1-1/2"-WW-073-01CS-H			-
	5	Line Size	Schedule				4"			6.02 Thk (mm)
	6	Pipe Material	Pipe Insulation				ASTM A350 LF2			ELECTRICALLY HEAT TRACED
PROCESS CONDITIONS	7	Fluid	Phase				SEA WATER SUPPLY			LIQUID
	8	Temperature	Min.	Oper.	Max.			Amb		
	9	Pressure	Min.	Oper.	Max.			Atm		
	10	Design Temperature	Min.		Max.		-46 °C			100 °C
	11	Design Pressure	Min.		Max.		3.5 barg			
	12	Vibrations	Thermal Shock				ASME PTC19.3 (28, 31)			-
	13	Erosion	Corrosion				-			-
	14	Flow Rate Max.	Velocity Max.				10000 kg/h			0.34 m/s
	15	Density	Molecular Weight				1000 kg/m^3			
	16	Viscosity	Oper. Spec. Gravity				1 cP			
	17	Ambient Temperature					Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.			
ELEMENT	18	T/C	Type				-			
	19		Epoxy.	Ground		Unground	-		-	-
	20		Sheath Material							
	21	RTD	Type				RTD, 3 wire PT100			
	22		Sensor Material		Insulator Material		Platinum			MgO
	23		Tollerance Class		Resistance		Class A according IEC 60751			100 ohm at 0°C/138.5 at 100°C
	24	Single/Duplex/Other	2/3/4 Wire				Single			3 Wire
	25	Diameter	Length				6 mm (32)			To be assembled with TW
	26									
TRANSMITTER	27	Type	Mounting				4-20 mA - HART/Smart			Integral, head mounted
	28	Input	Head Material				-			-
	29	ATEX Certification	Ingress Protection				Atex Ex II 2G Ex db IIC T5			IP-66
	30	Housing	Painting				AISI 316/316L (3, 7, 8)			-
	31	Power Supply	Load Resistance				24 Vdc			220 ÷ 640 Ω (for HART)
	32	Electrical Connection	Input		Output		-			N. 2 M20x1.5mm
	33	Accuracy	Responce Time				as per IEC 60751 Cl. A			-
	34	Linearisation	C J Compensation				as per IEC 60751 Cl. A			-
	35	Instrument Range	Min.		Max.		-50 °C			450 °C
	36	Calibration Range	Min.		Max.		0			80 °C
	37	SIL Certification					-			
	38	PED Certification					Required (8)			
COMMUNICATION AND SOFTWARE	39	Communication Type	Signal Type				HART 6			4-20mA Loop Powered 24 Vdc
	40	D D Revision	CFF Revision				-			-
	41	Hart Descriptor	Hart Tag				-			-
	42	Internal Diagnostics	Capacitance				-			-
	43	Segment	Device Address				-			-
	44	Device Class	Simulate				-			-
	45	Nominal Current	Operating Volage				-			-
	46									
WELL	47	Process Connection	Rating				1-1/2" Flanged			150# RF ASME B31.3
	48	Material	Type				AISI 316/316L			Tapered type (29)
	49	Construction Type	Internal Connection				Barstock Tapered			1/2" NPT-F
	50	Length	Overall	Insertion		Immersion	(34)		220 mm (34)	70 mm (34)
	51	Treatments	Finish				-			-
	52	Tip Thickness	Bore Diameter				7 mm			6.5 mm
	53	Insertion Diam. Min.	Max.				28 mm			18 mm
PURCHASE	54	Manufacturer					TERRANOVA			
	55	Model					SST72-TH-1-C-9-1-B-4-3 + TWE			
	56	Purchase Order Number					1724000979			

Notes:

						INSTRUMENT DATASHEET	CROSSWIND
						Temperature Transmitter	ROSETTI MARINO
02	06/12/2024	VBA	LCA	DLO	Accepted for Construction (AFC)		Sheet 35 of 35
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)		
00	16/01/2024	VBA	LCA	DLO	ISSUED FOR REVIEW (IFR)		
No.	Date	By	Chkd	Appr	Description	Code:	Rev 02

ITEM	Tag	50-TW-002	: Thermowell - Water Disposal Header to Caisson B-50014			Dwg	123A90-DDL-IN-DL-40080
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10000907		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX13 Thermowell

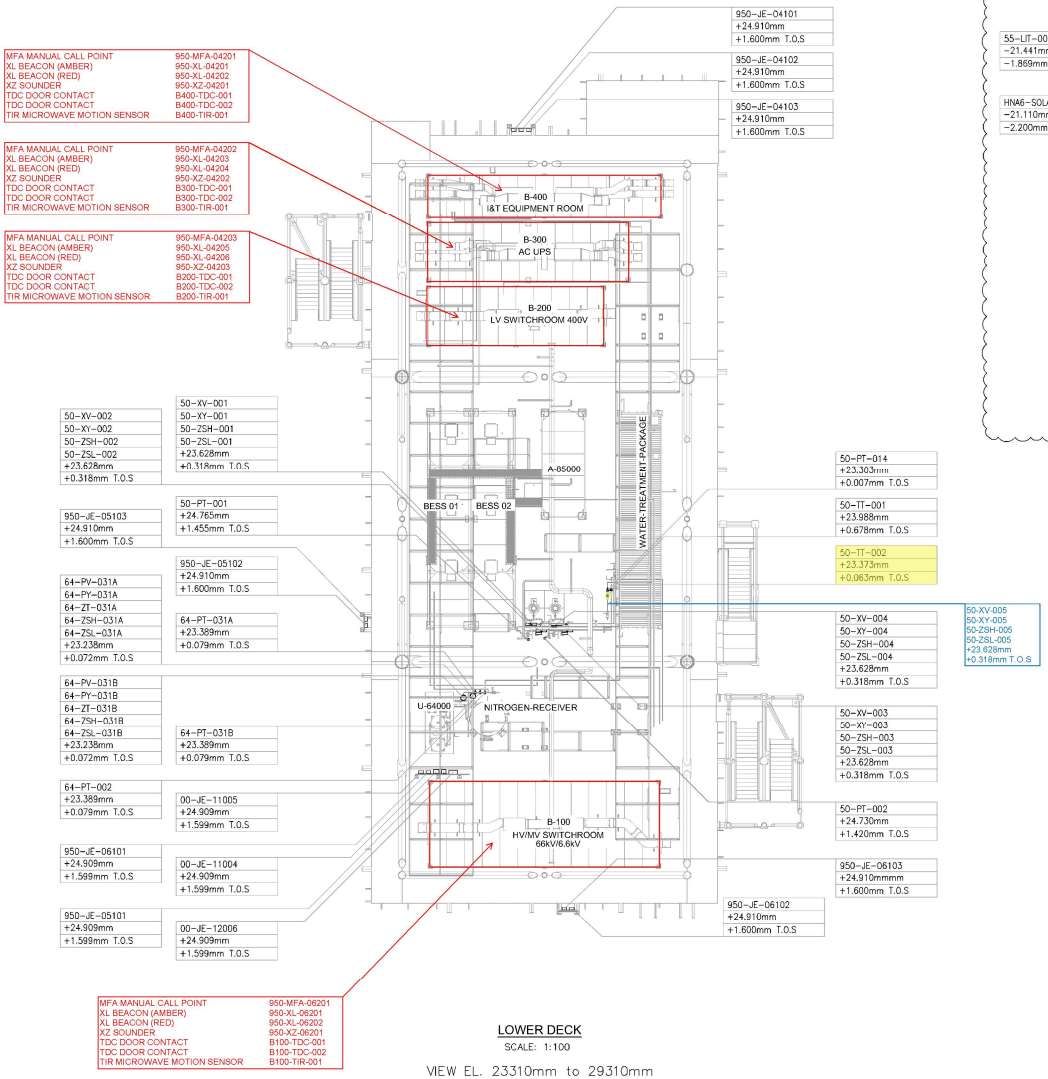
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification (Insersion and stem length, internal diameter…).	Note
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check identification (tag number, tag plates).	OK
5	Check accessibility conforms to specifications with platforming where necessary.	OK
6	If required produce Red Line Mark Up for "AS BUILT"	

Comments: Note 1: only external check has been done on the T.E.(thermo Element), without evaluation of tightening and internal damage
Note 2: Task C10001435 for dimensional check 50-TW-002

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-18	2025-02-21	
Signature	Digitaly signed by Michele Tartaglia 2025-02-18T09:42:27.789Z	Digitaly signed by Alessio Polo 2025-02-21T14:10:48.402Z	

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

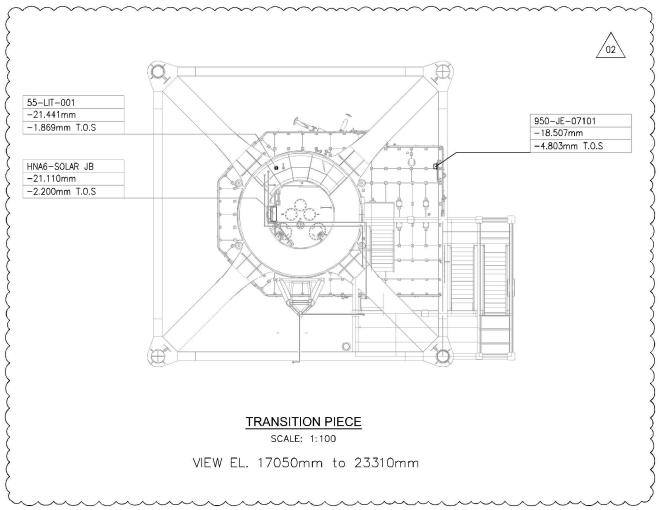
REV. 02



LOWER DECK

SCALE: 1:100

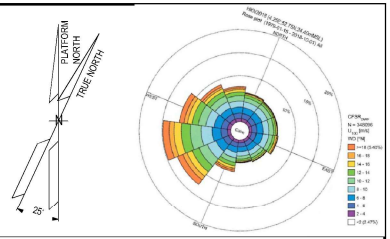
VIEW EL. 23310mm to 29310mm



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)

VALID FOR CONSTRUCTION

FDL DWG: 123A90-FDL-IN-DL-40080

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

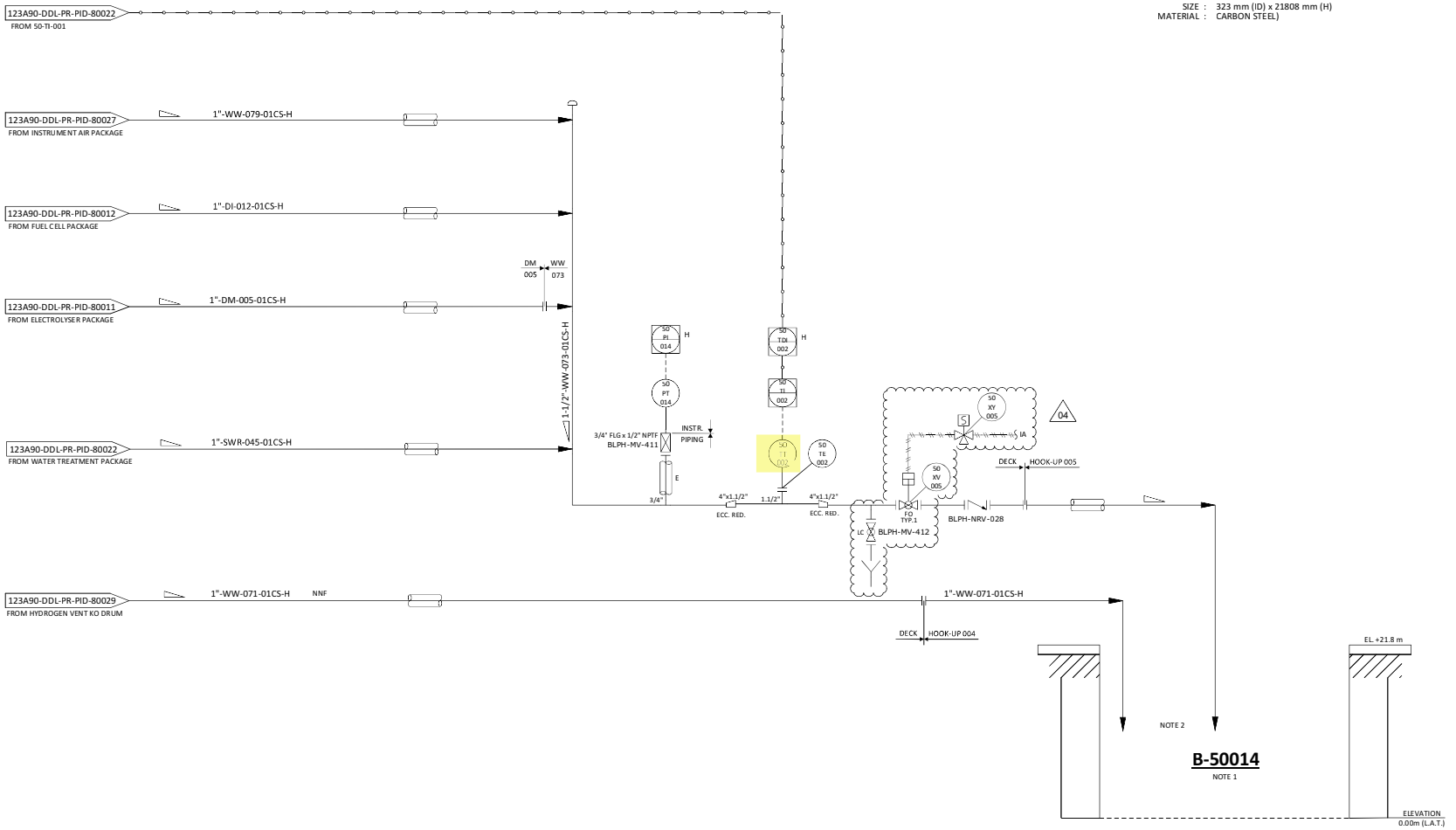
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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. DRAWING_NO.

REV. REV.



NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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

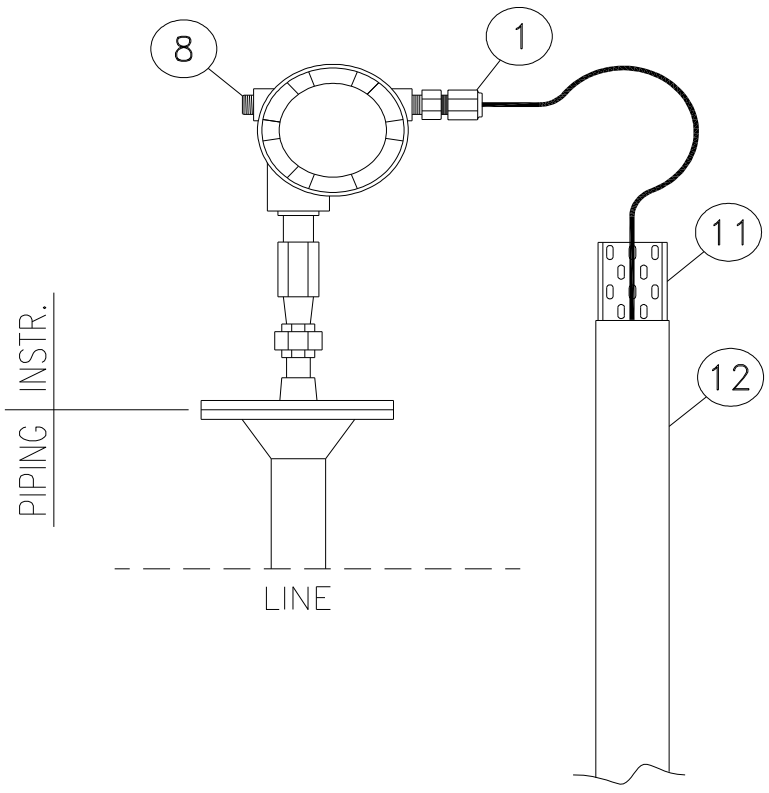
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 1

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-80025		SHEET 001	REV. 04

File Name : FILE_NAME

ELECTRICAL HOOK-UP FOR TEMPERATURE TRANSMITTERS



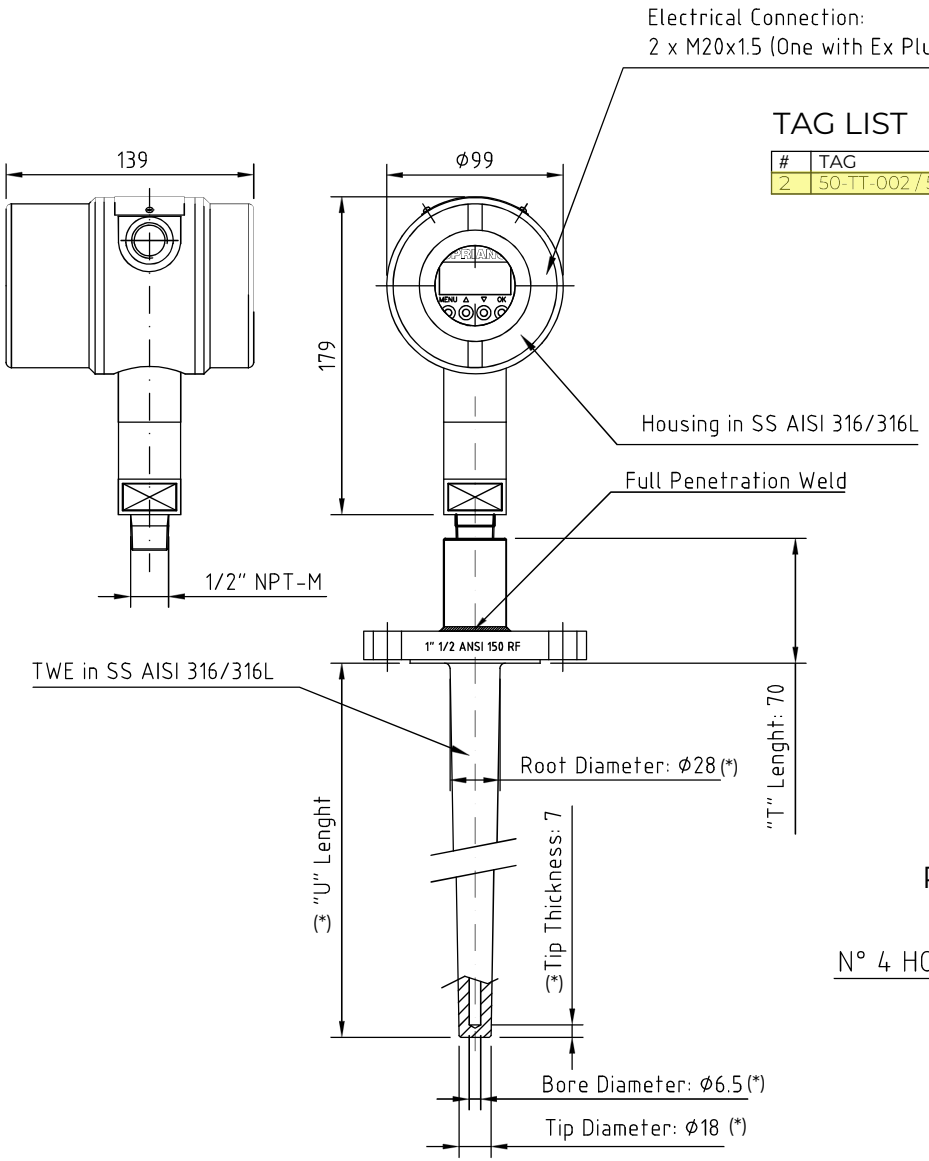
INSTRUMENT TAG	
1	50-TT-001
2	50-TT-002
3	
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NOTE:

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	1

This document undergoes an issuance cycle within EDMS "Fusionlive".
File: 123A90-DDL-IN-HD-40079_Rev.02 - Instrument Electrical Hook-up its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

SST72 TEMPERATURE TRANSMITTERS

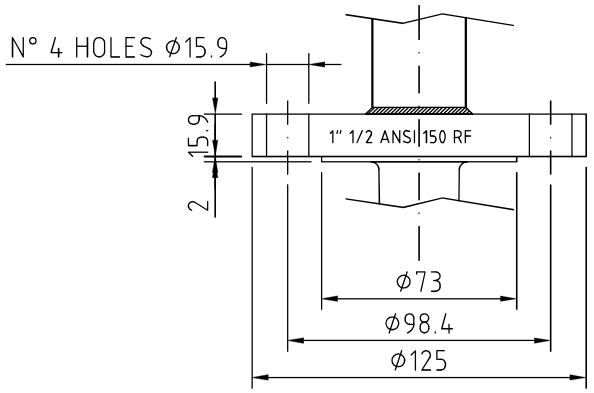


TAG LIST

#	TAG	CALIBRATION RANGE	"U" LENGHT
2	50-TT-002 / 50-TE-002 / 50-TW-002	0 ÷ 80 °C	220 mm

TOTAL QUANTITY: 1

PROCESS CONNECTION: 1" 1/2 ANSI 150 RF



(*) TWE dimensions will be confirmed after Wake Frequencies Calculation approval

NOTES

SST72 TEMPERATURE TRANSMITTER
SST72-TH-1-C-9-1-B-4-3 + TWE

TH - OUTPUT: 4-20 mA + HART
1 - PROCESS CONNECTION: 1/2" NPT-M, SPRING LOADED (PROBE Ø6mm)
C - TYPE OF SENSOR (EXTENSION PROBE): RIGID INOX MGO Ø6mm AISI 316
9 - CALIBRATION RANGE: 0 ÷ 80 °C
1 - RTD TYPE: CLASS A (SINGLE ELEMENT, 3 WIRES)
B - HOUSING TYPE/MATERIAL: BOTTOM CONNECTION, STAINLESS STEEL
4 - EXPLOSION PROTECTION 2014/34/EU: ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb
3 - LOCAL MOUNTING WITH ELECTRICAL CONNECTIONS 2x M20x1.5

COMPLETE WITH:
1. TWE, BARSTOCK THERMOWELL, MATERIAL: SS AISI 316L, FLANGED 1" 1/2 ANSI 150 RF.

NOTES:
1. OVERALL ACCURACY IS WITHIN +/-0,1% FS;
2. ALL ITEMS ARE EQUIPPED WITH SS 316 NAMEPLATE;
3. ALL ITEMS HAVE INGRESS PROTECTION EN 60529: IP66;
4. HOUSING MATERIAL: STAINLESS STEEL;
5. ELECTRICAL CONNECTIONS ARE 2 x M20x1.5 (ONE PLUGGED);
6. INTEGRAL LCD DISPLAY FOR ALL ITEMS, as PER SPRIANO STD;
7. SHEAT MATERIAL SS AISI 316;
8. HART 6.

CERTIFICATES

1. ATEX Ex-d CERTIFICATE (2014/34/EU)
2. IP66 GRADE (EN/IEC 60529)
3. MATERIAL 3.1 (EN 10204) & HYDRAULIC TEST CERTIFICATES
4. CALIBRATION CERTIFICATES (IEC 60770)
5. WAKE FREQUENCIES CALCULATIONS
6. DYE PENETRANT TEST ON THERMOWELLS

REV	DATE	STATUS	PURPOSE OF ISSUE	PRE'D.	CHC'D.	APP'D.	AUTH'D.
03	18/JULY/24	FOURTH ISSUE	FOR CONSTRUCTION	M.Sarno	G.Abruzzo	G.Oliviero	E.Valletti
02	02/JULY/24	THIRD ISSUE	FOR CONSTRUCTION	M.Sarno	G.Abruzzo	G.Oliviero	E.Valletti
01	13/JUN/24	SECOND ISSUE	FOR CONSTRUCTION	M.Sarno	G.Abruzzo	G.Oliviero	E.Valletti
00	24/MAY/24	FIRST ISSUE	FOR APPROVAL	M.Sarno	G.Abruzzo	G.Oliviero	E.Valletti

CROSSWIND ROSETTI MARINO

P.O. No.: 24/01611/PO | Mod_CAR_Rev17-01 | SCALE – 1:3

TERRANOVA

TERRANOVA SRL

DRAWING TITLE: DIMENSIONAL DRAWINGS

JOB:	4718_OS	SHEET No.	8 OF 10	REV. 03

GENERAL	1	Tag Number					50-TT-002 / 50-TE-002 / 50-TW-002			
	2	Service					WASTE WATER FROM HEADER TO BRINE DISCHARGE CAISSON (B-50014)			
	3	P&ID Number	Area Classification				123A90-DDL-PR-PID-80025			ATEX Zone2-IIC(IIB+H2) T1
PIPE LINE	4	Line Number	Equipment Numbrer				1-1/2"-WW-073-01CS-H			-
	5	Line Size	Schedule				4"			6.02 Thk (mm)
	6	Pipe Material	Pipe Insulation				ASTM A350 LF2			ELECTRICALLY HEAT TRACED
PROCESS CONDITIONS	7	Fluid	Phase				SEA WATER SUPPLY			LIQUID
	8	Temperature	Min.	Oper.	Max.			Amb		
	9	Pressure	Min.	Oper.	Max.			Atm		
	10	Design Temperature	Min.		Max.		-46 °C			100 °C
	11	Design Pressure	Min.		Max.		3.5 barg			
	12	Vibrations	Thermal Shock				ASME PTC19.3 (28, 31)			-
	13	Erosion	Corrosion				-			-
	14	Flow Rate Max.	Velocity Max.				10000 kg/h			0.34 m/s
	15	Density	Molecular Weight				1000 kg/m^3			
	16	Viscosity	Oper. Spec. Gravity				1 cP			
	17	Ambient Temperature					Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.			
ELEMENT	18	T/C	Type				-			
	19		Epoxy.	Ground		Unground	-		-	-
	20		Sheath Material							
	21	RTD	Type				RTD, 3 wire PT100			
	22		Sensor Material		Insulator Material		Platinum			MgO
	23		Tollerance Class		Resistance		Class A according IEC 60751			100 ohm at 0°C/138.5 at 100°C
	24	Single/Duplex/Other	2/3/4 Wire				Single			3 Wire
	25	Diameter	Length				6 mm (32)			To be assembled with TW
	26									
TRANSMITTER	27	Type	Mounting				4-20 mA - HART/Smart			Integral, head mounted
	28	Input	Head Material				-			-
	29	ATEX Certification	Ingress Protection				Atex Ex II 2G Ex db IIC T5			IP-66
	30	Housing	Painting				AISI 316/316L (3, 7, 8)			-
	31	Power Supply	Load Resistance				24 Vdc			220 ÷ 640 Ω (for HART)
	32	Electrical Connection	Input		Output		-			N. 2 M20x1.5mm
	33	Accuracy	Responce Time				as per IEC 60751 Cl. A			-
	34	Linearisation	C J Compensation				as per IEC 60751 Cl. A			-
	35	Instrument Range	Min.		Max.		-50 °C			450 °C
	36	Calibration Range	Min.		Max.		0			80 °C
	37	SIL Certification					-			
	38	PED Certification					Required (8)			
COMMUNICATION AND SOFTWARE	39	Communication Type	Signal Type				HART 6			4-20mA Loop Powered 24 Vdc
	40	D D Revision	CFF Revision				-			-
	41	Hart Descriptor	Hart Tag				-			-
	42	Internal Diagnostics	Capacitance				-			-
	43	Segment	Device Address				-			-
	44	Device Class	Simulate				-			-
	45	Nominal Current	Operating Volage				-			-
	46									
WELL	47	Process Connection	Rating				1-1/2" Flanged			150# RF ASME B31.3
	48	Material	Type				AISI 316/316L			Tapered type (29)
	49	Construction Type	Internal Connection				Barstock Tapered			1/2" NPT-F
	50	Length	Overall	Insertion		Immersion	(34)		220 mm (34)	70 mm (34)
	51	Treatments	Finish				-			-
	52	Tip Thickness	Bore Diameter				7 mm			6.5 mm
	53	Insertion Diam. Min.	Max.				28 mm			18 mm
PURCHASE	54	Manufacturer					TERRANOVA			
	55	Model					SST72-TH-1-C-9-1-B-4-3 + TWE			
	56	Purchase Order Number					1724000979			

Notes:

No.	Date	By	Chkd	Appr	Description
02	06/12/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
01	29/08/2024	VBA	LCA	DLO	Accepted for Construction (AFC)
00	16/01/2024	VBA	LCA	DLO	ISSUED FOR REVIEW (IFR)

INSTRUMENT DATASHEET

Temperature Transmitter

CROSSWIND

ROSETTI MARINO

Sheet 35 of 35

Code: | Rev 02

ITEM	Tag	50-PT-014	: Pressure Transmitter - Water Disposal Header to Caisson B-50014			Dwg	123A90-DDL-IN-DS-40039
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10000943		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° :	SST76-SERIES	SERIAL N° :	SE240651
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

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

See Attachment

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 2024-09-17T06:43:46.492Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-02T09:50:27.654Z	

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 FROM HEADER TO BRINE DISCHARGE CAISSON B-50014		
Area	N.P.	Loop Tag	50-PI-014	Instrument Tag	50-PT-014
Type of verification	periodic	Calibration range	0,00 ÷ 18,00 bar	Report N°	020
Type of instrument	Pressure meter	Max uncertainty required	± 0,070 % s.r.	Reference procedure data sheet	123A90-PML-QHSE-PRO-00122 Page N°8

UNDER EXAMINATION INSTRUMENT 'S DATA

Tag	Manufacture	Model	S/N
50-PT-014	SPRIANO	SST76	SE240651

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	0640/MP/2024 _LAT 150	± 0,001 c.s.	24/04/2024
Digital pressure gauge				± 0,001 c.s.	24/04/2024

environment temperature at the time of check 25 °C

Value indicated before starting the check 0 bar

CHECK RESULT: *as found*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
bar	mA	mA	mA	
0,00	4,000	4,009	+0,009	+0,056
4,50	8,000	8,004	+0,004	+0,025
9,00	12,000	11,998	-0,002	-0,013
13,50	16,000	15,999	-0,001	-0,006
18,00	20,000	20,002	+0,002	+0,009
13,50	16,000	16,001	+0,001	+0,006
9,00	12,000	12,001	+0,001	+0,006
4,50	8,000	8,005	+0,005	+0,031
0,00	4,000	4,008	+0,008	+0,050
		max error detected %		0,056

Check: PASSED

Verification activation of blocks/threshold alarms

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

Blocks/alarms check:

Corrective action

RISULTATO VERIFICA: *as left*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
bar	mA	mA	mA	
		errore massimo rilevato %		0,00

Check:

Verification activation of blocks/threshold alarms

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

Blocks/alarms check:

Value indicated after the check 0 bar

Note:

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

Verification Date	Verification Expiration	Technical Executor	Viewed	Approved by
18/09/2024	09/2025	PENSO SILVIO		
		signature	*signature*	*signature*

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

GENERAL	1	Tag Number			50-PT-014	
	2	Service			WASTE WATER FROM HEADER TO BRINE DISCHARGE CAISSON (B-50014)	
	3	P&ID Number	Location		123A90-DDL-PR-PID-80025	1-1/2"-WW-073-01CS-H
	4	Function			PRESSURE MEASUREMENT	
	5	Mounting			DIRECT ON-LINE	
	6	Area Classification			ATEX Zone2 - IIC (IIB+H2) T1	
	7	Ambient Temperature			Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.	
PROCESS CONDITIONS	8	Fluid			WASTE WATER	
	9	Pressure Des.	Oper.	[barg]	17.7	ATM
	10	Temperature Des.	Oper.	[°C]	100	AMB
	11	Oper. Spec. Gravity	Oper. Viscosity		-	-
	12	Flow Rate	Allowable Temp.		-	-
TRANSMITTER	13	Instrument Range Min.	Max.	[barg]	0	30
	14	Calibration Range Min.	Max.	[barg]	0	18
	15	Elevation	Suppression		-	-
	16	Element Type			Diaphragm	
	17	Element Material			SS AISI 316/316L	
	18	Body Material	Body Rating		AISI 316 SS	20 bar
	19	Process Connection			1/2” NPT-M	
	20	Wetted O-Rings Material			-	
	21	Fill Fluid			-	
	22	Bolts	Housing		Manifold/Instrument assembly	SS AISI 316/316L
	23	Paint			N/A	
	24	ATEX Certification	Ingress Protection		ATEX Ex II 2G Ex db IIC T5	IP66
	25	Process Connection	Electrical Connection		1/2” NPT-M	2 X M20X1.5
	26	Accuracy			0.07% of Nominal Range	
	27	SIL Certification	PED Certification		-	Required
DIAPHRAGM SEAL	28	Process Connection & Rating			-	
	29	Diaphragm Material	Housing Material		-	-
	30	Fill Fluid	Capillary Material		-	-
	31	Capillary Type	Capillary Length		-	-
	32	Flushing Connection			-	
OPTIONS	33	Integral Meter	Scale		Required	-
	34	Hydrostatic Testing	Cleaning		Required	-
	35	Mounting Brackets	Manifold Model No		Required	MAN2-R6
	36	Lightning Protection	Barrier Manuf./Model		-	-
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type		HART 6	4-20mA Loop Powered 24 Vdc
	38	D D Revision	CFF Revision		-	-
	39	Device Tag	Hart Tag		-	-
	40	Internal Diagnostics	Capacitance		-	-
	41	Segment	Device Address		-	-
	42	Device Class	Simulate		-	-
	43	Nominal Current	Operating Voltage		-	-
PURCHASE	44	Manufacturer			TERRANOVA SRL	
	45	Model			SST76-H-7-K-2-0-2-1-4 + MAN2-R6	
	46	Purchase Order Number			4718_OS	

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ITEM	Tag	50-TT-002	: Temperature Transmitter - Water Disposal Header to Caisson B-50014			Dwg	123A90-DDL-IN-DS-40039
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10000945		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° :	SST72-SERIES	SERIAL N° :	SE240659
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

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

See Attachment

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 2024-09-17T06:44:16.626Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2024-10-02T09:51:50.347Z	

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 FROM HEADER TO BRINE DISCHARGE CAISSON B-50014		
Area	N.P.	Loop Tag	50-TI-002	Instrument Tag	50-TT-002
Type of verification	periodic	Calibration range	0,00 ÷ 80,00 °C	Report N°	028
Type of instrument	RTD 3 wire Pt100	Max uncertainty required	± 0,1 % s.r.	Reference procedure data sheet	123A90-PML-QHSE-PRO-00122 Page N°13

UNDER EXAMINATION INSTRUMENT 'S DATA

Tag	Manufacture	Model	S/N
50-TT-002	SPRIANO	ST72	SE240659

USED REFERENCE SAMPLE 'S DATA

Manufacture	Model	S/N	n° of certification and calibration center	uncertainty (u.m.)	Expiration
BEAMEX	MC5-IS	20177766	0452/MT/2024 _LAT 150	± 0,1 °C	23/04/2024
ASIT INSTRUMENT	PT-100	20170421-S411	0452/MT/2024 _LAT 150	± 0,1 °C	23/04/2024

environment temperature at the time of check 24 °C

Value indicated before starting the check 23,73 °C

CHECK RESULT: *as found*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
°C	mA	mA	mA	
0,00	4,000	3,936	-0,064	-0,400
24,05	8,800	8,746	-0,054	-0,338
40,00	12,000	11,936	-0,064	-0,400
80,00	20,000	19,936	-0,064	-0,400
40,00	12,000	11,937	-0,063	-0,394
24,05	8,800	8,745	-0,055	-0,344
0,00	4,000	3,935	-0,065	-0,406
		max error detected %		0,41

Check: FAILED

Verification activation of blocks/threshold alarms

Alarm signalling	Type of activation	Alarm intervention	Block description	Action type	Block intervention
°C					

Blocks/alarms check:

Corrective action The instrument score less than the set range. Recalibrated

CHECK RESULT: *as left*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
°C	mA	mA	mA	
0	4,000	4,002	0,002	0,002
24,05	8,800	8,798	-0,002	-0,003
40	12,000	11,998	-0,002	-0,003
80	20,000	19,997	-0,003	-0,004
40	12,000	11,999	-0,001	-0,001
24,05	8,800	8,799	-0,001	-0,001
0	4,000	4,003	0,003	0,004
		errore massimo rilevato %		0,004

Check: PASSED

Verification activation of blocks/threshold alarms

Alarm signalling	Type of activation	Alarm intervention	Block description	Action type	Block intervention
°C	DESCENT				

Blocks/alarms check:

Value indicated after the check 24,05 °C

Note:

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

Verification Date	Verification Expiration	Technical Executor	Viewed	Approved by
23/09/2024	09/2025	PENSO SILVIO		
		signature	*signature*	*signature*

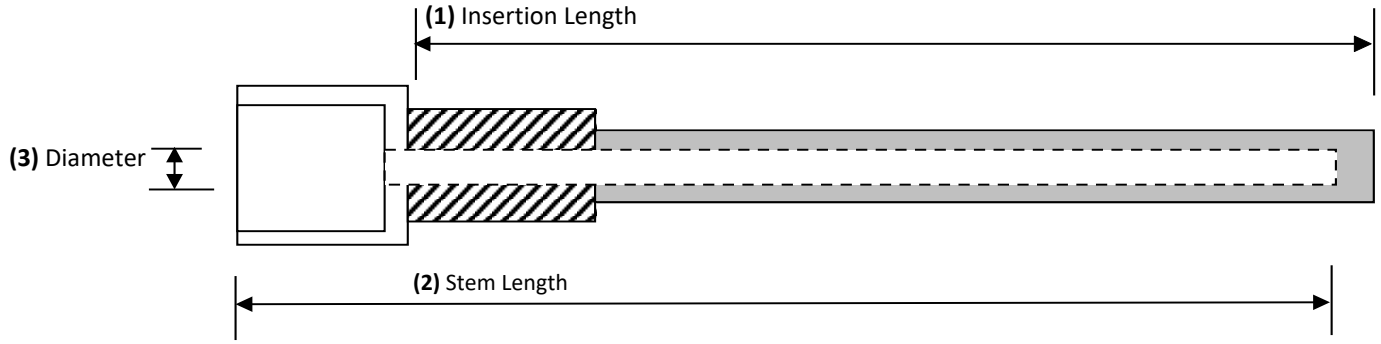
ABR SERVICE srl
Via M. Monti, 40 - 48123 RAVENNA
Tel. 0544 685411
C.F. e P.IVA 02764420390

GENERAL	1	Tag Number					50-TT-002 / 50-TE-002 / 50-TW-002		
	2	Service					WASTE WATER FROM HEADER TO BRINE DISCHARGE CAISSON (B-50014)		
	3	P&ID Number	Area Classification				123A90-DDL-PR-PID-80025	ATEX Zone2-IIC(IIB+H2) T1	
PIPE LINE	4	Line Number	Equipment Numbrer				1-1/2"-WW-073-01CS-H	-	
	5	Line Size	Schedule				4"	6.02 Thk (mm)	
	6	Pipe Material	Pipe Insulation				ASTM A350 LF2	ELECTRICALLY HEAT TRACED	
PROCESS CONDITIONS	7	Fluid	Phase				SEA WATER SUPPLY	LIQUID	
	8	Temperature	Min.	Oper.	Max.			AMB	
	9	Pressure	Min.	Oper.	Max.			ATM	
	10	Design Temperature	Min.		Max.		-46 °C	100 °C	
	11	Design Pressure	Min.		Max.		3.5 barg		
	12	Vibrations					ASME PTC 19.3		
	13	Erosion	Corrosion				-	-	
	14	Flow Rate Max.	Velocity Max.				10000 kg/h	0.34 m/s	
	15	Density					1000 kg/m^3		
	16	Viscosity					1 cP		
	17	Ambient Temperature					Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.		
ELEMENT	18	T/C	Type				-		
	19		Epoxy.	Ground		Unground	-	-	-
	20		Sheath Material						
	21	RTD	Type				RTD, 3 wire PT100		
	22		Sensor Material			Insulator Material	Platinum	MgO	
	23		Tollerance Class			Resistance	Class A according IEC 60751	100 Ω at 0°C/138.5 at 100°C	
	24	Single/Duplex/Other	2/3/4 Wire				Single	3 Wire	
	25	Diameter	Length				6 mm	to be assembled with TWE	
TRANSMITTER	26	Type	Mounting				4-20 mA - HART/Smart	Integral, head mounted	
	27	Input	Head Material				-	N/A	
	28	ATEX Certification	Ingress Protection				ATEX Ex II 2G Ex db IIC T5	IP-66	
	29	Housing	Painting				SS AISI 316/316L	N/A	
	30	Power Supply	Load Resistance				24 Vdc	220 ÷ 640 Ω (for HART)	
	31	Electrical Connection	Input		Output		-	2 X M20X1.5	
	32	Accuracy					As Per IEC 60751 Class A		
	33	Linearization					As Per IEC 60751 Class A		
	34	Instrument Range	Min.		Max.		-50 °C	450 °C	
	35	Calibration Range	Min.		Max.		0 °C	80 °C	
	36	SIL Certification					-		
	37	PED Certification					Required		
COMMUNICATION AND SOFTWARE	38	Communication Type	Signal Type				HART 6	4-20mA Loop Powered24 Vdc	
	39	D D Revision	CFF Revision				-	-	
	40	Hart Descriptor	Hart Tag				-	-	
	41	Internal Diagnostics	Capacitance				-	-	
	42	Segment	Device Address				-	-	
	43	Device Class	Simulate				-	-	
	44	Nominal Current	Operating Volage				-	-	
WELL	45	Process Connection	Rating				1-1/2" Flanged	150# RF ASME B31.3	
	46	Material	Type				SS AISI 316/316L	Tapered Type	
	47	Construction Type	Internal Connection				Barstock Tapered	1/2” NPT-F	
	48	Immersion Length (“U”)	Head Length (“T”)				220 mm	70 mm	
	49	Treatments	Finish				-	-	
	50	Tip Thickness	Bore Diameter				7 mm	6.5 mm	
	51	Insertion Diam. Min.	Max.				28 mm	18 mm	
PURCHASE	52	Manufacturer					TERRANOVA SRL		
	53	Model					SST72-TH-1-C-9-1-B-4-3 + TWE		
	54	Purchase Order Number					4718_OS		

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ITEM	Tag	50-TW-002	: Thermowell - Water Disposal Header to Caisson B-50014			Dwg	123A90-DDL-IN-DL-40080
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10001435		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Instrumental Form TJX13		Thermowell

1	Insertion length (1) mm	220
2	Stem Length (2) mm	70
3	Internal diameter (3) mm	6,5
4	Thermowell filled-up by:	N/A
5	If required produce Red Line Mark Up for "AS BUILT"	



Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-02-13	2025-02-13	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-13T14:21:12.015Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-02-13T14:36:40.472Z	

GENERAL	1	Tag Number					50-TT-002 / 50-TE-002 / 50-TW-002			
	2	Service					WASTE WATER FROM HEADER TO BRINE DISCHARGE CAISSON (B-50014)			
	3	P&ID Number	Area Classification				123A90-DDL-PR-PID-80025		ATEX Zone2-IIC(IIB+H2) T1	
PIPE LINE	4	Line Number	Equipment Numbrer				1-1/2"-WW-073-01CS-H		-	
	5	Line Size	Schedule				4"		6.02 Thk (mm)	
	6	Pipe Material	Pipe Insulation				ASTM A350 LF2		ELECTRICALLY HEAT TRACED	
PROCESS CONDITIONS	7	Fluid	Phase				SEA WATER SUPPLY		LIQUID	
	8	Temperature	Min.	Oper.	Max.			AMB		
	9	Pressure	Min.	Oper.	Max.			ATM		
	10	Design Temperature	Min.		Max.		-46 °C		100 °C	
	11	Design Pressure	Min.		Max.		3.5 barg			
	12	Vibrations					ASME PTC 19.3			
	13	Erosion	Corrosion				-		-	
	14	Flow Rate Max.	Velocity Max.				10000 kg/h		0.34 m/s	
	15	Density					1000 kg/m^3			
	16	Viscosity					1 cP			
	17	Ambient Temperature					Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.			
ELEMENT	18	T/C	Type				-			
	19		Epoxy.	Ground		Unground	-	-	-	
	20		Sheath Material							
	21	RTD	Type				RTD, 3 wire PT100			
	22		Sensor Material			Insulator Material	Platinum		MgO	
	23		Tollerance Class			Resistance	Class A according IEC 60751		100 Ω at 0°C/138.5 at 100°C	
	24	Single/Duplex/Other	2/3/4 Wire				Single		3 Wire	
	25	Diameter	Length				6 mm		to be assembled with TWE	
TRANSMITTER	26	Type	Mounting				4-20 mA - HART/Smart		Integral, head mounted	
	27	Input	Head Material				-		N/A	
	28	ATEX Certification	Ingress Protection				ATEX Ex II 2G Ex db IIC T5		IP-66	
	29	Housing	Painting				SS AISI 316/316L		N/A	
	30	Power Supply	Load Resistance				24 Vdc		220 ÷ 640 Ω (for HART)	
	31	Electrical Connection	Input		Output		-		2 X M20X1.5	
	32	Accuracy					As Per IEC 60751 Class A			
	33	Linearization					As Per IEC 60751 Class A			
	34	Instrument Range	Min.		Max.		-50 °C		450 °C	
	35	Calibration Range	Min.		Max.		0 °C		80 °C	
	36	SIL Certification					-			
	37	PED Certification					Required			
COMMUNICATION AND SOFTWARE	38	Communication Type	Signal Type				HART 6		4-20mA Loop Powered24 Vdc	
	39	D D Revision	CFF Revision				-		-	
	40	Hart Descriptor	Hart Tag				-		-	
	41	Internal Diagnostics	Capacitance				-		-	
	42	Segment	Device Address				-		-	
	43	Device Class	Simulate				-		-	
	44	Nominal Current	Operating Volage				-		-	
WELL	45	Process Connection	Rating				1-1/2" Flanged		150# RF ASME B31.3	
	46	Material	Type				SS AISI 316/316L		Tapered Type	
	47	Construction Type	Internal Connection				Barstock Tapered		1/2" NPT-F	
	48	Immersion Length ("U")	Head Length ("T")				220 mm		70 mm	
	49	Treatments	Finish				-		-	
	50	Tip Thickness	Bore Diameter				7 mm		6.5 mm	
	51	Insertion Diam. Min.	Max.				28 mm		18 mm	
PURCHASE	52	Manufacturer					TERRANOVA SRL			
	53	Model					SST72-TH-1-C-9-1-B-4-3 + TWE			
	54	Purchase Order Number					4718_OS			

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ITEM	Tag	50-XV-005	: On-Off Actuated Ball Valve		Dwg	123A90-DDL-IN-LIS-40088	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10004657	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX23	Actuated on/off Valve-Pneumatic/Hydraulic Type

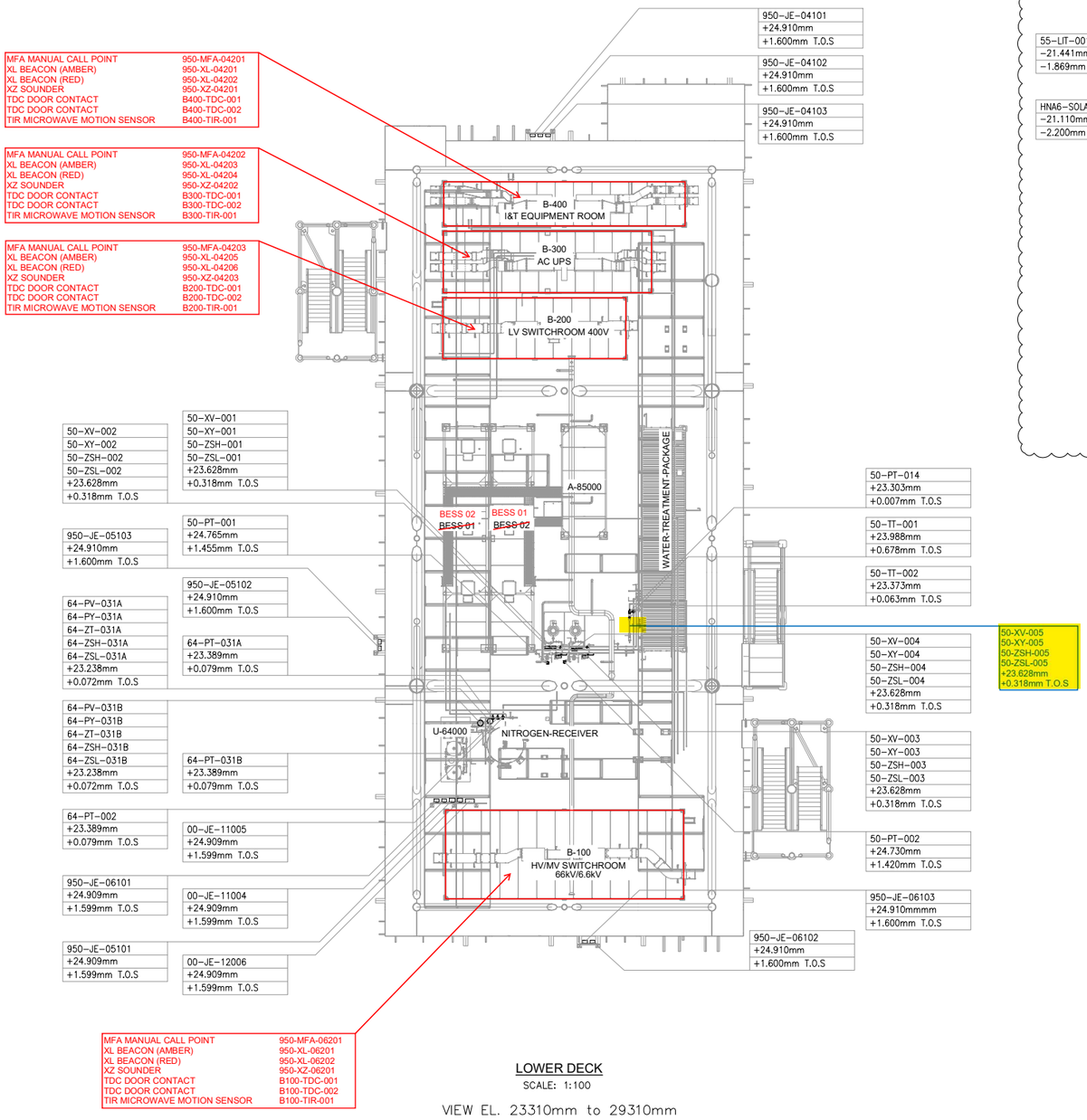
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID, typical and hook-up drawing.	OK
4	Check valve is installed in accordance with flow direction.	OK
5	Check all stop plugs are properly installed.	OK
6	Check identification (tag number, tag plates).	PL
7	Check accessibility conforms to specifications, with platforming where necessary.	NA
8	If required produce Red Line Mark Up for "AS BUILT"	

Comments

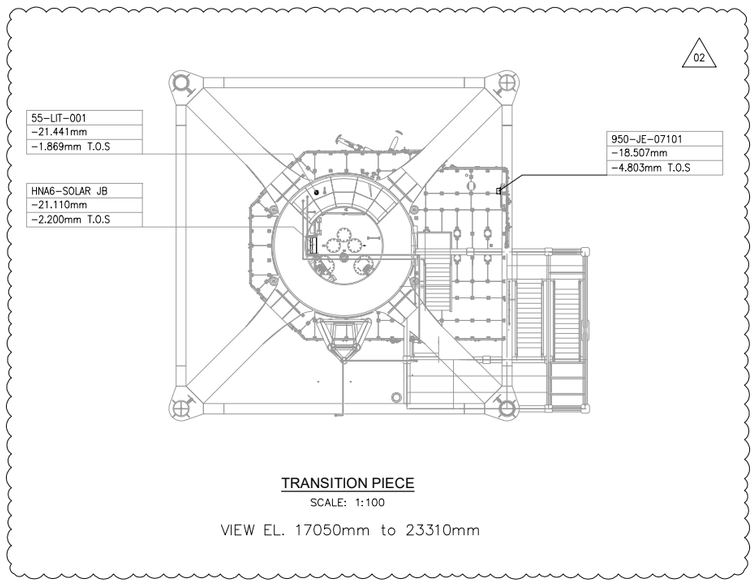
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-03-06	2025-03-07	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-03-06T15:23:32.693Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-03-07T14:16:16.168Z	

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

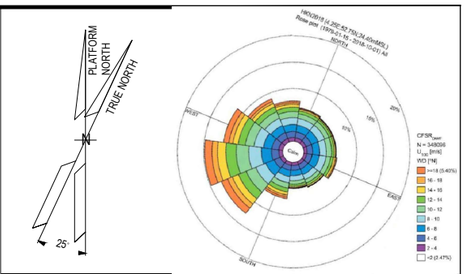
REV. 02



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

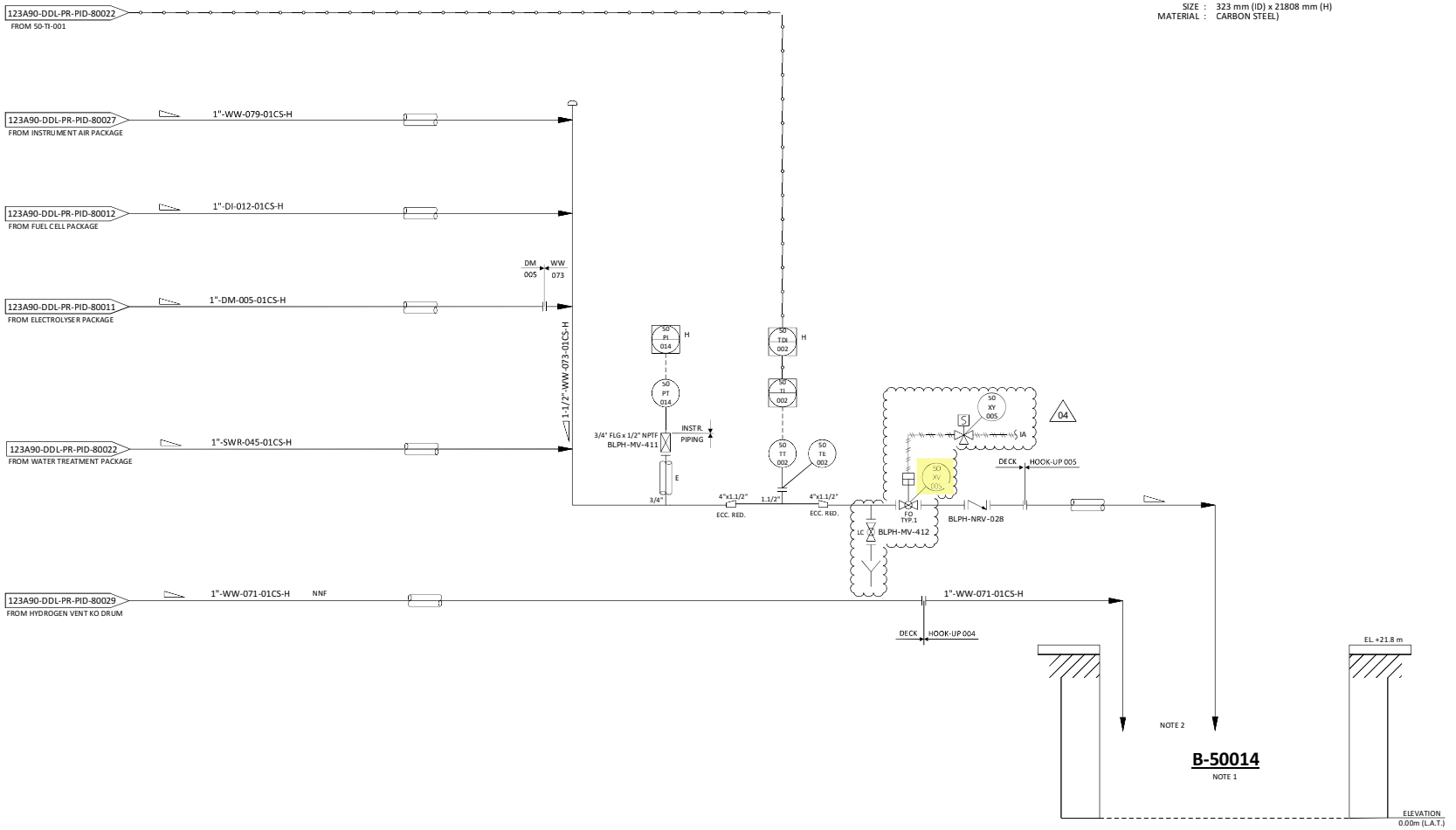
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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. DRAWING_NO.

REV. REV.



NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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)

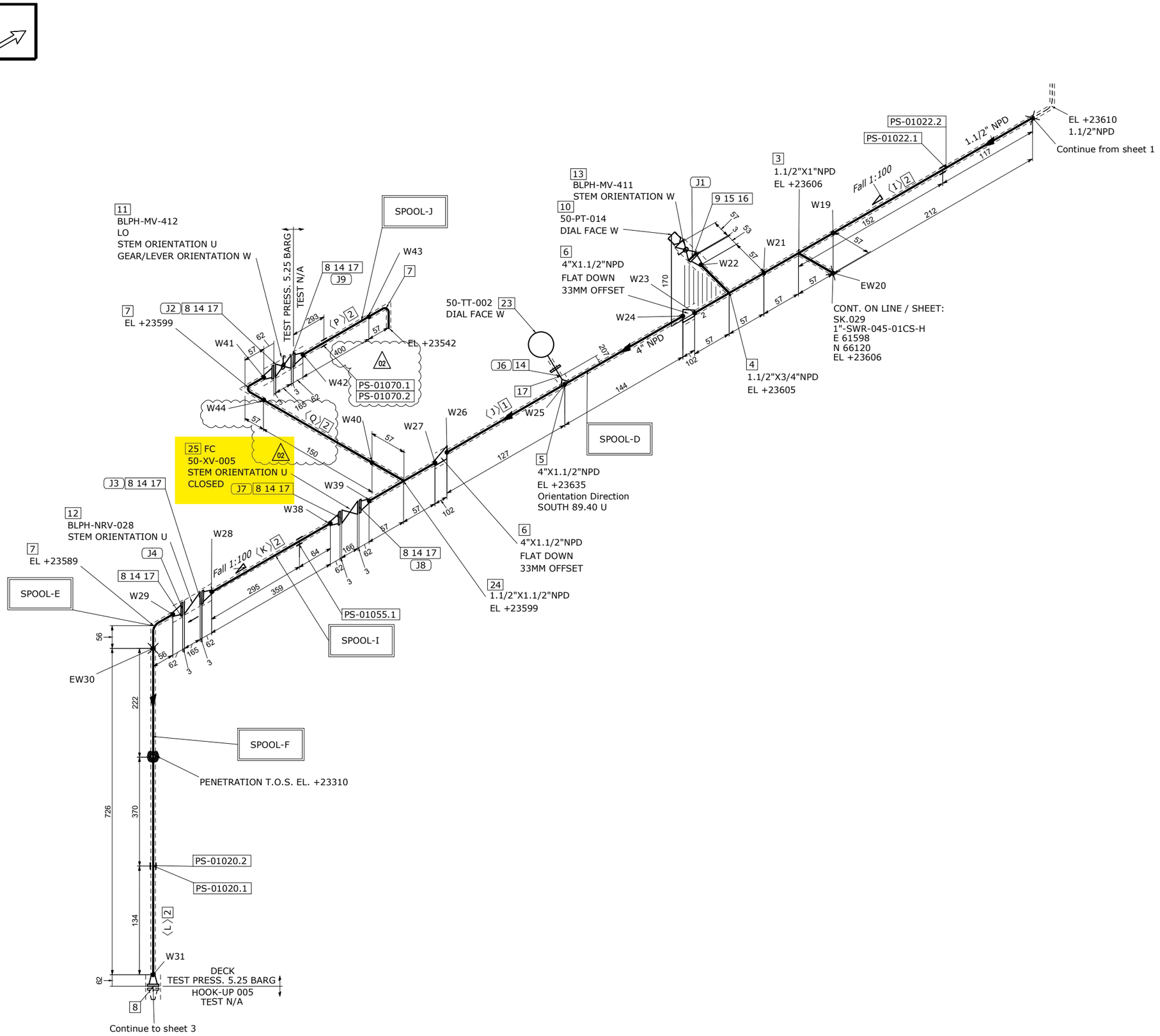
CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 1

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-80025		SHEET 001	REV. 04

File Name : FILE_NAME



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

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	

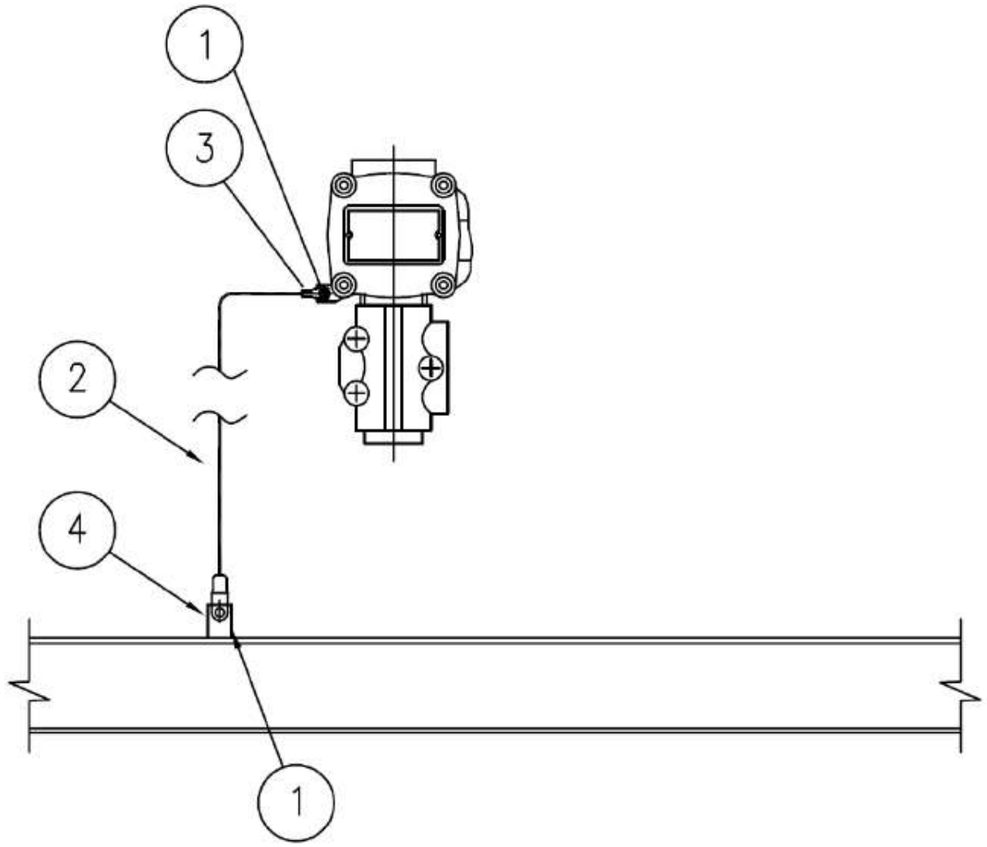
REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80025
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

MASTER

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

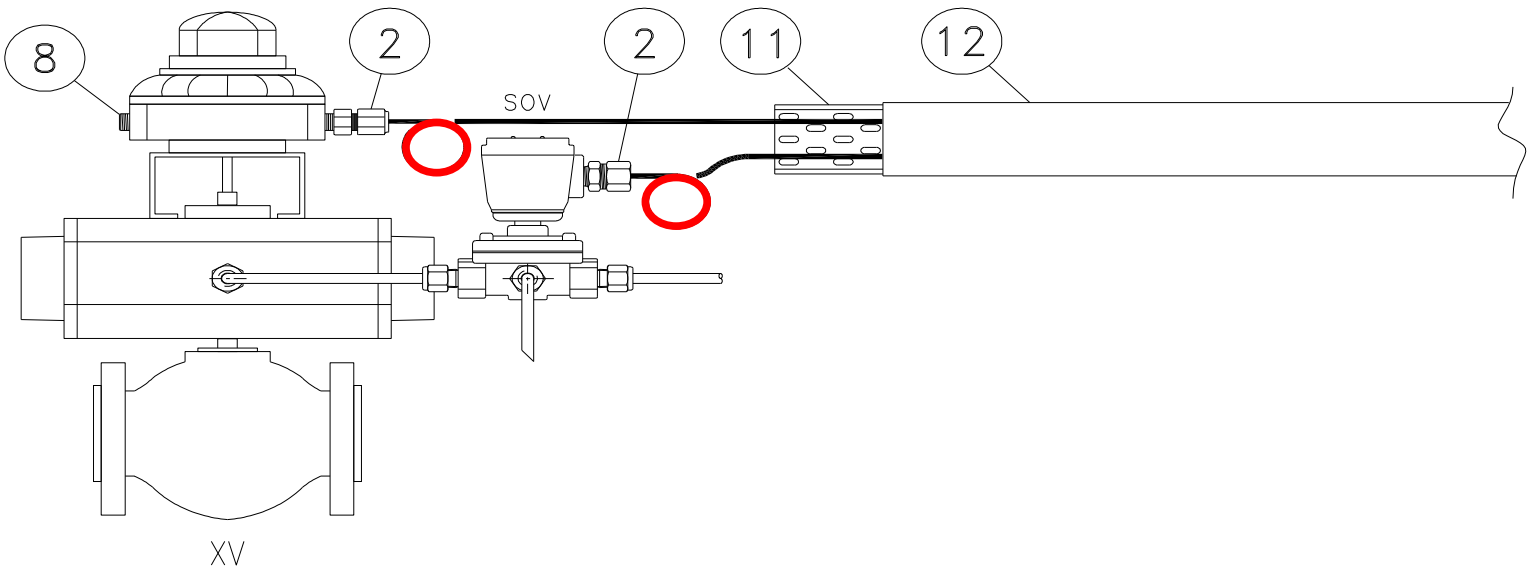
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

ELECTRICAL HOOK-UP FOR XV (N.1 SOLENOID VALVE + 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-XV-004
2	25-XV-006
3	25-XV-008
4	25-XV-009
5	25-XV-011
6	25-XV-012
7	25-XV-014
8	25-XV-015
9	25-XV-017
10	25-XV-018
11	25-XV-020
12	25-XV-021
13	25-XV-024
14	50-XV-001
15	50-XV-002
16	50-XV-003
17	50-XV-004
18	80-XV-001
19	50-XV-005
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

NOTE:

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

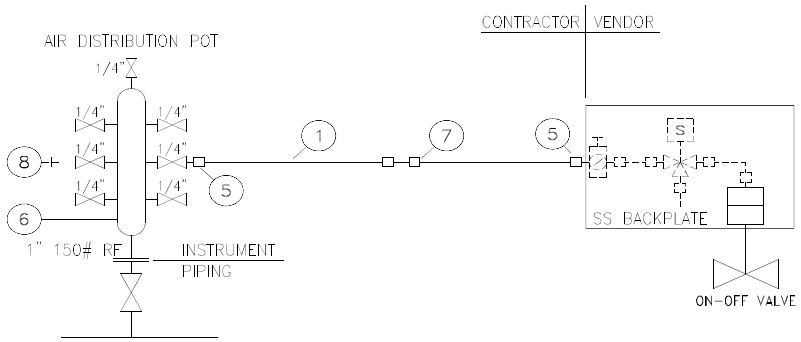
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PNEUMATIC HOOK-UP FOR ON-OFF VALVES

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40078**

REV.:	DATE:	SIGNATURE:
1_B	06/11/24	G.Randi

ROSETTI MARINO SpA

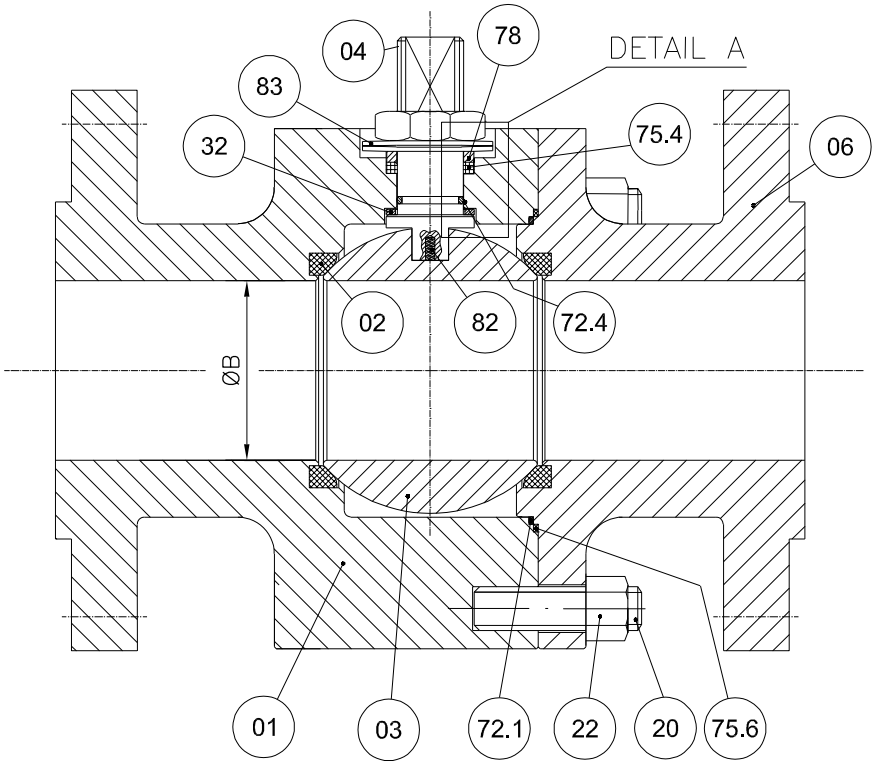


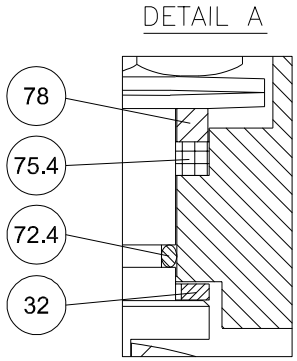
	INSTRUMENT TAG
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2	25-BDV-005
3	25-BDV-007
4	25-BDV-010
5	25-BDV-013
6	25-BDV-016
7	25-BDV-019
8	25-SDV-001
9	25-SDV-023
10	25-XV-004
11	25-XV-006
12	25-XV-008
13	25-XV-009
14	25-XV-011
15	25-XV-012
16	25-XV-014
17	25-XV-015
18	25-XV-017
19	25-XV-018
20	25-XV-020
21	25-XV-021
22	25-XV-024
23	50-XV-001
24	50-XV-002
25	50-XV-003
26	50-XV-004
27	80-XV-001
28	64-SDV-001
29	50-XV-005
30	

NOTE:
(1) For Air Distribution Pot quantities see material take-off on sh. 4

POS.	NORM/STD CODE	DESCRIPTION	SIZE/CONNECTION TYPE	Q.TY
8		SS316 PLUG	1/4" NPT	Note 1
7		SS316 UNION	1/2" O.D. x 1/2" O.D.	N. 1
6		SS316 AIR DISTRIBUTION POT	1" 150#RF - N. 7 1/4" BALL VALVES	Note 1
5		SS316 MALE CONNECTOR	1/4" NPT x 1/2" O.D.	N. 2
1		SS 316L TUBING	1/2" x 0,049"Thk	10 m

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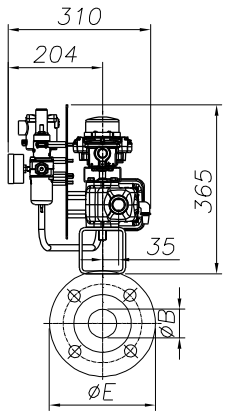


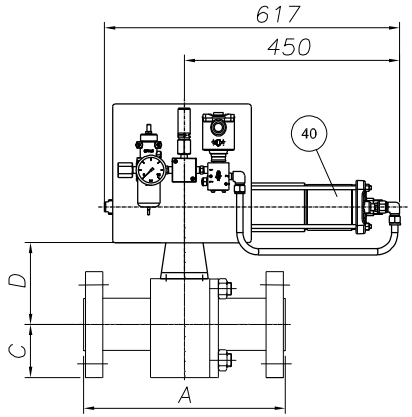


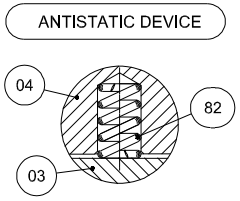
POS.	PART. NAME	MATERIAL
01	BODY	A182 F53
02	SEAT	RPTFE
03	BALL	A182 F53
04	STEM	A182 F53
06	CLOSURE	A182 F53
20	STUD	A193 B7+HDG (1)
22	NUT	A194 Gr.2H+HDG (1)
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301

NOTE:

(1) HDG: Hot Dip Galvanised (ASTM A153)







REMARKS:

- Dimensions are in mm
- Design acc. to API 6D
- Face to face acc. to ASME B16.10/API 6D
- Flange connection acc. to ANSI B16.5
- Antistatic device acc. to API 6D

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Valve Weight (kg):	Actuator Weight (kg):	Tot. Weight (kg):
01	340	BS01F01RF	50-XV-005	1	1-1/2"	150	RF	165	38	64	105	127	18	36	54

CUSTOMER :	ROSETTI MARINO S.P.A. CIG 9931200D7D
P.O. N. :	17240000204 23A90A
JOB N. :	240396

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2							
1							
0	FIRST ISSUE	S.Madahar	04/10/2024	D.Barcella	04/10/2024	L.Mora	04/10/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

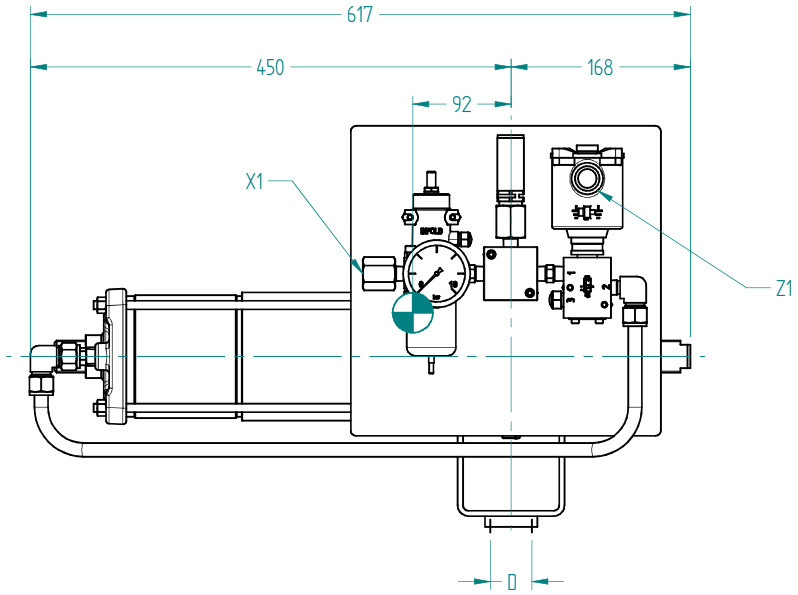
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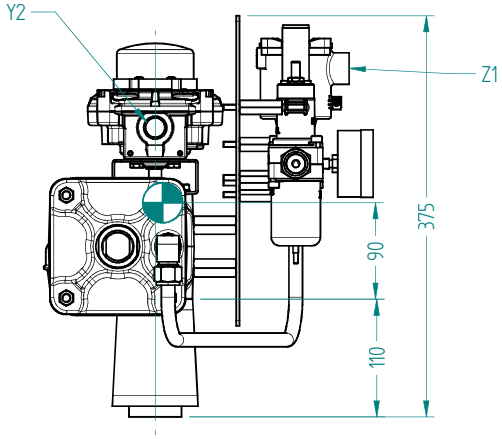
SPLIT BODY FLOATING BALL VALVE

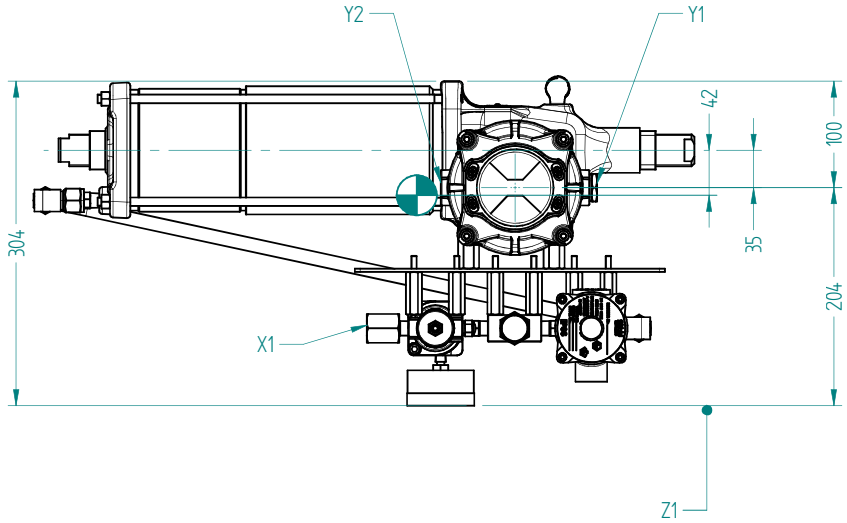
DRAWN: S.Madahar	DATE: 04/10/2024	
CHK'D: D.Barcella	DATE: 04/10/2024	
APPV'D: L.Mora	DATE: 04/10/2024	
SIZE: A3	SCALE: N.A.	DRAWING NAME: D240396-01

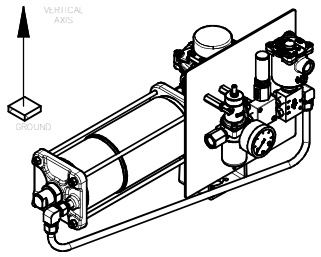
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Rev.: 0









ISOMETRIC VIEW
SCALE 1:10

RFS Item	Tag No.
1	50-XV-005

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

NOTES:
1. D = ACCORDING TO VALVE FLANGE.
2. DIMENSIONS MUST BE WITHIN +20% OF THE OVERALL DIMENSION DRAWING.
3. TUBING IS SHOWN FOR INFORMATION ONLY. ACTUAL TUBING ROUTING MAY BE DIFFERENT, BUT WITHIN THE OVERALL DIMENSIONS SHOWN IN THE DRAWING
4. LIFTING OF THE ACTUATOR SHALL BE DONE BY LIFTING POINTS OR BY SLINGS SUITABLY RATED FOR THE ACTUATOR DIMENSIONS AND WEIGHT. SLINGS OR LIFTING POINTS SHALL NOT BE USED TO LIFT THE VALVE/ACTUATOR ASSEMBLY.

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Document type: Assembly Drawing
Dimensions in mm
Scale 1:5

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Title
SINGLE ACTING PNEUMATIC ACTUATOR
CP/S-035-100A/BA - F.O.

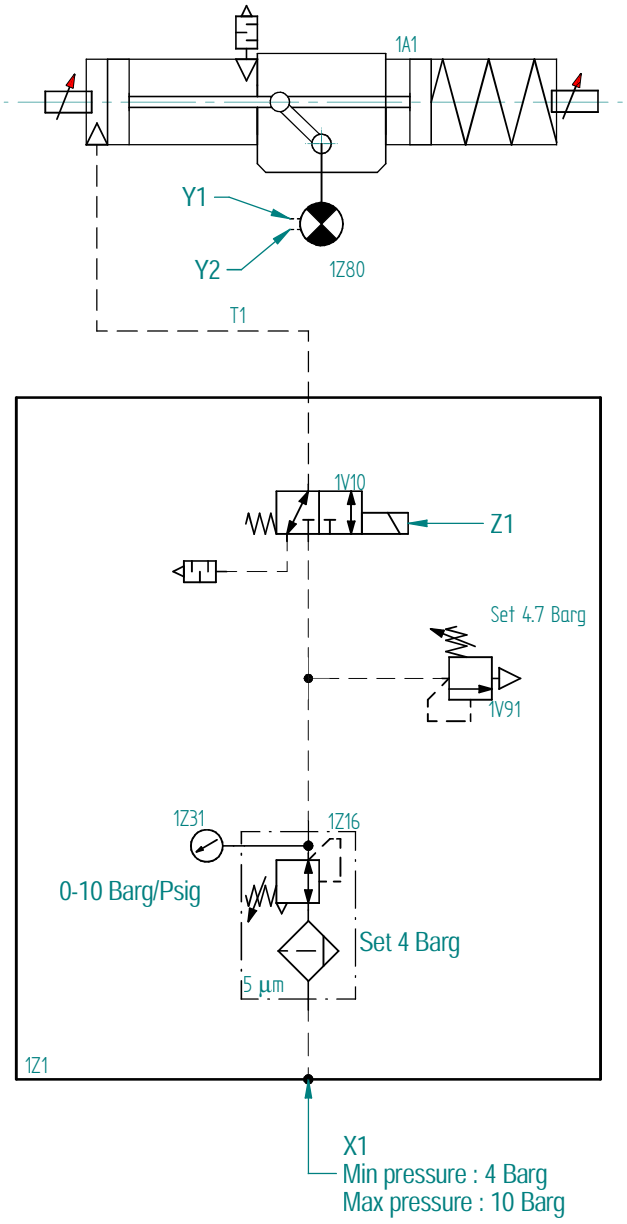
Drawing Number
AF7888OCPA01

Rev 0-0

Nominal Mass 32 kg | Size A3 | Sheet 1 of 1

Template Issue: 24/02/2020 SR

PNEUMATIC



Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Title
E1F2G1H02A0A1J3L1R0

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Drawing Number
AF7888PDA01

Rev
0-0

Size A3 Sheet 1 of 2

Template Issue : 2400/2020-SR

BILL OF MATERIAL					
Pos	**Description**	**Size**	**Manufacturer**	**Model**	**Material**
1A1	QUARTER TURN PNEUMATIC ACTUATOR, SPRING RETURN, SPRING TO OPEN		ROTORK	*see Tag Number Table	*see Tag Number Table
1V10	SOLENOID VALVE, DIRECT ACTING, 3/2 UNIVERSAL TYPE, SPRING RETURN	1/4"	BIFOLD	FP06P-S1-04-32-NU-V-77A-24D-57	AISI316L
1V91	PRESSURE RELIEF VALVE, FREE EXHAUST	1/2"	N.G.I.	D10/S	AISI 316
1Z1	CONTROL PANEL		RFS	-	AISI316L
1Z16	FILTER REGULATOR, SELF RELIEVING, FILTER WITH MANUAL DRAIN	1/4"	BIFOLD	SH06-FR-SR-MD-10-X1	AISI 316L
1Z31	PRESSURE GAUGE, GAUGE TYPE	DN 63	WIKA	233.50	AISI316
1Z80	LIMIT SWITCH BOX, 2 ELECTRIC CONNECTION	-	SOLDO	SQN120E-20X23L7	AISI 316

RFS Item	Tag No.	ACTUATOR MODEL	ACTUATOR MATERIAL
1	50-XV-005	CP/S-035-100A/BA	CAST IRON

N°	Description	Type	Size	Manufacturer	Material
T1	PNEUMATIC TUBING	POWER LINE	1/2"	SANDVIK or EQUIVALENT	AISI 316L
-	TUBE FITTINGS	DOUBLE FERRULE	ACCORDING TO TUBING SIZE	FITOK	AISI 316
-	SILENCER - BUG SCREEN	SFEX	ACCORDING TO PORT SIZE	-	AISI316
-	THREADED UNIONS		ACCORDING TO COMPONENT SIZE	R.F.S.	AISI316

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

FUNCTION	DESCRIPTION
1) REMOTE OPERATION:	1A) VALVE ACTUATOR OPEN STROKE: ENERGIZE SOLENOID VALVE 1V10.
	1B) VALVE ACTUATOR CLOSE STROKE: DE-ENERGIZE SOLENOID VALVE 1V10.

NOTES
THE SCHEMATIC IS SHOWN WITHOUT PNEUMATIC AND ELECTRIC SUPPLY
THE ACTUATOR IS SHOWN IN CLOSE POSITION

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Title: E1F2G1H02A0A1J3L1R0

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

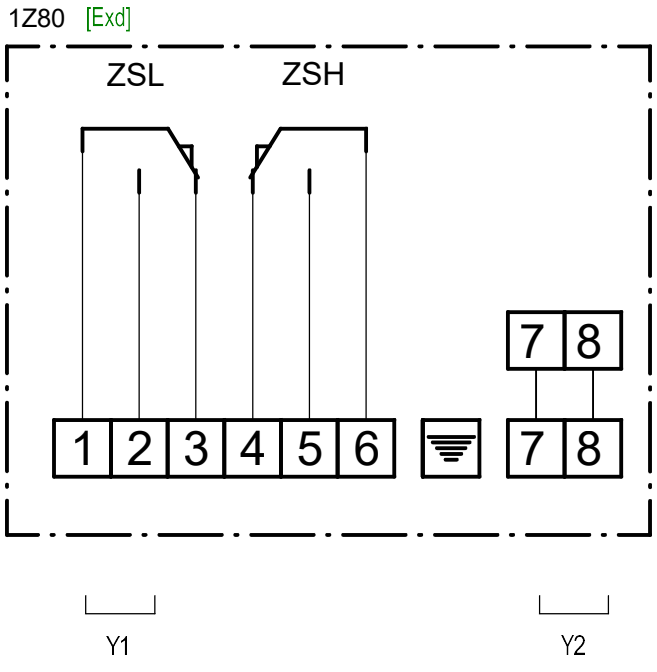
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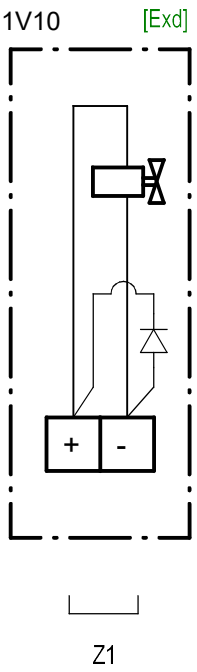
Rev: 0-0

Size: A3 Sheet 2 of 2

Template Issue : 24/02/2020-SR

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue





THE LIMIT SWITCHES ARE SHOWN WITH
THE VALVE IN INTERMEDIATE POSITION

closed contact
open contact

limit switch		Limit switch function VALVE POSITION open	interm.	closed
ZSL	1-2 NO			■
	1-3 NC	■	■	
ZSH	6-5 NO	■		
	6-4 NC		■	■

RFS Item	Tag No.
1	50-XV-005

Connection	Description	Size
Y1	LIMIT SWITCH BOX ELECTRIC CONNECTION	M20x1,5 (Female)
Y2	LIMIT SWITCH BOX ELECTRIC CONNECTION (plugged)	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

Item	Description	Manufacturer, Model and Features
1V10	SOLENOID VALVE	BIFOLD, mod. FP06P-S1-04-32-NU-V-77A-24D-57 - ATEX/IECEx - 24Vdc, 5,7 Watt - Exd IIC T4/T6 - IP66
1Z80	LIMIT SWITCHES BOX	SOLDO, mod. SQN120E-20X23L7- ATEX/IECEx - Ex II 2GD Ex d IIC T4/T6 - IP66
ZSL	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]
ZSH	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]

Template Issue : 2019-05-10

rotork® Fluid Systems
Lucca - Italy
www.rotork.com

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Document type	WIRING DIAGRAM	
Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Title WIRING DIAGRAM
Drawing Number AF7888WD01 Rev 0-0
Size A4 Sheet 1 of 1

ITEM	Tag	AV-63009/50-XV-005	: Pneumatic Connection			Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10004658		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX06		Tubing Hydraulic

General

1	Drawings (P&ID tube) attached.	OK
2	Isometric drawings (P&ID pipe) attached.	NA
3	Check drawings at last revision.	OK
4	Material certificates for pipe/tube/fittings/flanges/hose and support clamps checked	OK
5	Welders certificates checked	NA
6	Certificate and mark-up drawings for welding WPS and WPQR and material certificates checked	NA
7	Certificates and mark-up drawings for NDT report checked	NA

Check before Flushing and/or Testing

8	Installation complete and in compliance with drawings and specifications.	OK
9	Tubing/Piping tray checked.	NA
10	Hose according to specifications and tightened	NA
11	Flanges - nuts and bolts tightened.	NA
12	Fittings are mounted and tightened.	OK
13	Pipe supports completed and installed as required.	OK
14	Cable ladders, trays, sharp edges protected, cut ends sealed.	NA
15	Maintenance evaluation.	OK

REFER TO FINAL SHEET FOR ACCEPTANCE

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	AV-63009/50-XV-005	: Pneumatic Connection		Dwg	123A90-DDL-IN-LIS-40092	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10004658	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX06	Tubing Hydraulic

Flushing / Pressure testing

16	Drawings of flushing loops (P&ID tube) attached	NA
17	Equipment & valves bypassed and blinded	OK
18	Calibration certificates attached	OK
19	Type of flushing medium correct	NA
20	Printout from recorder/particle counter	NA
21	Printout from pressure indicator	OK

Final Check

22	Final inspection of pipework.	OK
23	Preservation of tested pipework.	NA
24	System/equipment labelled with: "Hot Oil flushing performed".	NA
25	If required produce Red Line Mark Up for "AS BUILT"	

TEST SPECIFIED USED

TEST FLUID: IA TEST PRESSURE BAR G: 9 TEST DURATION : 10,16

TEST EQUIPMENT: CPG 1500 SERIAL N°: 1A014ILJJIM

HOOK UP DIAGRAM Number: 123A90-DDL-IN-HD-40078

Line FROM	Line TO	Tubing cleaned			Tubing flushed			Diam ID/OD
		Yes	No	N/A	Yes	No	N/A	
AV-63009	50-XV-005	●					●	

TESTED LABEL AFFIXED DATA SHEET ATTACHED

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-03-10	2025-03-10	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-03-10T10:32:54.065Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-03-10T15:10:57.459Z	

WIKA Italia S.r.l. & C. s.a.s.
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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 0435-SM-24
Certificate of Calibration

- data di emissione date of issue	2024-09-20
- 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)

Si riferisce a
referring to

- oggetto *item*	Misuratore di pressione elettronico Electrical pressure gauge
- costruttore *manufacturer*	WIKA
- modello *model*	CPG1500
- matricola *serial number*	1A014ILJJIM
- data di ricev. oggetto *date of receipt of item*	2024-09-17
- data delle misure *date of measurements*	2024-09-20
- registro di laboratorio *laboratory reference*	0435-SM-24

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.

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

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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.*	1A014ILJJIM
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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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*	(1009,3 ± 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	99,9	99,9
199,82	199,9	199,9	199,9
299,73	299,8	299,8	299,8
399,63	399,7	399,7	399,7
499,53	499,5	499,6	499,6
599,44	599,4	599,4	599,4
699,34	699,3	699,3	699,3
799,25	799,1	799,2	799,1
899,14	899,0	899,1	899,0
999,04	999,0	999,0	999,0

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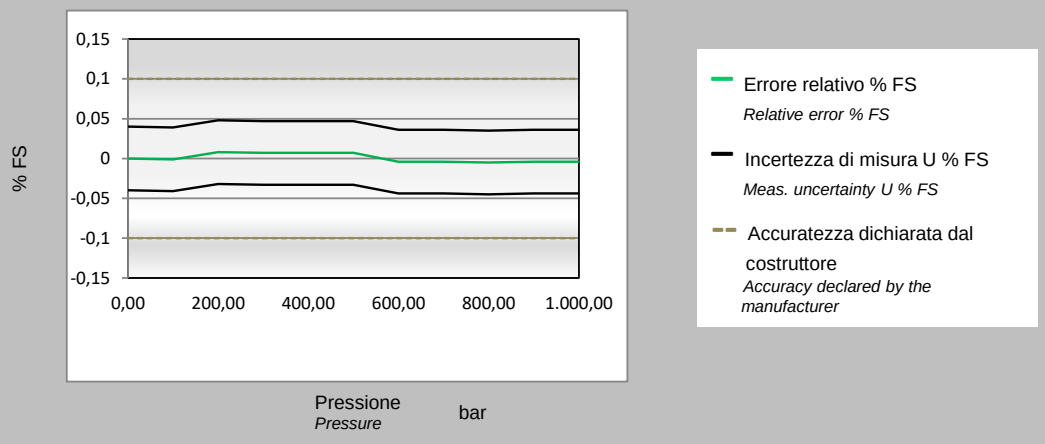
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Incertezza di misura
Uncertainty of measurement

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	99,9	0,0	0,0	0,0	0,40
199,82	199,9	0,1	0,0	0,0	0,40
299,73	299,8	0,1	0,0	0,0	0,40
399,63	399,7	0,1	0,0	0,0	0,40
499,53	499,6	0,1	0,1	0,1	0,40
599,44	599,4	0,0	0,0	0,0	0,40
699,34	699,3	0,0	0,0	0,0	0,40
799,25	799,2	0,0	0,0	0,1	0,40
899,14	899,1	0,0	0,0	0,1	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 0,5 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

Logger protocol
Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	AV-63009/50-XV-005

Instrument
Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A014ILJJIM
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:DD:8D)

Measurement conditions
Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	15000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	00:10:16
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	04:15:53 pm

Logger protocol

Protocollo di acquisizione elenco dati

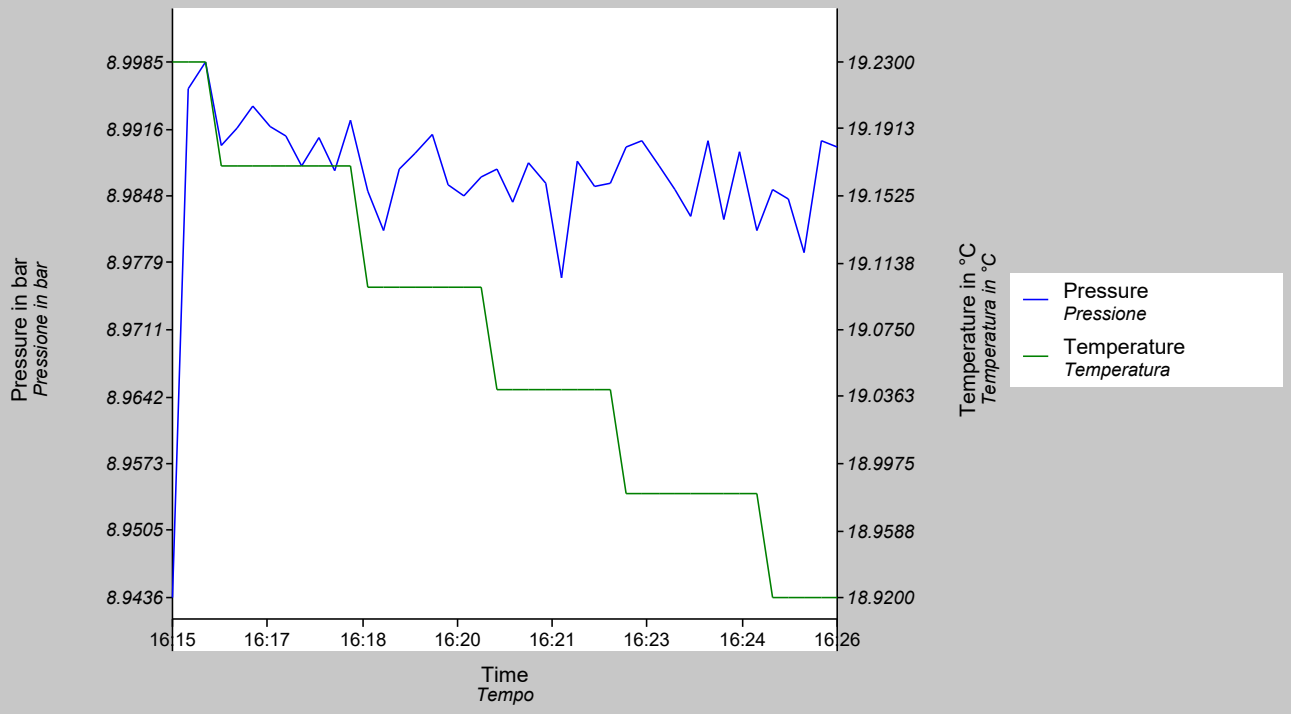
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	AV-63009/50-XV-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
03/10/2025 16:15:53.000	8.9436	19.2300
03/10/2025 16:16:08.000	8.9958	19.2300
03/10/2025 16:16:23.000	8.9985	19.2300
03/10/2025 16:16:38.000	8.9899	19.1700
03/10/2025 16:16:53.000	8.9917	19.1700
03/10/2025 16:17:08.000	8.9940	19.1700
03/10/2025 16:17:23.000	8.9919	19.1700
03/10/2025 16:17:38.000	8.9909	19.1700
03/10/2025 16:17:53.000	8.9879	19.1700
03/10/2025 16:18:08.000	8.9907	19.1700
03/10/2025 16:18:23.000	8.9874	19.1700
03/10/2025 16:18:38.000	8.9926	19.1700
03/10/2025 16:18:53.000	8.9853	19.1000
03/10/2025 16:19:08.000	8.9813	19.1000
03/10/2025 16:19:23.000	8.9876	19.1000
03/10/2025 16:19:38.000	8.9892	19.1000
03/10/2025 16:19:53.000	8.9910	19.1000

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	AV-63009/50-XV-005

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
03/10/2025 16:20:08.000	8.9859	19.1000
03/10/2025 16:20:23.000	8.9847	19.1000
03/10/2025 16:20:38.000	8.9867	19.1000
03/10/2025 16:20:53.000	8.9875	19.0400
03/10/2025 16:21:08.000	8.9842	19.0400
03/10/2025 16:21:23.000	8.9882	19.0400
03/10/2025 16:21:38.000	8.9860	19.0400
03/10/2025 16:21:53.000	8.9764	19.0400
03/10/2025 16:22:08.000	8.9883	19.0400
03/10/2025 16:22:23.000	8.9858	19.0400
03/10/2025 16:22:38.000	8.9860	19.0400
03/10/2025 16:22:53.000	8.9897	18.9800
03/10/2025 16:23:08.000	8.9904	18.9800
03/10/2025 16:23:23.000	8.9879	18.9800
03/10/2025 16:23:38.000	8.9855	18.9800
03/10/2025 16:23:53.000	8.9827	18.9800
03/10/2025 16:24:08.000	8.9904	18.9800
03/10/2025 16:24:23.000	8.9823	18.9800
03/10/2025 16:24:38.000	8.9893	18.9800
03/10/2025 16:24:53.000	8.9812	18.9800
03/10/2025 16:25:08.000	8.9854	18.9200
03/10/2025 16:25:23.000	8.9845	18.9200
03/10/2025 16:25:38.000	8.9790	18.9200
03/10/2025 16:25:53.000	8.9904	18.9200
03/10/2025 16:26:08.000	8.9898	18.9200

CROSSWIND

HOLLANDSE KUST NOORD WIND PARK Project
Contract No. CW-I-WP4-2023-05

INSTRUMENT TUBING LIST

ROSETTI MARINO

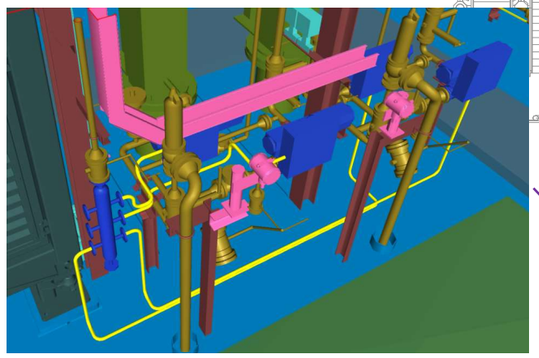
REV.	00	01	02	03	04
	X	X	X	X	X

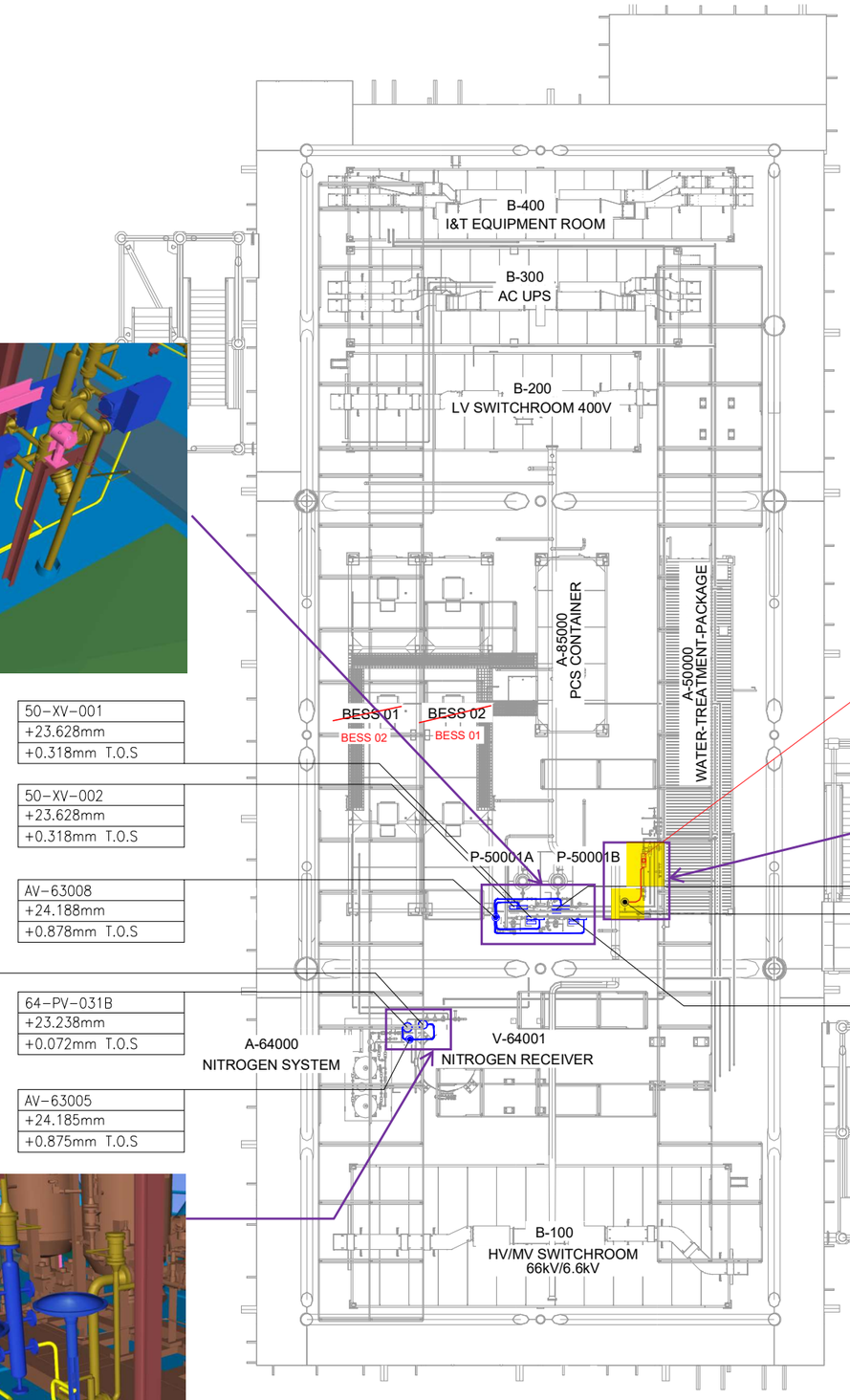
								DATA TUBING											FROM AREA					TO AREA					
POS.	REV	SUPPLY SCOPE	LAINING SCOPE	TAG Tubing	P&ID	MAIN FUNCTION	SERVICE	DESIGN TEMPERATURE(C°)	OPERATING PRESSURE (Barg)	DESIGN PRESSURE (Barg)	TEST PRESSURE (Barg)	FLUID TEST	DIMENSIONS	MATERIAL	REF. DOC.	Q.TY (m)	FIRE PROOFING	HEAT TRACING	MODULE	AREA	FROM ITEM	REF. P&I	DESCRIPTION	MODULE	AREA	TO ITEM	REF. LAYOUT	DESCRIPTION	NOTE
01	04	RM	RM	**AV-63001/25-XV-011**	123A90-DDL-PR-PID-80017	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Upper Deck	AV-63001	123A90-DDL-PR-PID-80041	Distribution Pot 1	BLPH	Upper Deck	25-XV-011	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
02	04	RM	RM	**AV-63001/25-FV-033**	123A90-DDL-PR-PID-80017	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**9**	N.A.	N.A.	BLPH	Upper Deck	AV-63001	123A90-DDL-PR-PID-80041	Distribution Pot 1	BLPH	Upper Deck	25-FV-033	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
03	04	RM	RM	**AV-63001/25-XV-008**	123A90-DDL-PR-PID-80016	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**6**	N.A.	N.A.	BLPH	Upper Deck	AV-63001	123A90-DDL-PR-PID-80041	Distribution Pot 1	BLPH	Upper Deck	25-XV-008	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
04	04	RM	RM	**AV-63001/25-FV-032**	123A90-DDL-PR-PID-80016	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**7**	N.A.	N.A.	BLPH	Upper Deck	AV-63001	123A90-DDL-PR-PID-80041	Distribution Pot 1	BLPH	Upper Deck	25-FV-032	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
05	04	RM	RM	**AV-63002/25-XV-020**	123A90-DDL-PR-PID-80020	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63002	123A90-DDL-PR-PID-80041	Distribution Pot 2	BLPH	Upper Deck	25-XV-020	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
06	04	RM	RM	**AV-63002/25-FV-036**	123A90-DDL-PR-PID-80020	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**11**	N.A.	N.A.	BLPH	Upper Deck	AV-63002	123A90-DDL-PR-PID-80041	Distribution Pot 2	BLPH	Upper Deck	25-FV-036	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
07	04	RM	RM	**AV-63002/25-XV-017**	123A90-DDL-PR-PID-80019	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**5**	N.A.	N.A.	BLPH	Upper Deck	AV-63002	123A90-DDL-PR-PID-80041	Distribution Pot 2	BLPH	Upper Deck	25-XV-017	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
08	04	RM	RM	**AV-63002/25-FV-038**	123A90-DDL-PR-PID-80019	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**7**	N.A.	N.A.	BLPH	Upper Deck	AV-63002	123A90-DDL-PR-PID-80041	Distribution Pot 2	BLPH	Upper Deck	25-FV-038	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
09	04	RM	RM	**AV-63002/25-XV-014**	123A90-DDL-PR-PID-80018	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Upper Deck	AV-63002	123A90-DDL-PR-PID-80041	Distribution Pot 2	BLPH	Upper Deck	25-XV-014	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
10	04	RM	RM	**AV-63002/25-FV-034**	123A90-DDL-PR-PID-80018	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63002	123A90-DDL-PR-PID-80041	Distribution Pot 2	BLPH	Upper Deck	25-FV-034	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
11	04	RM	RM	**AV-63003/25-BDV-010**	123A90-DDL-PR-PID-80017	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Upper Deck	AV-63003	123A90-DDL-PR-PID-80041	Distribution Pot 3	BLPH	Upper Deck	25-BDV-010	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
12	04	RM	RM	**AV-63003/25-PV-040**	123A90-DDL-PR-PID-80017	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63003	123A90-DDL-PR-PID-80041	Distribution Pot 3	BLPH	Upper Deck	25-PV-040	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
13	04	RM	RM	**AV-63003/25-XV-012**	123A90-DDL-PR-PID-80017	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**7**	N.A.	N.A.	BLPH	Upper Deck	AV-63003	123A90-DDL-PR-PID-80041	Distribution Pot 3	BLPH	Upper Deck	25-XV-012	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
14	04	RM	RM	**AV-63003/25-XV-009**	123A90-DDL-PR-PID-80016	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**13**	N.A.	N.A.	BLPH	Upper Deck	AV-63003	123A90-DDL-PR-PID-80041	Distribution Pot 3	BLPH	Upper Deck	25-XV-009	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
15	04	RM	RM	**AV-63004/25-BDV-013**	123A90-DDL-PR-PID-80018	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63004	123A90-DDL-PR-PID-80041	Distribution Pot 4	BLPH	Upper Deck	25-BDV-013	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
16	04	RM	RM	**AV-63004/25-PV-043**	123A90-DDL-PR-PID-80018	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Upper Deck	AV-63004	123A90-DDL-PR-PID-80041	Distribution Pot 4	BLPH	Upper Deck	25-PV-043	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
17	04	RM	RM	**AV-63004/25-XV-015**	123A90-DDL-PR-PID-80018	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**6**	N.A.	N.A.	BLPH	Upper Deck	AV-63004	123A90-DDL-PR-PID-80041	Distribution Pot 4	BLPH	Upper Deck	25-XV-015	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
18	04	RM	RM	**AV-63005/64-PV-031A**	123A90-DDL-PR-PID-80027	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**4**	N.A.	N.A.	BLPH	Lower Deck	AV-63005	123A90-DDL-PR-PID-80041	Distribution Pot 5	BLPH	Lower Deck	64-PV-031A	123A90-DDL-IN-DL-40080	Pneumatic Control Valve	Design Pressure set as per downstream PSV
19	04	RM	RM	**AV-63005/64-PV-031B**	123A90-DDL-PR-PID-80027	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**3**	N.A.	N.A.	BLPH	Lower Deck	AV-63005	123A90-DDL-PR-PID-80041	Distribution Pot 5	BLPH	Lower Deck	64-PV-031B	123A90-DDL-IN-DL-40080	Pneumatic Control Valve	Design Pressure set as per downstream PSV
20	04	RM	RM	**AV-63006/25-BDV-022**	123A90-DDL-PR-PID-80014	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**6**	N.A.	N.A.	BLPH	Upper Deck	AV-63006	123A90-DDL-PR-PID-80041	Distribution Pot 6	BLPH	Upper Deck	25-BDV-022	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
21	04	RM	RM	**AV-63006/25-XV-021**	123A90-DDL-PR-PID-80020	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**6**	N.A.	N.A.	BLPH	Upper Deck	AV-63006	123A90-DDL-PR-PID-80041	Distribution Pot 6	BLPH	Upper Deck	25-XV-021	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
22	04	RM	RM	**AV-63006/25-PV-049**	123A90-DDL-PR-PID-80020	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**9**	N.A.	N.A.	BLPH	Upper Deck	AV-63006	123A90-DDL-PR-PID-80041	Distribution Pot 6	BLPH	Upper Deck	25-PV-049	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
23	04	RM	RM	**AV-63006/25-BDV-019**	123A90-DDL-PR-PID-80020	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63006	123A90-DDL-PR-PID-80041	Distribution Pot 6	BLPH	Upper Deck	25-BDV-019	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
24	04	RM	RM	**AV-63006/80-XV-001**	123A90-DDL-PR-PID-80012	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63006	123A90-DDL-PR-PID-80041	Distribution Pot 6	BLPH	Upper Deck	80-XV-001	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
25	04	RM	RM	**AV-63007/25-XV-006**	123A90-DDL-PR-PID-80015	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**9**	N.A.	N.A.	BLPH	Upper Deck	AV-63007	123A90-DDL-PR-PID-80041	Distribution Pot 7	BLPH	Upper Deck	25-XV-006	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
26	04	RM	RM	**AV-63007/25-PV-035**	123A90-DDL-PR-PID-80015	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**11**	N.A.	N.A.	BLPH	Upper Deck	AV-63007	123A90-DDL-PR-PID-80041	Distribution Pot 7	BLPH	Upper Deck	25-PV-035	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
27	04	RM	RM	**AV-63007/25-BDV-005**	123A90-DDL-PR-PID-80015	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63007	123A90-DDL-PR-PID-80041	Distribution Pot 7	BLPH	Upper Deck	25-BDV-005	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
28	04	RM	RM	**AV-63007/25-PV-037**	123A90-DDL-PR-PID-80016	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63007	123A90-DDL-PR-PID-80041	Distribution Pot 7	BLPH	Upper Deck	25-PV-037	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
29	04	RM	RM	**AV-63007/25-BDV-007**	123A90-DDL-PR-PID-80016	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Upper Deck	AV-63007	123A90-DDL-PR-PID-80041	Distribution Pot 7	BLPH	Upper Deck	25-BDV-007	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
30	04	RM	RM	**AV-63008/50-XV-001**	123A90-DDL-PR-PID-80021	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**6**	N.A.	N.A.	BLPH	Lower Deck	AV-63008	123A90-DDL-PR-PID-80041	Distribution Pot 8	BLPH	Lower Deck	50-XV-001	123A90-DDL-IN-DL-40080	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
31	04	RM	RM	**AV-63008/50-XV-002**	123A90-DDL-PR-PID-80021	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**5**	N.A.	N.A.	BLPH	Lower Deck	AV-63008	123A90-DDL-PR-PID-80041	Distribution Pot 8	BLPH	Lower Deck	50-XV-002	123A90-DDL-IN-DL-40080	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
32	04	RM	RM	**AV-63008/50-XV-003**	123A90-DDL-PR-PID-80021	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Lower Deck	AV-63008	123A90-DDL-PR-PID-80041	Distribution Pot 8	BLPH	Lower Deck	50-XV-003	123A90-DDL-IN-DL-40080	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
33	04	RM	RM	**AV-63008/50-XV-004**	123A90-DDL-PR-PID-80021	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**7**	N.A.	N.A.	BLPH	Lower Deck	AV-63008	123A90-DDL-PR-PID-80041	Distribution Pot 8	BLPH	Lower Deck	50-XV-004	123A90-DDL-IN-DL-40080	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
33A	04	RM	RM	**AV-63009/50-XV-005**	123A90-DDL-PR-PID-80025	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**4**	N.A.	N.A.	BLPH	Lower Deck	AV-63009	123A90-DDL-PR-PID-80041	Distribution Pot 9	BLPH	Lower Deck	50-XV-005	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
34	04	RM	RM	**AV-63010/25-SDV-001**	123A90-DDL-PR-PID-80013	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**10**	N.A.	N.A.	BLPH	Upper Deck	AV-63010	123A90-DDL-PR-PID-80041	Distribution Pot 10	BLPH	Upper Deck	25-SDV-001	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
35	04	RM	RM	**AV-63010/25-XV-024**	123A90-DDL-PR-PID-80013	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**9**	N.A.	N.A.	BLPH	Upper Deck	AV-63010	123A90-DDL-PR-PID-80041	Distribution Pot 10	BLPH	Upper Deck	25-XV-024	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
36	04	RM	RM	**AV-63010/25-XV-004**	123A90-DDL-PR-PID-80015	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**5**	N.A.	N.A.	BLPH	Upper Deck	AV-63010	123A90-DDL-PR-PID-80041	Distribution Pot 10	BLPH	Upper Deck	25-XV-004	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
37	04	RM	RM	**AV-63010/25-FV-031**	123A90-DDL-PR-PID-80015	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**7**	N.A.	N.A.	BLPH	Upper Deck	AV-63010	123A90-DDL-PR-PID-80041	Distribution Pot 10	BLPH	Upper Deck	25-FV-031	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
38	04	RM	RM	**AV-63010/64-SDV-001**	123A90-DDL-PR-PID-80027	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**15**	N.A.	N.A.	BLPH	Upper Deck	AV-63010	123A90-DDL-PR-PID-80041	Distribution Pot 10	BLPH	Upper Deck	64-SDV-001	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
39	04	RM	RM	**AV-63011/25-SDV-023**	123A90-DDL-PR-PID-80014	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**4**	N.A.	N.A.	BLPH	Upper Deck	AV-63011	123A90-DDL-PR-PID-80041	Distribution Pot 11	BLPH	Upper Deck	25-SDV-023	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
40	04	RM	RM	**AV-63011/25-PV-055A**	123A90-DDL-PR-PID-80014	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**7**	N.A.	N.A.	BLPH	Upper Deck	AV-63011	123A90-DDL-PR-PID-80041	Distribution Pot 11	BLPH	Upper Deck	25-PV-055A	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
41	04	RM	RM	**AV-63011/25-PV-055B**	123A90-DDL-PR-PID-80014	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**6**	N.A.	N.A.	BLPH	Upper Deck	AV-63011	123A90-DDL-PR-PID-80041	Distribution Pot 11	BLPH	Upper Deck	25-PV-055B	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
42	04	RM	RM	**AV-63012/25-XV-018**	123A90-DDL-PR-PID-80019	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**5**	N.A.	N.A.	BLPH	Upper Deck	AV-63012	123A90-DDL-PR-PID-80041	Distribution Pot 12	BLPH	Upper Deck	25-XV-018	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
43	04	RM	RM	**AV-63012/25-PV-046**	123A90-DDL-PR-PID-80019	Pneumatic Connection	Air Supply	100	4	6	6,6	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**8**	N.A.	N.A.	BLPH	Upper Deck	AV-63012	123A90-DDL-PR-PID-80041	Distribution Pot 12	BLPH	Upper Deck	25-PV-046	123A90-DDL-IN-DL-40081	Pneumatic Control Valve	Design Pressure set as per downstream PSV
44	04	RM	RM	**AV-63012/25-BDV-016**	123A90-DDL-PR-PID-80019	Pneumatic Connection	Air Supply	100	4	4,7	5,17	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40078	**9**	N.A.	N.A.	BLPH	Upper Deck	AV-63012	123A90-DDL-PR-PID-80041	Distribution Pot 12	BLPH	Upper Deck	25-BDV-016	123A90-DDL-IN-DL-40081	Pneumatic On/Off Valve	Design Pressure set as per downstream PSV
45	03	DELETED	DELETED	**BLPH-MV-014/25-PT-001**	123A90-DDL-PR-PID-80013	Process Connection	Hydrogen	80	7,5 / 30	40	7,5 / 30	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-014	123A90-DDL-PR-PID-80013	Manual Valve	BLPH	Upper Deck	25-PT-001	123A90-DDL-IN-DL-40081	Pressure Transmitter	
46	03	DELETED	DELETED	**BLPH-MV-013/25-PT-002**	123A90-DDL-PR-PID-80013	Process Connection	Hydrogen	80	7,5 / 30	40	7,5 / 30	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-013	123A90-DDL-PR-PID-80013	Manual Valve	BLPH	Upper Deck	25-PT-002	123A90-DDL-IN-DL-40081	Pressure Transmitter	
47	03	DELETED	DELETED	**BLPH-MV-025/25-PT-055A**	123A90-DDL-PR-PID-80014	Process Connection	Hydrogen	100	17,7	19	17,7	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-025	123A90-DDL-PR-PID-80014	Manual Valve	BLPH	Upper Deck	25-PT-055A	123A90-DDL-IN-DL-40081	Pressure Transmitter	
48	03	DELETED	DELETED	**BLPH-MV-213/25-PT-055B**	123A90-DDL-PR-PID-80014	Process Connection	Hydrogen	100	3,5 / 6,5	10	3,5 / 6,5	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-213	123A90-DDL-PR-PID-80014	Manual Valve	BLPH	Upper Deck	25-PT-055B	123A90-DDL-IN-DL-40081	Pressure Transmitter	
49	03	DELETED	DELETED	**BLPH-MV-407/43-PT-001**	123A90-DDL-PR-PID-80029	Process Connection	Hydrogen	-10 / +80	ATM	3,5	ATM	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-407	123A90-DDL-PR-PID-80029	Manual Valve	BLPH	Upper Deck	43-PT-001	123A90-DDL-IN-DL-40081	Pressure Transmitter	
50	03	DELETED	DELETED	**BLPH-MV-411/50-PT-014**	123A90-DDL-PR-PID-80025	Process Connection	Waste Water	100	ATM	17,7	ATM	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	YES	BLPH	Lower Deck	BLPH-MV-411	123A90-DDL-PR-PID-80025	Manual Valve	BLPH	Lower Deck	50-PT-014	123A90-DDL-IN-DL-40080	Pressure Transmitter	
51	03	DELETED	DELETED	**BLPH-MV-150/63-PT-003**	123A90-DDL-PR-PID-80027	Process Connection	Instrument Air	100	4 / 10	11	4 / 10	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-150	123A90-DDL-PR-PID-80027	Manual Valve	BLPH	Upper Deck	63-PT-003	123A90-DDL-IN-DL-40081	Pressure Transmitter	
52	03	DELETED	DELETED	**BLPH-MV-151/63-PT-004**	123A90-DDL-PR-PID-80027	Process Connection	Instrument Air	100	4 / 10	11	4 / 10	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-151	123A90-DDL-PR-PID-80027	Manual Valve	BLPH	Upper Deck	63-PT-004	123A90-DDL-IN-DL-40081	Pressure Transmitter	
53	04	RM	RM	**BLPH-MV-386/64-PT-031A**	123A90-DDL-PR-PID-80027	Process Connection	Nitrogen Gas	100	6	10	11	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Lower Deck	BLPH-MV-386	123A90-DDL-PR-PID-80027	Manual Valve	BLPH	Lower Deck	64-PT-031A	123A90-DDL-IN-DL-40080	Pressure Transmitter	
54	03	DELETED	DELETED	**BLPH-MV-166/64-PT-031B**	123A90-DDL-PR-PID-80027	Process Connection	Nitrogen Gas	100	6	10	6	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Lower Deck	BLPH-MV-166	123A90-DDL-PR-PID-80027	Manual Valve	BLPH	Lower Deck	64-PT-031B	123A90-DDL-IN-DL-40080	Pressure Transmitter	
55	03	DELETED	DELETED	**BLPH-MV-167/64-PT-002**	123A90-DDL-PR-PID-80027	Process Connection	Nitrogen Gas	100	6	10	6	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Lower Deck	BLPH-MV-167	123A90-DDL-PR-PID-80027	Manual Valve	BLPH	Lower Deck	64-PT-002	123A90-DDL-IN-DL-40080	Pressure Transmitter	
56	03	DELETED	DELETED	**BLPH-MV-038/80-PT-002**	123A90-DDL-PR-PID-80012	Process Connection	Hydrogen	100	3,5 / 6	10	3,5 / 6	N_2	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**0,5**	N.A.	N.A.	BLPH	Upper Deck	BLPH-MV-038	123A90-DDL-PR-PID-80012	Manual Valve	BLPH	Upper Deck	80-PT-002	123A90-DDL-IN-DL-40081	Pressure Transmitter	
57	04	RM	RM	**BLPH-MV-404/43-LT-001**	123A90-DDL-PR-PID-80029	Process Connection	Water	-10 / +80	ATM	3,5	3,85	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**4**	N.A.	YES	BLPH	Upper Deck	BLPH-MV-404	123A90-DDL-PR-PID-80029	Manual Valve	BLPH	Upper Deck	43-LT-001	123A90-DDL-IN-DL-40081	Level DP Transmitter	
58	04	RM	RM	**BLPH-MV-405/43-LT-001**	123A90-DDL-PR-PID-80029	Process Connection	Water	-10 / +80	ATM	3,5	3,85	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**4**	N.A.	YES	BLPH	Upper Deck	BLPH-MV-405	123A90-DDL-PR-PID-80029	Manual Valve	BLPH	Upper Deck	43-LT-001	123A90-DDL-IN-DL-40081	Level DP Transmitter	
59	04	RM	RM	**BLPH-MV-462/43-LT-003**	123A90-DDL-PR-PID-80029	Process Connection	Water	-10 / +80	ATM	3,5	3,85	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**4**	N.A.	YES	BLPH	Upper Deck	BLPH-MV-462	123A90-DDL-PR-PID-80029	Manual Valve	BLPH	Upper Deck	43-LT-003	123A90-DDL-IN-DL-40081	Level DP Transmitter	
60	04	RM	RM	**BLPH-MV-463/43-LT-003**	123A90-DDL-PR-PID-80029	Process Connection	Water	-10 / +80	ATM	3,5	3,85	N2 / Dry Air	1/2" OD x Thk. 0,049"	AISI 316L	123A90-DDL-IN-HD-40077	**4**	N.A.	YES	BLPH	Upper Deck	BLPH-MV-463	123A90-DDL-PR-PID-80029	Manual Valve	BLPH	Upper Deck	43-LT-003	123A90-DDL-IN-DL-40081	Level DP Transmitter	

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DRAWING NO. 123A90-DDL-IN-DL-40084

REV. 01





50-XV-001
+23.628mm
+0.318mm T.O.S

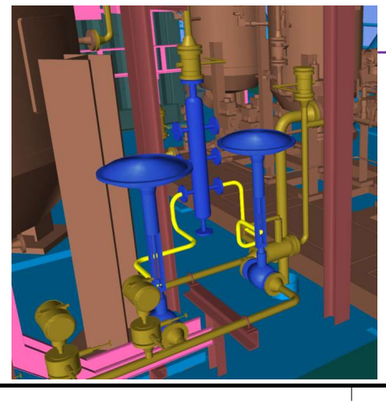
50-XV-002
+23.628mm
+0.318mm T.O.S

AV-63008
+24.188mm
+0.878mm T.O.S

64-PV-031A
+23.238mm
+0.072mm T.O.S

64-PV-031B
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+0.072mm T.O.S

AV-63005
+24.185mm
+0.875mm T.O.S



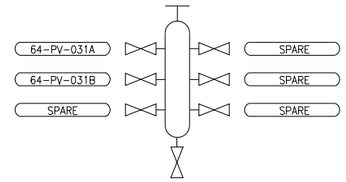
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+23.628mm
+0.318mm T.O.S.

50-XV-004
+23.628mm
+0.318mm T.O.S

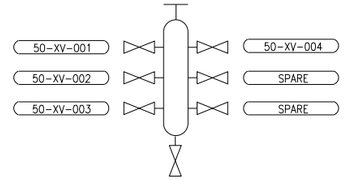
AV-63009
+24.235mm
+0.925mm T.O.S

50-XV-003
+23.628mm
+0.318mm T.O.S

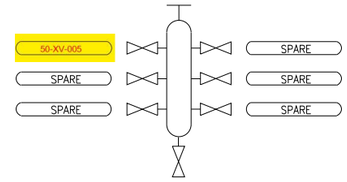
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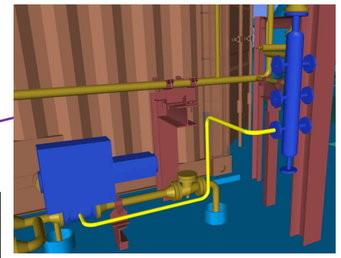


AV-63008



AV-63009

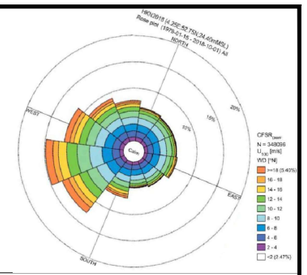




LOWER DECK

SCALE: 1:1

VIEW EL. 23310mm to 29310mm



NOTES

1) TUBING ROUTING > 2m IS SHOWN AND IT IS INDICATIVE ONLY.
TUBING ROUTING SHALL BE FINALIZED DURING CONSTRUCTION ACTIVITIES.

LEGEND

- AIR DISTRIBUTION POT
- CONTROL VALVE
- ON-OFF VALVE
- TUBING

HOLDS

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40084**

REV.:	DATE:	SIGNATURE:
1_D	12/12/24	C.Pilato

ROSETTI MARINO SpA

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND | ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT TUBING LAYOUT
ELEVATION 23.310M

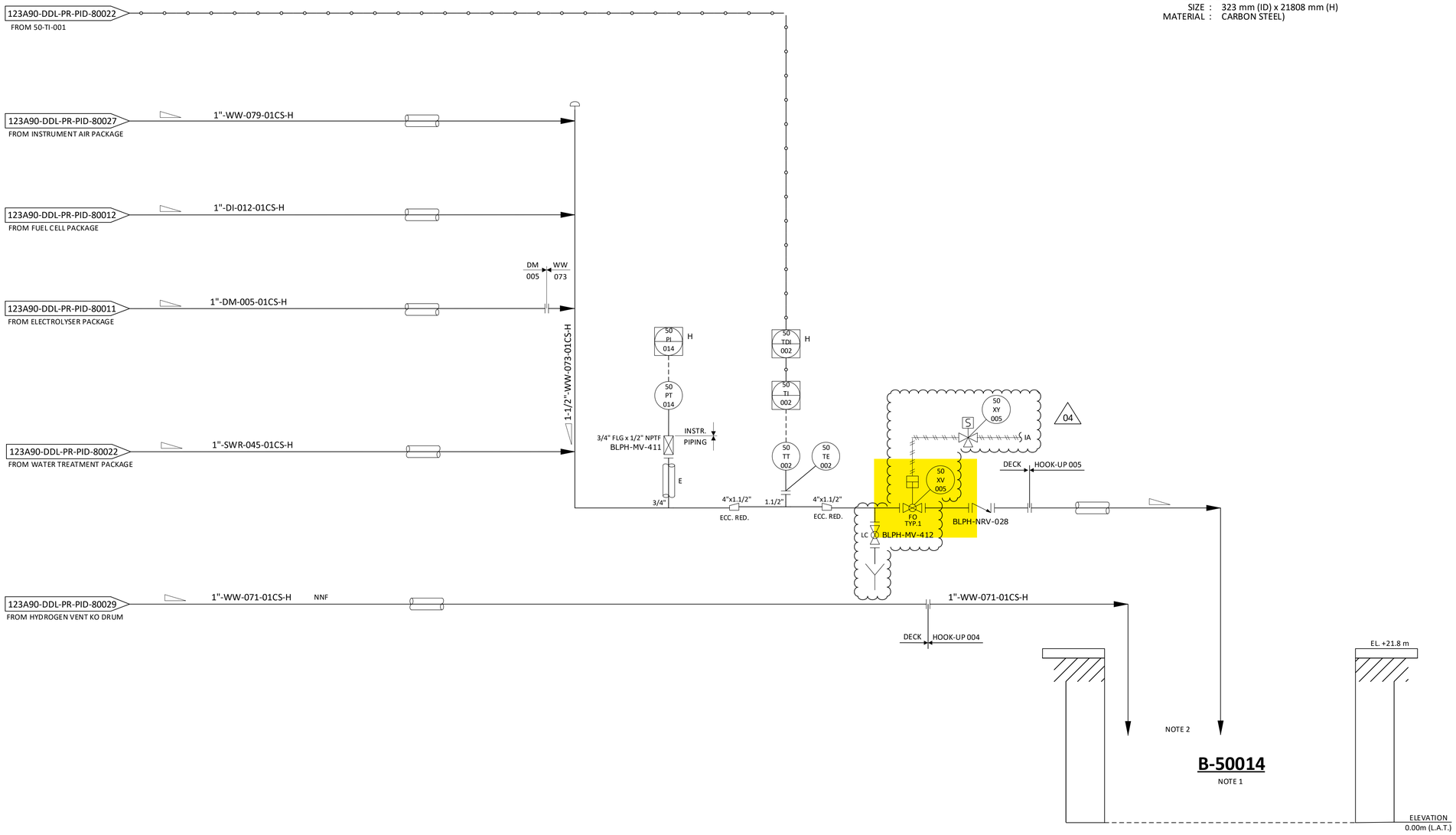
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:100
DRAWN DRAWN_BY	CHECKED CHECKED_BY	APPROVED APPROVED_BY	DATE DD/MM/YY

A1	DRAWING NO. 123A90-DDL-IN-DL-40084	SHEET 001	REV. 01

File Name : 12390-DDL-IN-DL-40084_Rev.01

DRAWING NO. DRAWING_NO.

REV. REV



B-50014

BRINE DISCHARGE CAISSON
SIZE : 323 mm (ID) x 21808 mm (H)
MATERIAL : CARBON STEEL)

NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025	SHEET 001	REV. 04

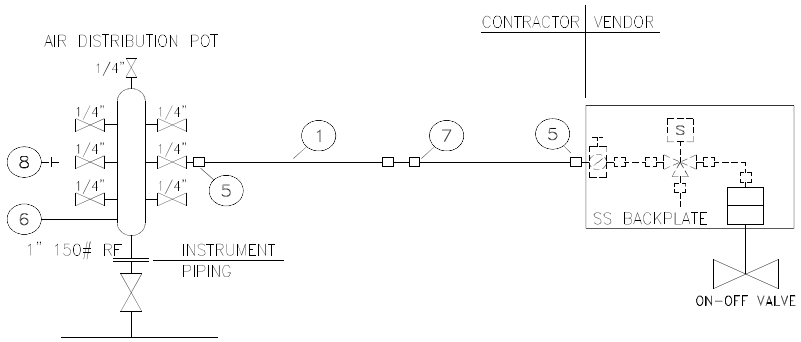
File Name : FILE_NAME

PNEUMATIC HOOK-UP FOR ON-OFF VALVES

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40078**

REV.:	DATE:	SIGNATURE:
1_B	06/11/24	G.Randi

ROSETTI MARINO SpA

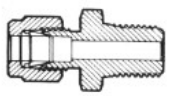
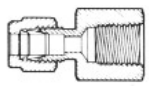
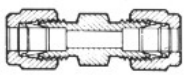


	INSTRUMENT TAG
1	25-BDV-022
2	25-BDV-005
3	25-BDV-007
4	25-BDV-010
5	25-BDV-013
6	25-BDV-016
7	25-BDV-019
8	25-SDV-001
9	25-SDV-023
10	25-XV-004
11	25-XV-006
12	25-XV-008
13	25-XV-009
14	25-XV-011
15	25-XV-012
16	25-XV-014
17	25-XV-015
18	25-XV-017
19	25-XV-018
20	25-XV-020
21	25-XV-021
22	25-XV-024
23	50-XV-001
24	50-XV-002
25	50-XV-003
26	50-XV-004
27	80-XV-001
28	64-SDV-001
29	50-XV-005
30	

NOTE:
(1) For Air Distribution Pot quantities see material take-off on sh. 4

POS.	NORM/STD CODE	DESCRIPTION	SIZE/CONNECTION TYPE	Q.TY
8		SS316 PLUG	1/4" NPT	Note 1
7		SS316 UNION	1/2" O.D. x 1/2" O.D.	N. 1
6		SS316 AIR DISTRIBUTION POT	1" 150#RF - N. 7 1/4" BALL VALVES	Note 1
5		SS316 MALE CONNECTOR	1/4" NPT x 1/2" O.D.	N. 2
1		SS 316L TUBING	1/2" x 0,049"Thk	10 m

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POS	PICTURE	DESCRIPTION		ITEM ID CODE	TOTAL					
		COMPRESSION FITTING TYPE: **DOUBLE FERRULE** THREADING: ASME B1.20.1 NPT MATERIAL: AISI 316 WORKING PRESSURE AS PER ASME B31.1 TUBING TYPE: ■ INCHES ☐ METRIC			UNIT	Counted	Required			
							Rev. 00	Rev. 01	Rev.	Rev.
1		STRAIGHT MALE CONNECTOR	1/2" NPT-M x 3/8" O.D.		nr.					
2			1/4" NPT-M x 1/2" O.D.		nr.	102	102	102		
3			1/2" NPT-M x 1/2" O.D.		nr.	36	36	-		
4			1/2" NPT-M x 3/4" O.D.		nr.					
5			3/4" NPT-M x 3/4" O.D.		nr.					
6			3/8" NPT-M x 3/8" O.D.		nr.					
7		STRAIGHT FEMALE CONNECTOR	1/2" NPT-F x 3/8" O.D.		nr.					
8			1/4" NPT-F x 1/2" O.D.		nr.					
9			1/2" NPT-F x 1/2" O.D.		nr.					
10			1/2" NPT-F x 3/4" O.D.		nr.					
11		UNION CONNECTOR	1/4" O.D. x 1/4" O.D.		nr.					
12			3/8" O.D. x 3/8" O.D.		nr.					
13			1/2" O.D. x 1/2" O.D.		nr.	49	49	49		
14			3/4" O.D. x 3/4" O.D.		nr.					
15		ELBOW CONNECTOR	1/4" NPT-M x 1/2" O.D.		nr.	27	27	27		
16			1/2" NPT-M x 1/2" O.D.		nr.					
17										
18										
19										
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33										
34										

VENDOR / ORDER : **AF SYSTEM / 1724001332**

MATERIAL :

- ☐ ASTM A106 Gr.B
- ■ AISI 316 L
- ☐ UNS S31254

SPECIAL REQUIREMENTS :

- ☐ ...

REMARKS :

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CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	TDS - Tubing and Fittings	Sh. 6 of 6 Date: 06/09/2024 Rev. 01

POS	SIZE	RATING	DESCRIPTION	ITEM ID CODE	UNIT	TOTAL				
						Counted	Required			
							Rev. 00	Rev. 01	Rev.	Rev.
1	1/2"		SS316 NIPPLE 1/2" NPT - L=100mm			40	40	2		
2	1/4"		SS316 PLUG 1/4" NPT			27	27	27		
3	1"		SS316L AIR DISTRIBUTION POT 1" 150#RF - N. 7 1/4" BALL VALVES			14	14	13		
4	1/2"	0,049"	SEAMLESS TUBING AISI 316L		m	558	558	276		
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

VENDOR / ORDER : AF SYSTEM / 1724001332

MATERIAL :

- ☐ ASTM A106 Gr.B
- ■ AISI 316 L
- ☐ UNS S31254

SPECIAL REQUIREMENTS :

- ☐ ...

REMARKS :

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ITEM	Tag	50-XY-005	: Solenoid Valve - Brine Discharge Caisson B-50014			Dwg	123A90-DDL-IN-LIS-40088
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10004661		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

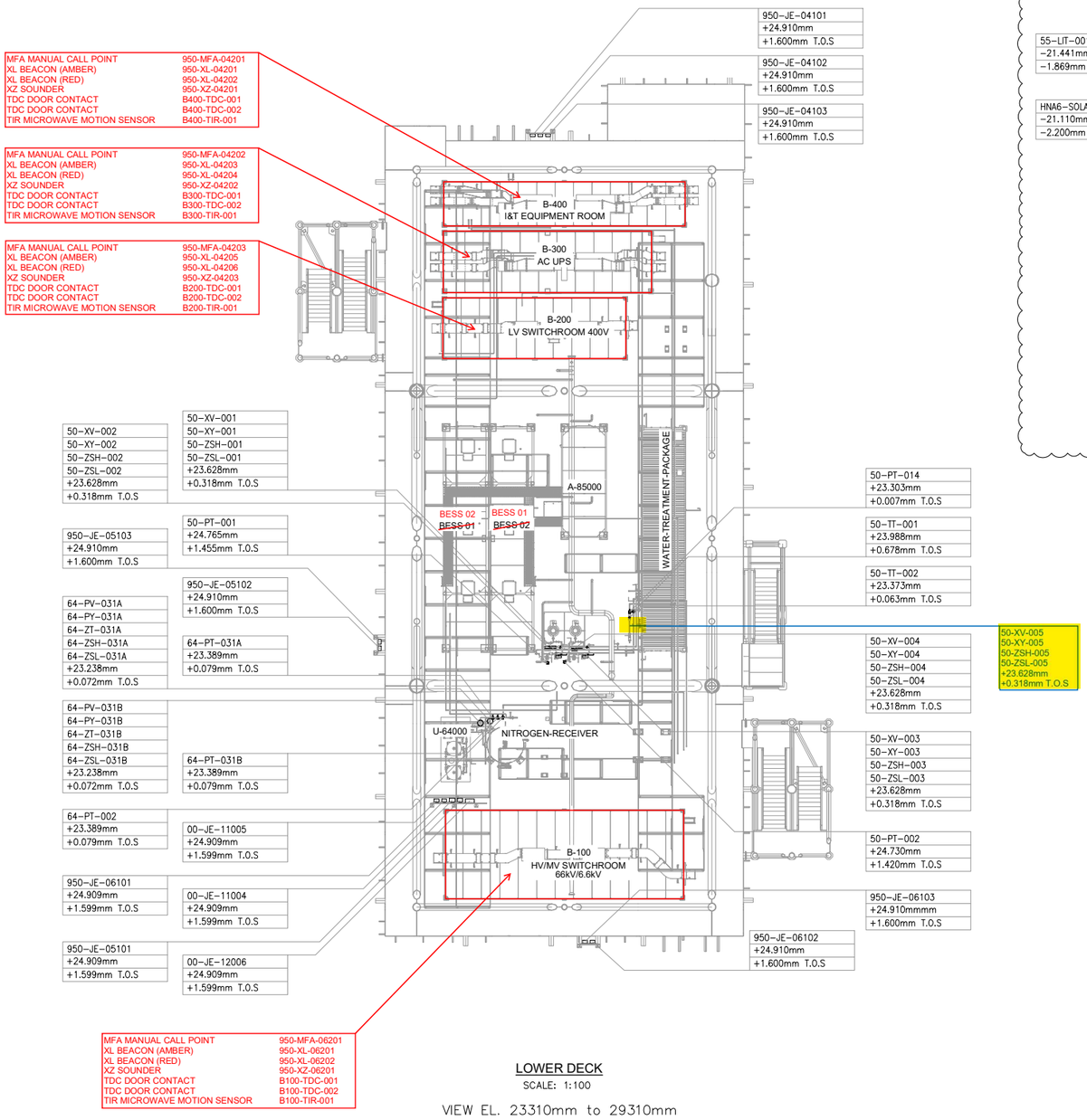
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility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

Comments:

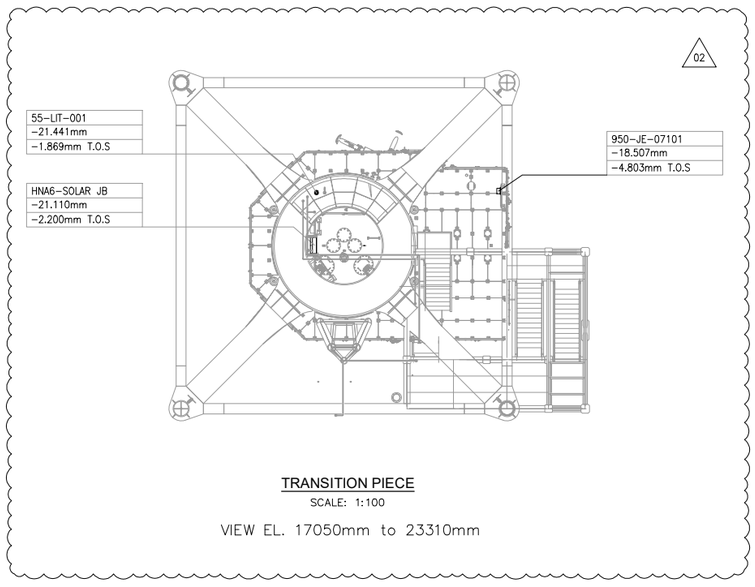
	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-03-06	2025-03-07	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-03-06T15:25:29.511Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-03-07T14:22:57.174Z	

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

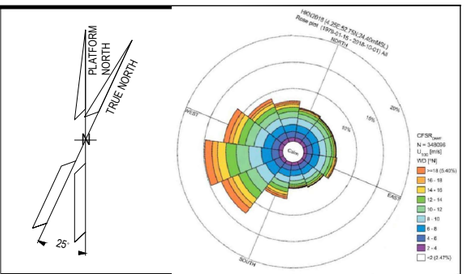
REV. 02



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

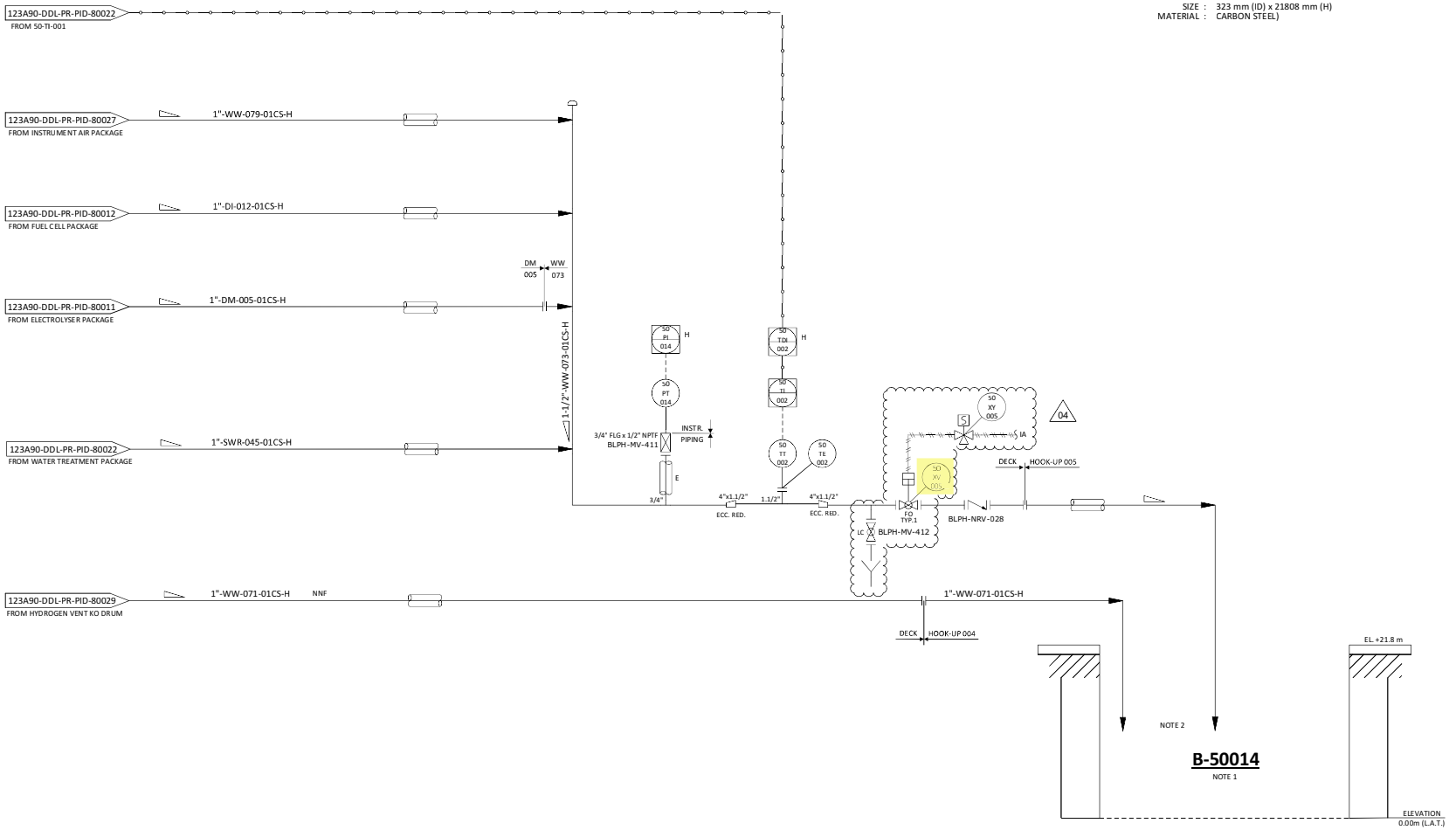
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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. DRAWING_NO.

REV. REV.



NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025		SHEET 001	REV. 04

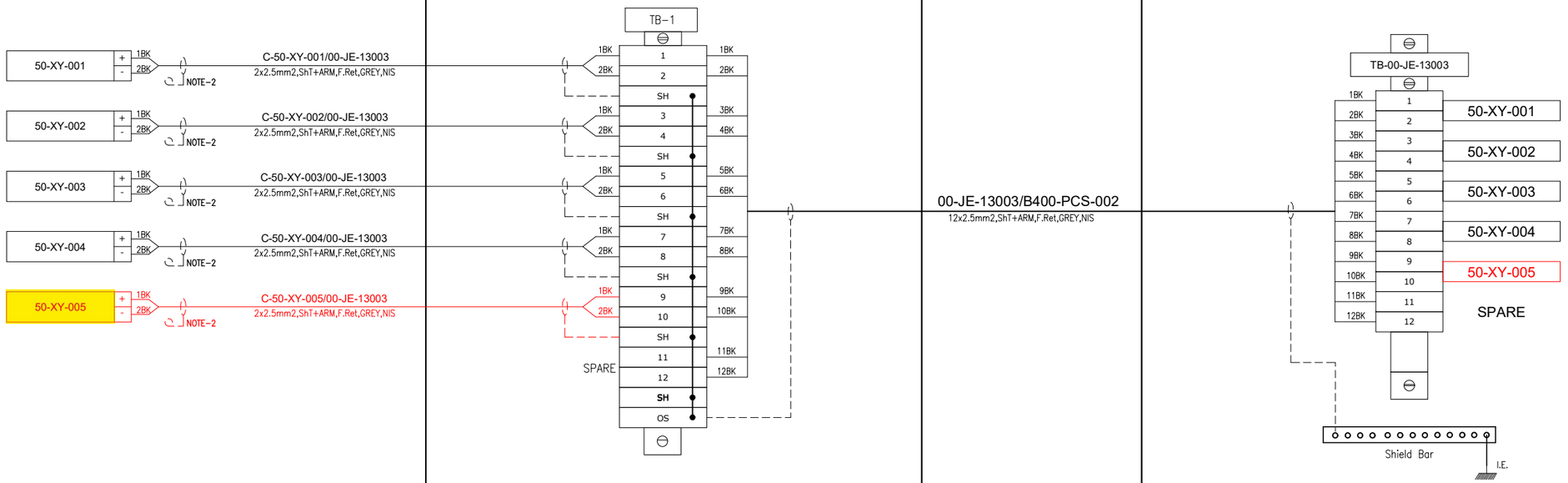
File Name : FILE_NAME

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX	No.	MARSHALLING CABINET
	00-JE-13003		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 :

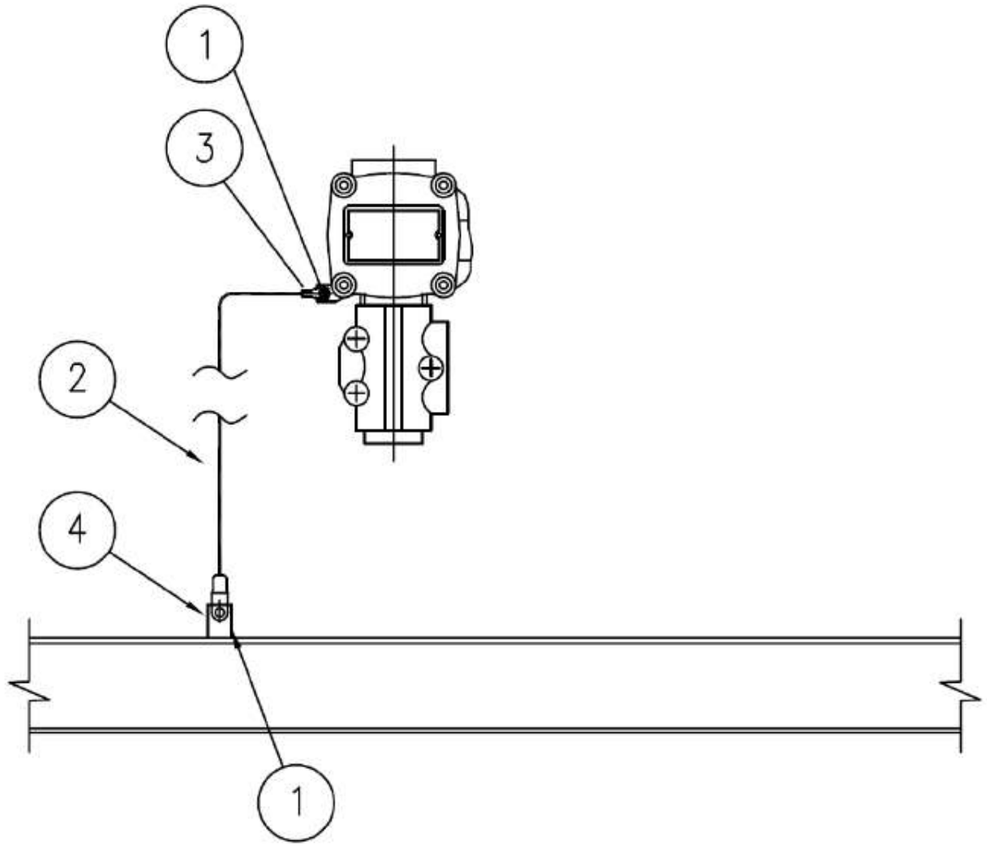
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00–JE–13003

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

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–IN–DG–40015	030	01

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-EL-DD-20090
REV.: 2_I | DATE: 07/11/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

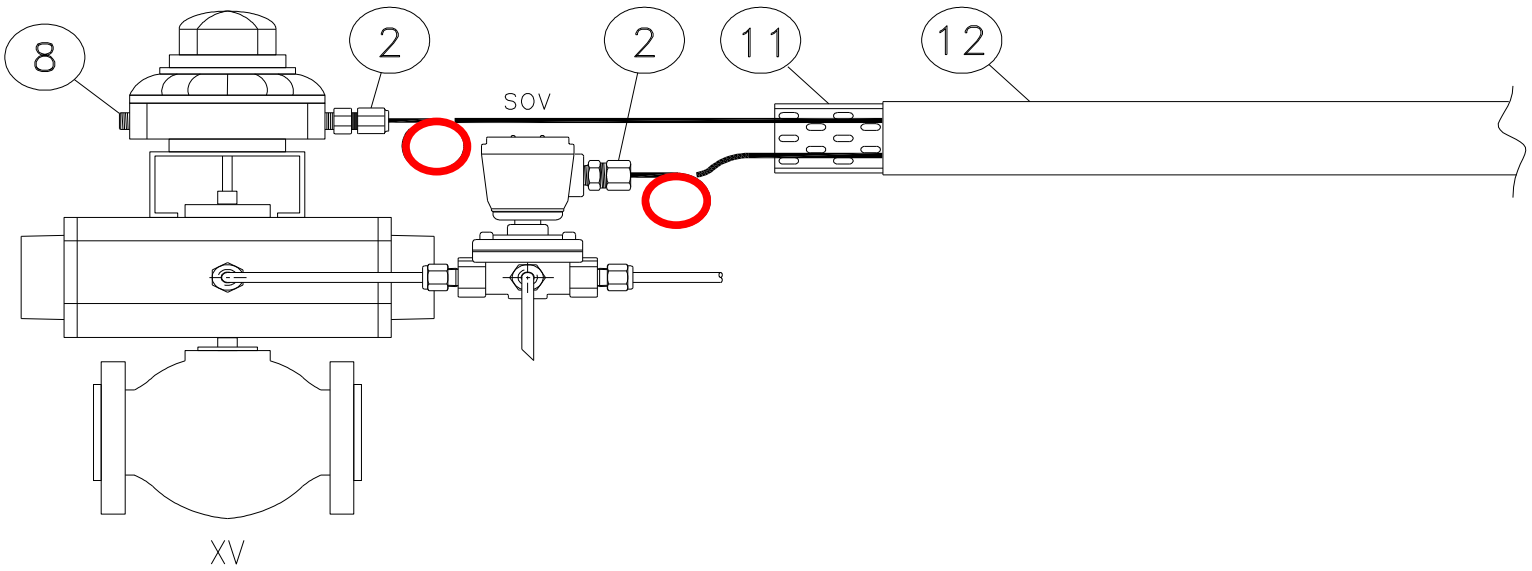
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 15 of 37 Date: 27/09/2024 Rev. 02

ELECTRICAL HOOK-UP FOR XV (N.1 SOLENOID VALVE + 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-XV-004
2	25-XV-006
3	25-XV-008
4	25-XV-009
5	25-XV-011
6	25-XV-012
7	25-XV-014
8	25-XV-015
9	25-XV-017
10	25-XV-018
11	25-XV-020
12	25-XV-021
13	25-XV-024
14	50-XV-001
15	50-XV-002
16	50-XV-003
17	50-XV-004
18	80-XV-001
19	50-XV-005
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

NOTE:

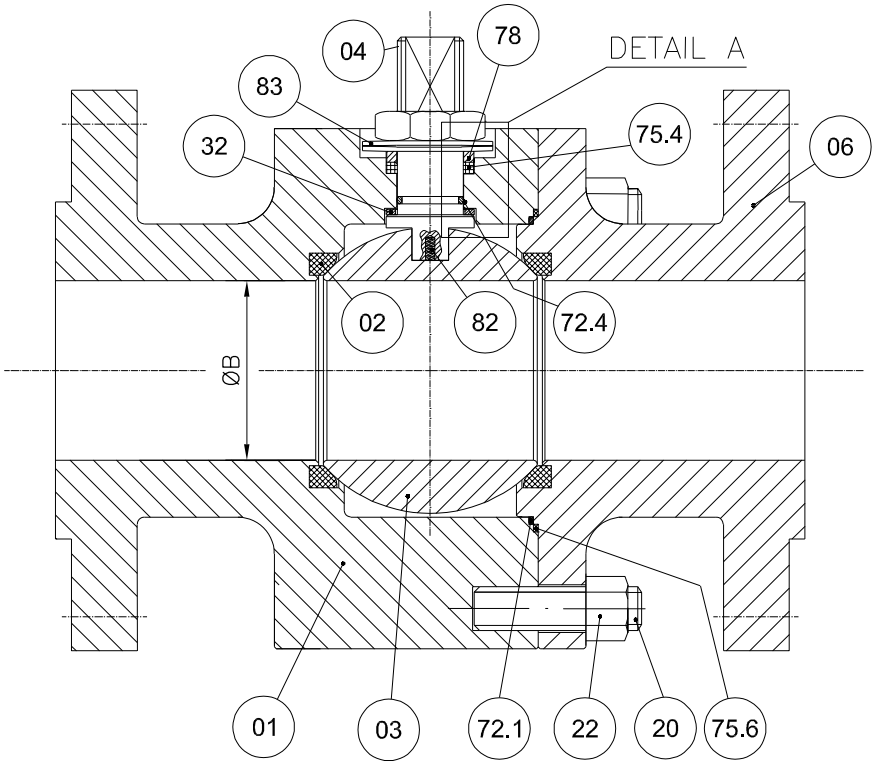
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

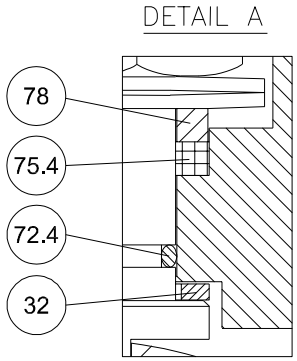
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

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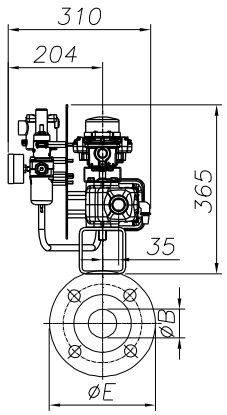


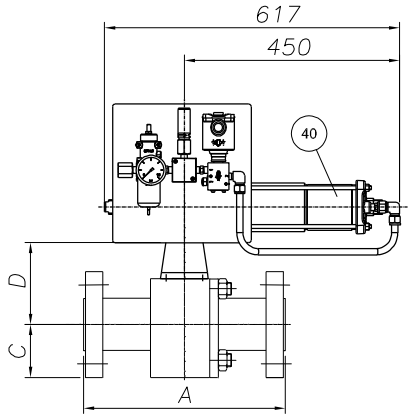


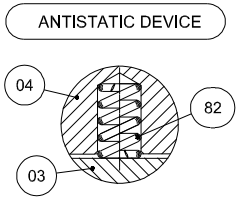
POS.	PART. NAME	MATERIAL
01	BODY	A182 F53
02	SEAT	RPTFE
03	BALL	A182 F53
04	STEM	A182 F53
06	CLOSURE	A182 F53
20	STUD	A193 B7+HDG (1)
22	NUT	A194 Gr.2H+HDG (1)
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301

NOTE:

(1) HDG: Hot Dip Galvanised (ASTM A153)







REMARKS:

- Dimensions are in mm
- Design acc. to API 6D
- Face to face acc. to ASME B16.10/API 6D
- Flange connection acc. to ANSI B16.5
- Antistatic device acc. to API 6D

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Valve Weight (kg):	Actuator Weight (kg):	Tot. Weight (kg):
01	340	BS01F01RF	50-XV-005	1	1-1/2"	150	RF	165	38	64	105	127	18	36	54

CUSTOMER :	ROSETTI MARINO S.P.A. CIG 9931200D7D
P.O. N. :	17240000204 23A90A
JOB N. :	240396

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2							
1							
0	FIRST ISSUE	S.Madahar	04/10/2024	D.Barcella	04/10/2024	L.Mora	04/10/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

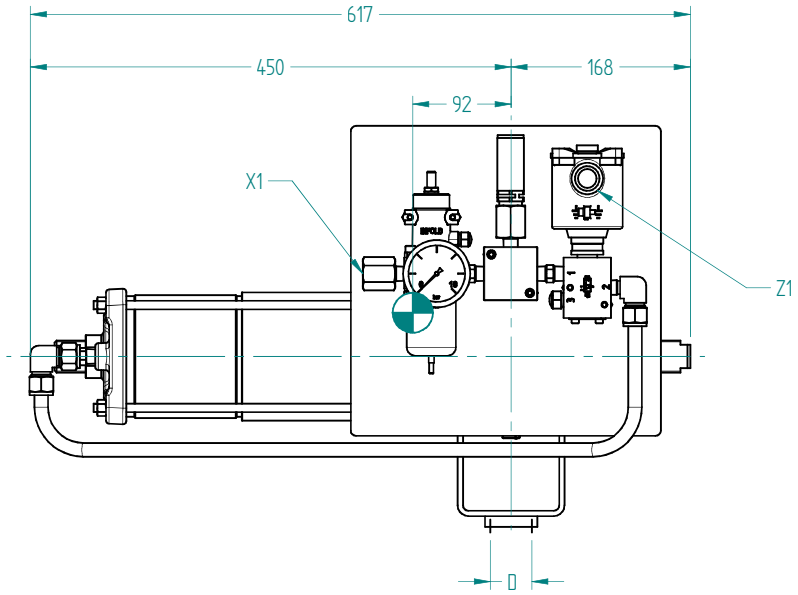
VALVE TYPE:

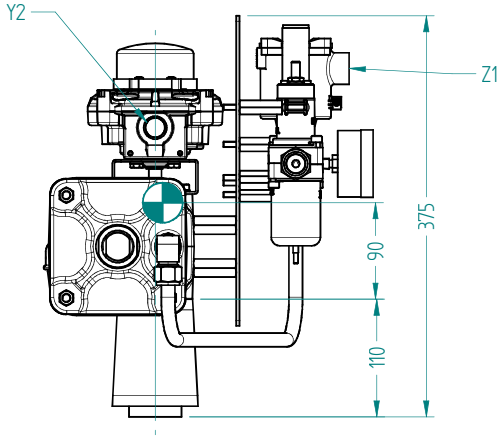
SPLIT BODY FLOATING BALL VALVE

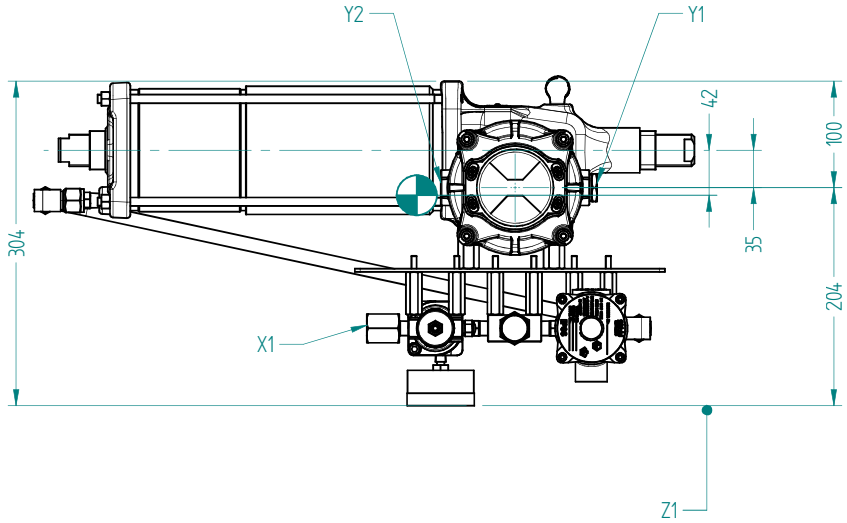
DRAWN: S.Madahar	DATE: 04/10/2024	
CHK'D: D.Barcella	DATE: 04/10/2024	
APPV'D: L.Mora	DATE: 04/10/2024	
SIZE: A3	SCALE: N.A.	DRAWING NAME: D240396-01

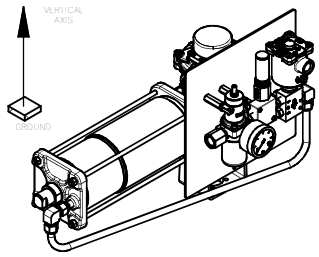
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Rev.: 0









ISOMETRIC VIEW
SCALE 1:10

RFS Item	Tag No.
1	50-XV-005

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

NOTES:
1. D = ACCORDING TO VALVE FLANGE.
2. DIMENSIONS MUST BE WITHIN +20% OF THE OVERALL DIMENSION DRAWING.
3. TUBING IS SHOWN FOR INFORMATION ONLY. ACTUAL TUBING ROUTING MAY BE DIFFERENT, BUT WITHIN THE OVERALL DIMENSIONS SHOWN IN THE DRAWING
4. LIFTING OF THE ACTUATOR SHALL BE DONE BY LIFTING POINTS OR BY SLINGS SUITABLY RATED FOR THE ACTUATOR DIMENSIONS AND WEIGHT. SLINGS OR LIFTING POINTS SHALL NOT BE USED TO LIFT THE VALVE/ACTUATOR ASSEMBLY.

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Document type: Assembly Drawing
Dimensions in mm
Scale 1:5

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Title
SINGLE ACTING PNEUMATIC ACTUATOR
CP/S-035-100A/BA - F.O.

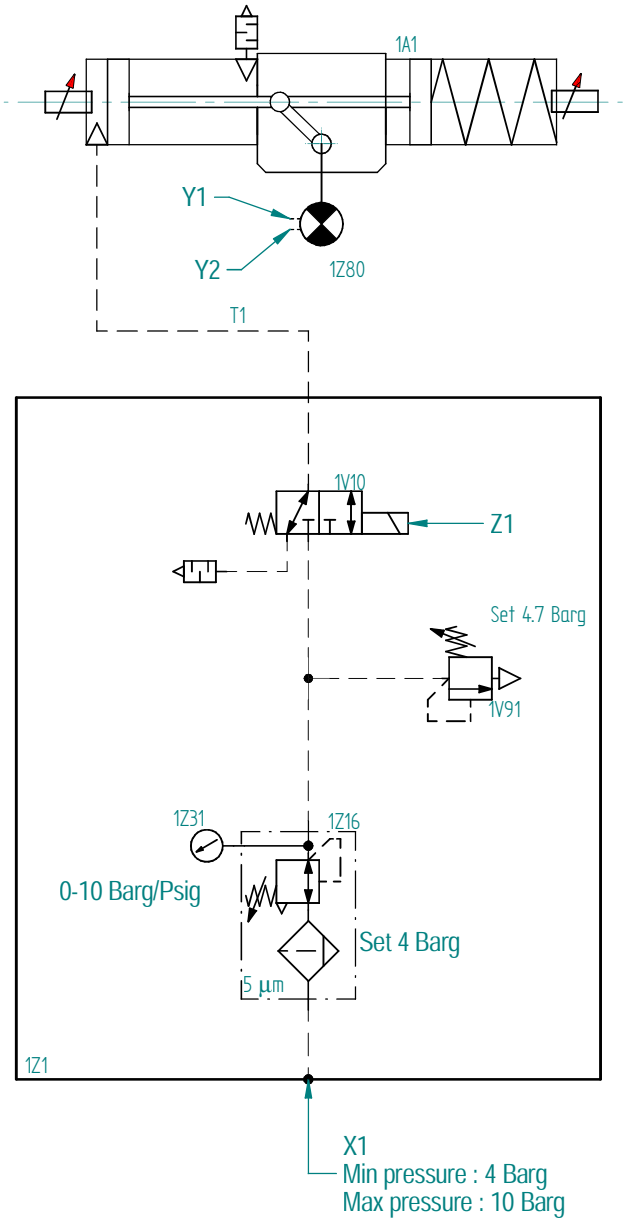
Drawing Number
AF7888OCPA01

Rev 0-0

Nominal Mass 32 kg | Size A3 | Sheet 1 of 1

Template Issue: 24/02/2020 SR

PNEUMATIC



Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Title
E1F2G1H02A0A1J3L1R0

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Drawing Number
AF7888PDA01

Rev
0-0

Size A3 Sheet 1 of 2

Template Issue : 2400/2020-SR

BILL OF MATERIAL					
Pos	**Description**	**Size**	**Manufacturer**	**Model**	**Material**
1A1	QUARTER TURN PNEUMATIC ACTUATOR, SPRING RETURN, SPRING TO OPEN		ROTORK	*see Tag Number Table	*see Tag Number Table
1V10	SOLENOID VALVE, DIRECT ACTING, 3/2 UNIVERSAL TYPE, SPRING RETURN	1/4"	BIFOLD	FP06P-S1-04-32-NU-V-77A-24D-57	AISI316L
1V91	PRESSURE RELIEF VALVE, FREE EXHAUST	1/2"	N.G.I.	D10/S	AISI 316
1Z1	CONTROL PANEL		RFS	-	AISI316L
1Z16	FILTER REGULATOR, SELF RELIEVING, FILTER WITH MANUAL DRAIN	1/4"	BIFOLD	SH06-FR-SR-MD-10-X1	AISI 316L
1Z31	PRESSURE GAUGE, GAUGE TYPE	DN 63	WIKA	233.50	AISI316
1Z80	LIMIT SWITCH BOX, 2 ELECTRIC CONNECTION	-	SOLDO	SQN120E-20X23L7	AISI 316

RFS Item	Tag No.	ACTUATOR MODEL	ACTUATOR MATERIAL
1	50-XV-005	CP/S-035-100A/BA	CAST IRON

N°	Description	Type	Size	Manufacturer	Material
T1	PNEUMATIC TUBING	POWER LINE	1/2"	SANDVIK or EQUIVALENT	AISI 316L
-	TUBE FITTINGS	DOUBLE FERRULE	ACCORDING TO TUBING SIZE	FITOK	AISI 316
-	SILENCER - BUG SCREEN	SFEX	ACCORDING TO PORT SIZE	-	AISI316
-	THREADED UNIONS		ACCORDING TO COMPONENT SIZE	R.F.S.	AISI316

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

FUNCTION	DESCRIPTION
1) REMOTE OPERATION:	1A) VALVE ACTUATOR OPEN STROKE: ENERGIZE SOLENOID VALVE 1V10.
	1B) VALVE ACTUATOR CLOSE STROKE: DE-ENERGIZE SOLENOID VALVE 1V10.

NOTES
THE SCHEMATIC IS SHOWN WITHOUT PNEUMATIC AND ELECTRIC SUPPLY
THE ACTUATOR IS SHOWN IN CLOSE POSITION

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Title: E1F2G1H02A0A1J3L1R0

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

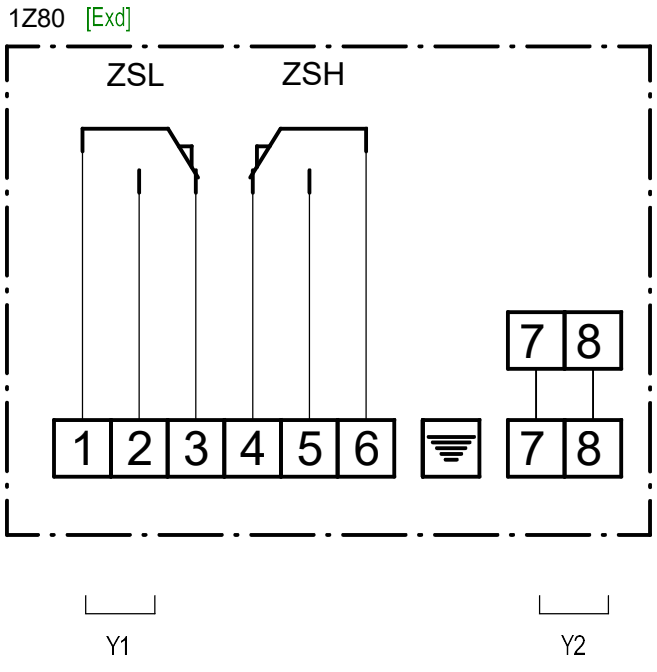
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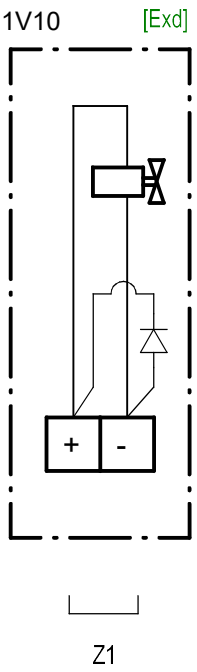
Rev: 0-0

Size: A3 Sheet 2 of 2

Template Issue : 24/02/2020-SR

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue





THE LIMIT SWITCHES ARE SHOWN WITH
THE VALVE IN INTERMEDIATE POSITION

closed contact
open contact

limit switch		Limit switch function VALVE POSITION open	interm.	closed
ZSL	1-2 NO			■
	1-3 NC	■	■	
ZSH	6-5 NO	■		
	6-4 NC		■	■

RFS Item	Tag No.
1	50-XV-005

Connection	Description	Size
Y1	LIMIT SWITCH BOX ELECTRIC CONNECTION	M20x1,5 (Female)
Y2	LIMIT SWITCH BOX ELECTRIC CONNECTION (plugged)	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

Item	Description	Manufacturer, Model and Features
1V10	SOLENOID VALVE	BIFOLD, mod. FP06P-S1-04-32-NU-V-77A-24D-57 - ATEX/IECEx - 24Vdc, 5,7 Watt - Exd IIC T4/T6 - IP66
1Z80	LIMIT SWITCHES BOX	SOLDO, mod. SQN120E-20X23L7- ATEX/IECEx - Ex II 2GD Ex d IIC T4/T6 - IP66
ZSL	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]
ZSH	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]

Template Issue : 2019-05-10

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Lucca - Italy
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Document type	WIRING DIAGRAM	
Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Title WIRING DIAGRAM
Drawing Number AF7888WD01 Rev 0-0
Size A4 Sheet 1 of 1

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	50-ZSHL-005	: Limit Switch box Brine Discharge Caisson B-50014			Dwg	123A90-DDL-IN-LIS-40088
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10004662		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

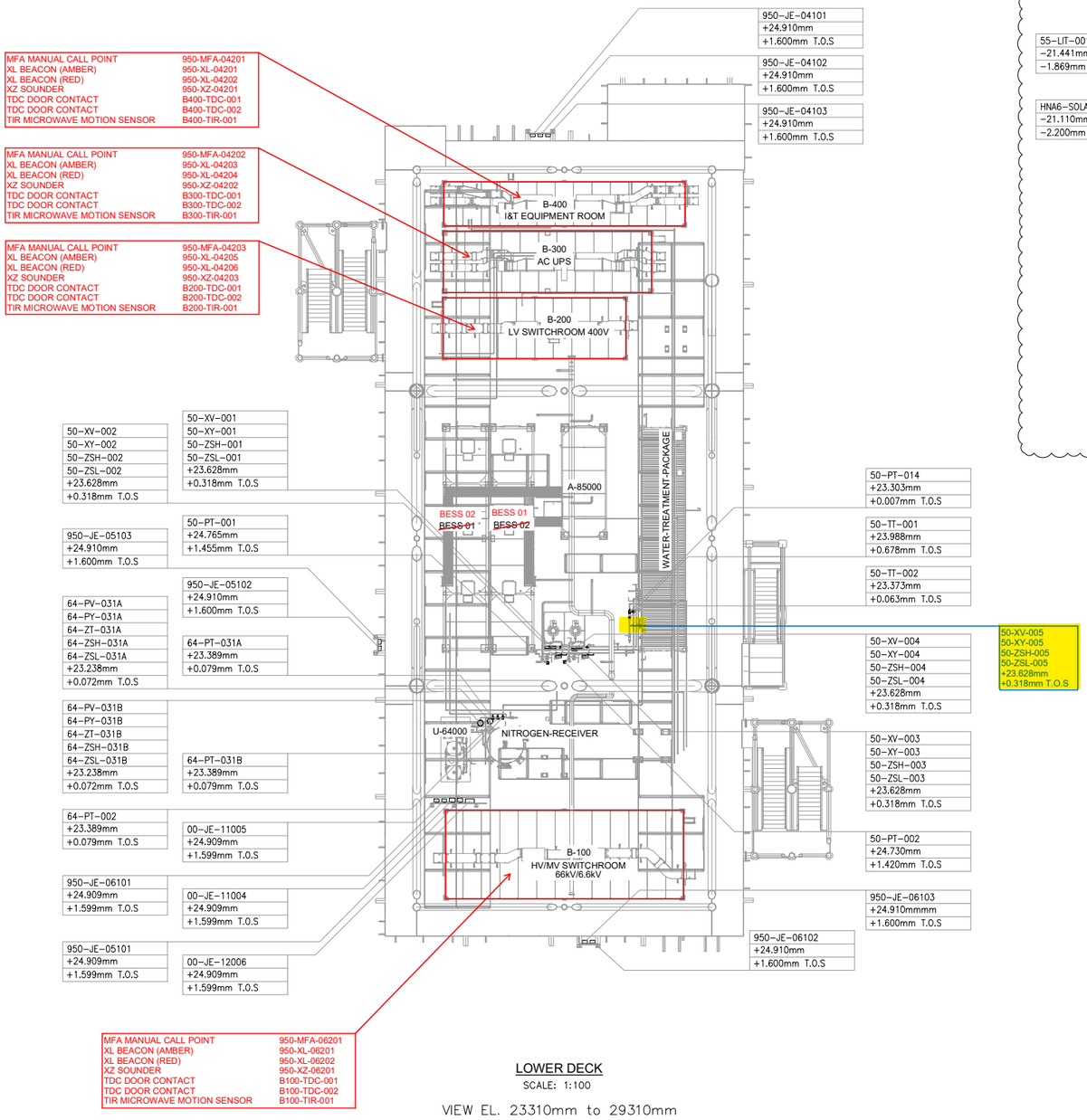
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility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

Comments:

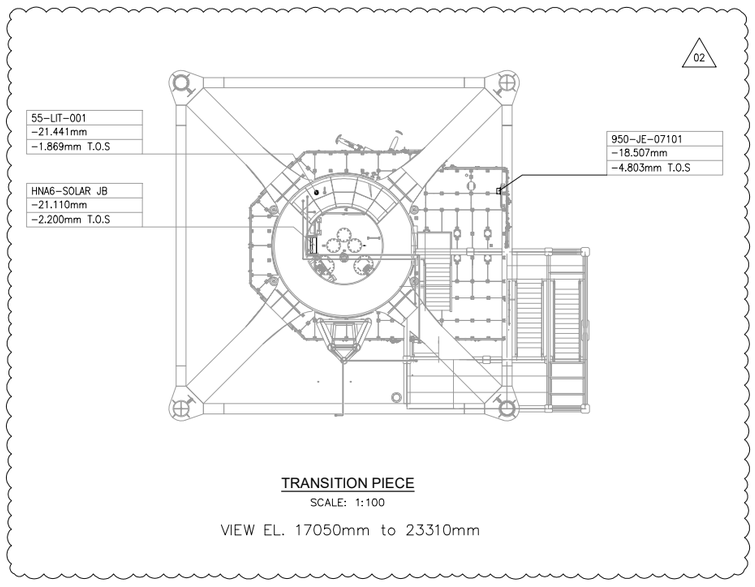
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-03-06	2025-03-07	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-03-06T15:26:32.079Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-03-07T14:24:46.549Z	

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

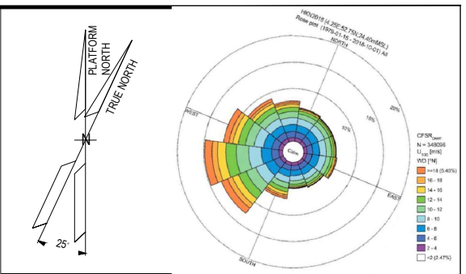
REV. 02



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

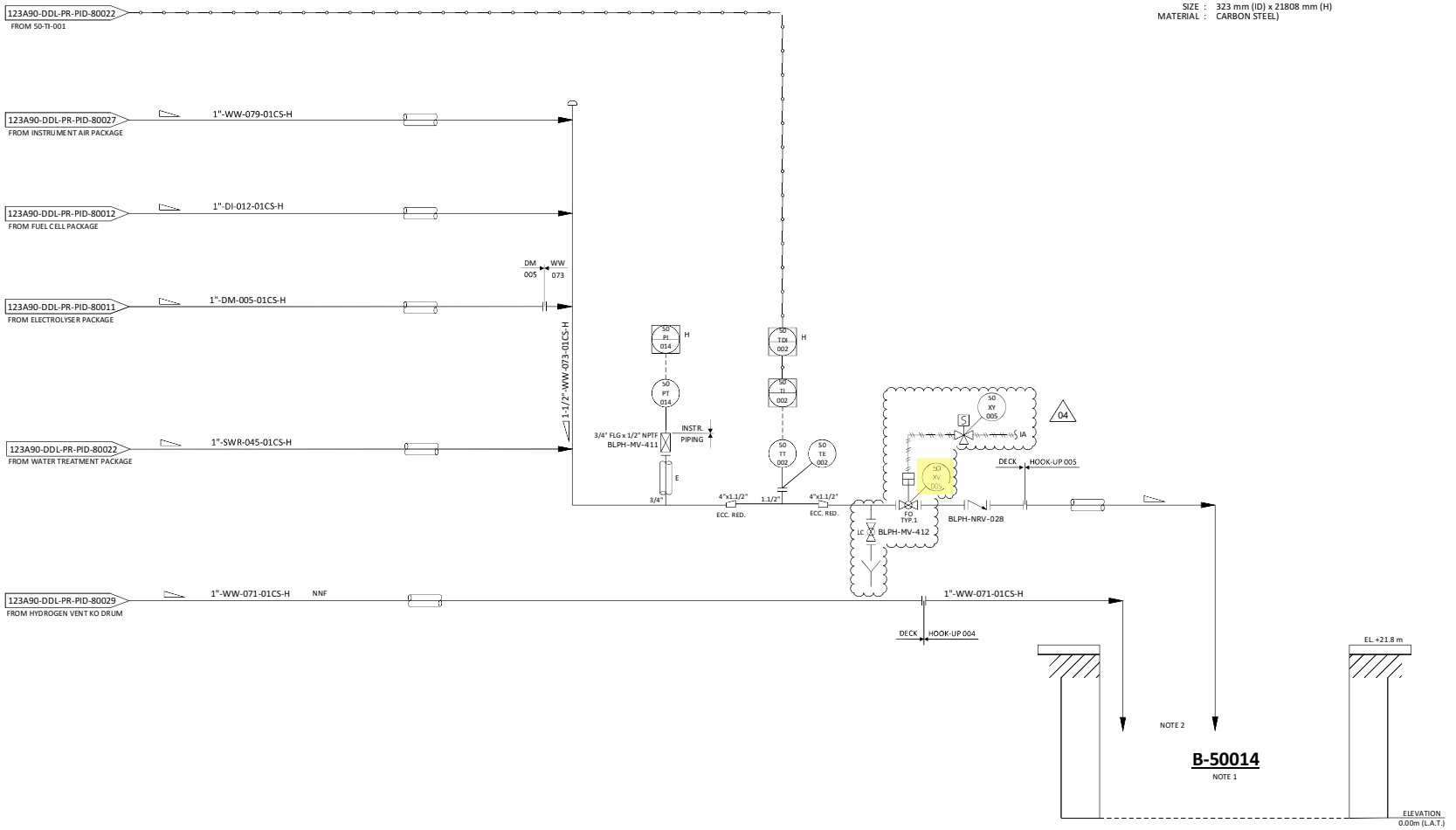
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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. DRAWING_NO.

REV. REV.



NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025		SHEET 001	REV. 04

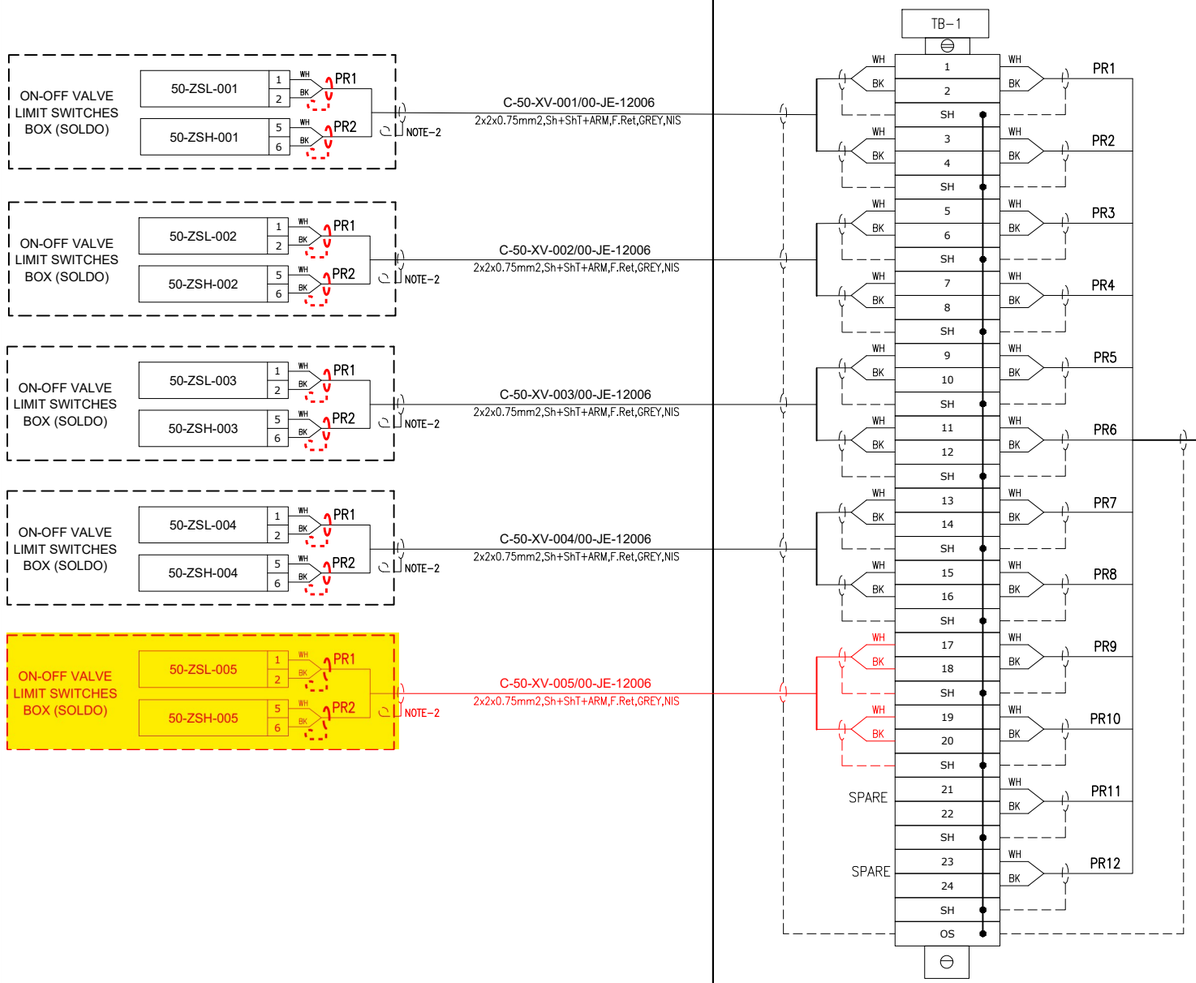
File Name : FILE_NAME

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

REV. 01

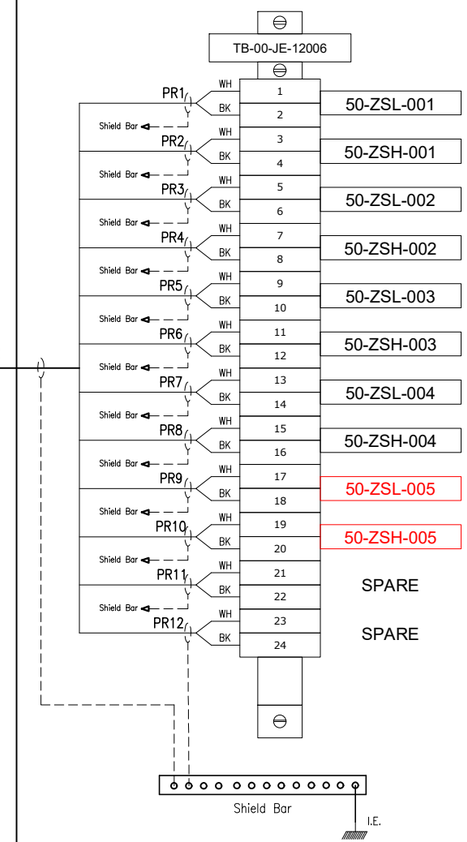
FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-12006	No.	MARSHALLING CABINET B400-PCS-002

<01>



00-JE-12006_1/B400-PCS-002

12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS



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

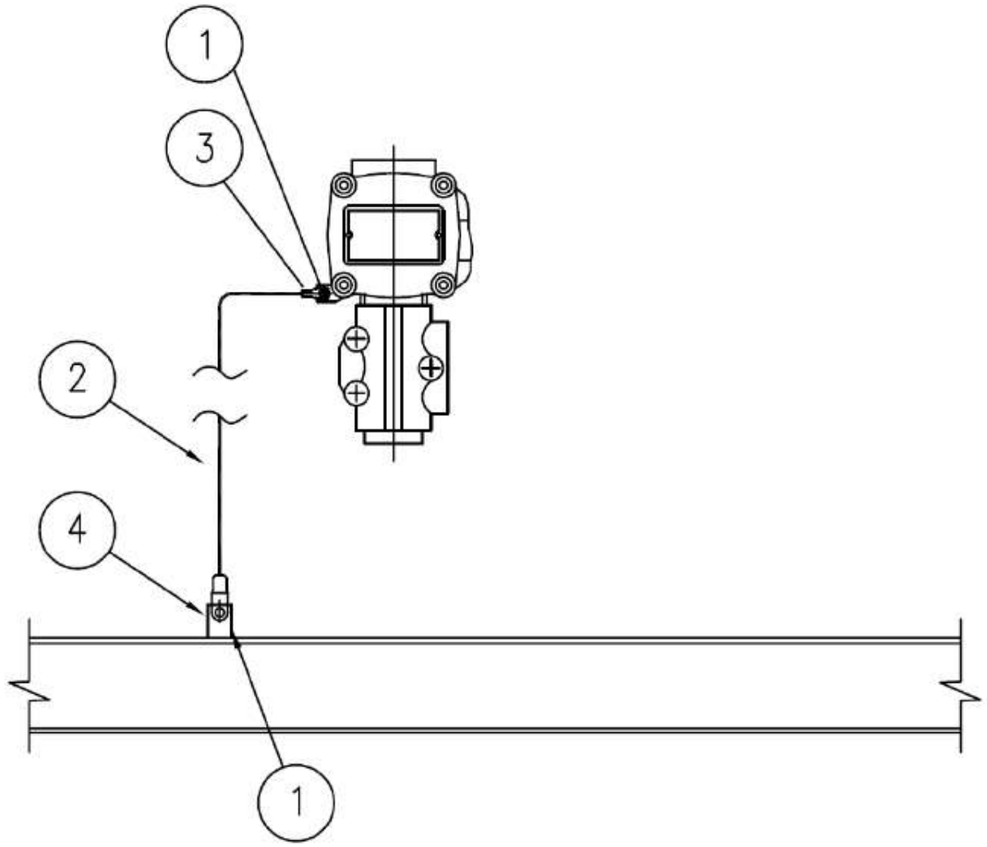
TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00–JE–12006–SH.1 OF 2

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 022	REV. 01

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

E33



MATERIALS

POS.	Q.TY	DESCRIPTION	NOTES
1	1	A4 STAINLESS STEEL BOLT COMPLETE WITH NUT AND WASHERS	
2	1	Y/G INSULATING COPPER CONDUCTOR - 6mm²	
3	1	COMPRESSION TYPE LUG FOR INSULATING COPPER CONDUCTOR	
4	1	EARTHING BAR / PLATE / THREADED STUD	(1)

NOTE:
1) FOR DETAIL OF EARTHING PLATE, EARTHING BOSS AND THREADED STUD SEE TYP. E11A/C/D/E

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-EL-DD-20090**

REV.:	DATE:	SIGNATURE:
2_I	07/11/24	G.Randi

ROSETTI MARINO SpA

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	26/08/24	GRA	AMA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	10/06/24	SPS	FMA/AMA	FPA/DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	21/11/23	SPS	FMA/AMA	FPA/DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
ELECTRICAL TYPICAL INSTALLATION DETAILS-EARTHING SYSTEM
EARTHING FOR GENERIC INSTRUMENT

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

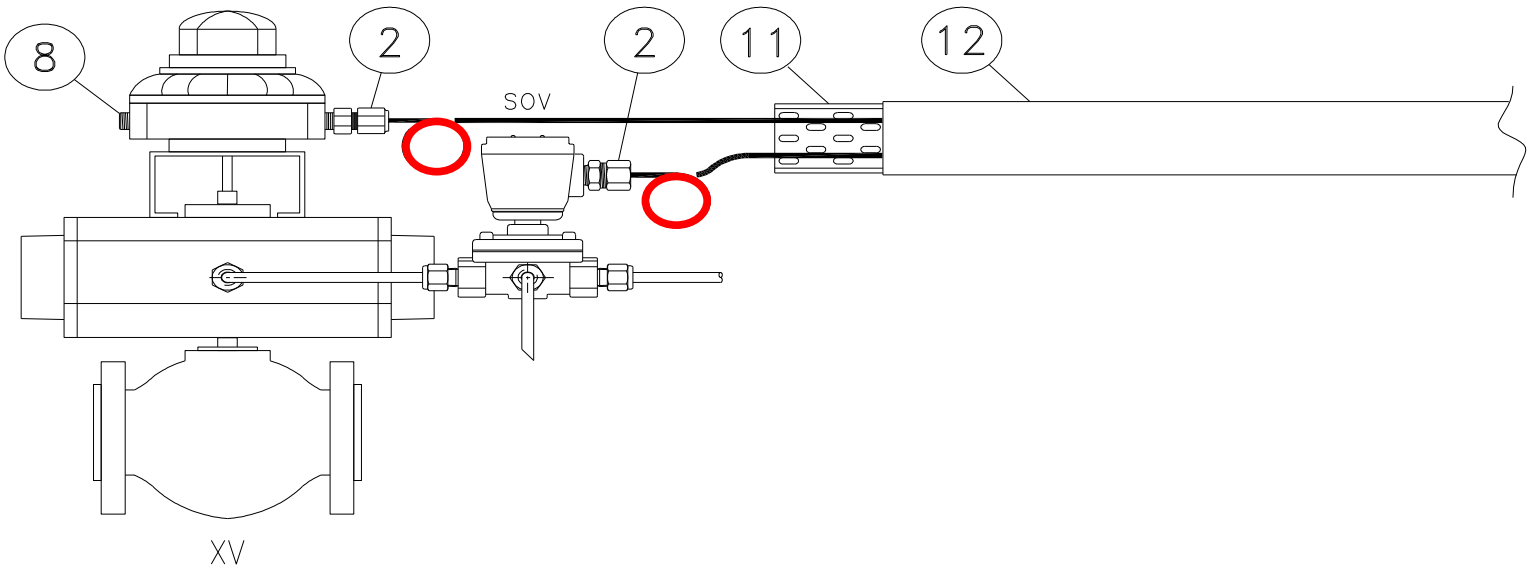
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

F.to UNI A3: 420mmx297mm

File Name : 123A90-DDL-EL-DD-20090 REV.02.DWG

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 15 of 37 Date: 27/09/2024 Rev. 02

ELECTRICAL HOOK-UP FOR XV (N.1 SOLENOID VALVE + 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-XV-004
2	25-XV-006
3	25-XV-008
4	25-XV-009
5	25-XV-011
6	25-XV-012
7	25-XV-014
8	25-XV-015
9	25-XV-017
10	25-XV-018
11	25-XV-020
12	25-XV-021
13	25-XV-024
14	50-XV-001
15	50-XV-002
16	50-XV-003
17	50-XV-004
18	80-XV-001
19	50-XV-005
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

NOTE:

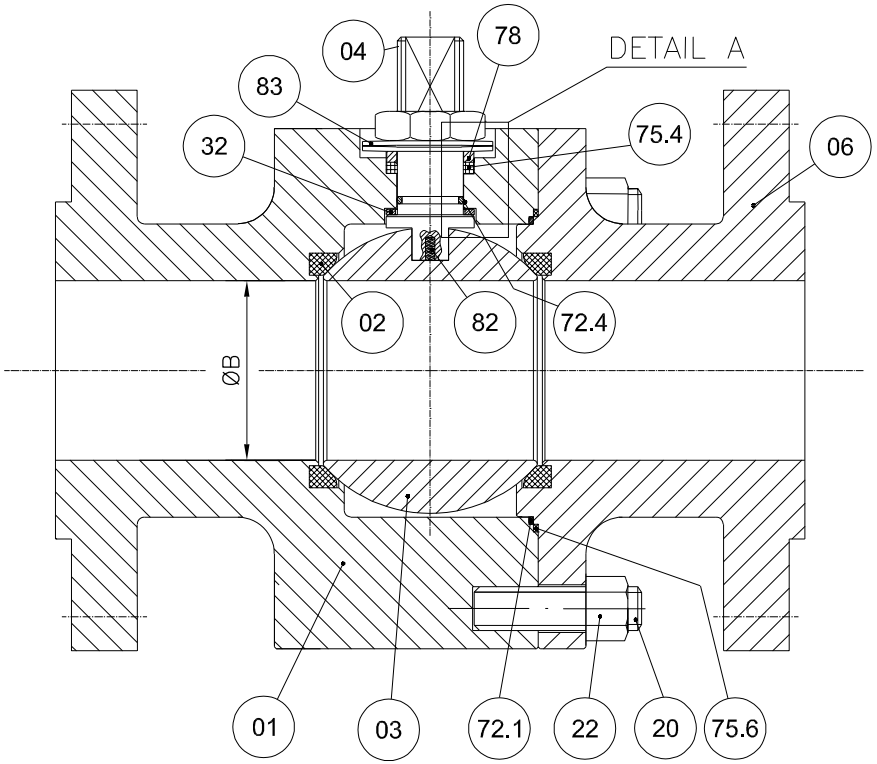
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

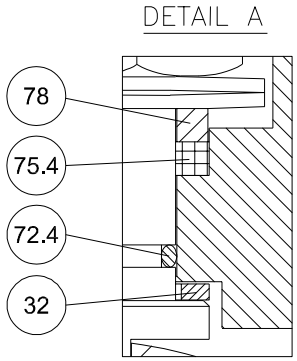
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
2		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20	2

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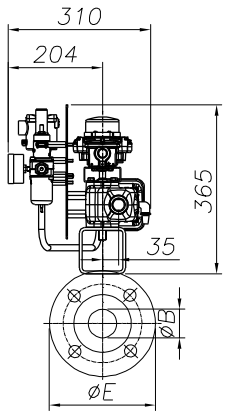


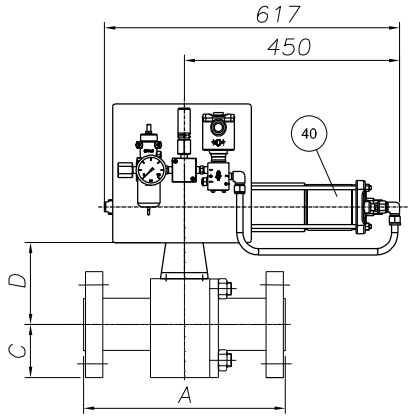


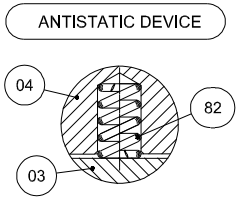
POS.	PART. NAME	MATERIAL
01	BODY	A182 F53
02	SEAT	RPTFE
03	BALL	A182 F53
04	STEM	A182 F53
06	CLOSURE	A182 F53
20	STUD	A193 B7+HDG (1)
22	NUT	A194 Gr.2H+HDG (1)
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301

NOTE:

(1) HDG: Hot Dip Galvanised (ASTM A153)







REMARKS:

- Dimensions are in mm
- Design acc. to API 6D
- Face to face acc. to ASME B16.10/API 6D
- Flange connection acc. to ANSI B16.5
- Antistatic device acc. to API 6D

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Valve Weight (kg):	Actuator Weight (kg):	Tot. Weight (kg):
01	340	BS01F01RF	50-XV-005	1	1-1/2"	150	RF	165	38	64	105	127	18	36	54

CUSTOMER :	ROSETTI MARINO S.P.A. CIG 9931200D7D
P.O. N. :	17240000204 23A90A
JOB N. :	240396

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2							
1							
0	FIRST ISSUE	S.Madahar	04/10/2024	D.Barcella	04/10/2024	L.Mora	04/10/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

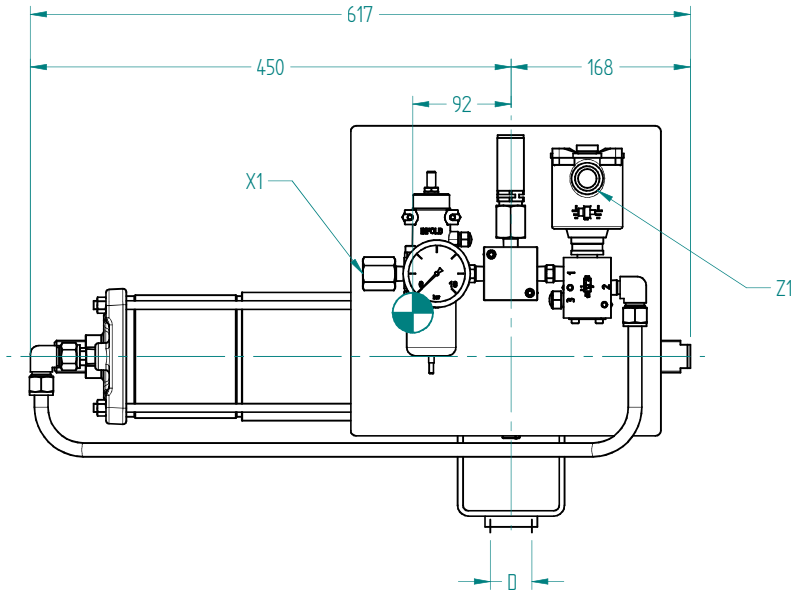
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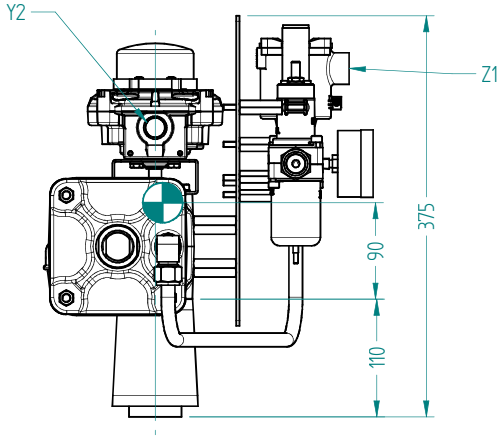
SPLIT BODY FLOATING BALL VALVE

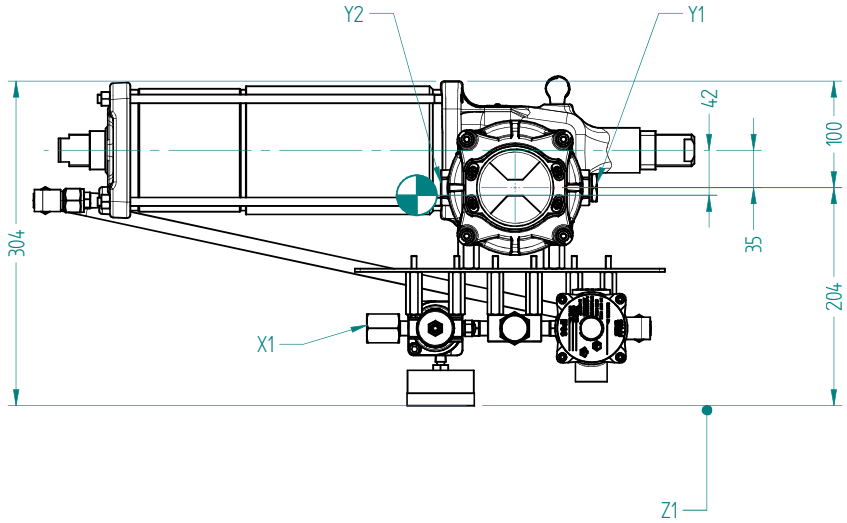
DRAWN: S.Madahar	DATE: 04/10/2024	
CHK'D: D.Barcella	DATE: 04/10/2024	
APPV'D: L.Mora	DATE: 04/10/2024	
SIZE: A3	SCALE: N.A.	DRAWING NAME: D240396-01

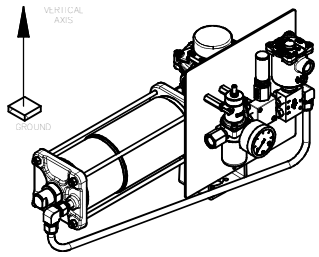
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Rev.: 0









ISOMETRIC VIEW
SCALE 1:10

RFS Item	Tag No.
1	50-XV-005

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

NOTES:
1. D = ACCORDING TO VALVE FLANGE.
2. DIMENSIONS MUST BE WITHIN +20% OF THE OVERALL DIMENSION DRAWING.
3. TUBING IS SHOWN FOR INFORMATION ONLY. ACTUAL TUBING ROUTING MAY BE DIFFERENT, BUT WITHIN THE OVERALL DIMENSIONS SHOWN IN THE DRAWING
4. LIFTING OF THE ACTUATOR SHALL BE DONE BY LIFTING POINTS OR BY SLINGS SUITABLY RATED FOR THE ACTUATOR DIMENSIONS AND WEIGHT. SLINGS OR LIFTING POINTS SHALL NOT BE USED TO LIFT THE VALVE/ACTUATOR ASSEMBLY.

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Document type: Assembly Drawing
Dimensions in mm
Scale 1:5

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Title
SINGLE ACTING PNEUMATIC ACTUATOR
CP/S-035-100A/BA - F.O.

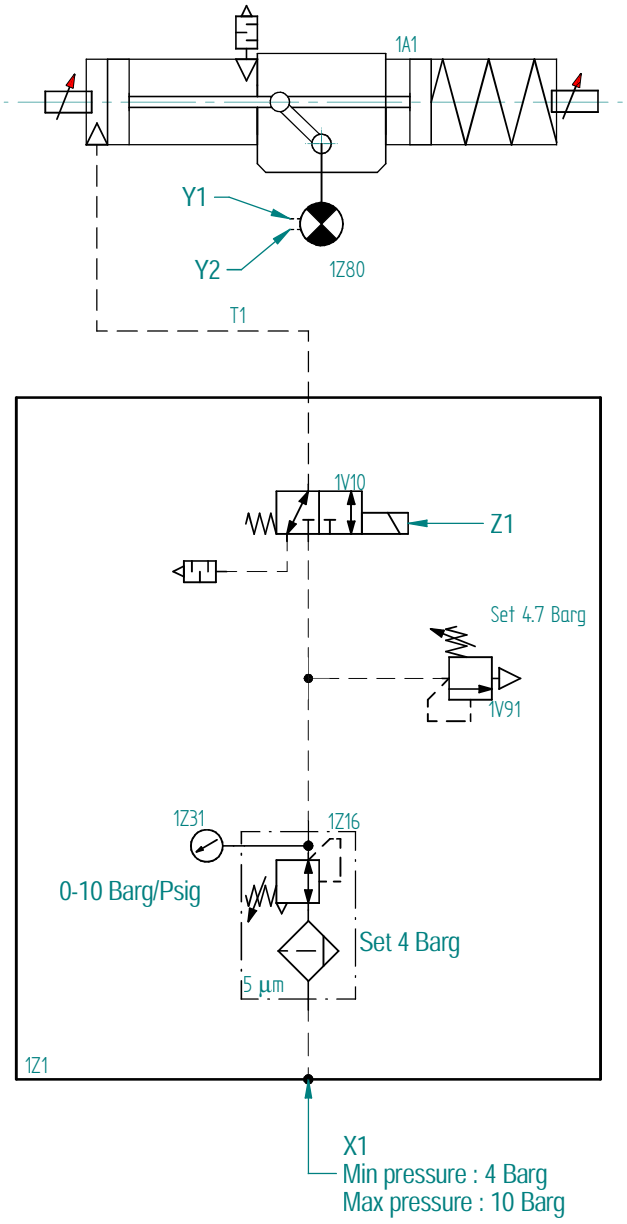
Drawing Number
AF7888OCPA01

Rev 0-0

Nominal Mass 32 kg | Size A3 | Sheet 1 of 1

Template Issue: 24/02/2020 SR

PNEUMATIC



Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Title
E1F2G1H02A0A1J3L1R0

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Drawing Number
AF7888PDA01

Rev
0-0

Size A3 Sheet 1 of 2

Template Issue : 2400/2020-SR

BILL OF MATERIAL					
Pos	**Description**	**Size**	**Manufacturer**	**Model**	**Material**
1A1	QUARTER TURN PNEUMATIC ACTUATOR, SPRING RETURN, SPRING TO OPEN		ROTORK	*see Tag Number Table	*see Tag Number Table
1V10	SOLENOID VALVE, DIRECT ACTING, 3/2 UNIVERSAL TYPE, SPRING RETURN	1/4"	BIFOLD	FP06P-S1-04-32-NU-V-77A-24D-57	AISI316L
1V91	PRESSURE RELIEF VALVE, FREE EXHAUST	1/2"	N.G.I.	D10/S	AISI 316
1Z1	CONTROL PANEL		RFS	-	AISI316L
1Z16	FILTER REGULATOR, SELF RELIEVING, FILTER WITH MANUAL DRAIN	1/4"	BIFOLD	SH06-FR-SR-MD-10-X1	AISI 316L
1Z31	PRESSURE GAUGE, GAUGE TYPE	DN 63	WIKA	233.50	AISI316
1Z80	LIMIT SWITCH BOX, 2 ELECTRIC CONNECTION	-	SOLDO	SQN120E-20X23L7	AISI 316

RFS Item	Tag No.	ACTUATOR MODEL	ACTUATOR MATERIAL
1	50-XV-005	CP/S-035-100A/BA	CAST IRON

N°	Description	Type	Size	Manufacturer	Material
T1	PNEUMATIC TUBING	POWER LINE	1/2"	SANDVIK or EQUIVALENT	AISI 316L
-	TUBE FITTINGS	DOUBLE FERRULE	ACCORDING TO TUBING SIZE	FITOK	AISI 316
-	SILENCER - BUG SCREEN	SFEX	ACCORDING TO PORT SIZE	-	AISI316
-	THREADED UNIONS		ACCORDING TO COMPONENT SIZE	R.F.S.	AISI316

Connection	Description	Size
X1	PNEUMATIC CONNECTION TO CONTROL PANEL (INLET)	1/2" NPT (Female)
Y1 - Y2	LIMIT SWITCH BOX MICRO ELECTRIC CONNECTION	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

FUNCTION	DESCRIPTION
1) REMOTE OPERATION:	1A) VALVE ACTUATOR OPEN STROKE: ENERGIZE SOLENOID VALVE 1V10.
	1B) VALVE ACTUATOR CLOSE STROKE: DE-ENERGIZE SOLENOID VALVE 1V10.

NOTES
THE SCHEMATIC IS SHOWN WITHOUT PNEUMATIC AND ELECTRIC SUPPLY
THE ACTUATOR IS SHOWN IN CLOSE POSITION

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue

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Title: E1F2G1H02A0A1J3L1R0

Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

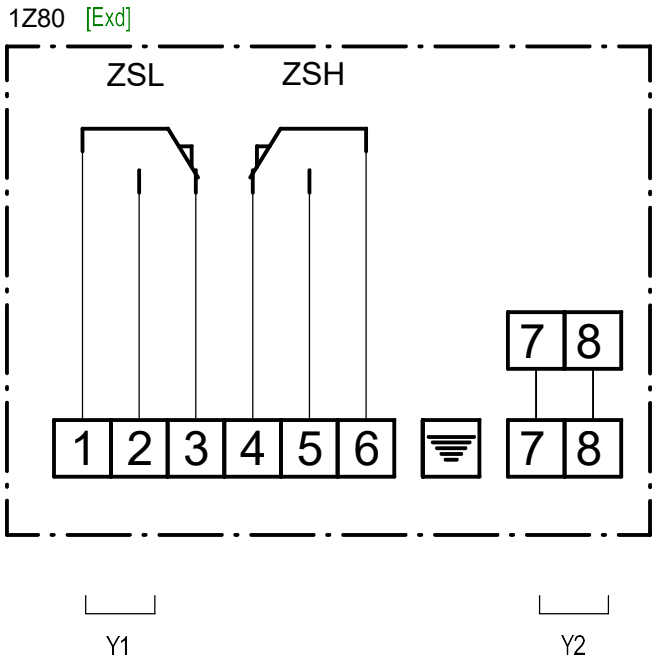
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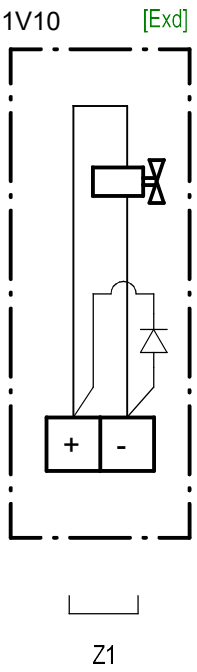
Rev: 0-0

Size: A3 Sheet 2 of 2

Template Issue : 24/02/2020-SR

Rev	ECN	Revised	Rev. Approved	Date	Change Description
0-0	ECO-0025937	S.Davini	L.Bernini	2024-10-25	First issue





THE LIMIT SWITCHES ARE SHOWN WITH
THE VALVE IN INTERMEDIATE POSITION

closed contact
open contact

limit switch		Limit switch function VALVE POSITION open	interm.	closed
ZSL	1-2 NO			■
	1-3 NC	■	■	
ZSH	6-5 NO	■		
	6-4 NC		■	■

RFS Item	Tag No.
1	50-XV-005

Connection	Description	Size
Y1	LIMIT SWITCH BOX ELECTRIC CONNECTION	M20x1,5 (Female)
Y2	LIMIT SWITCH BOX ELECTRIC CONNECTION (plugged)	M20x1,5 (Female)
Z1	SOLENOID VALVE ELECTRIC CONNECTION	M20x1,5 (Female)

Item	Description	Manufacturer, Model and Features
1V10	SOLENOID VALVE	BIFOLD, mod. FP06P-S1-04-32-NU-V-77A-24D-57 - ATEX/IECEx - 24Vdc, 5,7 Watt - Exd IIC T4/T6 - IP66
1Z80	LIMIT SWITCHES BOX	SOLDO, mod. SQN120E-20X23L7- ATEX/IECEx - Ex II 2GD Ex d IIC T4/T6 - IP66
ZSL	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]
ZSH	SPDT HERMETICALLY SEALED MAGNETIC PROXIMITY SWITCH	Rating [5A@250Vac / 5A@28Vdc]

Template Issue : 2019-05-10

rotork® Fluid Systems
Lucca - Italy
www.rotork.com

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Document type	WIRING DIAGRAM	
Created	S.Davini	2024-10-25
Checked	S.Davini	2024-10-25
Approved	L.Bernini	2024-10-25

Title WIRING DIAGRAM
Drawing Number AF7888WD01 Rev 0-0
Size A4 Sheet 1 of 1

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-50-XV-005/00-JE-12006	: On-Off Actuated Ball Valve/DI JB to PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	55-01	: Waste Water Brine Discharge System	Module	LD/LD_B-100_Ext		
TASK	code	C10004664	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 Cl.2/XLPE/IS/OS/LSZH/SWB/LSZH	Cores/Size mm²	2X2X0,75 mm2	Color	GREY
From	50-XV-005	To	00-JE-12006		

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.	OK
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.	PL
9	Check cable labelling is in accordance with specification.	PL
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	0,7	Ω
	SCREEN	0,7	Ω
	EARTH	NA	Ω
	ARMr	0,7	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

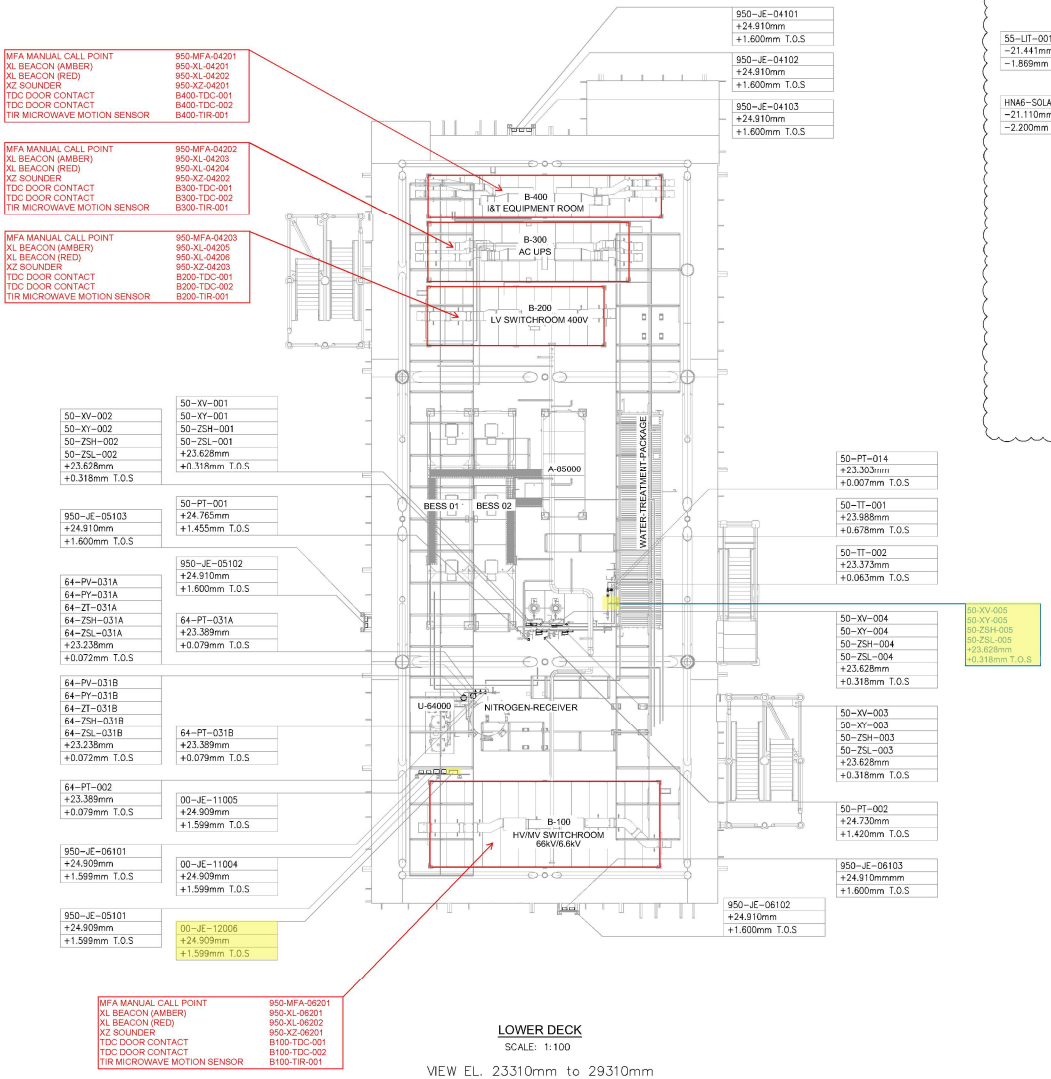
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments

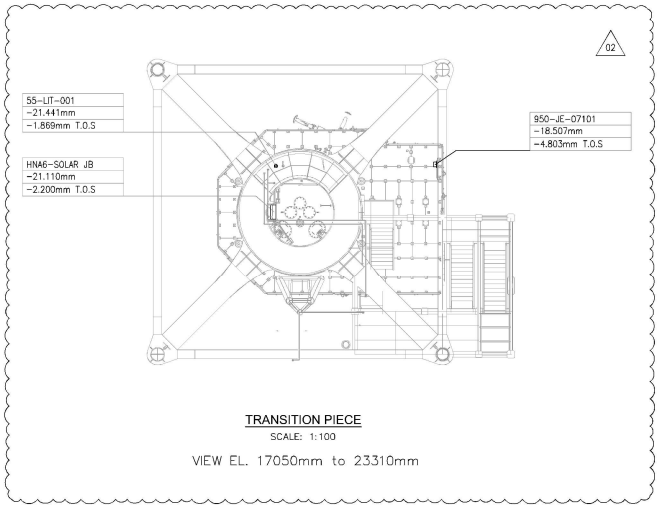
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-03-06	2025-03-07	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-03-06T15:27:12.636Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-03-07T14:00:07.825Z	

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

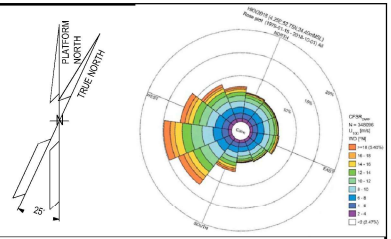
REV. 02



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)

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

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

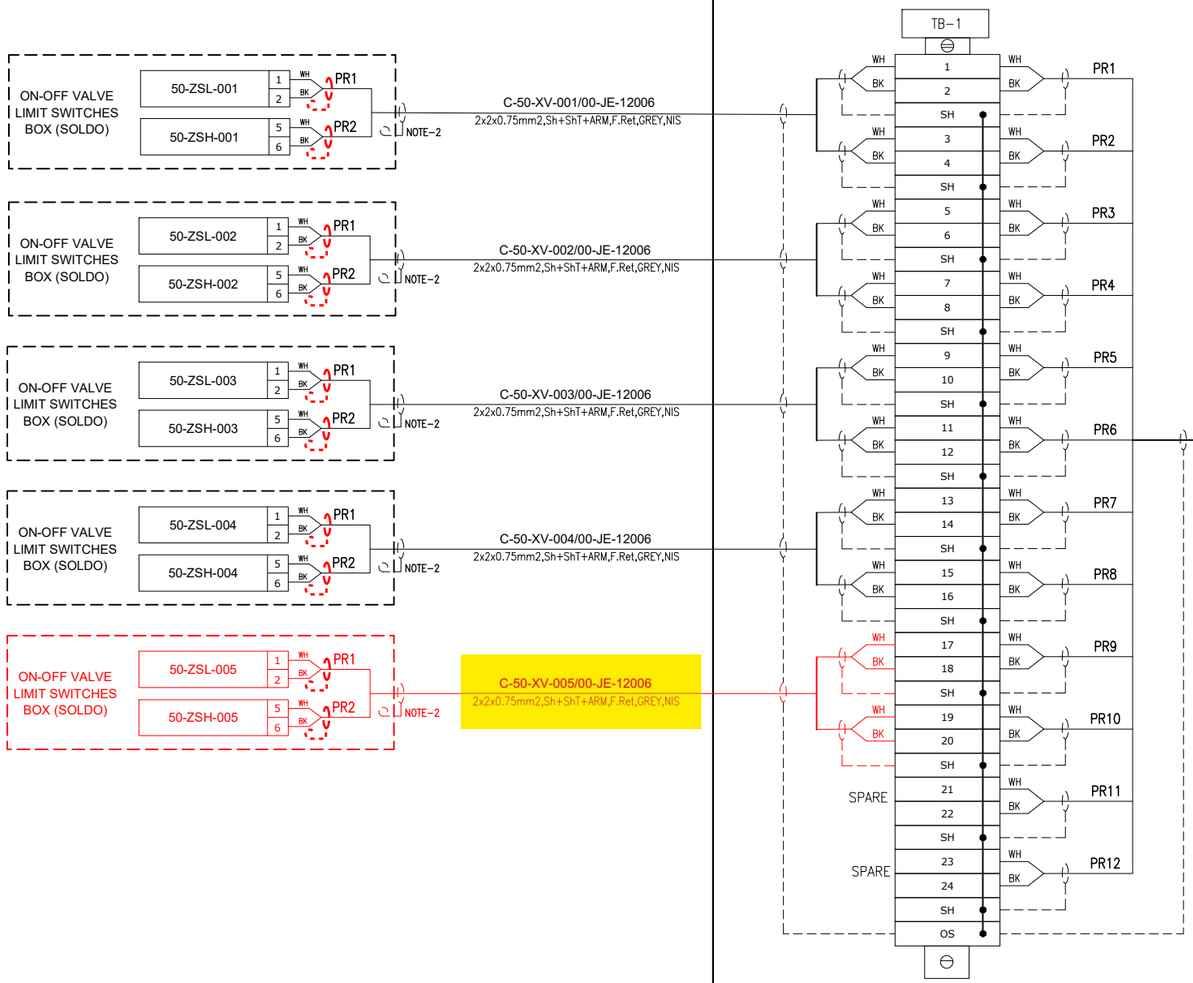
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DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

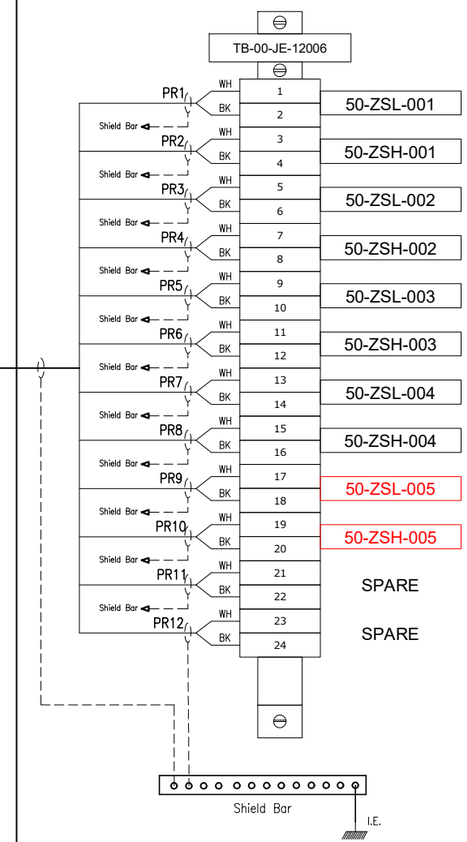
FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-12006	No.	MARSHALLING CABINET B400-PCS-002

<01>



00-JE-12006_1/B400-PCS-002

12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS



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–12006–SH.1 OF 2

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 022	REV. 01

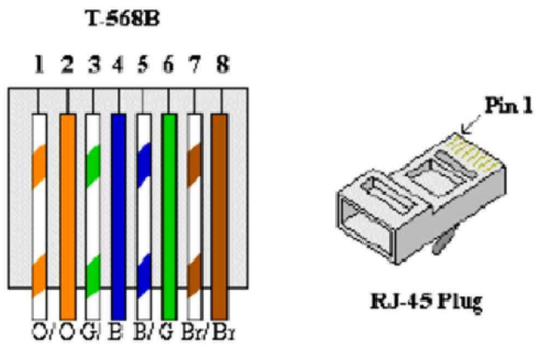
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



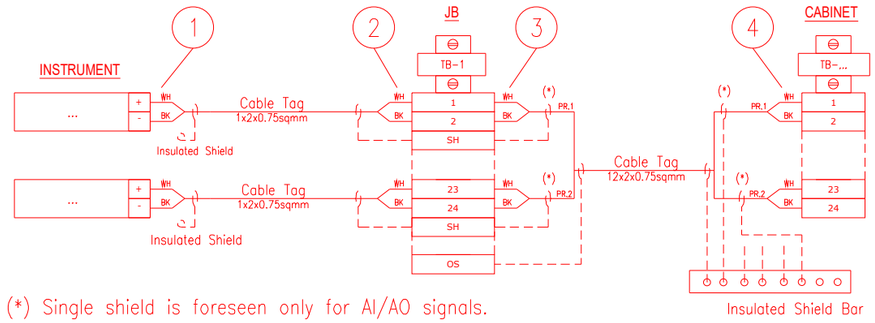
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

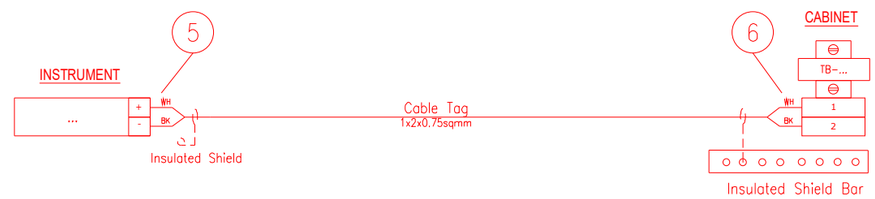
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

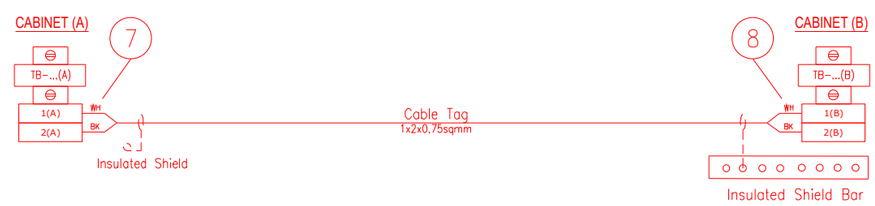
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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

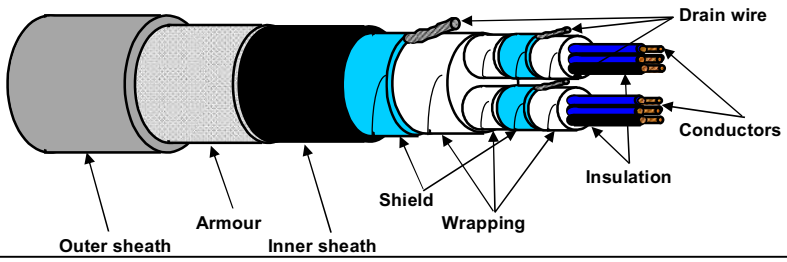
File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Info	Category	Discipline	Eng Status	NativeDoc	Layout	Wiring	TDS	Typical 1	Typical 2	Service	Parent Tag	Grouping	Entity Type	Main Function	Secondary Function	Module	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.	PO Number	PO Position	RFID	Eng Gross Qty	Over All Gross Qty	UM	Production Year	Serial Number	Is Barrier Ex Cert	Overall Prj Part Number	Parent Support	Install Remarks	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-SD-XV-005/00-JE-1200G		Cable	IN	VFC	123A90-0DL-IN-US-40091								Ext-Ext						SD-XV-005	On-Off Actuated Ball Valve	Lower Deck	Proximity Switch	00-JE-1200G	Dr JB to PCS	Lower Deck (B-100) Ext.	Junction Box	SMICVI02-2X240_75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (600V) 2x2x0.75mm² - Grey	1724001170	20-280.3			33		33	M							M20		T2_M20_Double				T2_M20_Double site				I-SEC-13 / I-SEC-1H / I-SEC-1I / I-SEC-1J / I-SEC-1L / I-SEC-1M / I-SEC-1G

FLEI s.r.l.

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

2X2X0,75 - 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 (each core NUMBERED for PAIR identification)**	
Pair Assembling :	13/1mt	
Pair 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	
Pair Shield :	by Aluminium-**Al** Minimum Thickness 0,008 mm / polyester-**PET** Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Shield Insulation :	by polyester-PET Minimum Thickness 0,010 mm tape helically wound (overlap ≥ 25%)	
Total Assembling :	7/1mt	
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 1,2 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 1,3 mm	
Outer sheath color code:	**Grey**	
Outer printing (INKJET) :	**FLEI - 2X2X0,75 SQMM - XLPE/IS/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 :	(11,4 ± 10%) mm	
Over armour diameter :	(12,6 ± 10%) mm	
Outer diameter :	(15,2 ± 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.

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ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-50-XY-005/00-JE-13003	: Solenoid Valve/DO JB to PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	UD	
TASK	code	C10004665	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 Cl.2/XLPE/OS/LSZH/SWB/LSZH	Cores/Size mm²	2X2,5 mm2	Color	GREY
From	50-XY-005	To	00-JE-13003		

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.	OK
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.	PL
9	Check cable labelling is in accordance with specification.	PL
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	0,5	Ω
	SCREEN	0,5	Ω
	EARTH	NA	Ω
	ARMr	0,5	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

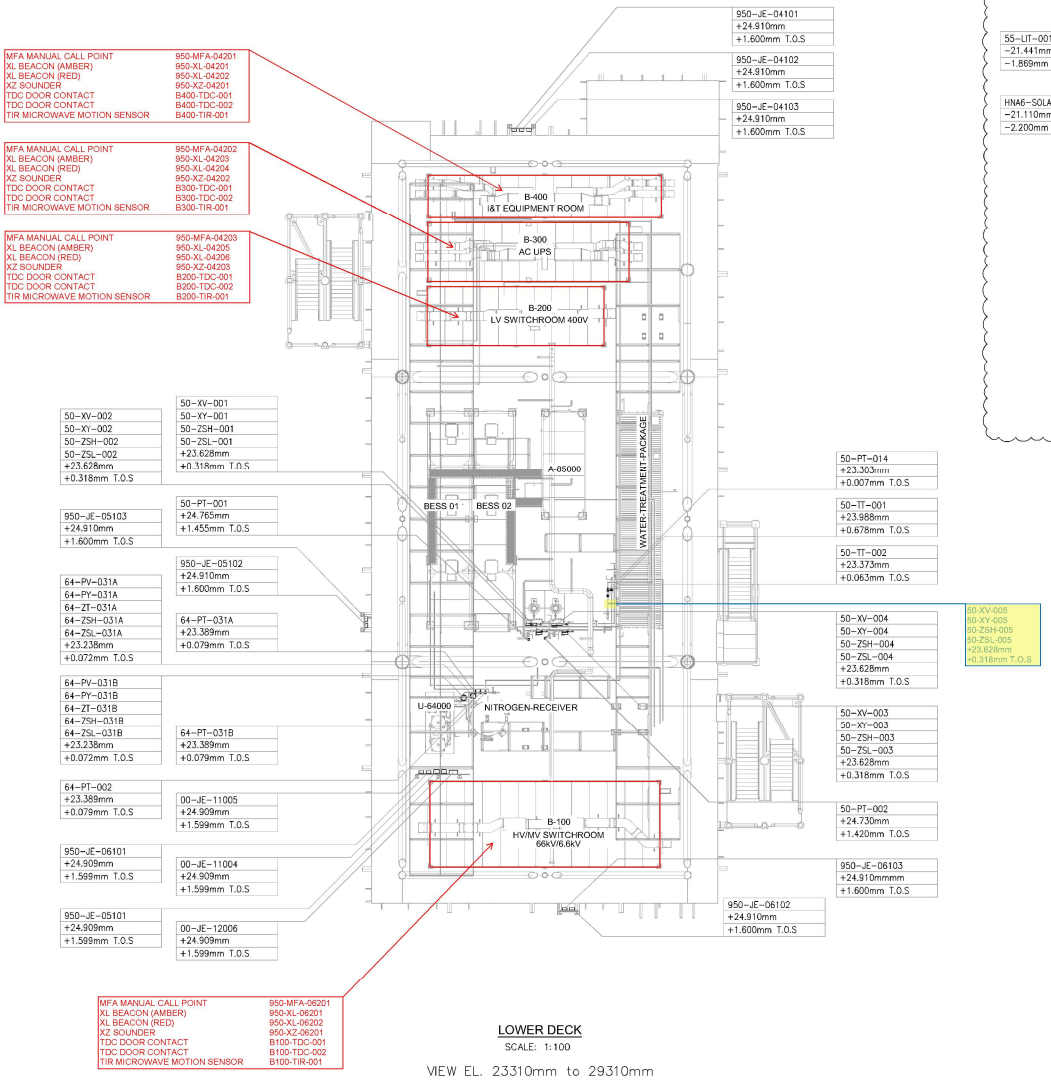
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000682

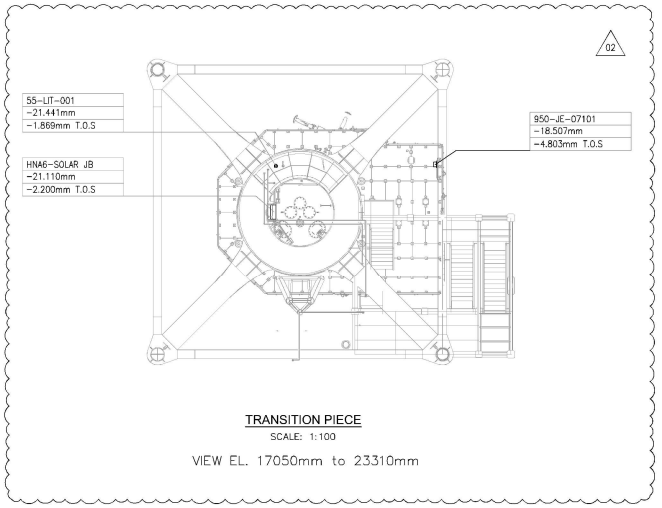
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VIP	RM(ROSETTI MARINO)	
Name	Madhankumar Arunagiri	Giovanni Tangianu	
Date	2025-03-06	2025-03-07	
Signature	PROVERLIS Digitaly signed by Madhankumar Arunagiri 2025-03-06T15:27:44.292Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-03-07T14:13:48.308Z	

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

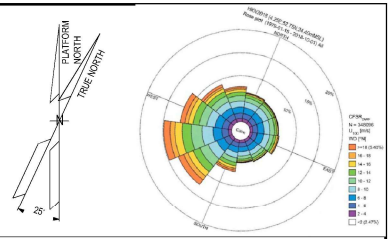
REV. 02



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)

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

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

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

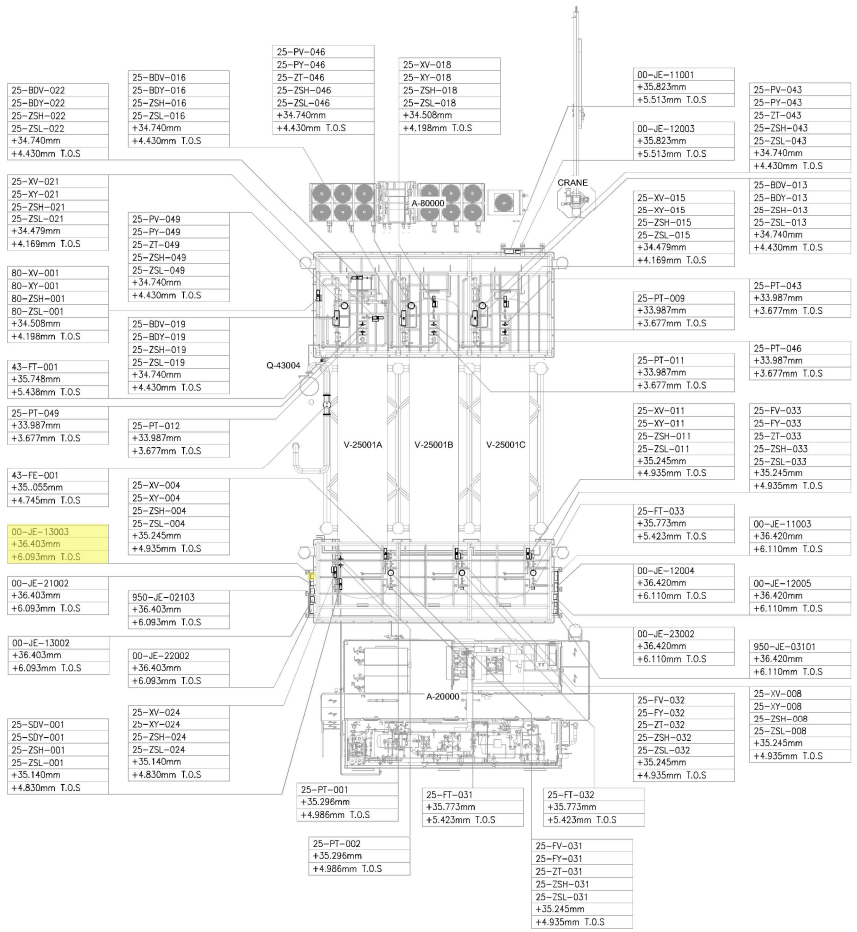
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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-DL-40081

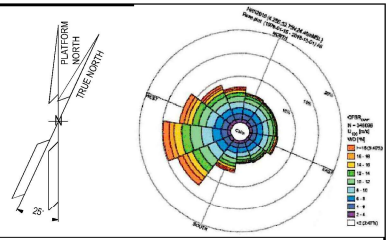
REV. 02



UPPER DECK

SCALE: 1:100

VIEW EL. 33740mm to 36500mm



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-40080	INSTRUMENT LAYOUT -LOWER 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-LOWER DECK

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	04/10/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	05/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DL-40081**

REV.:	DATE:	SIGNATURE:
2_A	07/10/24	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–UPPER DECK
TOS EL. 30.310M

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-40081	SHEET 002	REV. 02

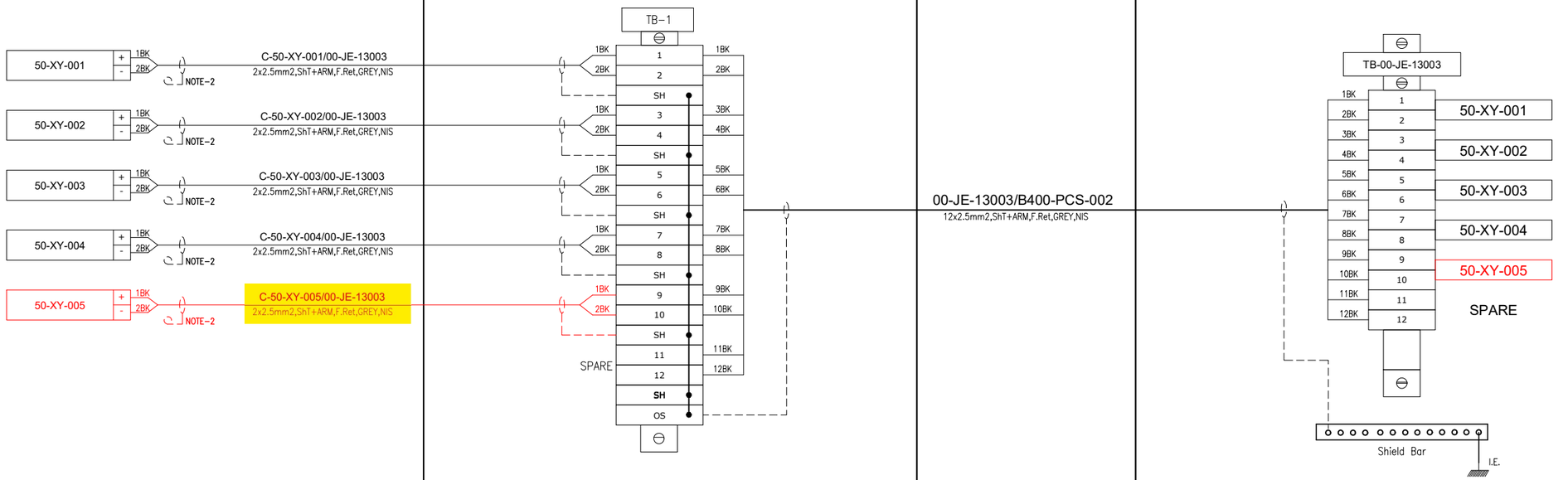
File Name : 123A90-DDL-IN-DL-40081 REV.02.dwg

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-13003	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–13003

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

A3	DRAWING NO.	SHEET	REV.
	123A90–DDL–IN–DG–40015	030	01

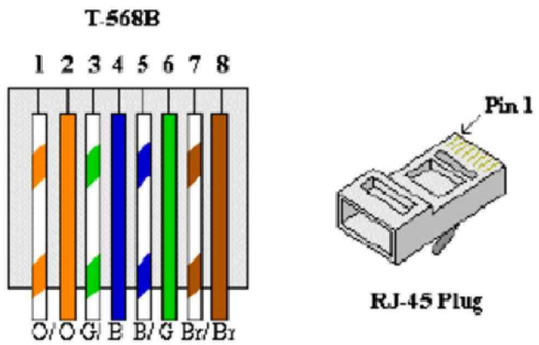
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



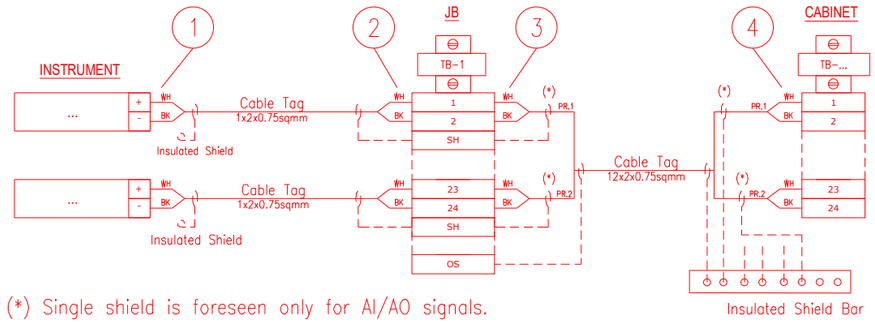
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

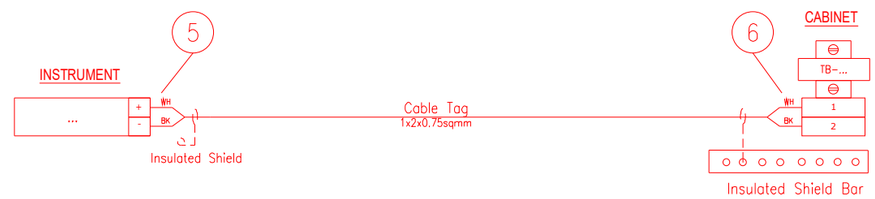
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY 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:

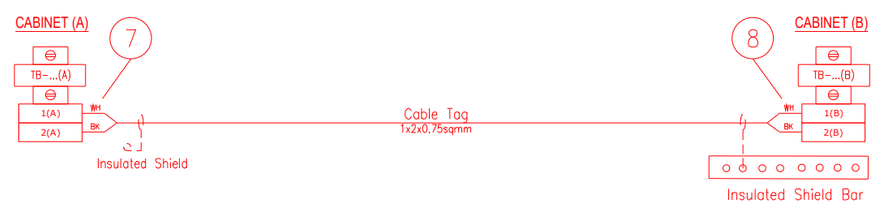
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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

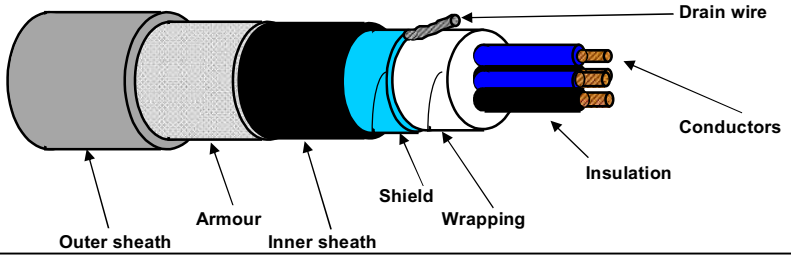
CONTRACT NO./TITLE			SCALE N/A
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Info	Category	Discipline	Eng Status	NativeDoc	Layout	Wiring	TDS	Typical 1	Typical 2	Service	Parent Tag	Grouping	Entity Type	Main Function	Secondary Function	Module	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.	PO Number	PO Position	RFID	Eng Gross Qty	Over All Gross Qty	UM	Production Year	Serial Number	Is Barrier Ex Cert	Overall Prj Part Number	Parent Support	Install Remarks	Gland Standard	From Gland	From Entry	From Fitting	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-SD-XY-005/DD-IE-13003		Cable	IN	VFC	123A90-DDL-IN-US-40091								Ext-Cat						SD-XY-005	Solenoid Value	Lower Deck		DD-IE-13003	DO IR to PCS	Upper Deck	Junction Box	SMICV05-2X2.5	Cable Cu Cl.2/XLPE/DSLS2H/SWB/LSZH 150/250V (300V) 2x2.5mm² - Grey	1724001170	SD-250.1			37	37	M							M20	T2_M20_Double			T2_M20_Double Ste				U-SEC-04 / U-SEC-14A / U-SEC-15 / L-SEC-10 / L-SEC-13

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

2X2,5 - 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 0,6 mm
Cores colour code :	**Black NUMBERED (from 1 to 2)**
Pair Assembling :	Not required
Pair Wrapping:	Not required
Drain wire :	Not required
Pair Shield :	Not required
Shield Insulation :	Not required
Total Assembling :	9/1mt
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 1,0 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 1,1 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 1,2 mm
Outer sheath color code:	**Grey**
Outer printing (INKJET) :	**FLEI - 2X2,5 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 :	(8,9 ± 10%) mm
Over armour diameter :	(9,7 ± 10%) mm
Outer diameter :	(12,1 ± 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 :	≤ 7,86 Ω/km (@ 20°C)
Insulation Resistance :	≥ 1000 MΩ x Km (@ 20°C)
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.

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Section 7 MECHANICAL COMPLETION STATUS INDEX - MECHANICAL DISCIPLINE

NOT APPLICABLE

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: 55-01 & process: MC & discipline : P

Piping	55-01 Waste Water Brine Discharge System						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
004-1-J1	Joint 004-1-J1	ONSHORE	C10004177	TMX27	100	2025-02-14	RFC 1
004-1-J2	Joint 004-1-J2	ONSHORE	C10004178	TMX27	100	2025-01-28	RFC 1
004-1-J3	Joint 004-1-J3	ONSHORE	C10004179	TMX27	100	2025-02-14	RFC 1
007-1-J1	Joint 007-1-J1	ONSHORE	C10004180	TMX27	100	2025-01-31	RFC 1
029-1-J1	Joint 029-1-J1	ONSHORE	C10004210	TMX27	100	2025-03-06	RFC 1
030-3-J1	Joint 030-3-J1	OFFSHORE	C10004211	TMX27	0	-	-
031-2-J1	Joint 031-2-J1	ONSHORE	C10004212	TMX27	100	2025-02-17	RFC 1
031-2-J2	Joint 031-2-J2	ONSHORE	C10004213	TMX27	100	2025-01-17	RFC 1
031-2-J3	Joint 031-2-J3	ONSHORE	C10004214	TMX27	100	2025-03-06	RFC 1
031-2-J4	Joint 031-2-J4	ONSHORE	C10004215	TMX27	100	2025-03-06	RFC 1
031-2-J6	Joint 031-2-J6	ONSHORE	C10004217	TMX27	100	2025-02-17	RFC 1
031-2-J7	Joint 031-2-J7	ONSHORE	C10004542	TMX27	100	2025-03-06	RFC 1
031-2-J8	Joint 031-2-J8	ONSHORE	C10004543	TMX27	100	2025-03-06	RFC 1
031-2-J9	Joint 031-2-J9	ONSHORE	C10004544	TMX27	100	2025-01-17	RFC 1
031-3-J5	Joint 031-3-J5	OFFSHORE	C10004216	TMX27	0	-	-
55-01-TP-003	Test Pack 55-01-TP-003	ONSHORE	C10003247	CLX02A	100	2025-01-31	RFC 2
		ONSHORE	C10003248	CLX02B	100	2025-03-10	RFC 2
		ONSHORE	C10003249	CXX01	100	2025-03-28	RFC 2
		ONSHORE	C10003250	CXX02	100	2025-03-24	RFC 2
		ONSHORE	C10003251	TMX03	100	2025-01-31	RFC 2
		ONSHORE	C10003252	TMX05	100	2025-01-31	RFC 2
		ONSHORE	C10003254	TPLX05	100	2025-01-31	RFC 2
55-01-TP-021	Test Pack 55-01-TP-021	ONSHORE	C10003389	CLX02A	100	2024-12-10	RFC 2
		ONSHORE	C10003390	CLX02B	100	2025-02-14	RFC 2
		ONSHORE	C10003391	CXX01	100	2025-03-27	RFC 2
		ONSHORE	C10003392	CXX02	100	2025-02-19	RFC 2
		ONSHORE	C10003393	TMX03	100	2024-12-10	RFC 2
		ONSHORE	C10003394	TMX05	100	2024-12-10	RFC 2
		ONSHORE	C10003396	TPLX05	100	2024-12-11	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 55-01 & process: MC & discipline : P

Piping	55-01 Waste Water Brine Discharge System						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
55-01-TP-046	Test Pack 55-01-TP-046	ONSHORE	C10003581	CLX02A	100	2025-01-25	RFC 2
		ONSHORE	C10003582	CLX02B	100	2025-02-15	RFC 2
		ONSHORE	C10003583	CXX01	100	2025-03-28	RFC 2
		ONSHORE	C10003584	CXX02	100	2025-02-19	RFC 2
		ONSHORE	C10003585	TMX03	100	2025-01-25	RFC 2
		ONSHORE	C10003586	TMX05	100	2025-01-25	RFC 2
		ONSHORE	C10003588	TPLX05	100	2025-01-25	RFC 2
55-01-TP-103	Test Pack 55-01-TP-103	OFFSHORE	C10003728	CLX02A	0	-	-
		OFFSHORE	C10003729	CLX02B	0	-	-
		OFFSHORE	C10003730	CXX01	0	-	-
		OFFSHORE	C10003731	CXX02	0	-	-

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003			Dwg	123A90-DDL-PR-PID-80012-22-25-27
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10003247		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.	OK
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).	OK
6	Check bolt tightening and flange management (excluded battery limit joints).	OK
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).	OK
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:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-31	2025-01-31	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-31T07:06:16.478Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-31T17:56:55.405Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003		Dwg	123A90-DDL-PR-PID-80012-22-25-27	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/UD	
TASK	code	C10003247	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).	Note
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: SK.031 (SH.2/3) Valves 50-XV-005 and BLPH-NRV-028 have not been assembled for the inspection.
SK.032 (SH.1/1) The Spool A has not been assembled. in the isometric is marked as part of TP-003 but as for the P&I it is part of another one.
Other Valves in the isometrics have been marked as outside battery limits of the TPest pack

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:19:27.563Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-15T07:05:13.866Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003			Dwg	123A90-DDL-PR-PID-80012-22-25-27
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10003248		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	2025-03-10	
Signature	Digitaly signed by Emanuele Delfino 2025-02-06T15:28:18.116Z	Digitaly signed by Lorenzo Novaga 2025-03-10T11:14:38.394Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003			Dwg	123A90-DDL-PR-PID-80012-22-25-27
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10003249		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.	PL
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	Note
7	Check the installation of wire mesh	PL
8	Check the overlap of the metal cladding.	PL
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 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: Note 6:refer to punch C30004259

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-03-21	2025-03-28	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:17:39.262Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-28T14:53:46.085Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003			Dwg	123A90-DDL-PR-PID-80012-22-25-27
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10003250		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.	PL
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.	PL
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	2025-03-24	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T15:52:53.308Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-24T15:12:30.582Z	

ROSETTI MARINO — CROSSWIND

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003		Dwg	123A90-DDL-PR-PID-80012-22-25-27	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/UD	
TASK	code	C10003251	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	31/01/2025	Start time	10:05	End time	10:20
Flow rate	NA	Duration	15 min	Medium T°	NA

Operation Description

Connected the water source to the highest 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	2025-01-31	2025-01-31	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-31T07:06:27.848Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-31T17:57:38.345Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003		Dwg	123A90-DDL-PR-PID-80012-22-25-27	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/UD	
TASK	code	C10003251	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	13/01/2024	Start time	15:00	End time	15:30
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	Massimo Bruschi	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:19:39.763Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-15T09:03:19.914Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003		Dwg	123A90-DDL-PR-PID-80012-22-25-27	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/UD	
TASK	code	C10003252	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	2025-01-31	2025-01-31	
Signature	Digitaly signed by Emanuele Delfino 2025-01-31T07:06:38.738Z	Digitaly signed by Kangi Albonetti 2025-01-31T18:00:24.722Z	

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP-003_1

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)*	01:06:05
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	10:25:18 am

Logger protocol

Protocollo di acquisizione elenco dati

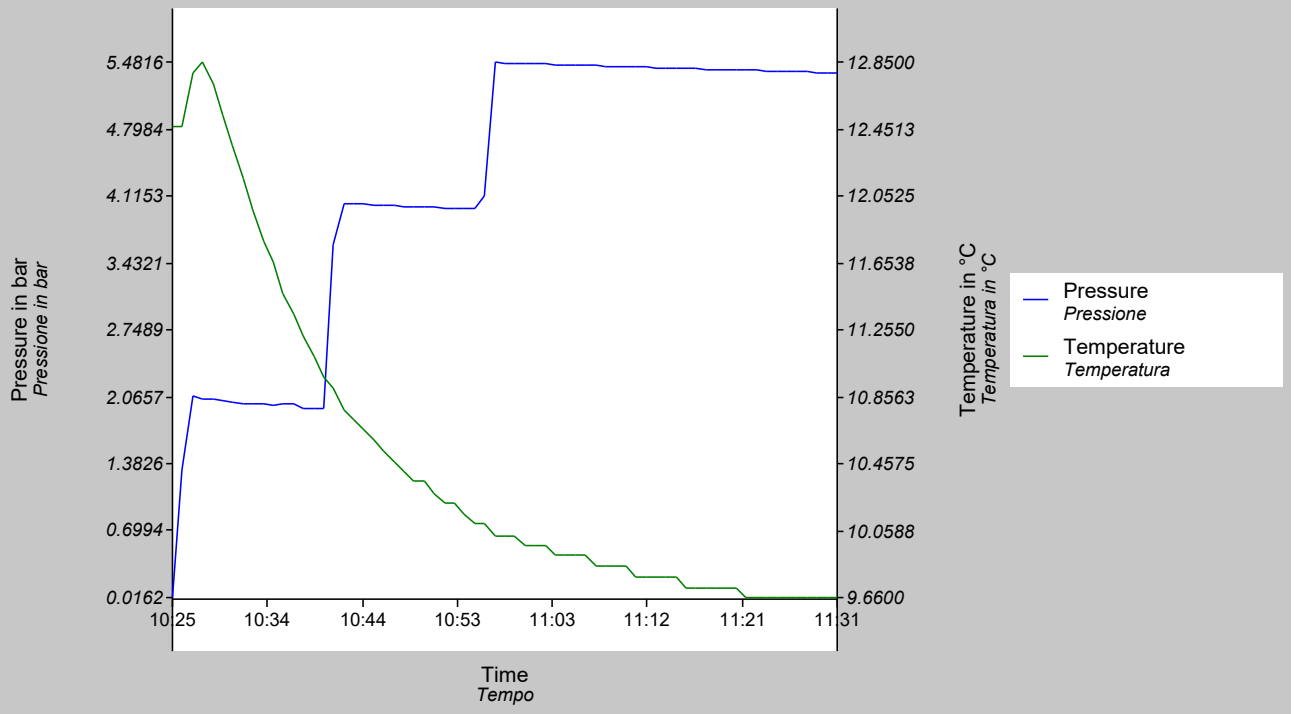
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP-003_1

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
01/31/2025 10:25:18.000	0.0162	12.4700
01/31/2025 10:26:18.000	1.3220	12.4700
01/31/2025 10:27:18.000	2.0778	12.7800
01/31/2025 10:28:18.000	2.0496	12.8500
01/31/2025 10:29:18.000	2.0346	12.7200
01/31/2025 10:30:18.000	2.0179	12.5300
01/31/2025 10:31:18.000	2.0056	12.3500
01/31/2025 10:32:18.000	2.0006	12.1600
01/31/2025 10:33:18.000	1.9965	11.9700
01/31/2025 10:34:18.000	1.9898	11.7800
01/31/2025 10:35:18.000	1.9836	11.6600
01/31/2025 10:36:18.000	1.9978	11.4700
01/31/2025 10:37:18.000	1.9935	11.3500
01/31/2025 10:38:18.000	1.9503	11.2200
01/31/2025 10:39:18.000	1.9529	11.1000
01/31/2025 10:40:18.000	1.9496	10.9700
01/31/2025 10:41:18.000	3.6222	10.9100

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP-003_1

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/31/2025 10:42:18.000	4.0365	10.7800
01/31/2025 10:43:18.000	4.0324	10.7200
01/31/2025 10:44:18.000	4.0286	10.6600
01/31/2025 10:45:18.000	4.0235	10.6000
01/31/2025 10:46:18.000	4.0186	10.5300
01/31/2025 10:47:18.000	4.0155	10.4700
01/31/2025 10:48:18.000	4.0098	10.4100
01/31/2025 10:49:18.000	4.0041	10.3500
01/31/2025 10:50:18.000	4.0021	10.3500
01/31/2025 10:51:18.000	3.9973	10.2800
01/31/2025 10:52:18.000	3.9936	10.2200
01/31/2025 10:53:18.000	3.9903	10.2200
01/31/2025 10:54:18.000	3.9889	10.1600
01/31/2025 10:55:18.000	3.9810	10.1000
01/31/2025 10:56:18.000	4.1166	10.1000
01/31/2025 10:57:18.000	5.4816	10.0300
01/31/2025 10:58:18.000	5.4729	10.0300
01/31/2025 10:59:18.000	5.4683	10.0300
01/31/2025 11:00:18.000	5.4617	9.9700
01/31/2025 11:01:18.000	5.4580	9.9700
01/31/2025 11:02:18.000	5.4588	9.9700
01/31/2025 11:03:18.000	5.4534	9.9100
01/31/2025 11:04:18.000	5.4469	9.9100
01/31/2025 11:05:18.000	5.4447	9.9100
01/31/2025 11:06:18.000	5.4446	9.9100
01/31/2025 11:07:18.000	5.4426	9.8500
01/31/2025 11:08:18.000	5.4366	9.8500
01/31/2025 11:09:18.000	5.4357	9.8500
01/31/2025 11:10:18.000	5.4324	9.8500
01/31/2025 11:11:18.000	5.4333	9.7800
01/31/2025 11:12:18.000	5.4260	9.7800
01/31/2025 11:13:18.000	5.4242	9.7800
01/31/2025 11:14:18.000	5.4235	9.7800
01/31/2025 11:15:18.000	5.4170	9.7800
01/31/2025 11:16:18.000	5.4148	9.7200
01/31/2025 11:17:18.000	5.4096	9.7200
01/31/2025 11:18:18.000	5.4061	9.7200
01/31/2025 11:19:18.000	5.4058	9.7200
01/31/2025 11:20:18.000	5.4016	9.7200
01/31/2025 11:21:18.000	5.3990	9.7200
01/31/2025 11:22:18.000	5.3979	9.6600
01/31/2025 11:23:18.000	5.3954	9.6600
01/31/2025 11:24:18.000	5.3889	9.6600
01/31/2025 11:25:18.000	5.3866	9.6600
01/31/2025 11:26:18.000	5.3856	9.6600
01/31/2025 11:27:18.000	5.3791	9.6600
01/31/2025 11:28:18.000	5.3791	9.6600
01/31/2025 11:29:18.000	5.3755	9.6600
01/31/2025 11:30:18.000	5.3714	9.6600

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP-003_1

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/31/2025 11:31:18.000	5.3702	9.6600

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.
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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.
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I Traversa, n. 8
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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

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

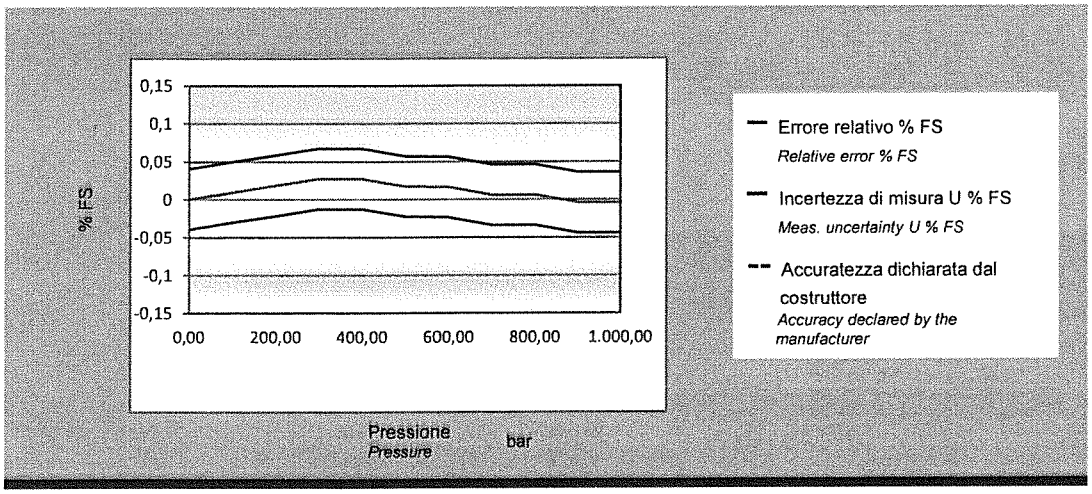
LAT N° 114

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°55-01-TP-003
SUB-SYSTEM N° 55-01

System	55
Sub-System	55-01
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.

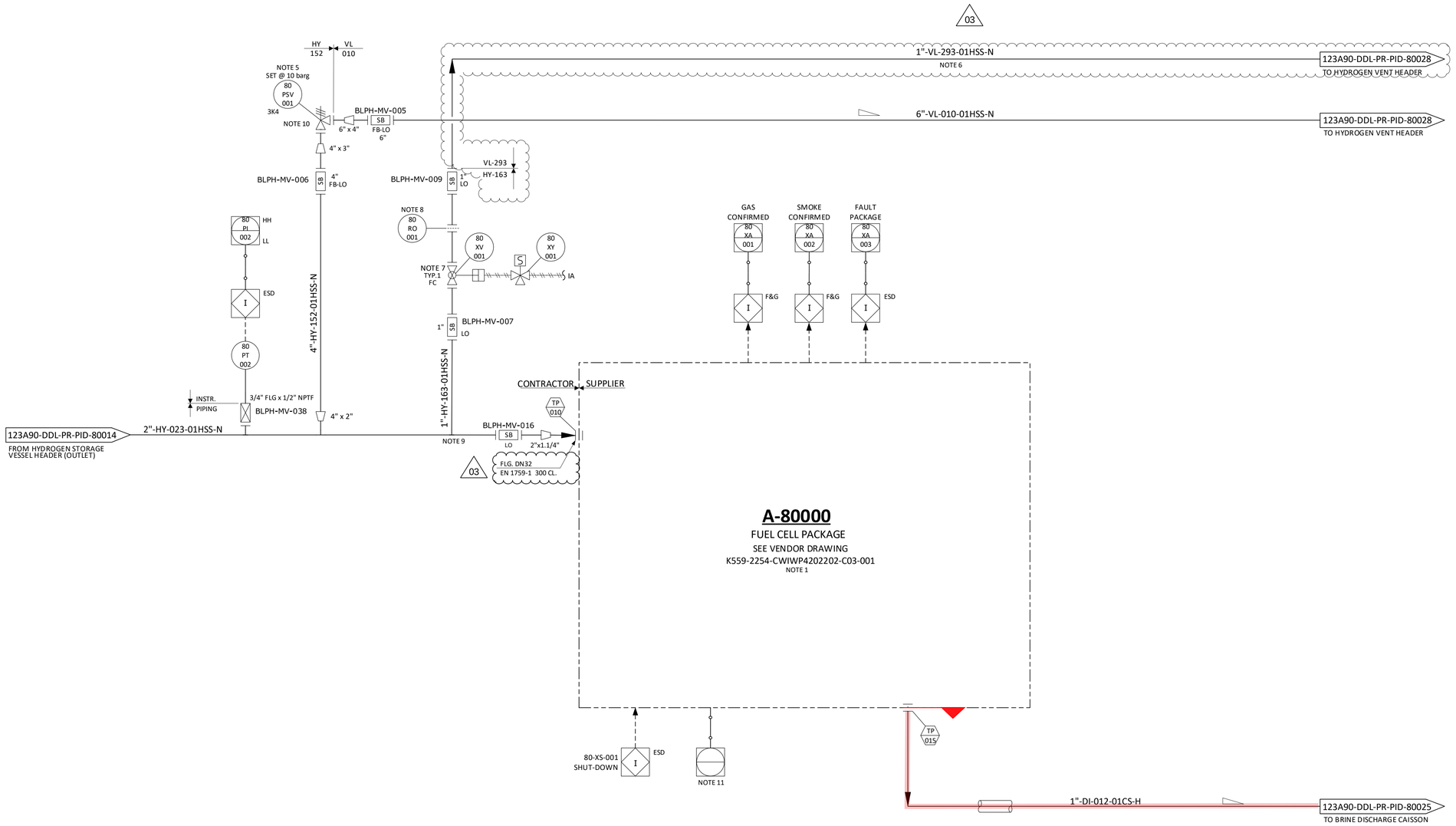
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1. COLOURED MARKED P&IDs
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5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
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   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning
   - 8.6 TMX05 – Pressure test
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   - 8.9 TPLX05 - Drying

1. COLOURED MARKED P&IDs

DRAWING NO. DRAWING_NO.

REV. REV



NOTES

1. THE VENDOR PACKAGE WILL CONTAIN AIR INTAKE AND EXHAUST, SUITABLY SAFEGUARDED AND SEPARATED.
2. DELETED.
3. DELETED.
4. DELETED
5. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
6. LINE REQUIRED FOR PURGING OF PIPING WORK.
7. TIGHT SHUT-OFF VALVE.
8. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
9. LINE 1"-HY-163-01HSS-N WILL BE LOCATED AS CLOSE TO THE PACKAGE AS POSSIBLE TO ENSURE COMPLETE PURGING OF THE LINE.
10. 80-PSV-001 SIZED FOR CV FAILURE OF UPSTREAM CONTROL VALVE 25-PV-055A/B.
11. SERIAL COMMUNICATION WITH CONTROL SYSTEM.

HOLDS

1. DELETED.
2. DELETED.

55-01-TP-003
5.25 barg

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
FUEL CELL PACKAGE

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-80012	001	03

File Name : FILE_NAME

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 50 017
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 50 005
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 50 006
03
DECK
HOOK-UP 003
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

SUPPLIER | CONTRACTOR

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

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

55-01-TP-003
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

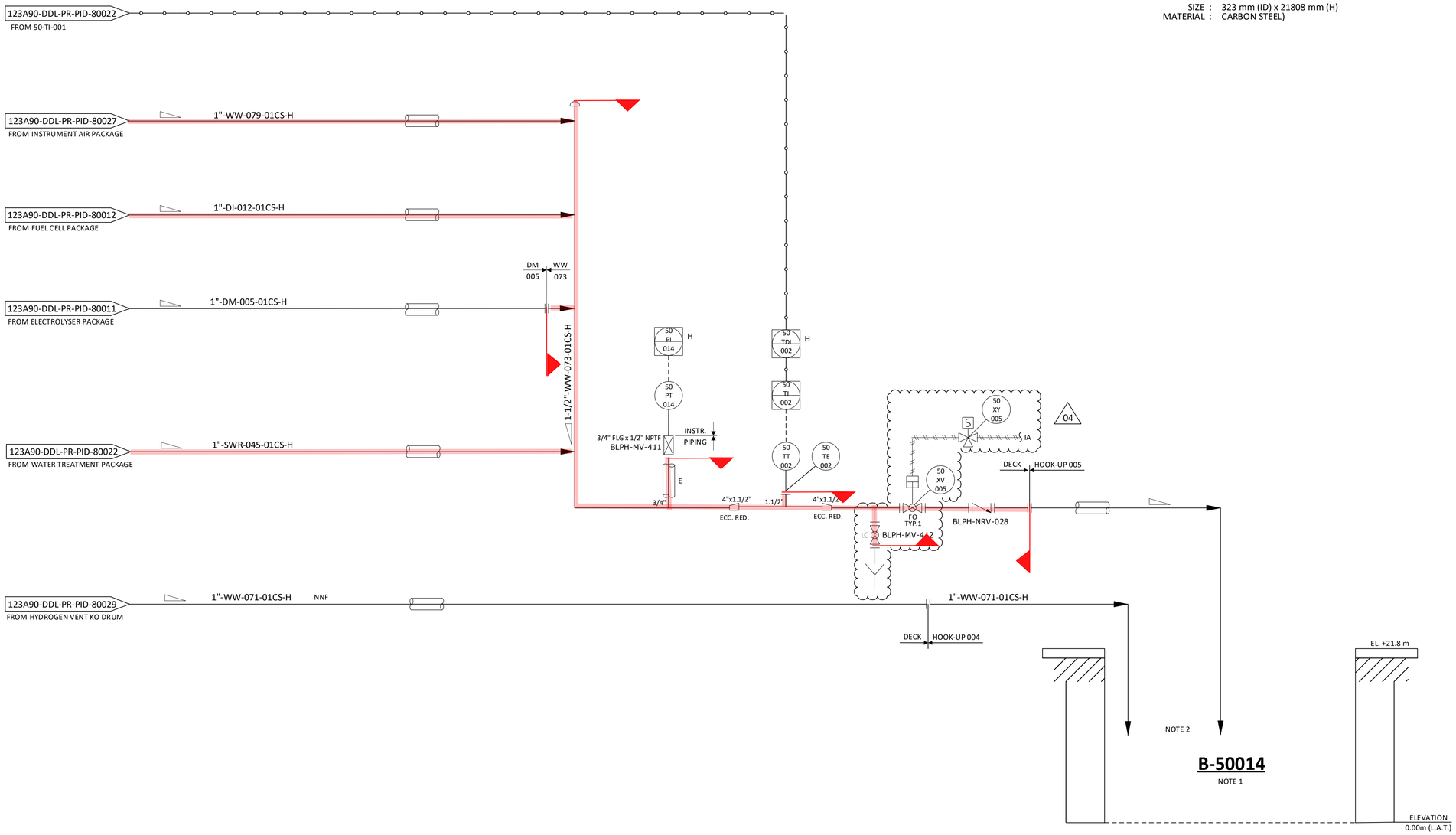
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PR-PID-80022	001	03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV



B-50014

BRINE DISCHARGE CAISSON
SIZE : 323 mm (ID) x 21808 mm (H)
MATERIAL : CARBON STEEL)

NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

55-01-TP-003
5.25 barg

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025	001	04

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
CAPACITY : 313 Sm³/h (PRODUCTION)

A-64000
NITROGEN GENERATION SYSTEM
CAPACITY : 52.7 Sm³/h (PRODUCTION)

SUCTION 63 PI 001 | DISCHARGE 63 PI 002 | COMMON ALARM 63 XA 001 | MCC DEVICE COMMS FAIL 63 XI 001 | AVAILABLE STATUS 63 XI 002 | RUN/STOP STATUS 63 XI 003 | SHUTDOWN STATUS 63 XI 004 | SHUTDOWN ALARM 63 XA 002 | ESD I

FAULT PACKAGE 63 XA 003

ESD I — 63-XS-001 SHUT-DOWN

NOTE 14

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
SEE VENDOR DRAWING 1724000428-PR-PID-00019
NOTE 2, 3, 4, 5, 6
03

1-1/2"-IA-263-01SS-N

03 — **V-63001**
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019
63 TP 040 — 2" — 2"x1.1/2"

03 — 63 TP 041 — 2"x1.1/2" — LO — BLPH-MV-149

1-1/2"-IA-108-01SS-N

63 PI 004 — LL — ESD I

63 PI 003 — L

63 PT 003 | 63 PT 004

INSTR. PIPING

BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF

123A90-DDL-PR-PID-80041
TO INSTRUMENT AIR DISTRIBUTION HEADER

03 — 63 TP 039

BLPH-MV-269 — SB — LO

1"-WW-079-01CS-H

123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

BLPH-MV-270 — LO — 1.1/2"

1-1/2"-IA-204-01SS-N

123A90-DDL-PR-PID-80041
FROM INSTRUMENT AIR DISTRIBUTION HEADER
03

03 — CONC. RED. 1.1/2"x1" — 64 TP 043

ESD I — TO SAFE LOCATION — 2"-AV-224-01CS-N — 03 — 64 TP 045

NOTE 15: 64 PI 002 — L — LL

NOTE 10 TO ATM

NOTE 1, 12 SET @ 10 barg 102 — 64 PSV 001 — 2"-AV-160-01CS-N

1"-N-101-01CS-N — 123A90-DDL-PR-PID-80028 — TO HYDROGEN VENT HEADER

1"-N-125-03HSS-N — 123A90-DDL-PR-PID-80017 — TO HYDROGEN STORAGE VESSEL C

1"-N-124-03HSS-N — 123A90-DDL-PR-PID-80016 — TO HYDROGEN STORAGE VESSEL B

1"-N-028-03HSS-N — 123A90-DDL-PR-PID-80015 — TO HYDROGEN STORAGE VESSEL A

1" N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL

1"-N-126-03HSS-N — 123A90-DDL-PR-PID-80018 — TO HYDROGEN STORAGE VESSEL D

1"-N-127-03HSS-N — 123A90-DDL-PR-PID-80019 — TO HYDROGEN STORAGE VESSEL E

1"-N-128-03HSS-N — 123A90-DDL-PR-PID-80020 — TO HYDROGEN STORAGE VESSEL F

1"-N-151-01CS-N — 123A90-DDL-PR-PID-80011 — TO ELECTROLYSER PACKAGE

01CS — 03HSS

64 HS 031 — 64 PIC 031A H L — 64 PIC 031B H L — 64 PT 031A — 64 PT 031B — 64 PT 002

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

INSTR. PIPING

3/4" FLG x 1/2" NPTF — BLPH-MV-386 — 3/4" FLG x 1/2" NPTF — BLPH-MV-166 — BLPH-MV-167 3/4" FLG x 1/2" NPTF

SB — BLPH-MV-278 FB-LO 1.1/2" — 1-1/2"-N-197-01CS-N — 1.5" x 1" — 1.5" x 1"

1"-N-100-01CS-N

64 SDY 001 — IA

64 SDV 001 — NOTE 13 — NC-FC TYP.2

BLPH-MV-271 — SB — LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 — NOTE 16

64 TP 042 | 64 TP 044 | 03

1"-N-262-01CS-N

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

ESD I — 64-XS-001 SHUT-DOWN — ESD I — NOTE 14

ESD I — 64 XA 003 — FAULT PACKAGE

03 — 64 TP 046 — **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

55-01-TP-003
5.25 barg

NOTES

1. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
2. COMPRESSORS AND DRIERS DESIGNED FOR 2 X 100% CONFIGURATION. INSTRUMENT AIR RECEIVER DESIGNED FOR 1 X 100%.
3. VENDOR TO PROVIDE NECESSARY CONTROLS, INSTRUMENTATIONS AND ISOLATIONS IN ORDER TO OPERATE THE PLANT IN SAFE MANNER.
4. COMPRESSORS WILL OPERATE ON THE BASIS OF ONE WORKING AND ONE ON STANDBY.
5. COMPRESSORS TO BE ROTARY SCREW TYPE OIL FREE.
6. AIR COMPRESSOR INLET TO BE LOCATED AWAY FROM ANY VENTS.
7. DELETED.
8. DELETED.
9. DELETED.
10. TO SAFE LOCATION, ROUTED AWAY FROM WALKWAYS.
11. DELETED.
12. 64-PSV-001 SIZED FOR UPSTREAM 64-PV-031 CV FAILURE. (03)
13. 64-SDV-001 IS NORMALLY CLOSED. IF REQUIRED THE OPERATOR CAN REMOTELY OPEN THE VALVE TO ALLOW PURGING OPERATION. VALVE 64-SDV-001 IS ALSO CONNECTED TO THE PCS SYSTEM.
14. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
15. THE ALARM 64-PAL-002 WILL CLOSE 64-SDV-001 THROUGH SAFETY SYSTEM.
16. MANUAL VALVE BLPH-MV-275 TO BE CONNECTED WITH MANUAL VALVE BLPH-MV-466 (INSTALLED ON ELECTROLYSER PACKAGE EXIT LINE) BY MEAN ON A FLEXIBLE HOSE DURING COMMISSIONING PHASE FOR PURGING OPERATION. (03)

HOLDS

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

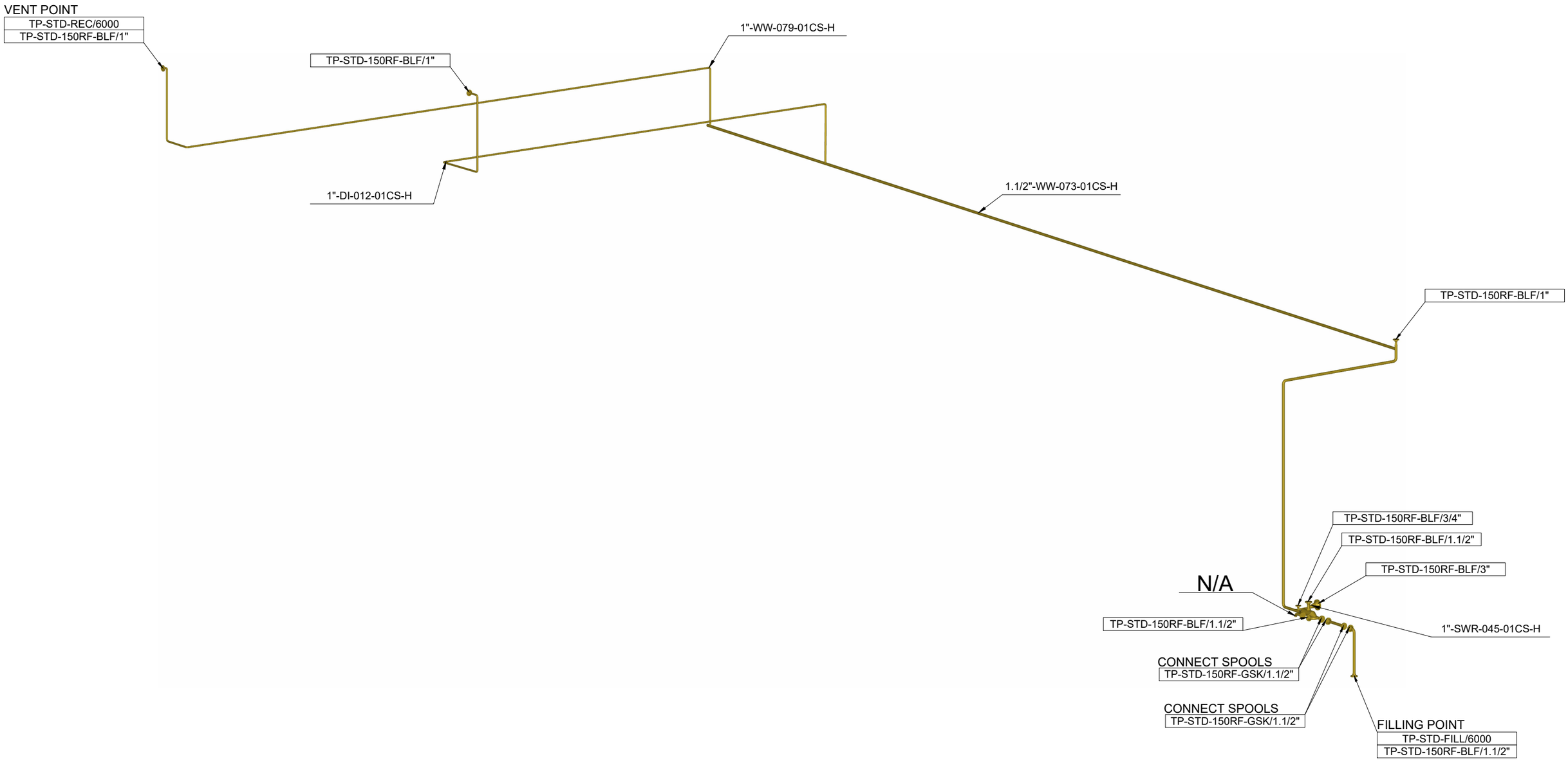
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR 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-80027		SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-01-TP-003

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
55-01-TP-003

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

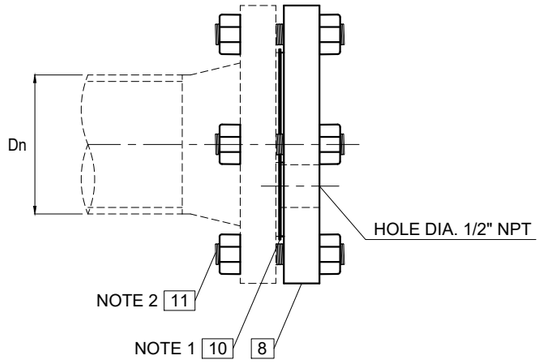
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-003	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	3	3	
TP-003	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	3	3	
TP-003	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	3	12	
TP-003	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-003	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-003	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-003	TP-STD-150RF-BLF/3"	FLBHCS0137030H	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-003	TP-STD-150RF-BLF/3"	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ø3" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-003	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	1	4	
TP-003	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	3	3	
TP-003	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	3	3	
TP-003	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	3	12	
TP-003	TP-STD-150RF-GSK/1.1/2"	GFL3GK15981H00	Gasket Flat Thk. 3 mm ø1.1/2" 150LB RF NEOPRENE	1	2	2	
TP-003	TP-STD-150RF-GSK/1.1/2"	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-150RF	150 RF	STANDARD FOR BLIND POINT

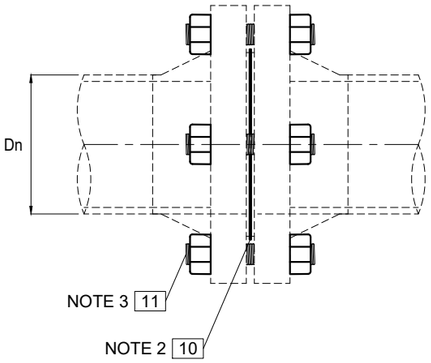
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

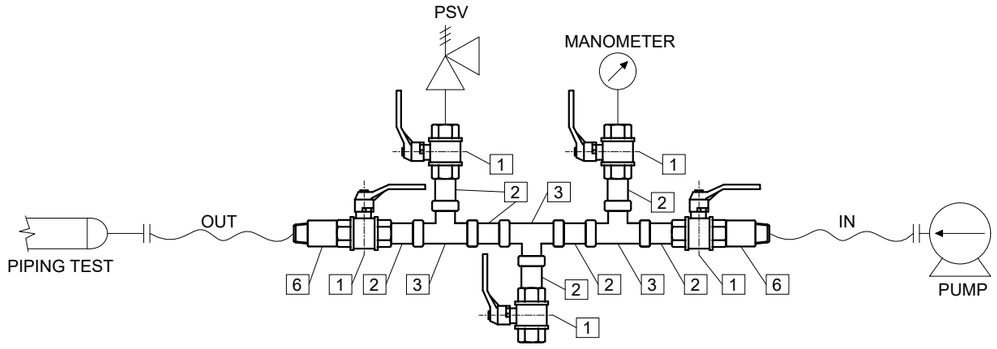
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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

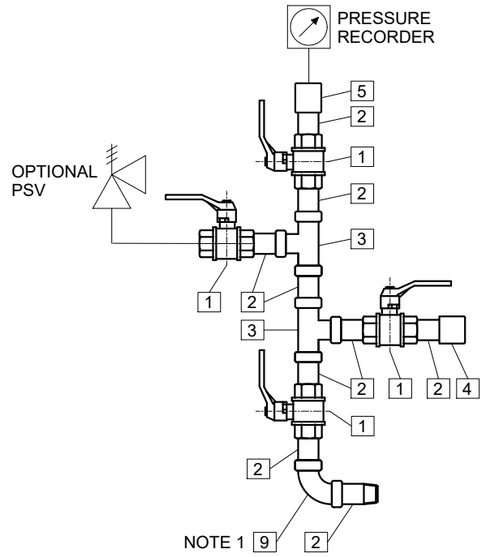
TP-STD-FILL

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
7	DI-012	012	1	01CS	H	4,55	80	N/A	1"-DI-012-01CS-H	123A90-DDL-PR-PID-80012	3,50	55	55-01	TP-003	Water	5.25	Deionised Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
29	SWR-045	045	1	01CS	H	4,55	80	N/A	1"-SWR-045-01CS-H	123A90-DDL-PR-PID-80022	3,50	55	55-01	TP-003	Water	5.25	Sea Water Return	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
31	WW-073	073	1.1/2	01CS	H	5,08	80	N/A	1-1/2"-WW-073-01CS-H	123A90-DDL-PR-PID-80025	3,50	55	55-01	TP-003/TP-103	Water	5.25/N/A	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
32	WW-079	079	1	01CS	H	4,55	80	N/A	1"-WW-079-01CS-H	123A90-DDL-PR-PID-80027	3,50	55 / 63	55-01 / 63-00	TP-003/TP-059	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**

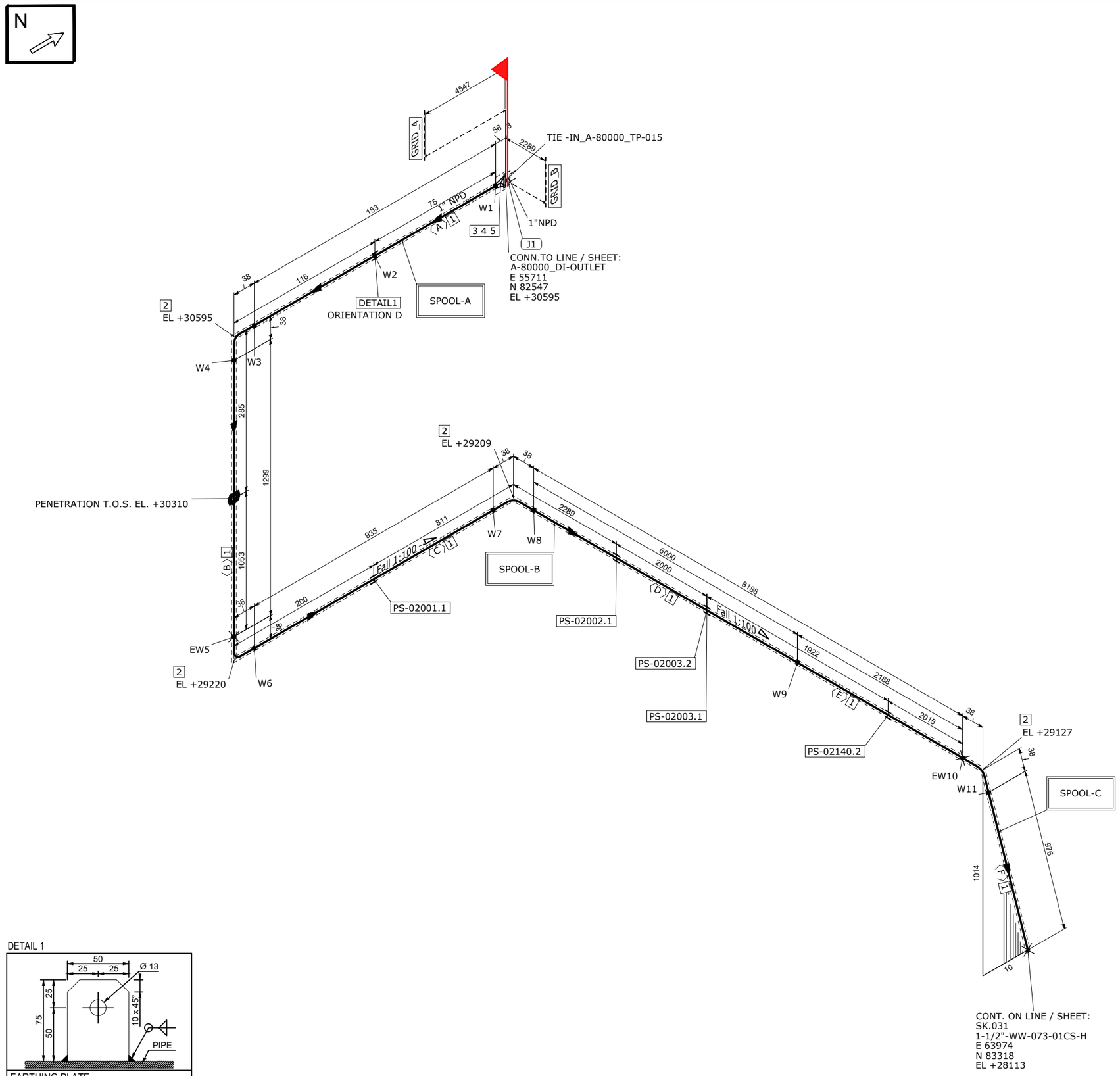
REV. **07**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **14/10/2024**

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
11	123A90-FDL-PP-DI-00007-01	**007**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-DI-012-01CS-H	27/08/2024													**00**	**03**		**TP-003**
37	123A90-FDL-PP-DI-00029-01	**029**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-SWR-045-01CS-H	27/08/2024													**00**	**03**		**TP-003**
41	123A90-FDL-PP-DI-00031-01	**031**	01	SHOP DRAWING ISOMETRIC - LINE NR 1-1/2"-WW-073-01CS-H	27/08/2024													**00**	**03**		**TP-003**
42	123A90-FDL-PP-DI-00031-02	**031**	02	SHOP DRAWING ISOMETRIC - LINE NR 1-1/2"-WW-073-01CS-H	27/08/2024	03/10/2024	14/10/2024											**02**	**07**		**TP-003**
44	123A90-FDL-PP-DI-00032-01	**032**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-079-01CS-H	27/08/2024													**00**	**03**		**TP-003/TP-059**



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	11.6M	37.4
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
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	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
5	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	39.5
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	40.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2		FW
W3	1	BW
W4	1	BW
EW5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	153	BEVEL	BEVEL
B	1	1299	BEVEL	BEVEL
C	1	935	BEVEL	BEVEL
D	1	6000	BEVEL	BEVEL
E	1	2188	BEVEL	BEVEL
F	1	977	BEVEL	BEVEL

SUPPORT LIST

PS-02001.1
PS-02002.1
PS-02003.1
PS-02003.2
PS-02140.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	6.3
B	4	29.9
C	1	3.3
MONT	2	0.6

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

55-01-TP-003

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-80012
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

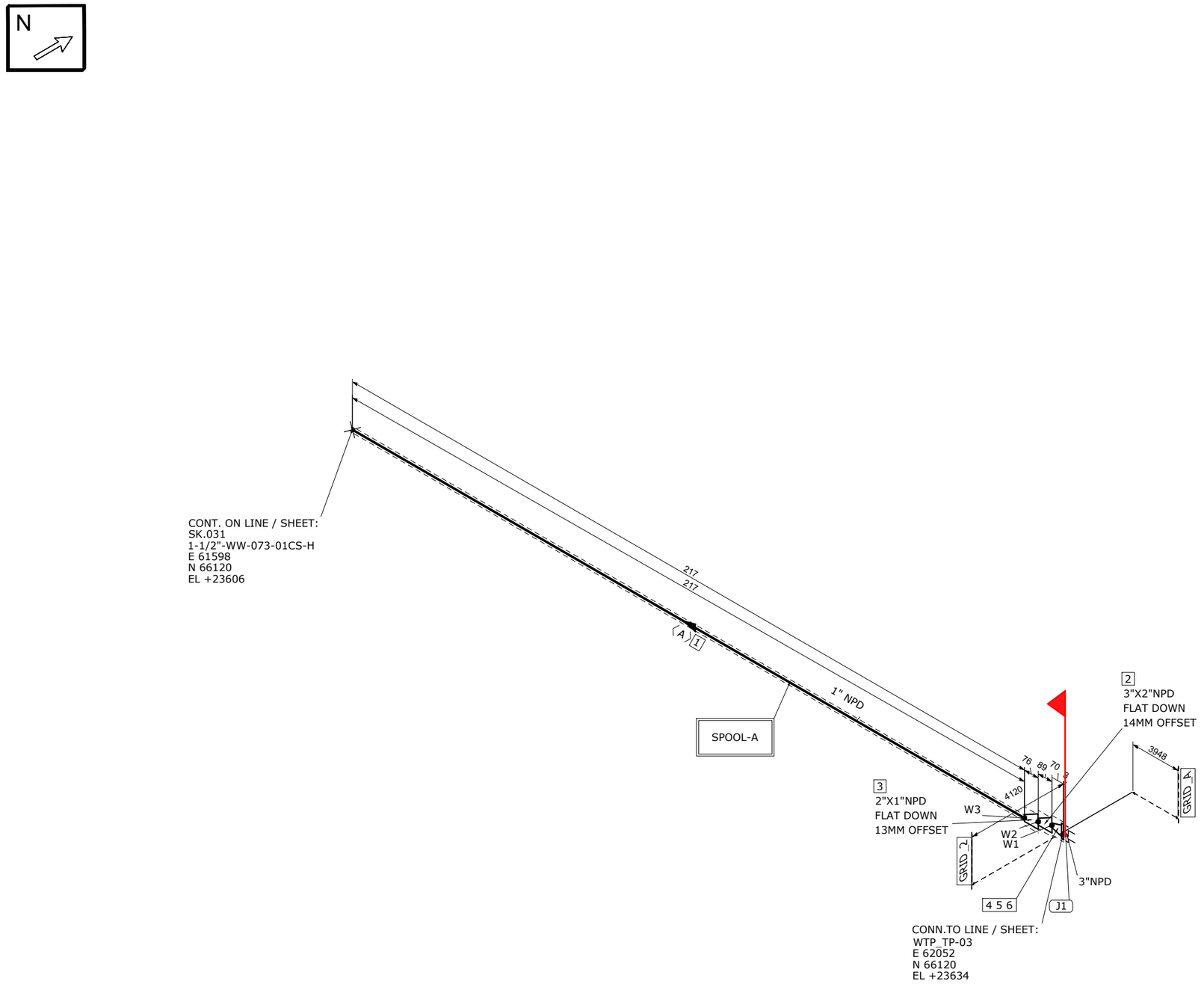
MASTER

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DI-012-01CS-H
SK.007

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-00007
SHEET / OF: 1/1
REV.: 00



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	0.2M	0.7
2	3X2	REE0CS13010302	Reducer Eccentric ASME B16.9 BW 5,49x5,54 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
3	2X1	REE0CS15650201	Reducer Eccentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
4	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]
5	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.2
6	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	6.8
ERECTION WEIGHT [kg]	1.2
OVERALL WEIGHT [kg]	8.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	2	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	217	BEVEL	BEVEL

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	6.8
MONT	0	1.2

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"-SWR-045-01CS-H

SK.029

55-01-TP-003

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-00029 | SHEET / OF: 1/1 | REV.: 00

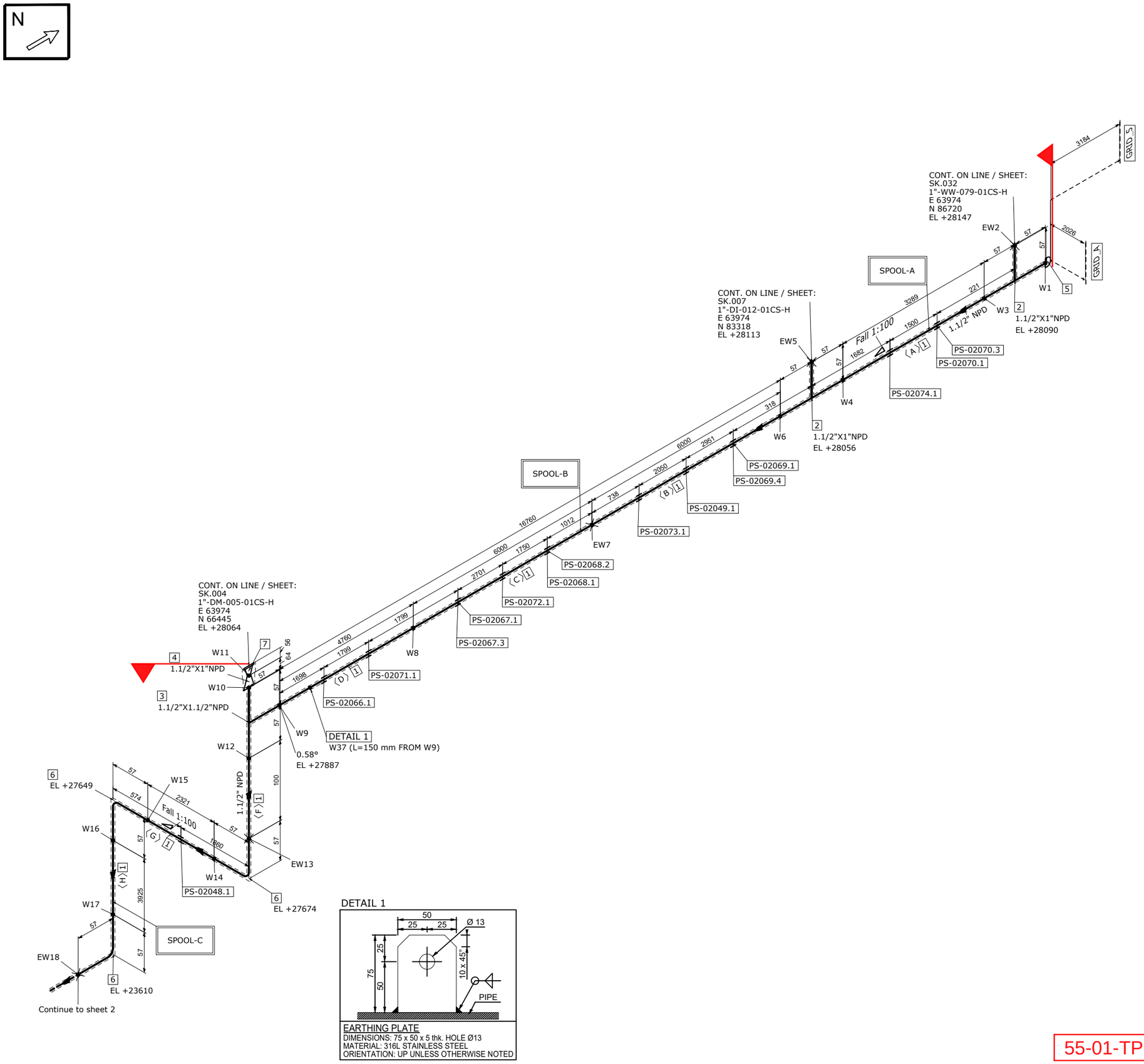
LINE DATA

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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	26.4M	142.8
2	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	2.0
3	1.1/2X1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1
4	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.4
5	1.1/2	CAP0CS05071H00	Cap ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.3
6	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
7	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]	149.5
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	149.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1.1/2	BW
EW2	1	BW
W3	1.1/2	BW
W4	1.1/2	BW
EW5	1	BW
W6	1.1/2	BW
EW7	1.1/2	BW
W8	1.1/2	BW
W9	1.1/2	BW
W10	1.1/2	BW
W11	1	BW
W12	1.1/2	BW
EW13	1.1/2	BW
W14	1.1/2	BW
W15	1.1/2	BW
W16	1.1/2	BW
W17	1.1/2	BW
EW18	1.1/2	BW
W37		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	3289	BEVEL	BEVEL
B	1.1/2	6000	BEVEL	BEVEL
C	1.1/2	6000	BEVEL	BEVEL
D	1.1/2	4760	BEVEL	BEVEL
F	1.1/2	100	BEVEL	BEVEL
G	1.1/2	2321	BEVEL	BEVEL
H	1.1/2	3925	BEVEL	BEVEL

SUPPORT LIST

PS-02070.3
PS-02070.1
PS-02074.1
PS-02069.1
PS-02069.4
PS-02049.1
PS-02073.1
PS-02068.2
PS-02068.1
PS-02072.1
PS-02067.1
PS-02067.3
PS-02071.1
PS-02066.1
PS-02048.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	52.5
B	7	61.6
C	6	35.3
MONT	6.5	0.0

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

CROSSWIND

ROSETTI MARINO

55-01-TP-003

MASTER

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-WW-073-01CS-H
SK.031

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-00031 | SHEET / OF: 1/3 | REV.: 00

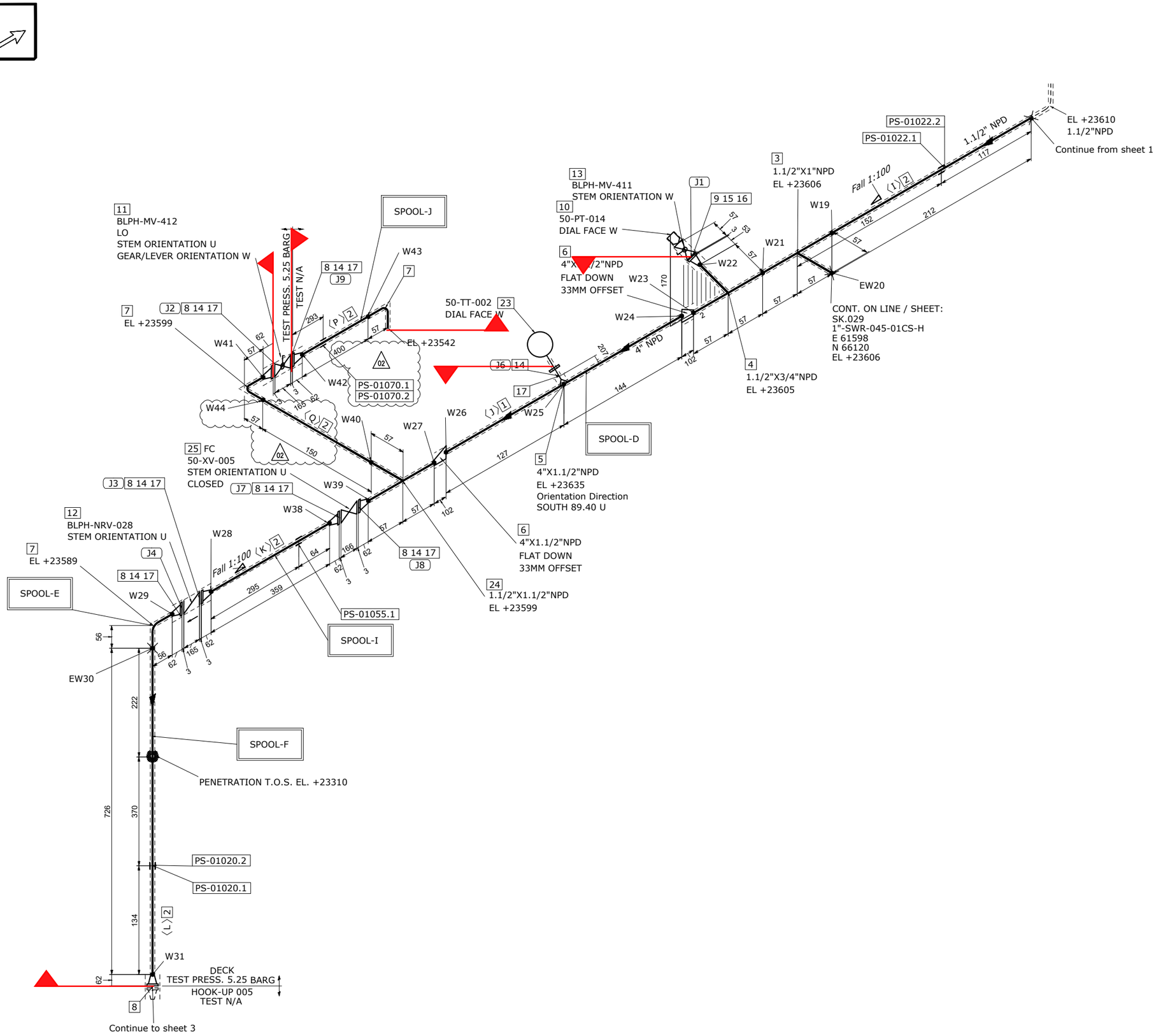
LINE DATA

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-80025
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	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1 02
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H
SK.031

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 14-10-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00031 | SHEET / OF: 2/3 | REV.: 02

55-01-TP-003

MASTER

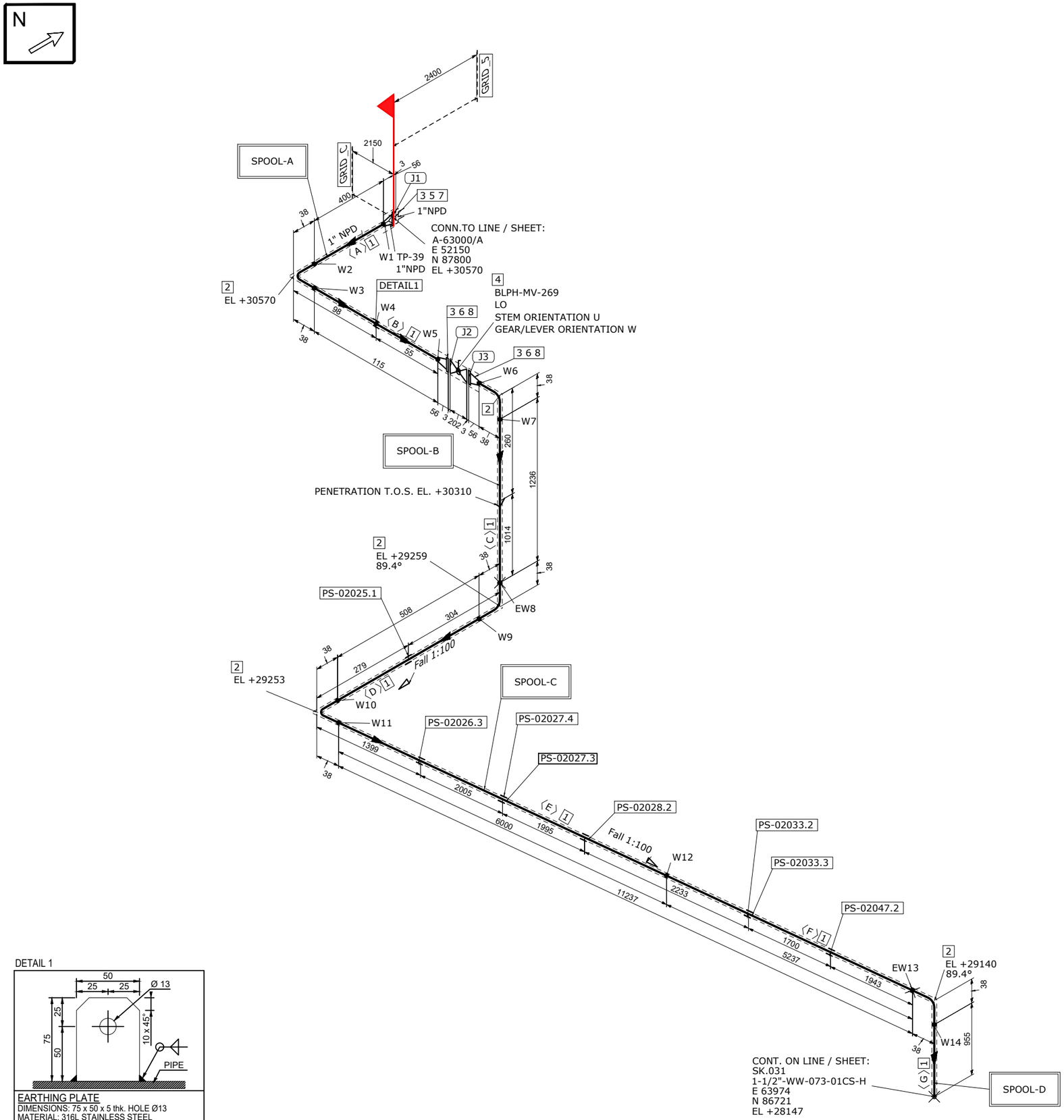
LINE DATA

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-80025
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



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	14.5M	46.9
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	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
5	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
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	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
8	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]	52.0
ERECTION WEIGHT [kg]	14.2
OVERALL WEIGHT [kg]	66.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4		FW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
EW13	1	BW
W14	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	400	BEVEL	BEVEL
B	1	115	BEVEL	BEVEL
C	1	1236	BEVEL	BEVEL
D	1	508	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	5237	BEVEL	BEVEL
G	1	955	BEVEL	BEVEL

SUPPORT LIST

PS-02025.1
PS-02026.3
PS-02027.3
PS-02027.4
PS-02028.2
PS-02033.2
PS-02033.3
PS-02047.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	4	4.7
B	2	5.6
C	4	38.4
D	1	3.3
MONT	2	14.2

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-80027
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

55-01-TP-003

MASTER

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-079-01CS-H

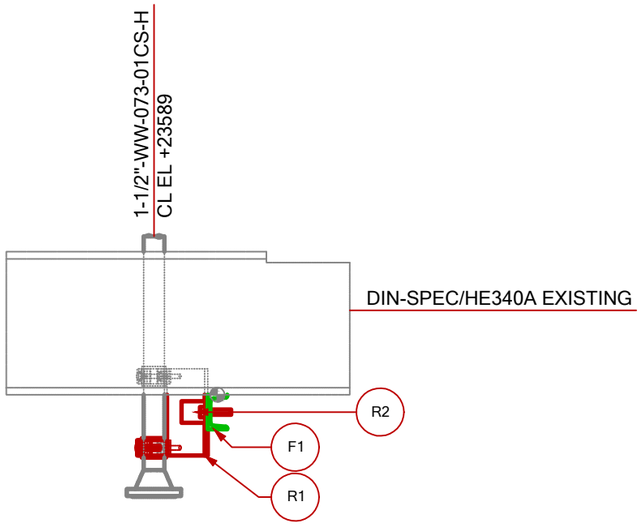
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CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM
DATE: 27-08-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00032
SHEET / OF: 1/1
REV.: 00

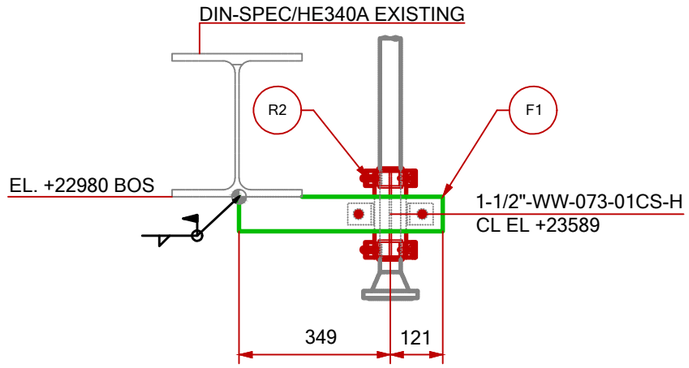
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

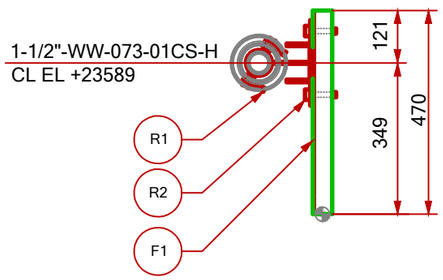
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01025	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-64 - 1.1/2" - 100 - 200		1	3,999	0,108	01	04/11/2024	AFC		TP-003
PS-01026	B2	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	01	04/11/2024	AFC		TP-003
PS-01022	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-01023	B2	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	01	04/11/2024	AFC		TP-003
PS-01055	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-71 - 1.1/2" - 100		1	2,911	0,082	01	04/11/2024	AFC		TP-003
PS-01070	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-64 - 1.1/2" - 100 - 200		1	3,999	0,108	01	04/11/2024	AFC		TP-003
PS-01076	B2	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	01	04/11/2024	AFC		TP-003
PS-02001	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 96 - 90 - 200		1	4,626	0,034	01	04/11/2024	AFC		TP-003
PS-02002	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 98 - 90 - 200		1	4,634	0,034	01	04/11/2024	AFC		TP-003
PS-02003	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 98 - 90 - 200		1	4,634	0,034	01	04/11/2024	AFC		TP-003
PS-02003	B2	PIP	UPPER DECK		1"-DI-012-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	01	04/11/2024	AFC		TP-003
PS-02025	B1	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02026	B3	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02027	B3	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02027	B4	PIP	UPPER DECK		1"-WW-079-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	01	04/11/2024	AFC		TP-003
PS-02028	B2	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02033	B2	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02033	B3	PIP	UPPER DECK		1"-WW-079-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	01	04/11/2024	AFC		TP-003
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PS-02048	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 97 - 91 - 200		1	5,014	0,040	01	04/11/2024	AFC		TP-003
PS-02049	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02066	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02067	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02067	B3	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02068	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02068	B2	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02069	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02069	B4	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02070	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02070	B2	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02071	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02072	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02073	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02074	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02140	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 98 - 90 - 200		1	4,634	0,034	01	04/11/2024	AFC		TP-003



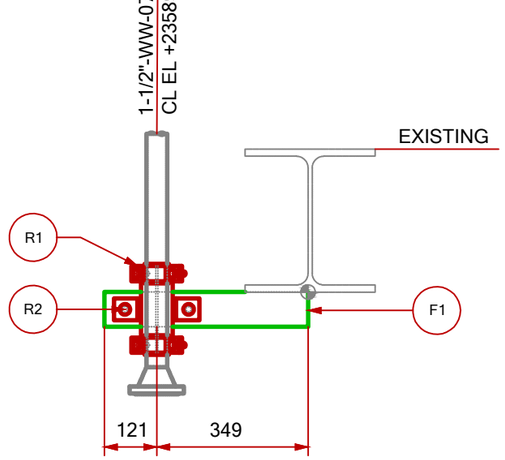
VIEW LOOKING NORTH



VIEW LOOKING WEST



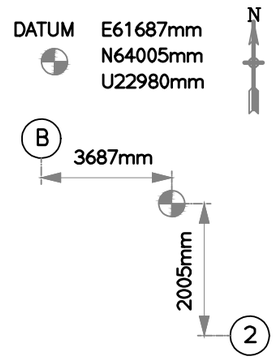
PLAN VIEW

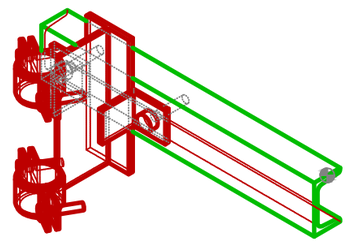


VIEW LOOKING EAST

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-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN80	Carbon Steel	470	1	8.66	4.07	0.149
						TOTAL	10.1	0.28





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

CROSSWIND

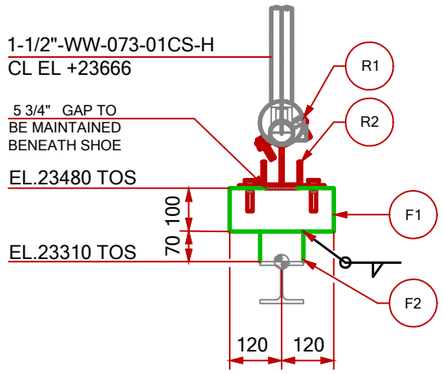
ROSETTI MARINO

TITLE :

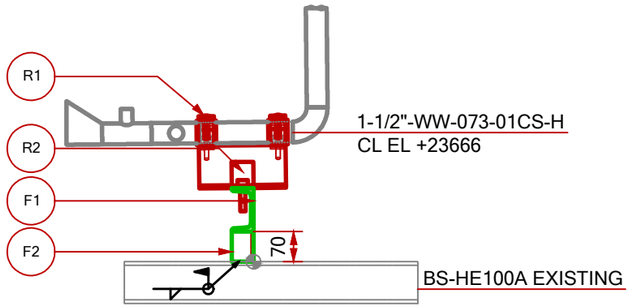
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01020

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

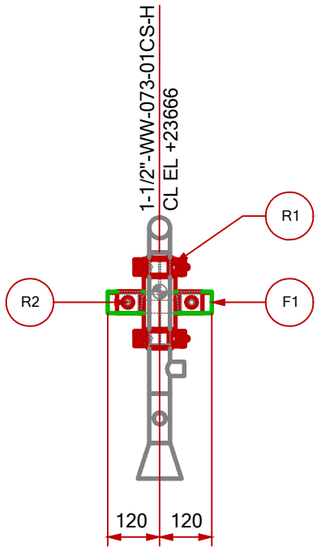
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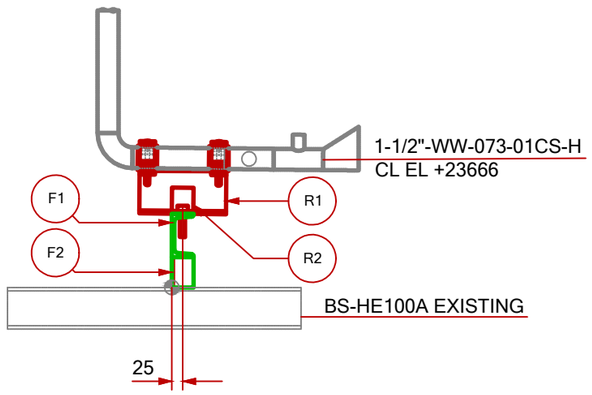
VIEW LOOKING NORTH



VIEW LOOKING WEST



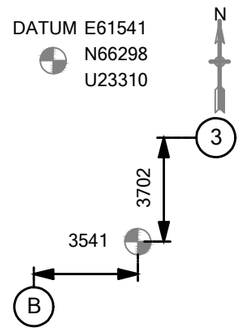
PLAN VIEW

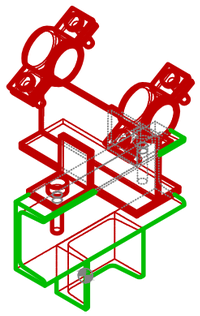


VIEW LOOKING EAST

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-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
R2	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
F2	BEAM	UPN100	Carbon Steel	70	1	10.57	0.74	0.029
						TOTAL	10.3	0.18





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

CROSSWIND

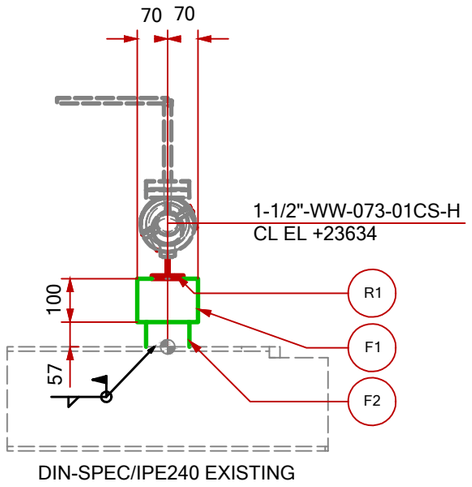
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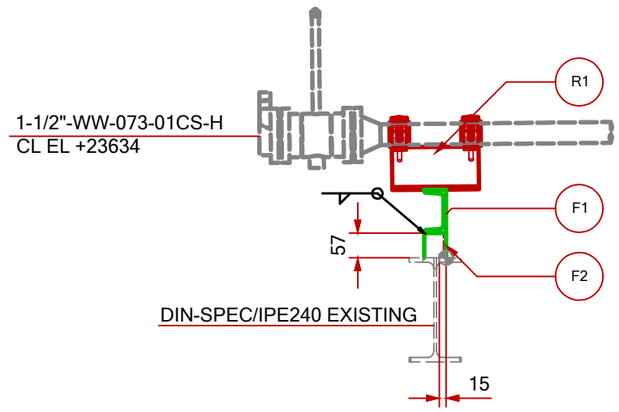
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01022

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

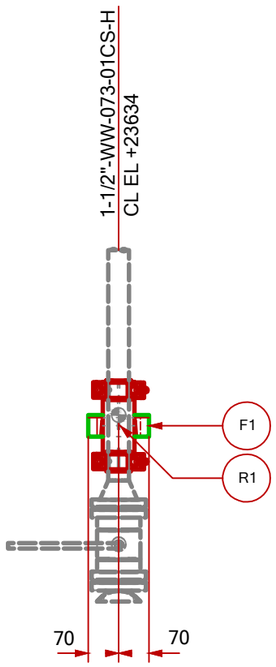
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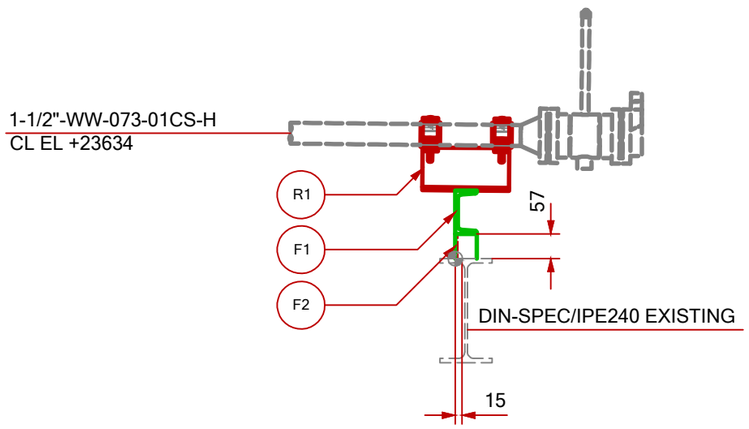
VIEW LOOKING NORTH



VIEW LOOKING WEST



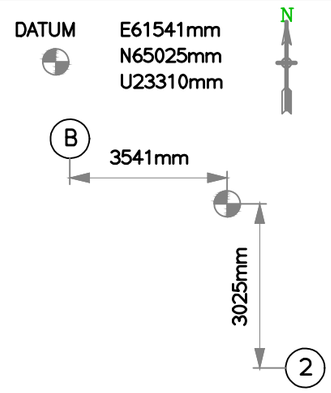
PLAN VIEW

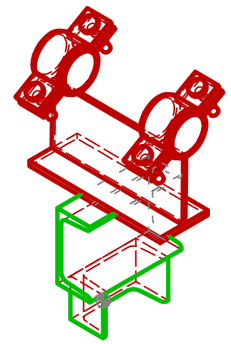


VIEW LOOKING EAST

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-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
F1	BEAM	UPN100	Carbon Steel	140	1	10.57	1.48	0.055
F2	BEAM	UPN100	Carbon Steel	57	1	10.57	0.60	0.024
						TOTAL	7.1	0.12





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

CROSSWIND

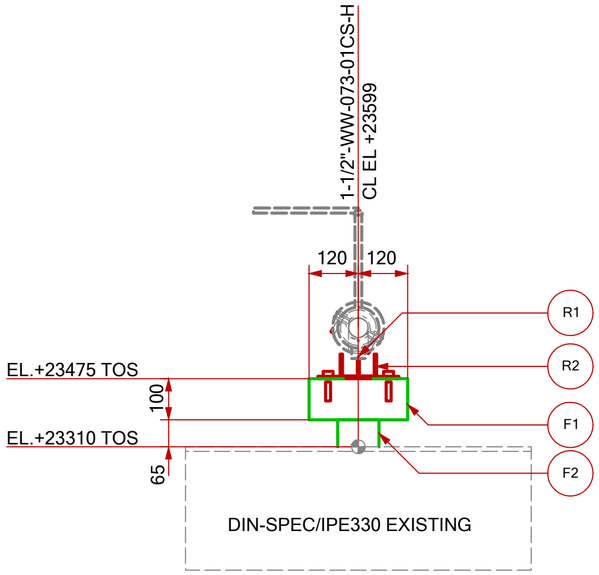
ROSETTI MARINO

TITLE :

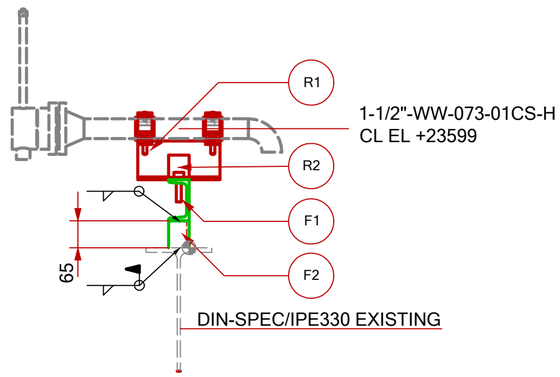
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01055

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

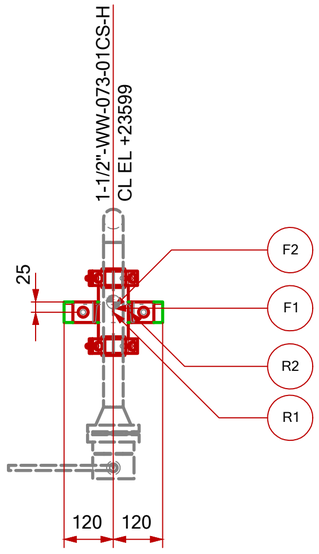
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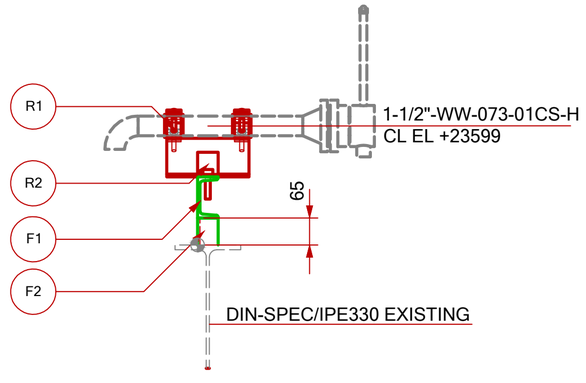
VIEW LOOKING NORTH



VIEW LOOKING WEST



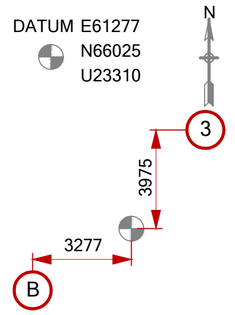
PLAN VIEW

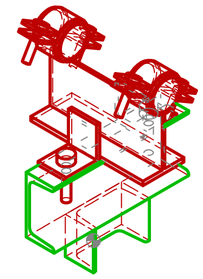


VIEW LOOKING EAST

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-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
F2	BEAM	UPN100	Carbon Steel	65	1	10.57	0.69	0.027
						TOTAL	9.3	0.25





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/11/24	MMA	SLO	DLO	ACCEPTED FOR CONSTRUCTION

CROSSWIND

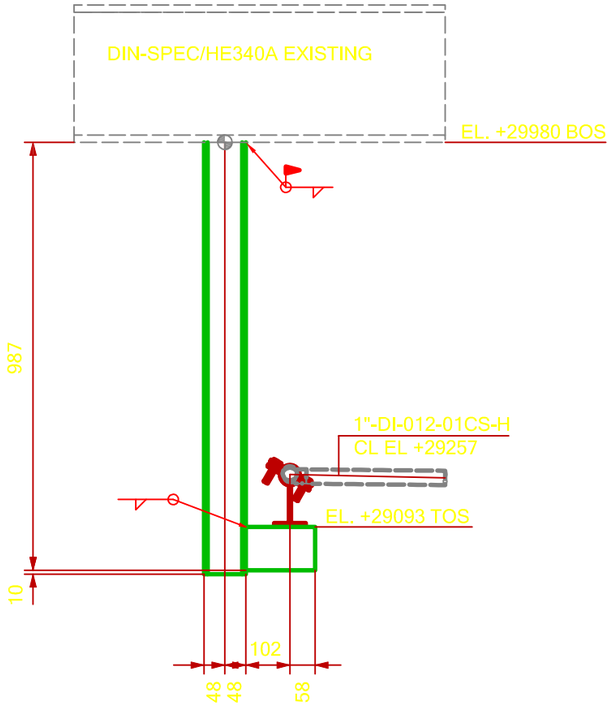
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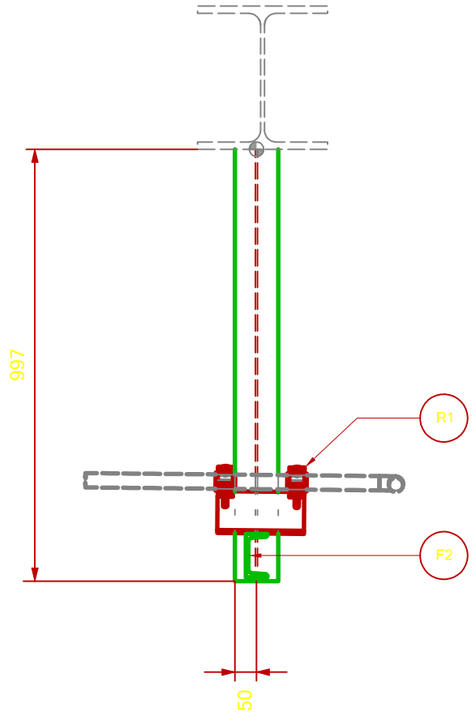
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01070

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:10
DRAWN	CHECKED	APPROVED	DATE 04/11/24
	DRAWING NO. 123A90-DDL-PP-DD-72000	SHEET 1 of 1	REV. 01

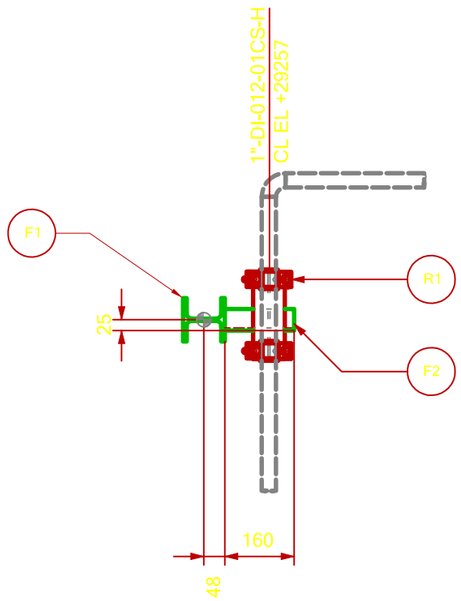
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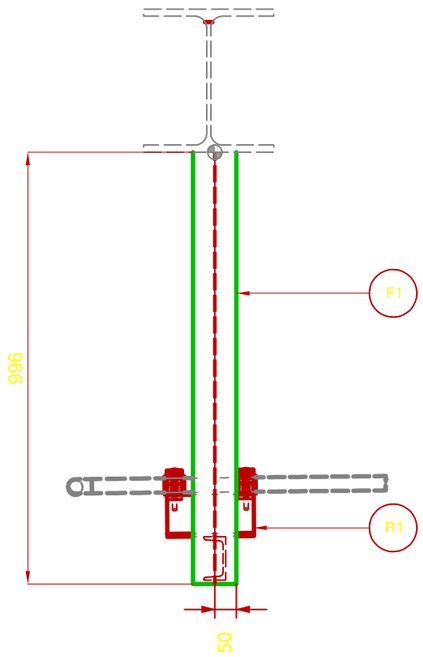
VIEW LOOKING NORTH



VIEW LOOKING WEST



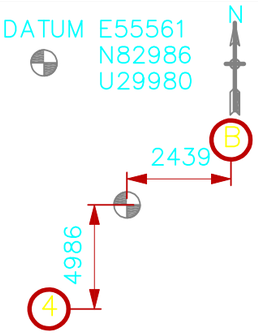
PLAN VIEW

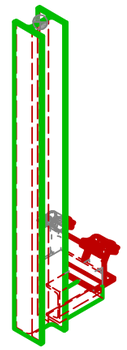


VIEW LOOKING EAST

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*-96-90-200	-	-	1	-	4,63	0,034
F1	BEAM	HEA100	Carbon Steel	997	1	16,76	16,69	0,565
F2	BEAM	UPN100	Carbon Steel	160	1	10,57	1,69	0,062
						TOTAL	23,0	0,66





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

CROSSWIND

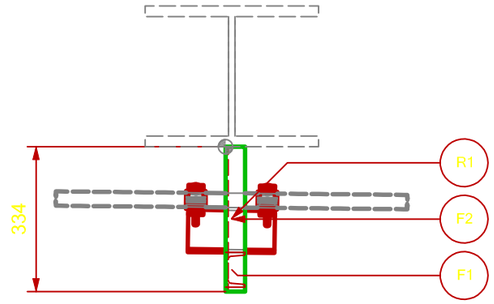
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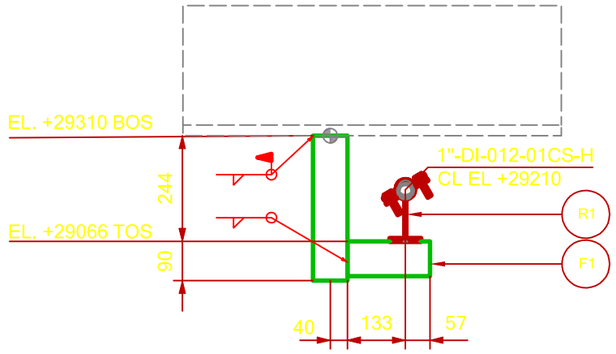
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02001

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

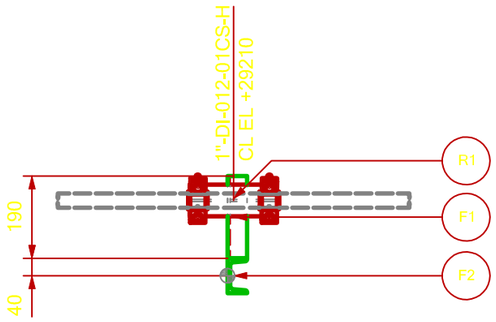
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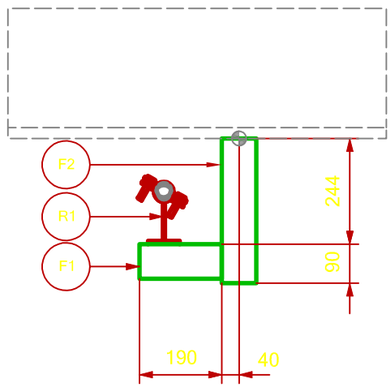
VIEW LOOKING NORTH



VIEW LOOKING WEST



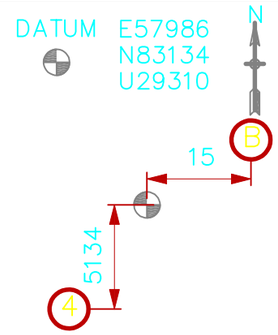
PLAN VIEW

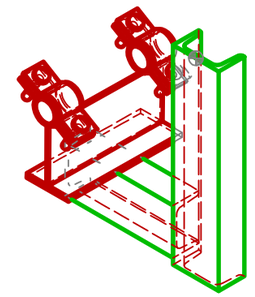


VIEW LOOKING EAST

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"-98-90-200	-	-	1	-	4,63	0,034
F1	BEAM	UPN80	Carbon Steel	100	1	8,66	1,65	0,062
F2	BEAM	UPN80	Carbon Steel	334	1	8,66	2,89	0,107
						TOTAL	9,2	0,20





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

CROSSWIND

ROSETTI MARINO

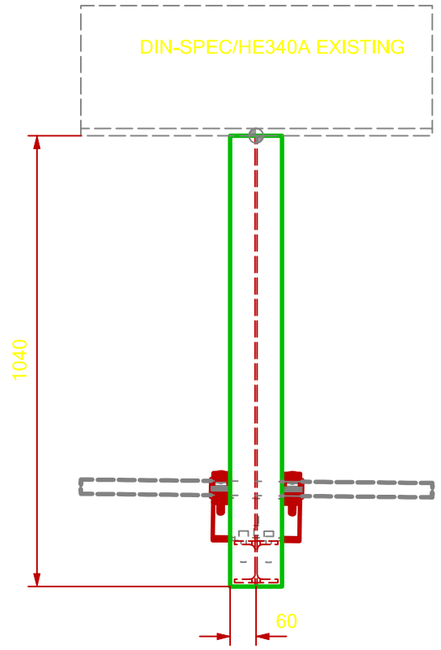
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

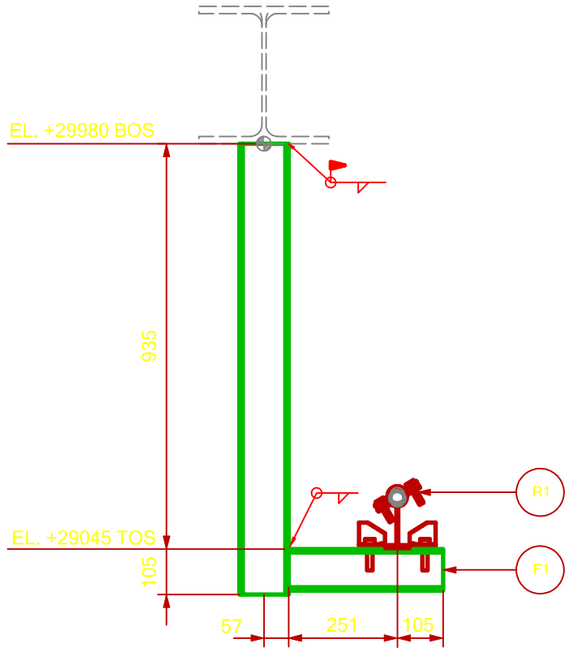
PS-02002

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

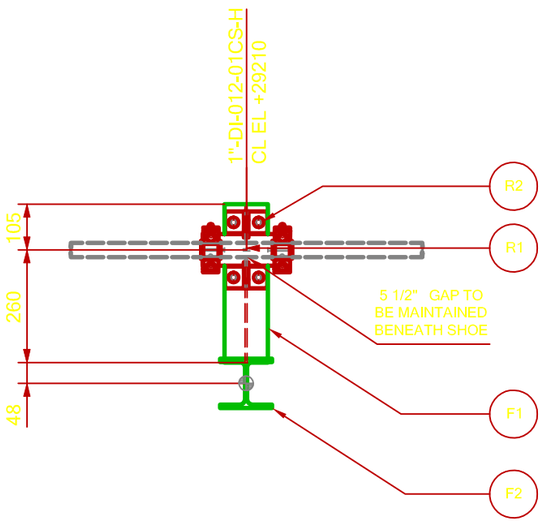
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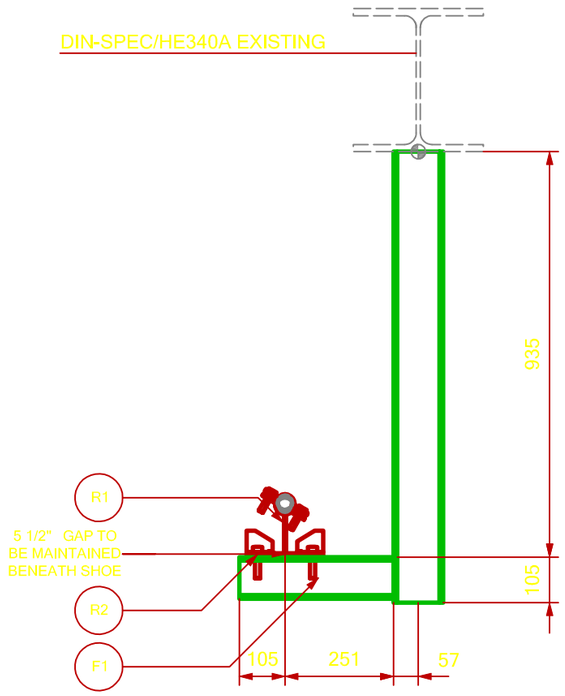
VIEW LOOKING NORTH



VIEW LOOKING WEST



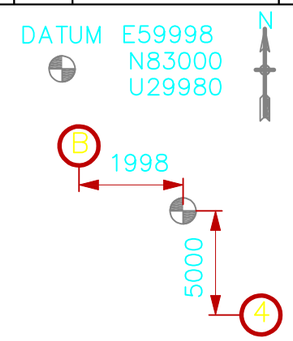
PLAN VIEW

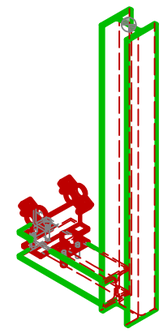


VIEW LOOKING EAST

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"-98-90-200	-	-	1	-	4,63	0,034
R2	STD	C-53-2-A-2	-	-	1	-	4,30	0,044
F1	BEAM	HEA100	Carbon Steel	356	1	16,76	6,12	0,209
F2	BEAM	HEA120	Carbon Steel	1040	1	19,98	20,78	0,709
						TOTAL	35,8	1,00





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

CROSSWIND

ROSETTI MARINO

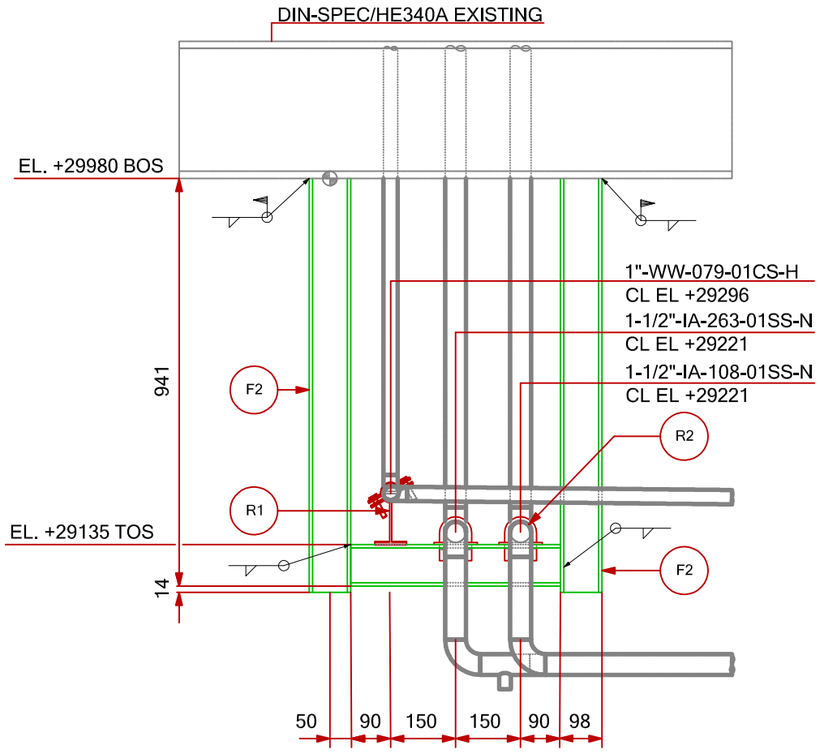
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

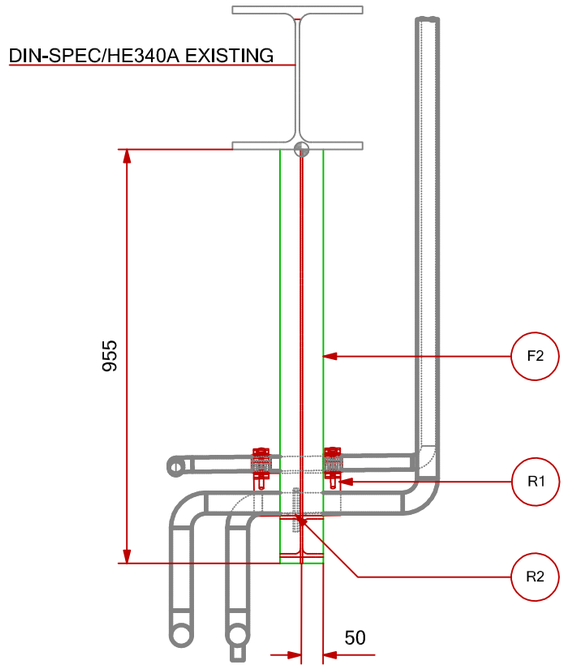
PS-02003

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

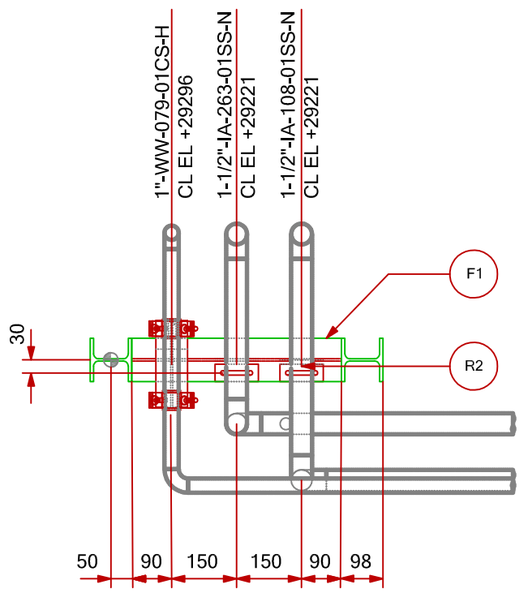
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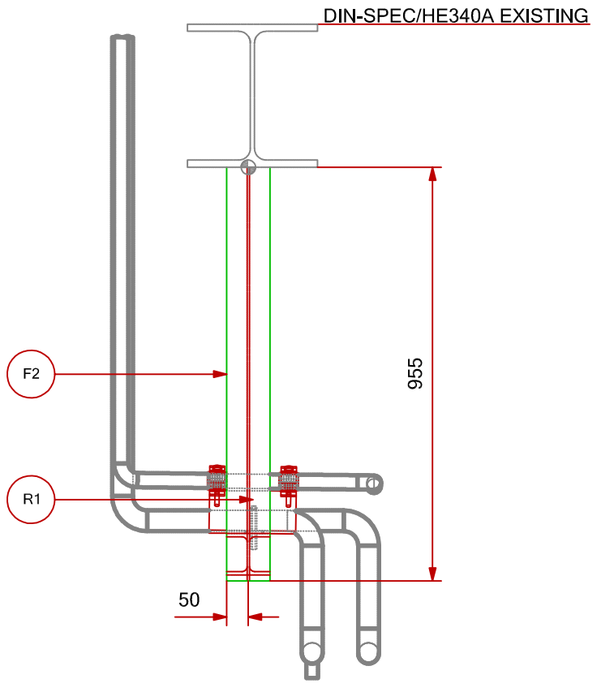
VIEW LOOKING NORTH



VIEW LOOKING WEST



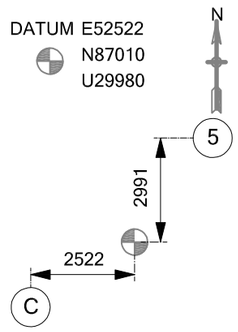
PLAN VIEW

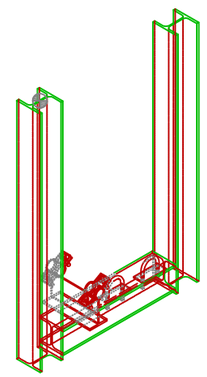


VIEW LOOKING EAST

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
R2	STD	S-211-1 1/2"	-	-	2	-	0.49	-
F1	BEAM	HEA100	CarbonSteel	480	1	16.76	8.05	0.274
F2	BEAM	HEA100	CarbonSteel	955	2	16.76	32.00	1.080
						TOTAL	45.7	1.39





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

CROSSWIND

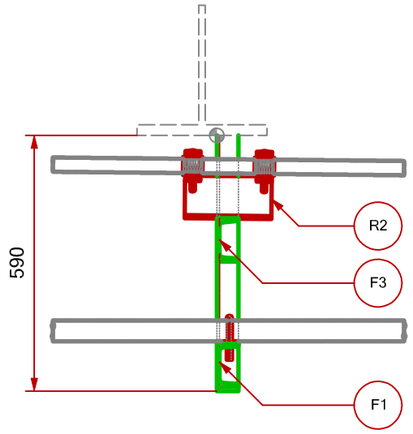
ROSETTI MARINO

TITLE :

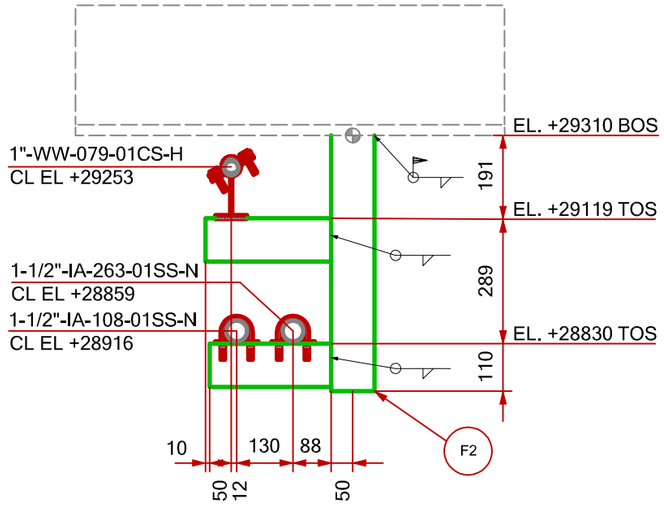
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02025

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

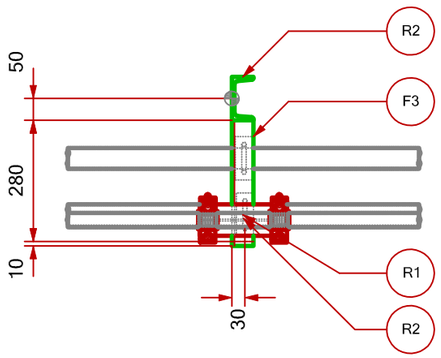
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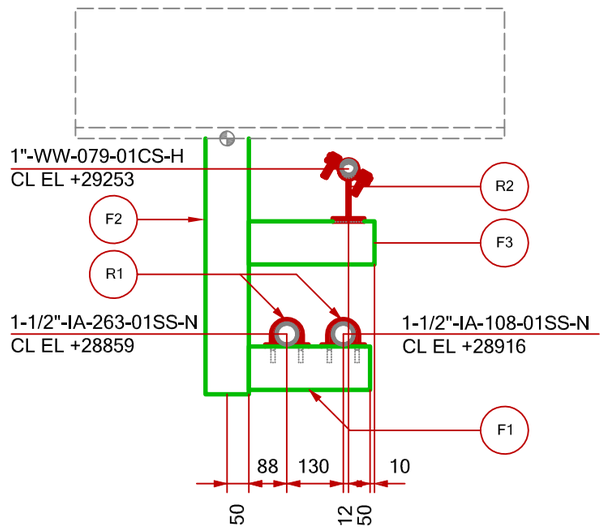
VIEW LOOKING NORTH



VIEW LOOKING WEST



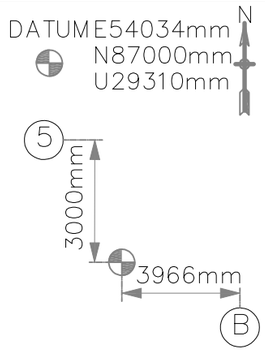
PLAN VIEW

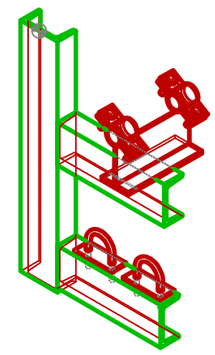


VIEW LOOKING EAST

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-211-1 1/2"	-	-	2	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN100	Carbon Steel	280	1	10.57	2.96	0.107
F2	BEAM	UPN100	Carbon Steel	590	1	10.57	6.24	0.222
F3	BEAM	UPN100	Carbon Steel	290	1	10.57	3.07	0.110
						TOTAL	17.9	0.47





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

CROSSWIND

ROSETTI MARINO

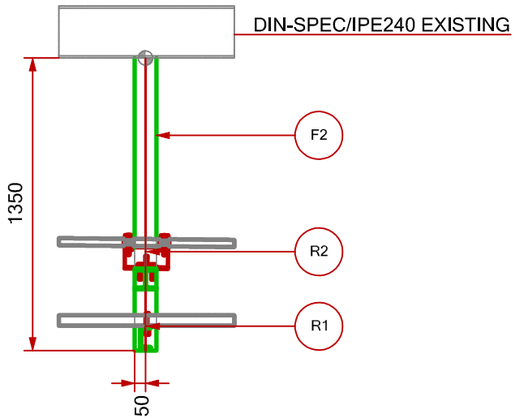
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

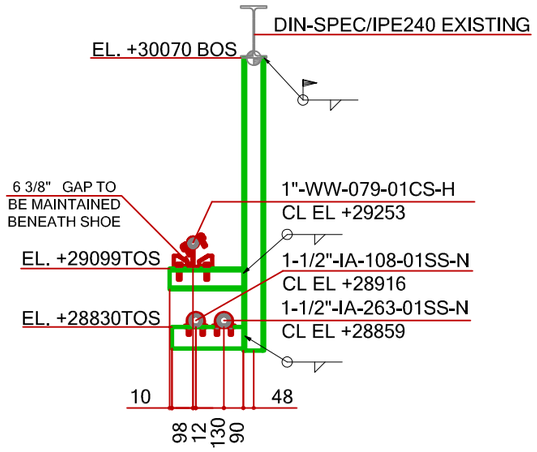
PS-02026

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

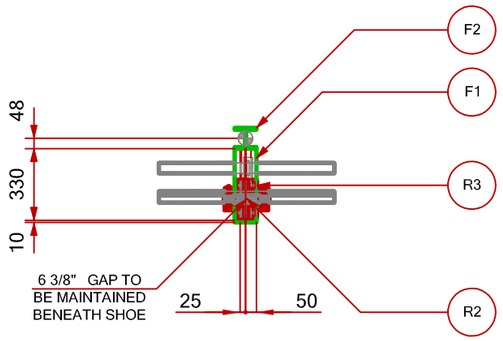
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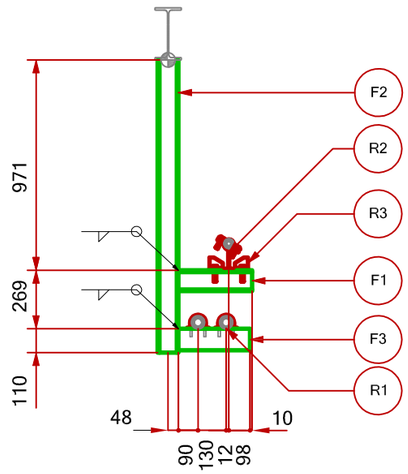
VIEW LOOKING NORTH



VIEW LOOKING WEST



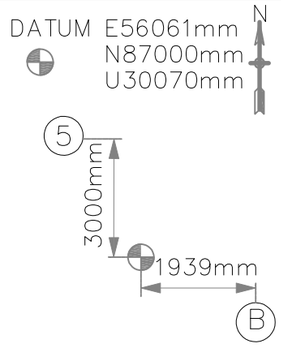
PLAN VIEW

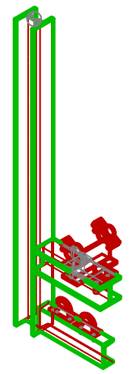


VIEW LOOKING EAST

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-211-1 1/2"	-	-	2	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R3	STD	C-33-2-A-2	-	-	1	-	4.30	0.044
F1	BEAM	HEA100	Carbon Steel	340	1	16.76	5.70	0.195
F2	BEAM	HEA100	Carbon Steel	1350	1	16.76	22.63	0.762
F3	BEAM	UPN100	Carbon Steel	330	1	10.57	3.49	0.125
						TOTAL	41.7	1.16





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

CROSSWIND

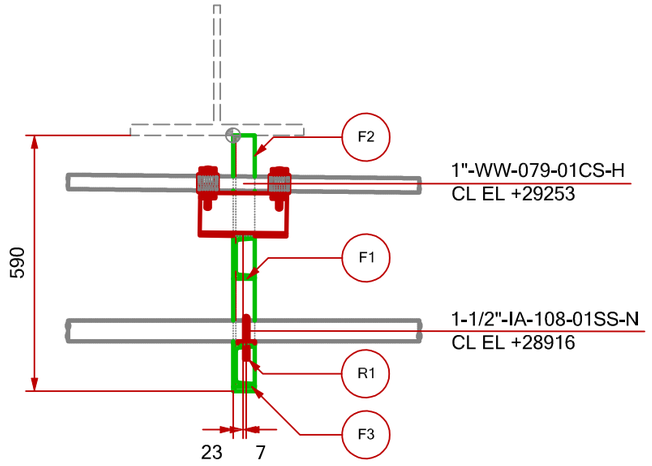
ROSETTI MARINO

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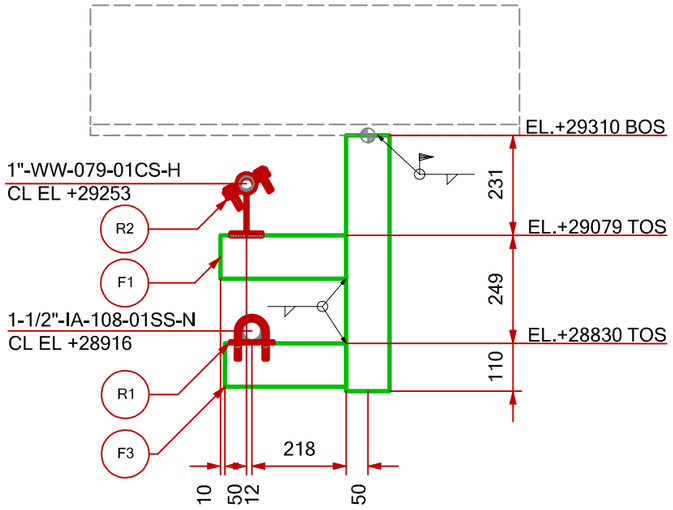
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02027

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

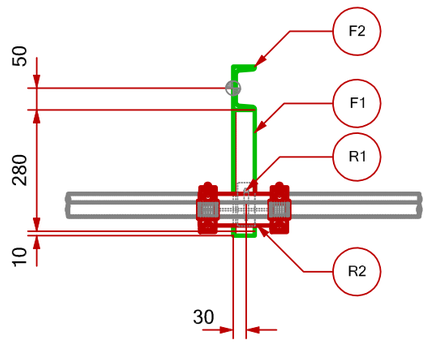
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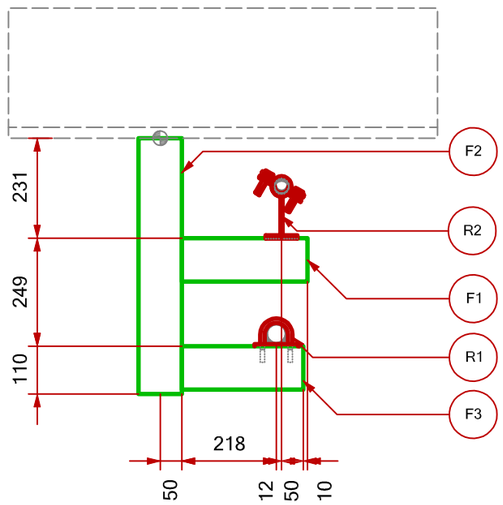
VIEW LOOKING NORTH



VIEW LOOKING WEST



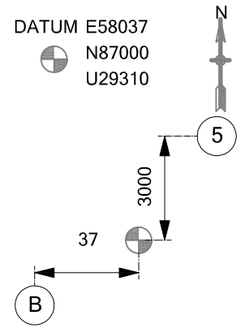
PLAN VIEW

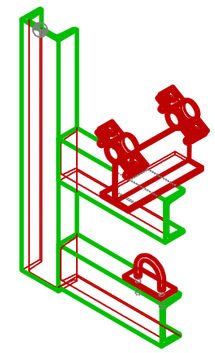


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN100	Carbon Steel	290	1	10.57	3.07	0.110
F2	BEAM	UPN100	Carbon Steel	590	1	10.57	6.24	0.222
F3	BEAM	UPN100	Carbon Steel	280	1	10.57	2.96	0.107
						TOTAL	17.4	0.47





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

CROSSWIND

ROSETTI MARINO

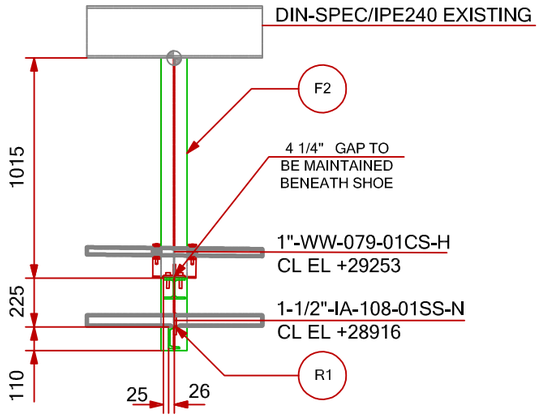
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

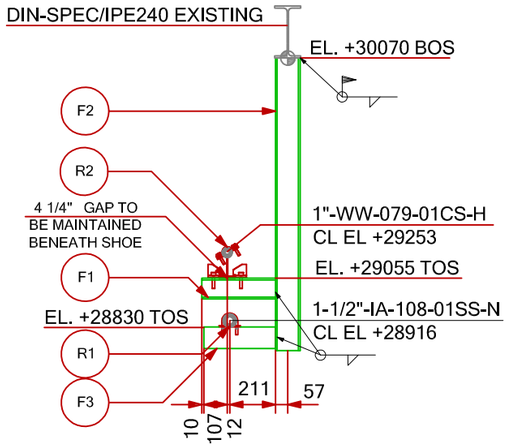
PS-02028

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

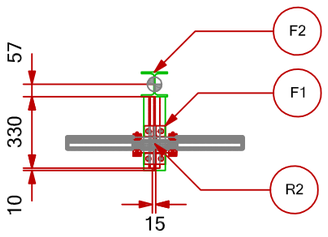
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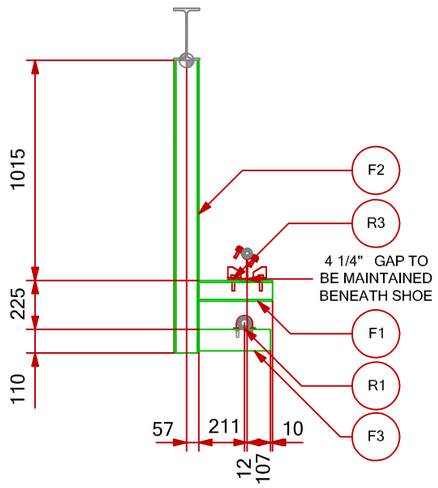
VIEW LOOKING NORTH



VIEW LOOKING WEST



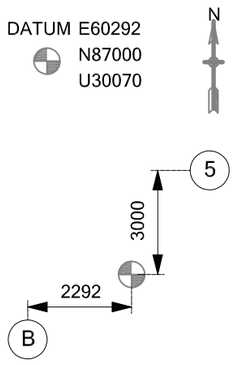
PLAN VIEW

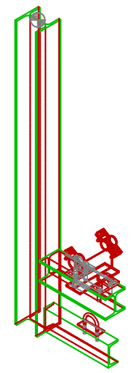


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R3	STD	C-33-2-A-2	-	-	1	-	4.30	0.044
F1	BEAM	HEA100	Carbon Steel	340	1	16.76	5.70	0.195
F2	BEAM	HEA120	Carbon Steel	1350	1	19.98	26.97	0.919
F3	BEAM	UPN100	Carbon Steel	330	1	10.57	3.49	0.125
						TOTAL	45.6	1.32





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

CROSSWIND

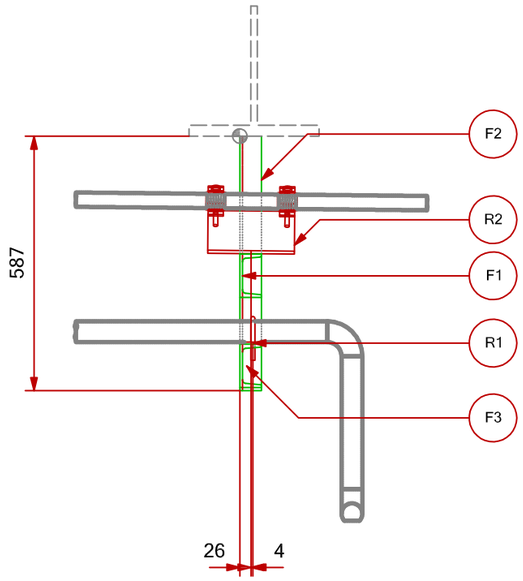
ROSETTI MARINO

TITLE :

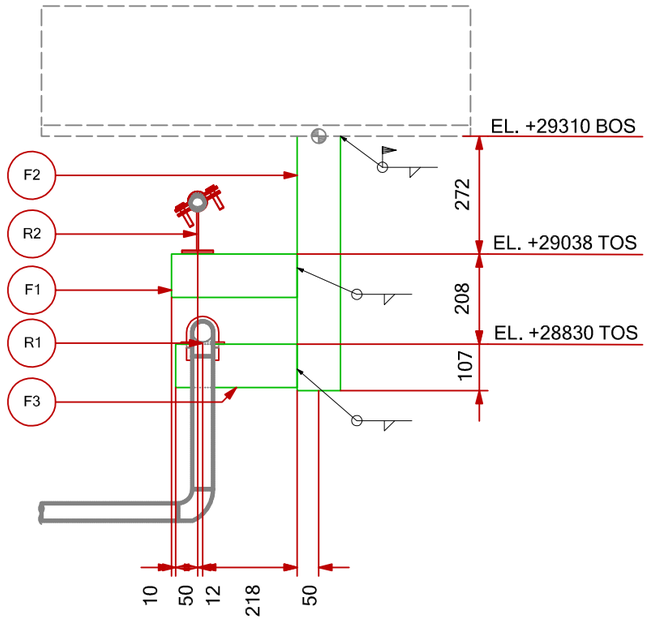
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02033

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

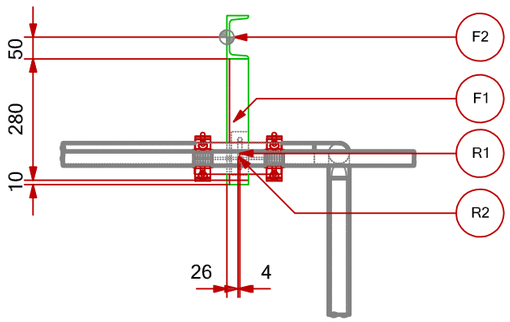
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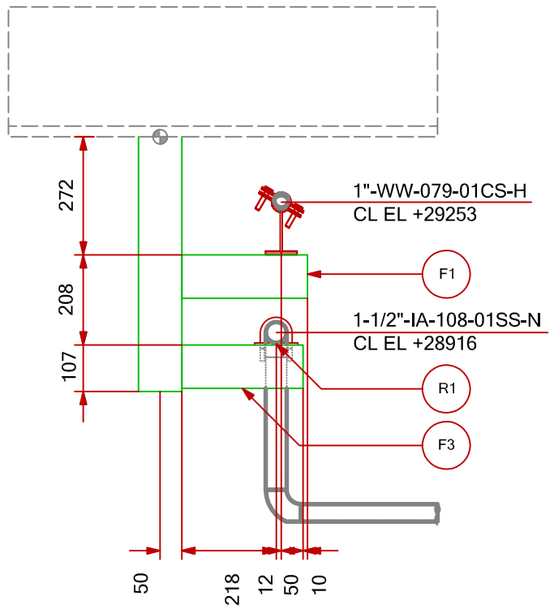
VIEW LOOKING NORTH



VIEW LOOKING WEST



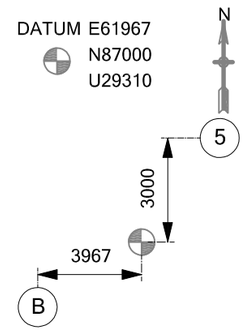
PLAN VIEW

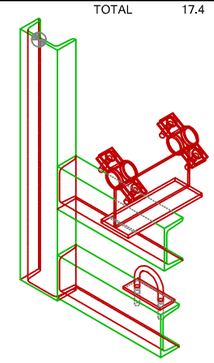


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN100	Carbon Steel	290	1	10.57	3.07	0.110
F2	BEAM	UPN100	Carbon Steel	587	1	10.57	6.21	0.221
F3	BEAM	UPN100	Carbon Steel	280	1	10.57	2.96	0.107
						TOTAL	17.4	0.47





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

CROSSWIND

ROSETTI MARINO

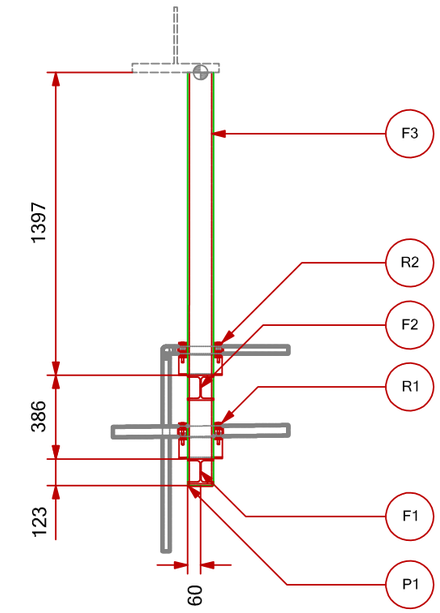
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BASE LOAD POWER HUB (BLPH)
Support Drawings

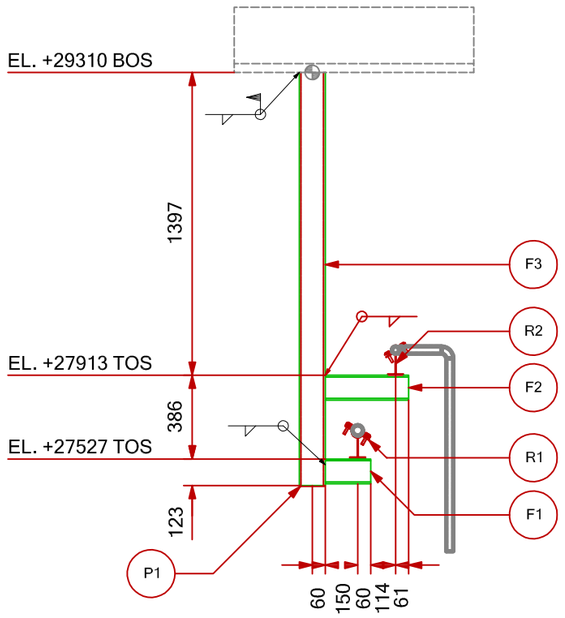
PS-02047

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

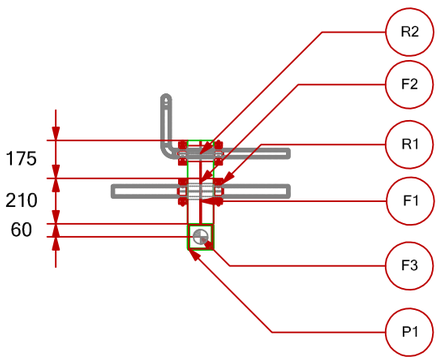
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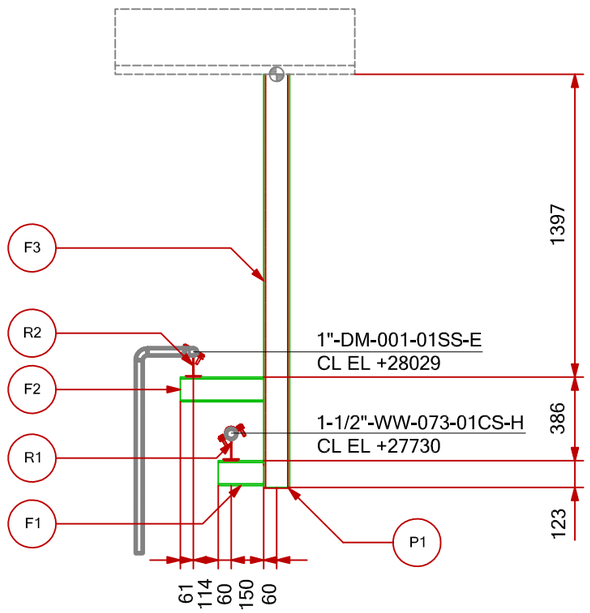
VIEW LOOKING NORTH



VIEW LOOKING WEST



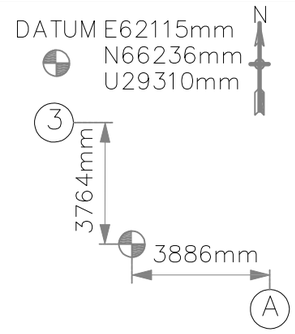
PLAN VIEW

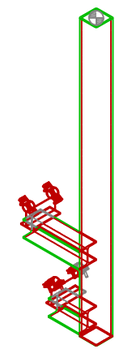


VIEW LOOKING EAST

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-75-1.1/2"-97-91-200	-	-	1	-	5.01	0.040
R2	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	HEA120	Carbon Steel	210	1	19.98	4.20	0.147
F2	BEAM	HEA120	Carbon Steel	385	1	19.98	7.69	0.266
F3	BEAM	RHS120x120x8	Carbon Steel	1906	1	27.79	52.97	1.675
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	74.0	2.24





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

CROSSWIND

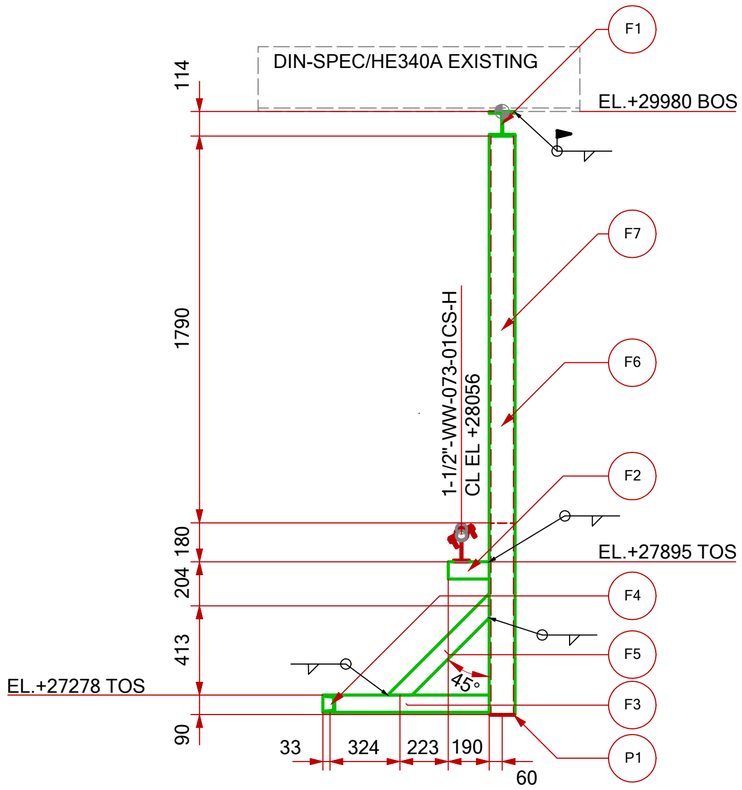
ROSETTI MARINO

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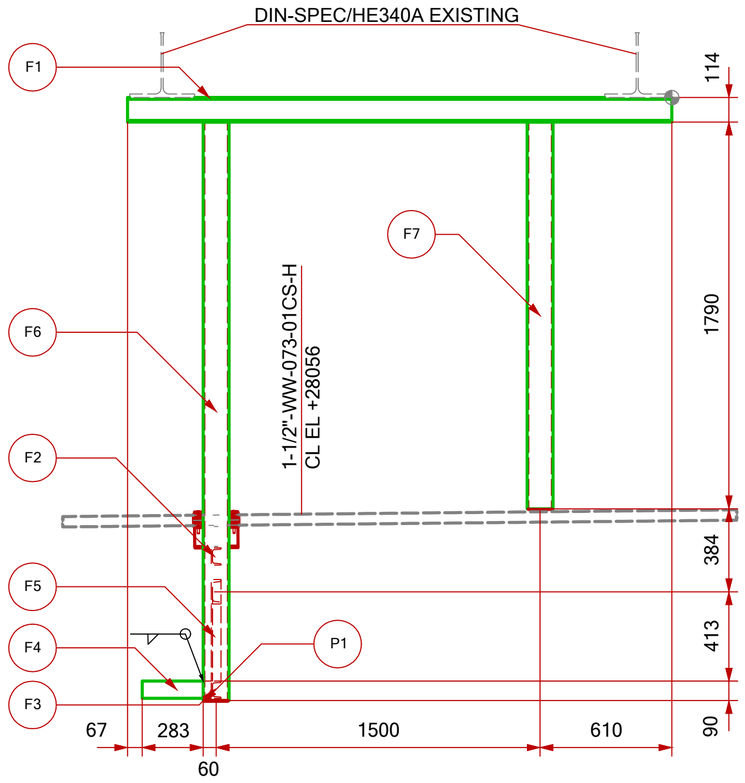
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02048

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

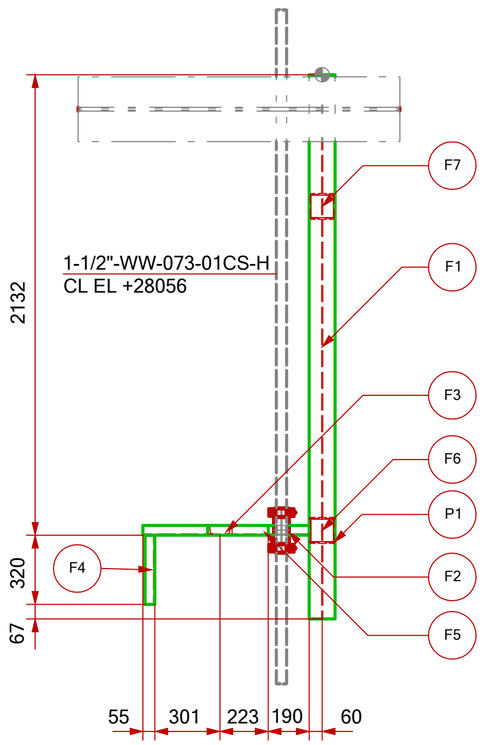
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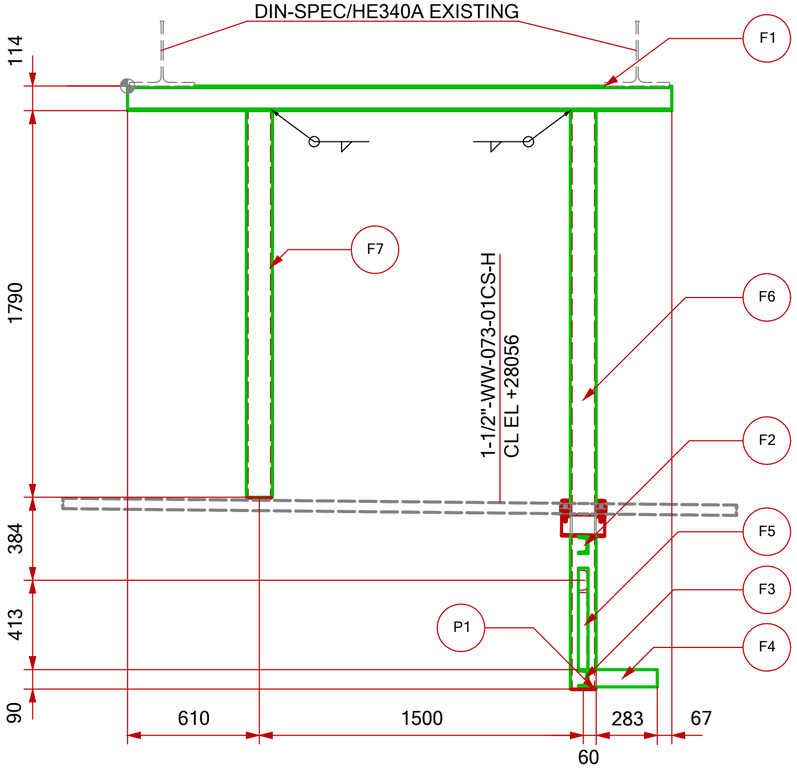
VIEW LOOKING NORTH



VIEW LOOKING WEST



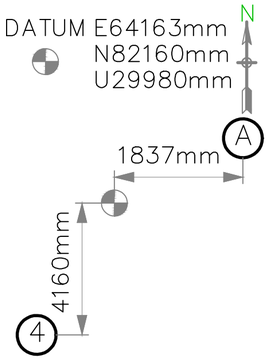
PLAN VIEW

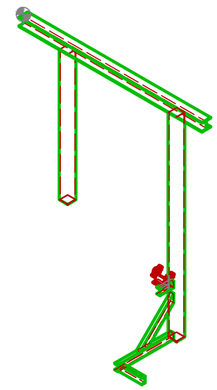


VIEW LOOKING EAST

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-211-1"	-	-	1	-	0.29	-
F1	BEAM	HEA120	Carbon Steel	2520	1	19.98	50.35	1.711
F2	BEAM	UPN80	Carbon Steel	190	1	8.66	1.65	0.062
F3	BEAM	UPN80	Carbon Steel	770	1	8.66	6.67	0.243
F4	BEAM	UPN80	Carbon Steel	320	1	8.66	2.77	0.102
F5	BEAM	UPN80	Carbon Steel	665	1	7.62	5.07	0.186
F6	BEAM	RHS120x120x8	Carbon Steel	2678	1	27.79	74.42	2.350
F7	BEAM	RHS120x120x8	Carbon Steel	1790	1	27.79	49.75	1.573
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	191.2	6.24





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

CROSSWIND

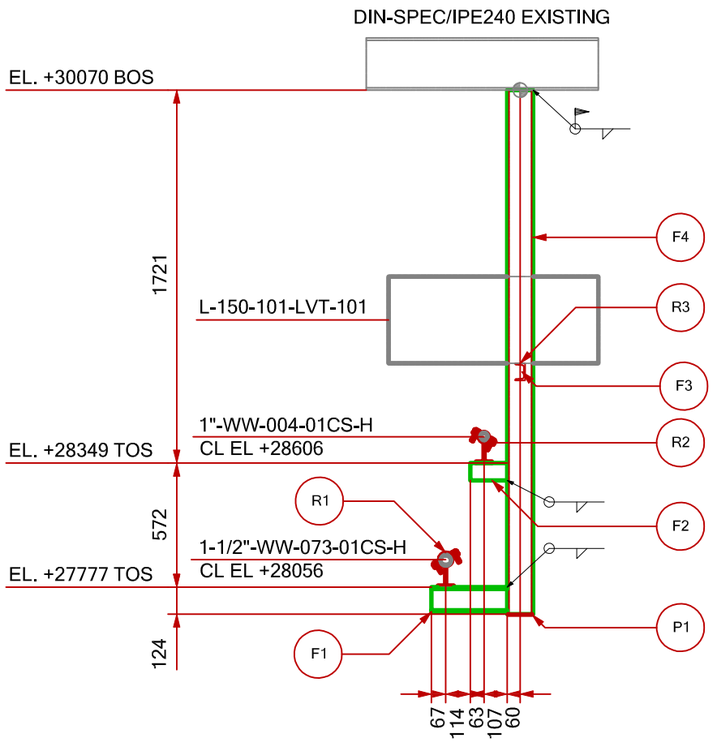
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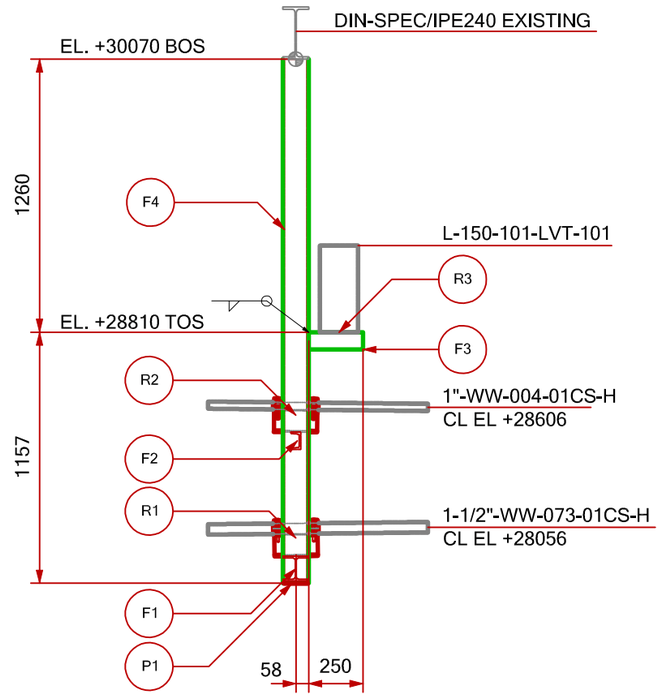
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02049

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

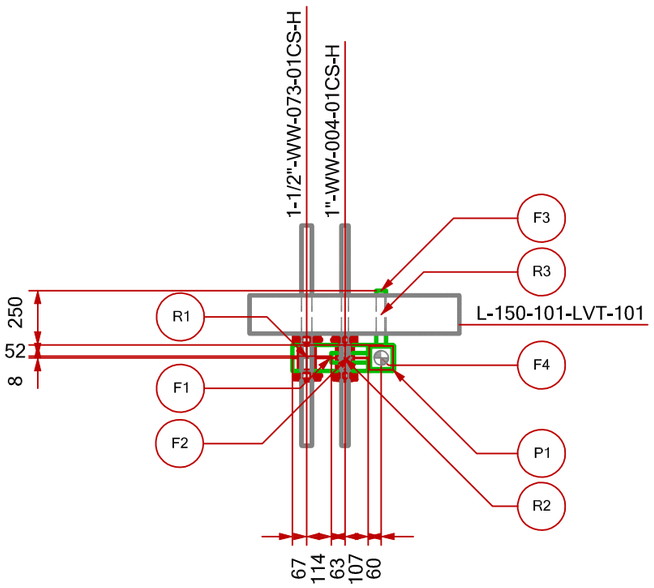
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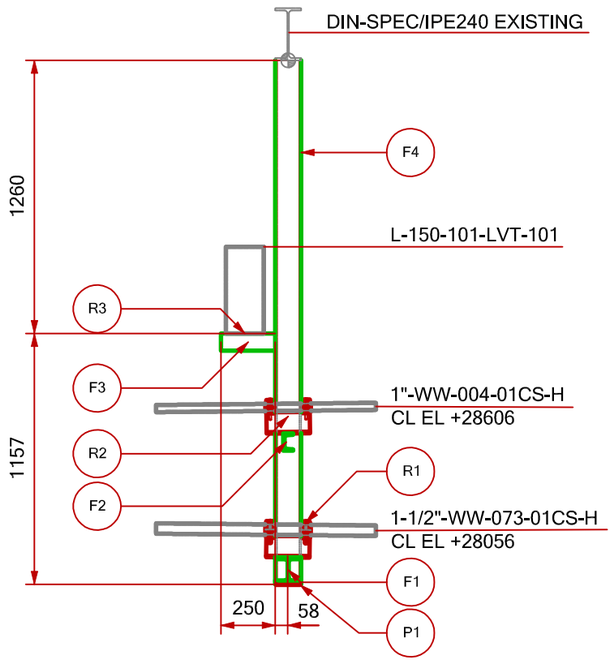
VIEW LOOKING NORTH



VIEW LOOKING WEST



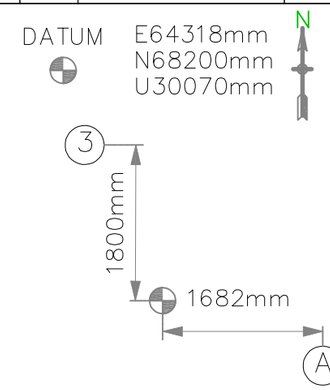
PLAN VIEW

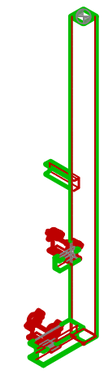


VIEW LOOKING EAST

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	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

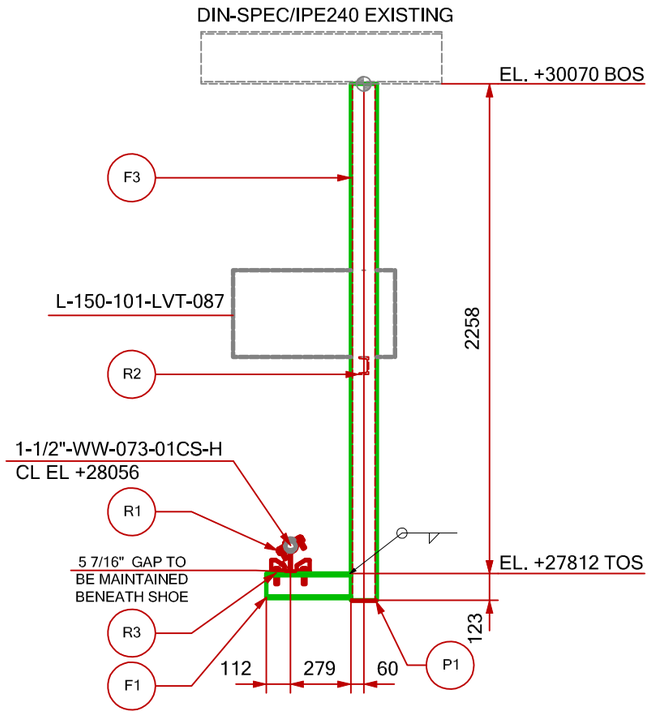
ROSETTI MARINO

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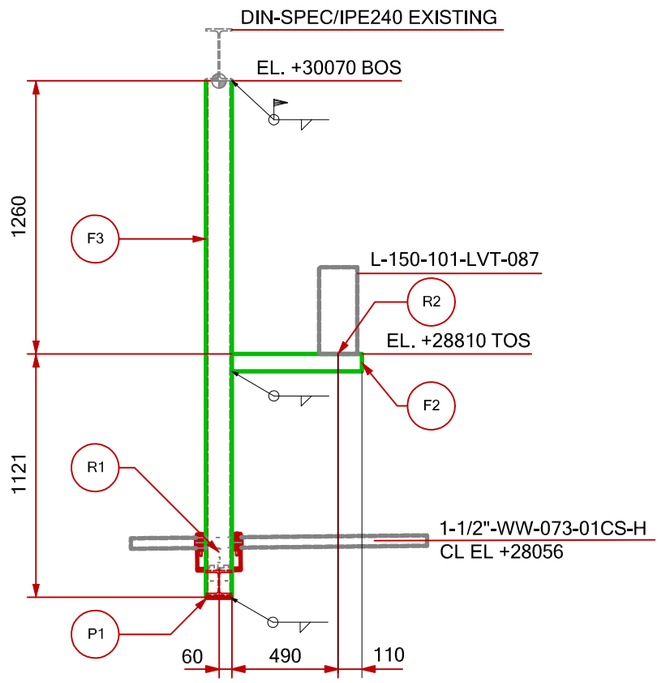
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02066

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

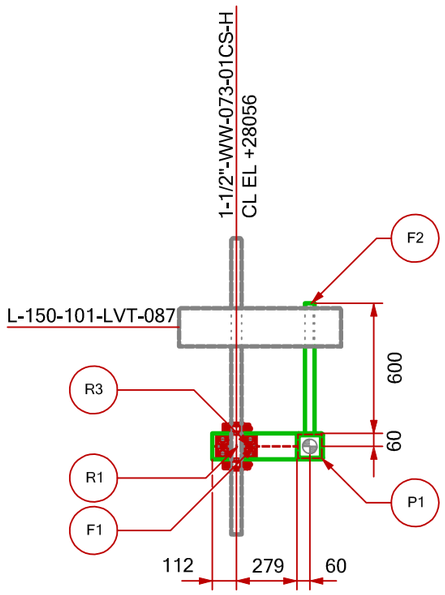
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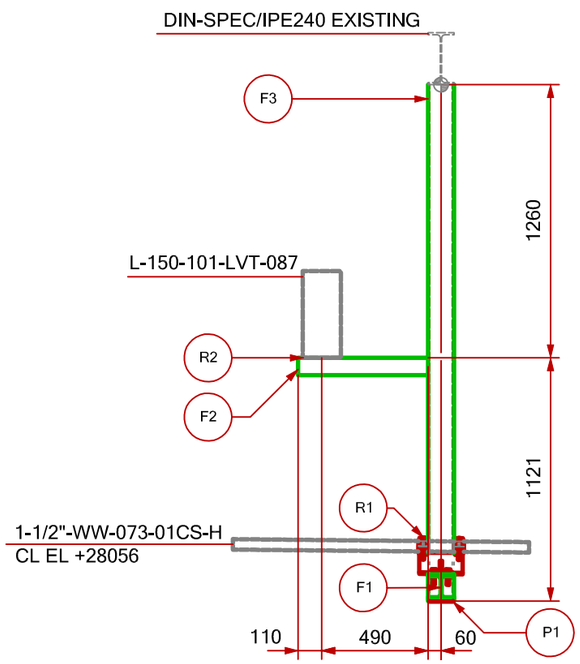
VIEW LOOKING NORTH



VIEW LOOKING WEST



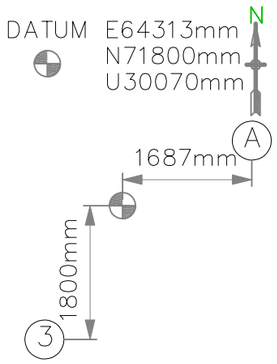
PLAN VIEW

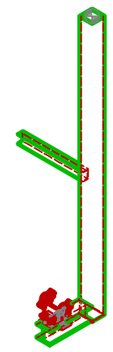


VIEW LOOKING EAST

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	RACK SUPPORT	-	-	1	-	0.00	-
R3	STD	C-33-2-B-2	-	-	1	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	390	1	19.98	7.79	0.269
F2	BEAM	UPN80	Carbon Steel	600	1	8.66	5.20	0.190
F3	BEAM	RHS120x120x8	Carbon Steel	2381	1	27.79	66.18	2.090
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	88.8	2.65





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

CROSSWIND

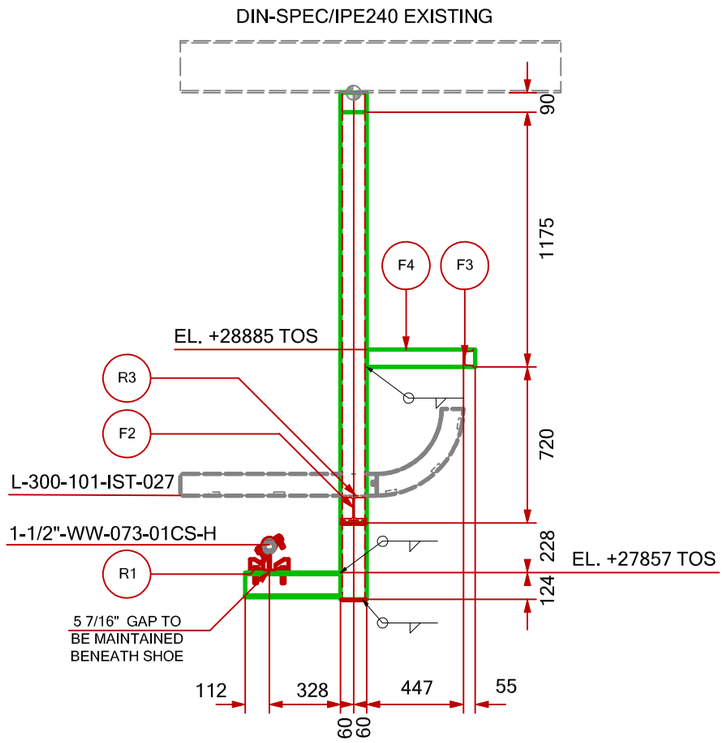
ROSETTI MARINO

TITLE :

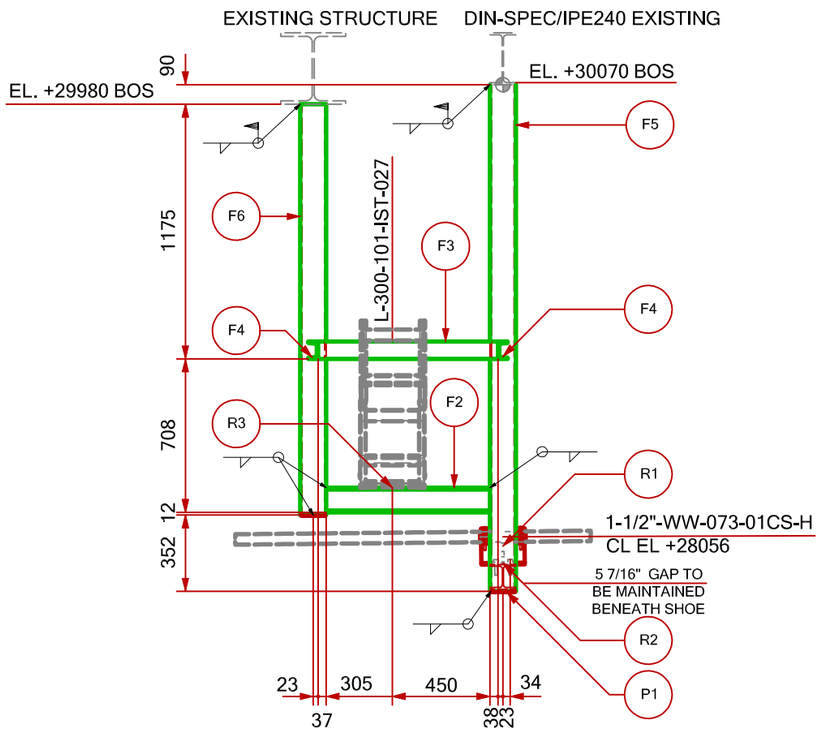
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02067

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

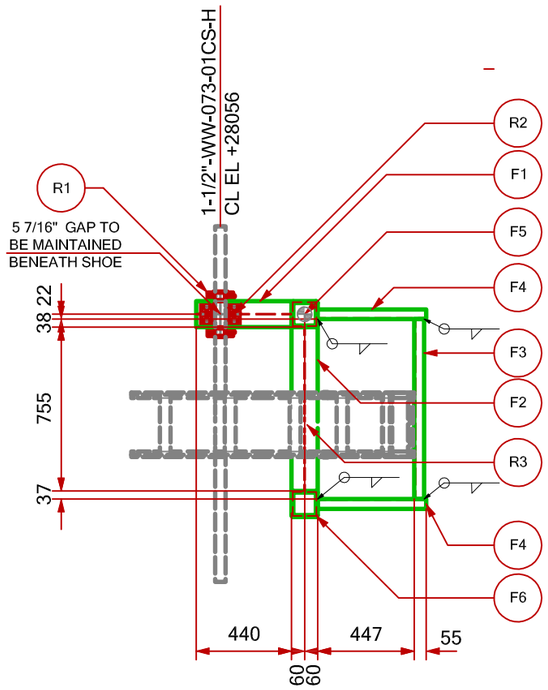
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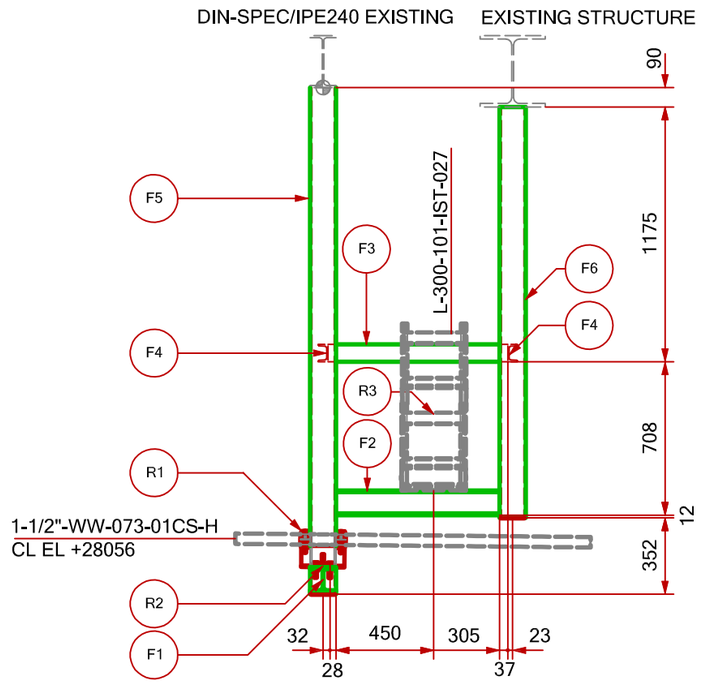
VIEW LOOKING NORTH



VIEW LOOKING WEST



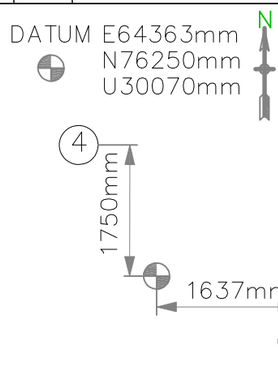
PLAN VIEW

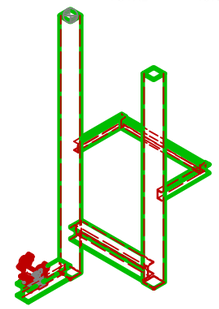


VIEW LOOKING EAST

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	C-33-2-B-2	-	-	1	-	4.36	0.048
R3	STD	RACK SUPPORT	-	-	2	-	0.00	-
F1	BEAM	HEA120	Carbon Steel	440	1	19.98	8.79	0.303
F2	BEAM	HEA120	Carbon Steel	755	1	19.98	15.08	0.516
F3	BEAM	UPN80	Carbon Steel	830	1	8.66	7.19	0.262
F4	BEAM	UPN80	Carbon Steel	502	1	8.66	4.35	0.159
F4	BEAM	UPN80	Carbon Steel	502	1	8.66	4.35	0.159
F5	BEAM	RHS120x120x8	Carbon Steel	2337	1	27.79	64.94	2.051
F6	BEAM	RHS120x120x8	Carbon Steel	1895	1	27.79	52.65	1.665
P1	PLATE	3	Carbon Steel	110x110	2	-	0.56	0.024
						TOTAL	167.3	5.23





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

CROSSWIND

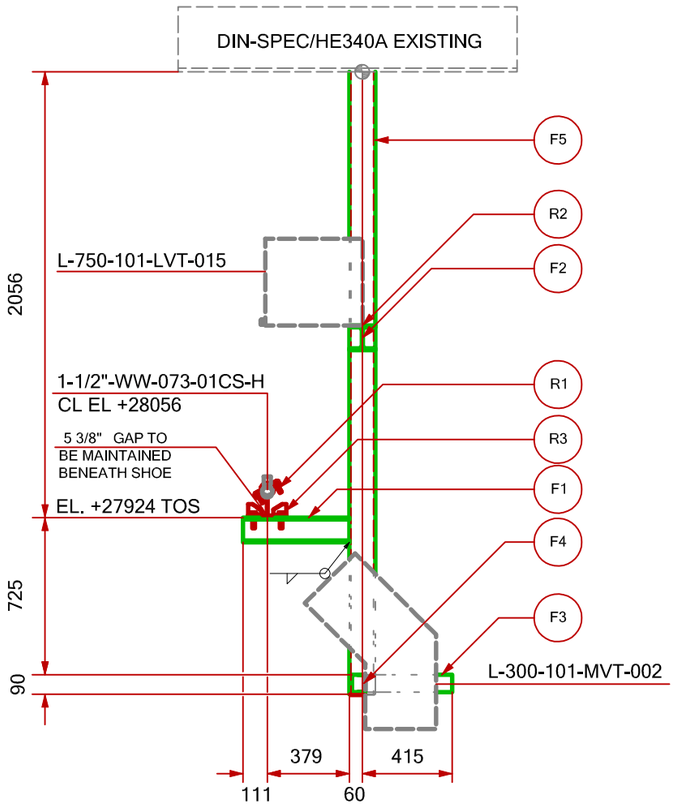
ROSETTI MARINO

TITLE :

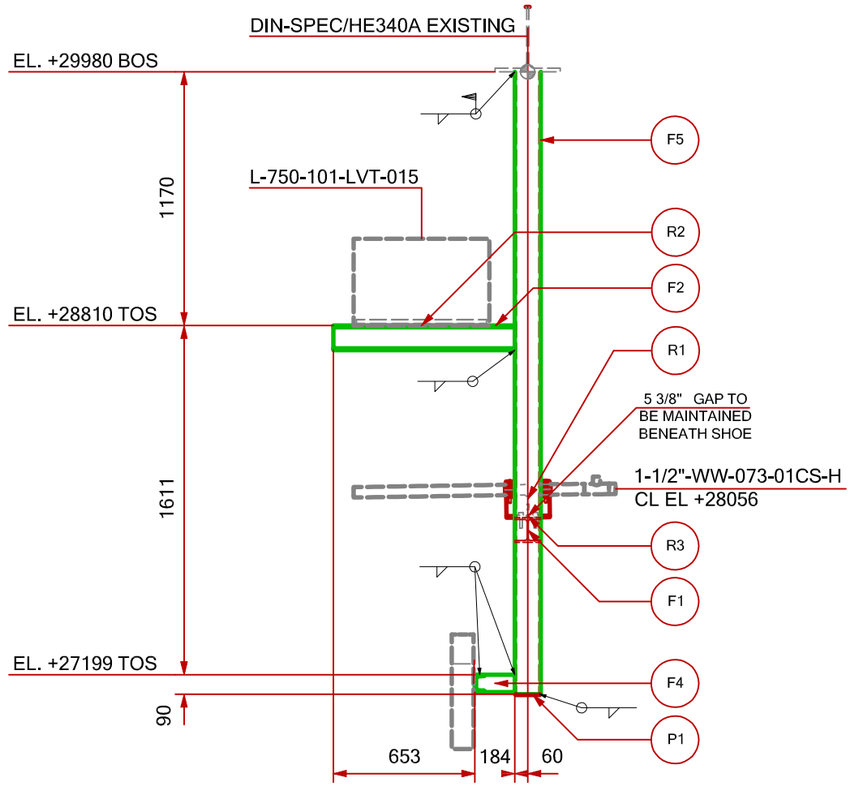
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02068

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

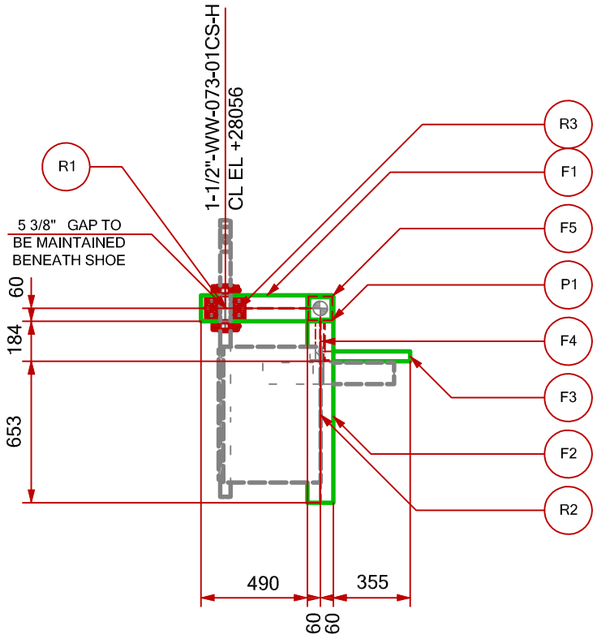
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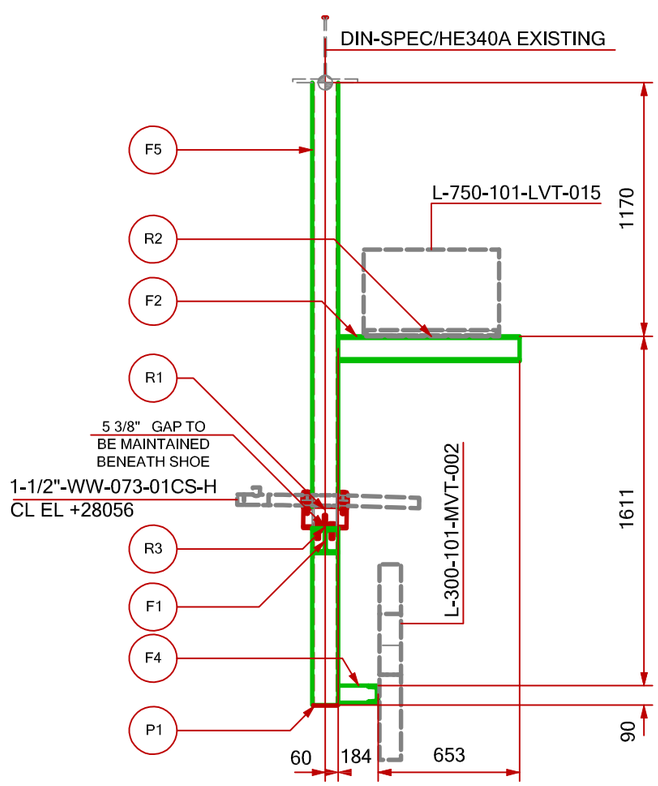
VIEW LOOKING NORTH



VIEW LOOKING WEST



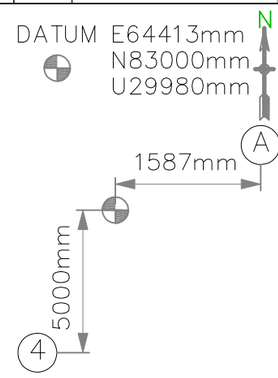
PLAN VIEW

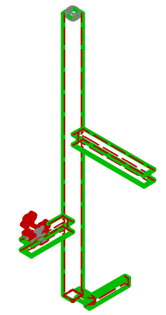


VIEW LOOKING EAST

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	RACK SUPPORT	-	-	2	-	0.00	-
R3	STD	C-33-2-B-2	-	-	1	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	490	1	19.98	9.79	0.337
F2	BEAM	HEA120	Carbon Steel	837	1	19.98	16.73	0.572
F3	BEAM	UPN80	Carbon Steel	462	1	8.66	4.00	0.147
F4	BEAM	UPN80	Carbon Steel	184	1	8.66	1.59	0.060
F5	BEAM	RHS120x120x8	Carbon Steel	2871	1	27.79	79.79	2.519
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	121.6	3.73





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

CROSSWIND

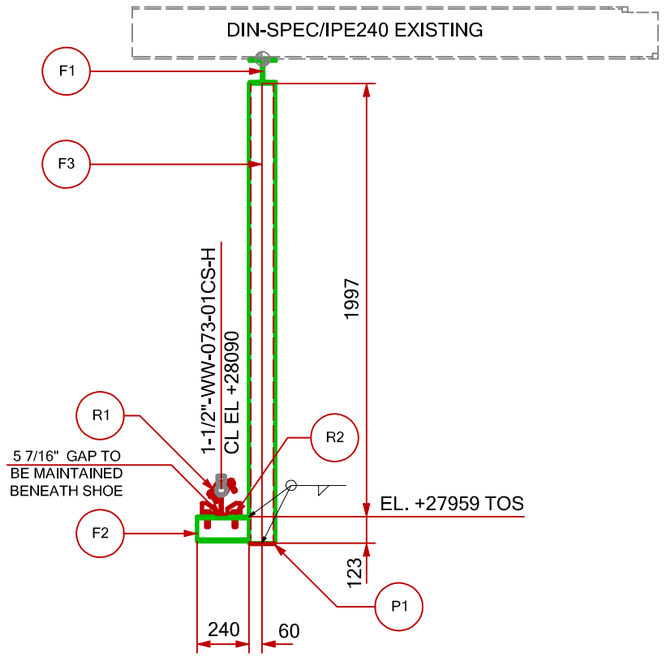
ROSETTI MARINO

TITLE :

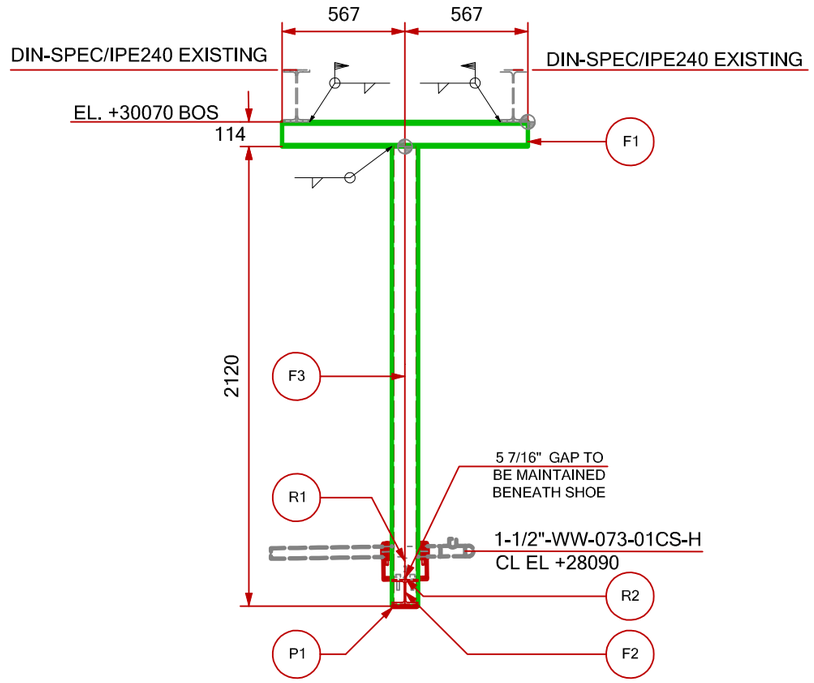
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02069

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

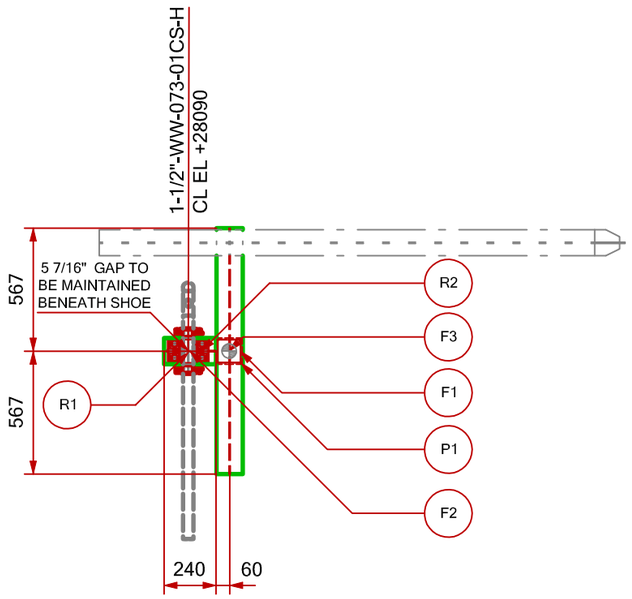
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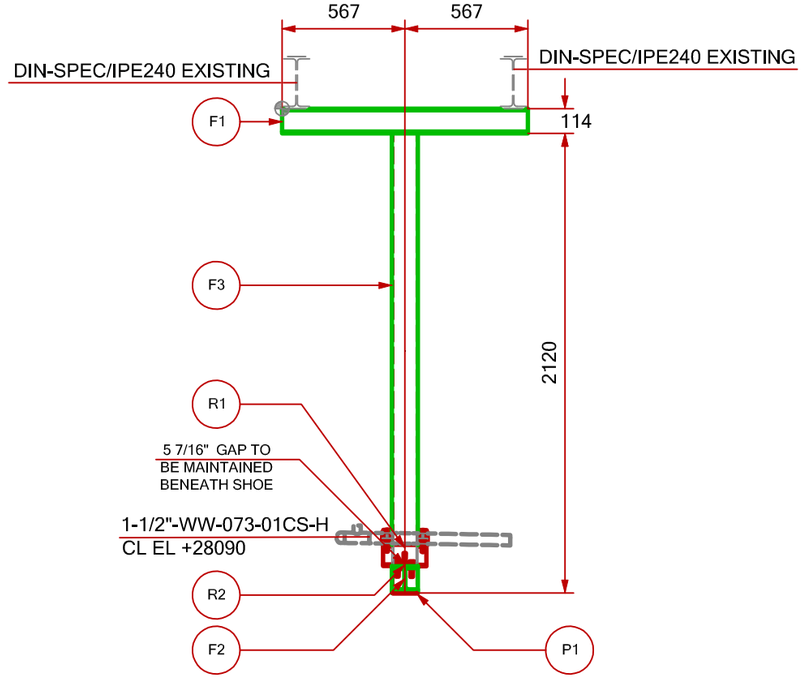
VIEW LOOKING NORTH



VIEW LOOKING WEST



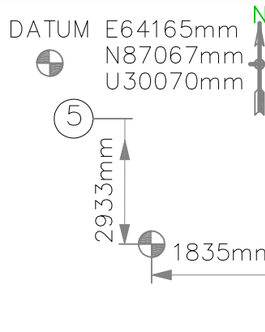
PLAN VIEW

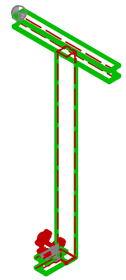


VIEW LOOKING EAST

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	C-33-2-B-2	-	-	1	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	1134	1	19,98	22,65	0,773
F2	BEAM	HEA120	Carbon Steel	240	1	19,98	4,80	0.168
F3	BEAM	RHS120x120x8	Carbon Steel	2120	1	27.79	58.92	1.862
P1	PLATE	3	Carbon Steel	110x110	2	-	0.56	0.024
						TOTAL	96.3	2.91





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

CROSSWIND

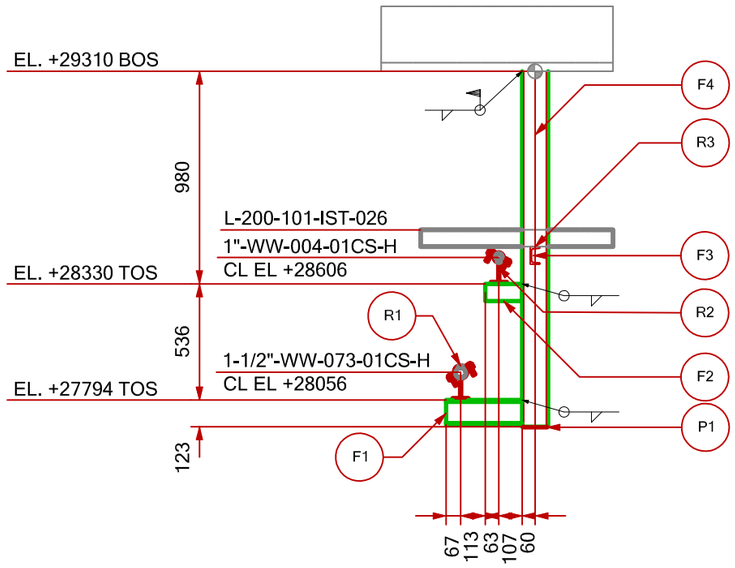
ROSETTI MARINO

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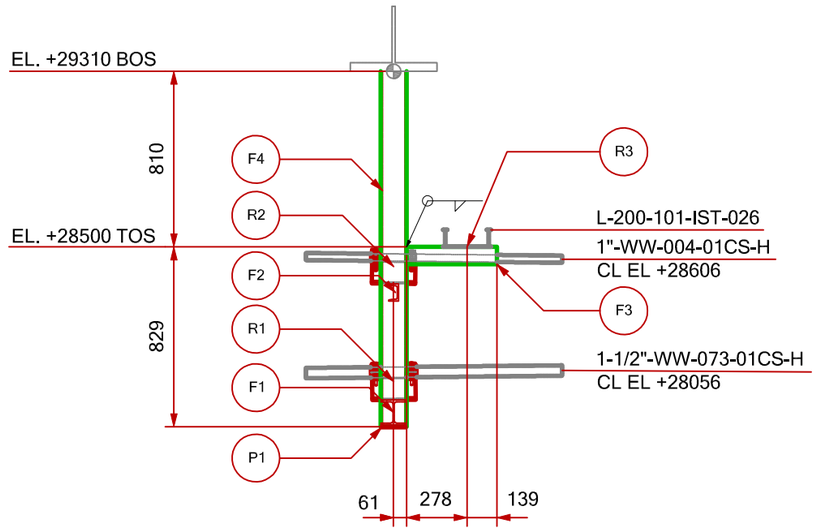
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02070

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

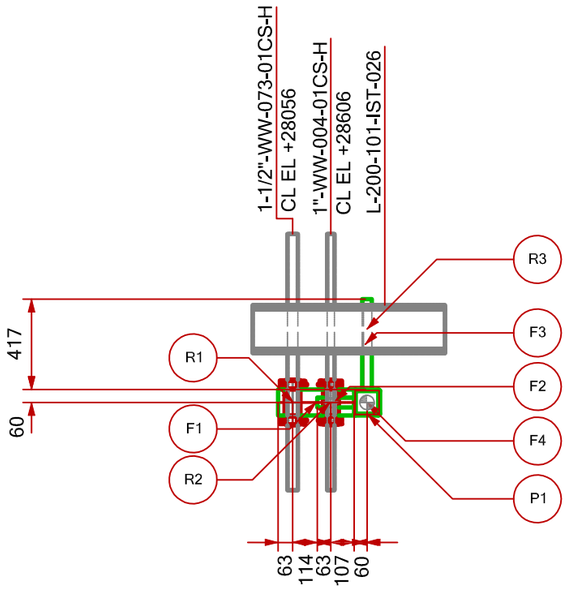
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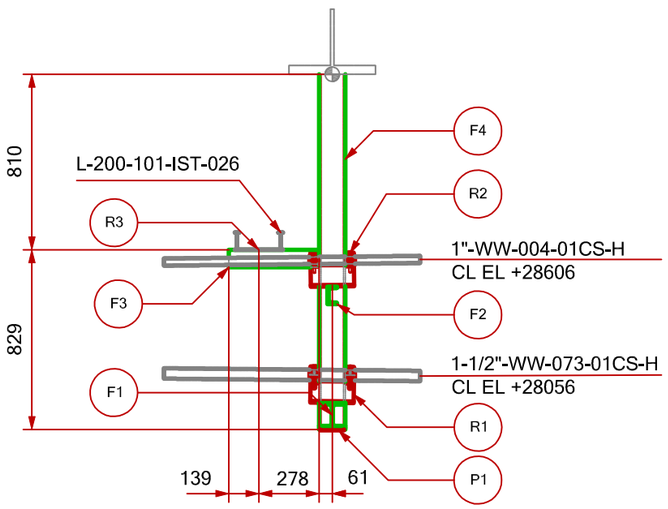
VIEW LOOKING NORTH



VIEW LOOKING WEST



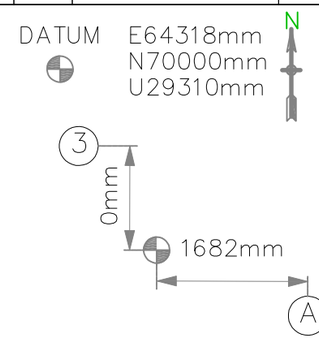
PLAN VIEW

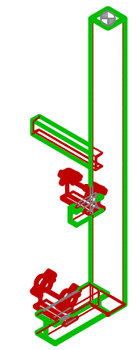


VIEW LOOKING EAST

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

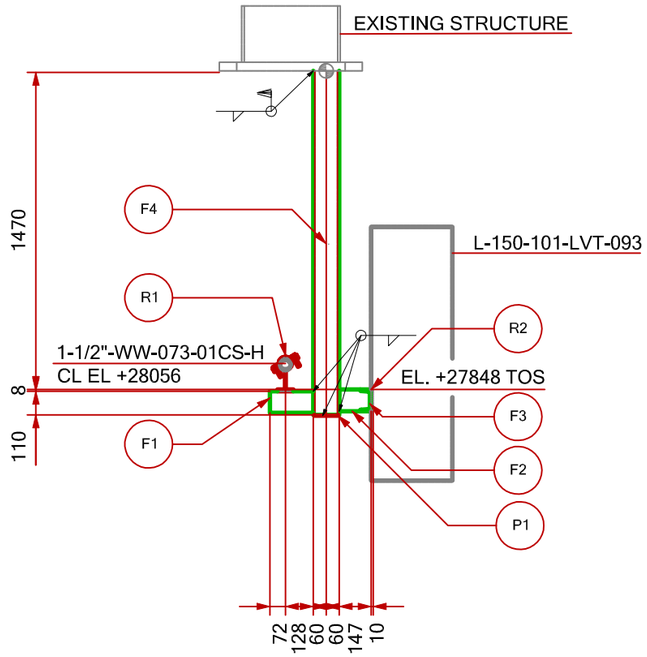
ROSETTI MARINO

TITLE :

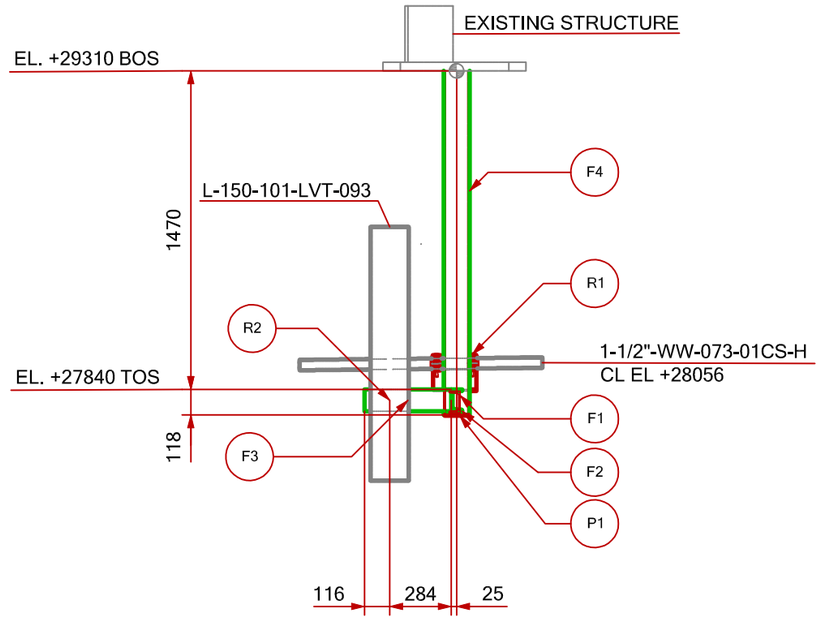
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02071

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

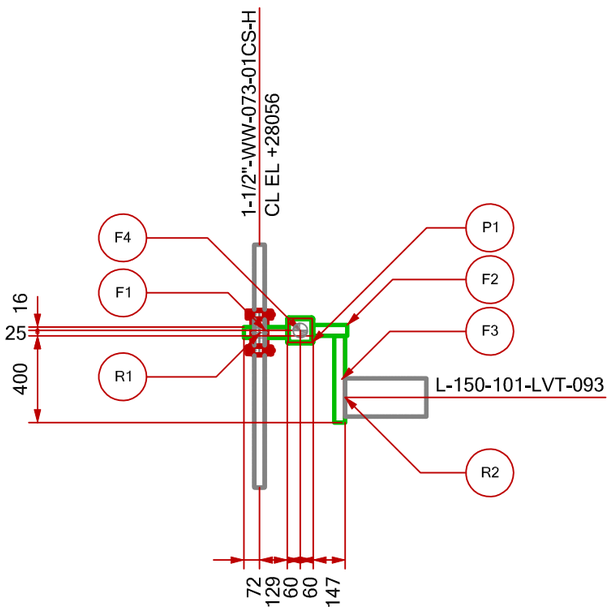
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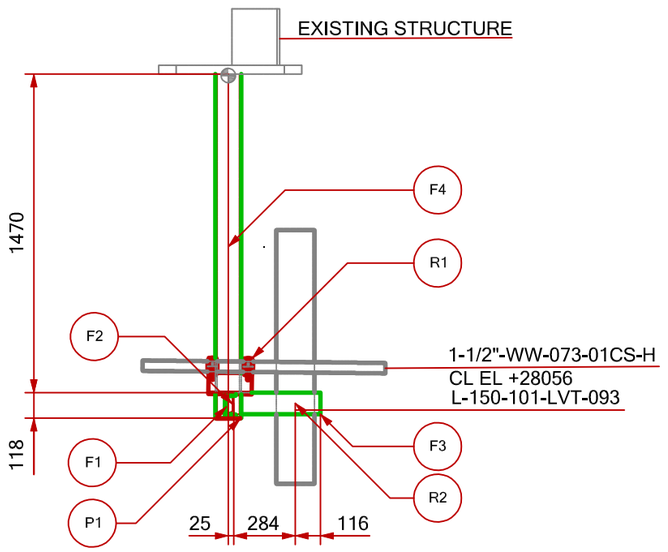
VIEW LOOKING NORTH



VIEW LOOKING WEST



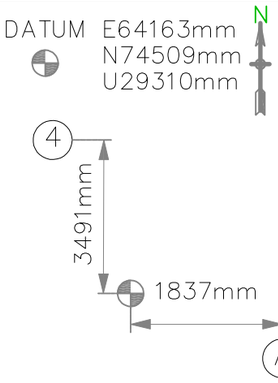
PLAN VIEW

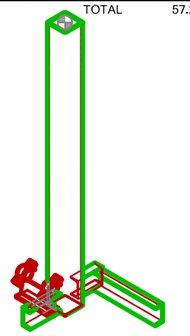


VIEW LOOKING EAST

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-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
R2	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	UPN100	Carbon Steel	200	1	10.57	2.11	0.077
F2	BEAM	UPN100	Carbon Steel	157	1	10.57	1.66	0.061
F3	BEAM	UPN100	Carbon Steel	400	1	10.57	4.23	0.151
F4	BEAM	RHS120x120x8	Carbon Steel	1580	1	27.79	43.92	1.390
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	57.2	1.73





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

CROSSWIND

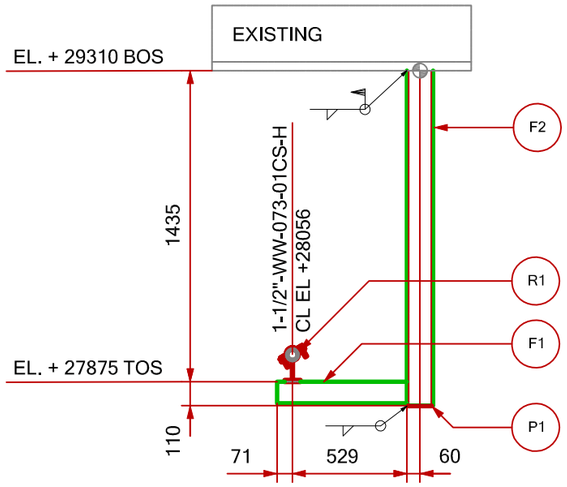
ROSETTI MARINO

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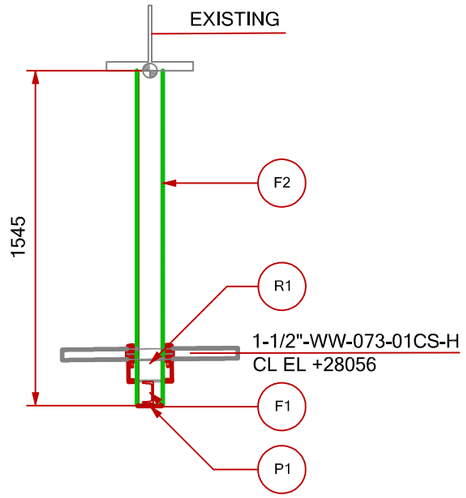
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02072

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

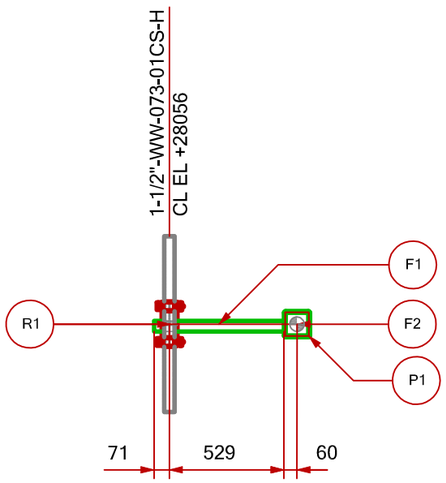
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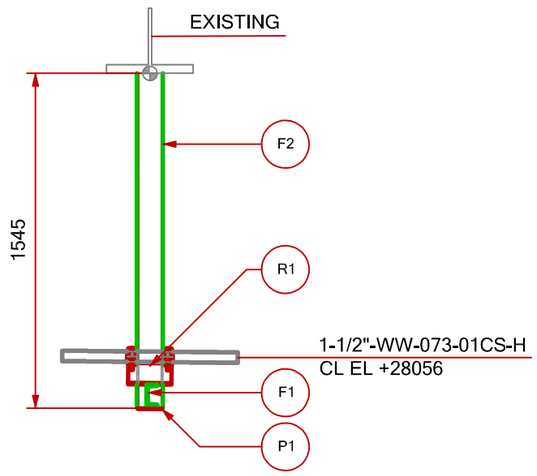
VIEW LOOKING NORTH



VIEW LOOKING WEST



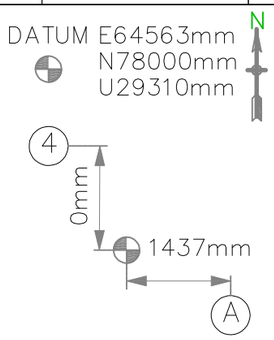
PLAN VIEW

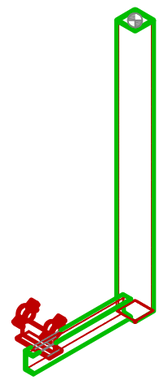


VIEW LOOKING EAST

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
F1	BEAM	UPN100	Carbon Steel	600	1	10.57	6.34	0.226
F2	BEAM	RHS120x120x8	Carbon Steel	1545	1	27.79	42.95	1.359
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	54.6	1.64





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

CROSSWIND

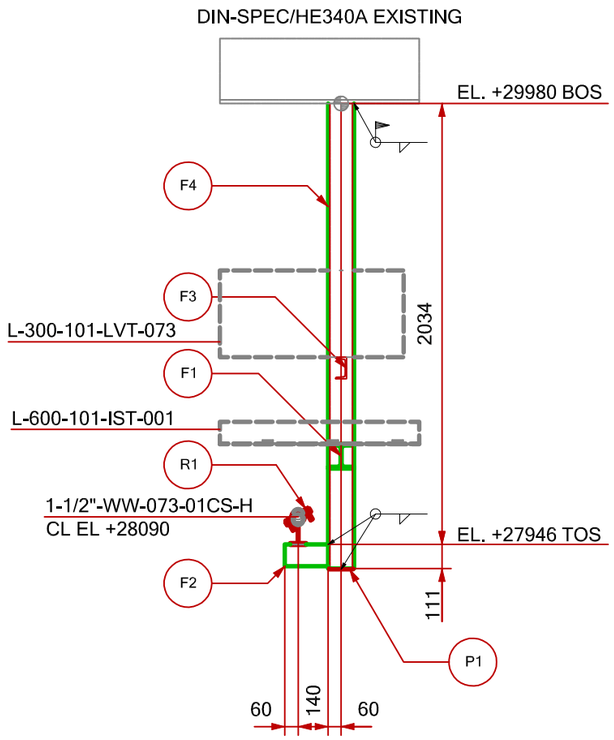
ROSETTI MARINO

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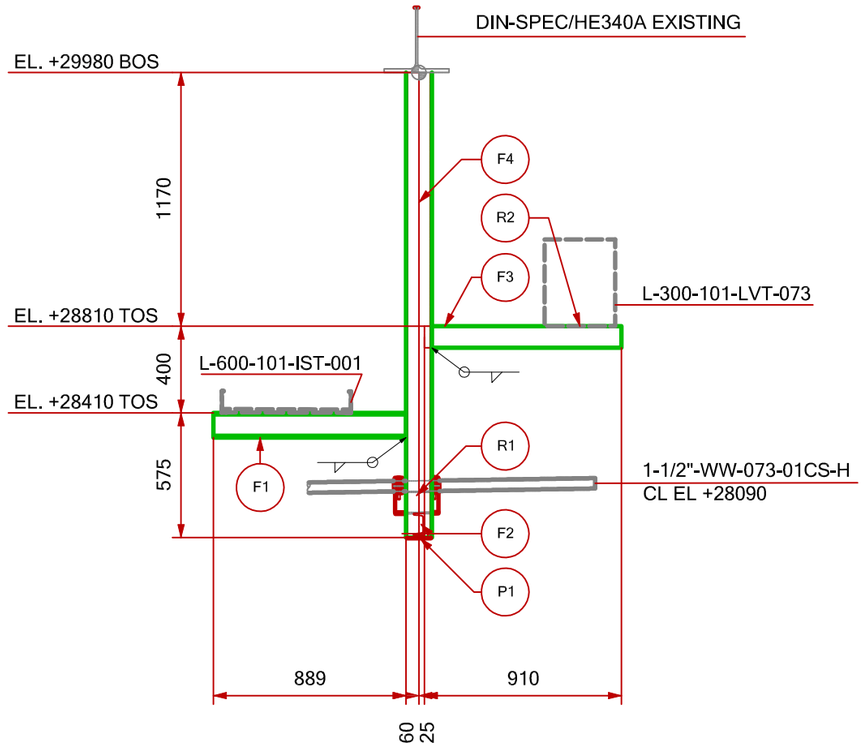
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02073

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

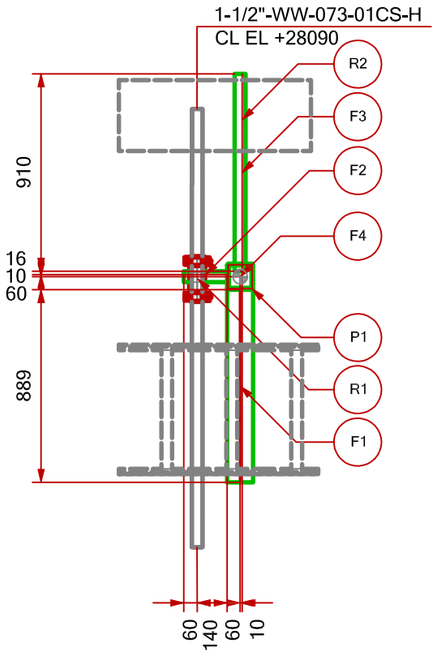
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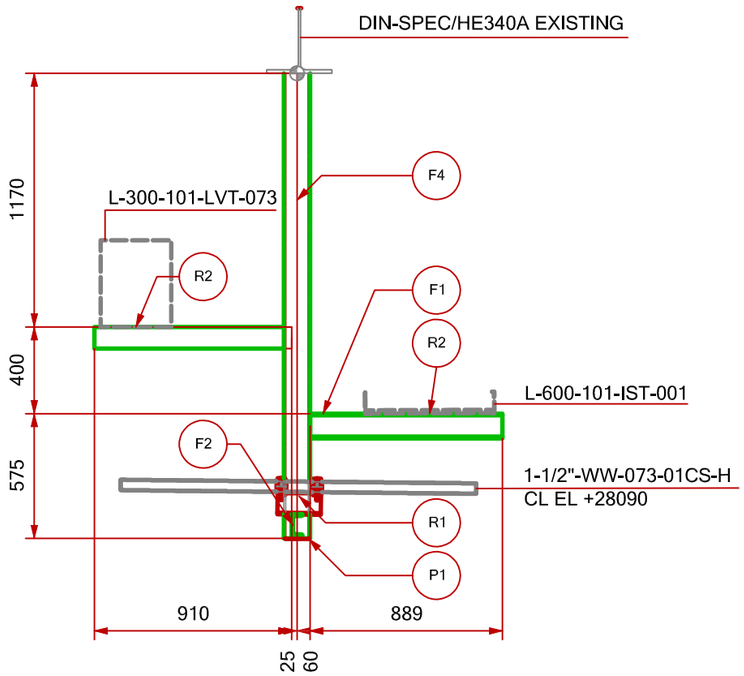
VIEW LOOKING NORTH



VIEW LOOKING WEST



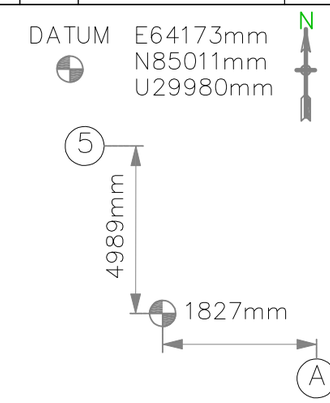
PLAN VIEW

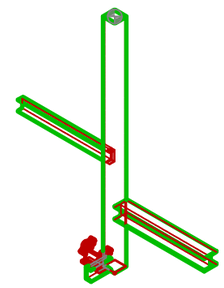


VIEW LOOKING EAST

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	RACK SUPPORT	-	-	2	-	0.00	-
F1	BEAM	HEA120	Carbon Steel	889	1	19.98	17.75	0.607
F2	BEAM	UPN100	Carbon Steel	200	1	10.57	2.11	0.077
F3	BEAM	UPN100	Carbon Steel	910	1	10.57	9.62	0.341
F4	BEAM	RHS120x120x8	Carbon Steel	2145	1	27.79	59.62	1.884
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	94.4	2.96





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

CROSSWIND

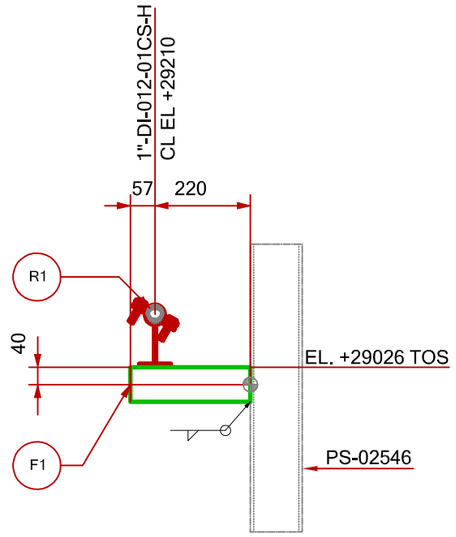
ROSETTI MARINO

TITLE :

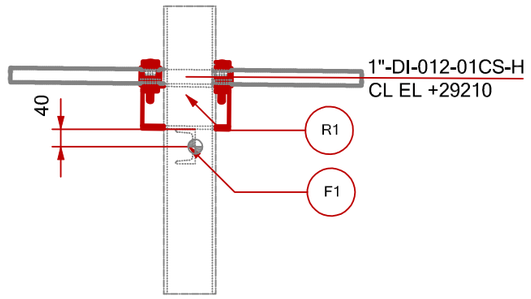
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02074

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

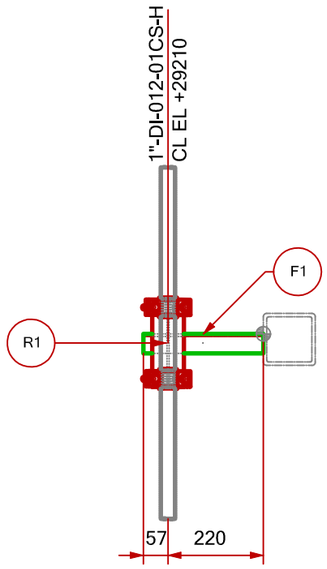
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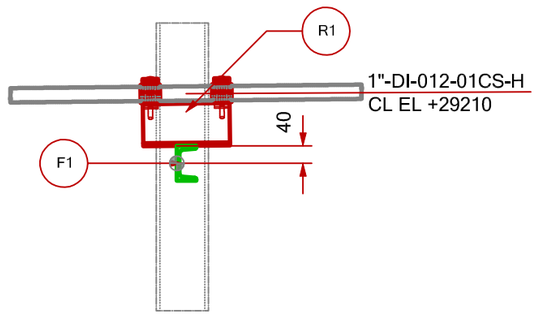
VIEW LOOKING EAST



VIEW LOOKING NORTH



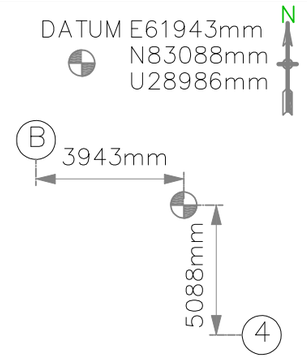
PLAN VIEW



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"-98-90-200	-	-	1	-	4.63	0.034
F1	BEAM	UPN80	Carbon Steel	277	1	8.66	2.40	0.089
						TOTAL	7.0	0.12



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-02140

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

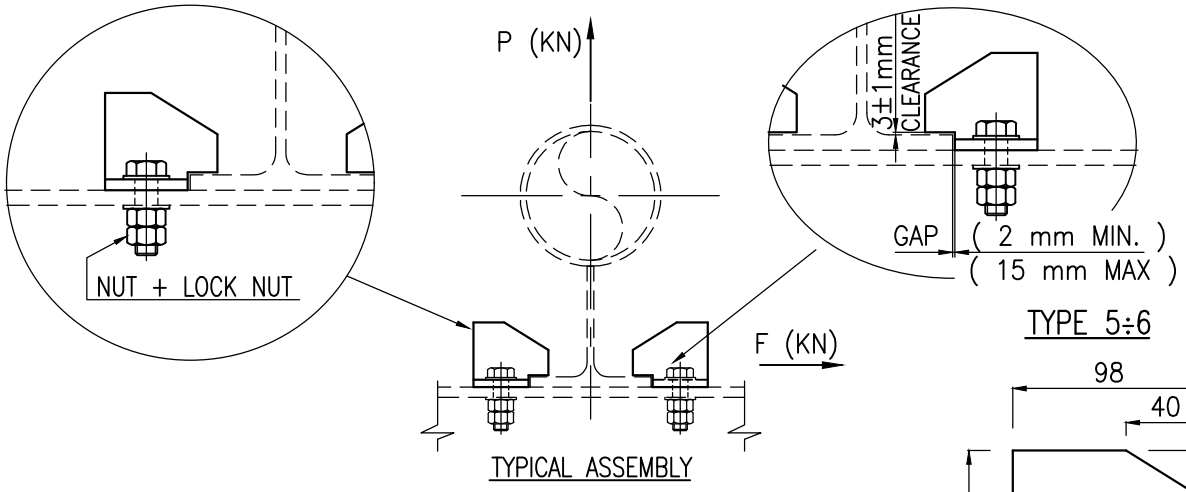
Document Number: STD–PP–DD–0001

Revision: 0

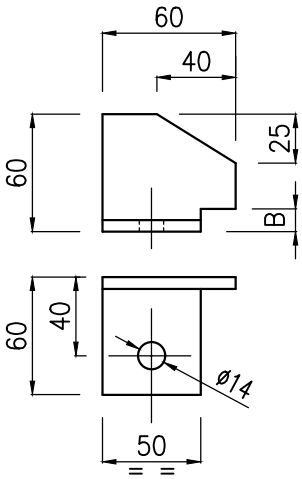
Date: –

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

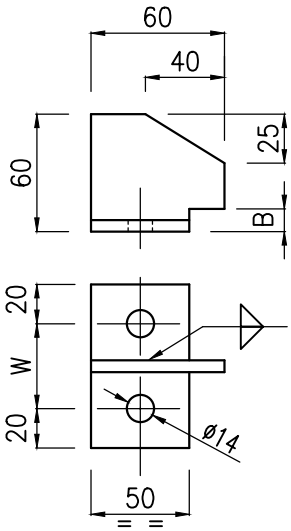
C–33



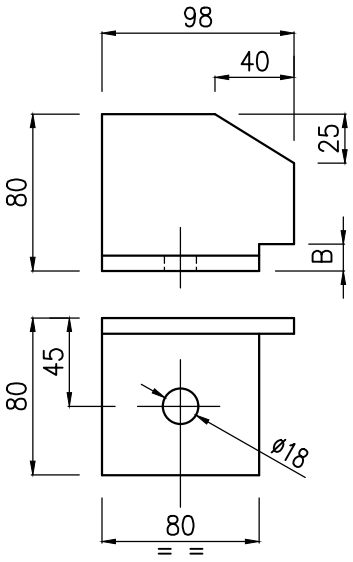
TYPE 1 (NOTE 4)



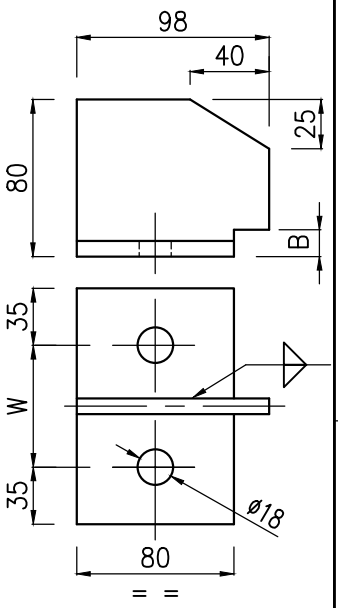
TYPE 2



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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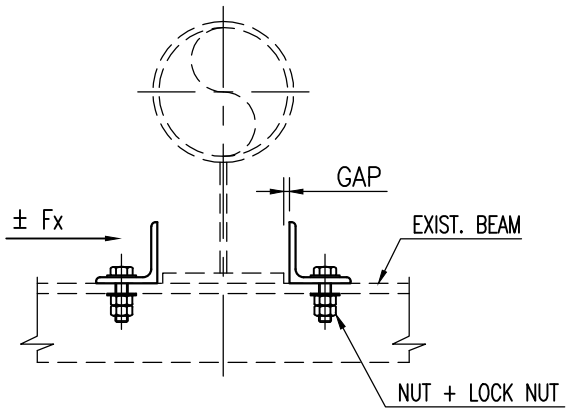
STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001
Revision: 0
Date: –

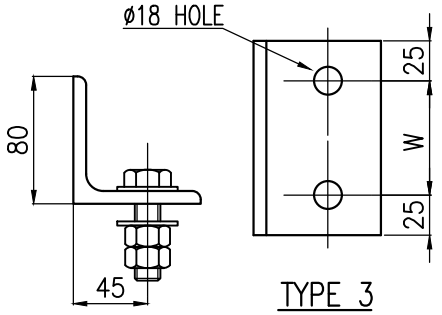
GUIDA BULLONATA
BOLTED GUIDE

C–34

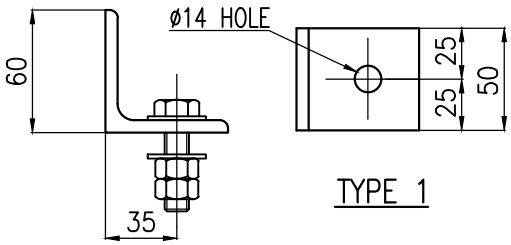
Example of designation : STD – TYPE – SIZE – GAP
(C–34 – 5 – M – 2)



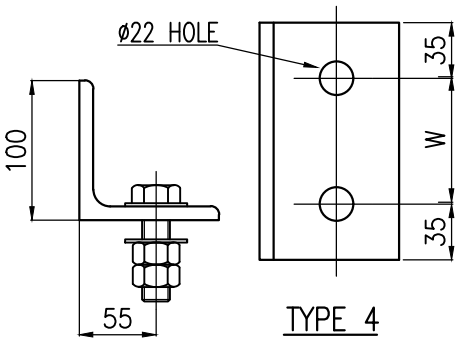
TYPICAL ASSEMBLY



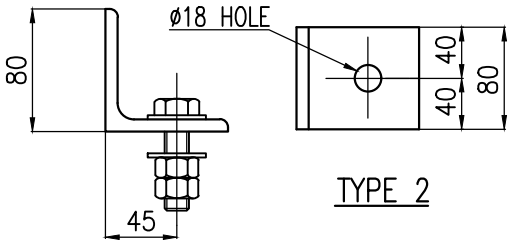
TYPE 3



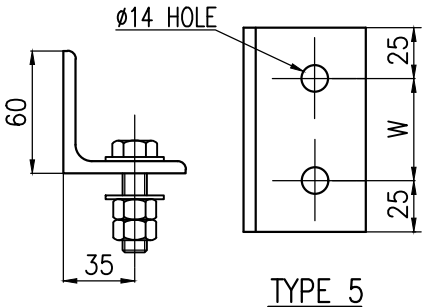
TYPE 1



TYPE 4



TYPE 2



TYPE 5

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

SIZE	EXIST. BEAM	W mm
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

TYPE	PROFILE	BOLTING (DIN933)	MAXIMUM LOAD Fx (KN)	WEIGHT (BOLTS INCL.)
1	L60x60x6	M12x60	10	0.8
2	L80x80x8	M16x70	18	2.0
3	L80x80x8	M16x70	36	.....
4	L100x100x10	M20x75	56	.....
5	L60x60x6	M12x60	20	.....

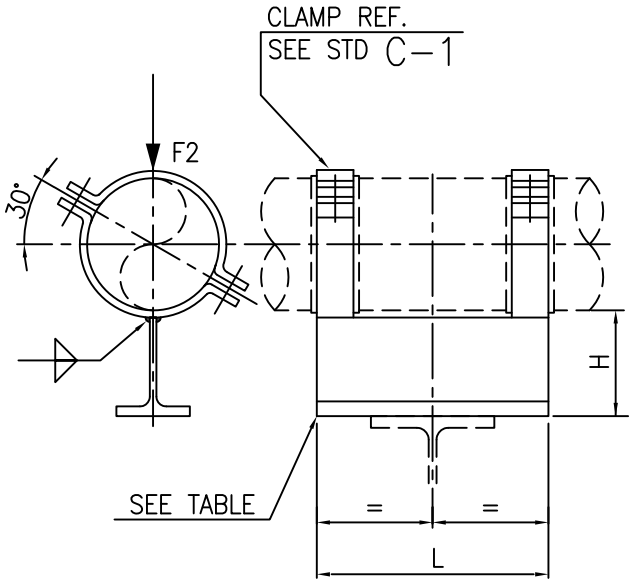
NOTES:
1– PROFILE MATERIAL : CARBON STEEL
2– BOLTS (UNI 5739 CI 8.8), NUTS (UNI 5588 CI 8.8), LOCK NUT (UNI 7474 CI.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– SAFE LOADS ARE BASED ON BOLT SHEAR LOADS ONLY.
4– GUIDES ARE TO BE SITE LOCATED AND DRILLED UNLESS OTHERWISE ON.
5– VARIABLE WEIGHT ADDICTED TO THE "TYPE" SELECTED AND THE "W" DIMENSION INDICATED.

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

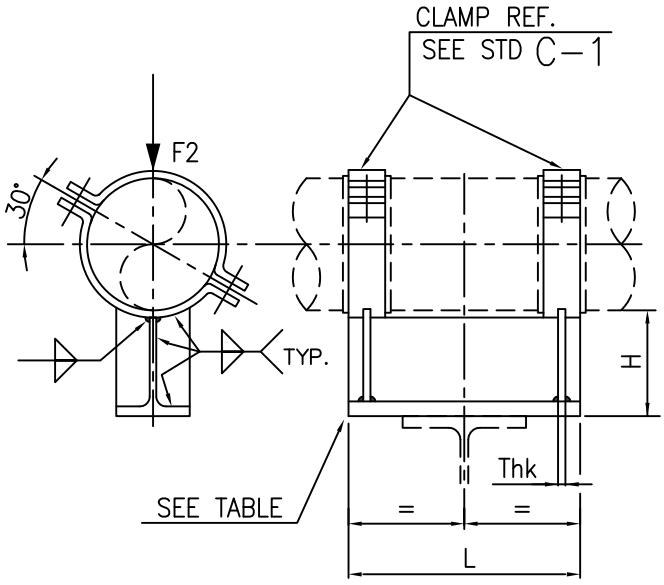
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

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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STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

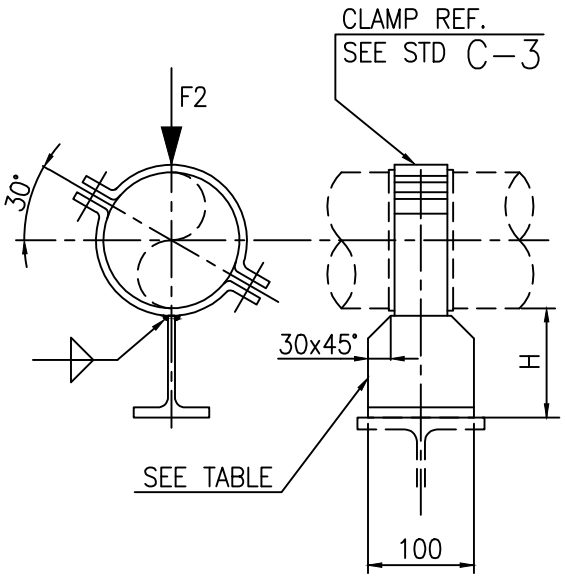
Revision: 0

Date: –

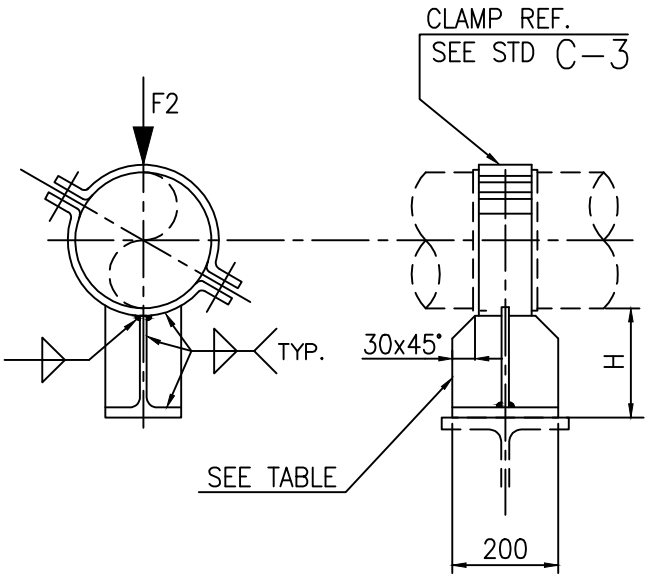
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY
CLAMPED SHOE FOR C.S.–S.S. AND ALLOY PIPES

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:

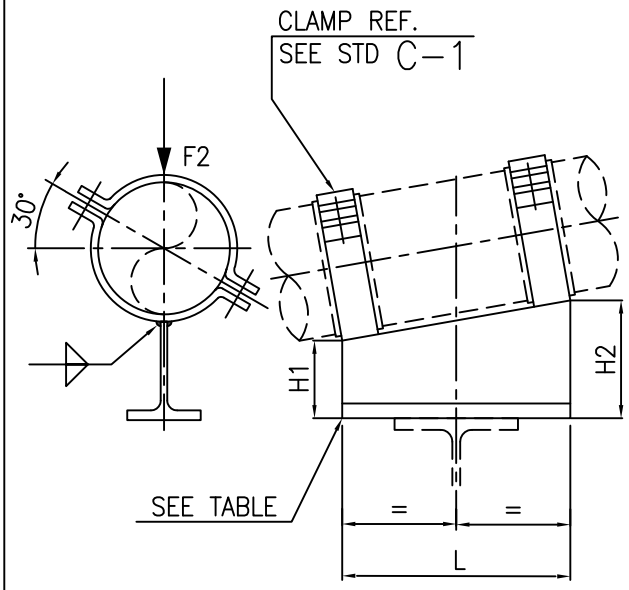
1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT IN FUNCTION OF THE "PIPE ND" SELECTED AND THE "H" DIMENSION.

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

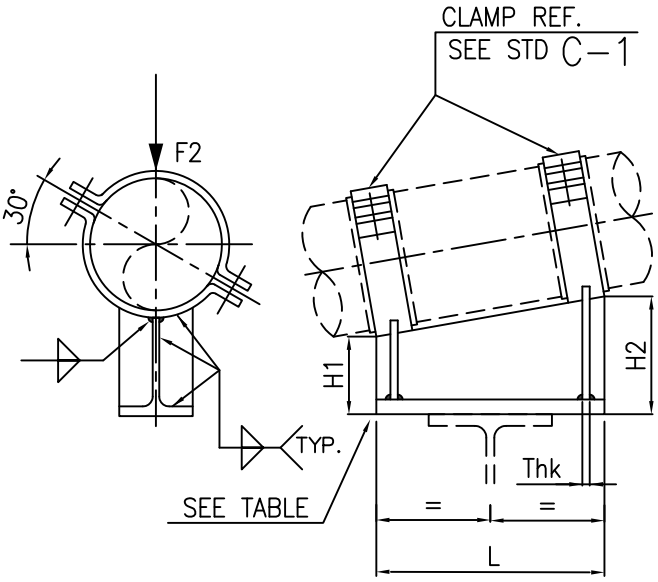
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI IN PENDENZA IN C.S.–S.S. E ALLOY CLAMPED SHOE FOR SLOPED PIPE IN C.S. – S.S. AND ALLOY		S–75

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**	7	**To**	7
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 Cont.	Accept. Date	Spool
1/7/1/_		**00**	**24-09-2024**	**14**	**AZ53**			**FWN**	**1,00 in**	**4,55 mm**	**V**	**0,104 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								
2/7/1/_		**00**	**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								
3/7/1/_		**00**	**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**	**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 %											
4/7/1/_		**00**	**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**	**A**
	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								
5/7/1/_		**00**	**10-01-2025**	**129**	**AX 453**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**10-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				10-01-2025				
		RT	FIN	Weld Completion				10 %			Acceptable								
6/7/1/_		**00**	**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								
7/7/1/_		**00**	**24-09-2024**	**14**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-10-2024**	**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		IDL-QCI-RT 0036 00	AA	10 %	000107	4	Acceptable				03-10-2024				
8/7/1/_		**00**	**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**	**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								
9/7/1/_		**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**	**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								

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
9/7/1/_		**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**	**B**
10/7/1/_		**00**	**09-01-2025**	**126**	**AX 453**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**09-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					09-01-2025			
		RT	FIN	Weld Completion				10 %			Acceptable								
11/7/1/_		**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**	**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								

Totals per DWG	**7**	**Prefabrication**	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,05 m**	**11 Nr. Welds**	**10,00 inch**
		Accepted	**1,05 m**	**11 Nr. Welds**	**10,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,05 m**	**11 Nr. Welds**	**10,00 inch**
		Accepted	**1,05 m**	**11 Nr. Welds**	**10,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,05 m**	**11 Nr. Welds**	**10,00 inch**
		Accepted	**1,05 m**	**11 Nr. Welds**	**10,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

CROSSWIND / ROSETTI MARINO	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: 13/01/2025
	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
7	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	W3-W4	
7	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	W1	
7	00	1	A	01CS	1A	0,153	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
7	00	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002		
7	00	1	A	01CS	1B	1,299	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
7	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	W6	
7	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	W7-W8	
7	00	1	B	01CS	1C	0,935	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
7	00	1	B	01CS	1D	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
7	00	1	B	01CS	1E	2,188	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
7	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W11	
7	00	1	C	01CS	1F	0,977	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	29	**To**	29
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	WPS / Defect length	Techn. Weld. / CND date	Type Cons / NOTE	Accept. Date	Spool
1/29/1/_		**00**	**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								
2/29/1/_		**00**	**28-09-2024**	**20**	**AZ53**			**RED**	**2,00 in**	**5,54 mm**	**V**	**0,189 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								
3/29/1/_		**00**	**27-09-2024**	**19**	**AZ53**			**RED**	**1,00 in**	**4,55 mm**	**V**	**0,104 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								
4/29/1/_		**00**	**24-01-2025**	**154**	**AX 453**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**27-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					27-01-2025			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	PR	10 %	001194	4	Acceptable					27-01-2025			
5/29/1/_		**00**	**24-01-2025**	**154**	**AX 453**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**27-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					27-01-2025			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	PR	10 %	001195	4	Acceptable					27-01-2025			

Totals per DWG	**29**	**Prefabrication**	**0,57 m**	**3 Nr. Welds**	**6,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,77 m**	**5 Nr. Welds**	**8,00 inch**
		Accepted	**0,77 m**	**5 Nr. Welds**	**8,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,57 m**	**3 Nr. Welds**	**6,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,77 m**	**5 Nr. Welds**	**8,00 inch**
		Accepted	**0,77 m**	**5 Nr. Welds**	**8,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,57 m**	**3 Nr. Welds**	**6,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,77 m**	**5 Nr. Welds**	**8,00 inch**
		Accepted	**0,77 m**	**5 Nr. Welds**	**8,00 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:
RosettiDoc.Num.	**123A90MTR001**			30/01/2025

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
29	00	1	A	01CS	2	1	Reducer Eccentric BW ›3"x2" Thk.5.49mmx5.54mm ASTM/ASME A/SA420 Gr.WPL6	OK3882	1724001267	00360	5924-P5	W1-W2	
29	00	1	A	01CS	3	1	Reducer Eccentric BW ›2"x1" Thk.5.54mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	J1L8480	1724001267	00370	5924-P4	W2-W3	
29	00	1	A	01CS	4	1	Flange WN ›3" Thk.5.49mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70167	1724001267	00100	2924-C_MFF-01793	W1	
29	00	1	A	01CS	7	1	45 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	E62123	1724000839	00230	MC-TYF-6-20080627118	EW4-EW5	
29	00	1	A	01CS	7	1	45 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	E62123	1724000839	00230	MC-TYF-6-20080627118	EW5	
29	00	1	A	01CS	1A	0,217	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	31	**To**	31
Sheet		**From**	1	**To**	2
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 Cons / NOTE	Accept. Date	Spool
1/31/1/_		**00**	**14-11-2024**	**28**	**AZ 32**			**CAP**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	**A**
01CS	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								
2/31/1/_		**00**	**10-01-2025**	**127**	**AX 453**			**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**10-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				10-01-2025				
		RT	FIN	Weld Completion				10 %				Acceptable								
3/31/1/_		**00**	**14-11-2024**	**28**	**AZ 32**			**TEE**		**1,50 in**	**5,08 mm**	**V**	**0,151 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								
4/31/1/_		**00**	**14-11-2024**	**28**	**AZ 32**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 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								
5/31/1/_		**00**	**10-01-2025**	**127**	**AX 453**			**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**10-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				10-01-2025				
		RT	FIN	Weld Completion				10 %				Acceptable								
6/31/1/_		**00**	**14-11-2024**	**28**	**AZ 32**			**TEE**		**1,50 in**	**5,08 mm**	**V**	**0,151 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								
7/31/1/_		**00**	**09-01-2025**	**126**	**AX 453**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**09-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				09-01-2025				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/31/1/_		**00**	**19-12-2024**	**35**	**AZ39**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-12-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	AGAVELLA	100 %	OK			Acceptable				20-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
9/31/1/_		**00**	**19-12-2024**	**35**	**AZ39**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-12-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	AGAVELLA	100 %	OK			Acceptable				20-12-2024				
		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. %	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
9/31/1/_		**00**	**19-12-2024**	**35**	**AZ39**			**PIPE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-12-2024**	**B**
10/31/1/_		**00**	**18-12-2024**	**34**	**AZ35**			**TEE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-12-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	AGAVELLA	100 %	OK		Acceptable				19-12-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
11/31/1/_		**00**	**18-12-2024**	**34**	**AZ35**			**RED**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-12-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	AGAVELLA	100 %	OK		Acceptable				19-12-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
12/31/1/_		**00**	**14-11-2024**	**28**	**AZ 32**			**TEE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	**B**
	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								
13/31/1/_		**00**	**11-01-2025**	**130**	**AX 453**			**PIPE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				11-01-2025				
		RT	FIN	Weld Completion				10 %			Acceptable								
14/31/1/_		**00**	**27-09-2024**	**19**	**AZ53**			**ELB**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**C**
	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								
15/31/1/_		**00**	**27-09-2024**	**19**	**AZ53**			**PIPE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**C**
	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								
16/31/1/_		**00**	**05-10-2024**	**23**	**AZ53**			**ELB**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**07-10-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				07-10-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
17/31/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**PIPE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				20-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
18/31/1/_		**00**	**13-01-2025**	**131**	**AX 453**			**ELB**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**13-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				13-01-2025				

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 Cont. / NOTE	Accept. Date	Spool
18/31/1/_		**00**	**13-01-2025**	**131**	**AX 453**			**ELB**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**13-01-2025**	
		RT	FIN	Weld Completion				10 %				Acceptable								
37/31/1/_		**00**	**09-10-2024**	**27**	**AZ53**			**PL**		**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**E1A**	**GTAW**	**F**	**11-10-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					11-10-2024			
		LP	FIN	Weld Completion				10 %				Acceptable								
19/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
20/31/2/_		**2**	**11-01-2025**	**130-153**	**AX 453**	**Welding + Repair done**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**28-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					11-01-2025			
		RT	FIN	Weld Completion				10 %				Acceptable								
Cut 24-01-2025 Prod sh.153 AX 453		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable A1A		GTAW			27-01-2025			
		RT	C 1 DTA	After Cutting		IDL-QCI-RT 0036 00	AA	10 %	001196		4	Acceptable					28-01-2025			
21/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**TEE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
22/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**TEE**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
23/31/2/_		**2**	**29-11-2024**	**33**	**AZ 32**			**TEE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
24/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**RED**		**4,00 in**	**6,02 mm**	**V**	**0,359 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
25/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**PIPE**		**1,50 in**	**5,08 mm**	**1/2V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**LET**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		MT	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
25/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**PIPE**	**1,50 in**	**5,08 mm**	**1/2V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**LET**	**03-12-2024**	**D**
26/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**PIPE**	**4,00 in**	**6,02 mm**	**V**	**0,359 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-12-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
27/31/2/_		**2**	**29-11-2024**	**33**	**AZ 32**			**RED**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-12-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
28/31/2/_		**2**	**15-11-2024**	**29**	**AZ 32**			**FWN**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**I**
	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								
29/31/2/_		**2**	**28-09-2024**	**20**	**AZ53**			**FWN**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**30-09-2024**	**E**
	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								
30/31/2/_		**2**	**13-01-2025**	**131**	**AX410**			**ELB**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**13-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				13-01-2025				
		RT	FIN	Weld Completion				10 %			Acceptable								
31/31/2/_		**2**	**21-09-2024**	**12**	**AZ53**			**PIPE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**23-09-2024**	**F**
	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								
38/31/2/_		**2**	**15-11-2024**	**29**	**AZ 32**			**FWN**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-11-2024**	**I**
	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								
39/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**FWN**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-12-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
40/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**TEE**	**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-12-2024				

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
40/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**TEE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
		RT	FIN	Weld Completion				10 %				Acceptable								
41/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**ELB**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
42/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**FWN**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**J**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
43/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**ELB**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**J**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
44/31/2/_		**2**	**28-11-2024**	**32**	**AZ 32**			**ELB**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								

Totals per DWG	**31**	**Prefabrication**	**5,00 m**	**32 Nr. Welds**	**50,25 inch**
		Erection	**0,90 m**	**7 Nr. Welds**	**9,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**5,90 m**	**39 Nr. Welds**	**59,25 inch**
		Accepted	**5,90 m**	**39 Nr. Welds**	**59,25 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**5,00 m**	**32 Nr. Welds**	**50,25 inch**
		Erection	**0,90 m**	**7 Nr. Welds**	**9,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**5,90 m**	**39 Nr. Welds**	**59,25 inch**
		Accepted	**5,90 m**	**39 Nr. Welds**	**59,25 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**5,00 m**	**32 Nr. Welds**	**50,25 inch**
		Erection	**0,90 m**	**7 Nr. Welds**	**9,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**5,90 m**	**39 Nr. Welds**	**59,25 inch**
		Accepted	**5,90 m**	**39 Nr. Welds**	**59,25 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: 13/01/2025
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
31	00	1	A	01CS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	W1-W3	
31	00	1	A	01CS	2	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	W4-W6	
31	00	1	A	01CS	5	1	Cap BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	16I	1724001828	00010	8055-P1	W1	
31	00	1	A	01CS	1A	3,289	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	00	1	A	01CS	1B	6	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	00	1	B	01CS	3	1	Tee BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	0D	1724001828	00260	8055-P2	W9-W10-W12	
31	00	1	B	01CS	4	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32	1724001267	00310	5924-P3	W10-W11	
31	00	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	W11	
31	00	1	B	01CS	1C	6	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	00	1	B	01CS	1D	4,76	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	00	1	B	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W37	
31	00	1	B	01CS	1F	0,1	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	00	1	C	01CS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W14	
31	00	1	C	01CS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W15-W16	
31	00	1	C	01CS	6	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W17	
31	00	1	C	01CS	1G	2,321	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	00	1	C	01CS	1H	3,925	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		

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: 13/01/2025
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
31	02	2	D	01CS	3	1	Tee Reducing BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	54	1724001828	00290	8055-P4	W19-W21	
31	02	2	D	01CS	4	1	Tee Reducing BW ›1.1/2"x3/4" Thk.5,08mmx3,91mm ASTM/ASME A/SA420 Gr.WPL6	14E	1724001828	00280	8055-P3	W21-W22-W23	
31	02	2	D	01CS	5	1	NipoFlange Reinforced ›4"x1.1/2" Thk.6,02mmx5,08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	T24617	1724001267	00270	24C0357/01	W25	
31	02	2	D	01CS	6	1	Reducer Eccentric BW ›4"x1.1/2" Thk.6.02mmx5.08mm ASTM/ASME A/SA420 Gr.WPL6	513131	1724000839	00770	4527-P12	W23-W24	
31	02	2	D	01CS	6	1	Reducer Eccentric BW ›4"x1.1/2" Thk.6.02mmx5.08mm ASTM/ASME A/SA420 Gr.WPL6	513131	1724001828	00130	8055-P5	W26-W27	
31	02	2	D	01CS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724002052	00010	9083-P1	W41-W44	
31	02	2	D	01CS	8	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	W39	
31	02	2	D	01CS	8	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	W41	
31	02	2	D	01CS	9	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	W22	
31	02	2	D	01CS	24	1	Tee BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	OD	1724002052	00020	9083-P2	W27-W39-W40	
31	02	2	D	01CS	1J	0,271	Pipe 114.3mm(4") thk.6.02mm ASTM/ASME A/SA333 Gr.6	1234140	1724000995	00020	24A2347		
31	02	2	D	01CS	2I	0,212	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	02	2	D	01CS	2Q	0,15	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	02	2	E	01CS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W29	
31	02	2	E	01CS	8	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	W29	
31	02	2	F	01CS	8	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	W31	
31	02	2	F	01CS	2L	0,726	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	02	2	I	01CS	8	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	W28	
31	02	2	I	01CS	8	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	W38	
31	02	2	I	01CS	2K	0,359	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
31	02	2	J	01CS	7	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W43	
31	02	2	J	01CS	8	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	W42	
31	02	2	J	01CS	2P	0,4	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	32	**To**	32
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
1/32/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**FWN**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**A**
01CS	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								
2/32/1/_		**00**	**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**	**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								
3/32/1/_		**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**	**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								
4/32/1/_		**00**	**25-09-2024**	**18**	**AZ53**			**PL**	**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**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				
		LP	FIN	Weld Completion				10 %			Acceptable								
5/32/1/_		**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								
6/32/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**FWN**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**B**
	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								
7/32/1/_		**00**	**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								
8/32/1/_		**00**	**11-01-2025**	**130**	**AX 453**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				11-01-2025				
		RT	FIN	Weld Completion				10 %			Acceptable								
9/32/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**ELB**	**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				18-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000083	4	Acceptable				26-09-2024				

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. %	Dimension / N. Rep	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Cons / NOTE	Accept. Date	Spool
9/32/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**ELB**	**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							18-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
10/32/1/_		**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**	**C**
	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								
11/32/1/_		**00**	**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**	**C**
	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								
12/32/1/_		**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**	**C**
	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								
13/32/1/_		**00**	**10-01-2025**	**127**	**AX 453**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**10-01-2025**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable							10-01-2025	
		RT	FIN	Weld Completion				10 %			Acceptable								
14/32/1/_		**00**	**18-09-2024**	**10**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**D**
	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	**32**	**Prefabrication**	**1,15 m**	**12 Nr. Welds**	**11,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,35 m**	**14 Nr. Welds**	**13,00 inch**
		Accepted	**1,35 m**	**14 Nr. Welds**	**13,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**1,15 m**	**12 Nr. Welds**	**11,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,35 m**	**14 Nr. Welds**	**13,00 inch**
		Accepted	**1,35 m**	**14 Nr. Welds**	**13,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

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		
14/32/1/_		**00**	**18-09-2024**	**10**	**AZ53**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**D**

Totals by Project			
Prefabrication	**1,15 m**	**12 Nr. Welds**	**11,00 inch**
Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Performed	**1,35 m**	**14 Nr. Welds**	**13,00 inch**
Accepted	**1,35 m**	**14 Nr. Welds**	**13,00 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:	13/01/2025

Sketch no.	Rev.	sheet	Spool	Piping Class	pos.	Q.ty (n° - m)	Description	Heat/Serial Number	PurchaseOrder	Pos. Order	Mat. Certificate	Weld Ref.	Note
32	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	W2-W3	
32	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	W1	
32	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	W5	
32	00	1	A	01CS	1A	0,4	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
32	00	1	A	01CS	1B	0,115	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
32	00	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W4	
32	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	W6-W7	
32	00	1	B	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	W6	
32	00	1	B	01CS	1C	1,236	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
32	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W9	
32	00	1	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W10-W11	
32	00	1	C	01CS	1D	0,508	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
32	00	1	C	01CS	1E	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
32	00	1	C	01CS	1F	5,237	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
32	00	1	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W14	
32	00	1	D	01CS	1G	0,955	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

Base Load Power Hub (BLPH)

TEST PACK

N°55-01-TP-003
SUB-SYSTEM N° 55-01

System	55
Sub-System	55-01
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.

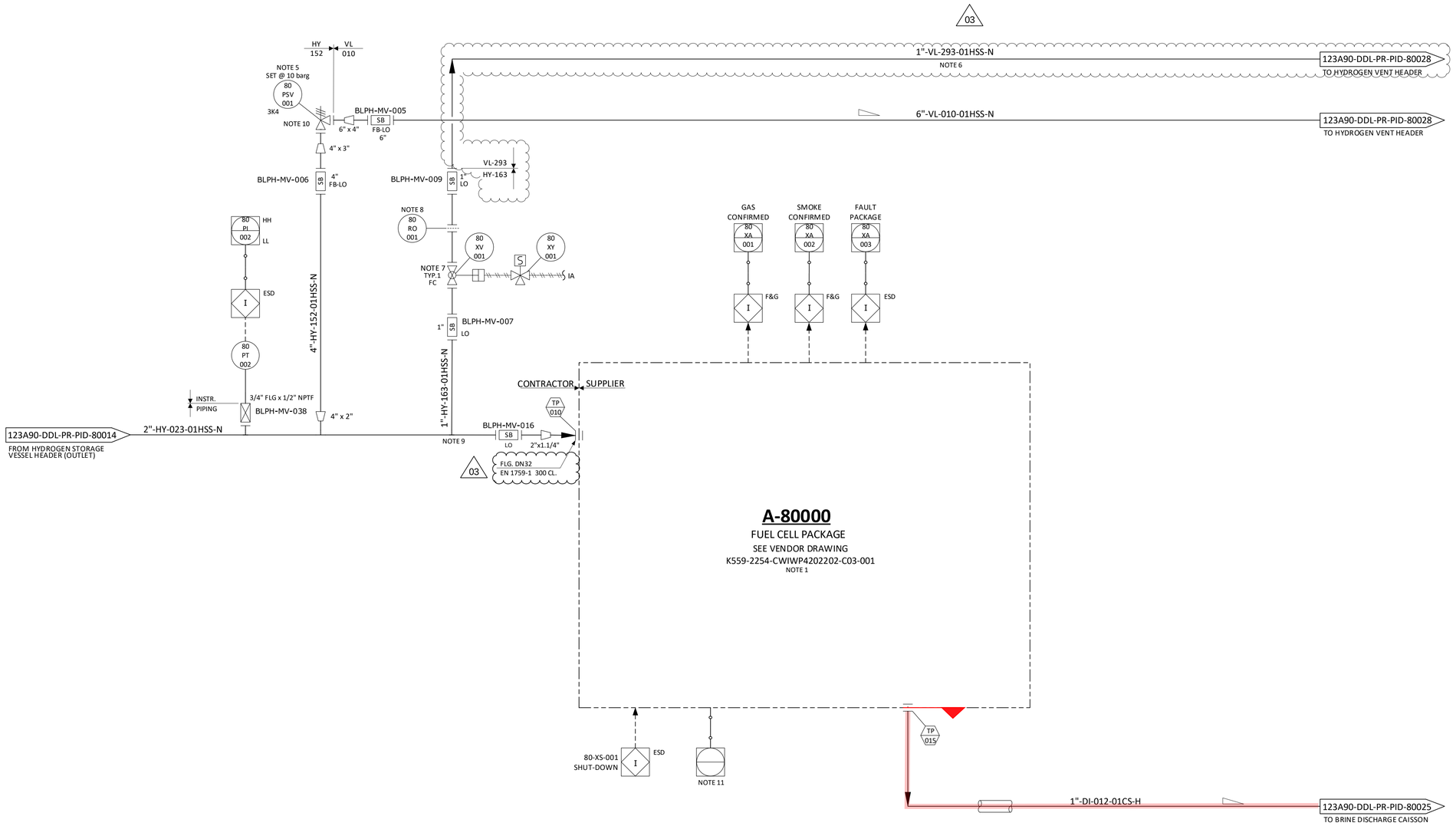
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1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation
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   - 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



NOTES

1. THE VENDOR PACKAGE WILL CONTAIN AIR INTAKE AND EXHAUST, SUITABLY SAFEGUARDED AND SEPARATED.
2. DELETED.
3. DELETED.
4. DELETED
5. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
6. LINE REQUIRED FOR PURGING OF PIPING WORK.
7. TIGHT SHUT-OFF VALVE.
8. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
9. LINE 1"-HY-163-01HSS-N WILL BE LOCATED AS CLOSE TO THE PACKAGE AS POSSIBLE TO ENSURE COMPLETE PURGING OF THE LINE.
10. 80-PSV-001 SIZED FOR CV FAILURE OF UPSTREAM CONTROL VALVE 25-PV-055A/B.
11. SERIAL COMMUNICATION WITH CONTROL SYSTEM.

HOLDS

1. DELETED.
2. DELETED.

55-01-TP-003
5.25 barg

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
FUEL CELL PACKAGE

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-80012	001	03

File Name : FILE_NAME

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 50 017
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 50 005
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 50 006
03
DECK
HOOK-UP 003
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK

SUPPLIER | CONTRACTOR

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

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

55-01-TP-003
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

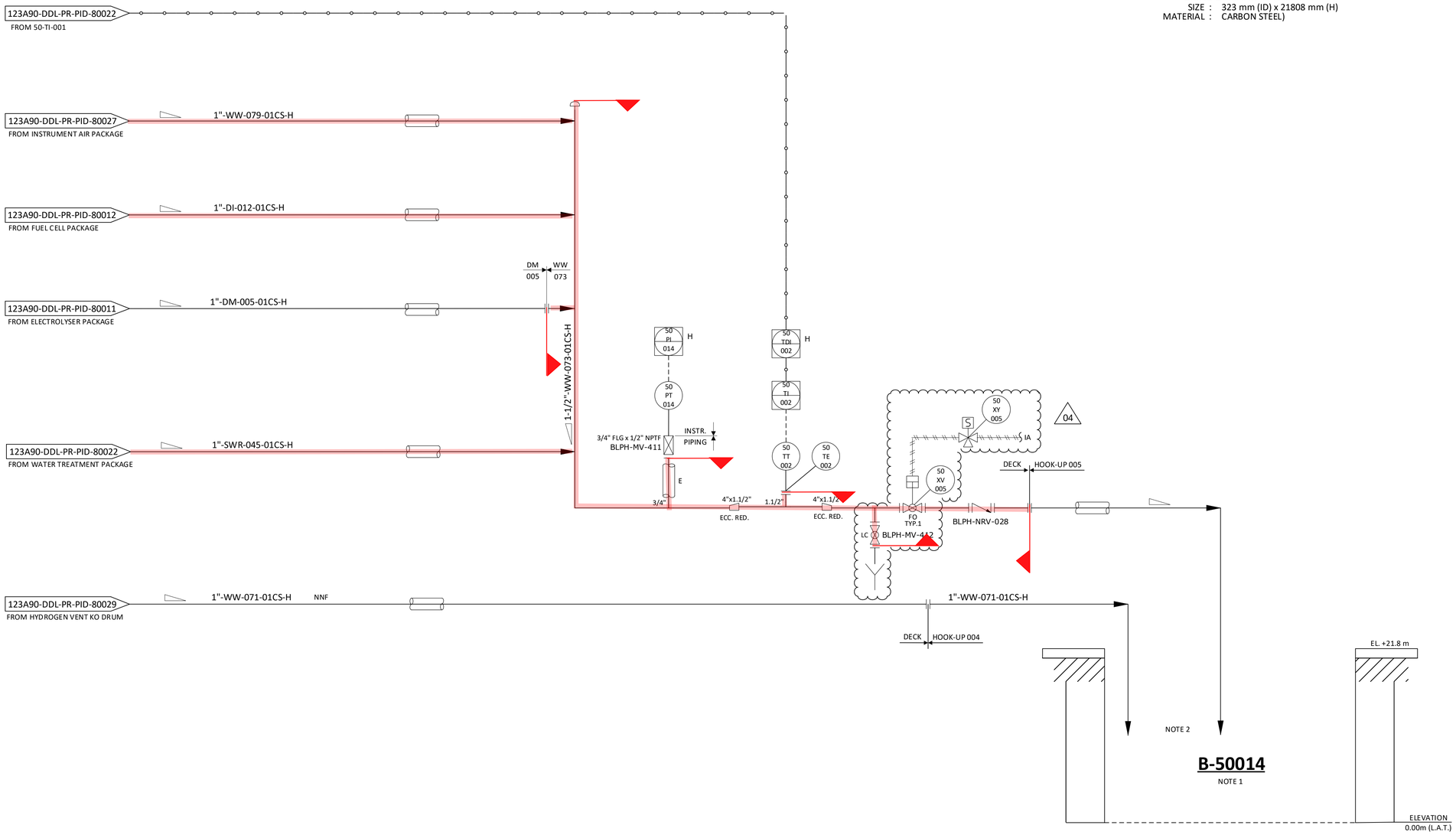
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PR-PID-80022	001	03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV



B-50014

BRINE DISCHARGE CAISSON
SIZE : 323 mm (ID) x 21808 mm (H)
MATERIAL : CARBON STEEL)

NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT).

HOLDS

1. DELETED.

55-01-TP-003
5.25 barg

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	11/10/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
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 1

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-80025	001	04

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
CAPACITY : 313 Sm³/h (PRODUCTION)

A-64000
NITROGEN GENERATION SYSTEM
CAPACITY : 52.7 Sm³/h (PRODUCTION)

SUCTION 63 PI 001 | DISCHARGE 63 PI 002 | COMMON ALARM 63 XA 001 | MCC DEVICE COMMS FAIL 63 XI 001 | AVAILABLE STATUS 63 XI 002 | RUN/STOP STATUS 63 XI 003 | SHUTDOWN STATUS 63 XI 004 | SHUTDOWN ALARM 63 XA 002 | ESD I

FAULT PACKAGE 63 XA 003

ESD I — 63-XS-001 SHUT-DOWN

NOTE 14

A-63000
INSTRUMENT AIR AND DRYER PACKAGE
SEE VENDOR DRAWING 1724000428-PR-PID-00019
NOTE 2, 3, 4, 5, 6
03

1-1/2"-IA-263-01SS-N

03 — **V-63001**
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019
63 TP 040 — 2" — 2"x1.1/2"

03 — 63 TP 041 — 2"x1.1/2" — LO — BLPH-MV-149

1-1/2"-IA-108-01SS-N

63 PI 004 — LL — ESD I

63 PI 003 — L

63 PT 003 | 63 PT 004

INSTR. PIPING

BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF

123A90-DDL-PR-PID-80041
TO INSTRUMENT AIR DISTRIBUTION HEADER

03 — 63 TP 039

BLPH-MV-269 — SB — LO

1"-WW-079-01CS-H

123A90-DDL-PR-PID-80025
TO BRINE DISCHARGE CAISSON

BLPH-MV-270 — LO — 1.1/2"

1-1/2"-IA-204-01SS-N

123A90-DDL-PR-PID-80041
FROM INSTRUMENT AIR DISTRIBUTION HEADER
03

03 — CONC. RED. 1.1/2"x1" — 64 TP 043

ESD I — TO SAFE LOCATION — 2"-AV-224-01CS-N — 03 — 64 TP 045

NOTE 15: 64 PI 002 — L — LL

NOTE 10 TO ATM

NOTE 1, 12 SET @ 10 barg 102 — 64 PSV 001 — 2"-AV-160-01CS-N

1"-N-101-01CS-N — 123A90-DDL-PR-PID-80028 — TO HYDROGEN VENT HEADER

1"-N-125-03HSS-N — 123A90-DDL-PR-PID-80017 — TO HYDROGEN STORAGE VESSEL C

1"-N-124-03HSS-N — 123A90-DDL-PR-PID-80016 — TO HYDROGEN STORAGE VESSEL B

1"-N-028-03HSS-N — 123A90-DDL-PR-PID-80015 — TO HYDROGEN STORAGE VESSEL A

1" N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL

1"-N-126-03HSS-N — 123A90-DDL-PR-PID-80018 — TO HYDROGEN STORAGE VESSEL D

1"-N-127-03HSS-N — 123A90-DDL-PR-PID-80019 — TO HYDROGEN STORAGE VESSEL E

1"-N-128-03HSS-N — 123A90-DDL-PR-PID-80020 — TO HYDROGEN STORAGE VESSEL F

1"-N-151-01CS-N — 123A90-DDL-PR-PID-80011 — TO ELECTROLYSER PACKAGE

01CS — 03HSS

64 HS 031 — 64 PIC 031A H L — 64 PIC 031B H L — 64 PT 031A — 64 PT 031B — 64 PT 002

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

INSTR. PIPING

3/4" FLG x 1/2" NPTF — BLPH-MV-386 — 3/4" FLG x 1/2" NPTF — BLPH-MV-166 — BLPH-MV-167 3/4" FLG x 1/2" NPTF

SB — BLPH-MV-278 FB-LO 1.1/2" — 1-1/2"-N-197-01CS-N — 1.5" x 1" — 1.5" x 1"

1"-N-100-01CS-N

64 SDY 001 — IA

64 SDV 001 — NOTE 13 — NC-FC TYP.2

BLPH-MV-271 — SB — LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 — NOTE 16

64 TP 042 | 64 TP 044 | 03

1"-N-262-01CS-N

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

ESD I — 64-XS-001 SHUT-DOWN — ESD I — NOTE 14

ESD I — 64 XA 003 — FAULT PACKAGE

03 — 64 TP 046 — **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

55-01-TP-003
5.25 barg

NOTES

1. ONE UNINSTALLED SPARE PSV SHALL BE AVAILABLE.
2. COMPRESSORS AND DRIERS DESIGNED FOR 2 X 100% CONFIGURATION. INSTRUMENT AIR RECEIVER DESIGNED FOR 1 X 100%.
3. VENDOR TO PROVIDE NECESSARY CONTROLS, INSTRUMENTATIONS AND ISOLATIONS IN ORDER TO OPERATE THE PLANT IN SAFE MANNER.
4. COMPRESSORS WILL OPERATE ON THE BASIS OF ONE WORKING AND ONE ON STANDBY.
5. COMPRESSORS TO BE ROTARY SCREW TYPE OIL FREE.
6. AIR COMPRESSOR INLET TO BE LOCATED AWAY FROM ANY VENTS.
7. DELETED.
8. DELETED.
9. DELETED.
10. TO SAFE LOCATION, ROUTED AWAY FROM WALKWAYS.
11. DELETED.
12. 64-PSV-001 SIZED FOR UPSTREAM 64-PV-031 CV FAILURE. (03)
13. 64-SDV-001 IS NORMALLY CLOSED. IF REQUIRED THE OPERATOR CAN REMOTELY OPEN THE VALVE TO ALLOW PURGING OPERATION. VALVE 64-SDV-001 IS ALSO CONNECTED TO THE PCS SYSTEM.
14. SERIAL COMMUNICATION WITH CONTROL SYSTEM.
15. THE ALARM 64-PAL-002 WILL CLOSE 64-SDV-001 THROUGH SAFETY SYSTEM.
16. MANUAL VALVE BLPH-MV-275 TO BE CONNECTED WITH MANUAL VALVE BLPH-MV-466 (INSTALLED ON ELECTROLYSER PACKAGE EXIT LINE) BY MEAN ON A FLEXIBLE HOSE DURING COMMISSIONING PHASE FOR PURGING OPERATION. (03)

HOLDS

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

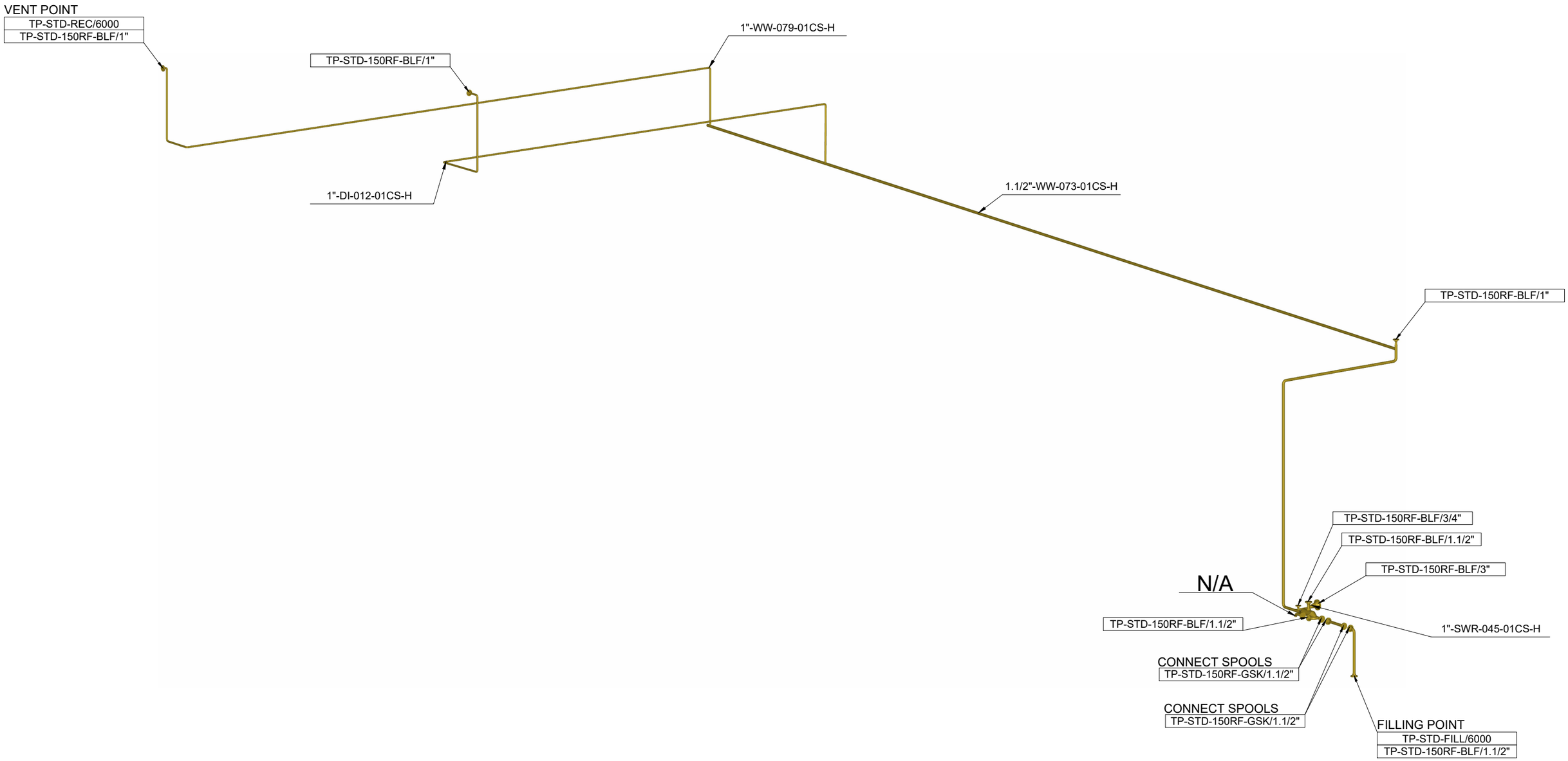
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR 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-80027		SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-01-TP-003

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
55-01-TP-003

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

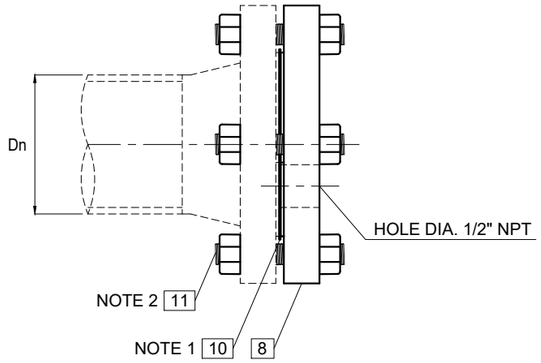
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-003	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	3	3	
TP-003	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	3	3	
TP-003	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	3	12	
TP-003	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-003	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-003	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-003	TP-STD-150RF-BLF/3"	FLBHCS0137030H	Flange Blind c/w NPT Hole ø3"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-003	TP-STD-150RF-BLF/3"	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ø3" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-003	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	1	4	
TP-003	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	3	3	
TP-003	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	3	3	
TP-003	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	3	12	
TP-003	TP-STD-150RF-GSK/1.1/2"	GFL3GK15981H00	Gasket Flat Thk. 3 mm ø1.1/2" 150LB RF NEOPRENE	1	2	2	
TP-003	TP-STD-150RF-GSK/1.1/2"	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-150RF	150 RF	STANDARD FOR BLIND POINT

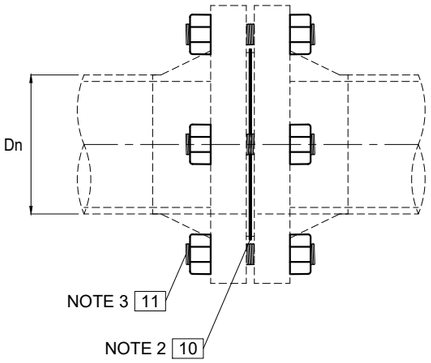
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

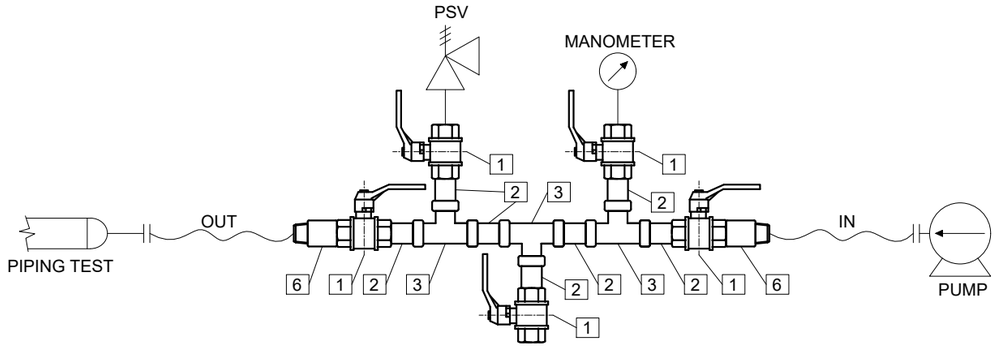
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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

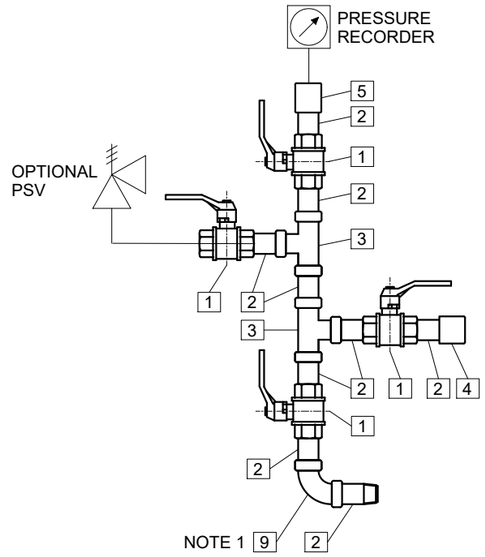
TP-STD-FILL

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
7	DI-012	012	1	01CS	H	4,55	80	N/A	1"-DI-012-01CS-H	123A90-DDL-PR-PID-80012	3,50	55	55-01	TP-003	Water	5.25	Deionised Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
29	SWR-045	045	1	01CS	H	4,55	80	N/A	1"-SWR-045-01CS-H	123A90-DDL-PR-PID-80022	3,50	55	55-01	TP-003	Water	5.25	Sea Water Return	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
31	WW-073	073	1.1/2	01CS	H	5,08	80	N/A	1-1/2"-WW-073-01CS-H	123A90-DDL-PR-PID-80025	3,50	55	55-01	TP-003/TP-103	Water	5.25/N/A	Waste Water	Carbon Steel	INF	Art. 4, par. 3	1D	N/A
32	WW-079	079	1	01CS	H	4,55	80	N/A	1"-WW-079-01CS-H	123A90-DDL-PR-PID-80027	3,50	55 / 63	55-01 / 63-00	TP-003/TP-059	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**

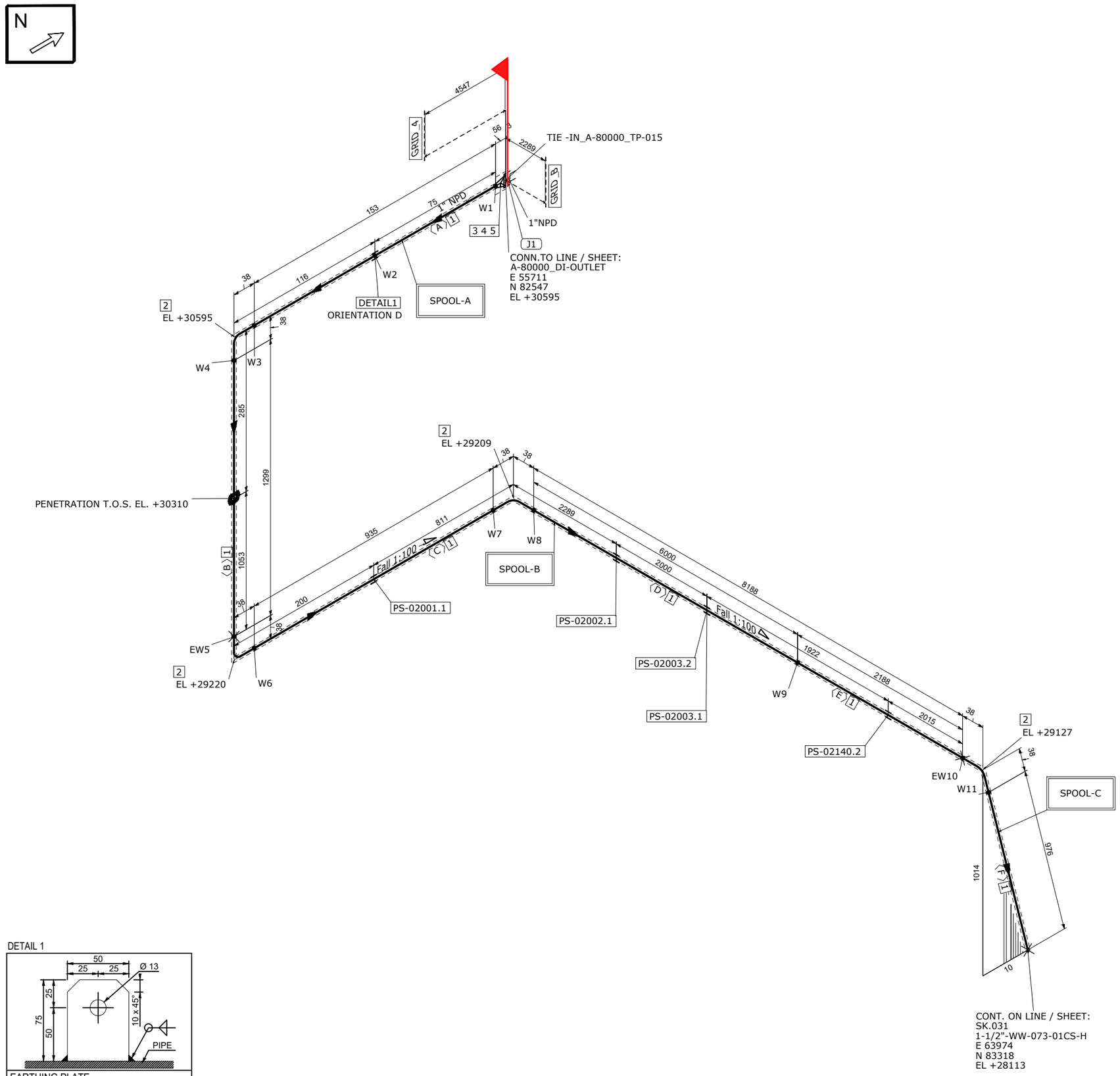
REV. **07**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **14/10/2024**

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
11	123A90-FDL-PP-DI-00007-01	**007**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-DI-012-01CS-H	27/08/2024													**00**	**03**		**TP-003**
37	123A90-FDL-PP-DI-00029-01	**029**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-SWR-045-01CS-H	27/08/2024													**00**	**03**		**TP-003**
41	123A90-FDL-PP-DI-00031-01	**031**	01	SHOP DRAWING ISOMETRIC - LINE NR 1-1/2"-WW-073-01CS-H	27/08/2024													**00**	**03**		**TP-003**
42	123A90-FDL-PP-DI-00031-02	**031**	02	SHOP DRAWING ISOMETRIC - LINE NR 1-1/2"-WW-073-01CS-H	27/08/2024	03/10/2024	14/10/2024											**02**	**07**		**TP-003**
44	123A90-FDL-PP-DI-00032-01	**032**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-079-01CS-H	27/08/2024													**00**	**03**		**TP-003/TP-059**



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	11.6M	37.4
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
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	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
5	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	39.5
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	40.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2		FW
W3	1	BW
W4	1	BW
EW5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	153	BEVEL	BEVEL
B	1	1299	BEVEL	BEVEL
C	1	935	BEVEL	BEVEL
D	1	6000	BEVEL	BEVEL
E	1	2188	BEVEL	BEVEL
F	1	977	BEVEL	BEVEL

SUPPORT LIST

PS-02001.1
PS-02002.1
PS-02003.1
PS-02003.2
PS-02140.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	6.3
B	4	29.9
C	1	3.3
MONT	2	0.6

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

55-01-TP-003

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-80012
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

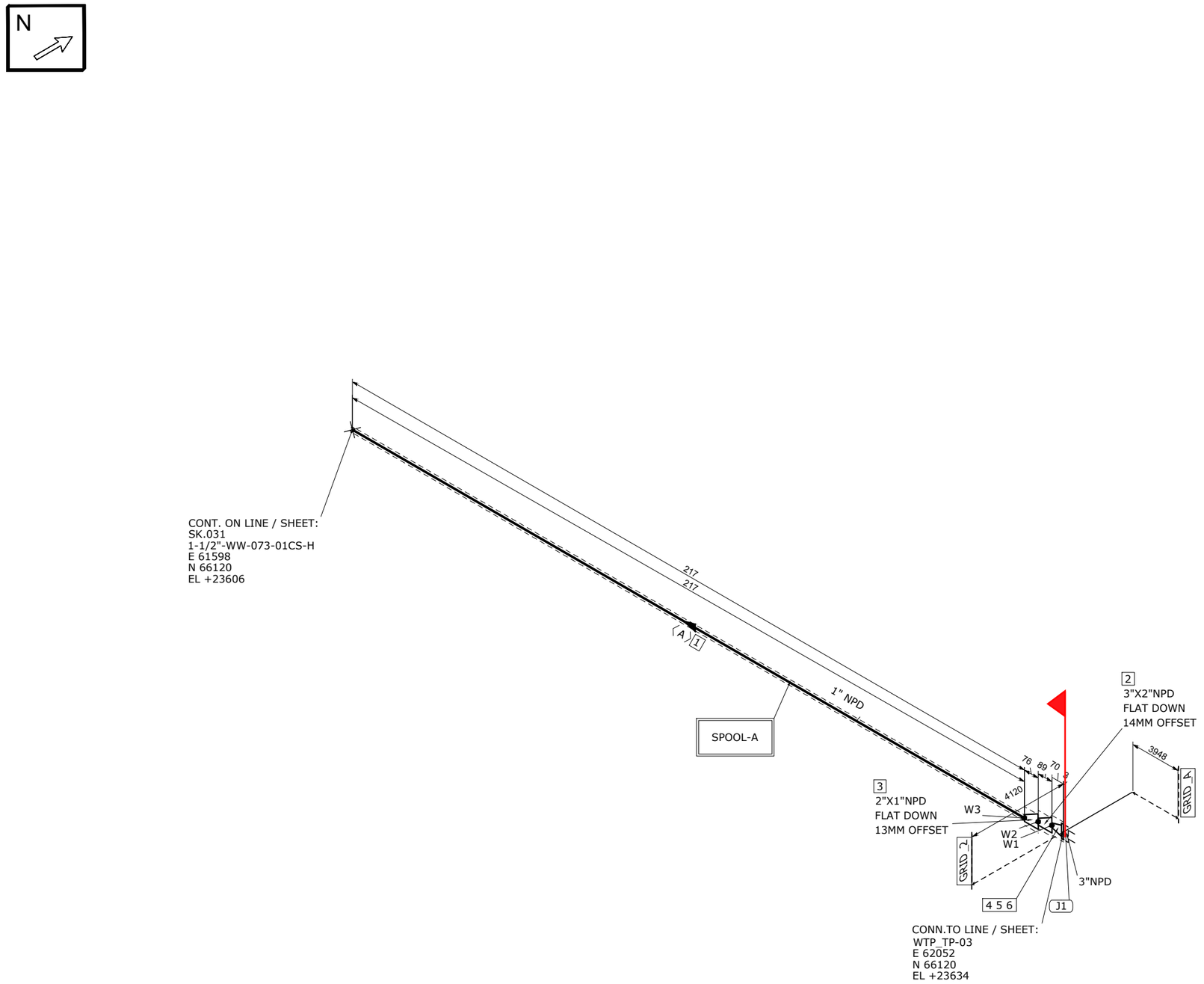
MASTER

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DI-012-01CS-H
SK.007

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-00007
SHEET / OF: 1/1
REV.: 00



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	0.2M	0.7
2	3X2	REE0CS13010302	Reducer Eccentric ASME B16.9 BW 5,49x5,54 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
3	2X1	REE0CS15650201	Reducer Eccentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
4	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]
5	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.2
6	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	6.8
ERECTION WEIGHT [kg]	1.2
OVERALL WEIGHT [kg]	8.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	2	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	217	BEVEL	BEVEL

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	6.8
MONT	0	1.2

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"-SWR-045-01CS-H

SK.029

55-01-TP-003

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-00029 | SHEET / OF: 1/1 | REV.: 00

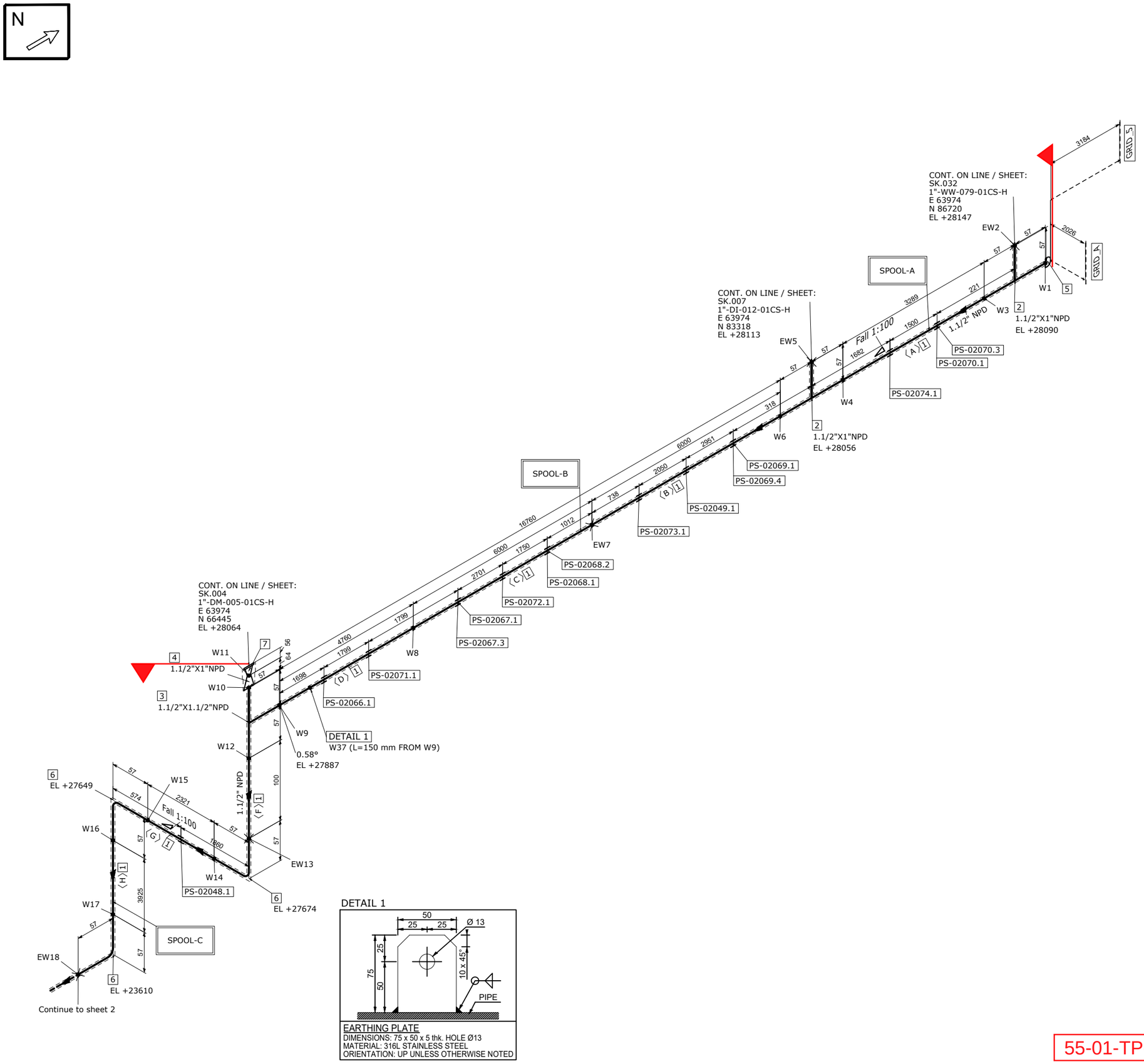
LINE DATA

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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	26.4M	142.8
2	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	2.0
3	1.1/2X1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1
4	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.4
5	1.1/2	CAP0CS05071H00	Cap ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.3
6	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
7	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]	149.5
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	149.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1.1/2	BW
EW2	1	BW
W3	1.1/2	BW
W4	1.1/2	BW
EW5	1	BW
W6	1.1/2	BW
EW7	1.1/2	BW
W8	1.1/2	BW
W9	1.1/2	BW
W10	1.1/2	BW
W11	1	BW
W12	1.1/2	BW
EW13	1.1/2	BW
W14	1.1/2	BW
W15	1.1/2	BW
W16	1.1/2	BW
W17	1.1/2	BW
EW18	1.1/2	BW
W37		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	3289	BEVEL	BEVEL
B	1.1/2	6000	BEVEL	BEVEL
C	1.1/2	6000	BEVEL	BEVEL
D	1.1/2	4760	BEVEL	BEVEL
F	1.1/2	100	BEVEL	BEVEL
G	1.1/2	2321	BEVEL	BEVEL
H	1.1/2	3925	BEVEL	BEVEL

SUPPORT LIST

PS-02070.3
PS-02070.1
PS-02074.1
PS-02069.1
PS-02069.4
PS-02049.1
PS-02073.1
PS-02068.2
PS-02068.1
PS-02072.1
PS-02067.1
PS-02067.3
PS-02071.1
PS-02066.1
PS-02048.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	52.5
B	7	61.6
C	6	35.3
MONT	6.5	0.0

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

CROSSWIND

ROSETTI MARINO

55-01-TP-003

MASTER

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-WW-073-01CS-H
SK.031

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-00031 | SHEET / OF: 1/3 | REV.: 00

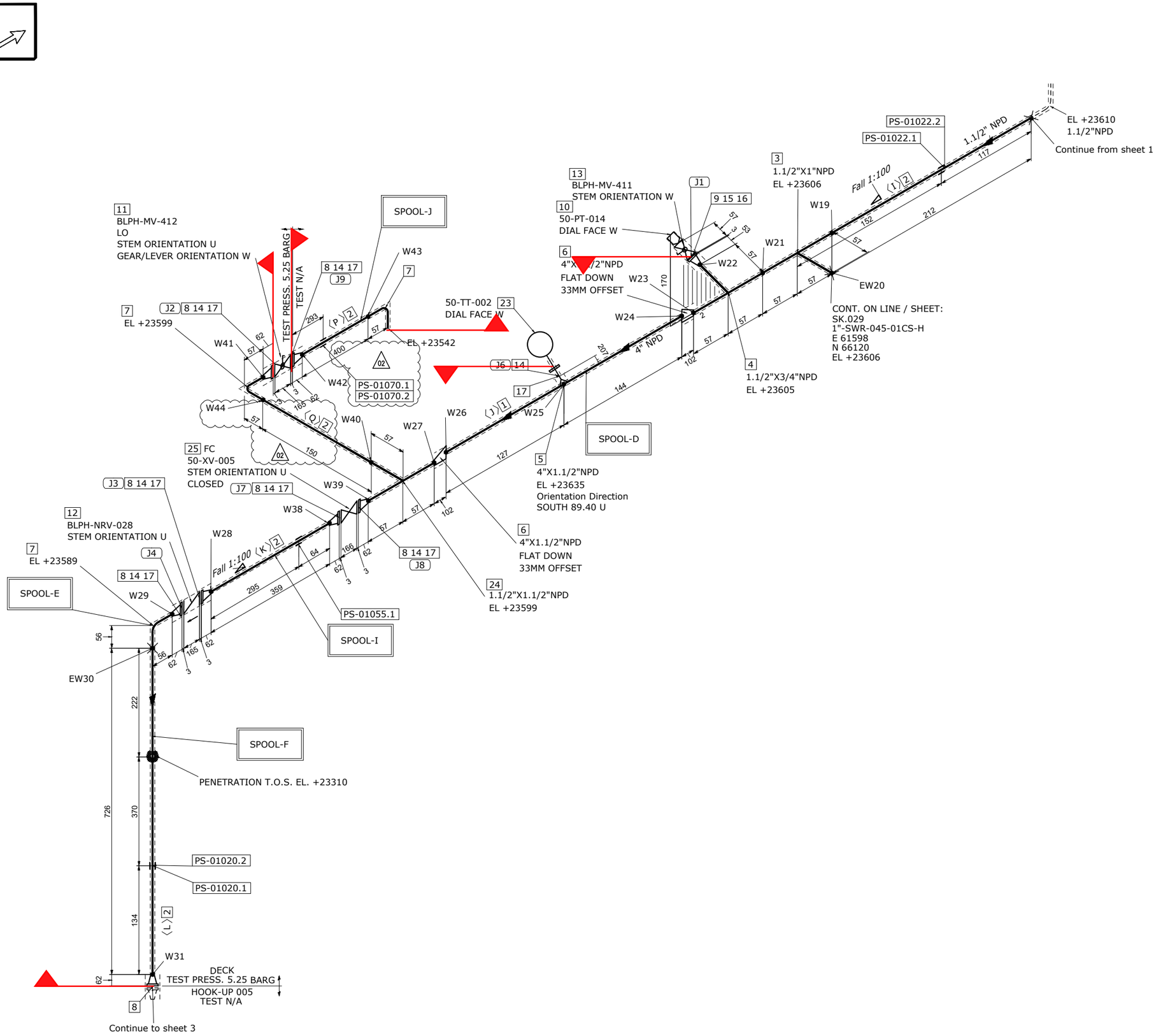
LINE DATA

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-80025
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	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1 02
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H
SK.031

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 14-10-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00031 | SHEET / OF: 2/3 | REV.: 02

55-01-TP-003

MASTER

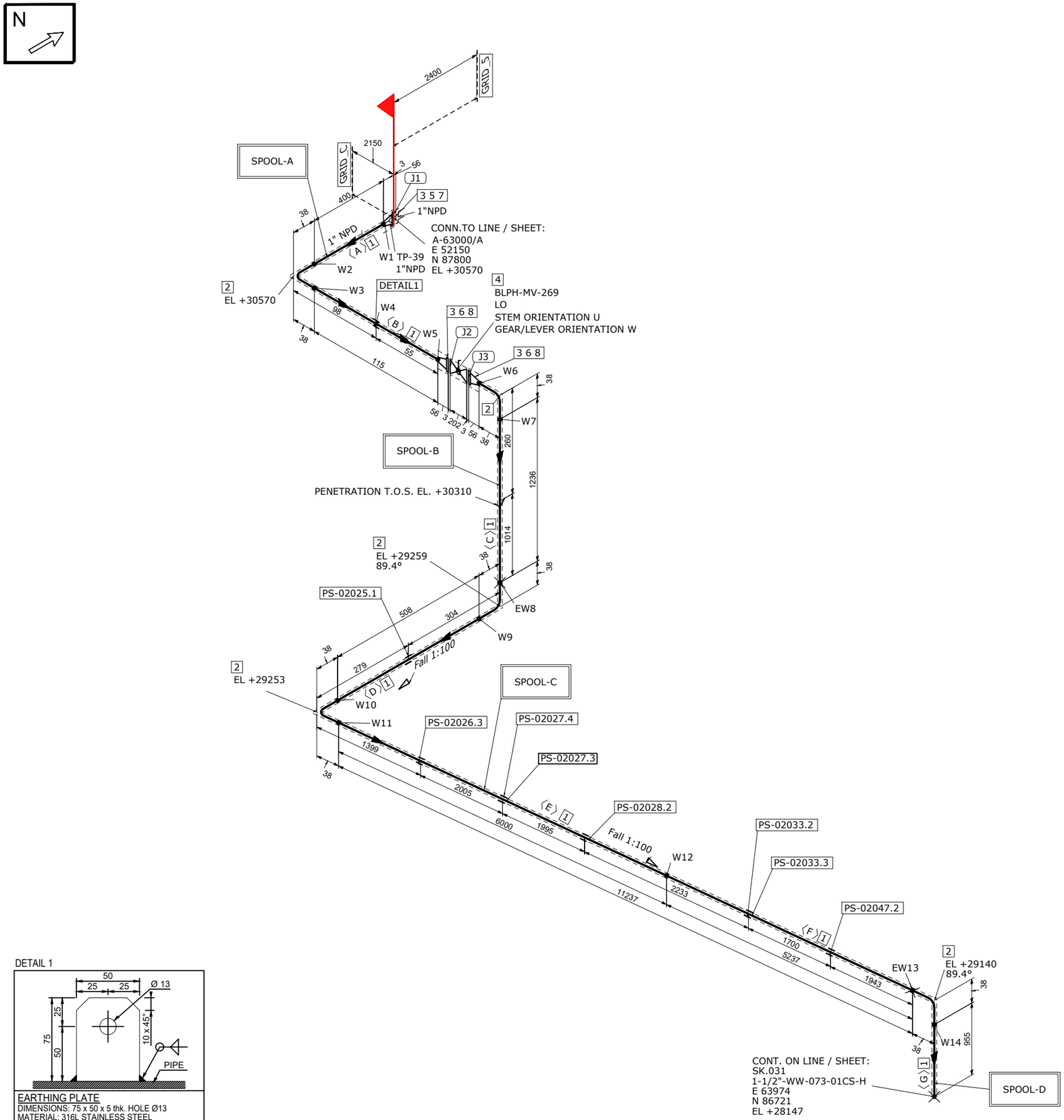
LINE DATA

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-80025
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



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	14.5M	46.9
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	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
5	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
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	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5
8	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]	52.0
ERECTION WEIGHT [kg]	14.2
OVERALL WEIGHT [kg]	66.2

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4		FW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
EW13	1	BW
W14	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	400	BEVEL	BEVEL
B	1	115	BEVEL	BEVEL
C	1	1236	BEVEL	BEVEL
D	1	508	BEVEL	BEVEL
E	1	6000	BEVEL	BEVEL
F	1	5237	BEVEL	BEVEL
G	1	955	BEVEL	BEVEL

SUPPORT LIST

PS-02025.1
PS-02026.3
PS-02027.3
PS-02027.4
PS-02028.2
PS-02033.2
PS-02033.3
PS-02047.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	4	4.7
B	2	5.6
C	4	38.4
D	1	3.3
MONT	2	14.2

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-80027
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

55-01-TP-003

MASTER

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-079-01CS-H

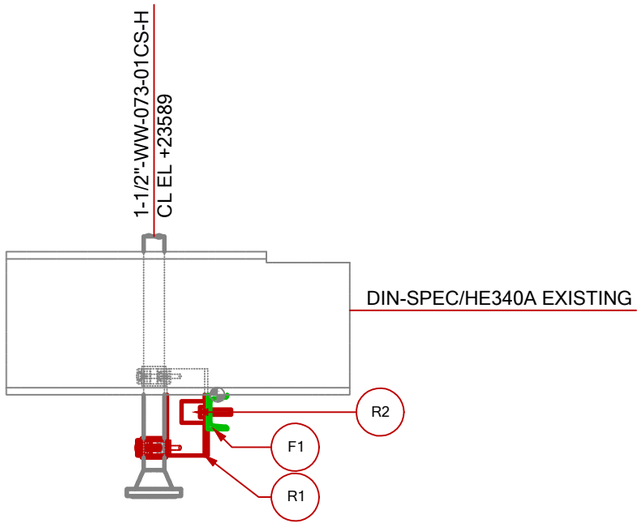
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CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM
DATE: 27-08-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00032
SHEET / OF: 1/1
REV.: 00

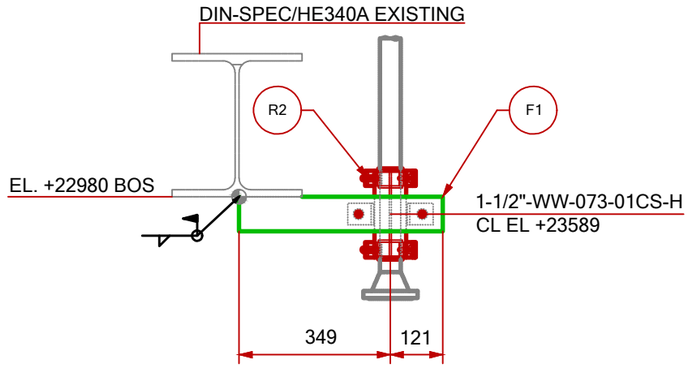
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

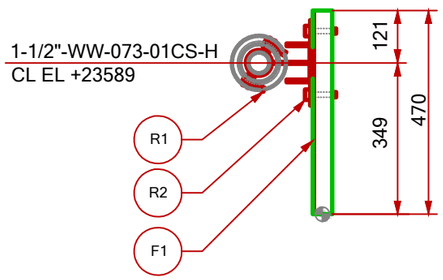
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01025	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-64 - 1.1/2" - 100 - 200		1	3,999	0,108	01	04/11/2024	AFC		TP-003
PS-01026	B2	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	01	04/11/2024	AFC		TP-003
PS-01022	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-01023	B2	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	01	04/11/2024	AFC		TP-003
PS-01055	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-71 - 1.1/2" - 100		1	2,911	0,082	01	04/11/2024	AFC		TP-003
PS-01070	B1	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	S-64 - 1.1/2" - 100 - 200		1	3,999	0,108	01	04/11/2024	AFC		TP-003
PS-01076	B2	PIP	LOWER DECK		1-1/2"-WW-073-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	01	04/11/2024	AFC		TP-003
PS-02001	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 96 - 90 - 200		1	4,626	0,034	01	04/11/2024	AFC		TP-003
PS-02002	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 98 - 90 - 200		1	4,634	0,034	01	04/11/2024	AFC		TP-003
PS-02003	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 98 - 90 - 200		1	4,634	0,034	01	04/11/2024	AFC		TP-003
PS-02003	B2	PIP	UPPER DECK		1"-DI-012-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	01	04/11/2024	AFC		TP-003
PS-02025	B1	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02026	B3	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02027	B3	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02027	B4	PIP	UPPER DECK		1"-WW-079-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	01	04/11/2024	AFC		TP-003
PS-02028	B2	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02033	B2	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02033	B3	PIP	UPPER DECK		1"-WW-079-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	01	04/11/2024	AFC		TP-003
PS-02047	B2	PIP	UPPER DECK		1"-WW-079-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	01	04/11/2024	AFC		TP-003
PS-02048	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 97 - 91 - 200		1	5,014	0,040	01	04/11/2024	AFC		TP-003
PS-02049	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02066	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02067	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02067	B3	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02068	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02068	B2	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02069	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02069	B4	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02070	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02070	B2	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	01	04/11/2024	AFC		TP-003
PS-02071	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02072	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02073	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02074	B1	PIP	UPPER DECK		1-1/2"-WW-073-01CS-H	S-75 - 1.1/2" - 98 - 92 - 200		1	5,021	0,040	01	04/11/2024	AFC		TP-003
PS-02140	B1	PIP	UPPER DECK		1"-DI-012-01CS-H	S-75 - 1" - 98 - 90 - 200		1	4,634	0,034	01	04/11/2024	AFC		TP-003



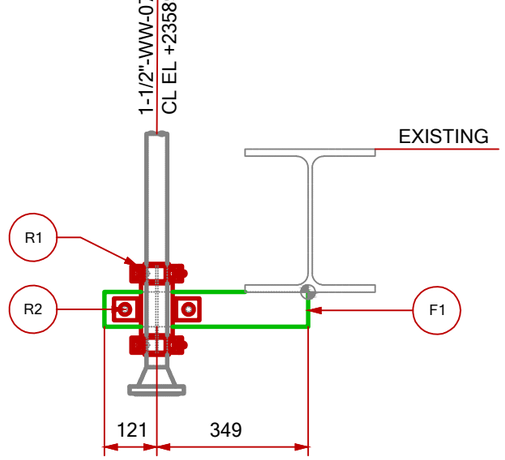
VIEW LOOKING NORTH



VIEW LOOKING WEST



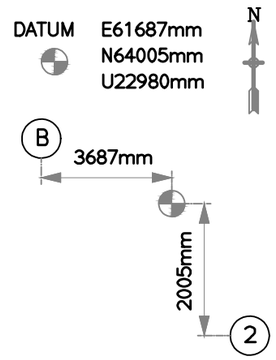
PLAN VIEW

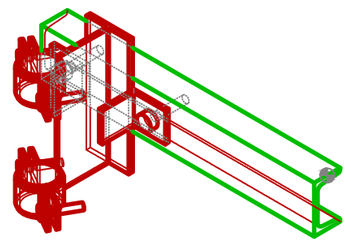


VIEW LOOKING EAST

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-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN80	Carbon Steel	470	1	8.66	4.07	0.149
						TOTAL	10.1	0.28





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

CROSSWIND

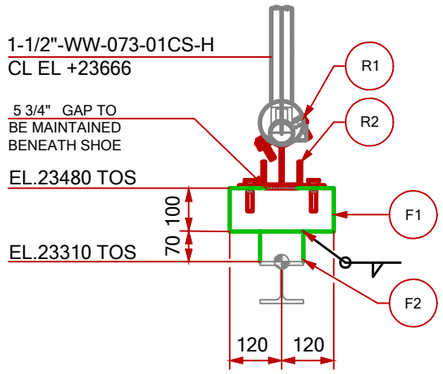
ROSETTI MARINO

TITLE :

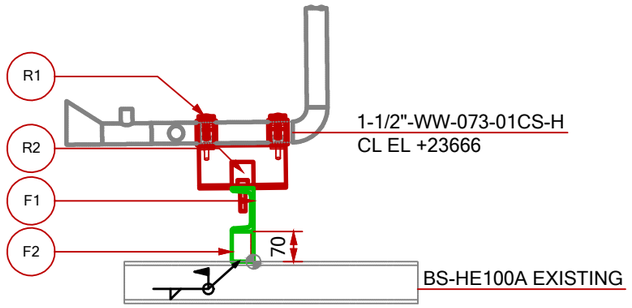
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01020

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

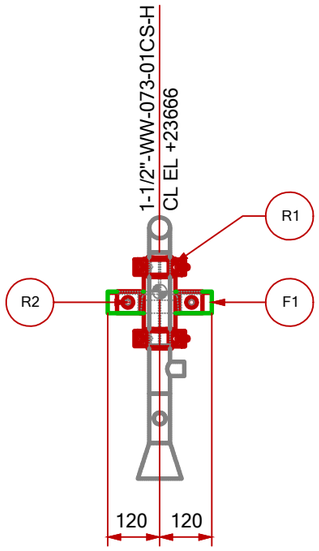
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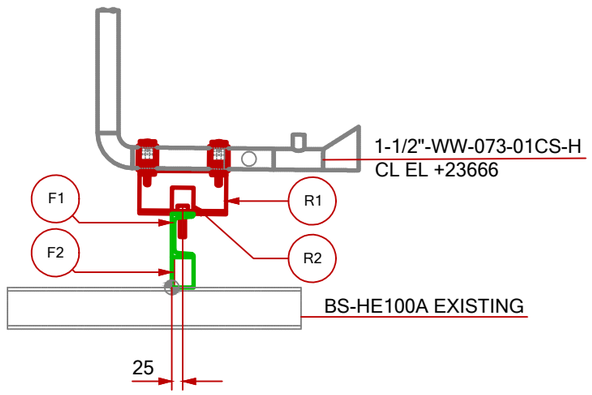
VIEW LOOKING NORTH



VIEW LOOKING WEST



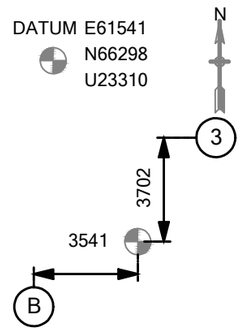
PLAN VIEW

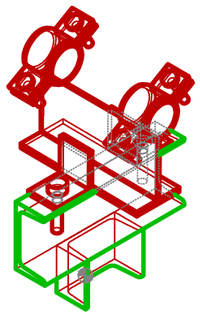


VIEW LOOKING EAST

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-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
R2	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
F2	BEAM	UPN100	Carbon Steel	70	1	10.57	0.74	0.029
						TOTAL	10.3	0.18





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

CROSSWIND

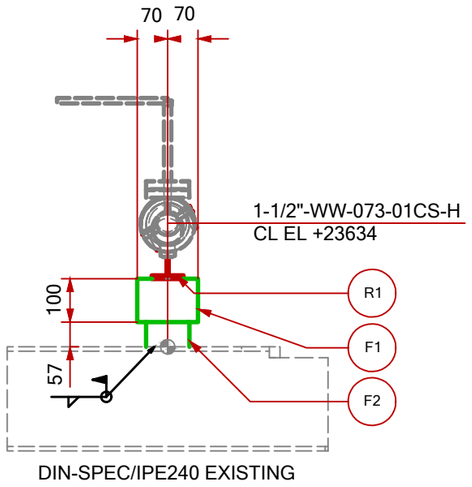
ROSETTI MARINO

TITLE :

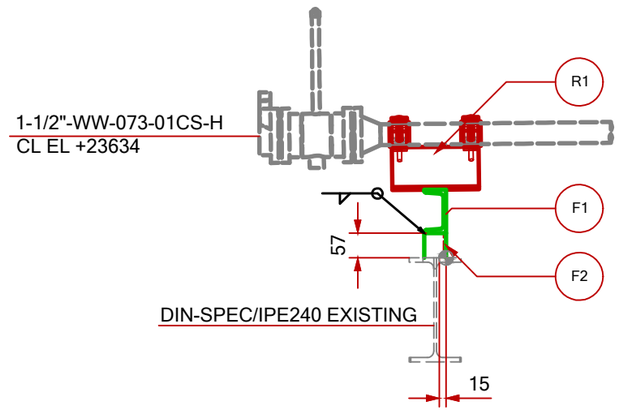
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01022

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

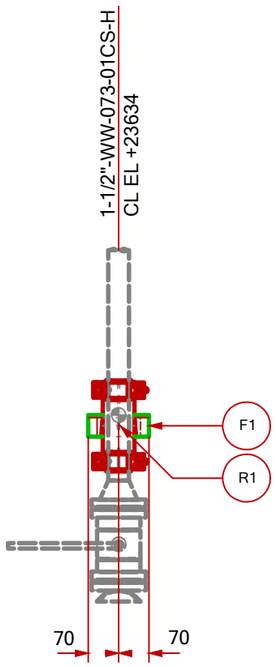
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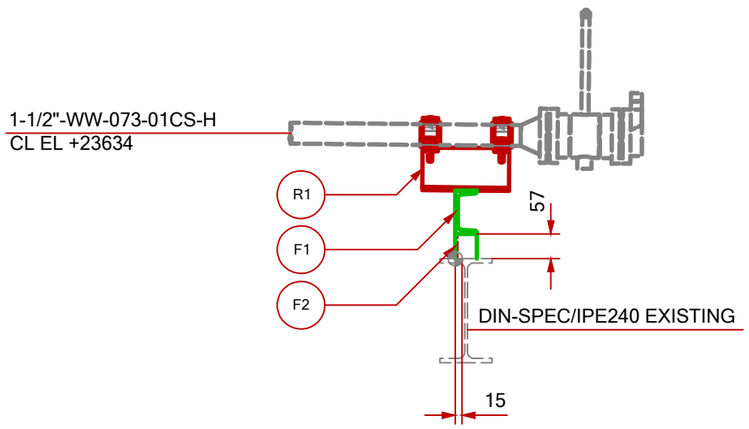
VIEW LOOKING NORTH



VIEW LOOKING WEST



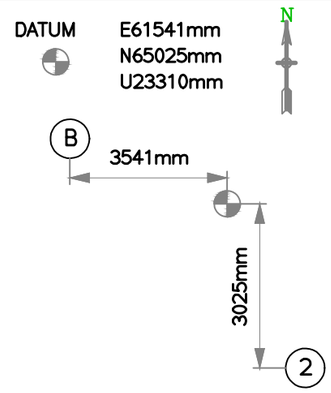
PLAN VIEW

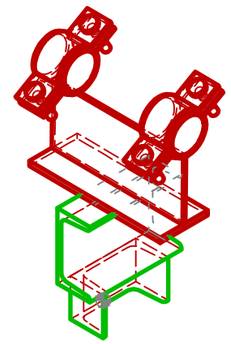


VIEW LOOKING EAST

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-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
F1	BEAM	UPN100	Carbon Steel	140	1	10.57	1.48	0.055
F2	BEAM	UPN100	Carbon Steel	57	1	10.57	0.60	0.024
						TOTAL	7.1	0.12





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

CROSSWIND

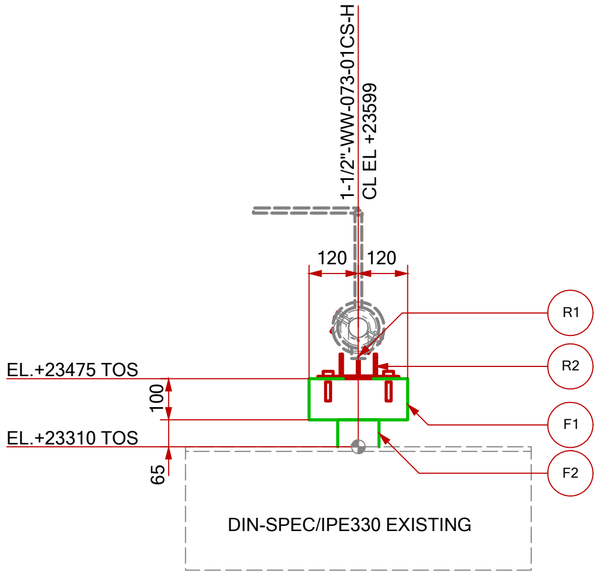
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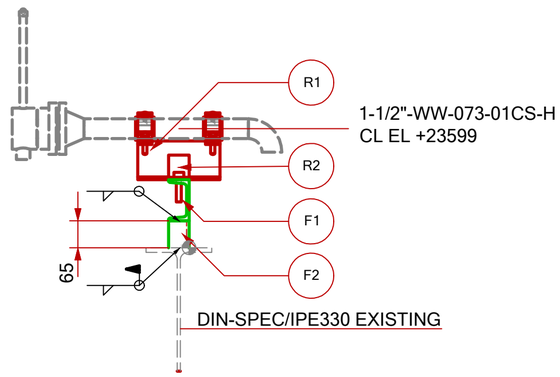
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01055

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

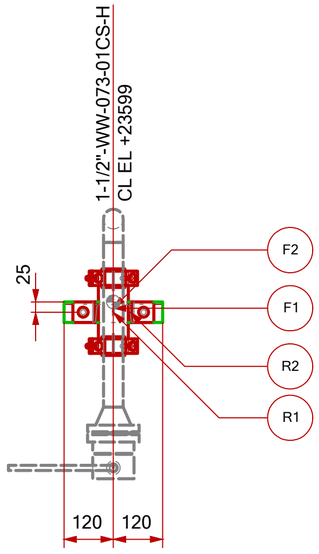
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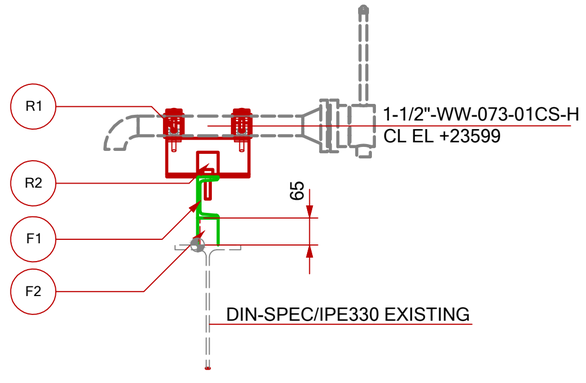
VIEW LOOKING NORTH



VIEW LOOKING WEST



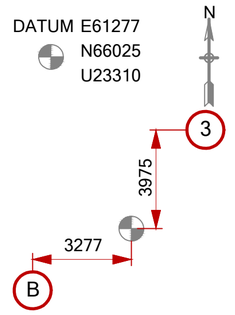
PLAN VIEW

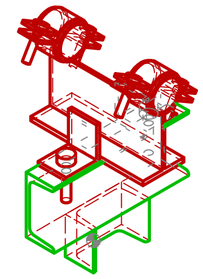


VIEW LOOKING EAST

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-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
F2	BEAM	UPN100	Carbon Steel	65	1	10.57	0.69	0.027
						TOTAL	9.3	0.25





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	04/11/24	MMA	SLO	DLO	ACCEPTED FOR CONSTRUCTION

CROSSWIND

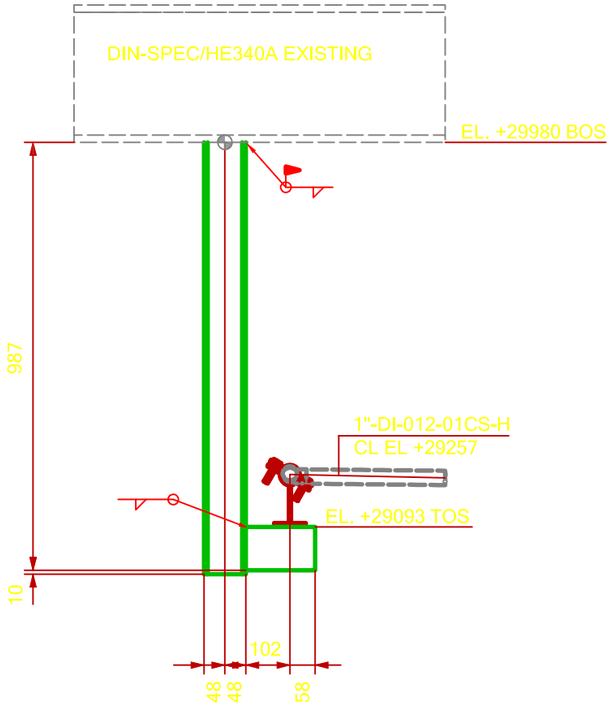
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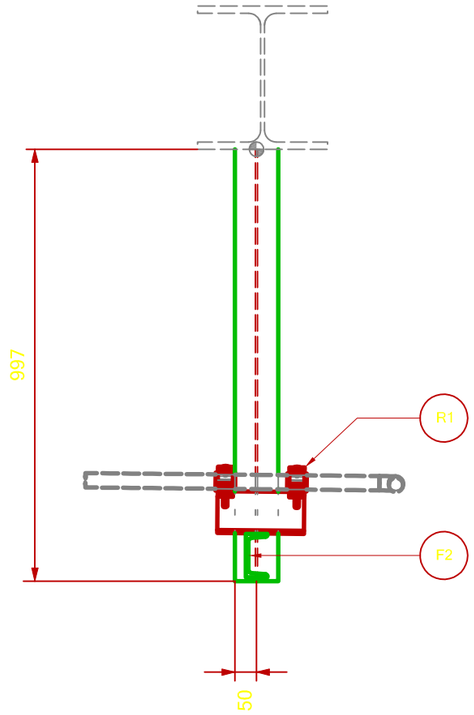
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01070

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1:10
DRAWN	CHECKED	APPROVED	DATE 04/11/24
	DRAWING NO. 123A90-DDL-PP-DD-72000	SHEET 1 of 1	REV. 01

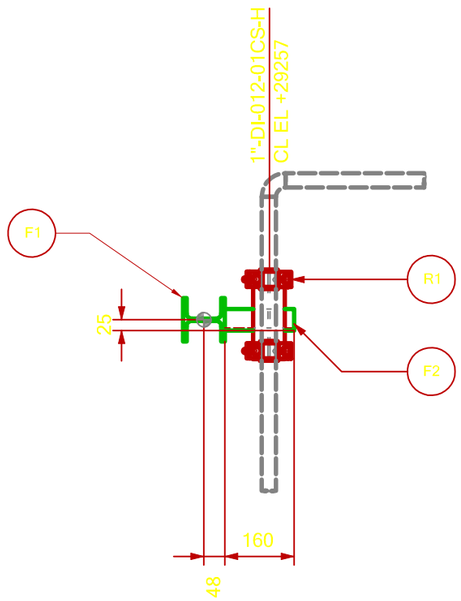
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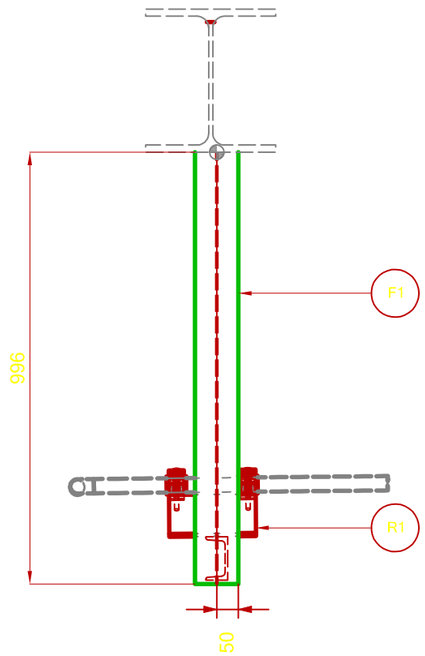
VIEW LOOKING NORTH



VIEW LOOKING WEST



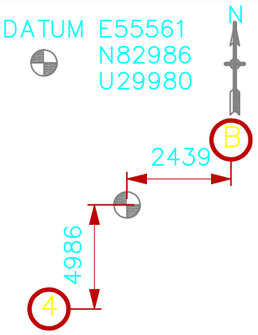
PLAN VIEW

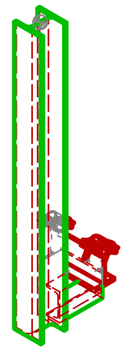


VIEW LOOKING EAST

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*-96-90-200	-	-	1	-	4,63	0,034
F1	BEAM	HEA100	Carbon Steel	997	1	16,76	16,69	0,565
F2	BEAM	UPN100	Carbon Steel	160	1	10,57	1,69	0,062
						TOTAL	23,0	0,66





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

CROSSWIND

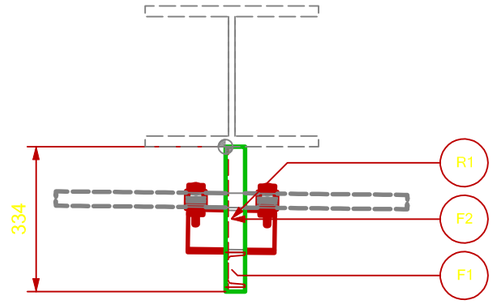
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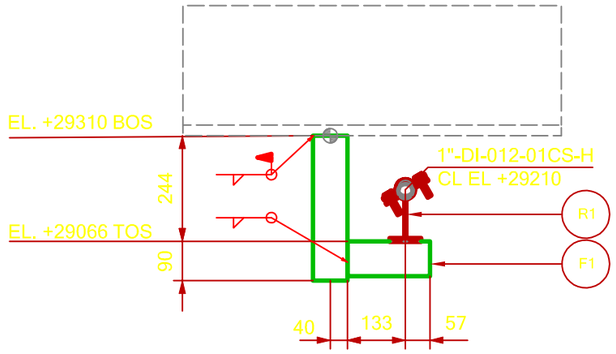
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02001

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

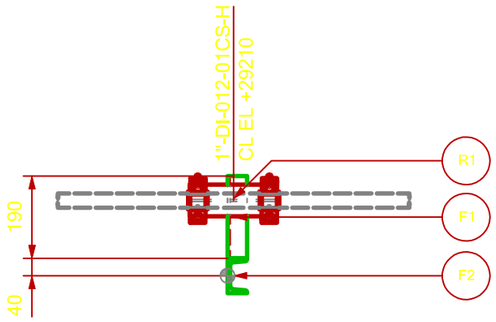
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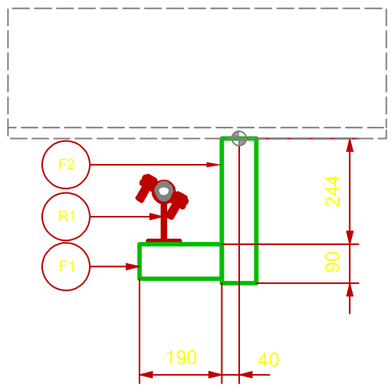
VIEW LOOKING NORTH



VIEW LOOKING WEST



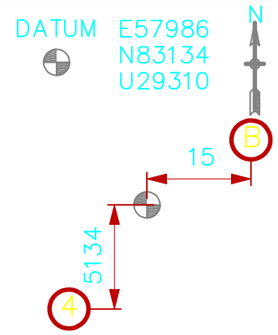
PLAN VIEW

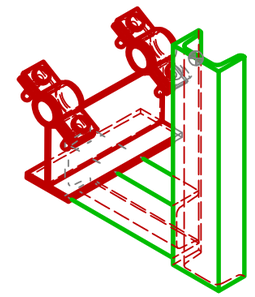


VIEW LOOKING EAST

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"-98-90-200	-	-	1	-	4,63	0,034
F1	BEAM	UPN80	Carbon Steel	100	1	8,66	1,65	0,062
F2	BEAM	UPN80	Carbon Steel	334	1	8,66	2,89	0,107
						TOTAL	9,2	0,20





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

CROSSWIND

ROSETTI MARINO

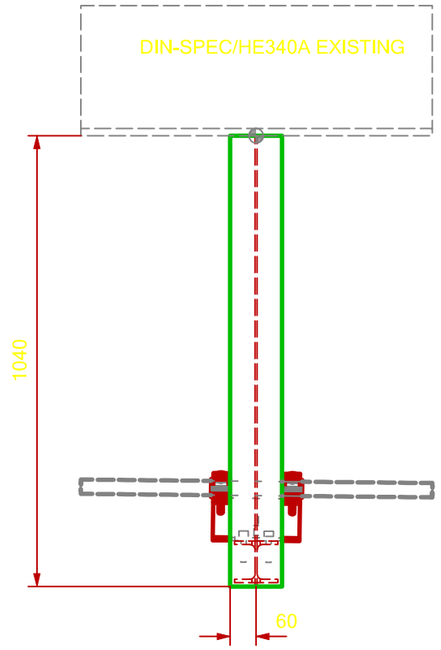
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

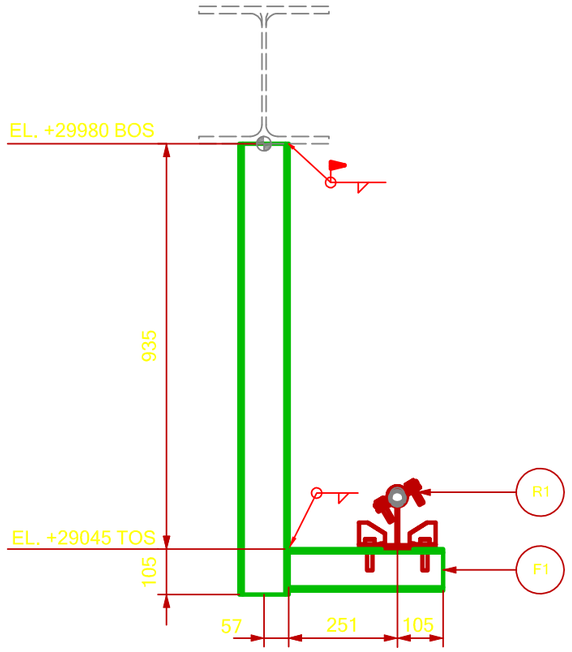
PS-02002

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

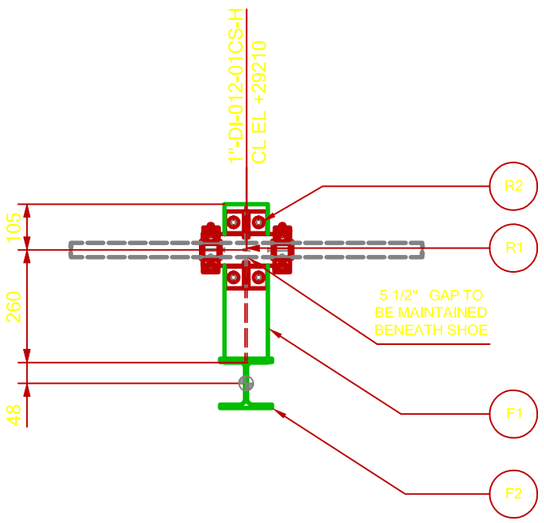
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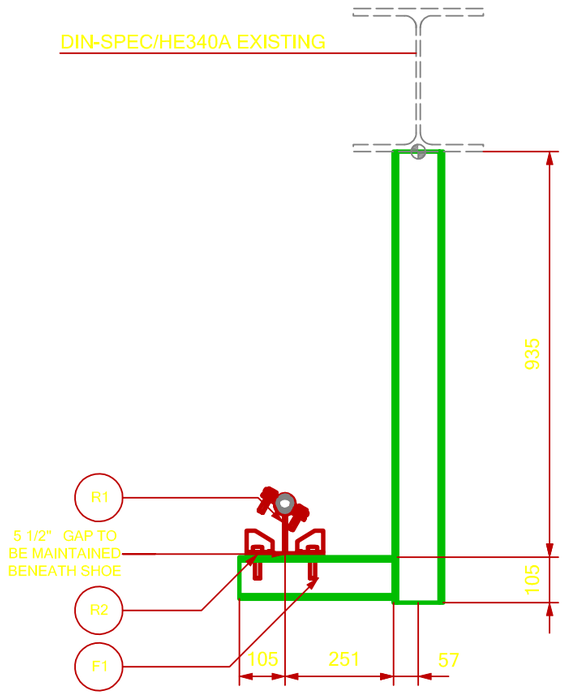
VIEW LOOKING NORTH



VIEW LOOKING WEST



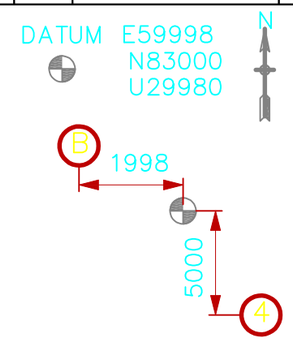
PLAN VIEW

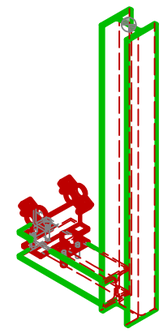


VIEW LOOKING EAST

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"-98-90-200	-	-	1	-	4,63	0,034
R2	STD	C-53-2-A-2	-	-	1	-	4,30	0,044
F1	BEAM	HEA100	Carbon Steel	356	1	16,76	6,12	0,209
F2	BEAM	HEA120	Carbon Steel	1040	1	19,98	20,78	0,709
						TOTAL	35,8	1,00





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

CROSSWIND

ROSETTI MARINO

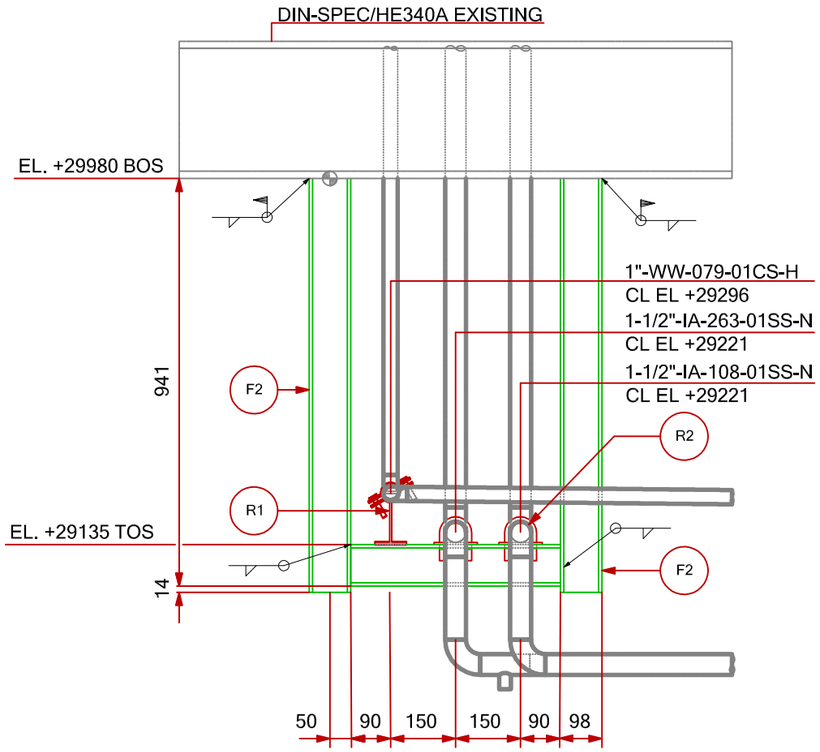
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

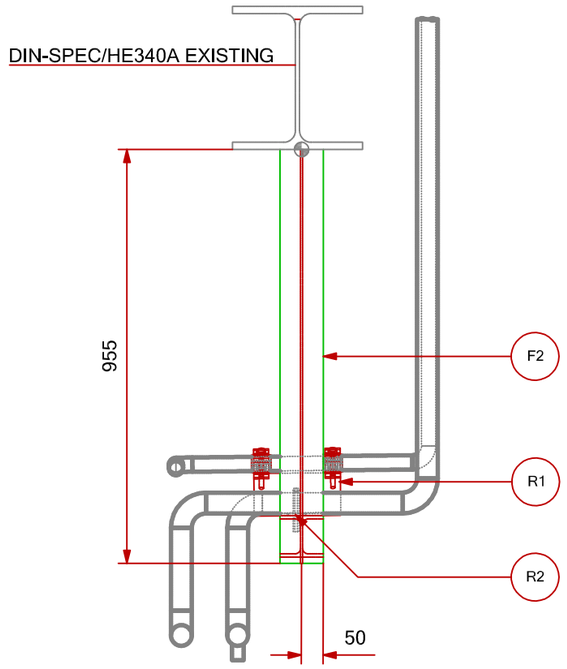
PS-02003

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

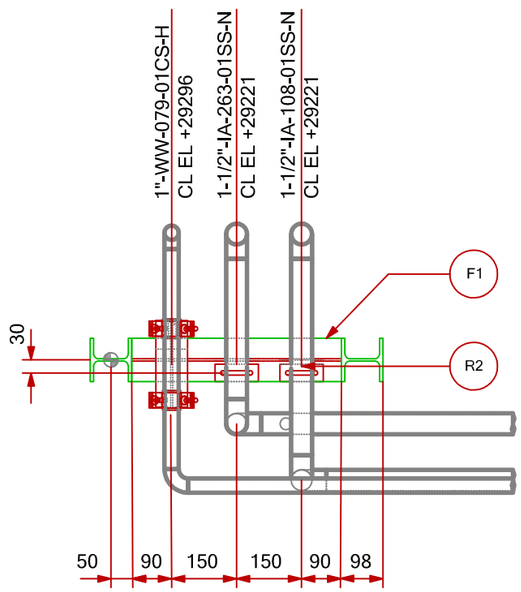
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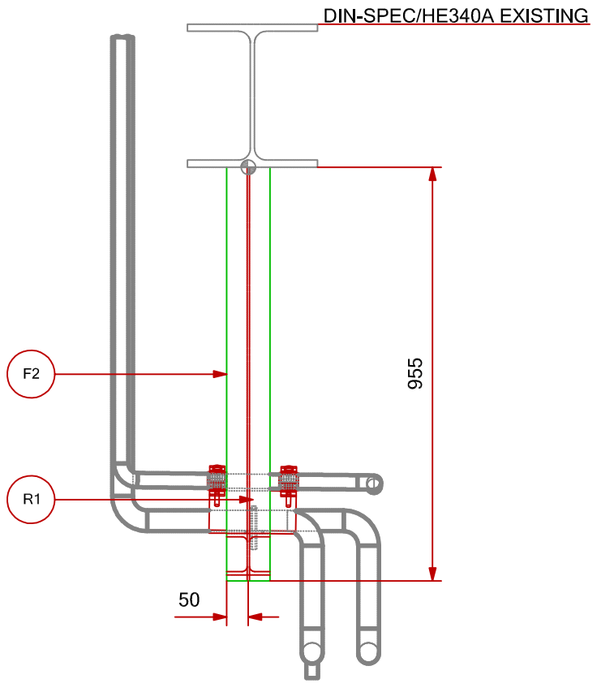
VIEW LOOKING NORTH



VIEW LOOKING WEST



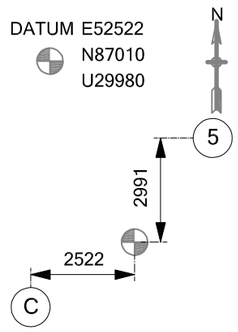
PLAN VIEW

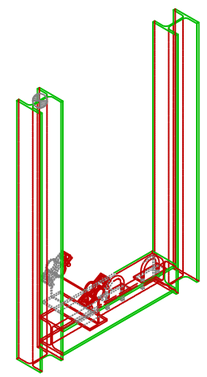


VIEW LOOKING EAST

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
R2	STD	S-211-1 1/2"	-	-	2	-	0.49	-
F1	BEAM	HEA100	CarbonSteel	480	1	16.76	8.05	0.274
F2	BEAM	HEA100	CarbonSteel	955	2	16.76	32.00	1.080
						TOTAL	45.7	1.39





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

CROSSWIND

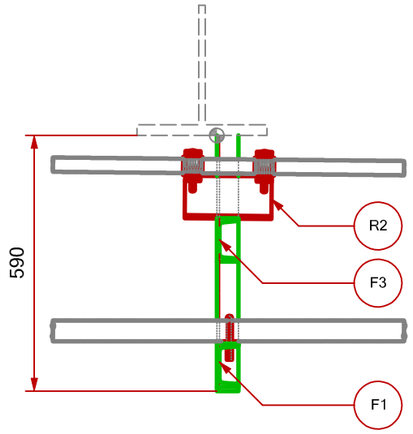
ROSETTI MARINO

TITLE :

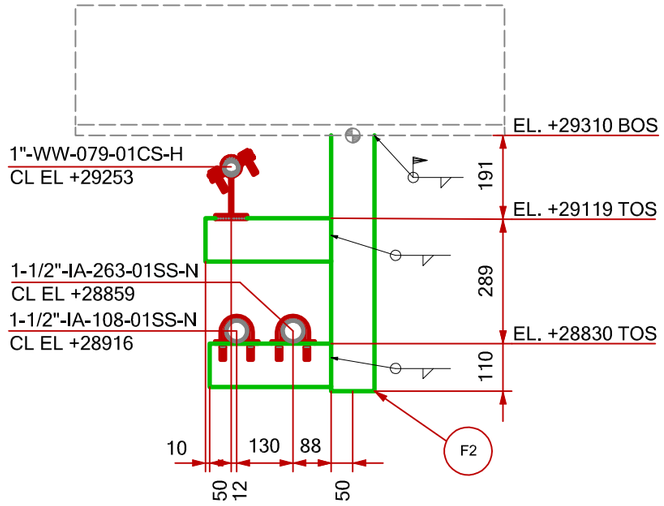
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02025

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

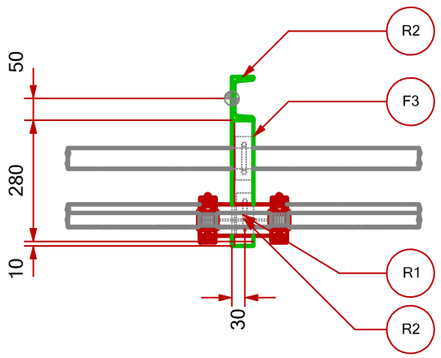
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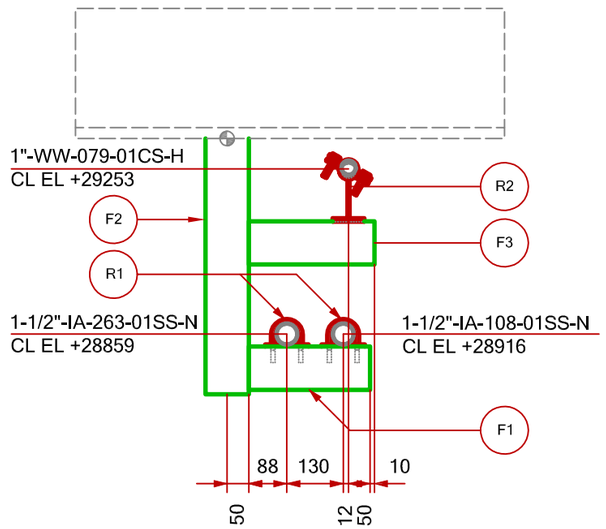
VIEW LOOKING NORTH



VIEW LOOKING WEST



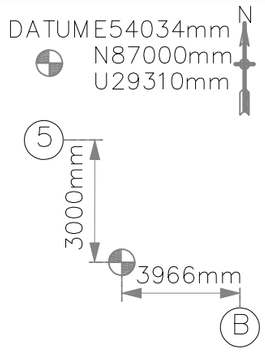
PLAN VIEW

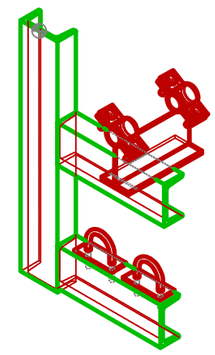


VIEW LOOKING EAST

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-211-1 1/2"	-	-	2	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN100	Carbon Steel	280	1	10.57	2.96	0.107
F2	BEAM	UPN100	Carbon Steel	590	1	10.57	6.24	0.222
F3	BEAM	UPN100	Carbon Steel	290	1	10.57	3.07	0.110
						TOTAL	17.9	0.47





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

CROSSWIND

ROSETTI MARINO

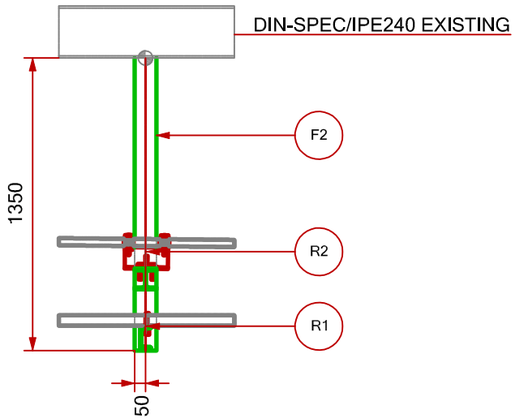
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

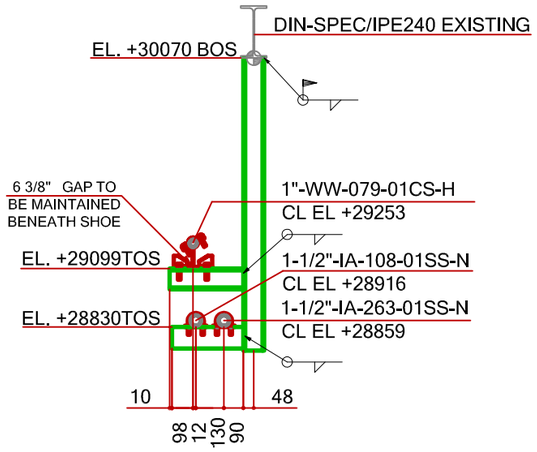
PS-02026

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

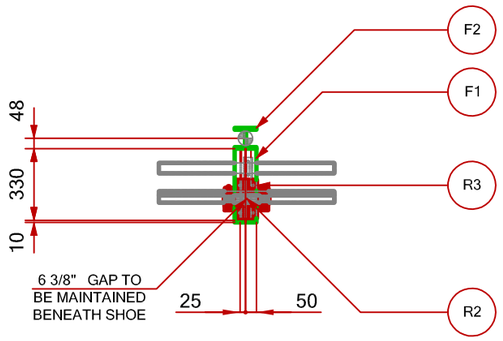
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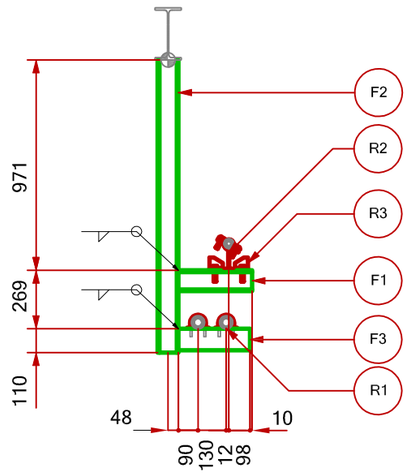
VIEW LOOKING NORTH



VIEW LOOKING WEST



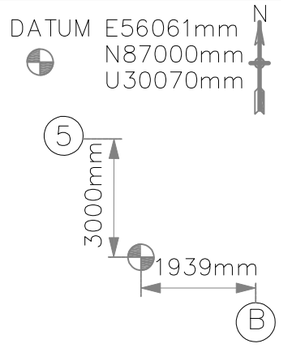
PLAN VIEW

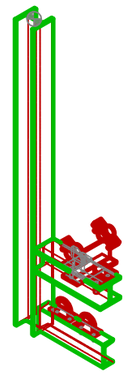


VIEW LOOKING EAST

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-211-1 1/2"	-	-	2	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R3	STD	C-33-2-A-2	-	-	1	-	4.30	0.044
F1	BEAM	HEA100	Carbon Steel	340	1	16.76	5.70	0.195
F2	BEAM	HEA100	Carbon Steel	1350	1	16.76	22.63	0.762
F3	BEAM	UPN100	Carbon Steel	330	1	10.57	3.49	0.125
						TOTAL	41.7	1.16





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

CROSSWIND

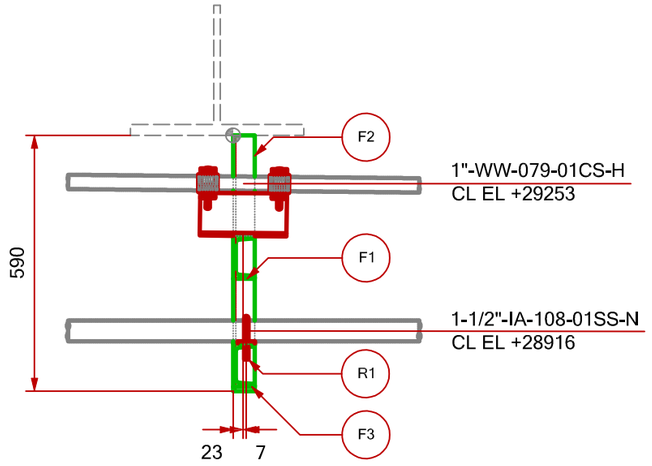
ROSETTI MARINO

TITLE :

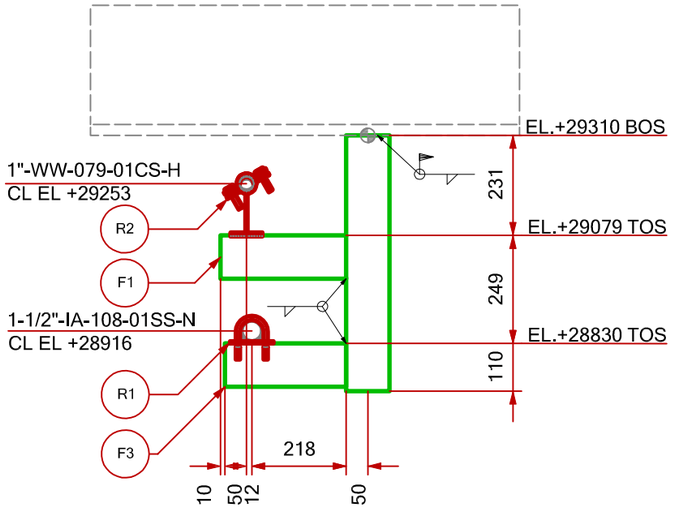
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02027

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

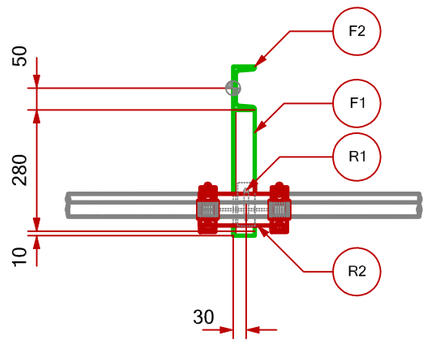
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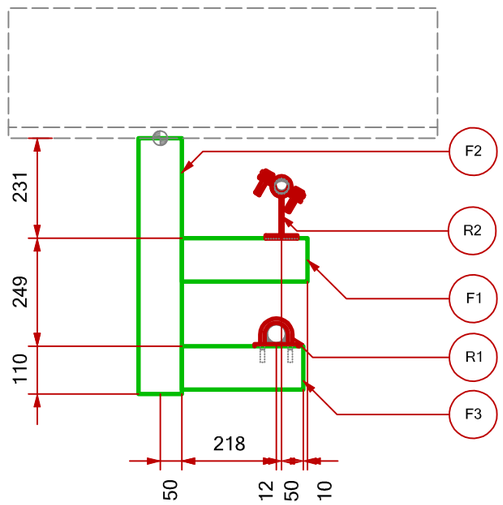
VIEW LOOKING NORTH



VIEW LOOKING WEST



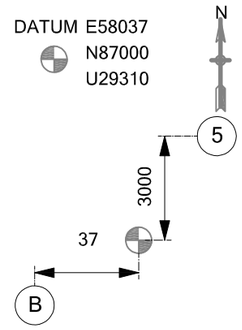
PLAN VIEW

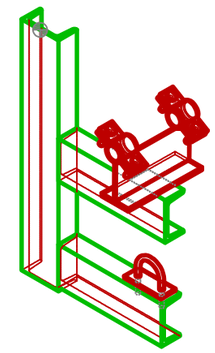


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN100	Carbon Steel	290	1	10.57	3.07	0.110
F2	BEAM	UPN100	Carbon Steel	590	1	10.57	6.24	0.222
F3	BEAM	UPN100	Carbon Steel	280	1	10.57	2.96	0.107
						TOTAL	17.4	0.47





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

CROSSWIND

ROSETTI MARINO

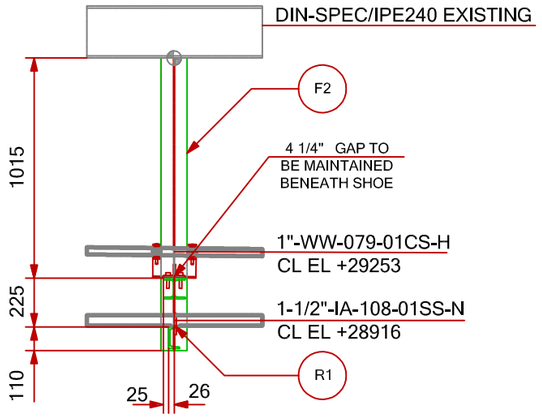
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

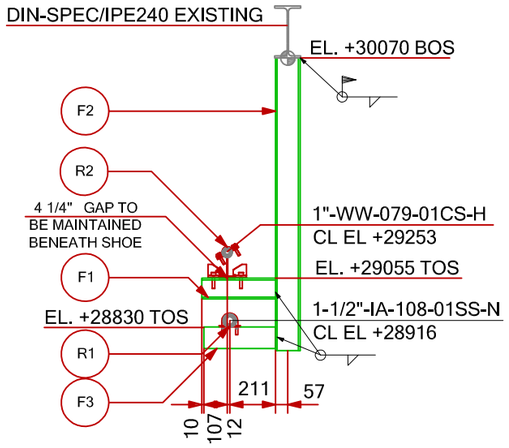
PS-02028

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

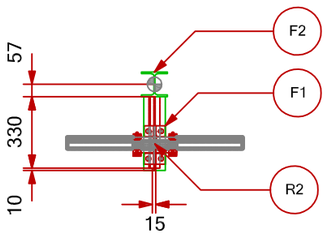
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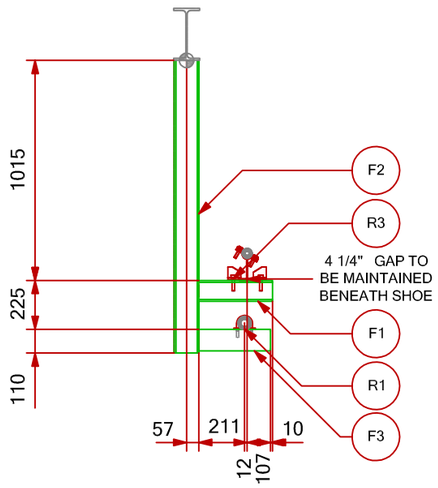
VIEW LOOKING NORTH



VIEW LOOKING WEST



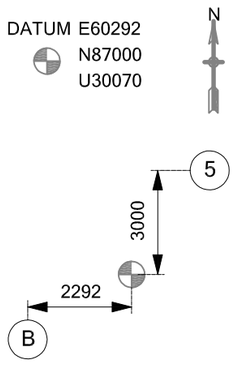
PLAN VIEW

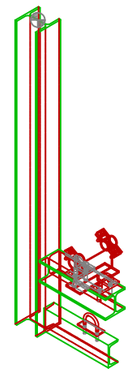


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
R3	STD	C-33-2-A-2	-	-	1	-	4.30	0.044
F1	BEAM	HEA100	Carbon Steel	340	1	16.76	5.70	0.195
F2	BEAM	HEA120	Carbon Steel	1350	1	19.98	26.97	0.919
F3	BEAM	UPN100	Carbon Steel	330	1	10.57	3.49	0.125
						TOTAL	45.6	1.32





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

CROSSWIND

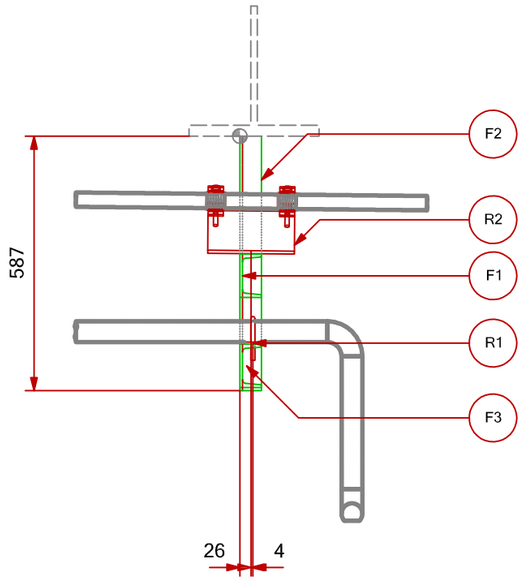
ROSETTI MARINO

TITLE :

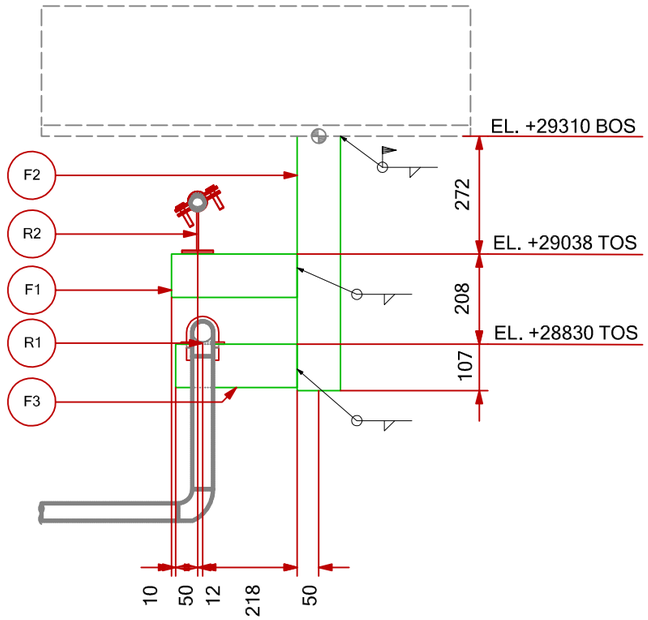
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02033

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

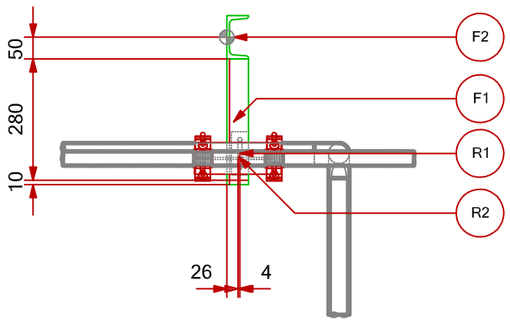
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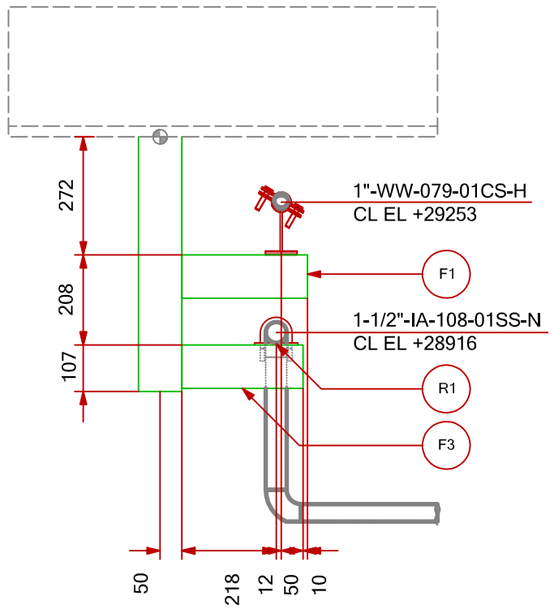
VIEW LOOKING NORTH



VIEW LOOKING WEST



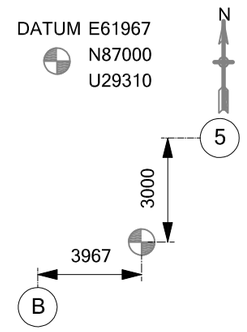
PLAN VIEW

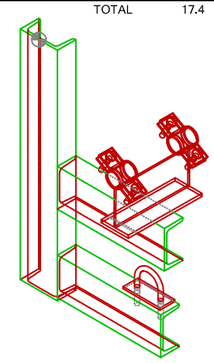


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	UPN100	Carbon Steel	290	1	10.57	3.07	0.110
F2	BEAM	UPN100	Carbon Steel	587	1	10.57	6.21	0.221
F3	BEAM	UPN100	Carbon Steel	280	1	10.57	2.96	0.107
						TOTAL	17.4	0.47





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

CROSSWIND

ROSETTI MARINO

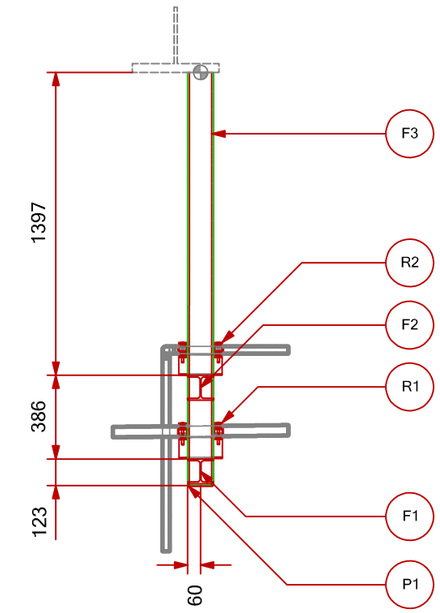
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

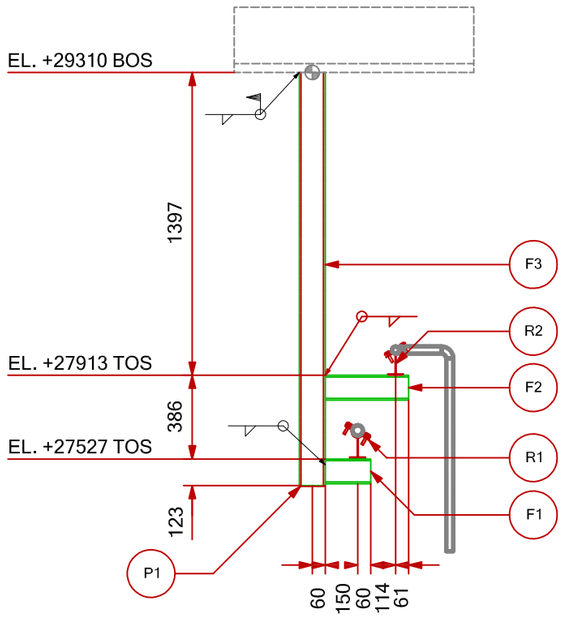
PS-02047

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

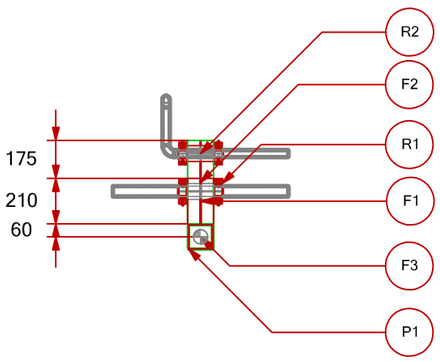
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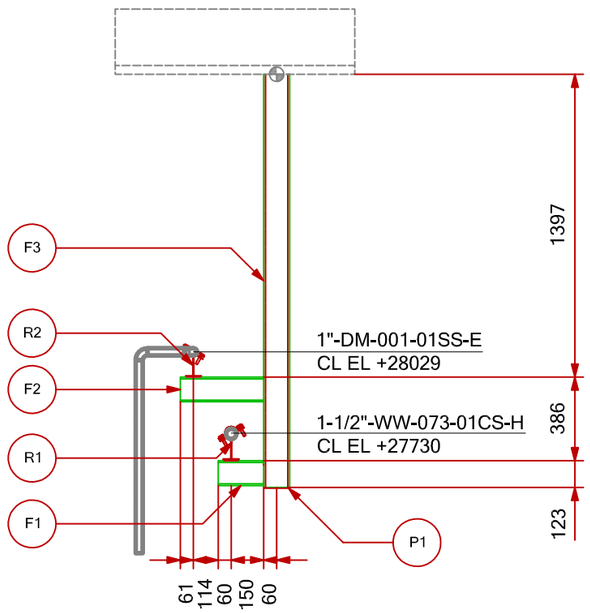
VIEW LOOKING NORTH



VIEW LOOKING WEST



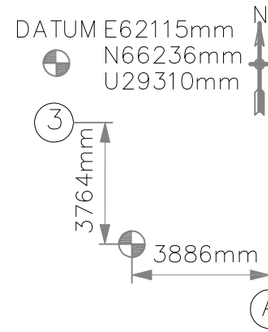
PLAN VIEW

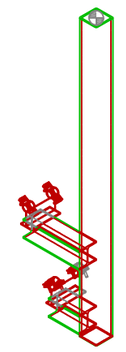


VIEW LOOKING EAST

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-75-1.1/2"-97-91-200	-	-	1	-	5.01	0.040
R2	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	HEA120	Carbon Steel	210	1	19.98	4.20	0.147
F2	BEAM	HEA120	Carbon Steel	385	1	19.98	7.69	0.266
F3	BEAM	RHS120x120x8	Carbon Steel	1906	1	27.79	52.97	1.675
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	74.0	2.24





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

CROSSWIND

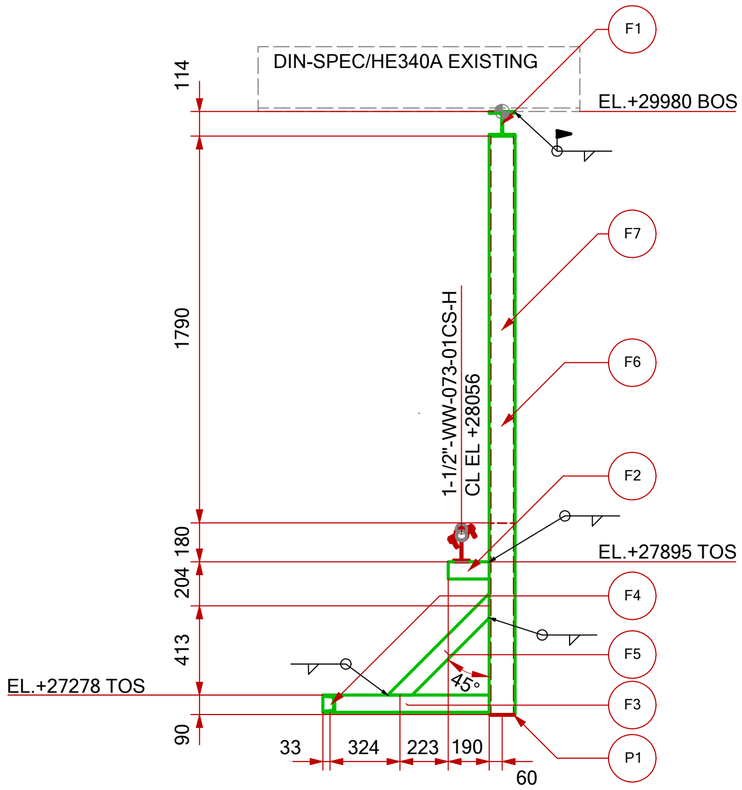
ROSETTI MARINO

TITLE :

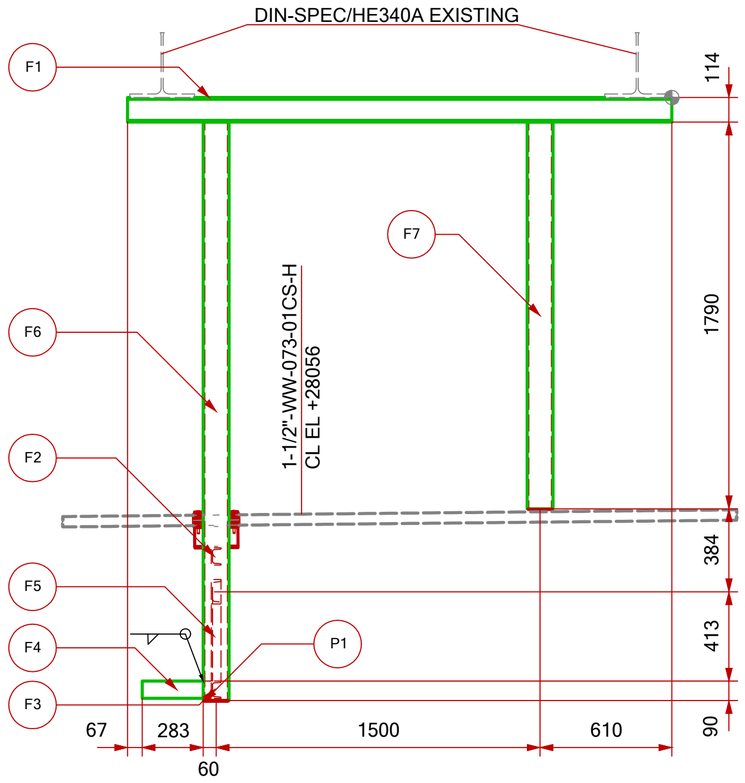
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02048

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

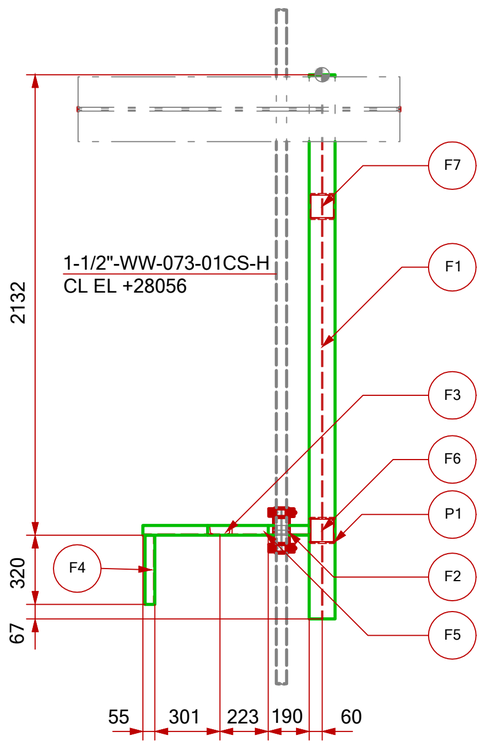
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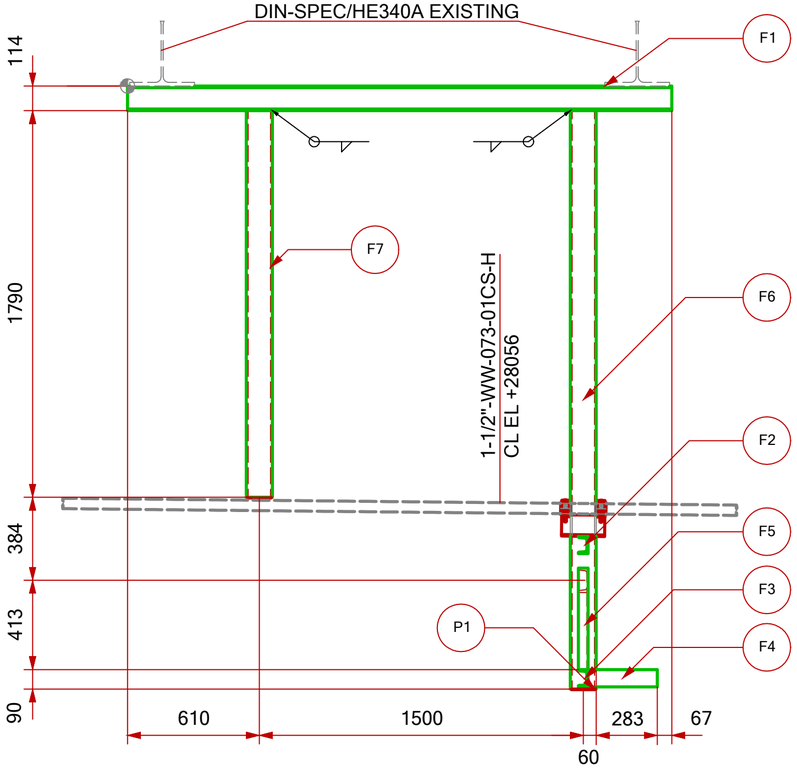
VIEW LOOKING NORTH



VIEW LOOKING WEST



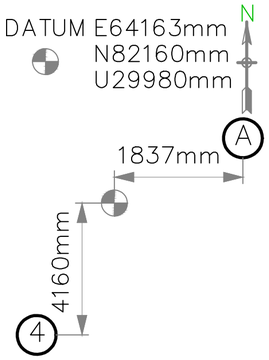
PLAN VIEW

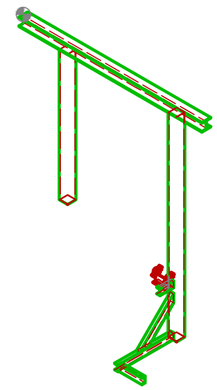


VIEW LOOKING EAST

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-211-1"	-	-	1	-	0.29	-
F1	BEAM	HEA120	Carbon Steel	2520	1	19.98	50.35	1.711
F2	BEAM	UPN80	Carbon Steel	190	1	8.66	1.65	0.062
F3	BEAM	UPN80	Carbon Steel	770	1	8.66	6.67	0.243
F4	BEAM	UPN80	Carbon Steel	320	1	8.66	2.77	0.102
F5	BEAM	UPN80	Carbon Steel	665	1	7.62	5.07	0.186
F6	BEAM	RHS120x120x8	Carbon Steel	2678	1	27.79	74.42	2.350
F7	BEAM	RHS120x120x8	Carbon Steel	1790	1	27.79	49.75	1.573
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	191.2	6.24





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

CROSSWIND

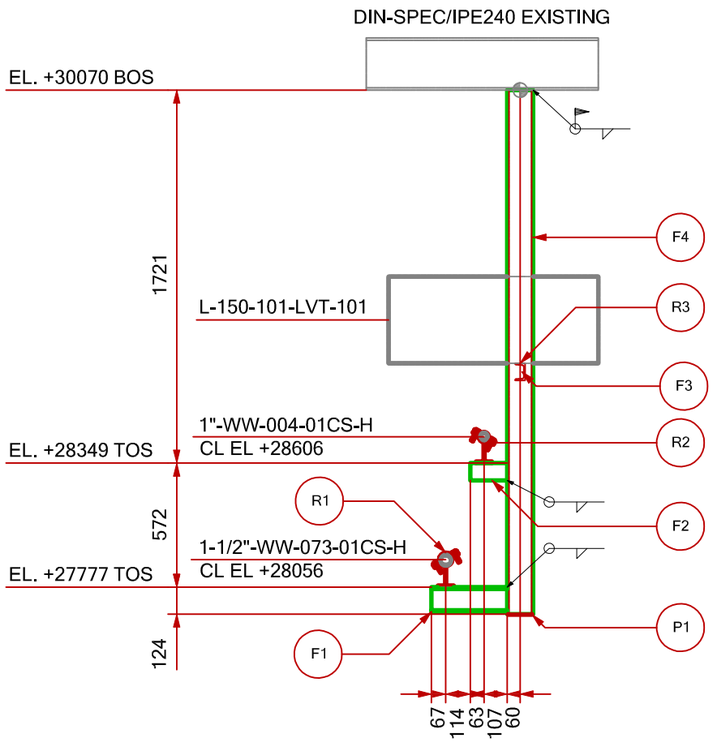
ROSETTI MARINO

TITLE :

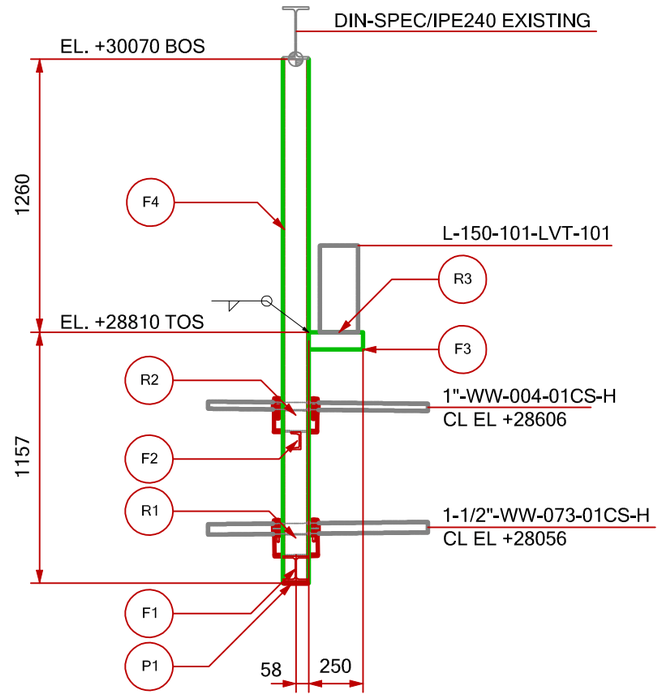
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02049

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

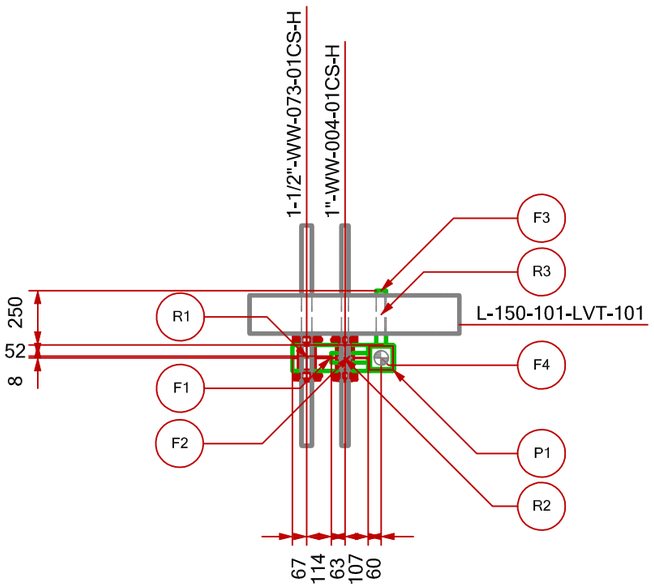
File Name :



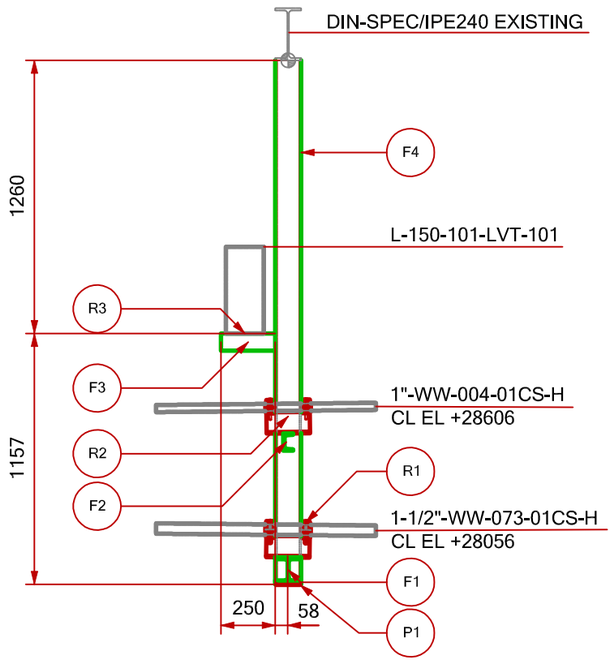
VIEW LOOKING NORTH



VIEW LOOKING WEST



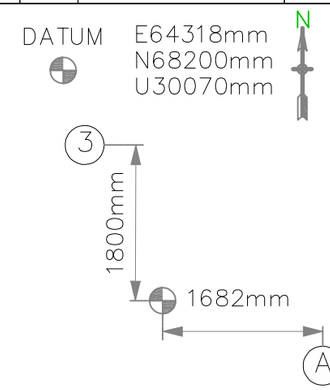
PLAN VIEW

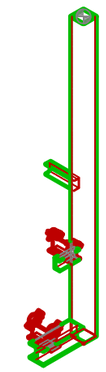


VIEW LOOKING EAST

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

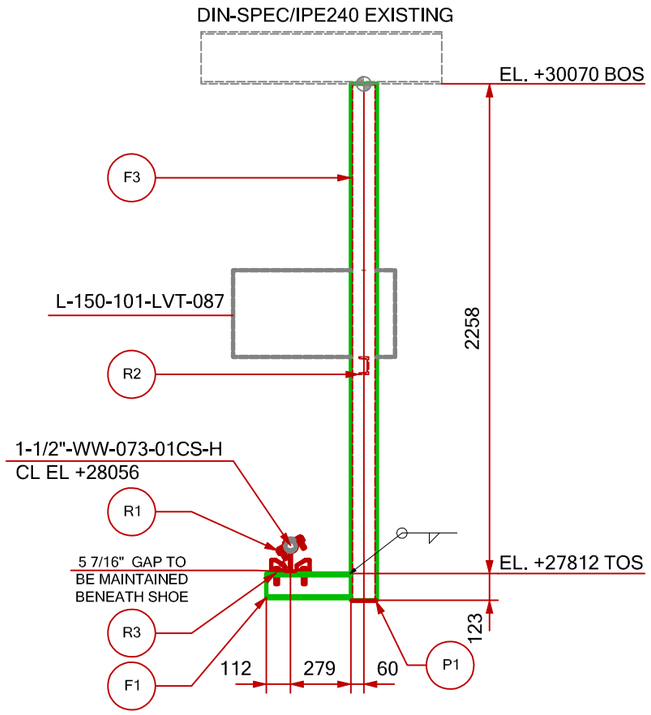
ROSETTI MARINO

TITLE :

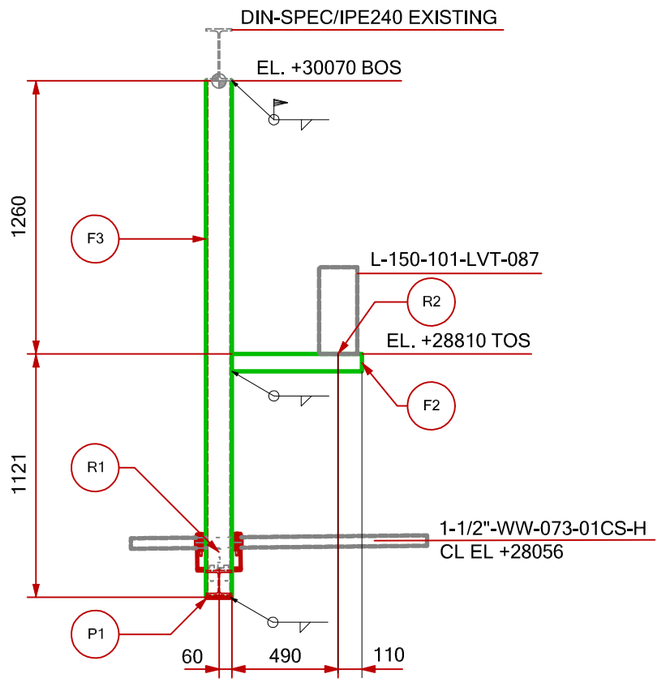
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02066

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

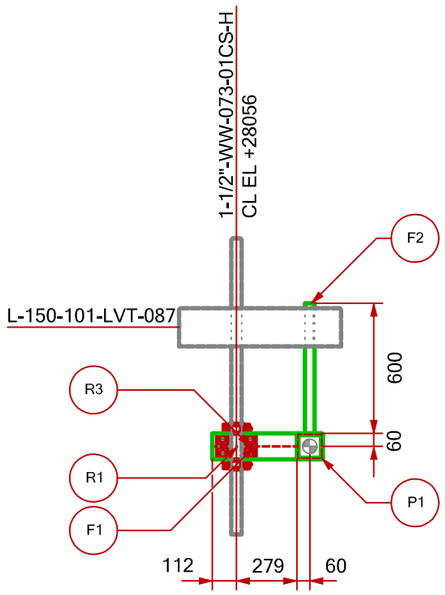
File Name :



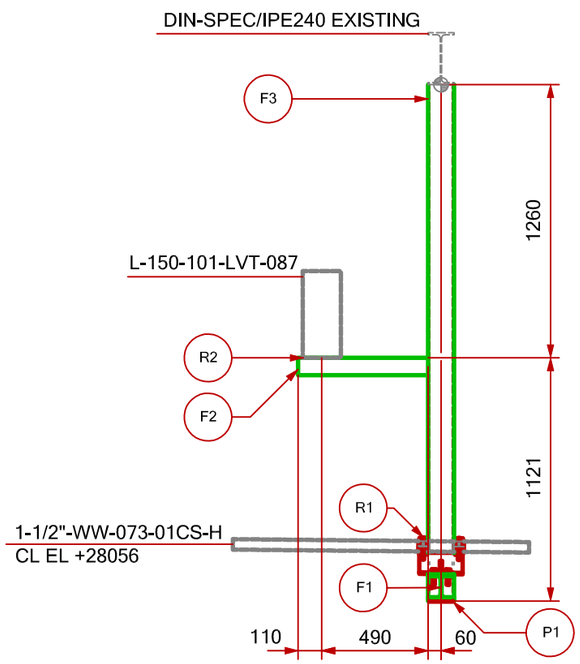
VIEW LOOKING NORTH



VIEW LOOKING WEST



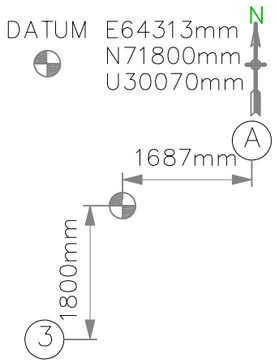
PLAN VIEW

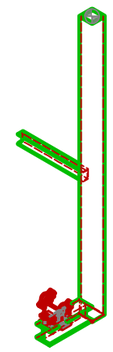


VIEW LOOKING EAST

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	RACK SUPPORT	-	-	1	-	0.00	-
R3	STD	C-33-2-B-2	-	-	1	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	390	1	19.98	7.79	0.269
F2	BEAM	UPN80	Carbon Steel	600	1	8.66	5.20	0.190
F3	BEAM	RHS120x120x8	Carbon Steel	2381	1	27.79	66.18	2.090
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	88.8	2.65





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

CROSSWIND

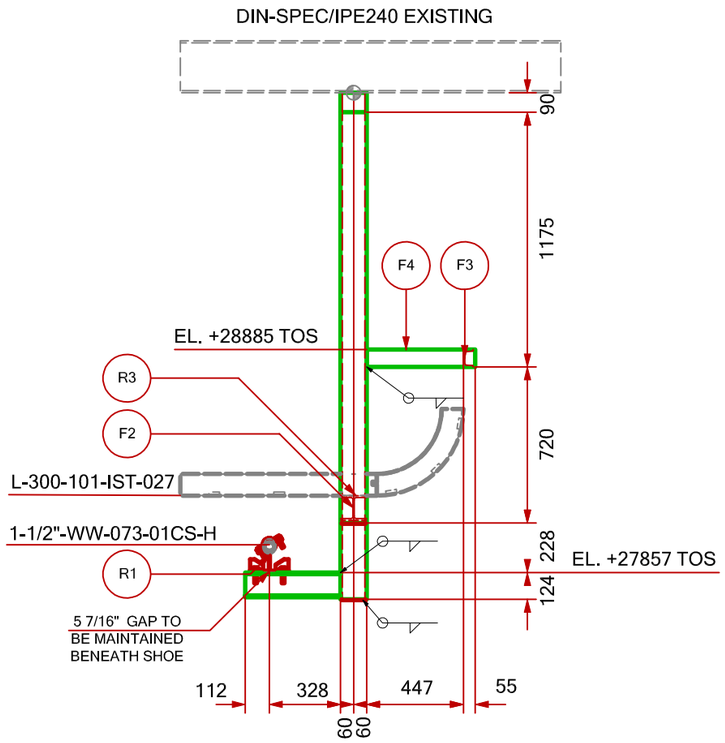
ROSETTI MARINO

TITLE :

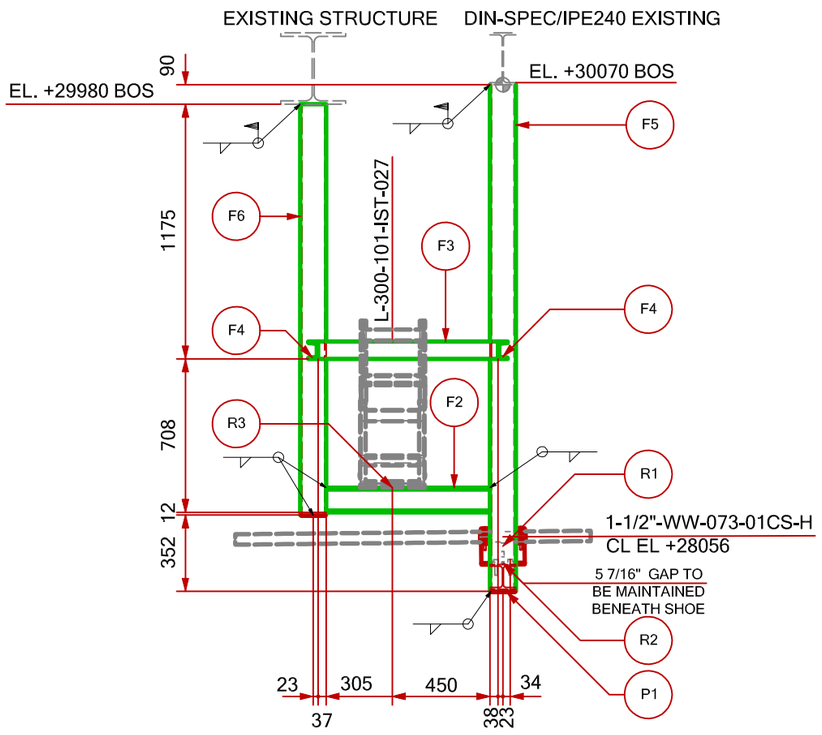
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02067

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

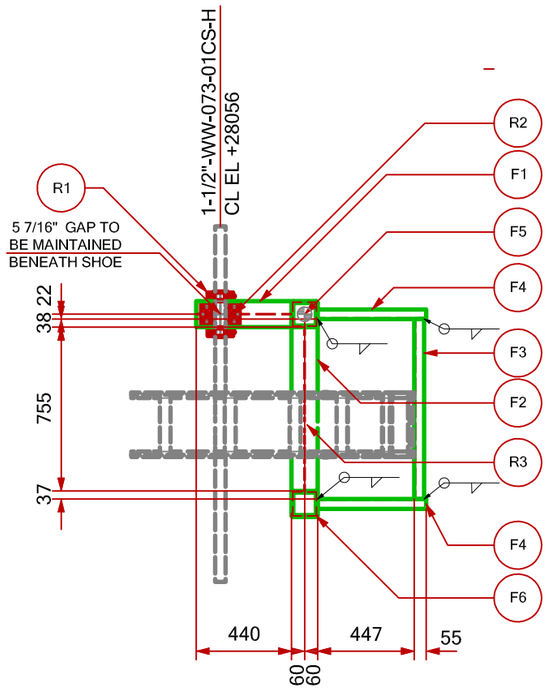
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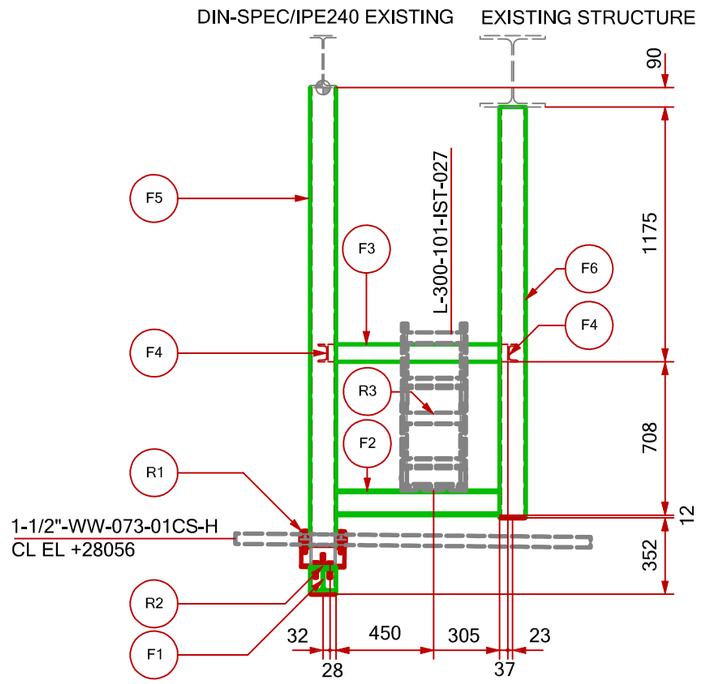
VIEW LOOKING NORTH



VIEW LOOKING WEST



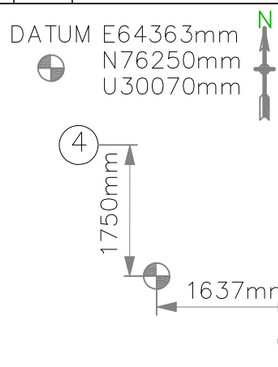
PLAN VIEW

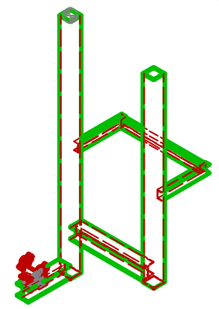


VIEW LOOKING EAST

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	C-33-2-B-2	-	-	1	-	4.36	0.048
R3	STD	RACK SUPPORT	-	-	2	-	0.00	-
F1	BEAM	HEA120	Carbon Steel	440	1	19.98	8.79	0.303
F2	BEAM	HEA120	Carbon Steel	755	1	19.98	15.08	0.516
F3	BEAM	UPN80	Carbon Steel	830	1	8.66	7.19	0.262
F4	BEAM	UPN80	Carbon Steel	502	1	8.66	4.35	0.159
F4	BEAM	UPN80	Carbon Steel	502	1	8.66	4.35	0.159
F5	BEAM	RHS120x120x8	Carbon Steel	2337	1	27.79	64.94	2.051
F6	BEAM	RHS120x120x8	Carbon Steel	1895	1	27.79	52.65	1.665
P1	PLATE	3	Carbon Steel	110x110	2	-	0.56	0.024
						TOTAL	167.3	5.23





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

CROSSWIND

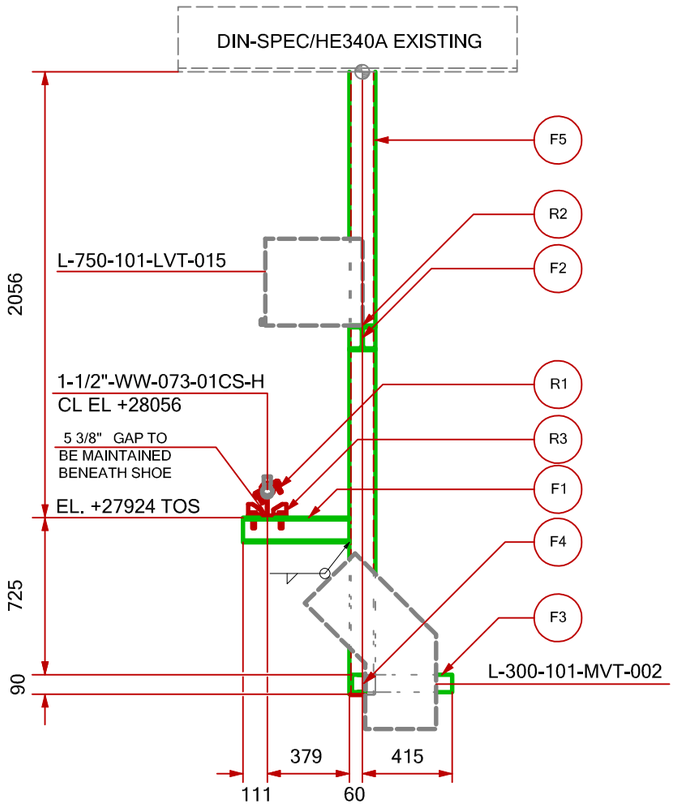
ROSETTI MARINO

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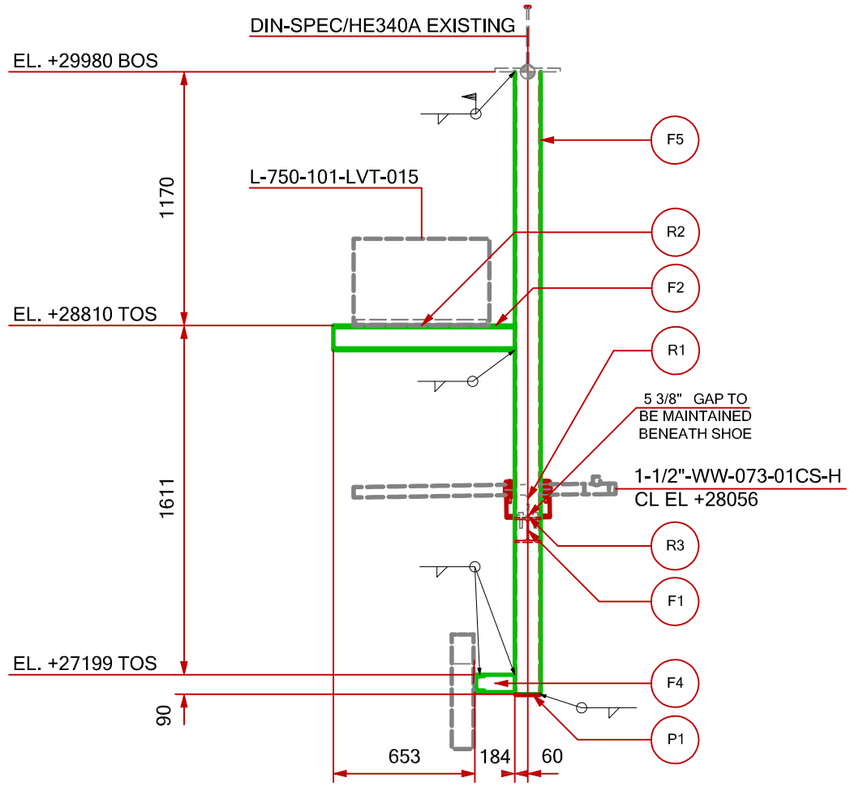
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02068

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

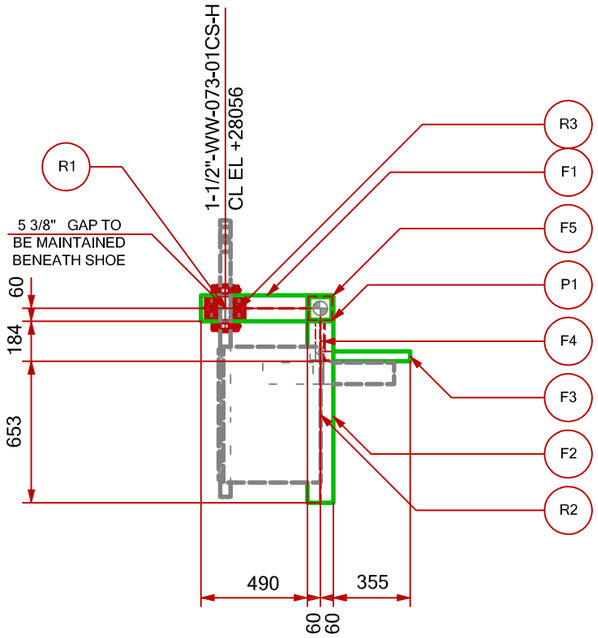
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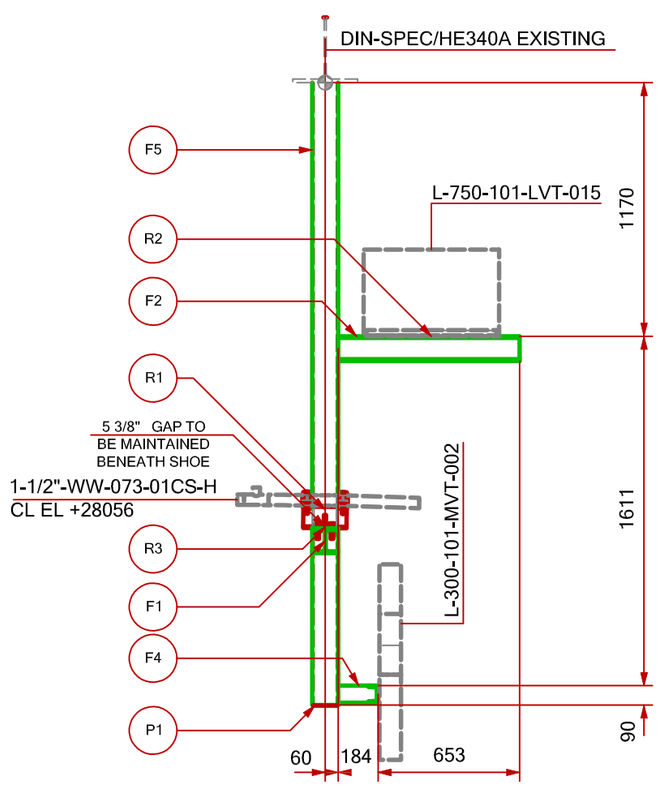
VIEW LOOKING NORTH



VIEW LOOKING WEST



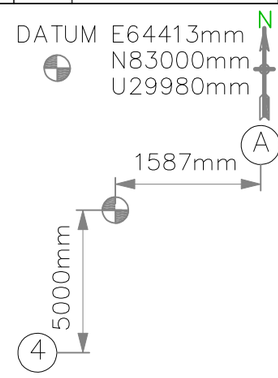
PLAN VIEW

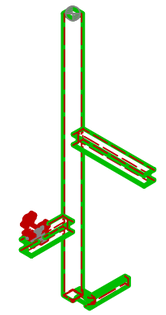


VIEW LOOKING EAST

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	RACK SUPPORT	-	-	2	-	0.00	-
R3	STD	C-33-2-B-2	-	-	1	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	490	1	19.98	9.79	0.337
F2	BEAM	HEA120	Carbon Steel	837	1	19.98	16.73	0.572
F3	BEAM	UPN80	Carbon Steel	462	1	8.66	4.00	0.147
F4	BEAM	UPN80	Carbon Steel	184	1	8.66	1.59	0.060
F5	BEAM	RHS120x120x8	Carbon Steel	2871	1	27.79	79.79	2.519
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	121.6	3.73





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

CROSSWIND

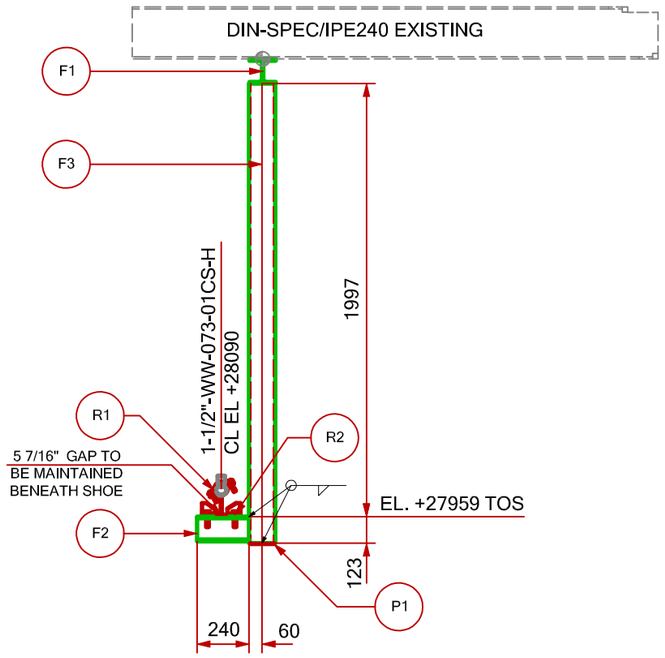
ROSETTI MARINO

TITLE :

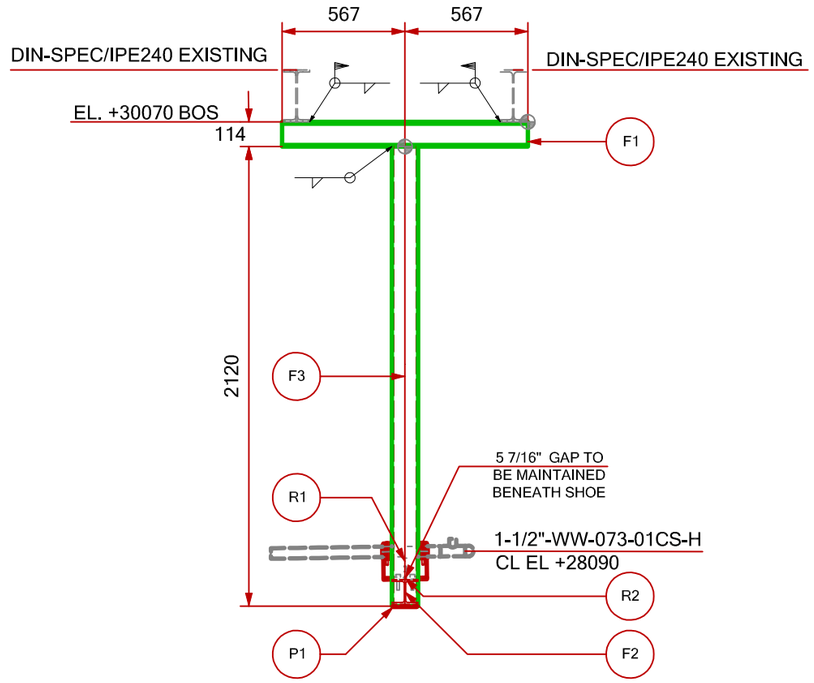
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02069

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

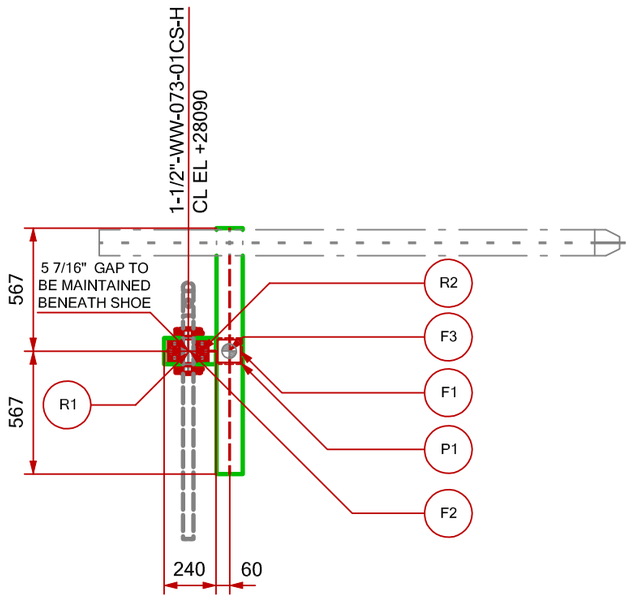
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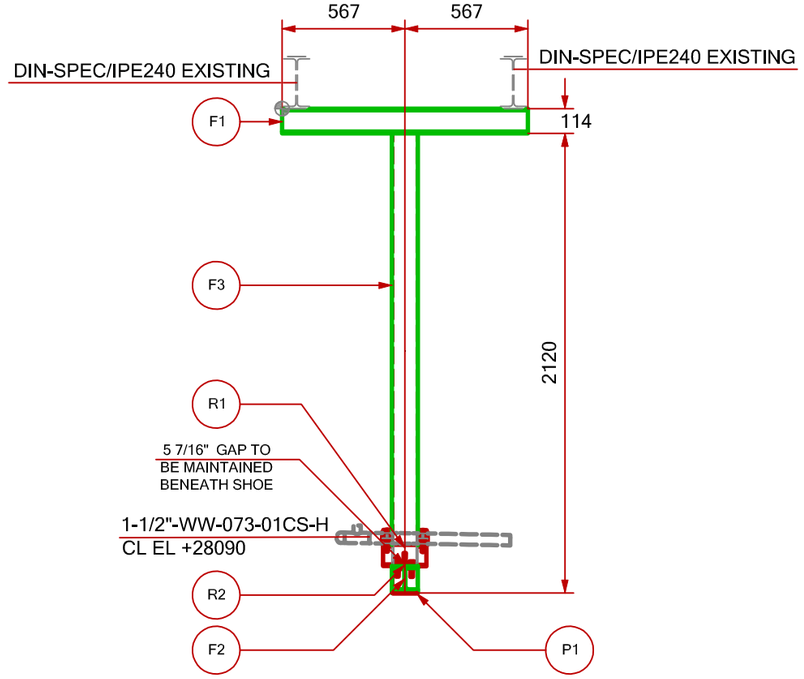
VIEW LOOKING NORTH



VIEW LOOKING WEST



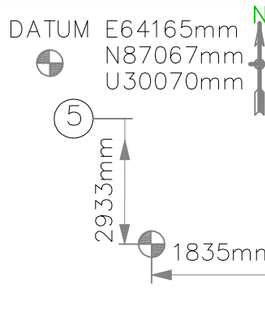
PLAN VIEW

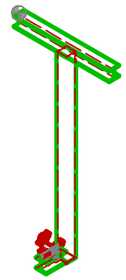


VIEW LOOKING EAST

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	C-33-2-B-2	-	-	1	-	4.36	0.048
F1	BEAM	HEA120	Carbon Steel	1134	1	19,98	22,65	0,773
F2	BEAM	HEA120	Carbon Steel	240	1	19,98	4,80	0.168
F3	BEAM	RHS120x120x8	Carbon Steel	2120	1	27.79	58.92	1.862
P1	PLATE	3	Carbon Steel	110x110	2	-	0.56	0.024
						TOTAL	96.3	2.91





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

CROSSWIND

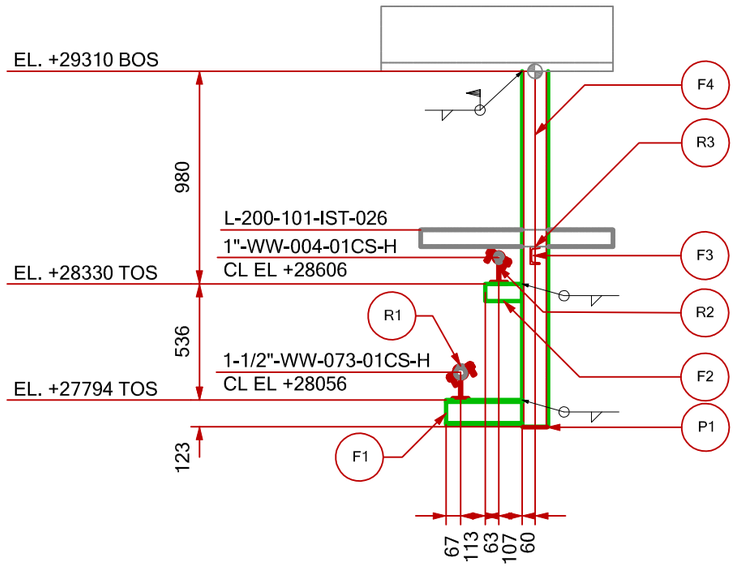
ROSETTI MARINO

TITLE :

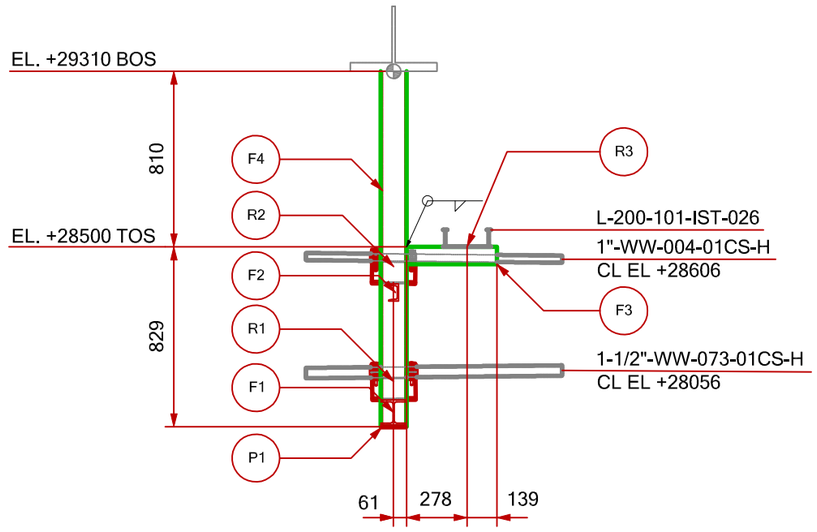
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02070

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

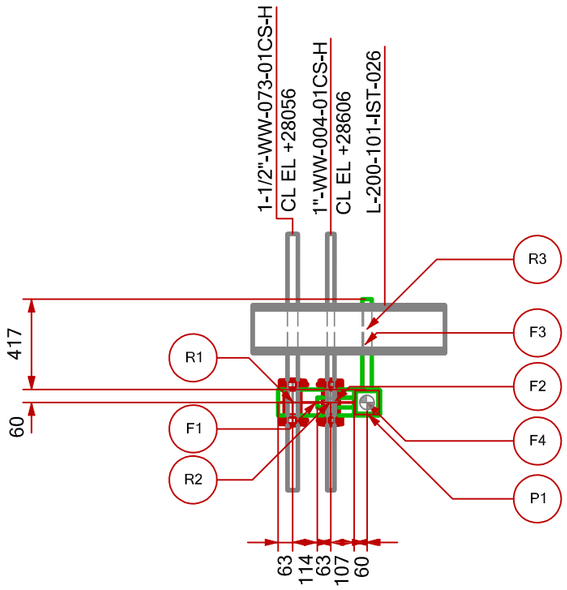
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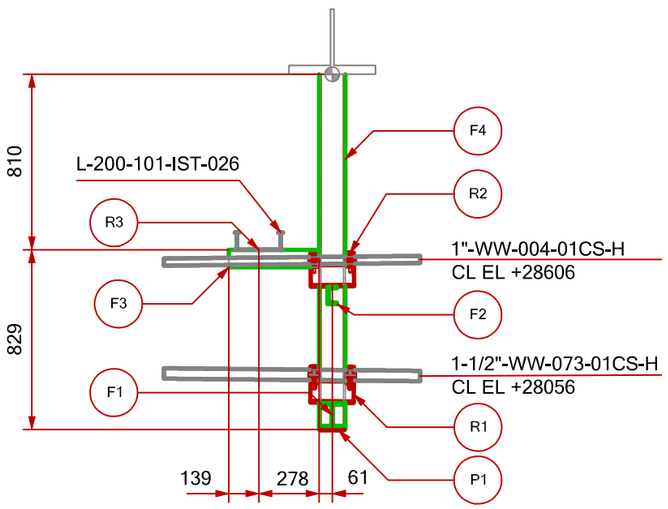
VIEW LOOKING NORTH



VIEW LOOKING WEST



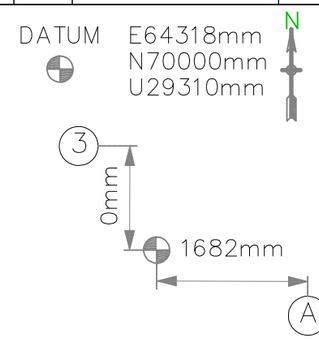
PLAN VIEW

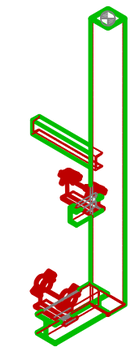


VIEW LOOKING EAST

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

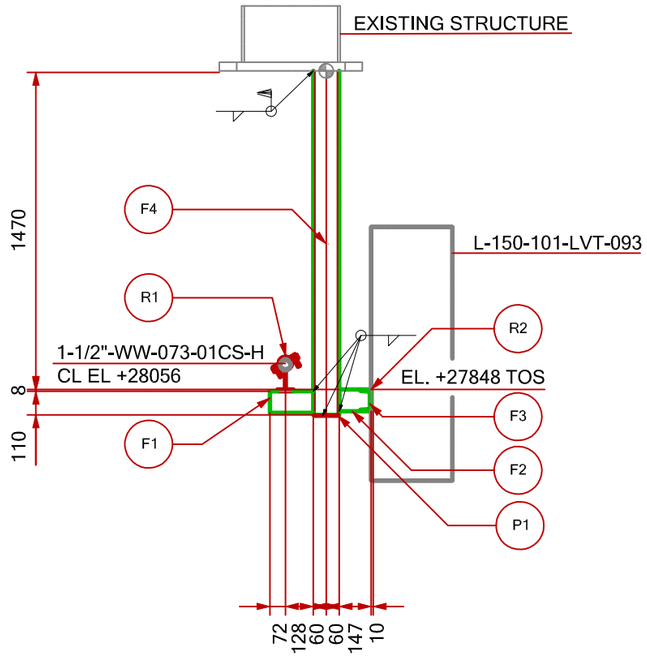
ROSETTI MARINO

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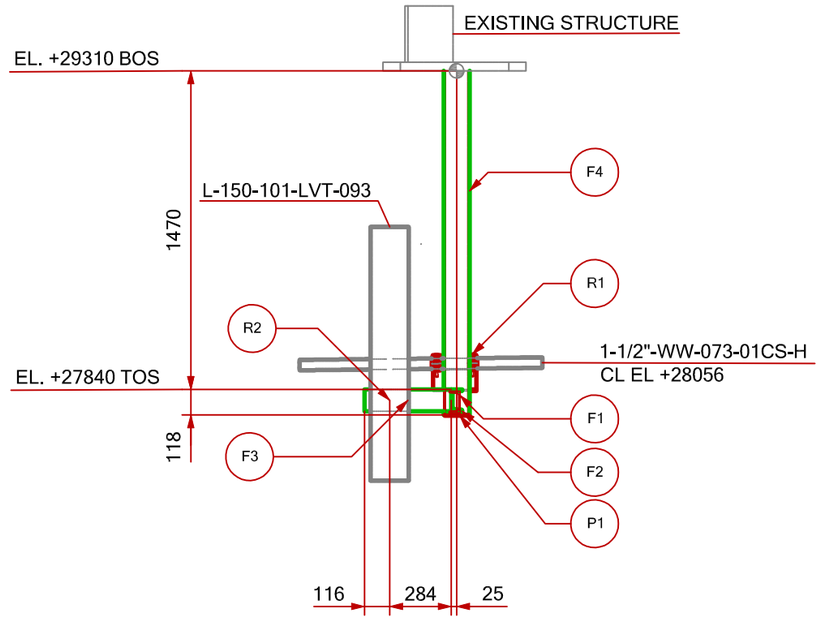
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02071

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

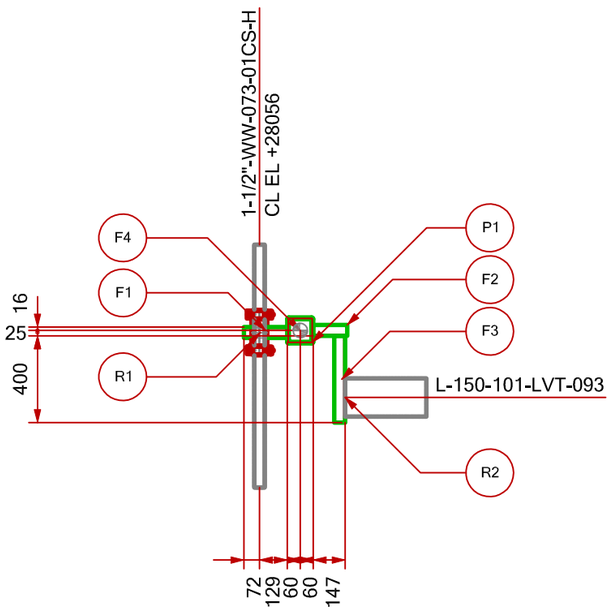
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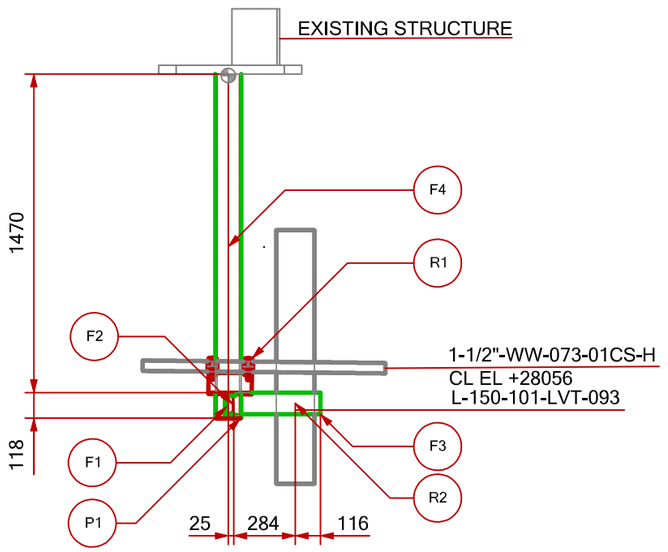
VIEW LOOKING NORTH



VIEW LOOKING WEST



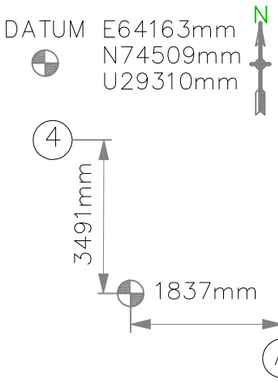
PLAN VIEW

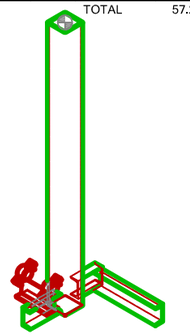


VIEW LOOKING EAST

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-75-1.1/2"-98-92-200	-	-	1	-	5.02	0.040
R2	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	UPN100	Carbon Steel	200	1	10.57	2.11	0.077
F2	BEAM	UPN100	Carbon Steel	157	1	10.57	1.66	0.061
F3	BEAM	UPN100	Carbon Steel	400	1	10.57	4.23	0.151
F4	BEAM	RHS120x120x8	Carbon Steel	1580	1	27.79	43.92	1.390
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	57.2	1.73





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

CROSSWIND

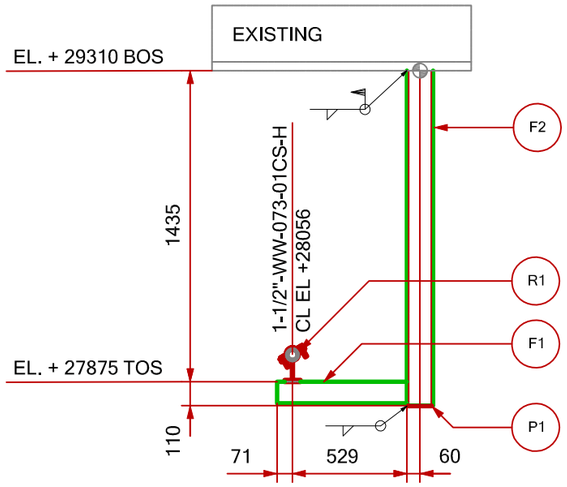
ROSETTI MARINO

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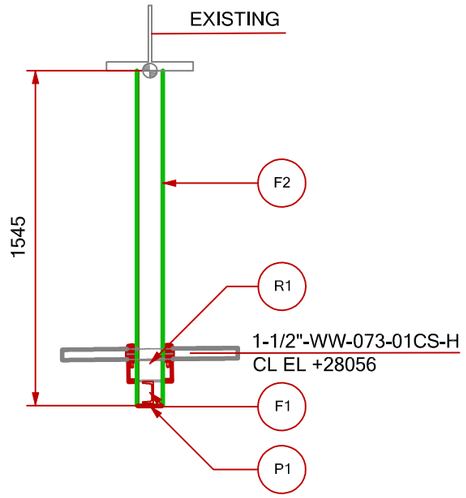
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02072

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

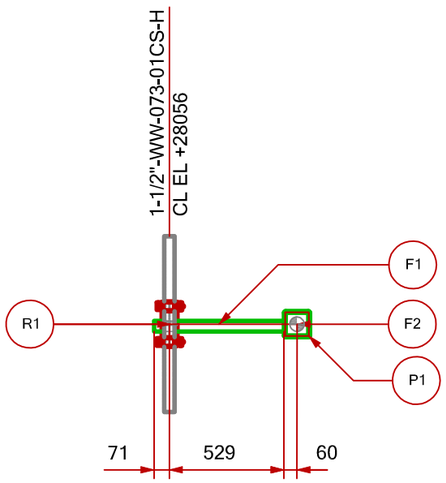
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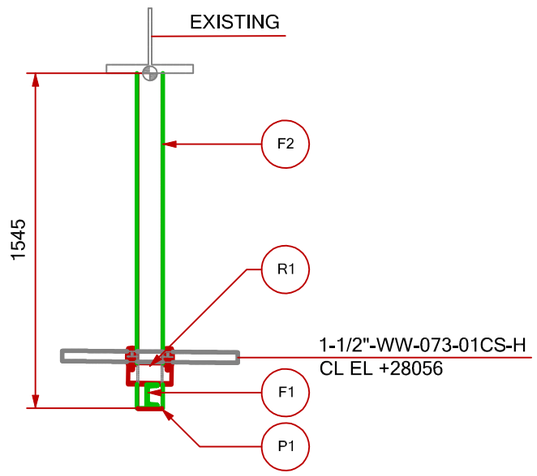
VIEW LOOKING NORTH



VIEW LOOKING WEST



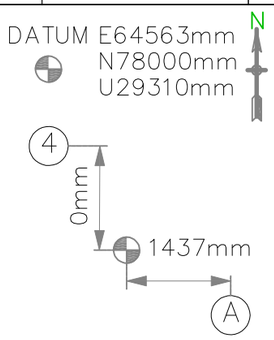
PLAN VIEW

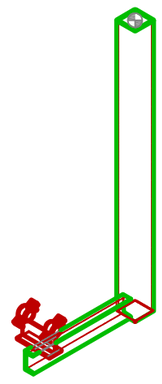


VIEW LOOKING EAST

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
F1	BEAM	UPN100	Carbon Steel	600	1	10.57	6.34	0.226
F2	BEAM	RHS120x120x8	Carbon Steel	1545	1	27.79	42.95	1.359
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	54.6	1.64





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

CROSSWIND

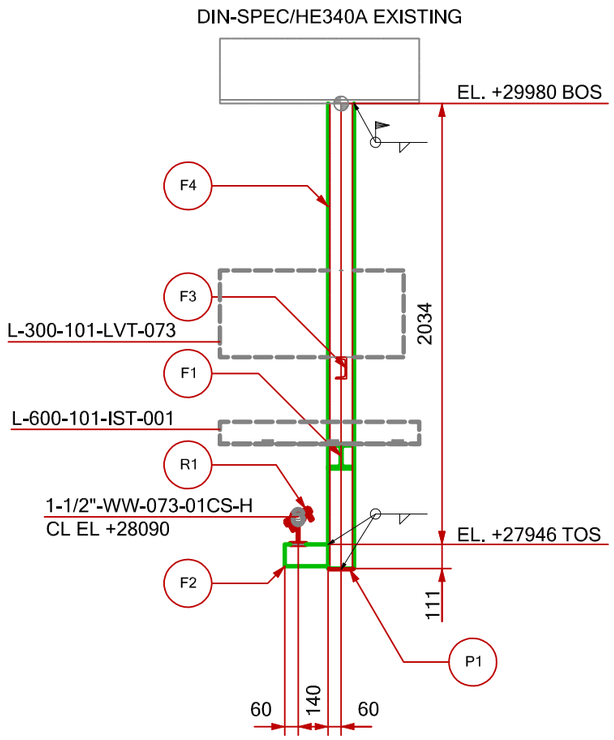
ROSETTI MARINO

TITLE :

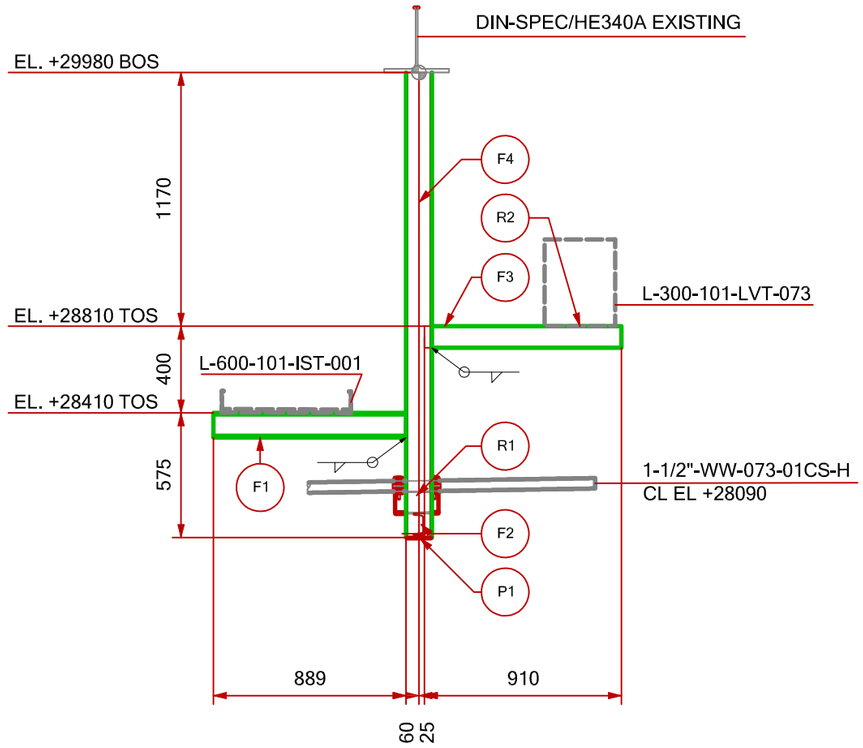
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02073

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

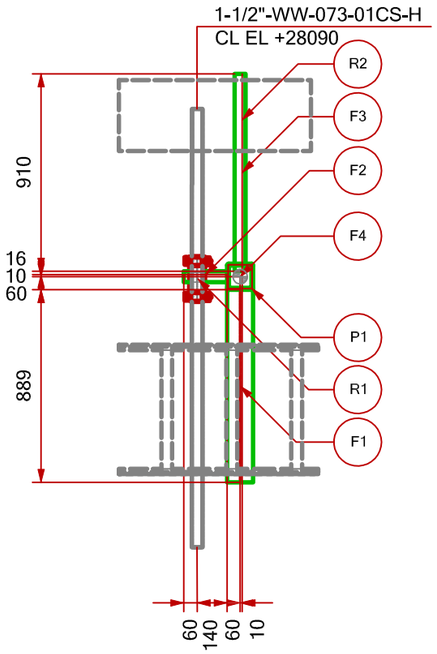
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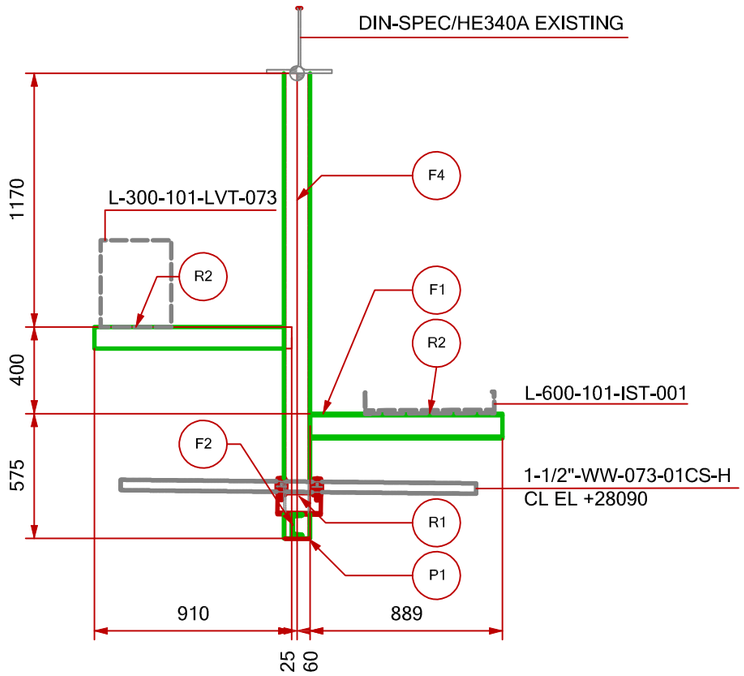
VIEW LOOKING NORTH



VIEW LOOKING WEST



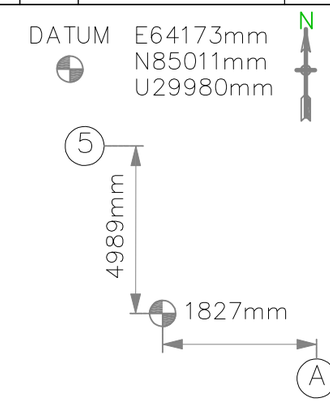
PLAN VIEW

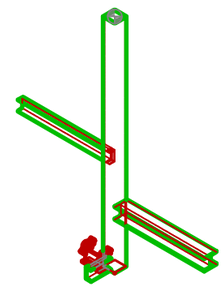


VIEW LOOKING EAST

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	RACK SUPPORT	-	-	2	-	0.00	-
F1	BEAM	HEA120	Carbon Steel	889	1	19.98	17.75	0.607
F2	BEAM	UPN100	Carbon Steel	200	1	10.57	2.11	0.077
F3	BEAM	UPN100	Carbon Steel	910	1	10.57	9.62	0.341
F4	BEAM	RHS120x120x8	Carbon Steel	2145	1	27.79	59.62	1.884
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	94.4	2.96





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

CROSSWIND

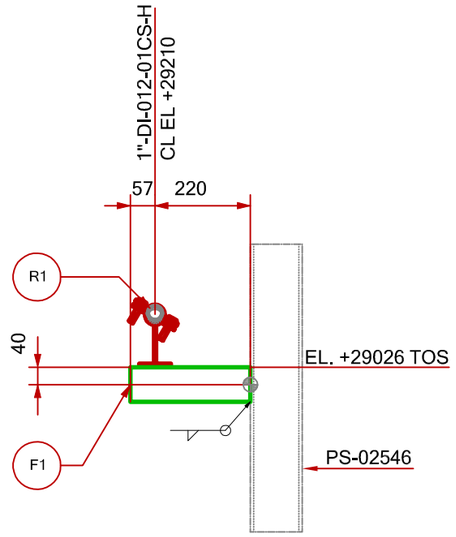
ROSETTI MARINO

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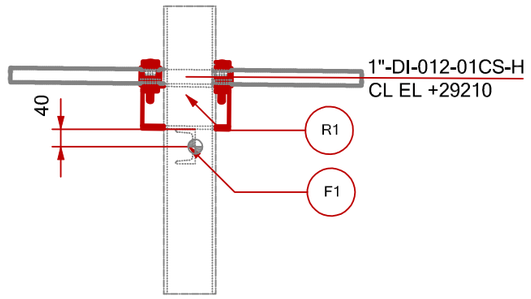
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02074

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

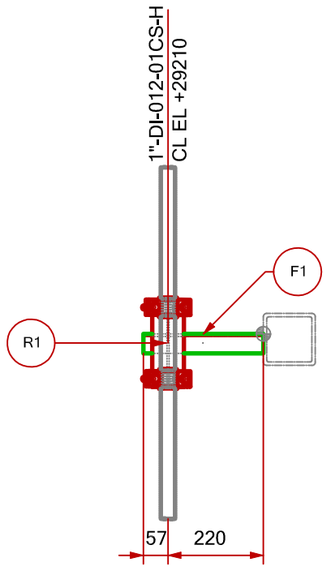
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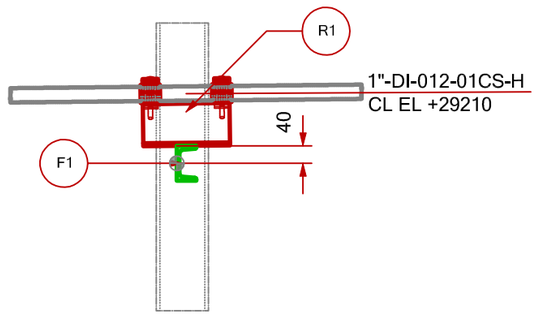
VIEW LOOKING EAST



VIEW LOOKING NORTH



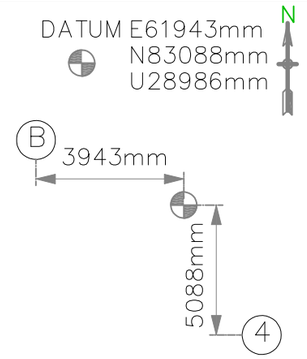
PLAN VIEW



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"-98-90-200	-	-	1	-	4.63	0.034
F1	BEAM	UPN80	Carbon Steel	277	1	8.66	2.40	0.089
						TOTAL	7.0	0.12



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-02140

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

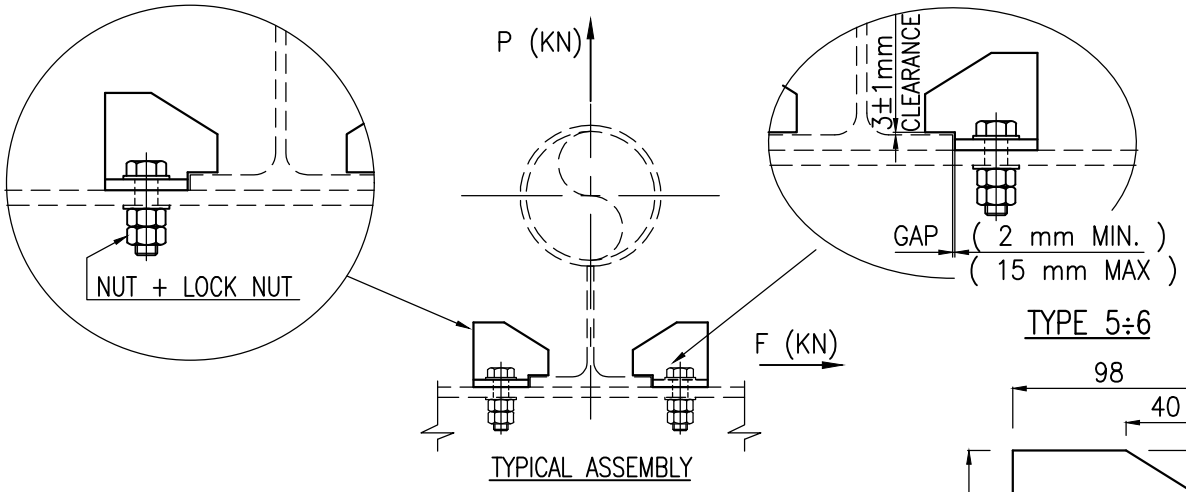
Document Number: STD–PP–DD–0001

Revision: 0

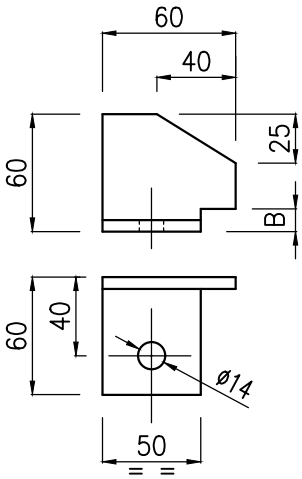
Date: –

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

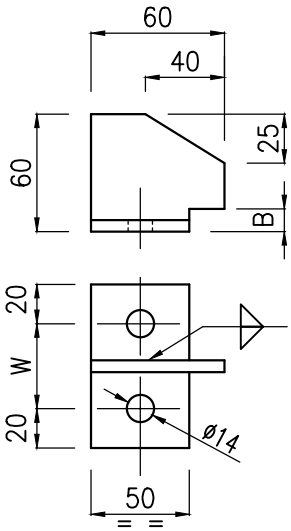
C–33



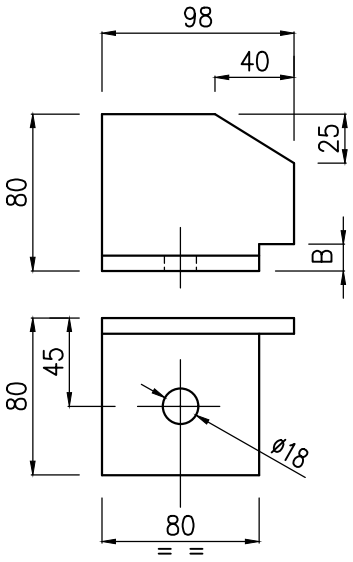
TYPE 1 (NOTE 4)



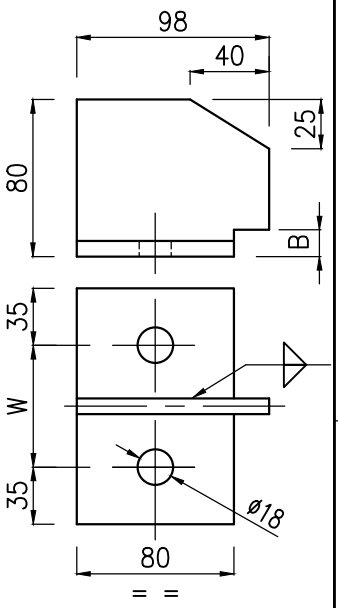
TYPE 2



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

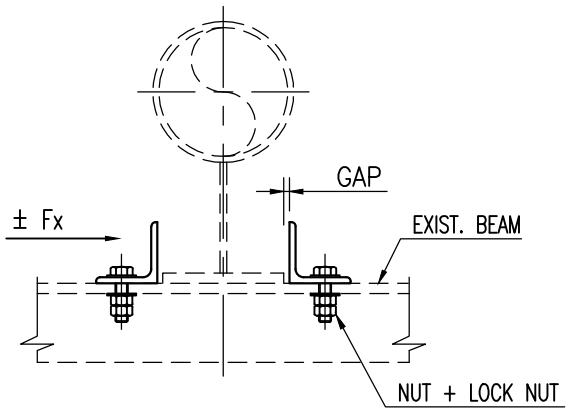
STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001
Revision: 0
Date: –

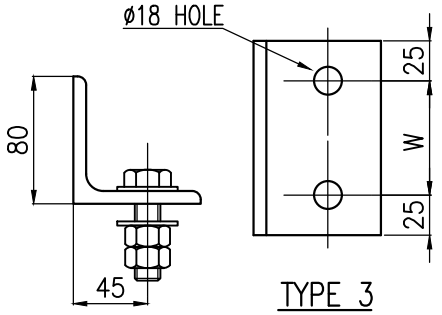
GUIDA BULLONATA
BOLTED GUIDE

C–34

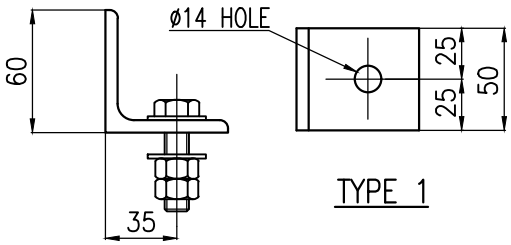
Example of designation : STD – TYPE – SIZE – GAP
(C–34 – 5 – M – 2)



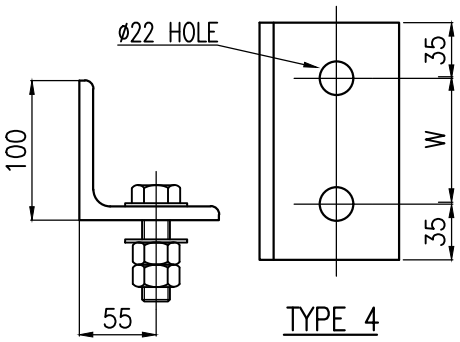
TYPICAL ASSEMBLY



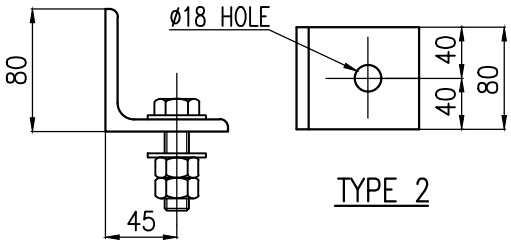
TYPE 3



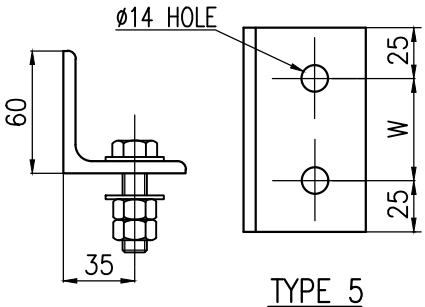
TYPE 1



TYPE 4



TYPE 2



TYPE 5

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

SIZE	EXIST. BEAM	W mm
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

TYPE	PROFILE	BOLTING (DIN933)	MAXIMUM LOAD Fx (KN)	WEIGHT (BOLTS INCL.)
1	L60x60x6	M12x60	10	0.8
2	L80x80x8	M16x70	18	2.0
3	L80x80x8	M16x70	36	.....
4	L100x100x10	M20x75	56	.....
5	L60x60x6	M12x60	20	.....

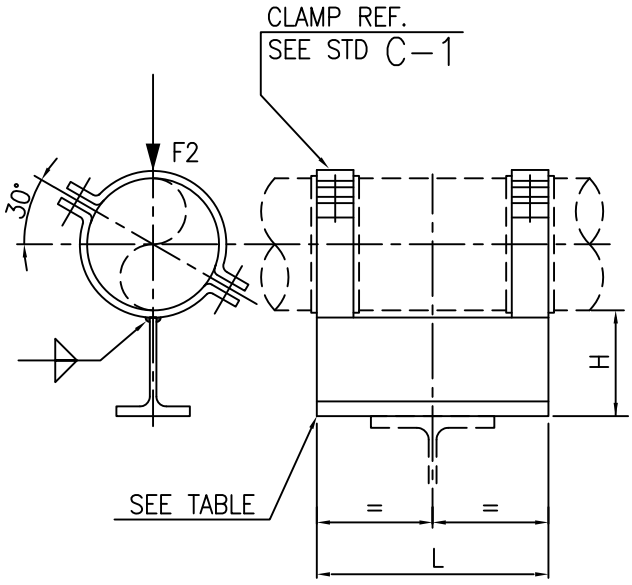
NOTES:
1– PROFILE MATERIAL : CARBON STEEL
2– BOLTS (UNI 5739 CI 8.8), NUTS (UNI 5588 CI 8.8), LOCK NUT (UNI 7474 CI.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– SAFE LOADS ARE BASED ON BOLT SHEAR LOADS ONLY.
4– GUIDES ARE TO BE SITE LOCATED AND DRILLED UNLESS OTHERWISE ON.
5– VARIABLE WEIGHT ADDICTED TO THE "TYPE" SELECTED AND THE "W" DIMENSION INDICATED.

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

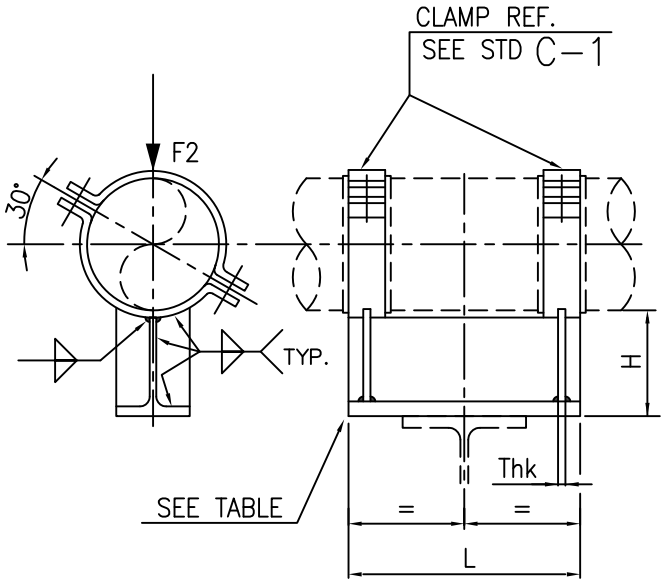
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

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

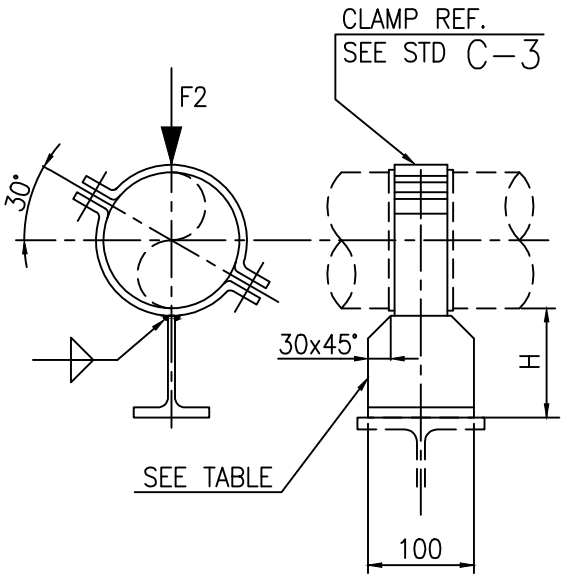
Revision: 0

Date: –

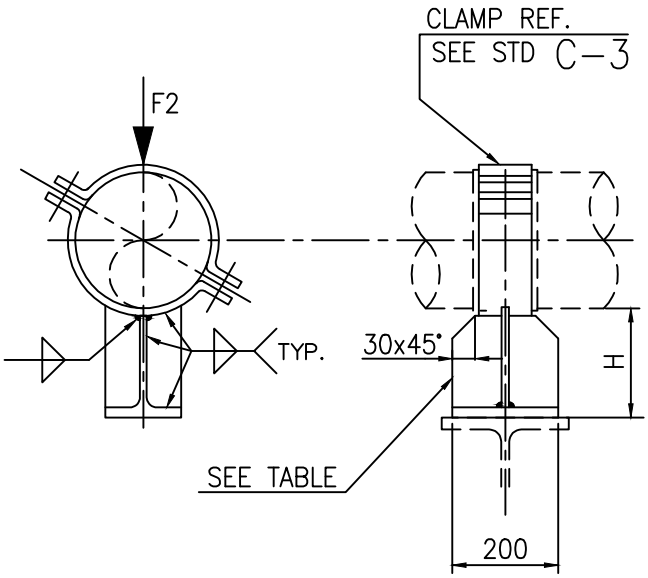
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY
CLAMPED SHOE FOR C.S.–S.S. AND ALLOY PIPES

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:

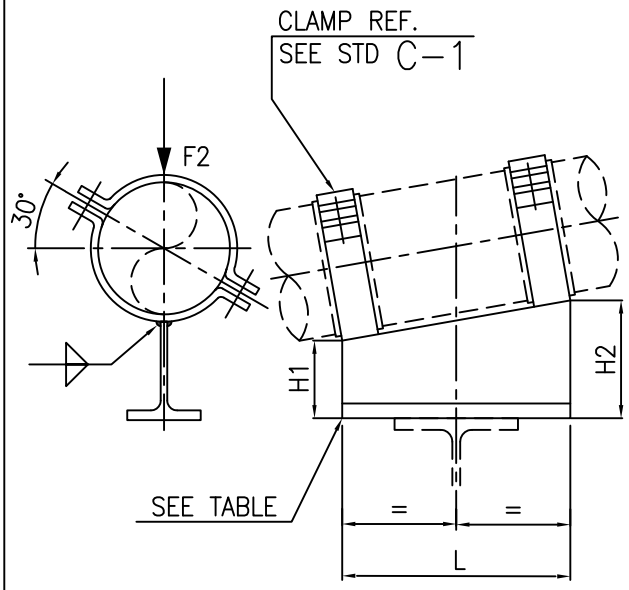
1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT IN FUNCTION OF THE "PIPE ND" SELECTED AND THE "H" DIMENSION.

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

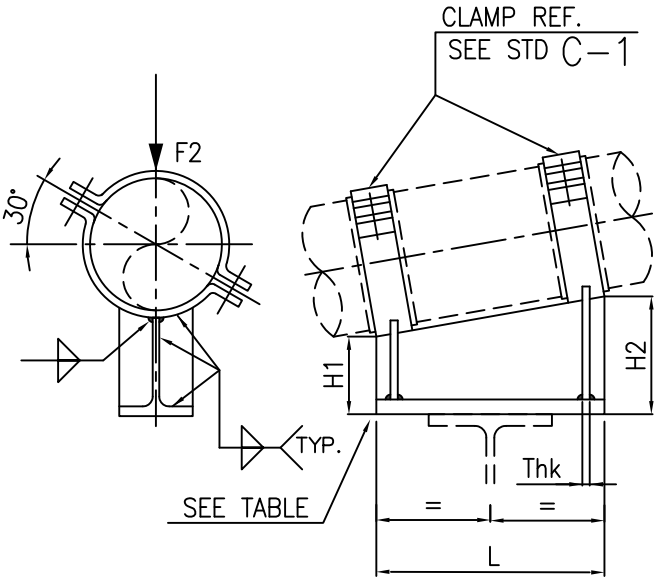
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI IN PENDENZA IN C.S.–S.S. E ALLOY CLAMPED SHOE FOR SLOPED PIPE IN C.S. – S.S. AND ALLOY		S–75

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

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	55-01-TP-003	: Test Pack 55-01-TP-003			Dwg	123A90-DDL-PR-PID-80012-22-25-27
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10003254		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	2025-01-31	2025-01-31	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-31T07:06:58.202Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-31T18:00:46.600Z	

ITEM	Tag	55-01-TP-003	: Test Pack 55-01-TP-003			Dwg	123A90-DDL-PR-PID-80012-22-25-27
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10003254		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	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:21:29.259Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-15T09:04:04.056Z	

ITEM	Tag	55-01-TP-021	: Test Pack 55-01-TP-021			Dwg	123A90-DDL-PR-PID-80025-29
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003389		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.	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).	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: Inspection points n.4 and 5: To be checked during Flange management.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-09	2024-12-10	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-09T05:16:54.379Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-10T17:26:49.516Z	

ITEM	Tag	55-01-TP-021	: Test Pack 55-01-TP-021			Dwg	123A90-DDL-PR-PID-80025-29
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003390		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.	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	2025-02-06	2025-02-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-06T15:29:05.044Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-14T10:11:24.752Z	

ITEM	Tag	55-01-TP-021	: Test Pack 55-01-TP-021		Dwg	123A90-DDL-PR-PID-80025-29	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10003391	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.	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.	OK
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 2025-03-21T15:18:48.948Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-27T16:18:32.937Z	

ITEM	Tag	55-01-TP-021	: Test Pack 55-01-TP-021			Dwg	123A90-DDL-PR-PID-80025-29
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003392		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	2025-02-19	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T07:36:10.250Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-19T08:58:03.906Z	

ITEM	Tag	55-01-TP-021	: Test Pack 55-01-TP-021			Dwg	123A90-DDL-PR-PID-80025-29
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003393		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	N/A					
Chemical treatment	No	N/A	Filtration	No	Screen size	N/A

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**	NA	Exhaustive list to be attached (temporary filters, spools…etc)	NA

TEST RESULTS

Test date	10/12/2024	Start time	14:10	End time	14:20
Flow rate	N/A	Duration	10 min	Medium T°	N/A

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 debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-09	2024-12-10	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-09T05:17:09.315Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-10T18:37:18.541Z	

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ITEM	Tag	55-01-TP-021	: Test Pack 55-01-TP-021		Dwg	123A90-DDL-PR-PID-80025-29	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10003394	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:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-09	2024-12-10	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-09T05:17:22.307Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-10T18:41:21.700Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	123A90-55-01-TP-21

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)*	00:48:14
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	03:00:31 pm

Logger protocol

Protocollo di acquisizione elenco dati

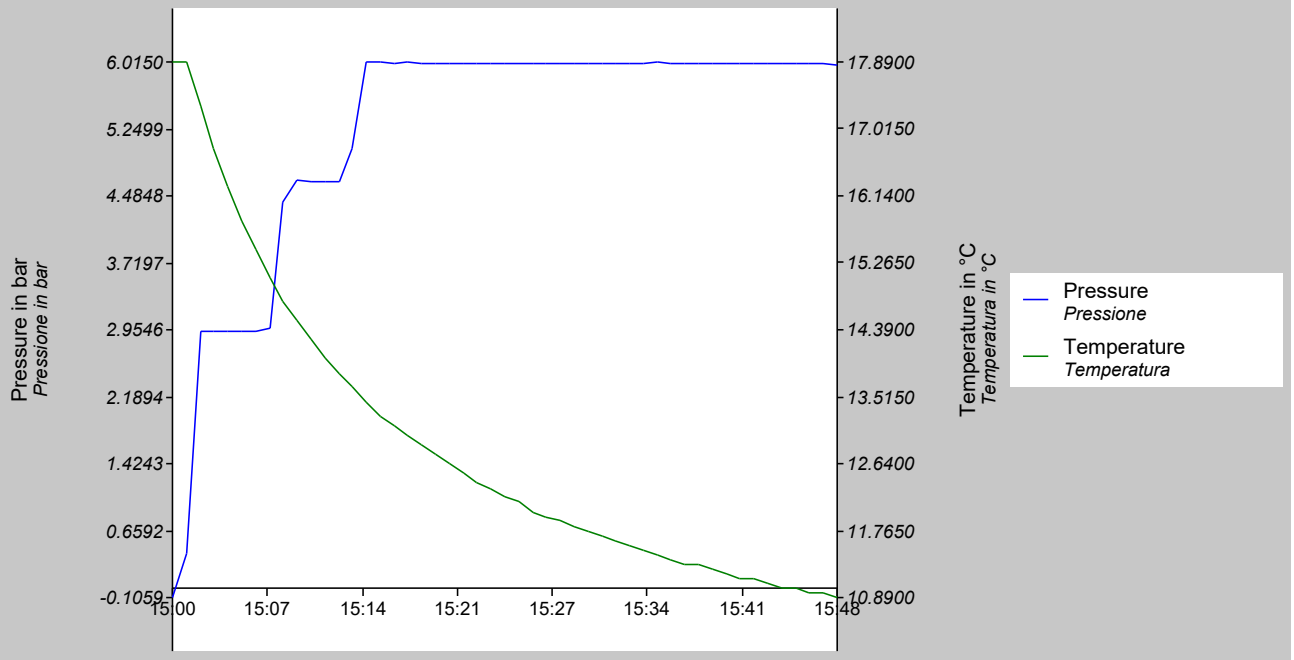
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP-21

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
12/10/2024 15:00:31.000	-0.1059	17.8900
12/10/2024 15:01:31.000	0.3913	17.8900
12/10/2024 15:02:31.000	2.9363	17.3200
12/10/2024 15:03:31.000	2.9300	16.7600
12/10/2024 15:04:31.000	2.9389	16.2600
12/10/2024 15:05:31.000	2.9404	15.8200
12/10/2024 15:06:31.000	2.9406	15.4500
12/10/2024 15:07:31.000	2.9665	15.0700
12/10/2024 15:08:31.000	4.4043	14.7600
12/10/2024 15:09:31.000	4.6561	14.5100
12/10/2024 15:10:31.000	4.6505	14.2600
12/10/2024 15:11:31.000	4.6501	14.0100
12/10/2024 15:12:31.000	4.6529	13.8200
12/10/2024 15:13:31.000	5.0321	13.6400
12/10/2024 15:14:31.000	6.0150	13.4500
12/10/2024 15:15:31.000	6.0127	13.2600
12/10/2024 15:16:31.000	6.0051	13.1400

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP-21

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
12/10/2024 15:17:31.000	6.0073	13.0100
12/10/2024 15:18:31.000	6.0038	12.8900
12/10/2024 15:19:31.000	6.0011	12.7600
12/10/2024 15:20:31.000	6.0020	12.6400
12/10/2024 15:21:31.000	6.0019	12.5100
12/10/2024 15:22:31.000	5.9997	12.3900
12/10/2024 15:23:31.000	6.0038	12.3200
12/10/2024 15:24:31.000	5.9996	12.2000
12/10/2024 15:25:31.000	6.0015	12.1400
12/10/2024 15:26:31.000	6.0039	12.0100
12/10/2024 15:27:31.000	5.9987	11.9500
12/10/2024 15:28:31.000	5.9990	11.8900
12/10/2024 15:29:31.000	5.9987	11.8200
12/10/2024 15:30:31.000	6.0008	11.7600
12/10/2024 15:31:31.000	5.9997	11.7000
12/10/2024 15:32:31.000	6.0034	11.6400
12/10/2024 15:33:31.000	6.0056	11.5700
12/10/2024 15:34:31.000	6.0024	11.5100
12/10/2024 15:35:31.000	6.0061	11.4500
12/10/2024 15:36:31.000	6.0041	11.3900
12/10/2024 15:37:31.000	6.0056	11.3200
12/10/2024 15:38:31.000	6.0026	11.3200
12/10/2024 15:39:31.000	6.0022	11.2600
12/10/2024 15:40:31.000	6.0024	11.2000
12/10/2024 15:41:31.000	6.0056	11.1400
12/10/2024 15:42:31.000	6.0009	11.1400
12/10/2024 15:43:31.000	6.0007	11.0700
12/10/2024 15:44:31.000	5.9946	11.0100
12/10/2024 15:45:31.000	5.9960	11.0100
12/10/2024 15:46:31.000	5.9945	10.9500
12/10/2024 15:47:31.000	5.9902	10.9500
12/10/2024 15:48:31.000	5.9859	10.8900

WIKA Italia S.r.l. & C. s.a.s.
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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

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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

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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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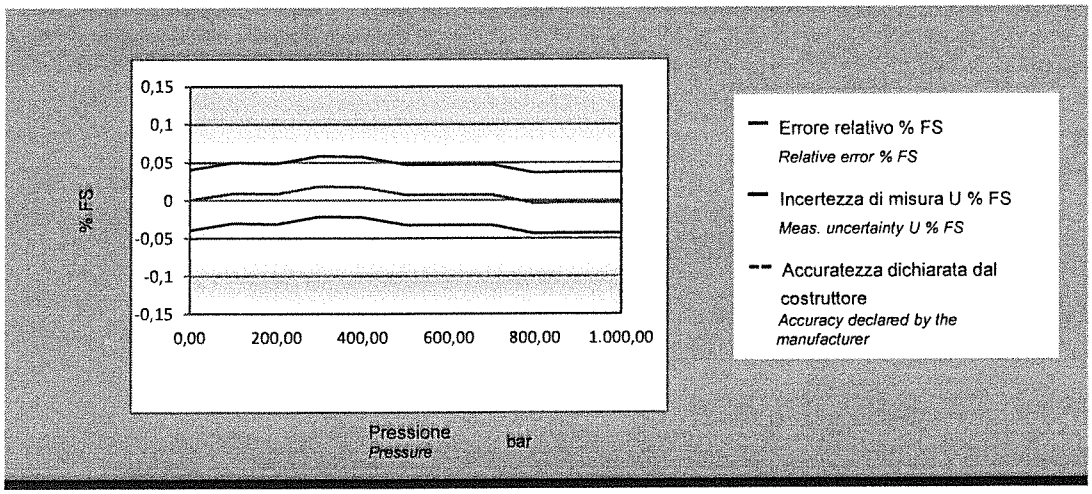
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Incertezza di misura
Uncertainty of measurement

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°55-01-TP-021
SUB-SYSTEM N° 55-01

System	55
Sub-System	55-01
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

123A90-DDL-PR-PID-80022
FROM 50-TI-001

123A90-DDL-PR-PID-80027
FROM INSTRUMENT AIR PACKAGE
1"-WW-079-01CS-H

123A90-DDL-PR-PID-80012
FROM FUEL CELL PACKAGE
1"-DI-012-01CS-H

03
DM 005 WW 073

123A90-DDL-PR-PID-80011
FROM ELECTROLYSER PACKAGE
1"-DM-005-01CS-H

1-1/2"-WW-073-01CS-H

50 PI 014 H
50 PT 014
50 TIH 002 H
50 TI 002
50 TT 002
50 TE 002

03
3/4" FLG x 1/2" NPTF
BLPH-MV-411
INSTR. PIPING

123A90-DDL-PR-PID-80022
FROM WATER TREATMENT PACKAGE
1"-SWR-045-01CS-H

E
3/4"
4"x1.1/2" ECC. RED.
1.1/2"
4"x1.1/2" ECC. RED.
BLPH-MV-412 LO
BLPH-NRV-028

DECK HOOK-UP 005
03

123A90-DDL-PR-PID-80029
FROM HYDROGEN VENT KO DRUM
1"-WW-071-01CS-H NNF

1"-WW-071-01CS-H
DECK HOOK-UP 004

EL. +21.8 m

NOTE 2

B-50014
NOTE 1

ELEVATION
0.00m (L.A.T.)

55-01-TP-021
5.25 barg

B-50014
BRINE DISCHARGE CAISSON
SIZE : 323 mm (ID) x 21808 mm (H)
MATERIAL : CARBON STEEL)

NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT). 03

HOLDS

1. 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 1

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-80025	001	03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

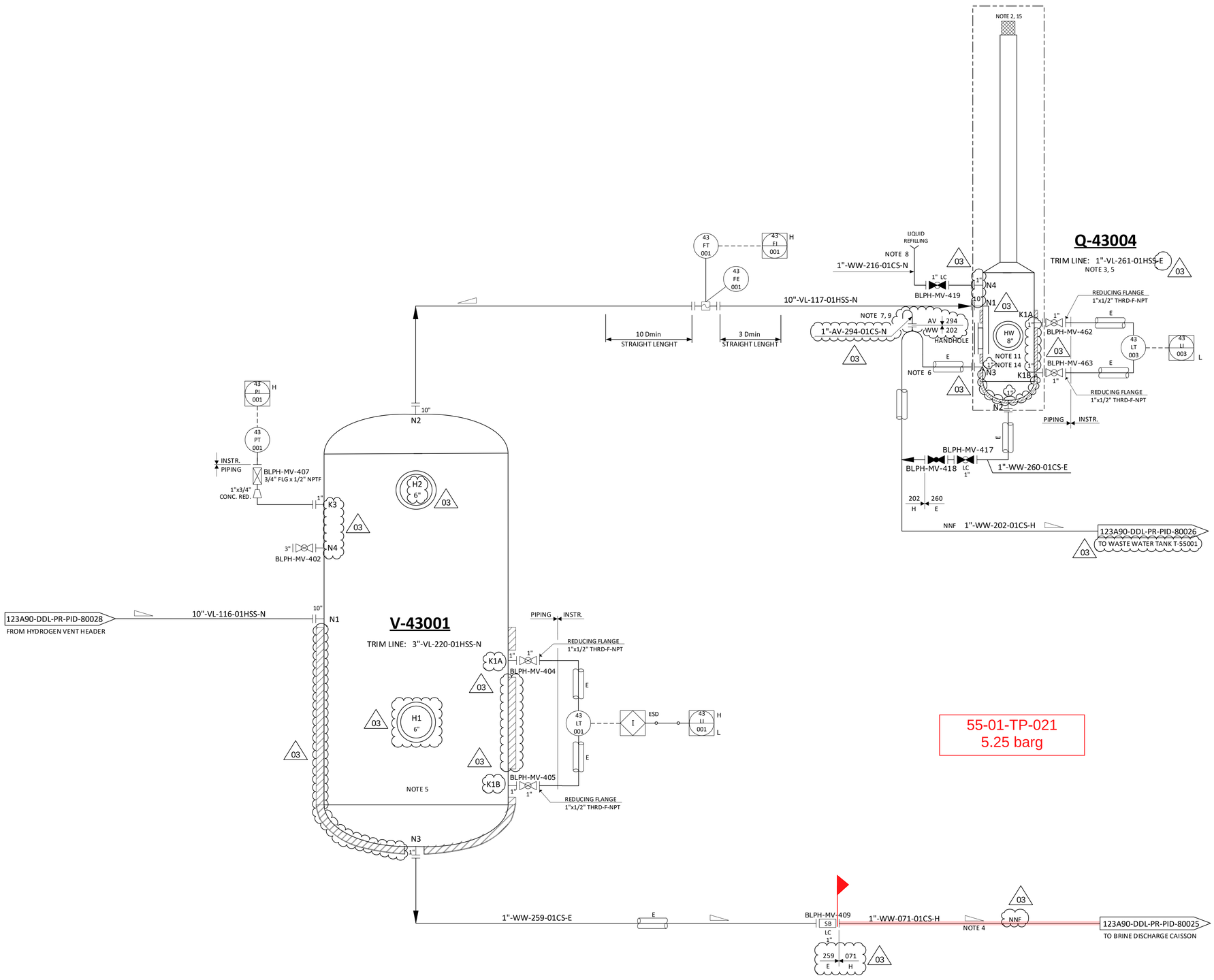
REV. REV

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

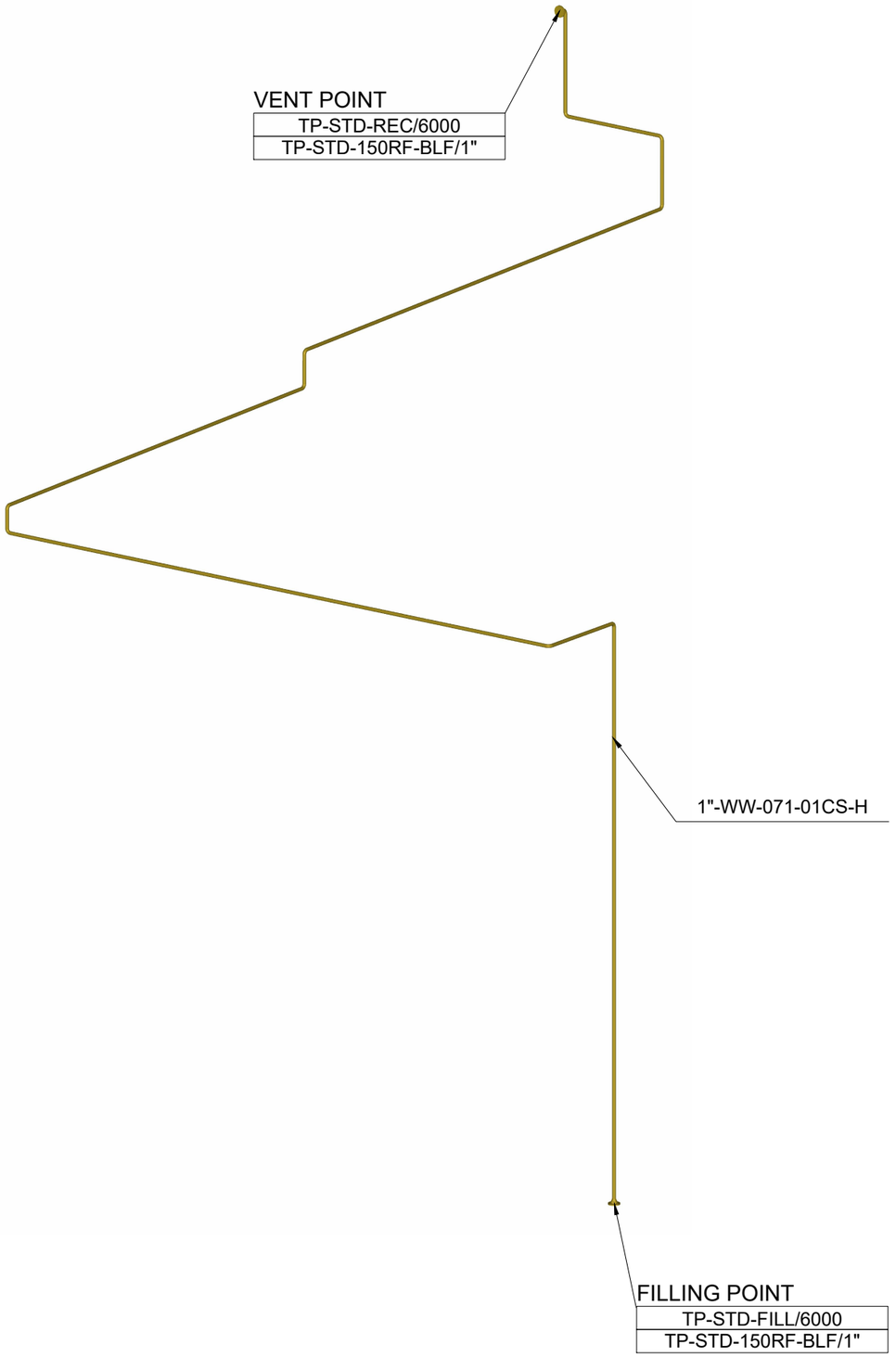
ROSETTI MARINO

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



55-01-TP-021

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
55-01-TP-021

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

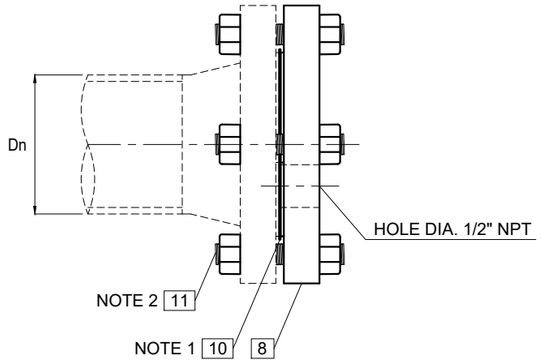
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-021	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	2	2	
TP-021	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	2	8	

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

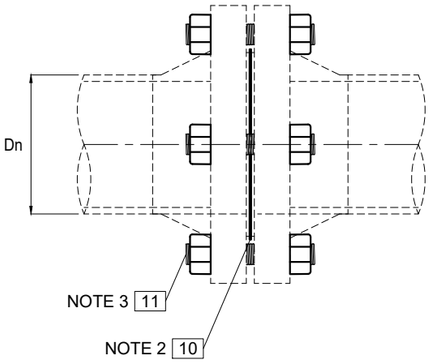
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

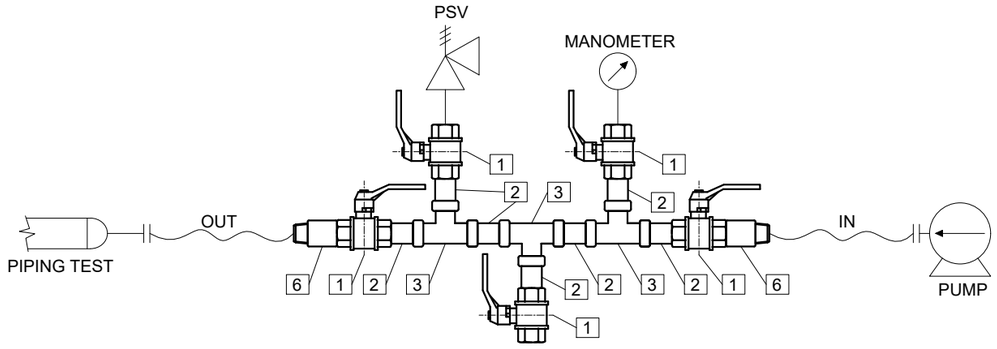
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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

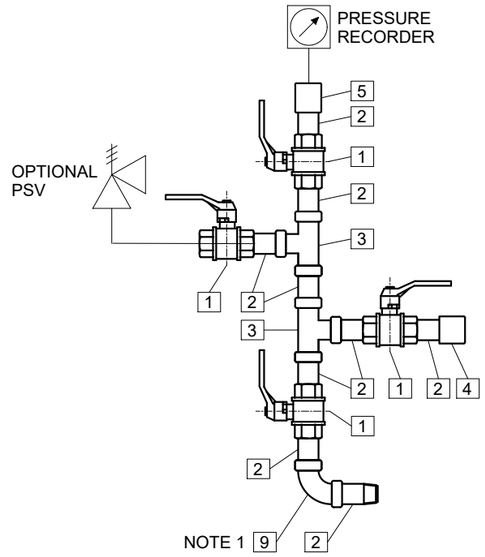
TP-STD-FILL

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
30	WW-071	071	1	01CS	H	4,55	80	N/A	1"-WW-071-01CS-H	123A90-DDL-PR-PID-80029	3,50	55	55-01	TP-021/TP-103	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**

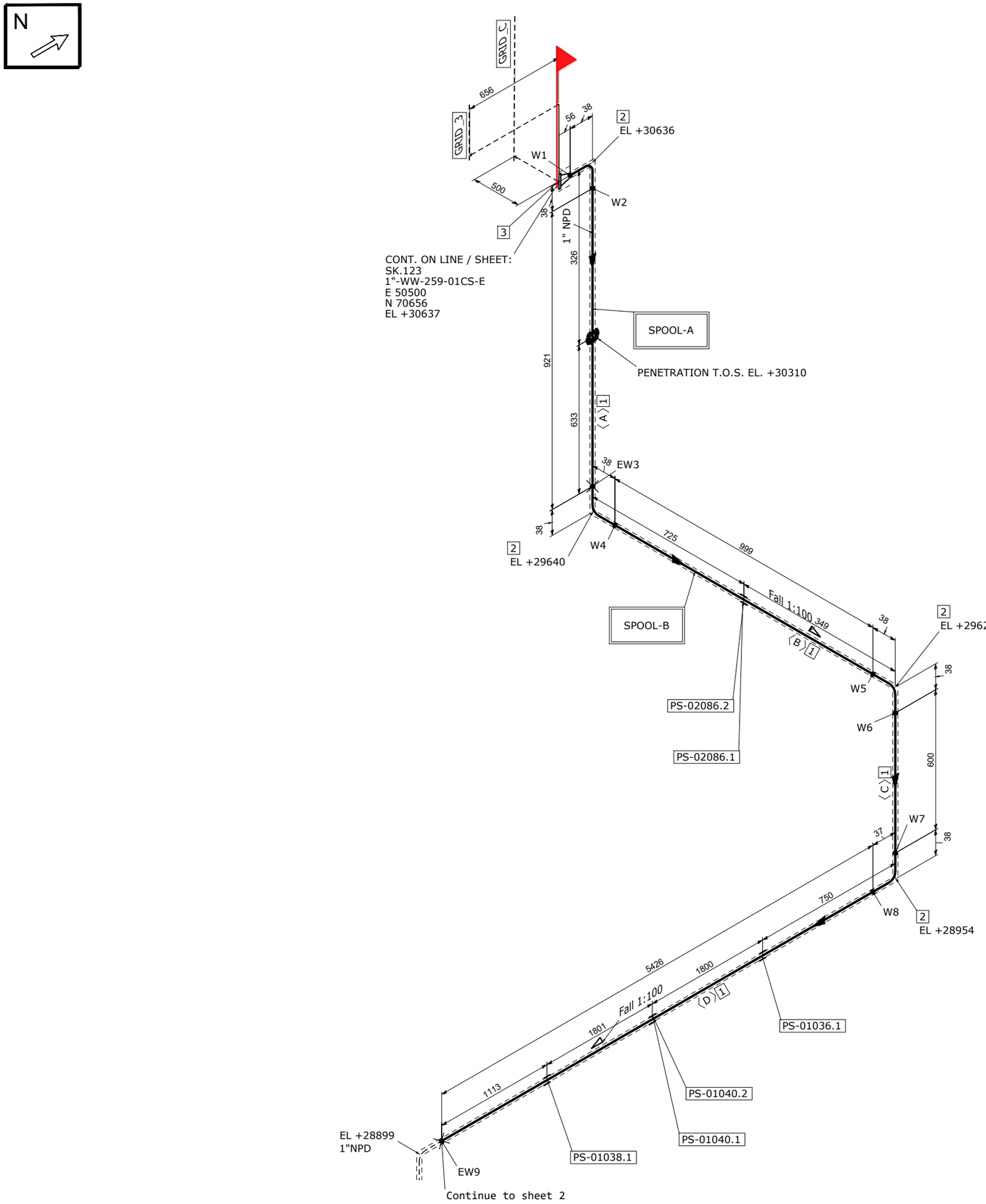
REV. **05**

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
38	123A90-FDL-PP-DI-00030-01	**030**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-071-01CS-H	27/08/2024													**00**	**03**		**TP-021**
39	123A90-FDL-PP-DI-00030-02	**030**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-WW-071-01CS-H	27/08/2024													**00**	**03**		**TP-021**



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	7.9M	25.7
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
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]

FABRICATION WEIGHT [kg]	27.8
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	27.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
EW3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
EW9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	921	BEVEL	BEVEL
B	1	999	BEVEL	BEVEL
C	1	600	BEVEL	BEVEL
D	1	5426	BEVEL	BEVEL

SUPPORT LIST

PS-02086.1
PS-02086.2
PS-01036.1
PS-01040.1
PS-01040.2
PS-01038.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	4.6
B	5	23.2
MONT	2	0.0

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

55-01-TP-021

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-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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-WW-071-01CS-H

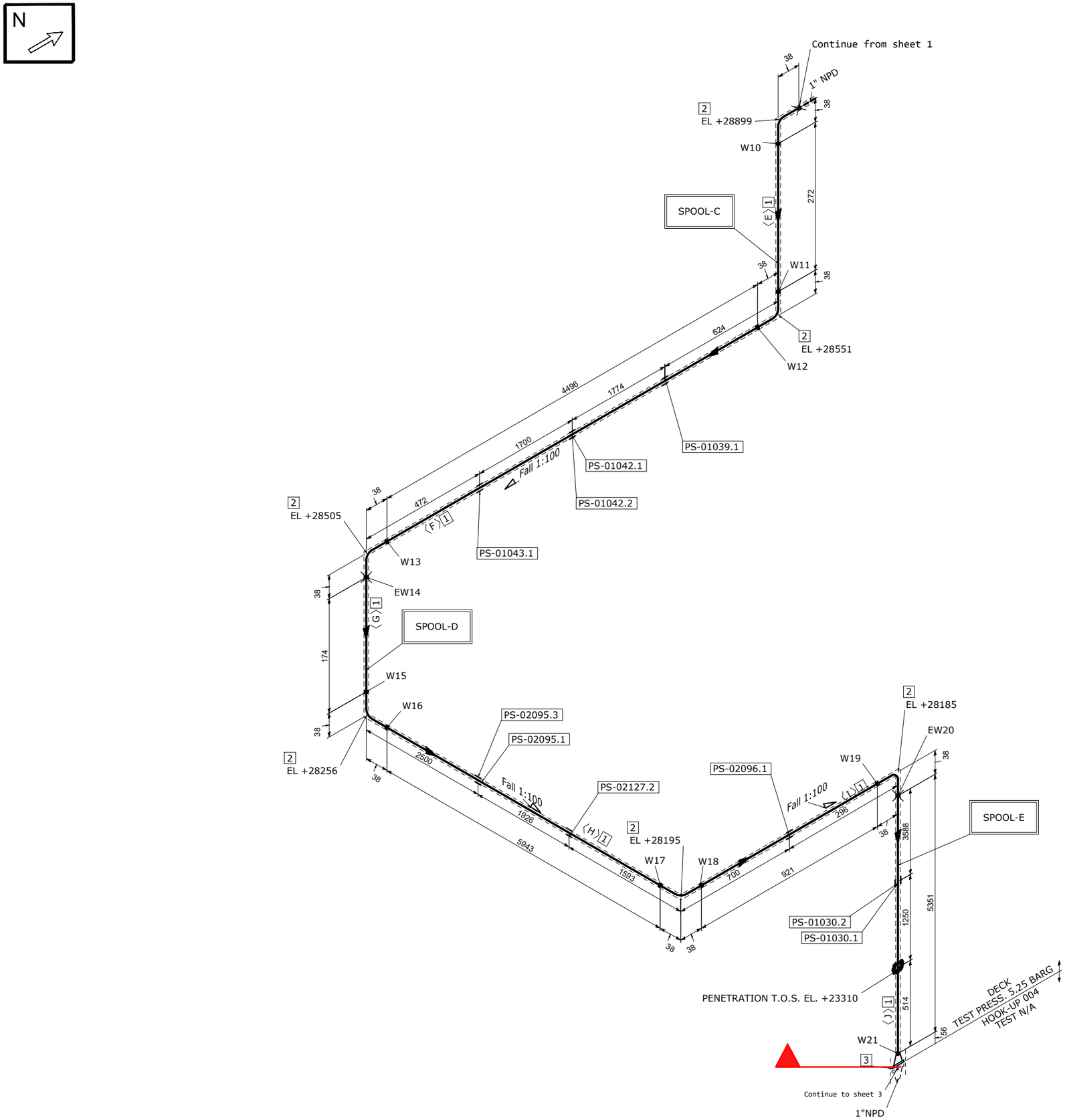
SK.030

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-00030 | SHEET / OF: 1/3 | REV.: 00



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	17.2M	55.6
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	6	1.1
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]

FABRICATION WEIGHT [kg]	58.1
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	58.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
EW14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW
W19	1	BW
EW20	1	BW
W21	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
E	1	272	BEVEL	BEVEL
F	1	4496	BEVEL	BEVEL
G	1	175	BEVEL	BEVEL
H	1	5943	BEVEL	BEVEL
I	1	921	BEVEL	BEVEL
J	1	5351	BEVEL	BEVEL

SUPPORT LIST

PS-01039.1
PS-01042.1
PS-01042.2
PS-01043.1
PS-02095.1
PS-02095.3
PS-02127.2
PS-02096.1
PS-01030.1
PS-01030.2

SPOOL	WELD [inches]	WEIGHT [kg]
C	4	16.0
D	5	23.3
E	1	18.7
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-071-01CS-H

SK.030

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-00030 | SHEET / OF: 2/3 | REV.: 00

55-01-TP-021

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

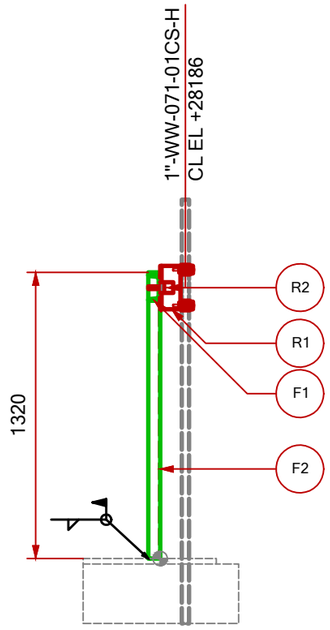
P&ID	123A90-DDL-PR-PID-80029
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

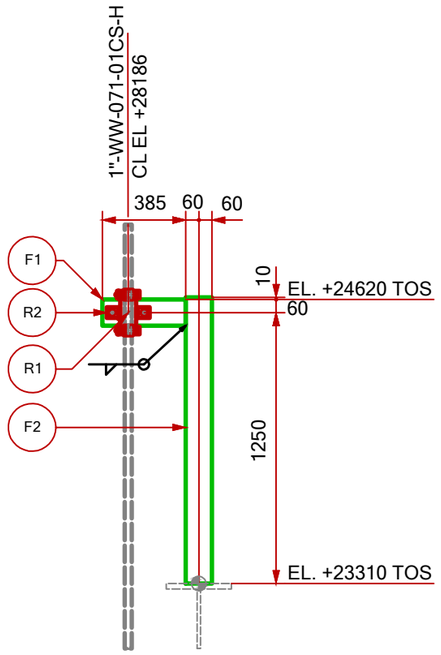
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

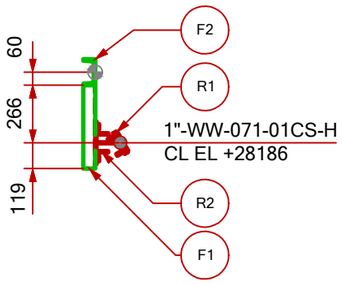
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01030	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	S-64 - 1" - 100 - 200		1	3,805	0,102	00	19/08/2024	IFR		TP-021
PS-01030	B2	PIP	LOWER DECK		1"-WW-071-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	00	19/08/2024	IFR		TP-021
PS-01036	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-021
PS-01038	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	S-75 - 1" - 77 - 71 - 200		1	4,486	0,034	00	19/08/2024	IFR		TP-021
PS-01039	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-021
PS-01040	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	C-34 - 5 - K - 2		1	2,306	0,070	00	19/08/2024	IFR		TP-021
PS-01040	B2	PIP	LOWER DECK		1"-WW-071-01CS-H	S-75 - 1" - 96 - 92 - 200		1	4,631	0,034	00	19/08/2024	IFR		TP-021
PS-01042	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	S-75 - 1" - 95 - 89 - 200		1	4,619	0,034	00	19/08/2024	IFR		TP-021
PS-01042	B2	PIP	LOWER DECK		1"-WW-071-01CS-H	C-34 - 5 - K - 2		1	2,306	0,070	00	19/08/2024	IFR		TP-021
PS-01043	B1	PIP	LOWER DECK		1"-WW-071-01CS-H	S-75 - 1" - 78 - 72 - 200		1	4,493	0,034	00	19/08/2024	IFR		TP-021
PS-02086	B1	PIP	UPPER DECK		1"-WW-071-01CS-H	S-75 - 1" - 98 - 102 - 200		1	4,669	0,034	00	19/08/2024	IFR		TP-021
PS-02086	B2	PIP	UPPER DECK		1"-WW-071-01CS-H	C-33 - 2 - A - 2		1	4,299	0,044	00	19/08/2024	IFR		TP-021
PS-02095	B1	PIP	UPPER DECK		1"-WW-071-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-021
PS-02095	B3	PIP	UPPER DECK		1"-WW-071-01CS-H	C-34 - 1 - I - 2		1	2,044	0,023	00	19/08/2024	IFR		TP-021
PS-02096	B1	PIP	UPPER DECK		1"-WW-071-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-021
PS-02127	B2	PIP	UPPER DECK		1"-WW-071-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-021



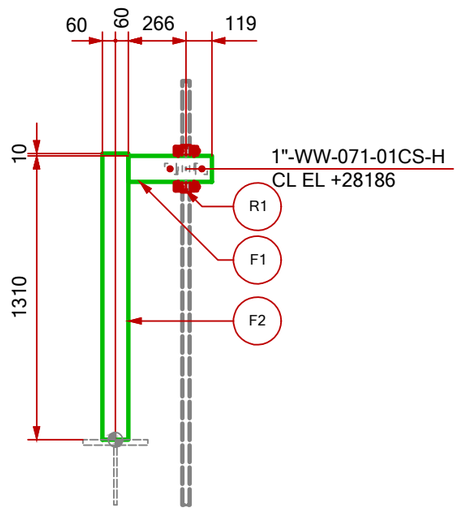
VIEW LOOKING NORTH



VIEW LOOKING WEST



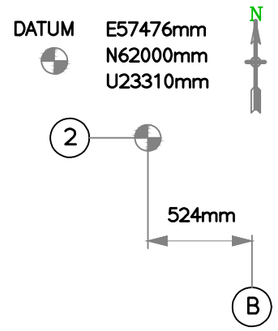
PLAN VIEW

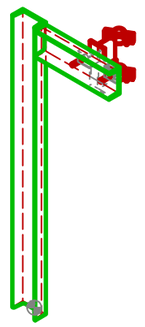


VIEW LOOKING EAST

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-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	UPN120	Carbon Steel	385	1	13.35	5.14	0.168
F2	BEAM	UPN120	Carbon Steel	1320	1	13.35	17.62	0.569
						TOTAL	28.6	0.86





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

CROSSWIND

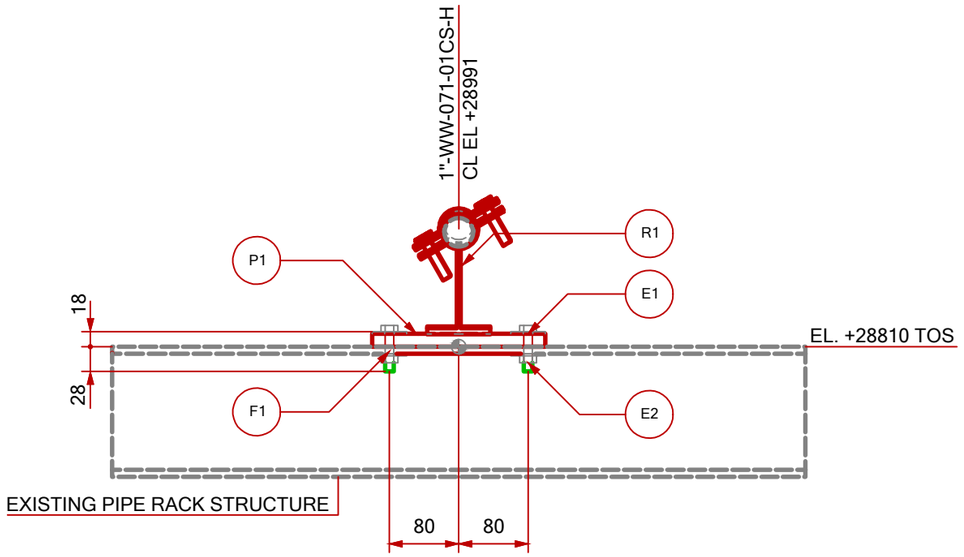
ROSETTI MARINO

TITLE :

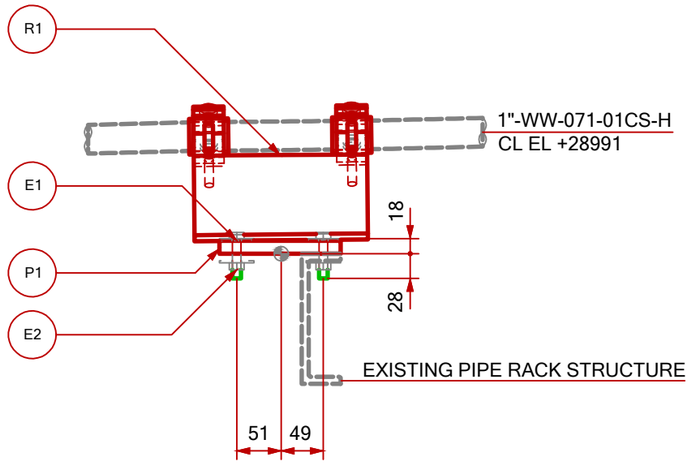
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01030

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

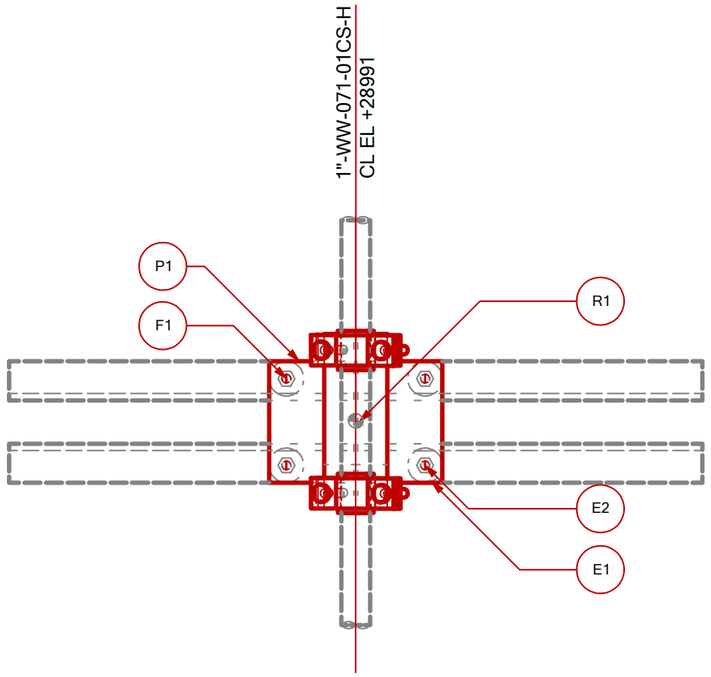
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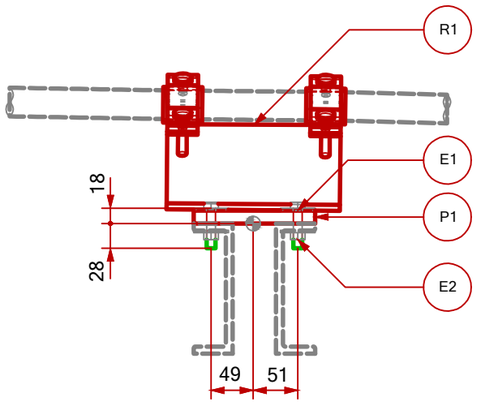
VIEW LOOKING NORTH



VIEW LOOKING WEST



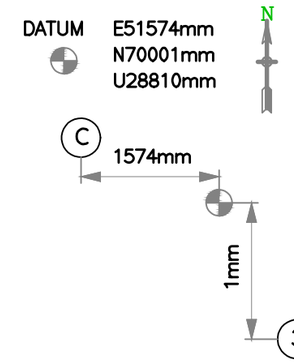
PLAN VIEW

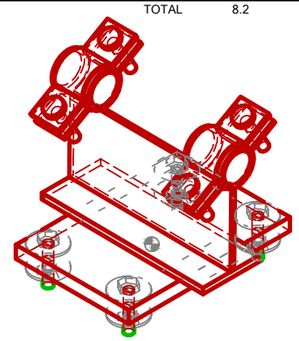


VIEW LOOKING EAST

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
E1	WASHER	M10	-	-	8	-	0.08	-
E2	NUT	M10	-	-	4	-	0.04	-
F1	BOLT	M10x46	-	-	4	-	0.16	-
P1	PLATE	15		140x200	1	-	3.30	0.028
						TOTAL	8.2	0.06





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

CROSSWIND

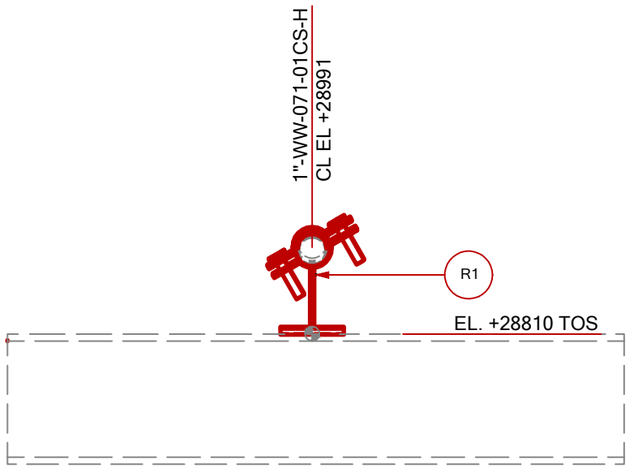
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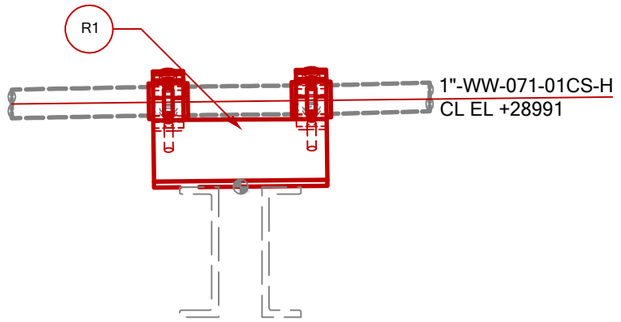
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01036

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

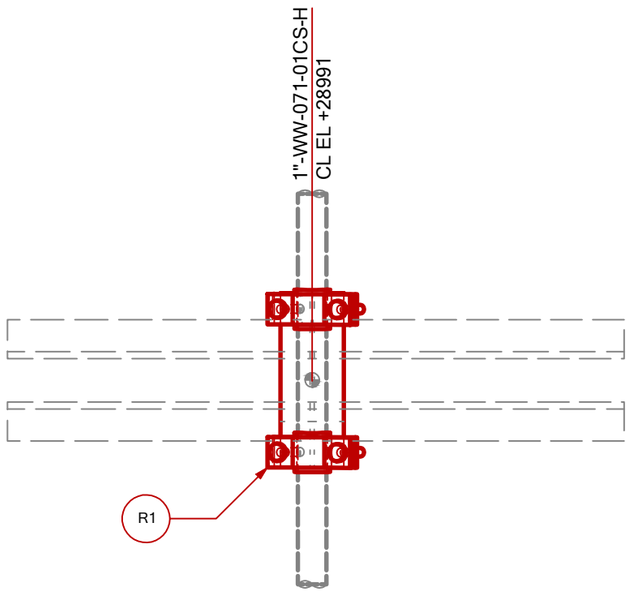
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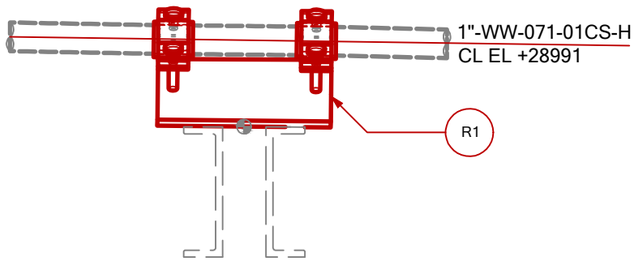
VIEW LOOKING NORTH



VIEW LOOKING WEST



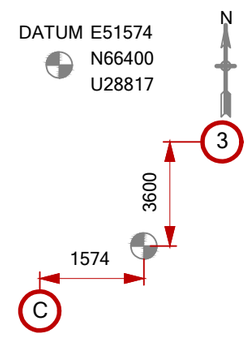
PLAN VIEW

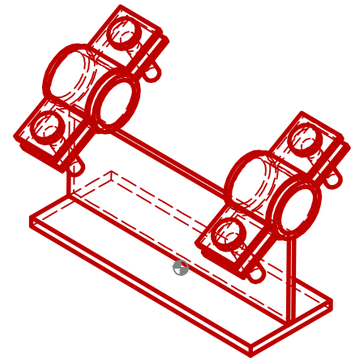


VIEW LOOKING EAST

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"-77-71-200	-	-	1	-	4.49	0.034
						TOTAL	4.5	0.03





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

CROSSWIND

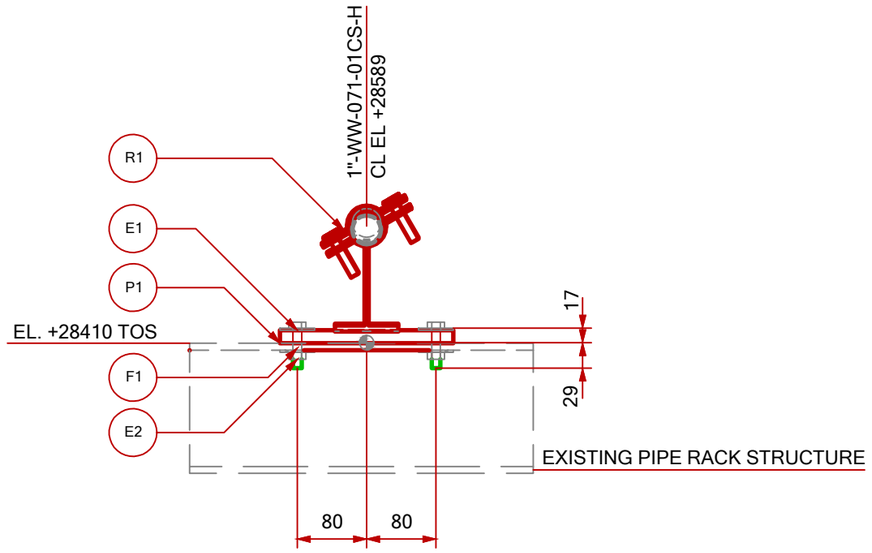
ROSETTI MARINO

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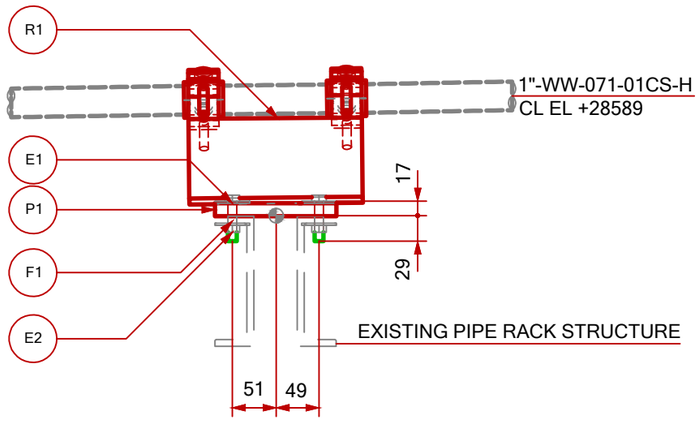
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01038

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

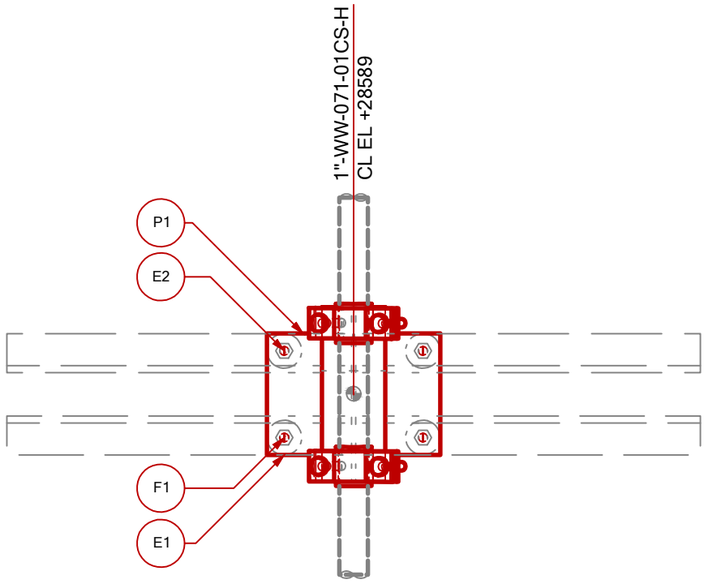
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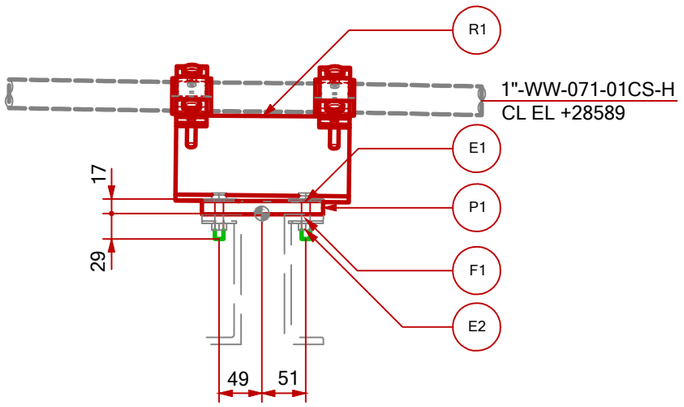
VIEW LOOKING NORTH



VIEW LOOKING WEST



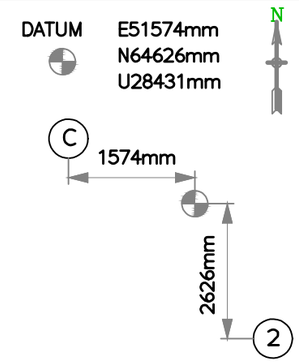
PLAN VIEW

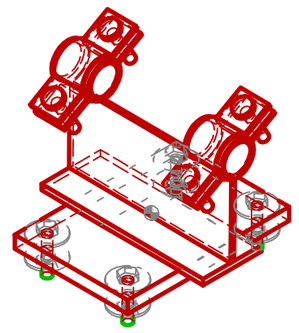


VIEW LOOKING EAST

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"-98-92-200	-	-	1	-	4.64	0.034
E1	WASHER	M10	-	-	8	-	0.08	-
E2	NUT	M10	-	-	4	-	0.04	-
F1	BOLT	M10x46	-	-	4	-	0.16	-
P1	PLATE	15		140x200	1	-	3.30	0.028
						TOTAL	8.2	0.06





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

CROSSWIND

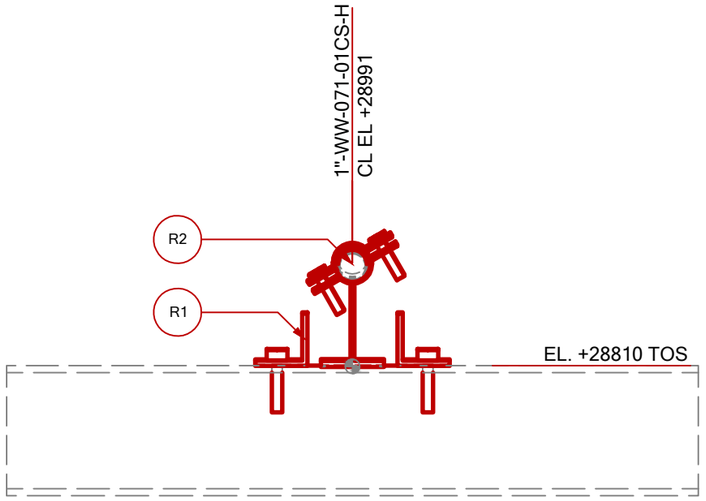
ROSETTI MARINO

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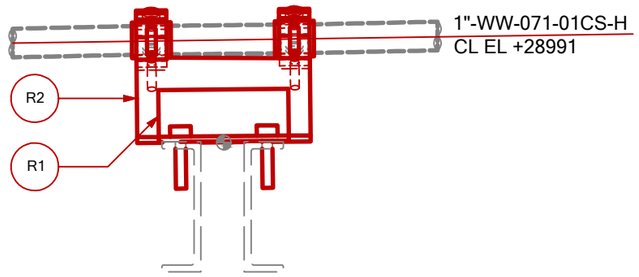
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01039

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

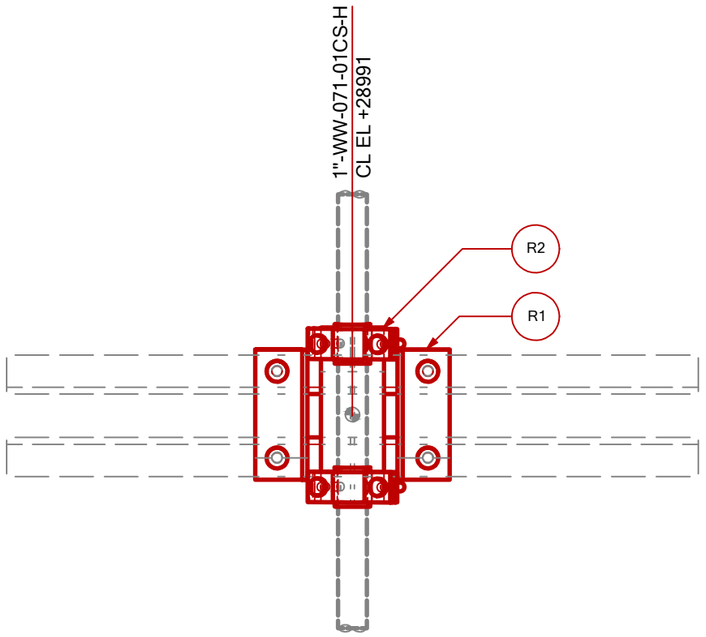
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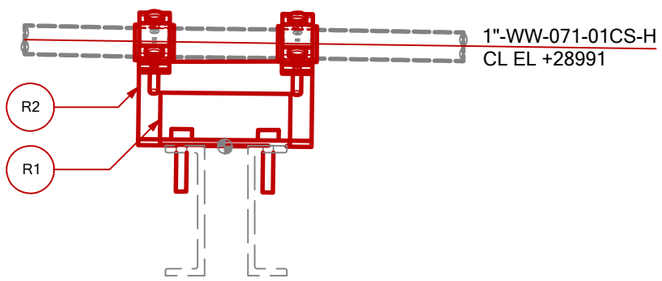
VIEW LOOKING NORTH



VIEW LOOKING WEST



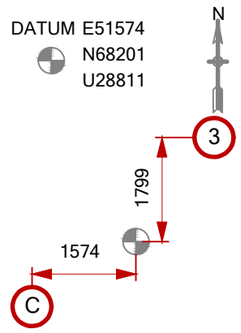
PLAN VIEW

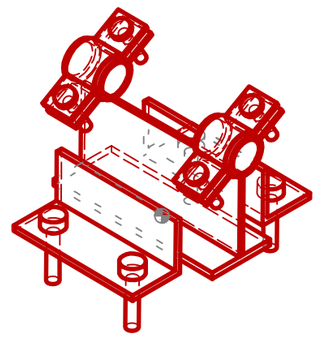


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	C-34-5-K-2	-	-	1	-	2.31	0.070
R2	STD	S-75-1"-96-92-200	-	-	1	-	4.63	0.034
						TOTAL	6.9	0.10





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

CROSSWIND

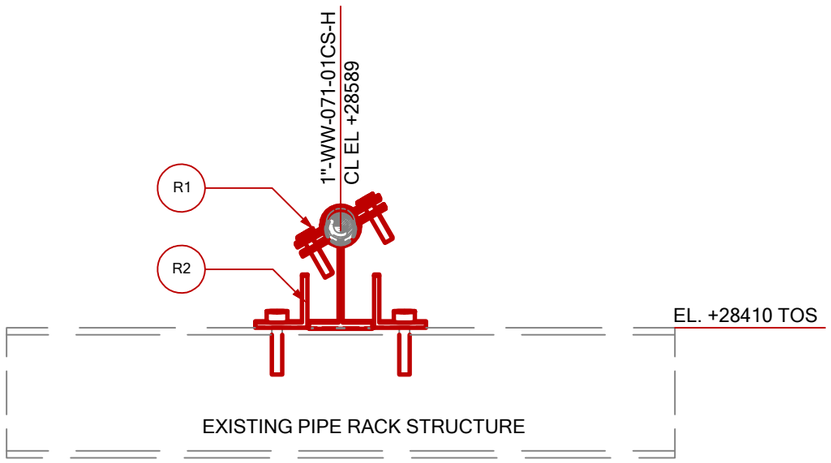
ROSETTI MARINO

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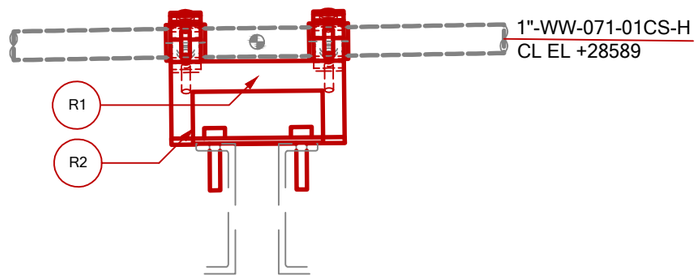
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01040

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

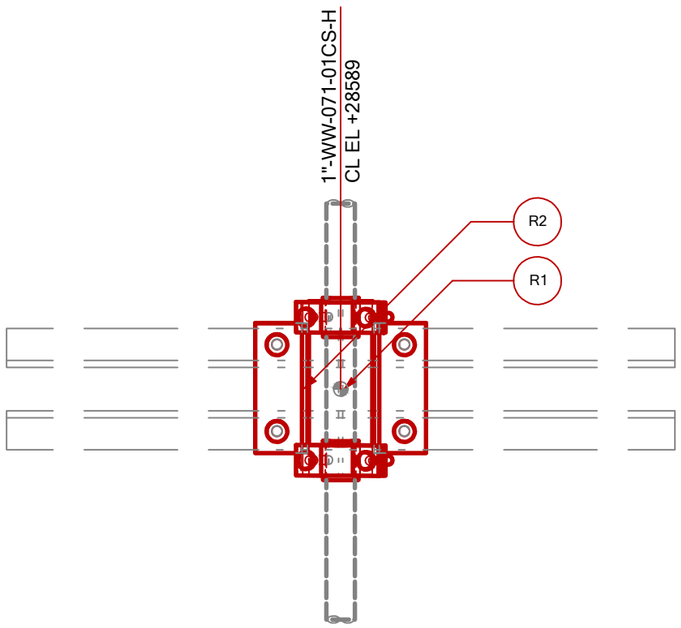
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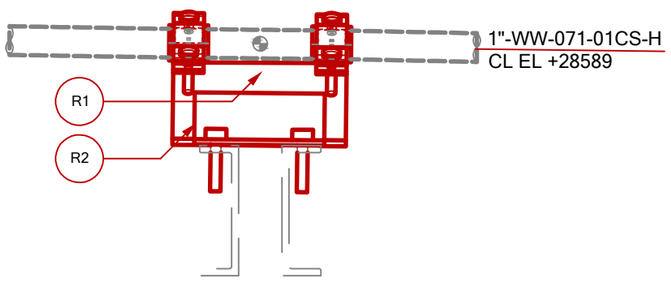
VIEW LOOKING NORTH



VIEW LOOKING WEST



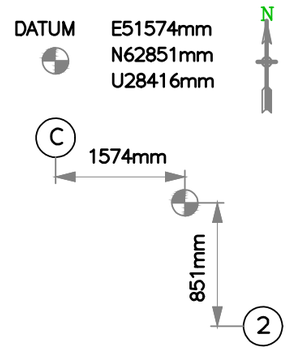
PLAN VIEW

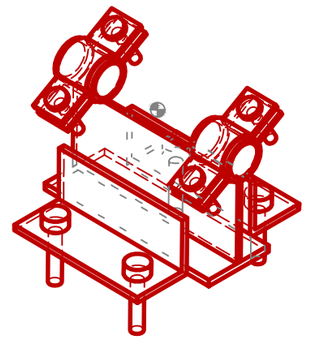


VIEW LOOKING EAST

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"-95-89-200	-	-	1	-	4.62	0.034
R2	STD	C-34-5-K-2	-	-	1	-	2.31	0.070
						TOTAL	6.9	0.10





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

CROSSWIND

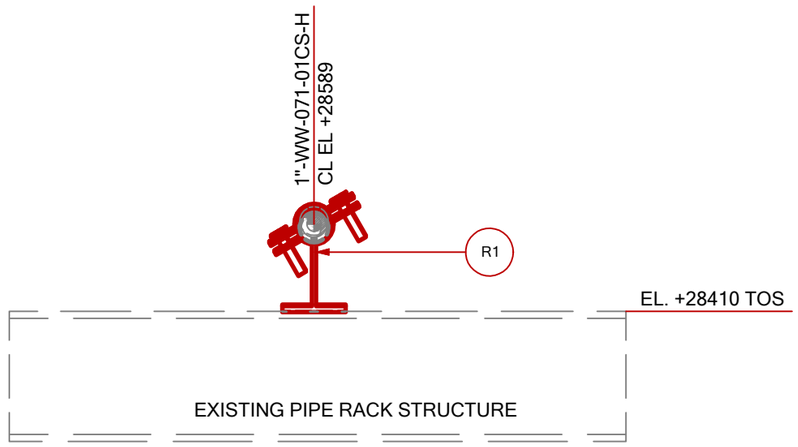
ROSETTI MARINO

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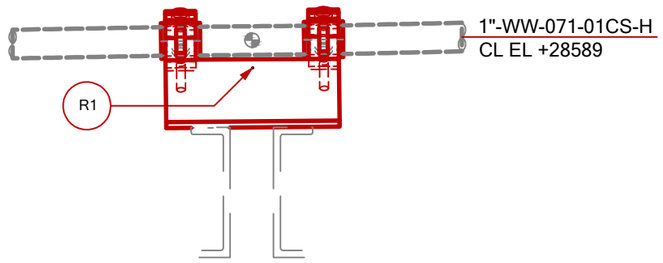
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01042

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

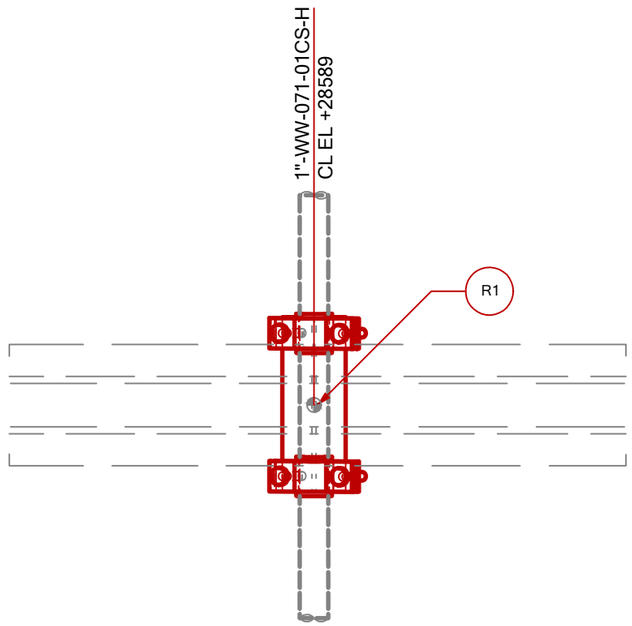
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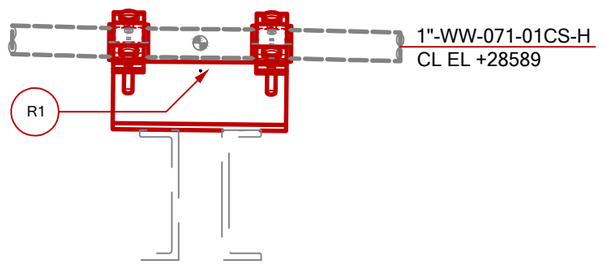
VIEW LOOKING NORTH



VIEW LOOKING WEST



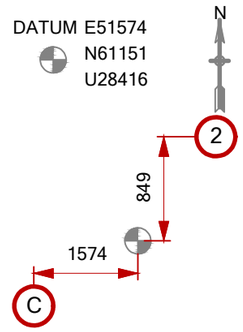
PLAN VIEW

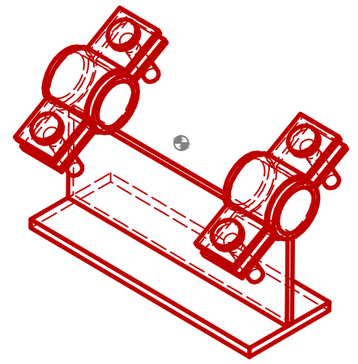


VIEW LOOKING EAST

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"-78-72-200	-	-	1	-	4.49	0.034
						TOTAL	4.5	0.03





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

CROSSWIND

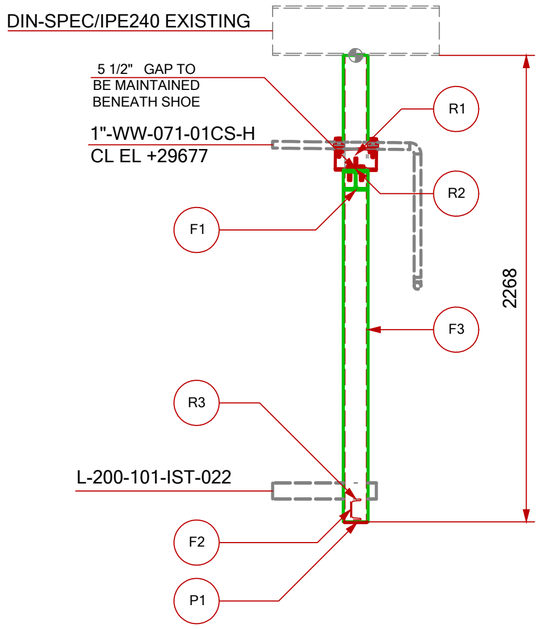
ROSETTI MARINO

TITLE :

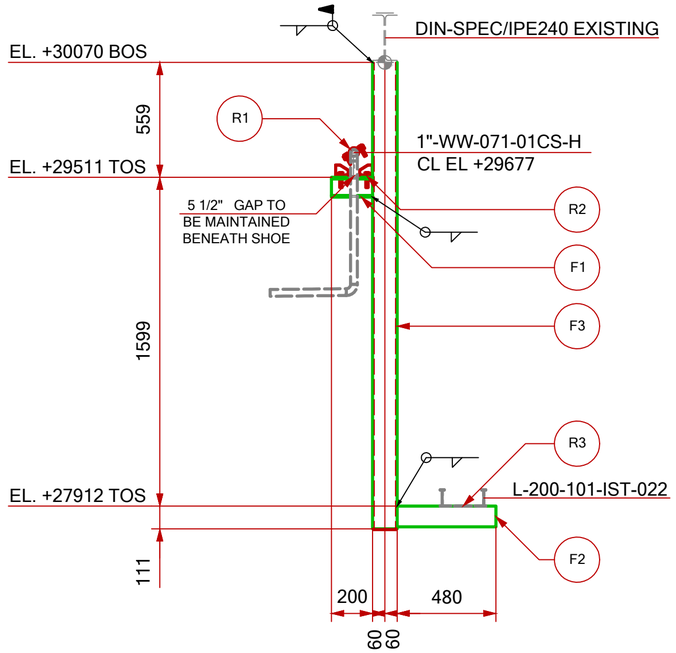
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01043

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

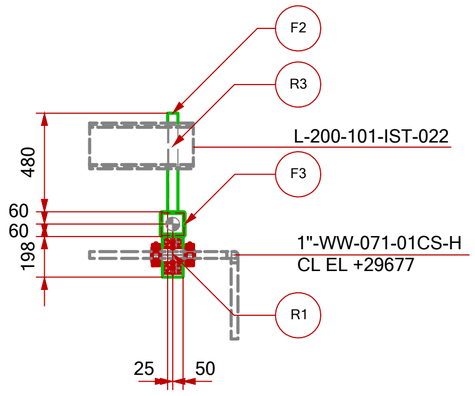
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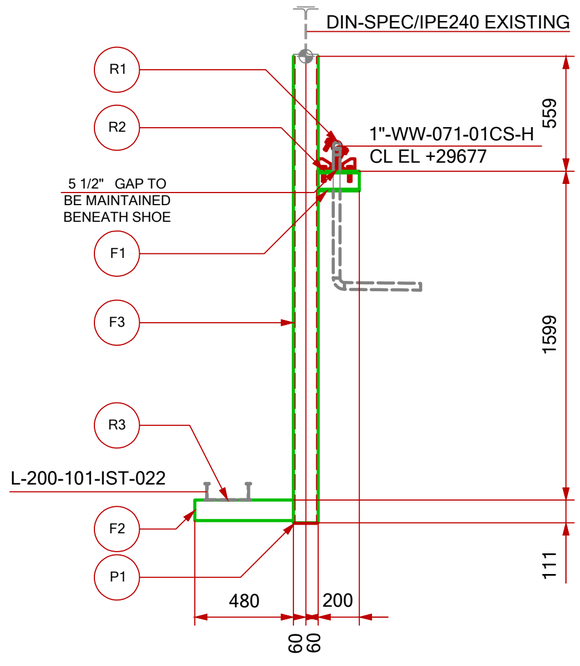
VIEW LOOKING NORTH



VIEW LOOKING WEST



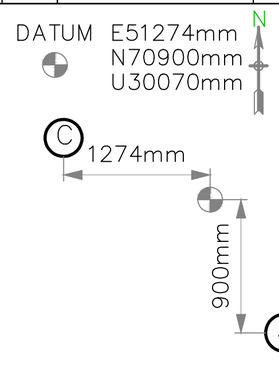
PLAN VIEW

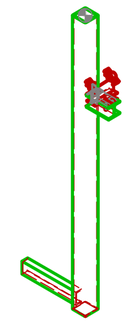


VIEW LOOKING EAST

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"-98-102-200	-	-	1	-	4.67	0.034
R2	STD	C-33-2-A-2	-	-	1	-	4.30	0.044
R3	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	HEA100	Carbon Steel	200	1	16.76	3.35	0.116
F2	BEAM	UPN100	Carbon Steel	480	1	10.57	5.07	0.181
F3	BEAM	RHS120x120x8	Carbon Steel	2268	1	27.79	63.03	1.991
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	80.9	2.38





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

CROSSWIND

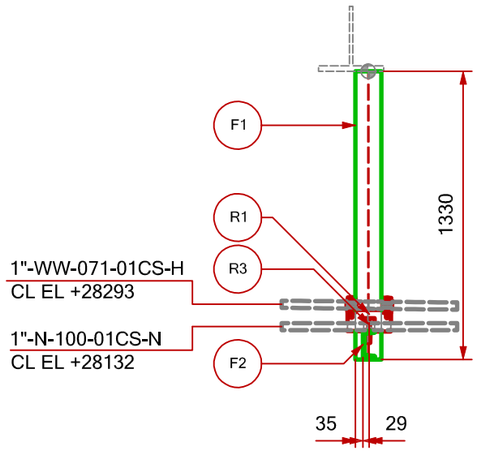
ROSETTI MARINO

TITLE :

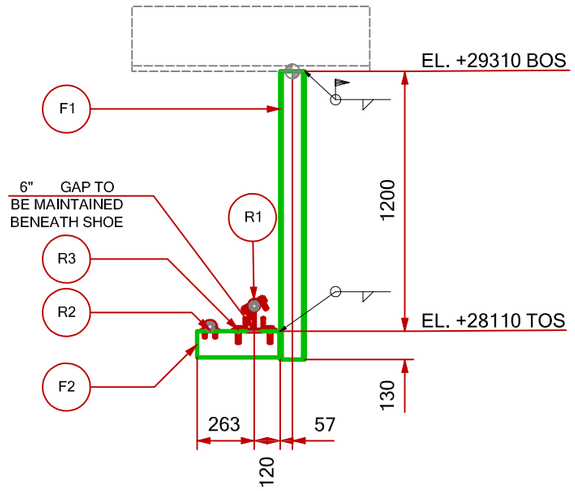
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02086

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-OD-72000	SHEET 1 of 1	REV. 00

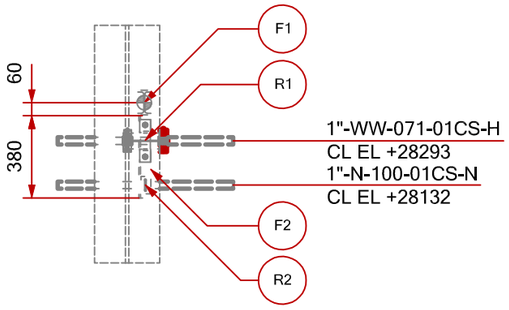
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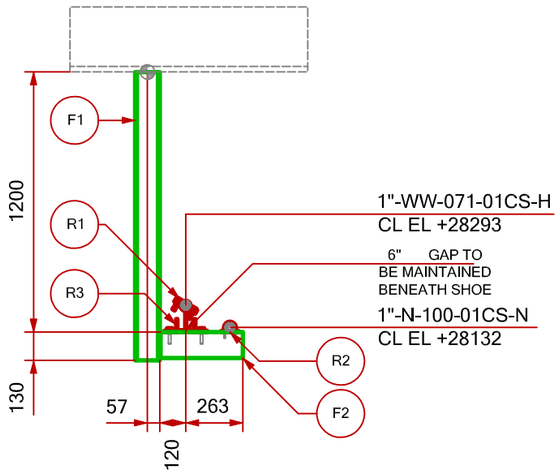
VIEW LOOKING NORTH



VIEW LOOKING WEST



PLAN VIEW

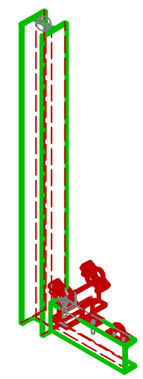


VIEW LOOKING EAST

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	S-211-1"	-	-	1	-	0.29	-
R3	STD	C-34-1-I-2	-	-	1	-	2.04	0.023
F1	BEAM	HEA120	Carbon Steel	1330	1	19.98	26.57	0.905
F2	BEAM	UPN120	Carbon Steel	383	1	13.35	5.07	0.166
						TOTAL	38.6	1.13





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

CROSSWIND

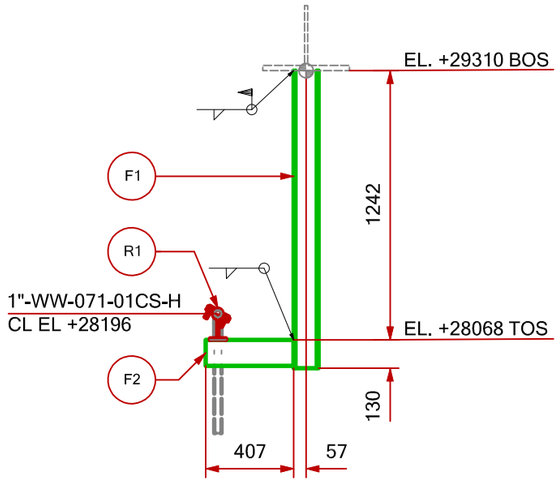
ROSETTI MARINO

TITLE :

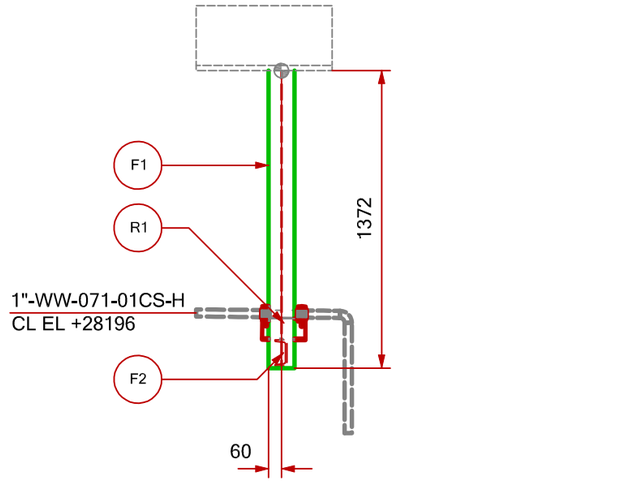
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02095

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

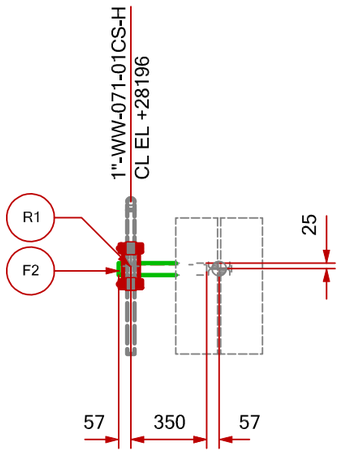
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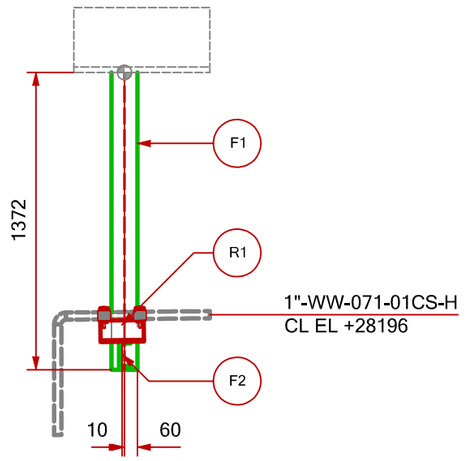
VIEW LOOKING NORTH



VIEW LOOKING WEST



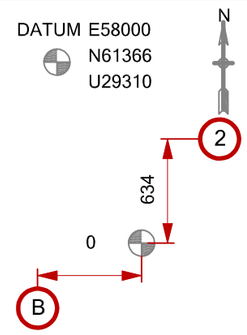
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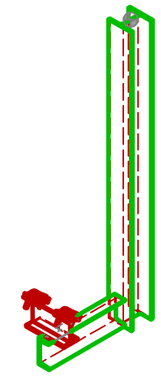


VIEW LOOKING EAST

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-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	1372	1	19.98	27.41	0.934
F2	BEAM	UPN120	Carbon Steel	407	1	13.35	5.39	0.176
						TOTAL	37.4	1.14





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

CROSSWIND

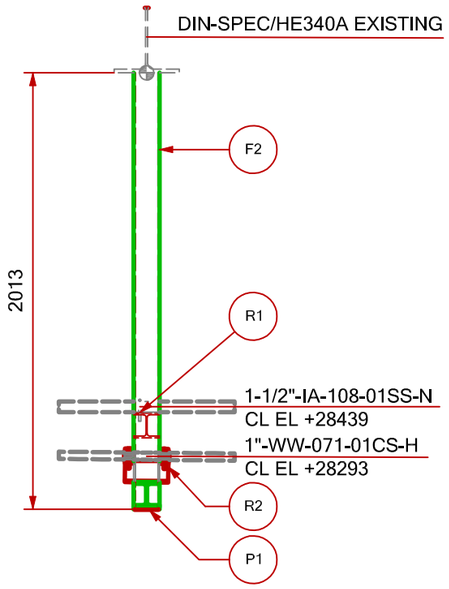
ROSETTI MARINO

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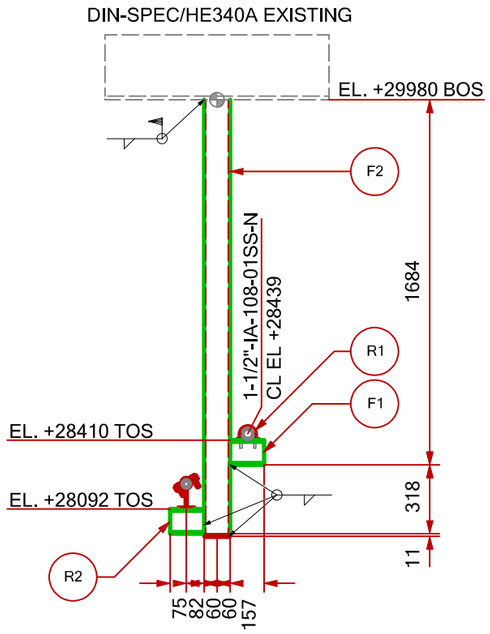
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02096

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

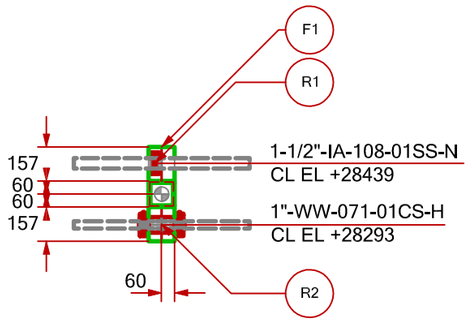
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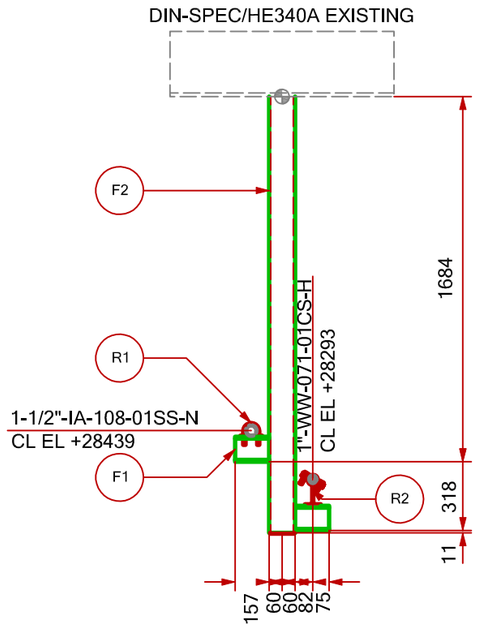
VIEW LOOKING NORTH



VIEW LOOKING WEST



PLAN VIEW

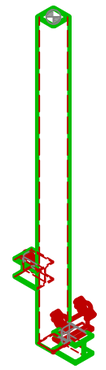


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-75-1"-98-92-200	-	-	1	-	4.64	0.034
F1	BEAM	HEA120	Carbon Steel	157	2	19,98	6.28	0.222
F2	BEAM	RHS120x120x8	Carbon Steel	2013	1	27.79	55.94	1.768
P1	PLATE	3	Carbon Steel	110x110	1	-	0.28	0.012
						TOTAL	67.6	2.04





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-02127

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

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

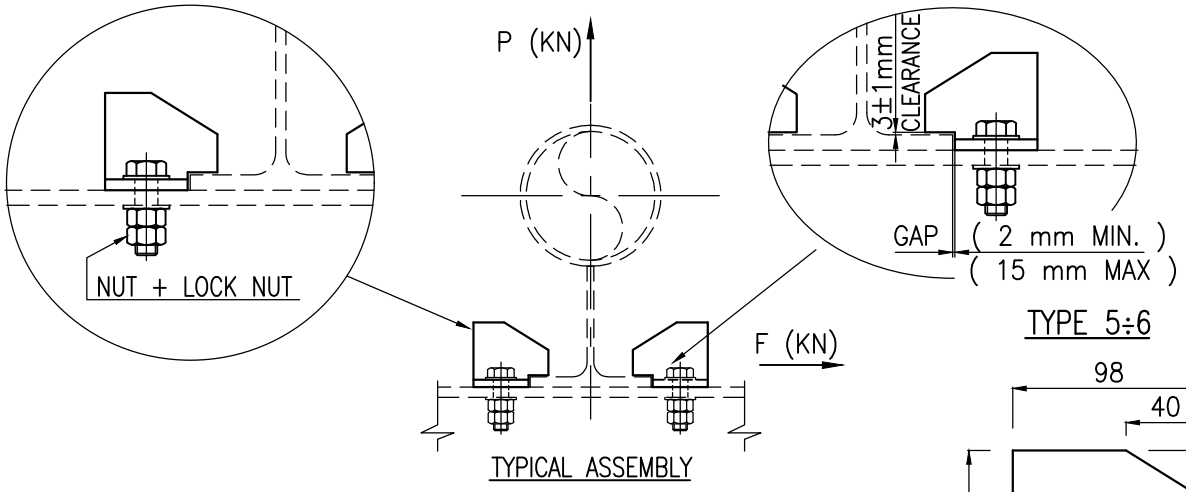
Document Number: STD–PP–DD–0001

Revision: 0

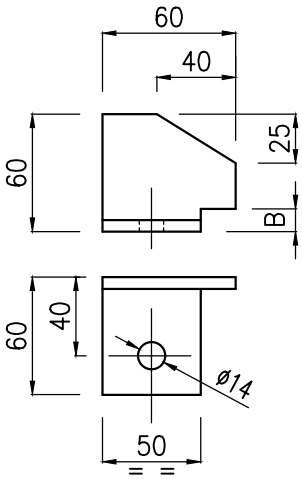
Date: –

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

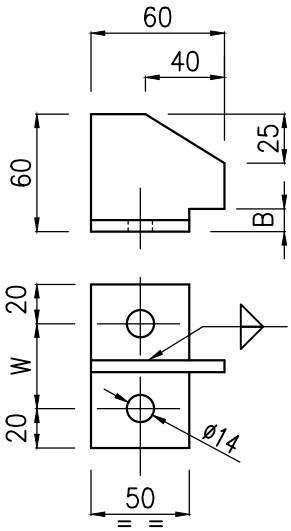
C–33



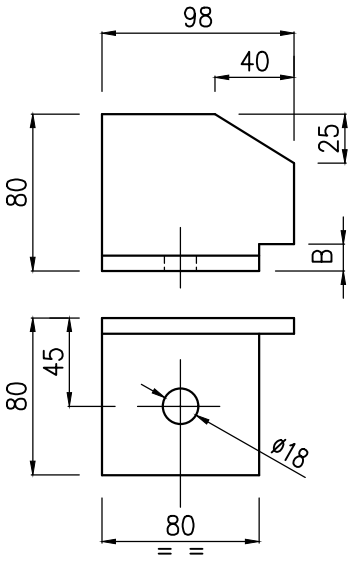
TYPE 1 (NOTE 4)



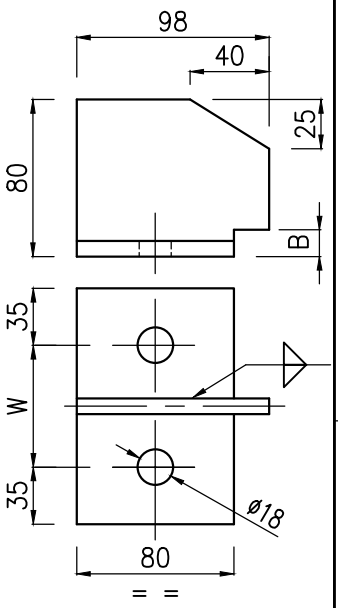
TYPE 2



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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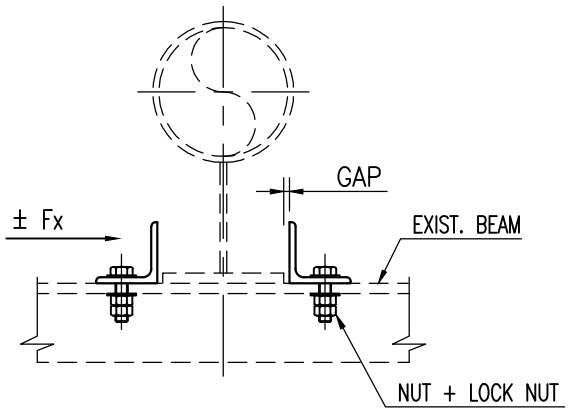
STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001
Revision: 0
Date: –

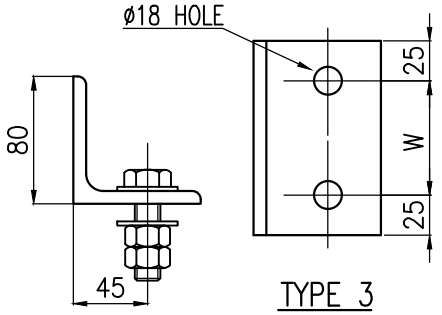
GUIDA BULLONATA
BOLTED GUIDE

C–34

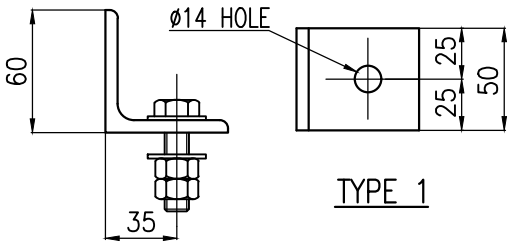
Example of designation : STD – TYPE – SIZE – GAP
(C–34 – 5 – M – 2)



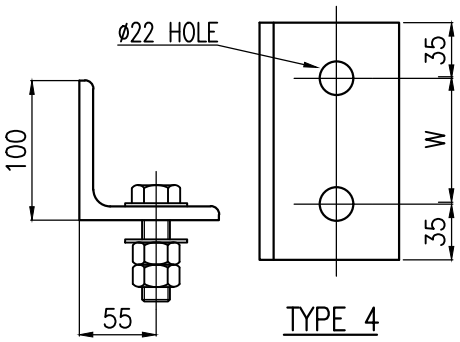
TYPICAL ASSEMBLY



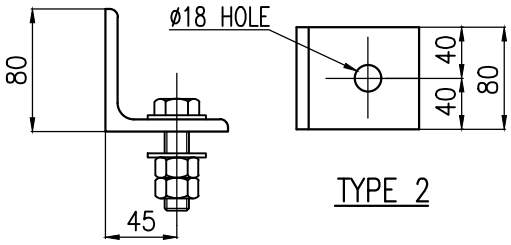
TYPE 3



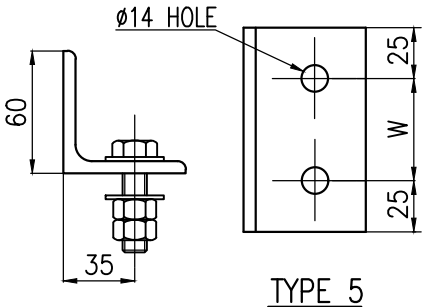
TYPE 1



TYPE 4



TYPE 2



TYPE 5

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

SIZE	EXIST. BEAM	W mm
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

TYPE	PROFILE	BOLTING (DIN933)	MAXIMUM LOAD Fx (KN)	WEIGHT (BOLTS INCL.)
1	L60x60x6	M12x60	10	0.8
2	L80x80x8	M16x70	18	2.0
3	L80x80x8	M16x70	36	.....
4	L100x100x10	M20x75	56	.....
5	L60x60x6	M12x60	20	.....

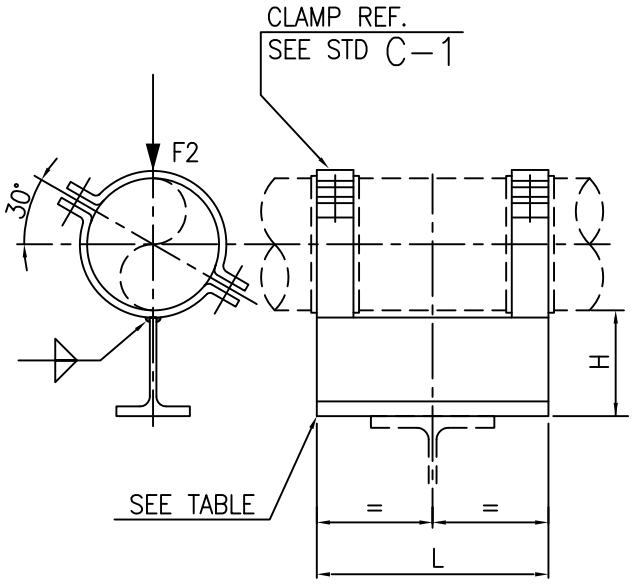
NOTES:
1– PROFILE MATERIAL : CARBON STEEL
2– BOLTS (UNI 5739 CI 8.8), NUTS (UNI 5588 CI 8.8), LOCK NUT (UNI 7474 CI.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– SAFE LOADS ARE BASED ON BOLT SHEAR LOADS ONLY.
4– GUIDES ARE TO BE SITE LOCATED AND DRILLED UNLESS OTHERWISE ON.
5– VARIABLE WEIGHT ADDICTED TO THE "TYPE" SELECTED AND THE "W" DIMENSION INDICATED.

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

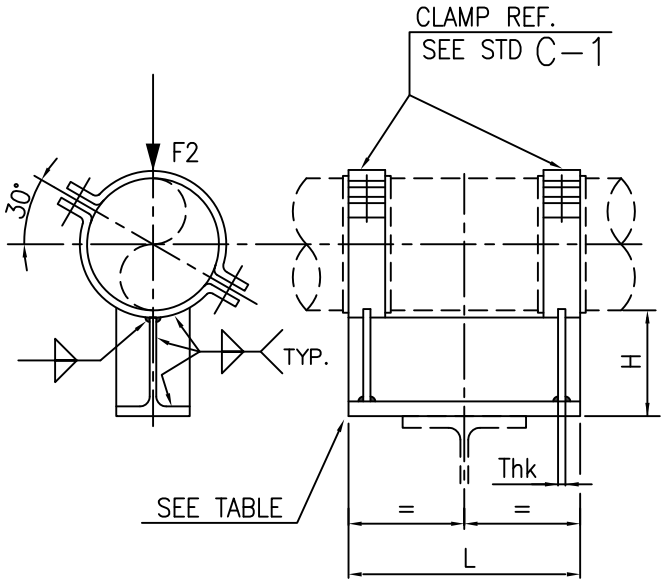
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI C.S.–S.S. E ALLOY CLAMPED SHOE FOR C.S. – S.S. AND ALLOY PIPES		S–64

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:

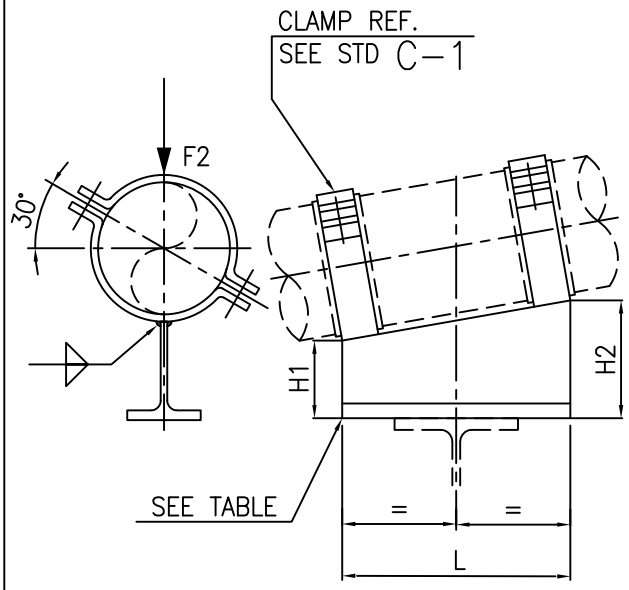
1– MATERIAL TO BE CARBON STEEL
2– ALL FILLET WELDING MUST HAVE THE EQUAL TO 0.8 OF THE MINIMUM THICKNESS TO BE WELDED EXCEPT WHERE OTHERWISE INDICATED.
3– VARIABLE WEIGHT ADDICTED TO THE "PIPE ND" SELECTED AND THE "L", "H" DIMENSIONS INDICATED.

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

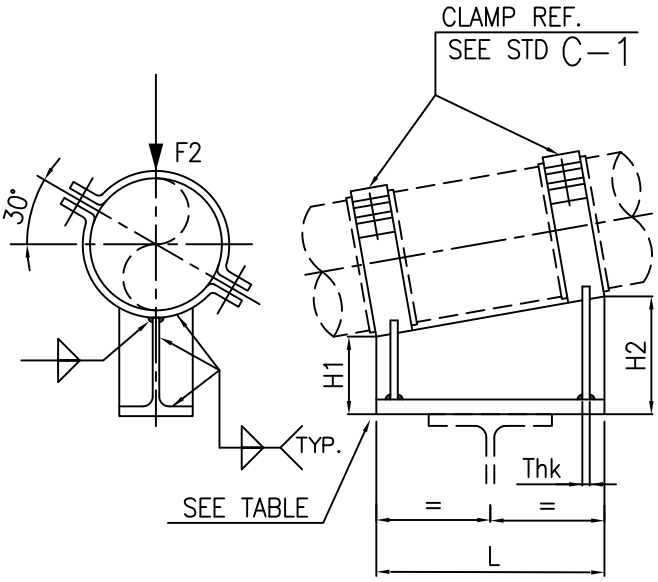
Documento di proprietà aziendale.La Società tutelerà i propri diritti a termine di legge.This document is Company property. The Company lawfulliy reserves all rights.

	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI 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**	30	**To**	30
Sheet		**From**	1	**To**	2
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 Cons	Accept. Date	Spool
1/30/1/_		**00**	**23-09-2024**	**13**	**AZ53**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**A**
01CS	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								
2/30/1/_		**00**	**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**	**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								
3/30/1/_		**00**	**31-10-2024**	**17**	**AX416**			**PIPE**		**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								
4/30/1/_		**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**	**B**
	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								
5/30/1/_		**00**	**23-09-2024**	**13**	**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	RGARDINIT	100 %	OK			Acceptable				24-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000087		4	Acceptable				26-09-2024				
6/30/1/_		**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**	**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								
7/30/1/_		**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**	**B**
	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								
8/30/1/_		**00**	**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**	**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								
9/30/1/_		**00**	**31-10-2024**	**20**	**AX416**			**PIPE**		**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								

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.	Type Conn / NOTE	Accept. Date	Spool
9/30/1/_		**00**	**31-10-2024**	**20**	**AX416**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**01-11-2024**	
10/30/2/_		**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**	**C**
	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								
11/30/2/_		**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**	**C**
	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								
12/30/2/_		**00**	**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**	**C**
	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								
13/30/2/_		**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**	**C**
	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								
14/30/2/_		**00**	**31-10-2024**	**21**	**AX416**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable							04-11-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
15/30/2/_		**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**	**D**
	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								
16/30/2/_		**00**	**26-09-2024**	**17**	**AZ52**			**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 %	000103	4	Acceptable							03-10-2024	
17/30/2/_		**00**	**26-09-2024**	**17**	**AZ52**			**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								
18/30/2/_		**00**	**24-09-2024**	**14**	**AZ53**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-10-2024**	**D**

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 Cons.	Accept. Date	Spool
18/30/2/_		**00**	**24-09-2024**	**14**	**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					26-09-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000104	4	Acceptable					03-10-2024			
19/30/2/_		**00**	**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**	**D**
	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								
20/30/2/_		**00**	**03-12-2024**	**63**	**AX416**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					03-12-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
21/30/2/_		**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**	**E**
	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	**30**	**Prefabrication**	**1,70 m**	**17 Nr. Welds**	**17,00 inch**
		Erection	**0,40 m**	**4 Nr. Welds**	**4,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,10 m**	**21 Nr. Welds**	**21,00 inch**
		Accepted	**2,10 m**	**21 Nr. Welds**	**21,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**1,70 m**	**17 Nr. Welds**	**17,00 inch**
		Erection	**0,40 m**	**4 Nr. Welds**	**4,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,10 m**	**21 Nr. Welds**	**21,00 inch**
		Accepted	**2,10 m**	**21 Nr. Welds**	**21,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**1,70 m**	**17 Nr. Welds**	**17,00 inch**
		Erection	**0,40 m**	**4 Nr. Welds**	**4,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,10 m**	**21 Nr. Welds**	**21,00 inch**
		Accepted	**2,10 m**	**21 Nr. Welds**	**21,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

CROSSWIND / ROSETTI MARINO	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: 06/12/2024
	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
30	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	W1-W2	
30	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	W1	
30	00	1	A	01CS	1A	0,921	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	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	W4	
30	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	W5-W6	
30	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	W7-W8	
30	00	1	B	01CS	1B	0,999	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	1	B	01CS	1C	0,6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	1	B	01CS	1D	5,426	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		

CROSSWIND / ROSETTI MARINO	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: 06/12/2024
	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
30	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W10	
30	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W11-W12	
30	00	2	C	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W13	
30	00	2	C	01CS	1E	0,272	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	2	C	01CS	1F	4,496	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W15-W16	
30	00	2	D	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	
30	00	2	D	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W19	
30	00	2	D	01CS	1G	0,175	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	2	D	01CS	1H	5,943	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	2	D	01CS	1I	0,921	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
30	00	2	E	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	W21	
30	00	2	E	01CS	1J	5,351	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	55-01-TP-021	: Test Pack 55-01-TP-021			Dwg	123A90-DDL-PR-PID-80025-29
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003396		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 :	Dry the system using a flow of dry air, ensuring all drains are open to facilitate the removal of moisture. The drying process shall be monitored closely to ensure complete moisture removal. After drying, isolate and close the inlet and outlet points.
3	Temporary means :	Blind 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):	N/A

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:	Delimit 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	2024-12-09	2024-12-11	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-09T05:17:34.707Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-11T15:07:44.828Z	

ITEM	Tag	55-01-TP-046	: Test Pack 55-01-TP-046		Dwg	123A90-DDL-PR-PID-80011-25	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10003581	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.	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: 4 and 5: the flanged joint is only for pressure test. Final joint will be performed during Flange management after test.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-01-24	2025-01-25	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-24T07:04:41.655Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-25T06:56:27.679Z	

ITEM	Tag	55-01-TP-046	: Test Pack 55-01-TP-046			Dwg	123A90-DDL-PR-PID-80011-25
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003582		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	2025-02-07	2025-02-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:17:45.727Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-15T15:08:45.873Z	

ITEM	Tag	55-01-TP-046	: Test Pack 55-01-TP-046		Dwg	123A90-DDL-PR-PID-80011-25	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10003583	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.	PL
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	PL
8	Check the overlap of the metal cladding.	PL
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 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	2025-03-28	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:21:26.538Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-03-28T15:16:18.068Z	

ITEM	Tag	55-01-TP-046	: Test Pack 55-01-TP-046			Dwg	123A90-DDL-PR-PID-80011-25
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003584		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	2025-02-19	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T15:54:57.450Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-19T08:58:31.824Z	

ITEM	Tag	55-01-TP-046	: Test Pack 55-01-TP-046		Dwg	123A90-DDL-PR-PID-80011-25	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10003585	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	24/01/2025	Start time	10:10	End time	10:20
Flow rate	NA	Duration	10 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	2025-01-24	2025-01-25	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-24T07:04:57.455Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-25T06:57:36.112Z	

ITEM	Tag	55-01-TP-046	: Test Pack 55-01-TP-046		Dwg	123A90-DDL-PR-PID-80011-25	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD	
TASK	code	C10003586	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: 9 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	2025-01-24	2025-01-25	
Signature	Digitaly signed by Emanuele Delfino 2025-01-24T07:05:12.413Z	Digitaly signed by Massimo Bruschi 2025-01-25T06:58:10.080Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	123A90-55-01-TP046

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)*	00:47:31
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	10:25:04 am

Logger protocol

Protocollo di acquisizione elenco dati

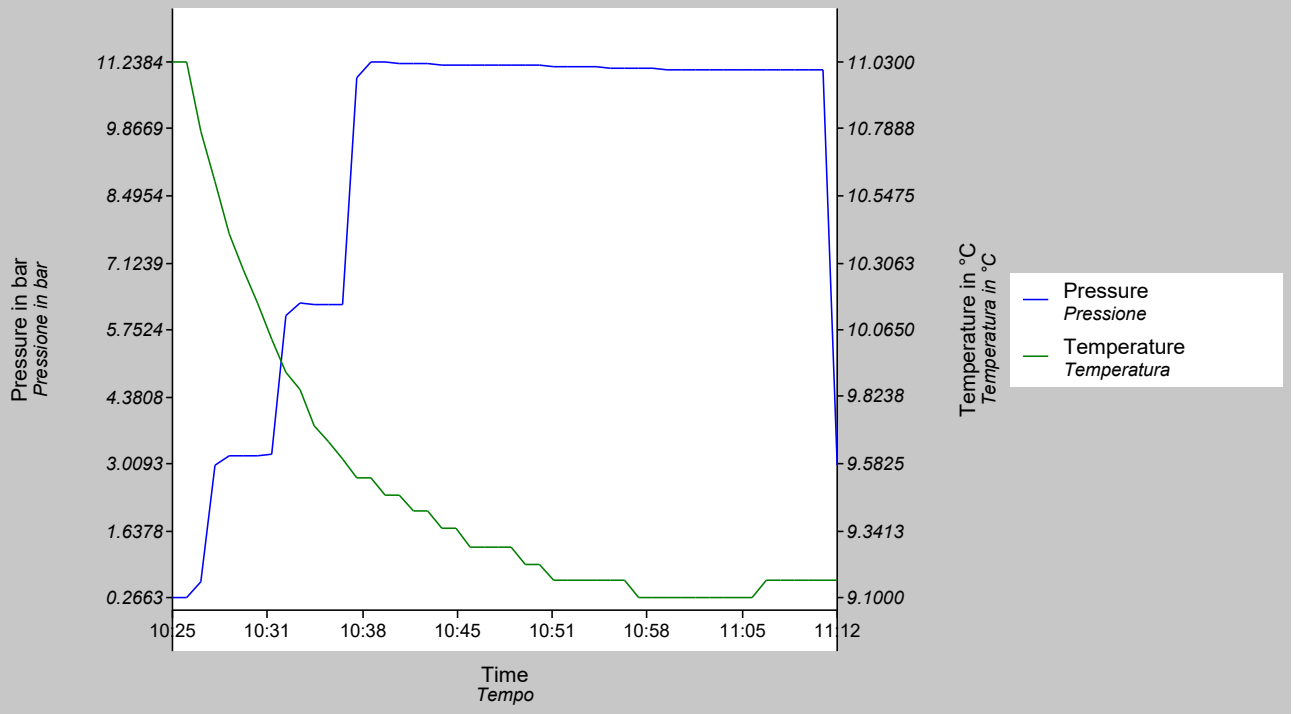
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP046

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
01/24/2025 10:25:04.000	0.2663	11.0300
01/24/2025 10:26:04.000	0.2796	11.0300
01/24/2025 10:27:04.000	0.5917	10.7800
01/24/2025 10:28:04.000	2.9677	10.6000
01/24/2025 10:29:04.000	3.1696	10.4100
01/24/2025 10:30:04.000	3.1716	10.2800
01/24/2025 10:31:04.000	3.1706	10.1600
01/24/2025 10:32:04.000	3.1919	10.0300
01/24/2025 10:33:04.000	6.0408	9.9100
01/24/2025 10:34:04.000	6.2875	9.8500
01/24/2025 10:35:04.000	6.2817	9.7200
01/24/2025 10:36:04.000	6.2790	9.6600
01/24/2025 10:37:04.000	6.2799	9.6000
01/24/2025 10:38:04.000	10.9083	9.5300
01/24/2025 10:39:04.000	11.2384	9.5300
01/24/2025 10:40:04.000	11.2302	9.4700
01/24/2025 10:41:04.000	11.2157	9.4700

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-55-01-TP046

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/24/2025 10:42:04.000	11.2035	9.4100
01/24/2025 10:43:04.000	11.1956	9.4100
01/24/2025 10:44:04.000	11.1888	9.3500
01/24/2025 10:45:04.000	11.1817	9.3500
01/24/2025 10:46:04.000	11.1810	9.2800
01/24/2025 10:47:04.000	11.1723	9.2800
01/24/2025 10:48:04.000	11.1684	9.2800
01/24/2025 10:49:04.000	11.1673	9.2800
01/24/2025 10:50:04.000	11.1606	9.2200
01/24/2025 10:51:04.000	11.1600	9.2200
01/24/2025 10:52:04.000	11.1531	9.1600
01/24/2025 10:53:04.000	11.1525	9.1600
01/24/2025 10:54:04.000	11.1517	9.1600
01/24/2025 10:55:04.000	11.1382	9.1600
01/24/2025 10:56:04.000	11.1225	9.1600
01/24/2025 10:57:04.000	11.1175	9.1600
01/24/2025 10:58:04.000	11.0981	9.1000
01/24/2025 10:59:04.000	11.0963	9.1000
01/24/2025 11:00:04.000	11.0890	9.1000
01/24/2025 11:01:04.000	11.0891	9.1000
01/24/2025 11:02:04.000	11.0857	9.1000
01/24/2025 11:03:04.000	11.0822	9.1000
01/24/2025 11:04:04.000	11.0820	9.1000
01/24/2025 11:05:04.000	11.0847	9.1000
01/24/2025 11:06:04.000	11.0834	9.1000
01/24/2025 11:07:04.000	11.0793	9.1600
01/24/2025 11:08:04.000	11.0715	9.1600
01/24/2025 11:09:04.000	11.0719	9.1600
01/24/2025 11:10:04.000	11.0743	9.1600
01/24/2025 11:11:04.000	11.0717	9.1600
01/24/2025 11:12:04.000	2.9731	9.1600

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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

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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

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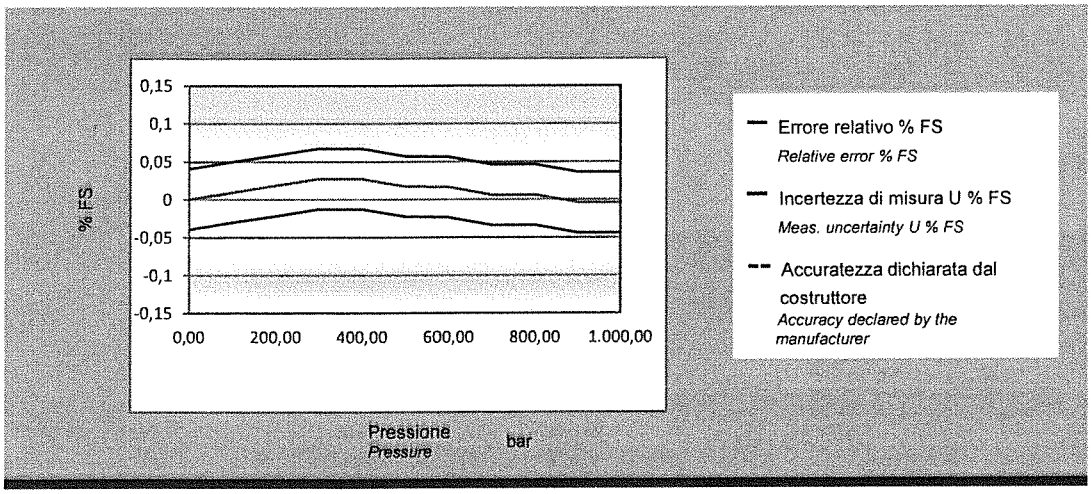
LAT N° 114

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°55-01-TP-046
SUB-SYSTEM N° 55-01

System	55
Sub-System	55-01
Test Pressure	9 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:
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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

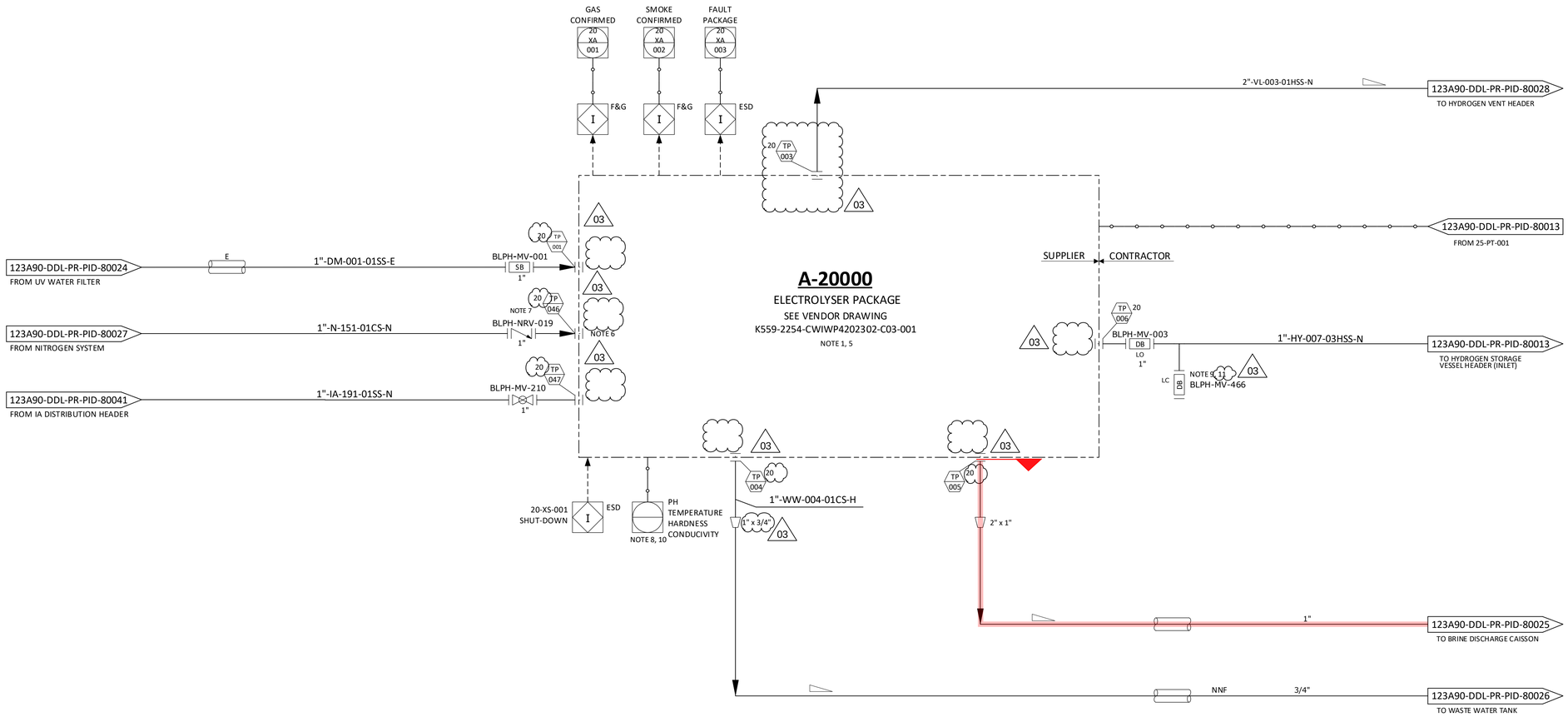
DRAWING NO. DRAWING_NO.

REV. REV

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. 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

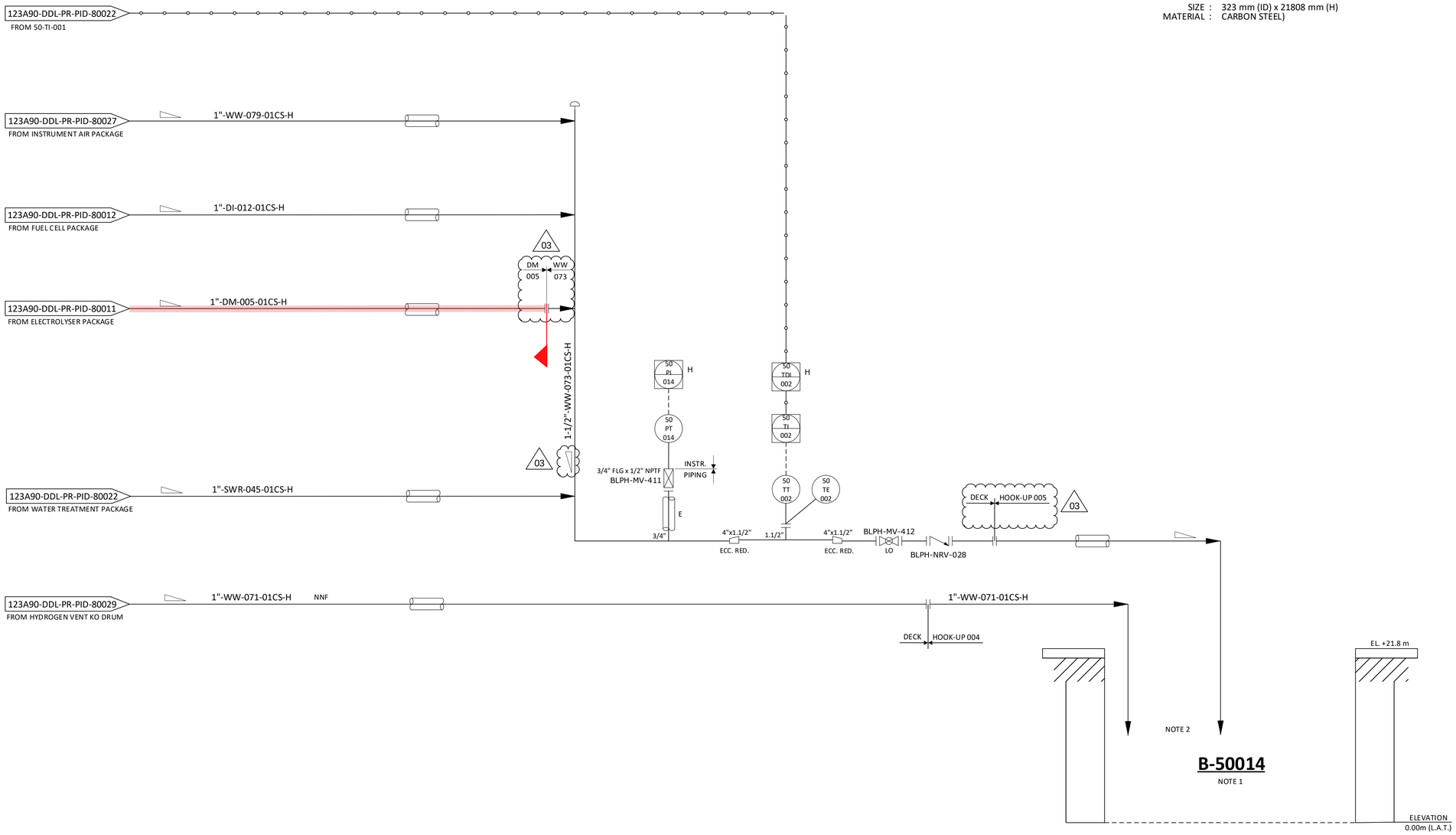
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE

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

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV



55-01-TP-046
9.00 barg

NOTES

1. CAISSON IS OPEN TOPPED.
2. ALL LINES TO TERMINATE APPROXIMATLEY 21000 mm ABOVE SEAWATER LEVEL (LAT). 03

HOLDS

1. 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

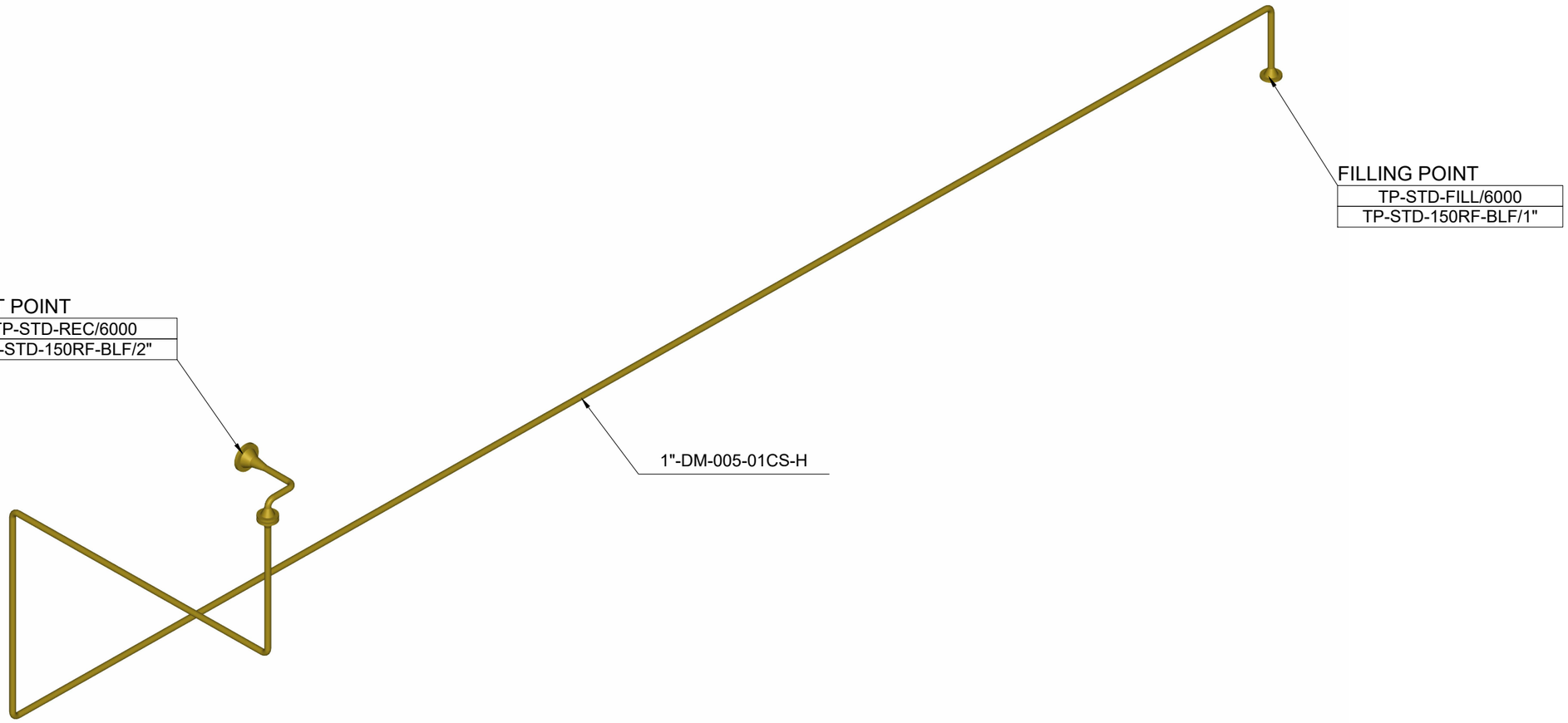
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
WATER DISPOSAL SHEET 1

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-80025	SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



55-01-TP-046

9 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
55-01-TP-046

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

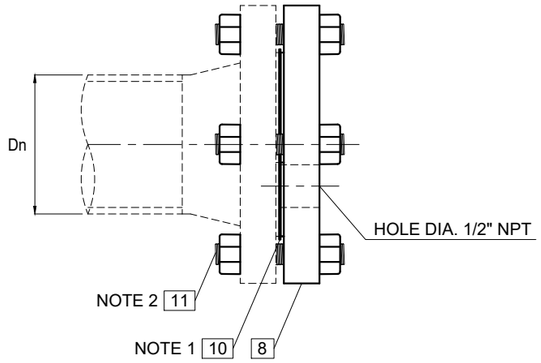
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-046	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-046	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-046	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-046	TP-STD-150RF-BLF/2"	FLBHCS0007020H	Flange Blind c/w NPT Hole ø2"x1/2" 150LB RF ASTM/ASME A/SA105	1	1	1	
TP-046	TP-STD-150RF-BLF/2"	GSW0GK11130200	Gasket Spiral Wound Thk. 3.2 mm ø2" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-046	TP-STD-150RF-BLF/2"	SB20BO00680300	Stud Bolt + 2 Heavy Nuts 5/8" L=100MM 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

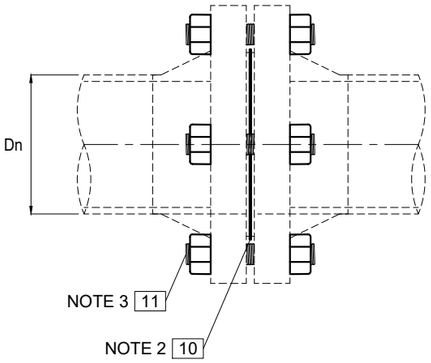
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

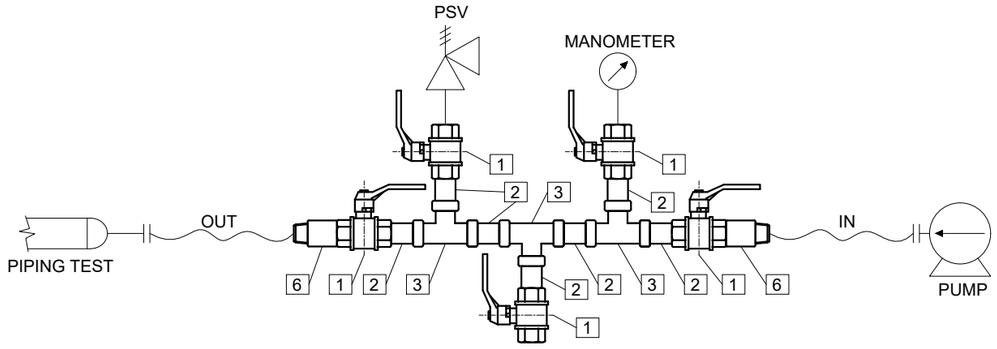
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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

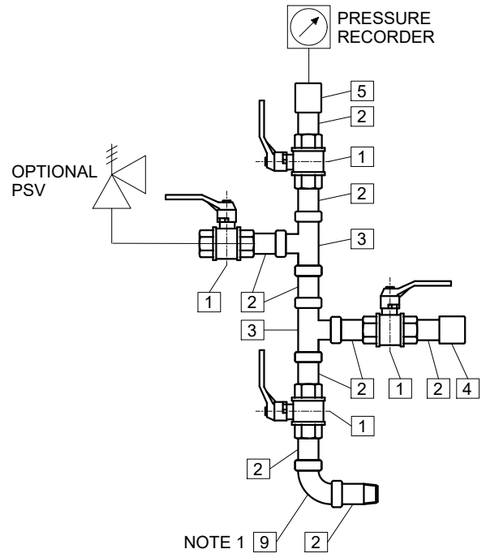
TP-STD-FILL

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
4	DM-005	005	1	01CS	H	4,55	80	N/A	1"-DM-005-01CS-H	123A90-DDL-PR-PID-80011	6,00	55	55-01	TP-046	Water	9.00	Demineralized 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**

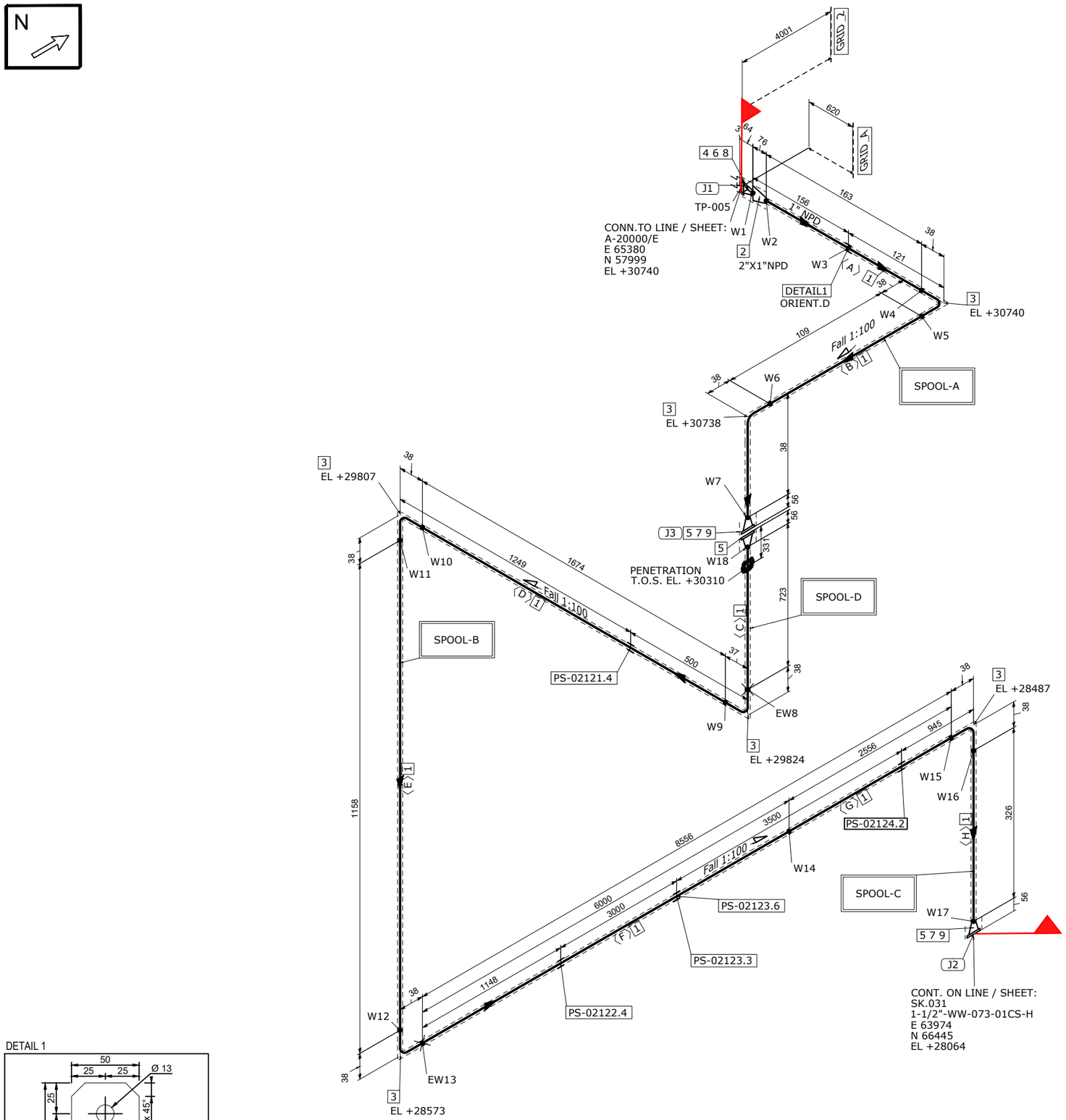
REV. **05**

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
6	123A90-FDL-PP-DI-00004-01	**004**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-DM-005-01CS-H	27/08/2024													**00**	**03**		**TP-046**



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	12.7M	41.2
2	2X1	REC0CS16210201	Reducer Concentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
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	2	FLW0CS02210200	Flange WN ASME B16.5 150LB RF 5,54 FRG ASTM/ASME A/SA350 Gr.LF2	1	2.7
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2	SPIKNN00560200	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	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
8	5/8	SB20BO00680300	100 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0
9	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]	49.7
ERECTION WEIGHT [kg]	2.2
OVERALL WEIGHT [kg]	51.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	2	BW
W2	1	BW
W3		FW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	163	BEVEL	BEVEL
B	1	109	BEVEL	BEVEL
C	1	723	BEVEL	BEVEL
D	1	1674	BEVEL	BEVEL
E	1	1159	BEVEL	BEVEL
F	1	6000	BEVEL	BEVEL
G	1	2556	BEVEL	BEVEL
H	1	326	BEVEL	BEVEL

SUPPORT LIST

PS-02121.4
PS-02122.4
PS-02123.6
PS-02123.3
PS-02124.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	7	5.9
B	4	9.7
C	4	30.4
D	1	3.7
MONT	2	2.2

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

CROSSWIND

ROSETTI MARINO

55-01-TP-046

MASTER

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-DM-005-01CS-H

SK.004

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-00004 | 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. 6 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A			TEST	PRESS. 9 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

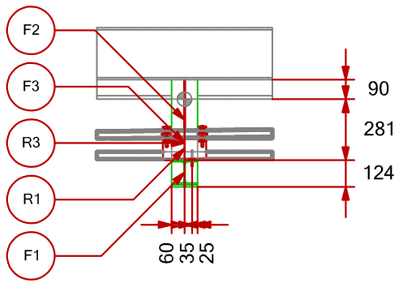
P&ID	123A90-DDL-PR-PID-80011
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

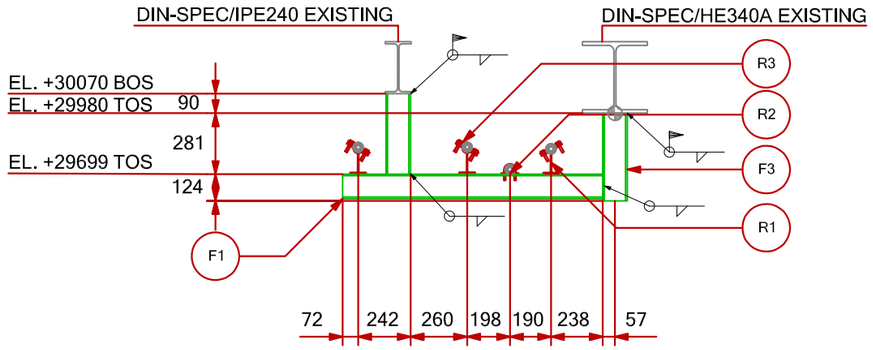
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

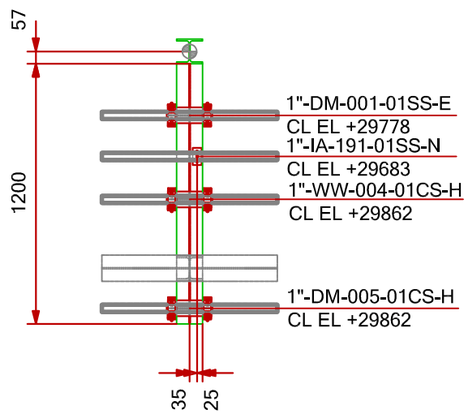
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-02121	B4	PIP	UPPER DECK		1"-DM-005-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-046
PS-02122	B4	PIP	UPPER DECK		1"-DM-005-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-046
PS-02123	B3	PIP	UPPER DECK		1"-DM-005-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-046
PS-02123	B6	PIP	UPPER DECK		1"-DM-005-01CS-H	C-33 - 2 - B - 2		1	4,362	0,048	00	19/08/2024	IFR		TP-046
PS-02124	B2	PIP	UPPER DECK		1"-DM-005-01CS-H	S-75 - 1" - 98 - 92 - 200		1	4,641	0,034	00	19/08/2024	IFR		TP-046



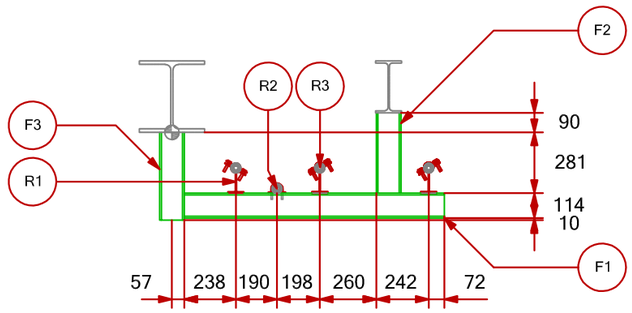
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VIEW LOOKING WEST



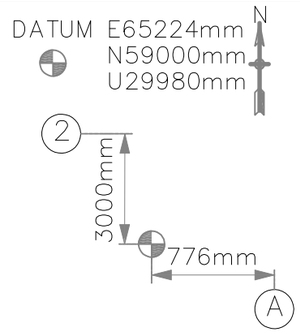
PLAN VIEW

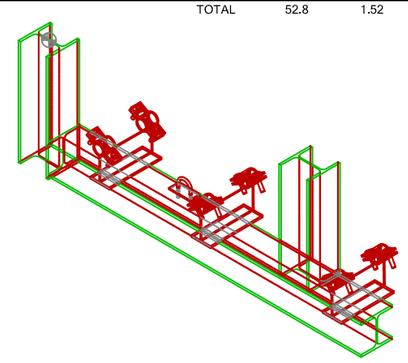


VIEW LOOKING EAST

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	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

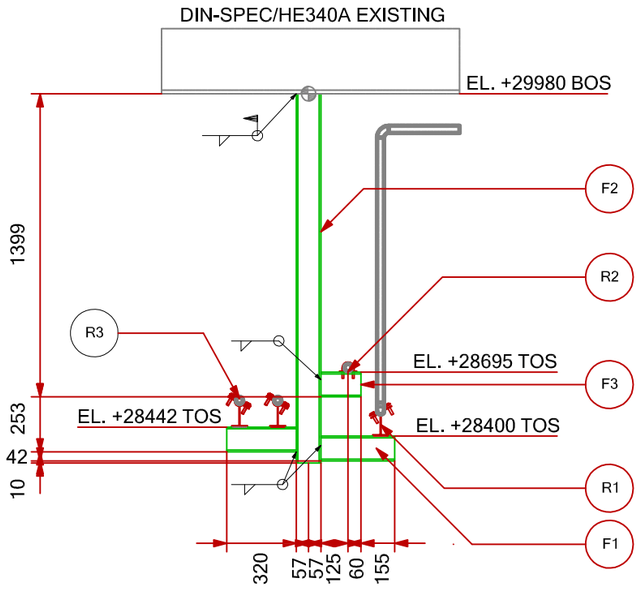
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

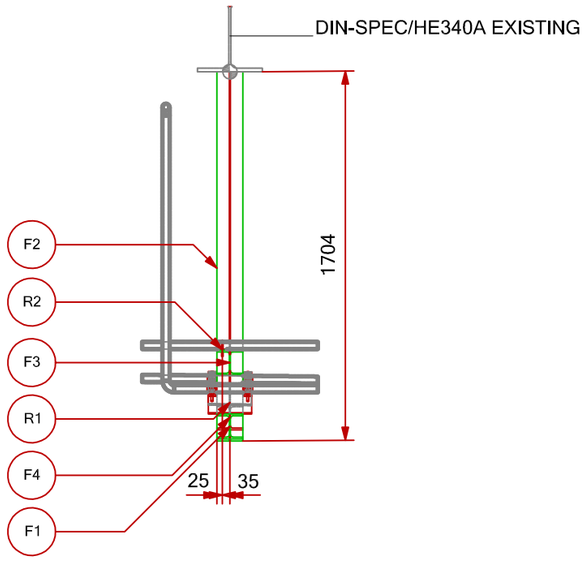
PS-02121

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

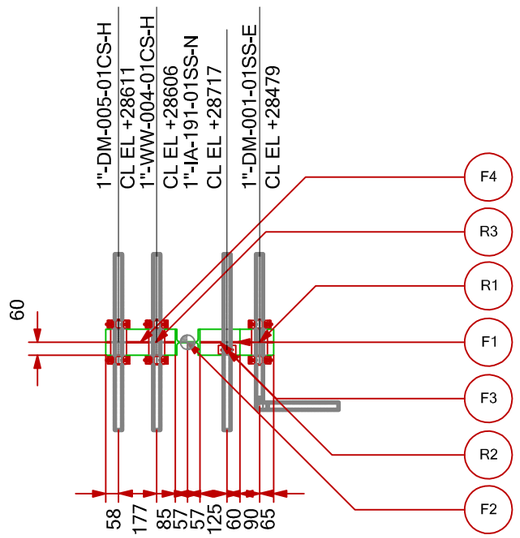
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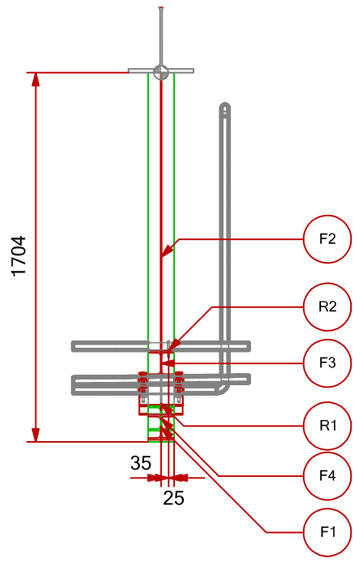
VIEW LOOKING NORTH



VIEW LOOKING WEST



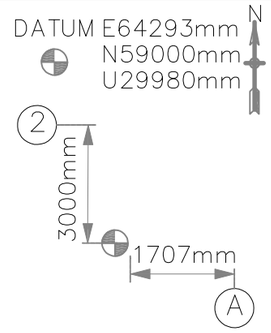
PLAN VIEW

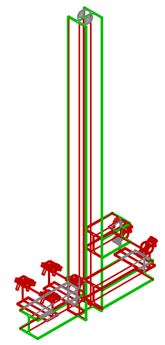


VIEW LOOKING EAST

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	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

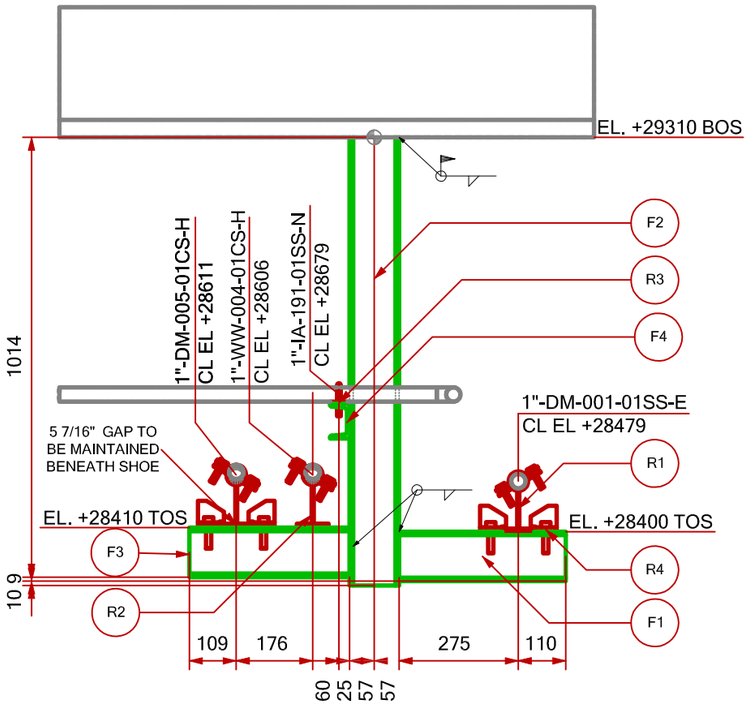
ROSETTI MARINO

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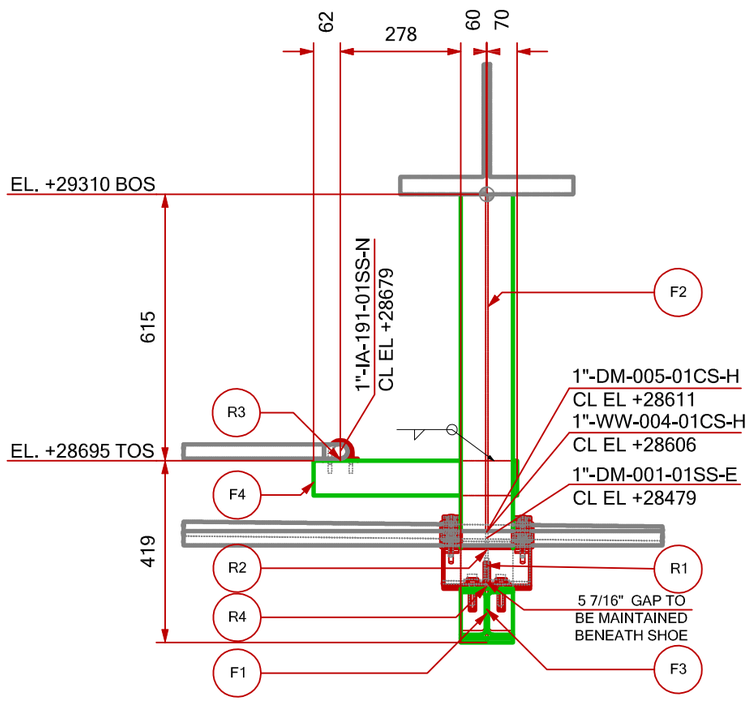
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02122

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

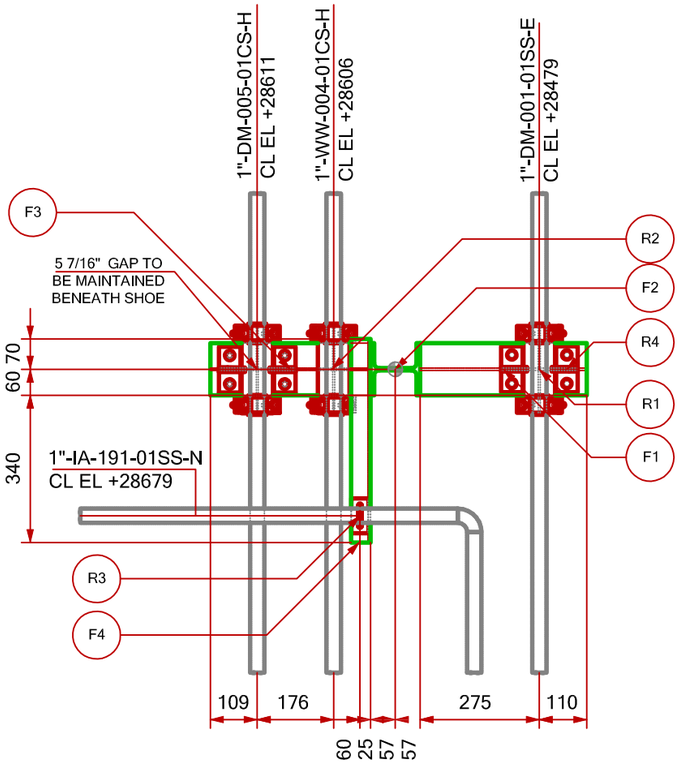
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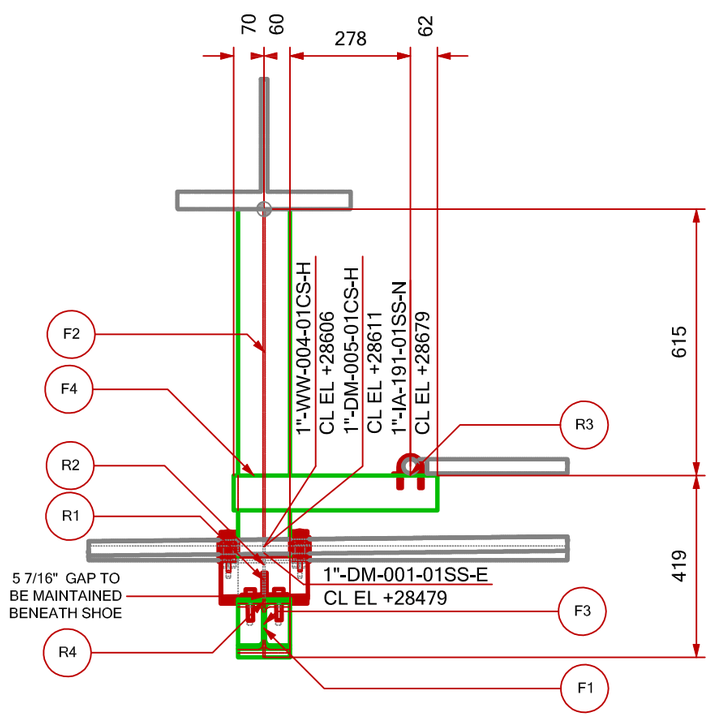
VIEW LOOKING NORTH



VIEW LOOKING WEST



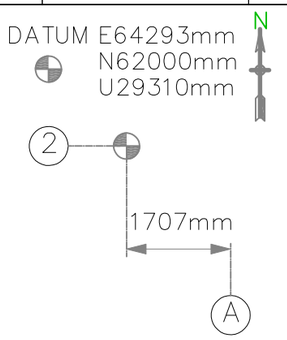
PLAN VIEW

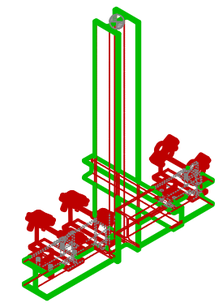


VIEW LOOKING EAST

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
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

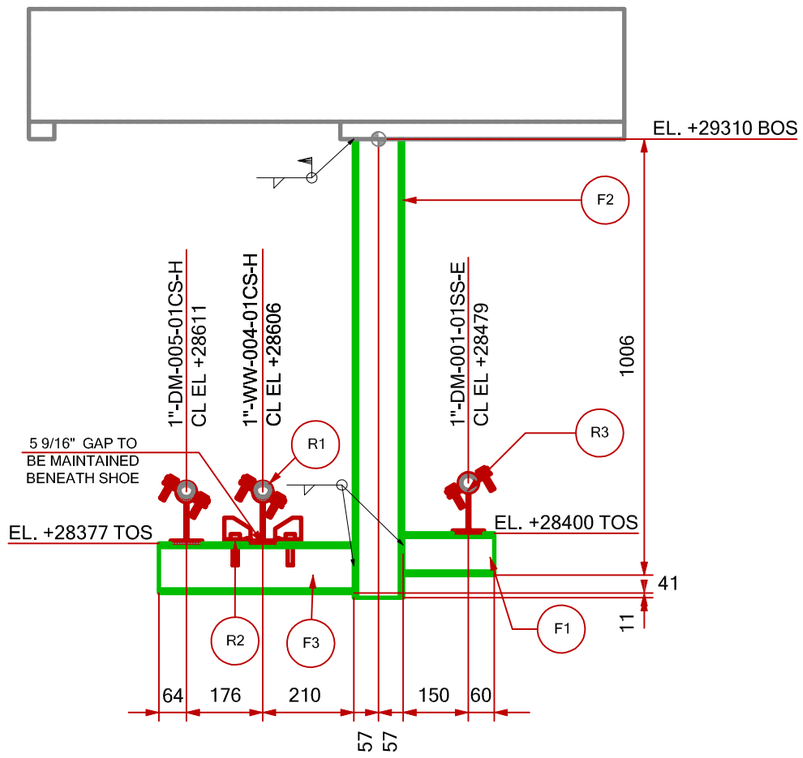
ROSETTI MARINO

TITLE :

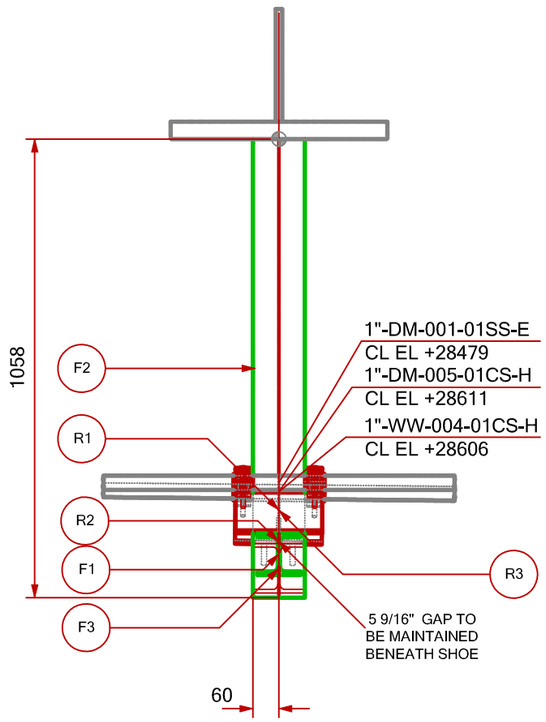
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02123

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

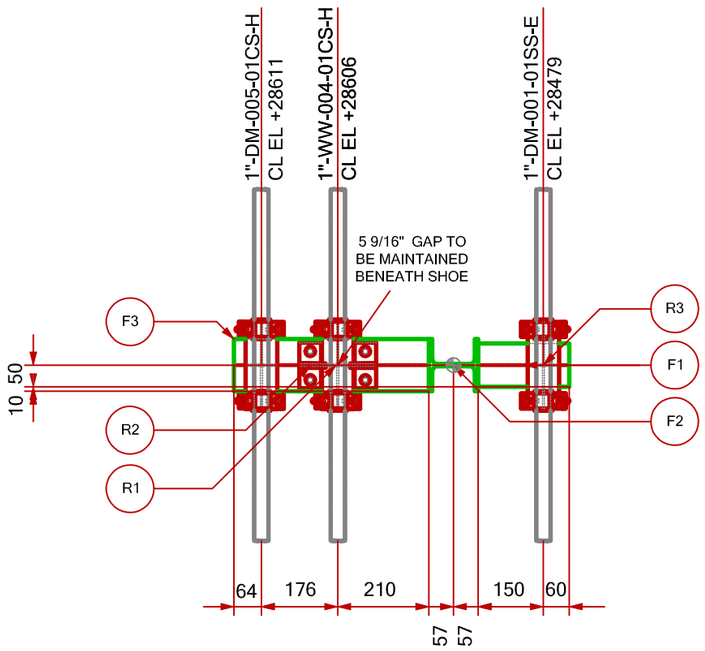
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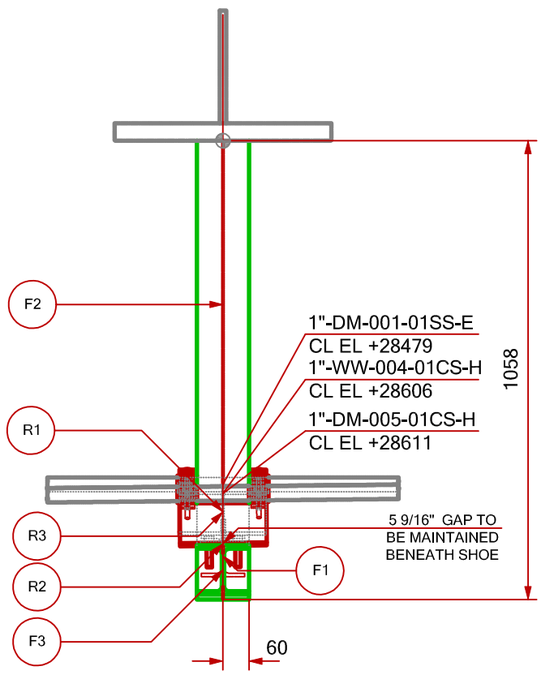
VIEW LOOKING NORTH



VIEW LOOKING WEST



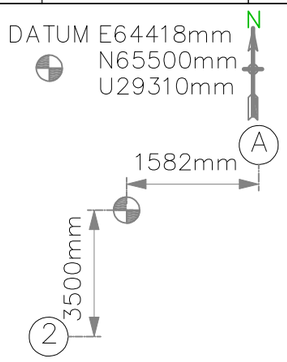
PLAN VIEW

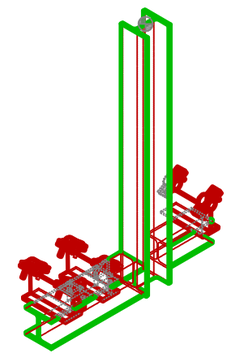


VIEW LOOKING EAST

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	-	-	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
00	19/08/24	MMA	SLO	DLO	ISSUE FOR REVIEW

CROSSWIND

ROSETTI MARINO

TITLE :

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

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

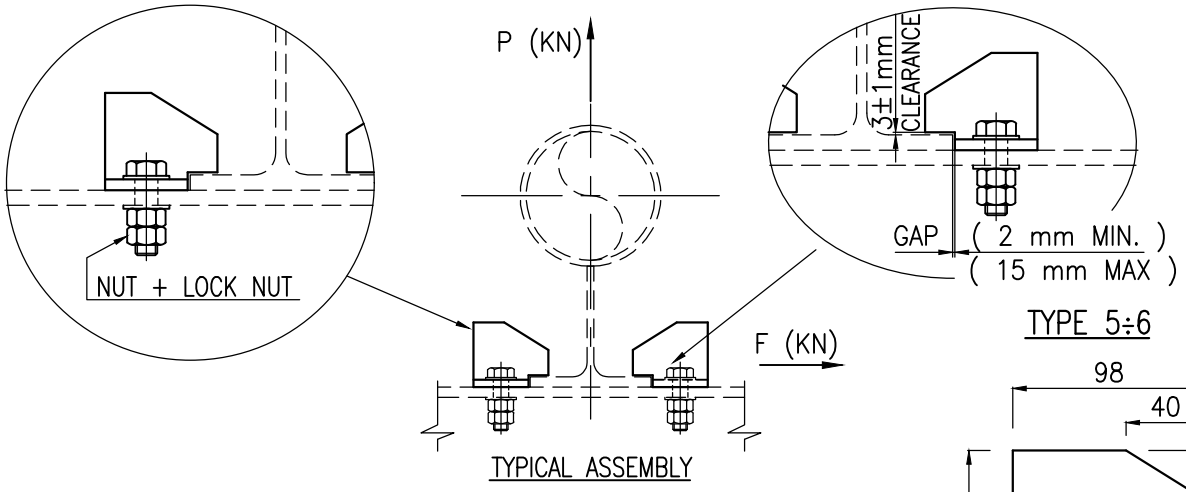
Document Number: STD–PP–DD–0001

Revision: 0

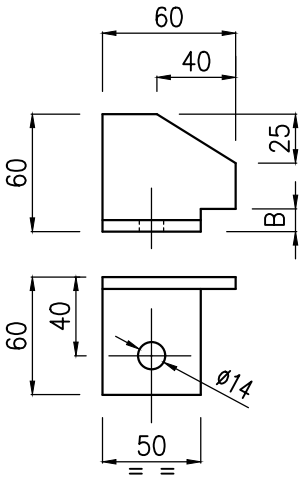
Date: –

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

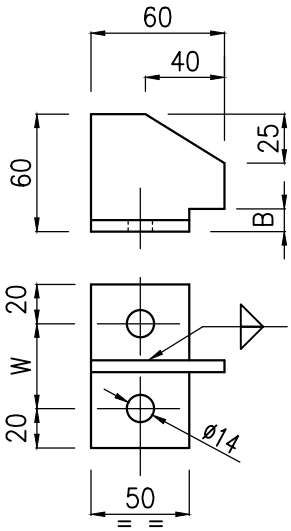
C–33



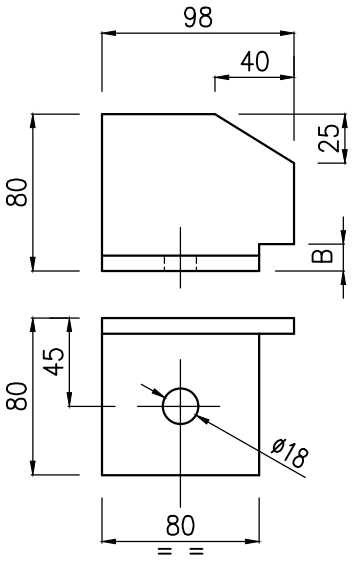
TYPE 1 (NOTE 4)



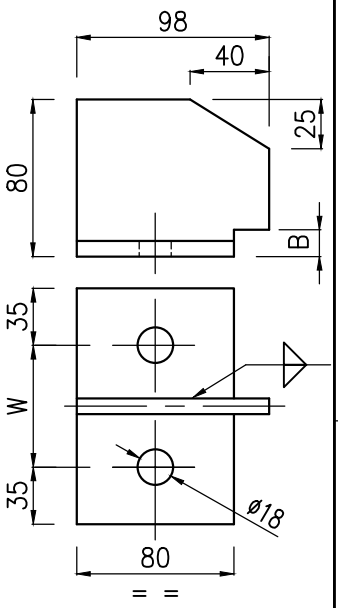
TYPE 2



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

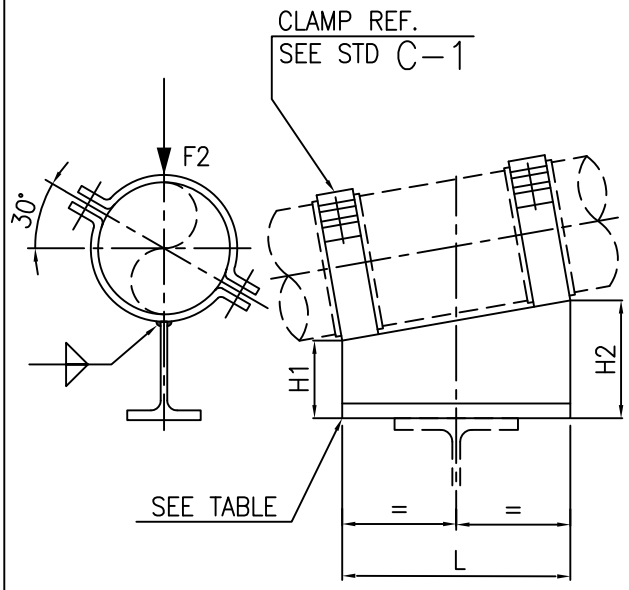
NOTES:
1– PLATES MATERIAL: CARBON STEEL
2– BOLTS (UNI 5739 Cl 8.8), NUTS (UNI 5588 Cl 8.8), LOCK NUT (UNI 7474 Cl.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– GUIDE TO BE SITE LOCATED UNLESS NOTED OTHERWISE ON THE PIPE SUPPORT DRAWING.
4– REALIZE A PIECE AS DRAWING AND A PIECE SYMMETRIC.
5– VARIABLE WEIGHT 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

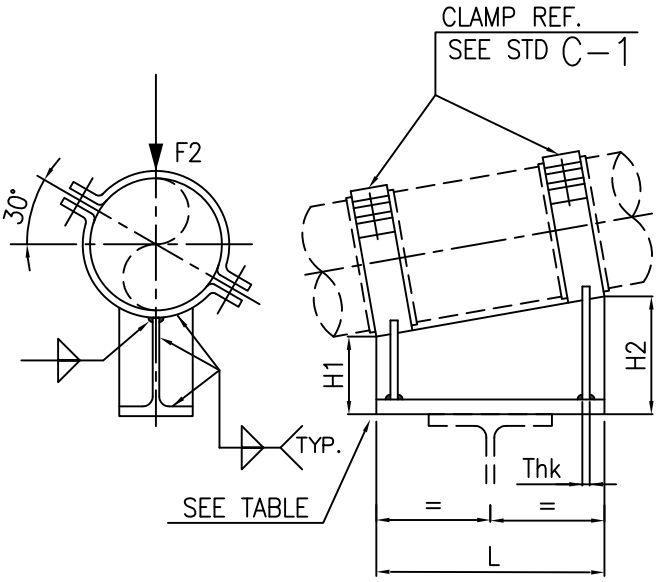
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	ROSETTI MARINO	Document Number: STD–PP–DD–0001
	STANDARD SPECIFICATION PIPE SUPPORT DETAIL STANDARD	Revision: 0 Date: –
SCARPETTA CLAMPATA PER TUBAZIONI IN PENDENZA IN C.S.–S.S. E ALLOY CLAMPED SHOE FOR SLOPED PIPE IN C.S. – S.S. AND ALLOY		S–75

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

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	4	**To**	4
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 Cont.	Accept. Date	Spool
1/4/1/_		**00**	**24-09-2024**	**14**	**AZ53**			**FWN**	**2,00 in**	**5,54 mm**	**V**	**0,189 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								
2/4/1/_		**00**	**25-09-2024**	**15-31-32**	**AZ53**			**RED**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**21-01-2025**	**A**
					AX84	**After Cutting**													
	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 %	000102	4	Acceptable					03-10-2024			
Cut 20-01-2025 Prod sh.32 AX84		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK		Acceptable A1A		GTAW			21-01-2025			
		RT	C 1 DTA	After Cutting				10 %			Acceptable								
3/4/1/_		**00**	**08-10-2024**	**25-32**	**AZ53**			**PL**	**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**21-01-2025**	**A**
					AX84	**After Cutting**													
	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								
Cut 20-01-2025 Prod sh.32 AX84		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK		Acceptable C1A		GTAW			21-01-2025			
		LP	C 1 DTA	After Cutting				10 %											
4/4/1/_		**00**	**24-09-2024**	**14-31-32**	**AZ53**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**21-01-2025**	**A**
					AX84	**After Cutting**													
	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								
Cut 20-01-2025 Prod sh.32 AX84		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK		Acceptable A1A		GTAW			21-01-2025			
		RT	C 1 DTA	After Cutting				10 %			Acceptable								
5/4/1/_		**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**	**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								
6/4/1/_		**00**	**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**	**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								
7/4/1/_		**00**	**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**	**A**
	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								

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	WPS / Defect length	Techn. Weld. / CND date	Type Conn / NOTE	Accept. Date	Spool
7/4/1/_		**00**	**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**	**A**
8/4/1/_		**00**	**09-12-2024**	**72**	**AX416**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK			Acceptable					11-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
9/4/1/_		**00**	**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								
10/4/1/_		**00**	**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								
11/4/1/_		**00**	**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								
12/4/1/_		**00**	**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								
13/4/1/_		**00**	**09-12-2024**	**72**	**AX416**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK			Acceptable					11-12-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
14/4/1/_		**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**	**C**
	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								
15/4/1/_		**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**	**C**
	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								
16/4/1/_		**00**	**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**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					26-09-2024			

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. %	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
16/4/1/_		**00**	**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**	**C**
		RT	FIN	Weld Completion			10 %			Acceptable								
17/4/1/_		**00**	**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**	**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								
18/4/1/_		**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**	**D**
	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								

Totals per DWG	**4**	**Prefabrication**	**1,64 m**	**16 Nr. Welds**	**16,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,84 m**	**18 Nr. Welds**	**18,00 inch**
		Accepted	**1,84 m**	**18 Nr. Welds**	**18,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**1,64 m**	**16 Nr. Welds**	**16,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,84 m**	**18 Nr. Welds**	**18,00 inch**
		Accepted	**1,84 m**	**18 Nr. Welds**	**18,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**1,64 m**	**16 Nr. Welds**	**16,00 inch**
		Erection	**0,20 m**	**2 Nr. Welds**	**2,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,84 m**	**18 Nr. Welds**	**18,00 inch**
		Accepted	**1,84 m**	**18 Nr. Welds**	**18,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

CROSSWIND / ROSETTI MARINO	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: 24/01/2025
	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
4	00	1	A	01CS	2	1	Reducer Concentric BW ›2"x1" Thk.5.54mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	433876	1724000839	00710	4527-P6	W1-W2	
4	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	W4-W5	
4	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	W6-W7	
4	00	1	A	01CS	4	1	Flange WN ›2" Thk.5.54mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70486	1724000839	01190	2024-C_MFF-01243	W1	
4	00	1	A	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	W7	
4	00	1	A	01CS	1A	0,163	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	00	1	A	01CS	1B	0,109	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	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	W9	
4	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	W10-W11	
4	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	W12	
4	00	1	B	01CS	1D	1,674	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	00	1	B	01CS	1E	1,159	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	00	1	C	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W15-W16	
4	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	W17	
4	00	1	C	01CS	1F	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	00	1	C	01CS	1G	2,556	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	00	1	C	01CS	1H	0,326	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
4	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	W18	
4	00	1	D	01CS	1C	0,723	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	55-01-TP-046	: Test Pack 55-01-TP-046			Dwg	123A90-DDL-PR-PID-80011-25
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10003588		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

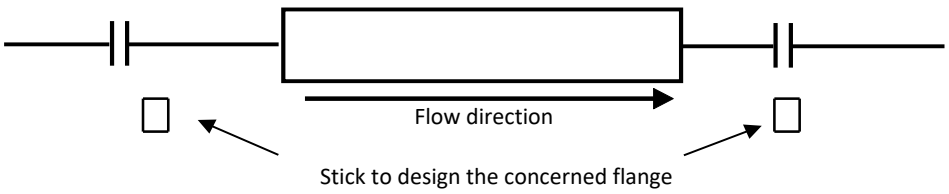
1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult 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	Massimo Bruschi	
Date	2025-01-24	2025-01-25	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-24T07:05:25.071Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-25T06:58:26.998Z	

ITEM	Tag	004-1-J1	: Joint 004-1-J1			Dwg	123A90-FDL-PP-DI-00004-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10004177	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-046

EQUIPMENT TAG



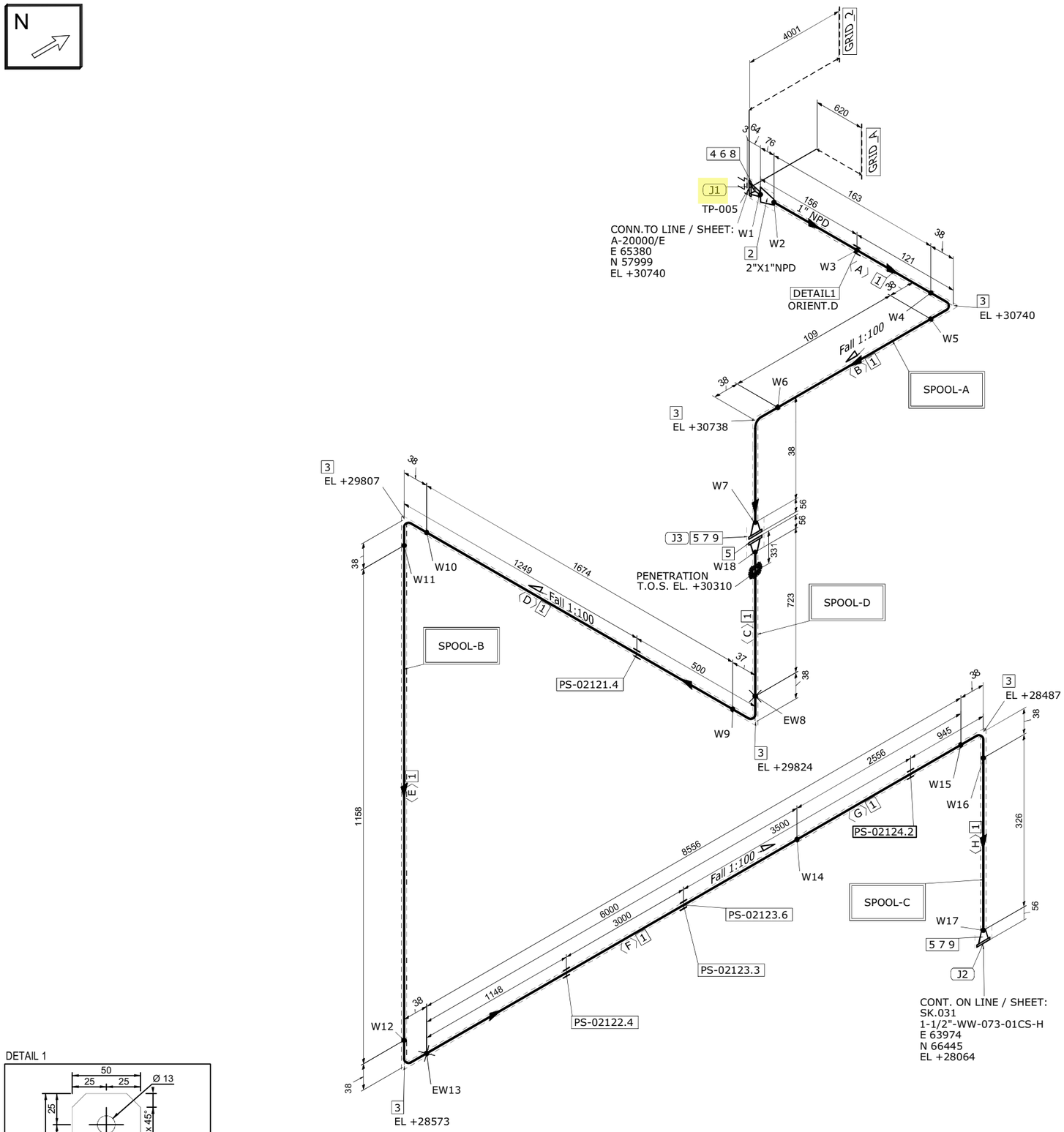
Flange Type	150LB	**Lubricant**	Yes
Flange Size	2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	120		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	36	120	36	72	120
2	36	120	36	72	120
3	36	120	36	72	120
4	36	120	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.	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	2025-02-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:25:59.369Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-14T15:41:39.992Z	



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	12.7M	41.2
2	2X1	REC0CS16210201	Reducer Concentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
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	2	FLW0CS02210200	Flange WN ASME B16.5 150LB RF 5,54 FRG ASTM/ASME A/SA350 Gr.LF2	1	2.7
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2	SPIKNN00560200	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	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
8	5/8	SB20BO00680300	100 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0
9	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]	49.7
ERECTION WEIGHT [kg]	2.2
OVERALL WEIGHT [kg]	51.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	2	BW
W2	1	BW
W3		FW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	163	BEVEL	BEVEL
B	1	109	BEVEL	BEVEL
C	1	723	BEVEL	BEVEL
D	1	1674	BEVEL	BEVEL
E	1	1159	BEVEL	BEVEL
F	1	6000	BEVEL	BEVEL
G	1	2556	BEVEL	BEVEL
H	1	326	BEVEL	BEVEL

SUPPORT LIST

PS-02121.4
PS-02122.4
PS-02123.6
PS-02123.3
PS-02124.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	7	5.9
B	4	9.7
C	4	30.4
D	1	3.7
MONT	2	2.2

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"-DM-005-01CS-H

SK.004

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-00004	SHEET / OF	1/1
				REV.	00

LINE DATA

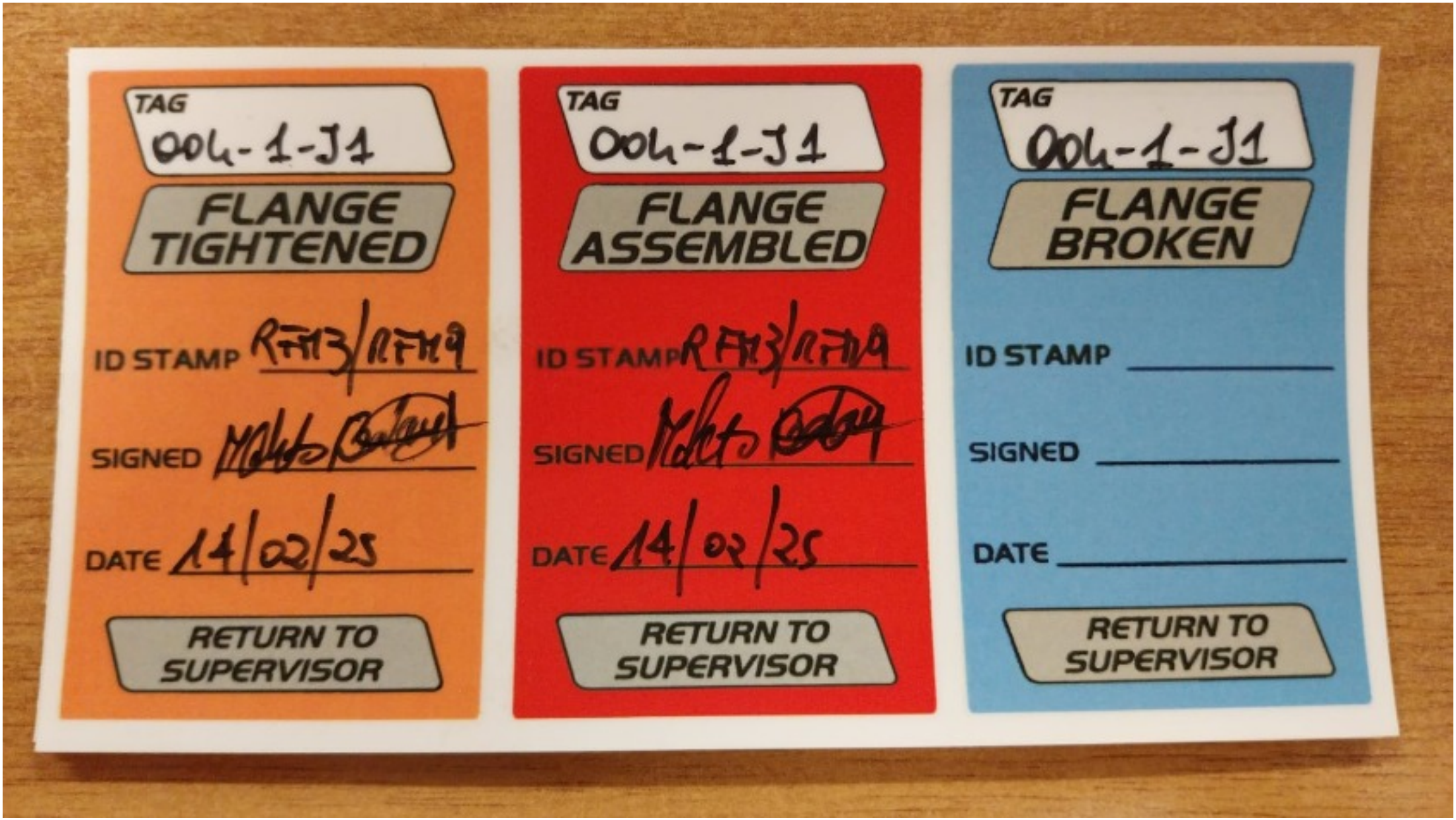
NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -46 / 100	[°C]	
HEAT TRACING	N/A			TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM Water	

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

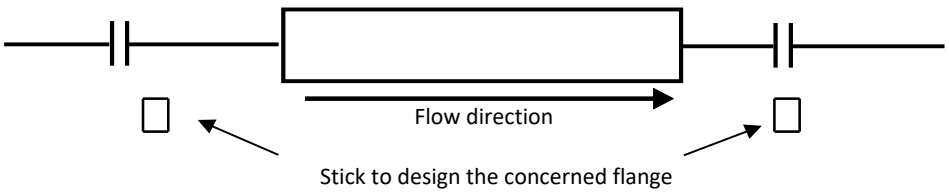
MASTER


TAG
004-1-J1
FLANGE TIGHTENED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
004-1-J1
FLANGE ASSEMBLED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
004-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	004-1-J2	: Joint 004-1-J2			Dwg	123A90-FDL-PP-DI-00004-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10004178		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-046

EQUIPMENT TAG



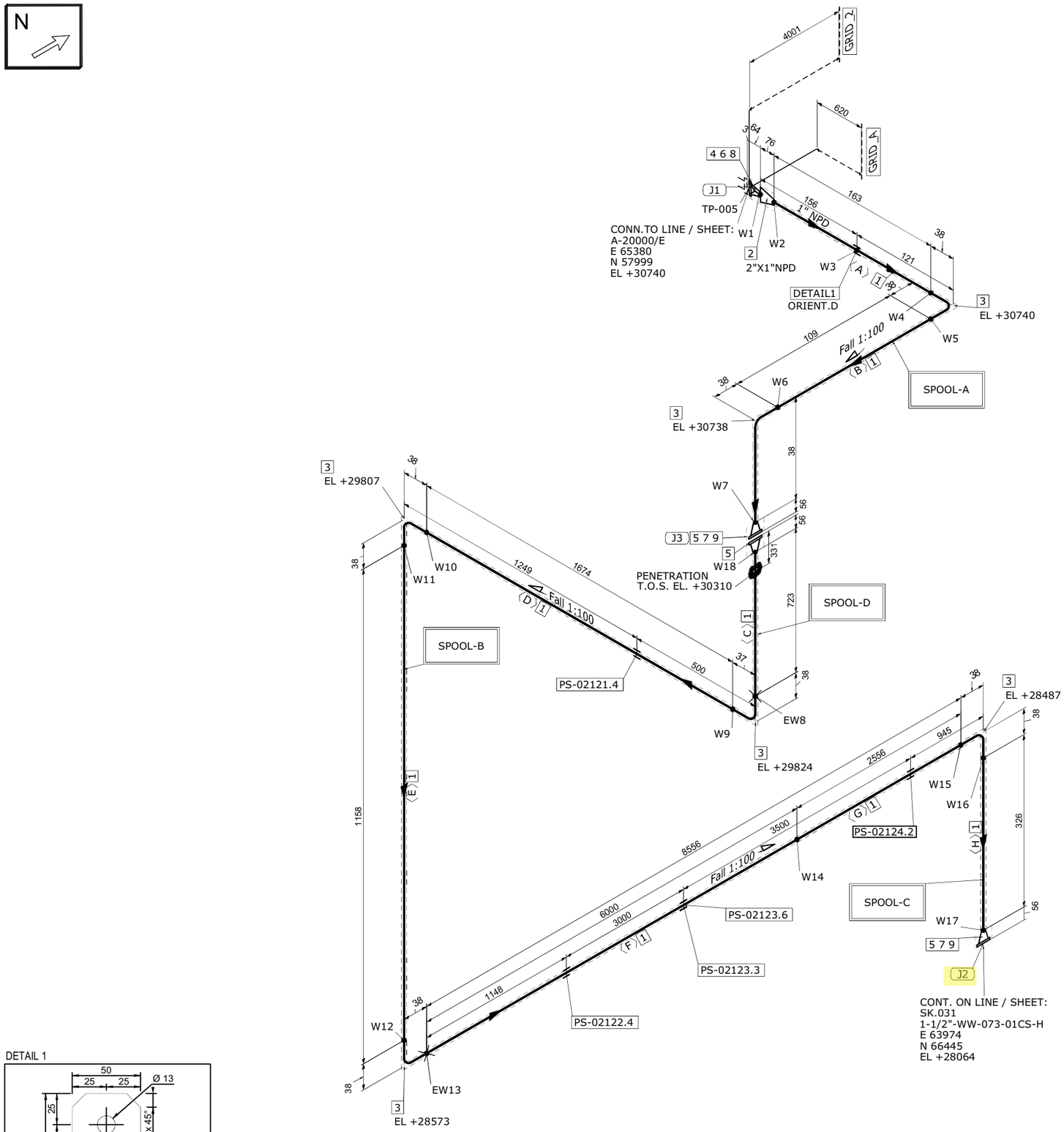
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	62.5		

			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	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:26:12.012Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-28T16:05:53.050Z	



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	12.7M	41.2
2	2X1	REC0CS16210201	Reducer Concentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
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	2	FLW0CS02210200	Flange WN ASME B16.5 150LB RF 5,54 FRG ASTM/ASME A/SA350 Gr.LF2	1	2.7
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2	SPIKNN00560200	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	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
8	5/8	SB20BO00680300	100 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0
9	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]	49.7
ERECTION WEIGHT [kg]	2.2
OVERALL WEIGHT [kg]	51.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	2	BW
W2	1	BW
W3		FW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	163	BEVEL	BEVEL
B	1	109	BEVEL	BEVEL
C	1	723	BEVEL	BEVEL
D	1	1674	BEVEL	BEVEL
E	1	1159	BEVEL	BEVEL
F	1	6000	BEVEL	BEVEL
G	1	2556	BEVEL	BEVEL
H	1	326	BEVEL	BEVEL

SUPPORT LIST

PS-02121.4
PS-02122.4
PS-02123.6
PS-02123.3
PS-02124.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	7	5.9
B	4	9.7
C	4	30.4
D	1	3.7
MONT	2	2.2

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"-DM-005-01CS-H

SK.004

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-00004	SHEET / OF	1/1
				DATE	27-08-2024
				REV.	00

LINE DATA

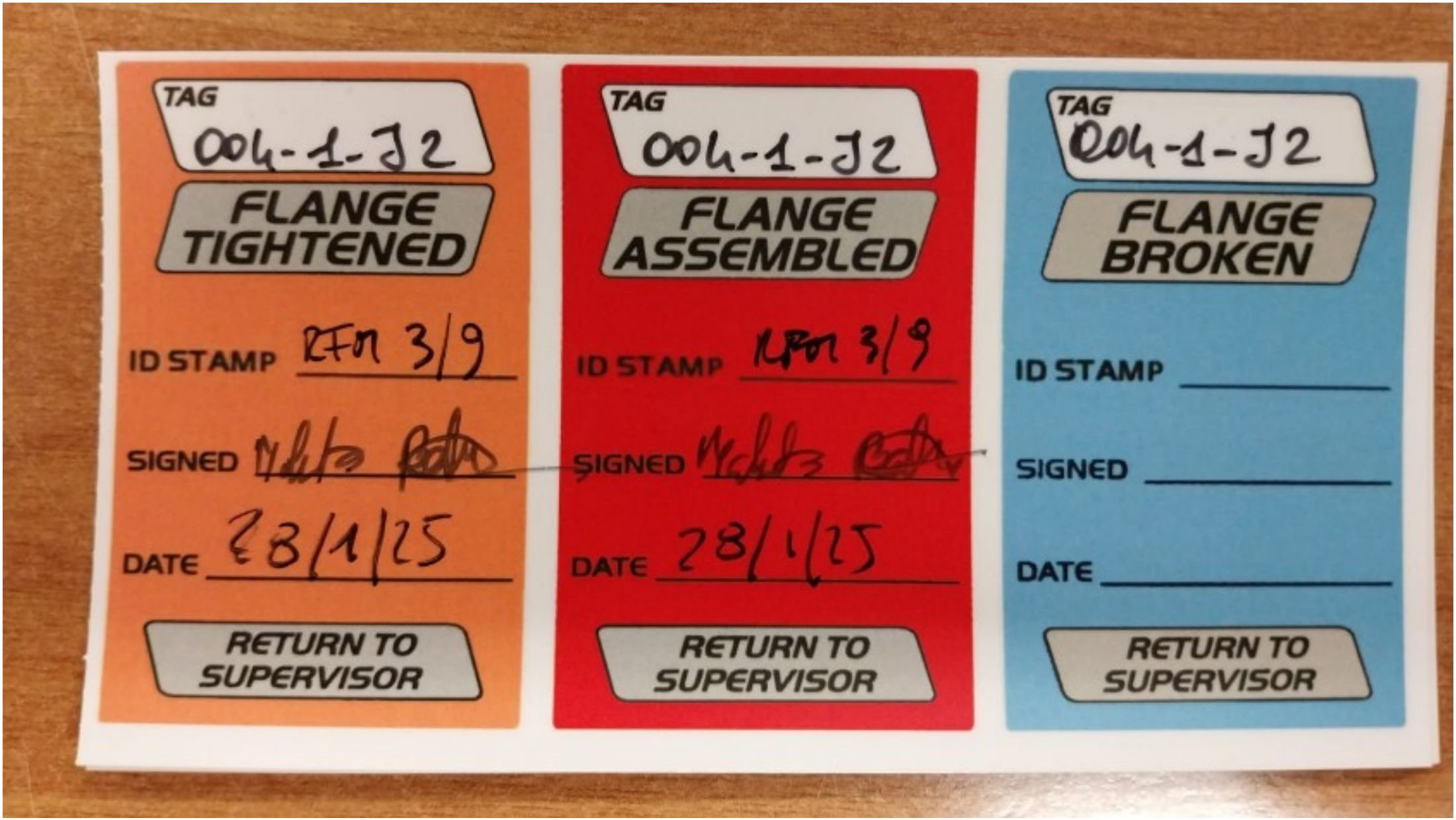
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM Water		

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

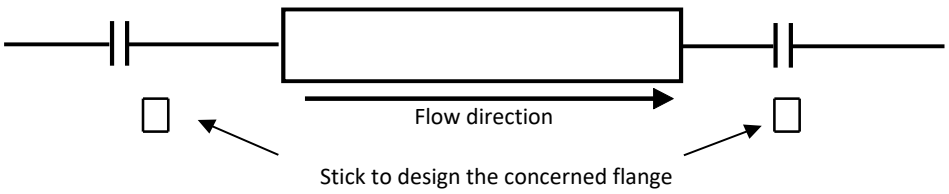
MASTER


TAG
004-1-J2
FLANGE TIGHTENED
ID STAMP RFM 3/9
SIGNED
DATE 28/1/25
RETURN TO SUPERVISOR
TAG
004-1-J2
FLANGE ASSEMBLED
ID STAMP RFM 3/9
SIGNED
DATE 28/1/25
RETURN TO SUPERVISOR
TAG
004-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	004-1-J3	: Joint 004-1-J3			Dwg	123A90-FDL-PP-DI-00004-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD
TASK	code	C10004179	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-046

EQUIPMENT TAG



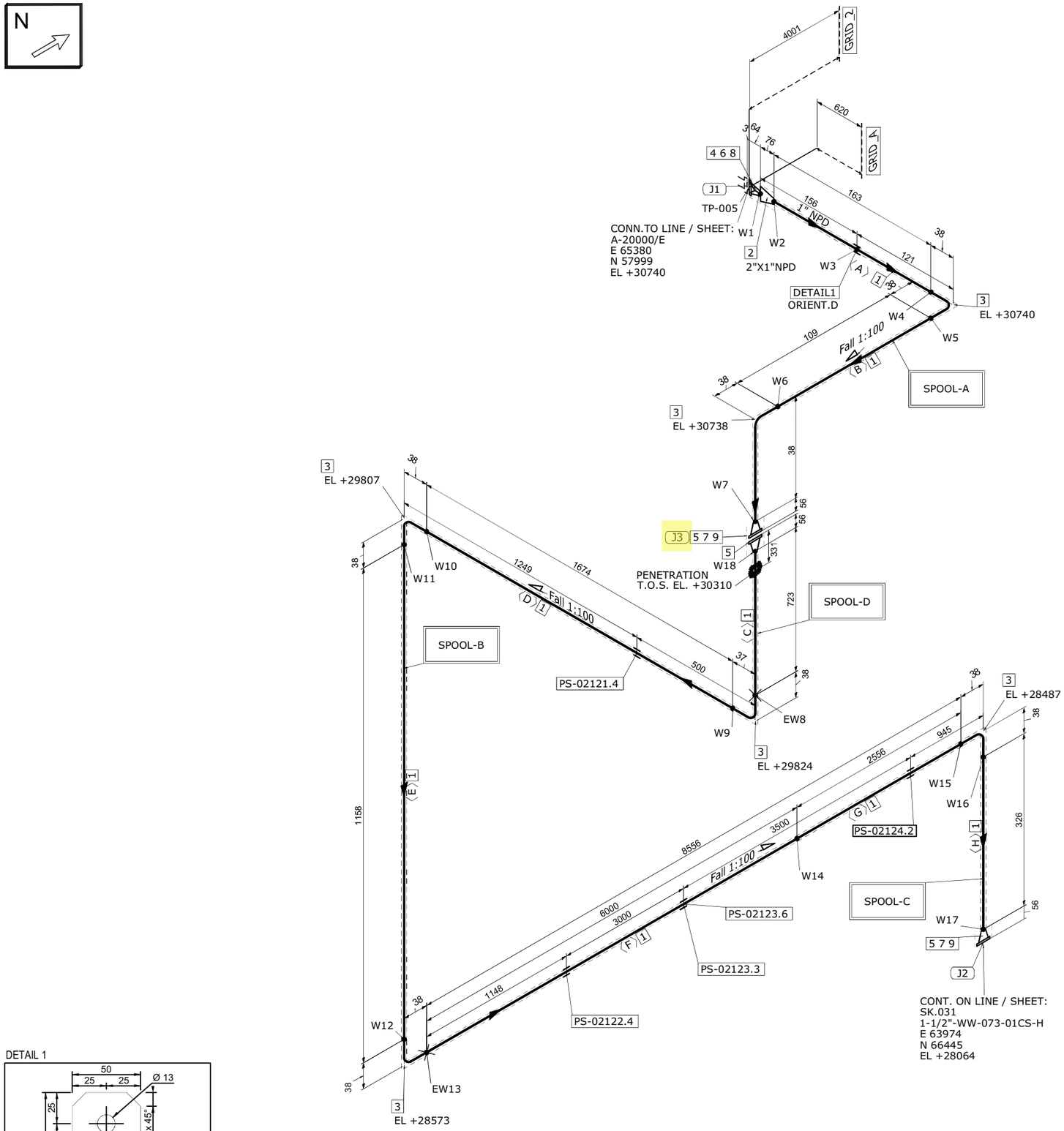
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	Massimo Bruschi	
Date	2025-01-17	2025-02-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:26:24.456Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-14T15:41:33.696Z	



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	12.7M	41.2
2	2X1	REC0CS16210201	Reducer Concentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
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	2	FLW0CS02210200	Flange WN ASME B16.5 150LB RF 5,54 FRG ASTM/ASME A/SA350 Gr.LF2	1	2.7
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2	SPIKNN00560200	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	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
8	5/8	SB20BO00680300	100 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0
9	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]	49.7
ERECTION WEIGHT [kg]	2.2
OVERALL WEIGHT [kg]	51.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	2	BW
W2	1	BW
W3		FW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	163	BEVEL	BEVEL
B	1	109	BEVEL	BEVEL
C	1	723	BEVEL	BEVEL
D	1	1674	BEVEL	BEVEL
E	1	1159	BEVEL	BEVEL
F	1	6000	BEVEL	BEVEL
G	1	2556	BEVEL	BEVEL
H	1	326	BEVEL	BEVEL

SUPPORT LIST

PS-02121.4
PS-02122.4
PS-02123.6
PS-02123.3
PS-02124.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	7	5.9
B	4	9.7
C	4	30.4
D	1	3.7
MONT	2	2.2

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"-DM-005-01CS-H

SK.004

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-00004	SHEET / OF	1/1
REV.	00				

LINE DATA

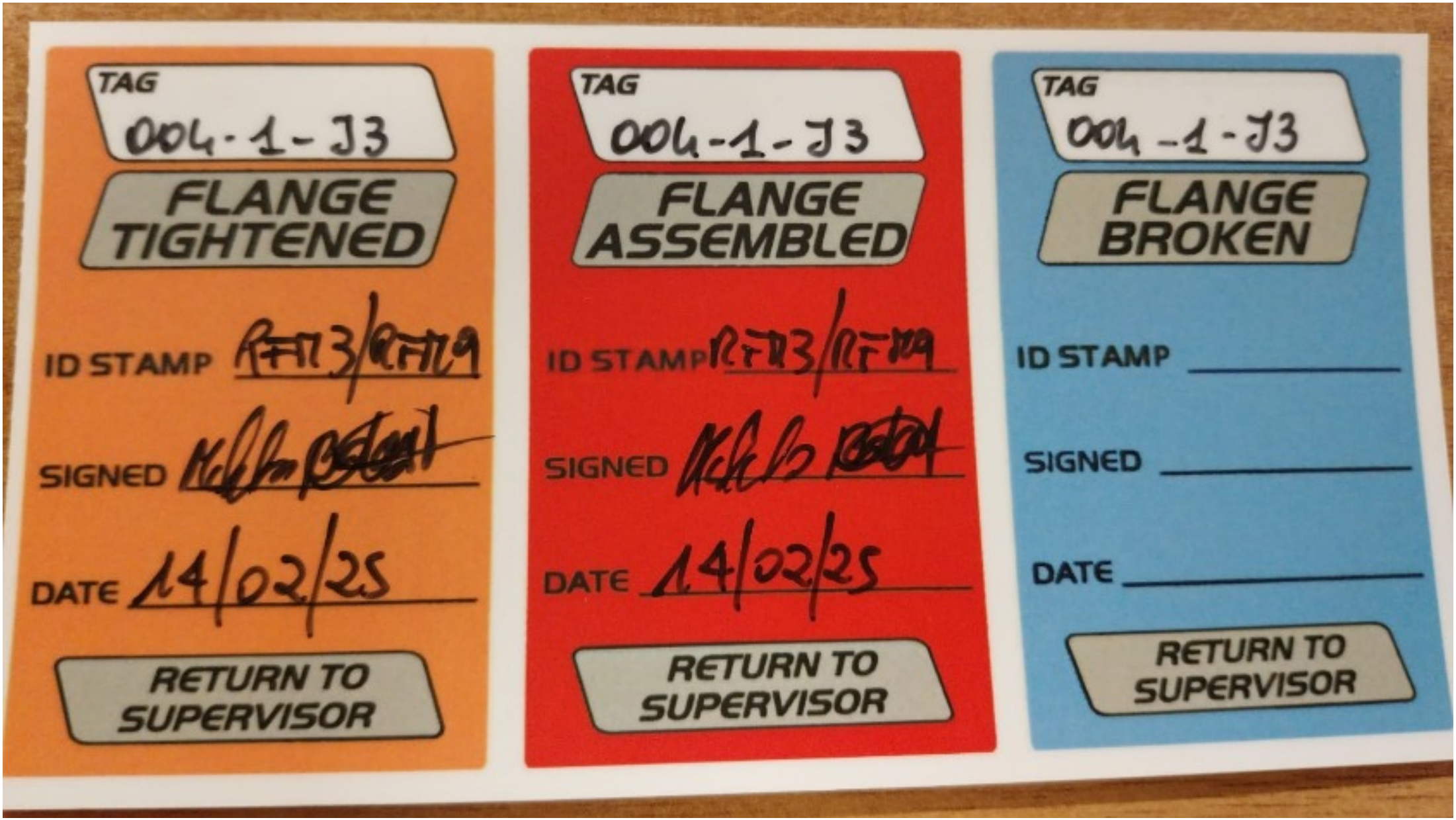
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 6	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 9	[barg]	TEMP. AMB	MEDIUM Water		

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

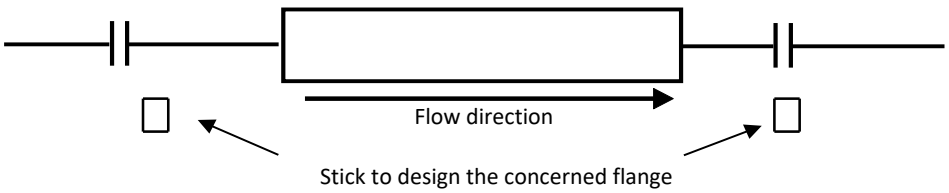
MASTER


TAG
004-1-J3
FLANGE TIGHTENED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
004-1-J3
FLANGE ASSEMBLED
ID STAMP RFH3/RFH9
SIGNED
DATE 14/02/25
RETURN TO SUPERVISOR
TAG
004-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	007-1-J1	: Joint 007-1-J1			Dwg	123A90-FDL-PP-DI-00007-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004180		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

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	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:

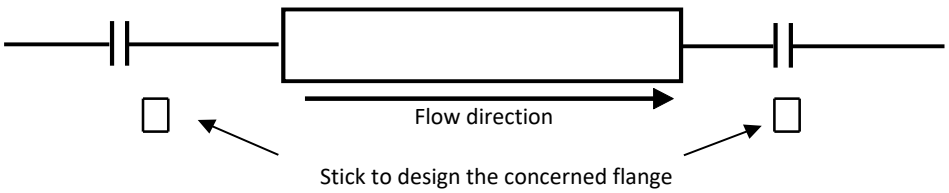
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-31	2025-01-31	
Signature	Digitaly signed by Emanuele Delfino 2025-01-31T07:07:16.126Z	Digitaly signed by Kangi Albonetti 2025-01-31T17:52:25.151Z	


TAG
007-1-J1
FLANGE TIGHTENED
ID STAMP RFM 2/6
SIGNED
DATE 31/01/2025
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE ASSEMBLED
ID STAMP RFM 2/6
SIGNED
DATE 31/01/2025
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE TIGHTENED
ID STAMP RFM 2/6
SIGNED
DATE 27/01/25
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE ASSEMBLED
ID STAMP RFM 2/6
SIGNED
DATE 27/01/25
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE BROKEN
ID STAMP KANW
SIGNED
DATE 28/1/2025
RETURN TO SUPERVISOR

ITEM	Tag	007-1-J1	: Joint 007-1-J1			Dwg	123A90-FDL-PP-DI-00007-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004180		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



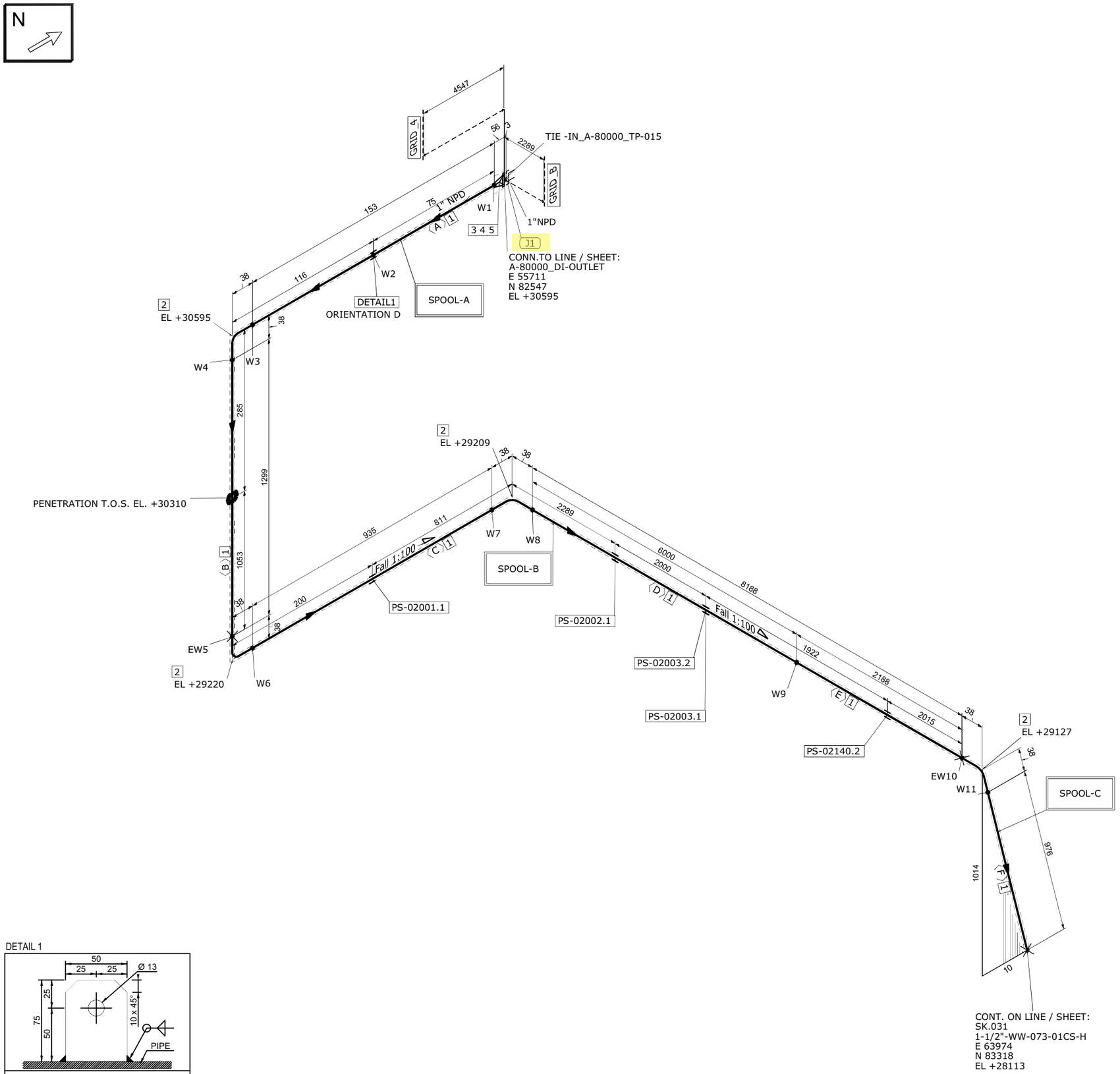
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	V030390 / RD00261
Bolt tensioning/Torquing value	62.5		

			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	2025-01-27	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:26:35.697Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-27T16:14:09.731Z	



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	11.6M	37.4
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	4	0.7
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	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
5	1/2	SB20BO00980200	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.5

FABRICATION WEIGHT [kg]	39.5
ERECTION WEIGHT [kg]	0.6
OVERALL WEIGHT [kg]	40.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2		FW
W3	1	BW
W4	1	BW
EW5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
EW10	1	BW
W11	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	153	BEVEL	BEVEL
B	1	1299	BEVEL	BEVEL
C	1	935	BEVEL	BEVEL
D	1	6000	BEVEL	BEVEL
E	1	2188	BEVEL	BEVEL
F	1	977	BEVEL	BEVEL

SUPPORT LIST

PS-02001.1
PS-02002.1
PS-02003.1
PS-02003.2
PS-02140.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	6.3
B	4	29.9
C	1	3.3
MONT	2	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"-DI-012-01CS-H

SK.007

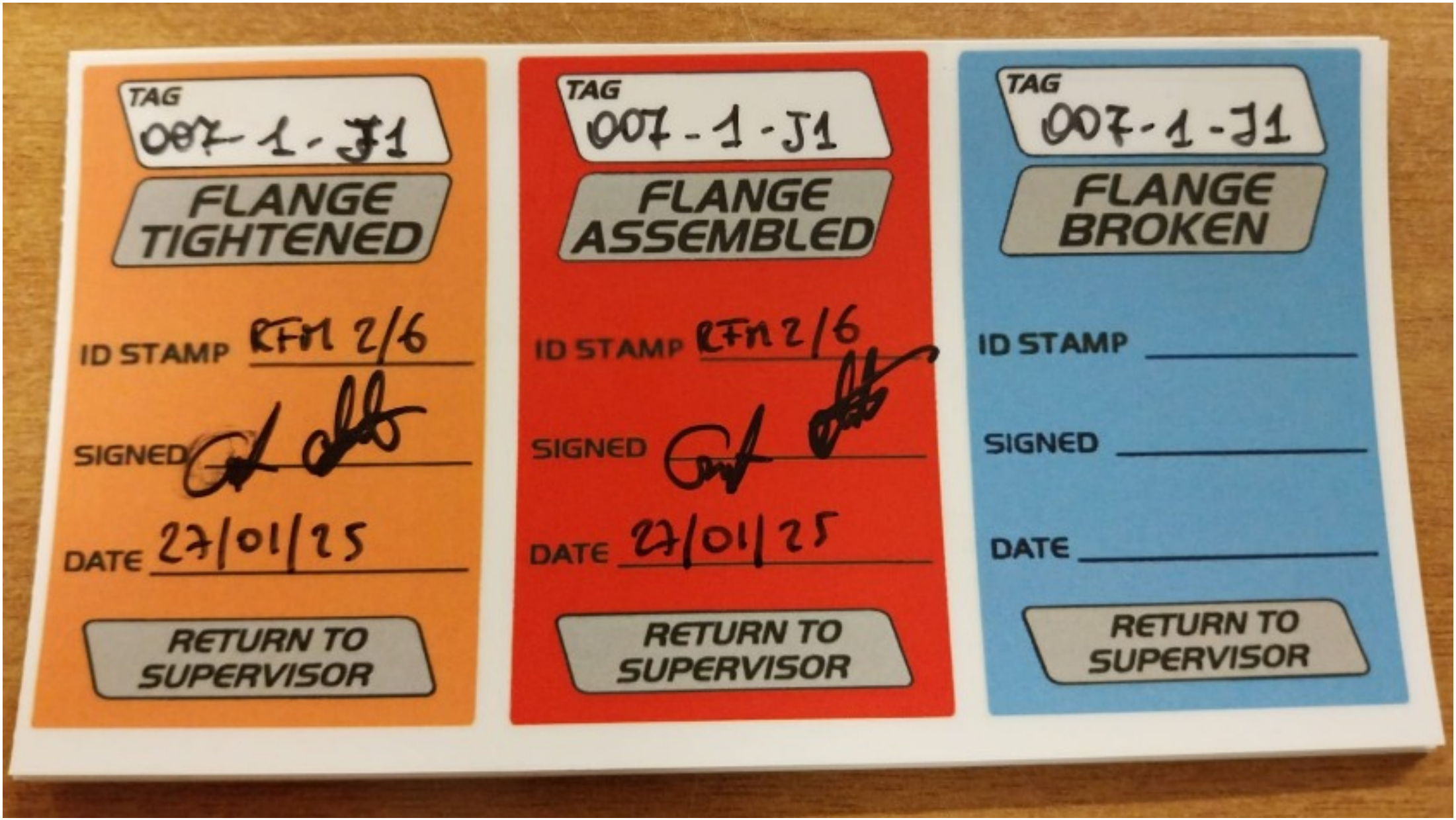
LINE DATA								
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80012
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

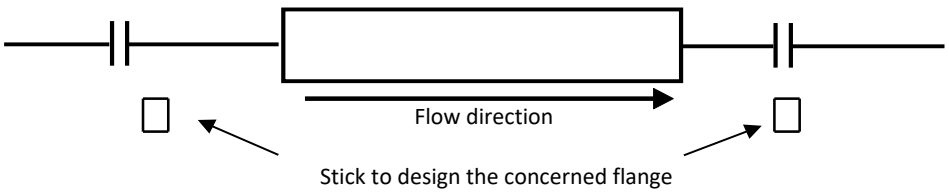
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 27-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00007	SHEET / OF 1/1	REV. 00


TAG
007-1-J1
FLANGE TIGHTENED
ID STAMP RFM 2/6
SIGNED
DATE 27/01/25
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE ASSEMBLED
ID STAMP RFM 2/6
SIGNED
DATE 27/01/25
RETURN TO SUPERVISOR
TAG
007-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	029-1-J1	: Joint 029-1-J1			Dwg	123A90-FDL-PP-DI-00029-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004210	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

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 V030390 / RD00261
Bolt tensioning/Torquing value	122.2		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	37	123	37	73	122.2
2	37	123	37	73	122.2
3	37	123	37	73	122.2
4	37	123	37	73	122.2
5	37	123	37	73	122.2
6	37	123	37	73	122.2
7	37	123	37	73	122.2
8	37	123	37	73	122.2
9	37	123	37	73	122.2
10	37	123	37	73	122.2
11	37	123	37	73	122.2
12	37	123	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:

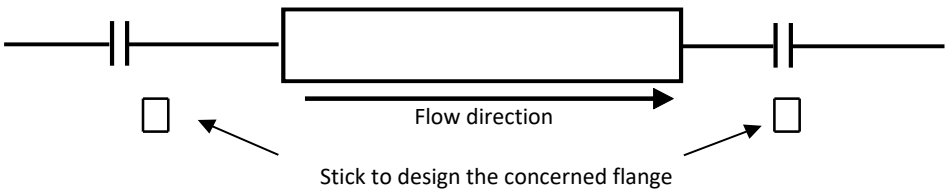
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-19	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-19T07:26:10.965Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:03:38.789Z	


TAG
029-1-J1
FLANGE TIGHTENED
ID STAMP RFH3
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE ASSEMBLED
ID STAMP RFH3
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE TIGHTENED
ID STAMP RFH3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE ASSEMBLED
ID STAMP RFH3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE BROKEN
ID STAMP RFH3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR

ITEM	Tag	029-1-J1	: Joint 029-1-J1			Dwg	123A90-FDL-PP-DI-00029-01
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004210	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

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	123	37	73	122.2
2	37	123	37	73	122.2
3	37	123	37	73	122.2
4	37	123	37	73	122.2
5	37	123	37	73	122.2
6	37	123	37	73	122.2
7	37	123	37	73	122.2
8	37	123	37	73	122.2
9	37	123	37	73	122.2
10	37	123	37	73	122.2
11	37	123	37	73	122.2
12	37	123	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

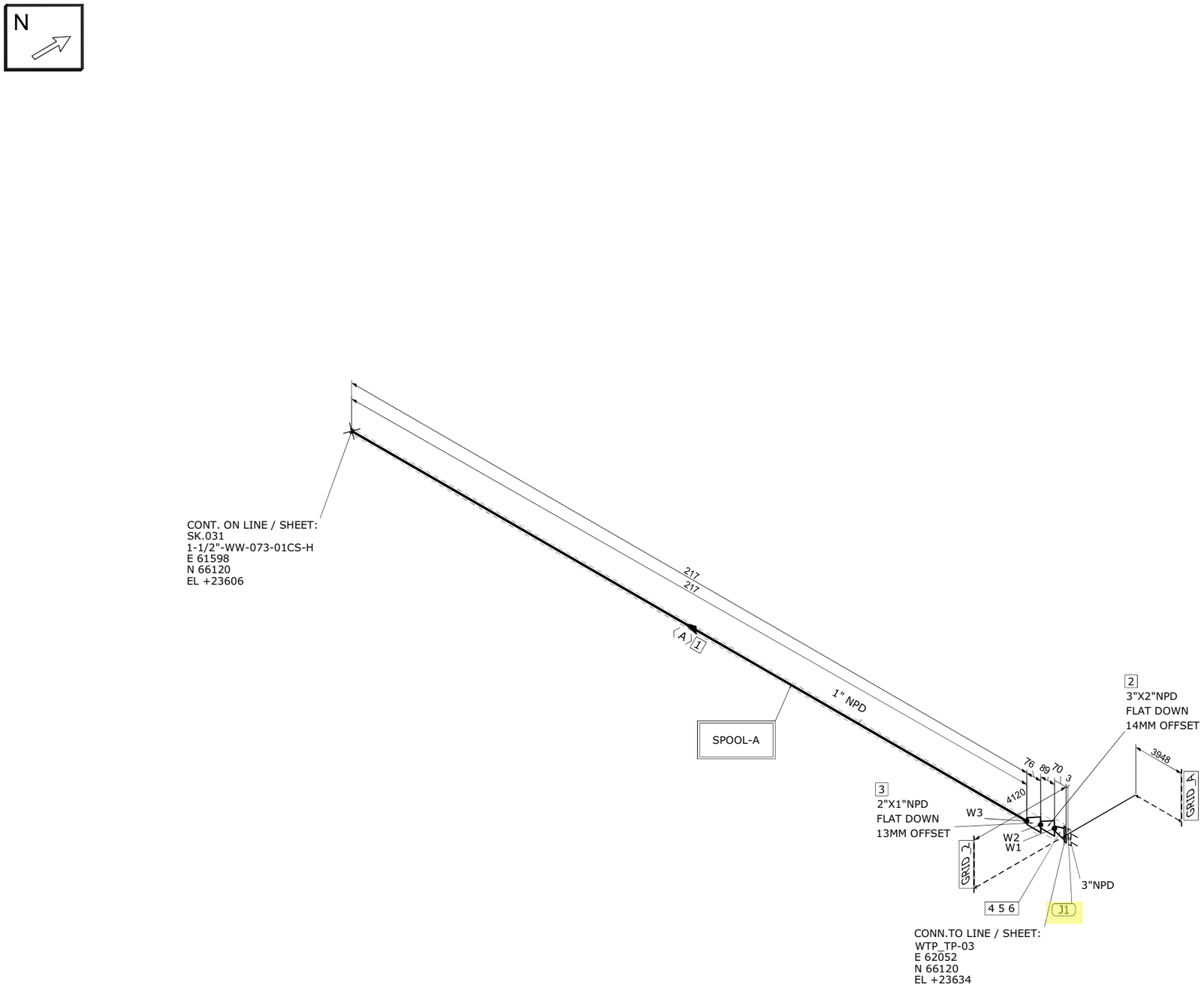
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	Massimo Bruschi	
Date	2025-01-17	2025-02-18	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:26:58.296Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-18T16:16:19.934Z	



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	0.2M	0.7
2	3X2	REE0CS13010302	Reducer Eccentric ASME B16.9 BW 5,49x5,54 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
3	2X1	REE0CS15650201	Reducer Eccentric ASME B16.9 BW 5,54x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.6
4	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]
5	3	GSW0GK11140300	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.2
6	5/8	SB20BO04190300	90 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	6.8
ERECTION WEIGHT [kg]	1.2
OVERALL WEIGHT [kg]	8.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	3	BW
W2	2	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	217	BEVEL	BEVEL

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	6.8
MONT	0	1.2

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"-SWR-045-01CS-H

SK.029

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-00029
SHEET / OF: 1/1
REV.: 00

LINE DATA

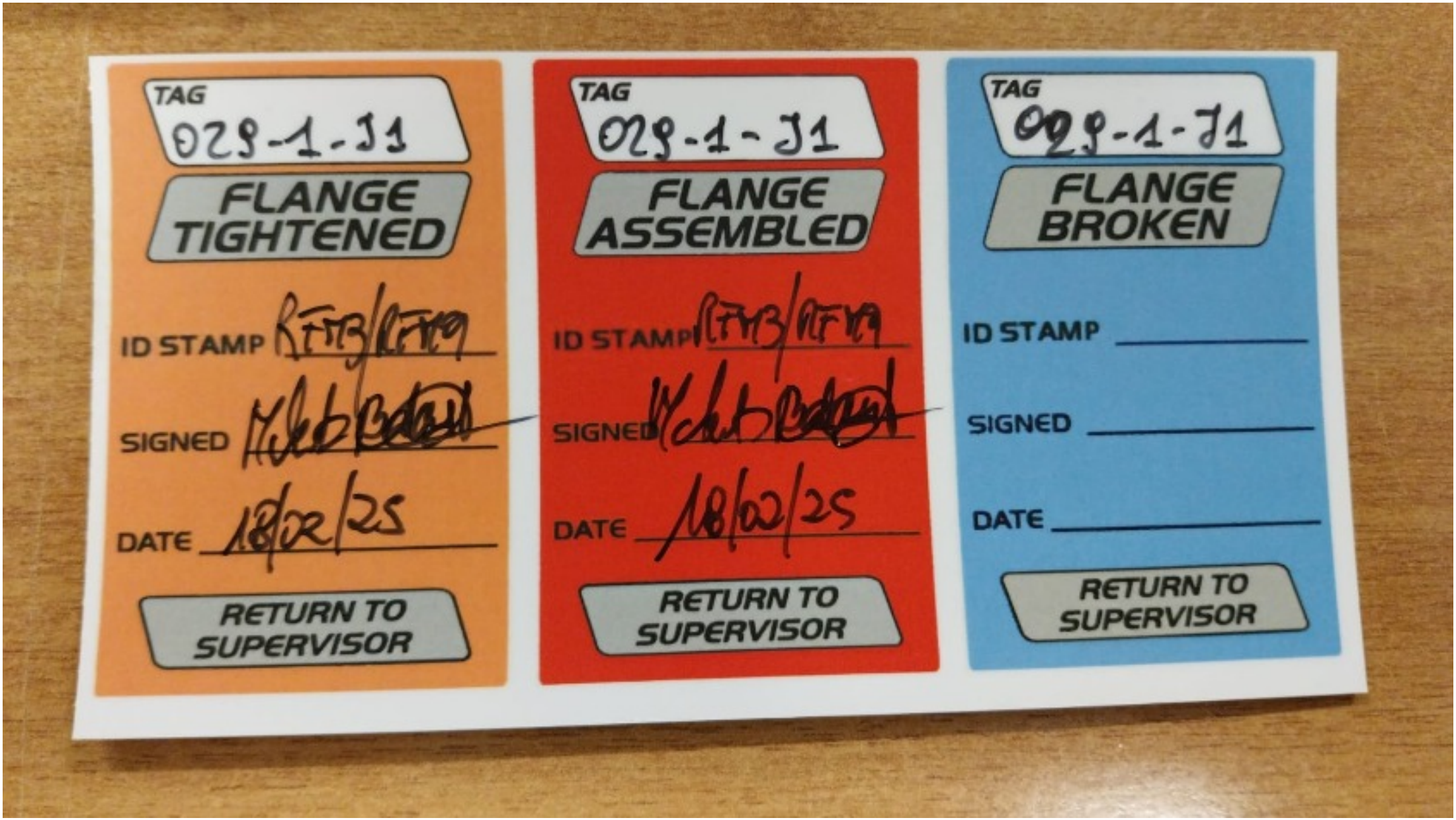
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid					
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]				
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water			

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

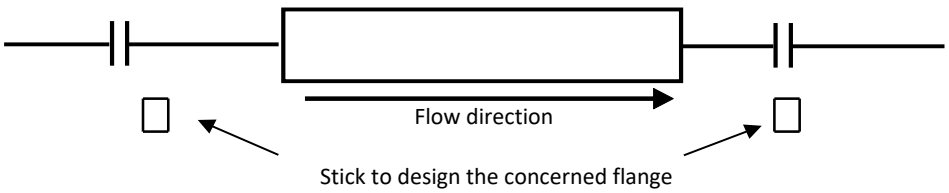
MASTER


TAG
029-1-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
029-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J1	: Joint 031-2-J1			Dwg	123A90-FDL-PP-DI-00031-02
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004212		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



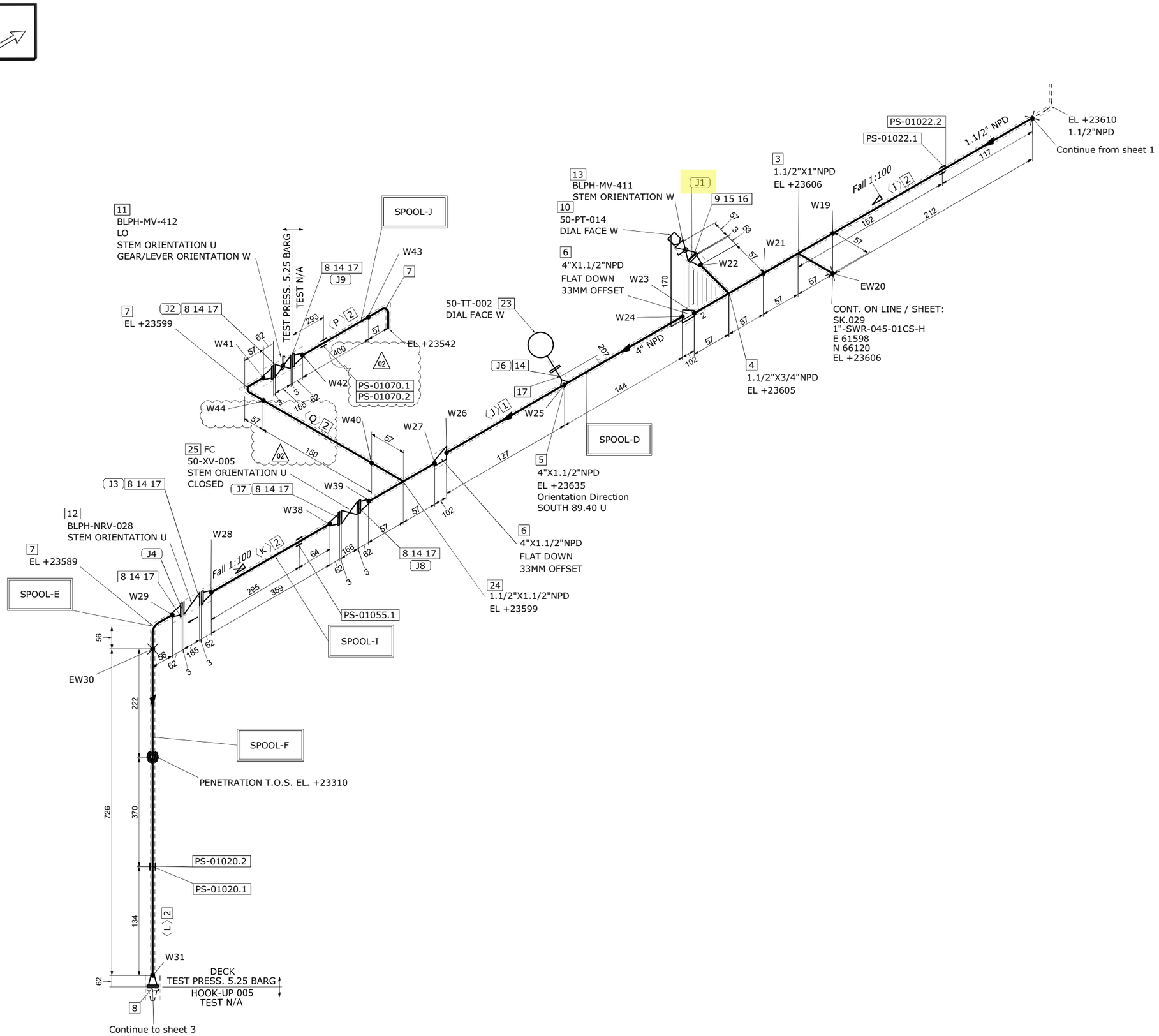
Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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 2025-01-17T14:27:26.600Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-17T16:16:30.336Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

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-80025
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

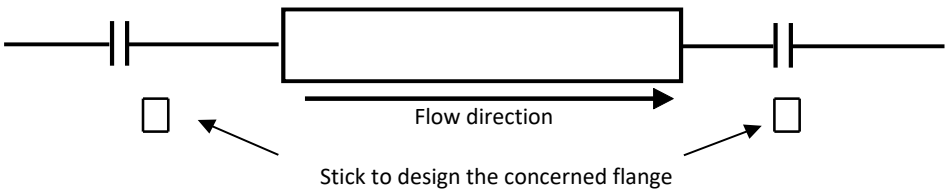
MASTER


TAG
031-2-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 17/02/25
RETURN TO SUPERVISOR
TAG
031-2-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 17/02/25
RETURN TO SUPERVISOR
TAG
031-2-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J2	: Joint 031-2-J2			Dwg	123A90-FDL-PP-DI-00031-02
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004213	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



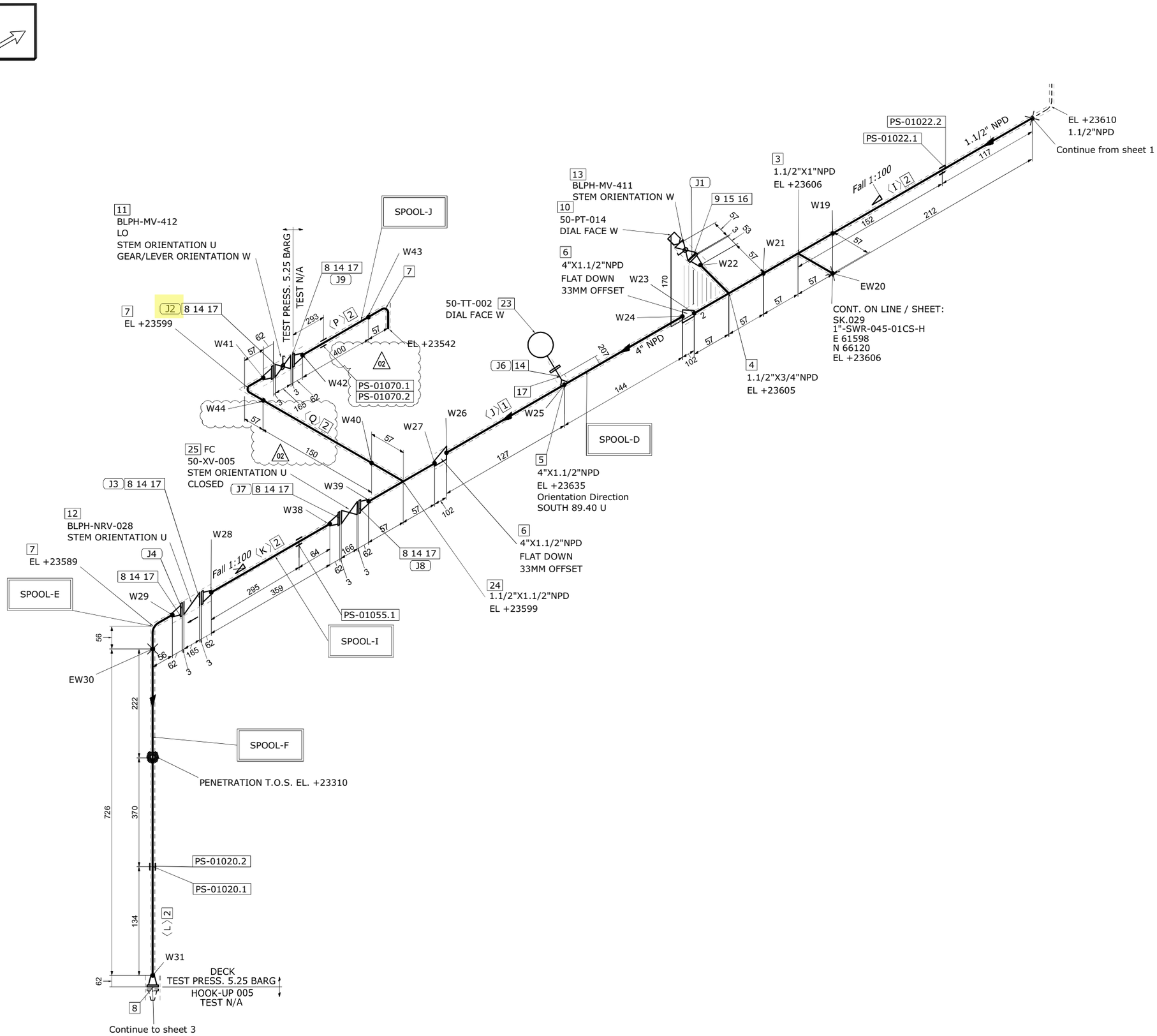
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	Lorenzo Novaga	
Date	2025-01-17	2025-01-17	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T05:51:21.097Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-17T07:48:40.471Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	80.0 02
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

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-80025
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

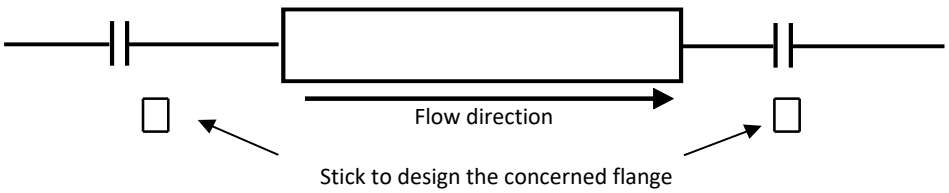
MASTER


TAG
031-2-J2
FLANGE TIGHTENED
ID STAMP RFH 2-6
SIGNED
DATE 11/21/2025
RETURN TO SUPERVISOR
TAG
031-2-J2
FLANGE ASSEMBLED
ID STAMP RFH 2-6
SIGNED
DATE 11/21/2025
RETURN TO SUPERVISOR
TAG
031-2-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J3	: Joint 031-2-J3			Dwg	123A90-FDL-PP-DI-00031-02
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004214		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



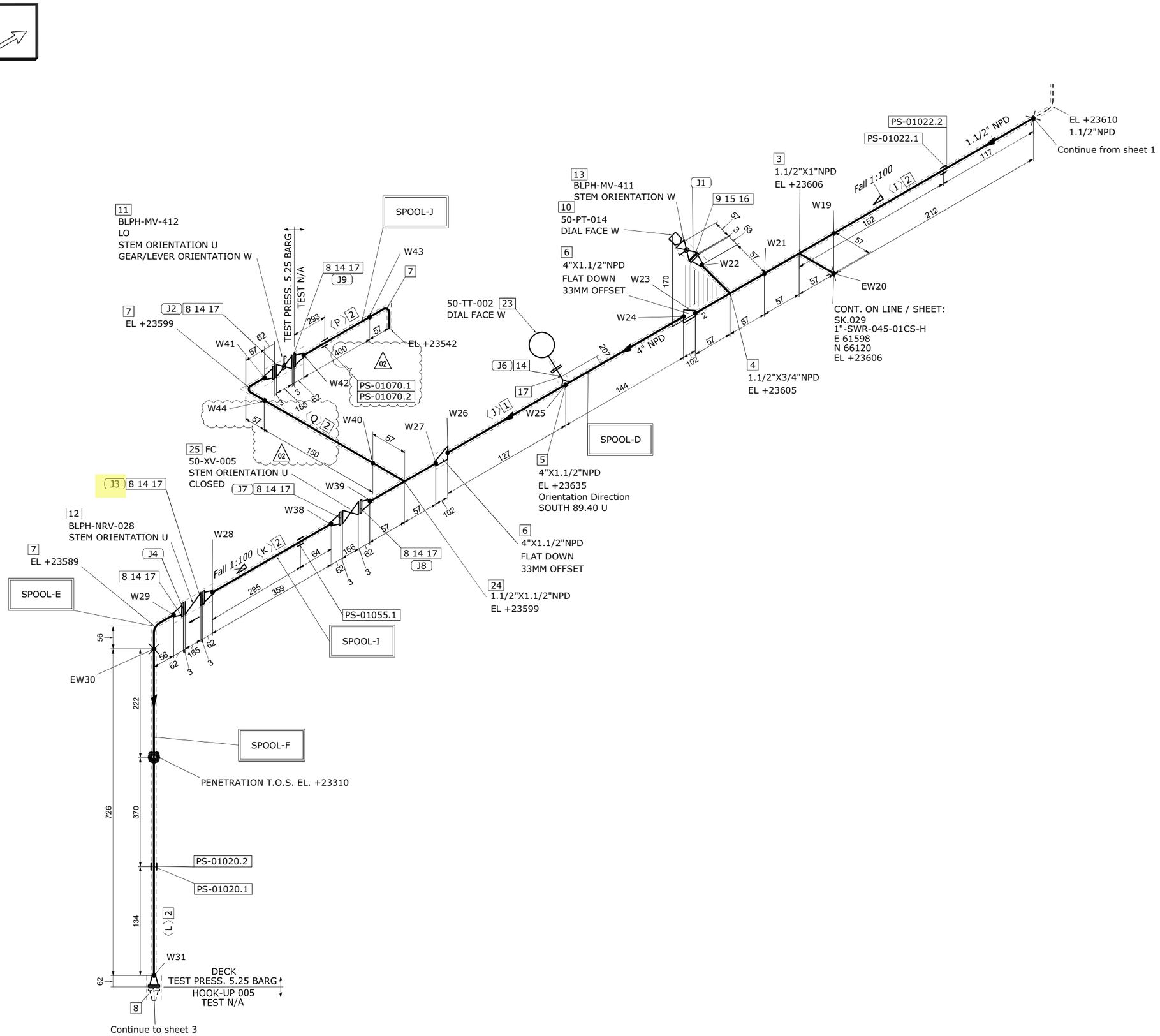
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:28:13.504Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:03:46.324Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	80.0 02
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

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-80025
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
031-2-J3

FLANGE TIGHTENED

ID STAMP RFM3

SIGNED

DATE 06/03/25

RETURN TO SUPERVISOR

TAG
031-2-J3

FLANGE ASSEMBLED

ID STAMP RFM3

SIGNED

DATE 06/03/25

RETURN TO SUPERVISOR

TAG
031-2-J3

FLANGE BROKEN

ID STAMP

SIGNED

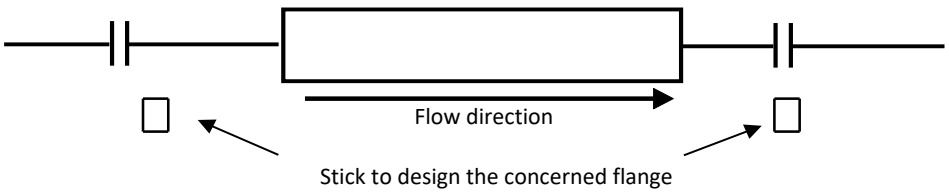
DATE

RETURN TO SUPERVISOR

ITEM	Tag	031-2-J4	: Joint 031-2-J4			Dwg	123A90-FDL-PP-DI-00031-02
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004215		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



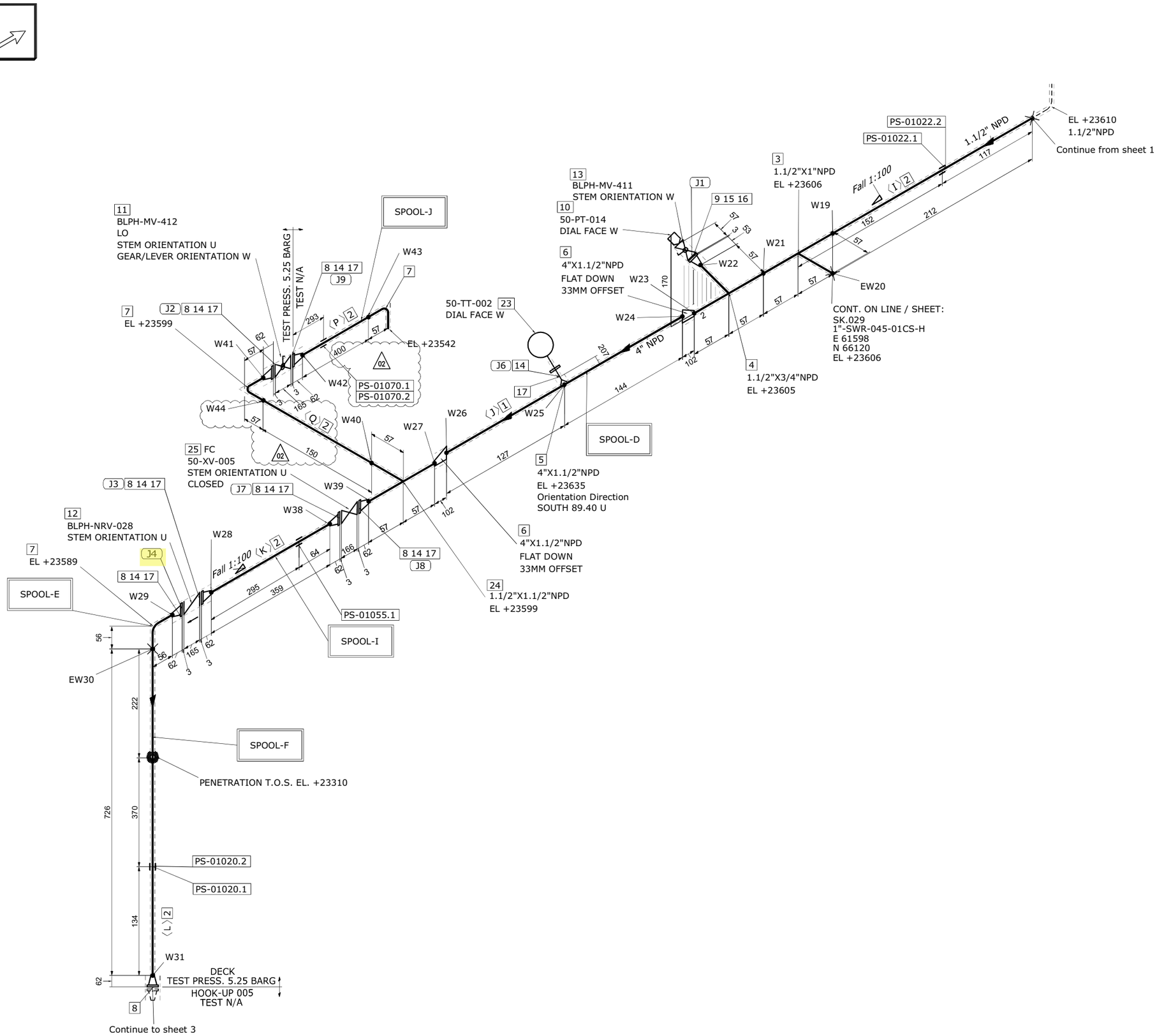
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:28:30.296Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:03:51.329Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
DATE	14-10-2024				
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00031	SHEET / OF	2/3
REV.	02				

LINE DATA

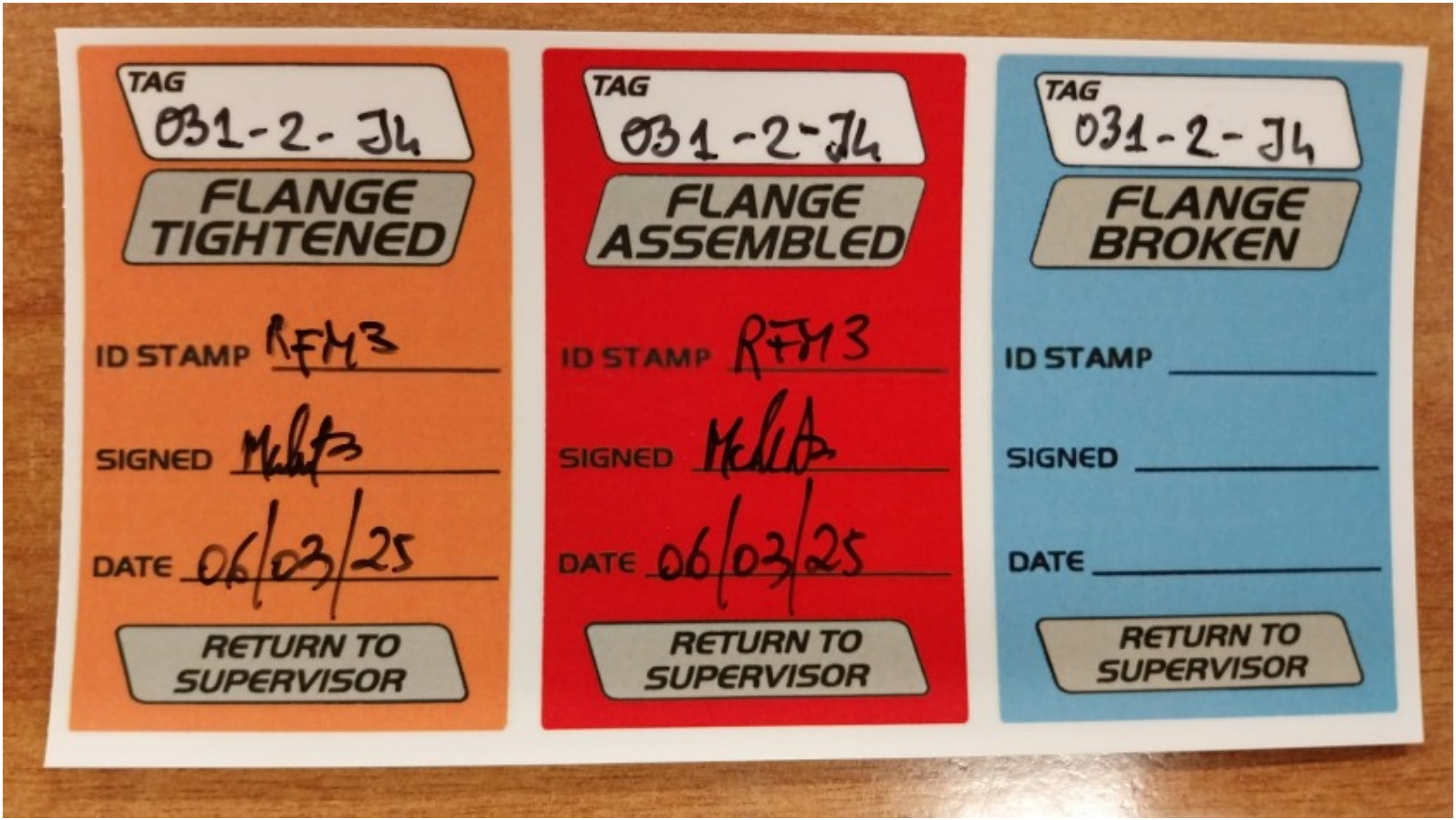
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80025
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

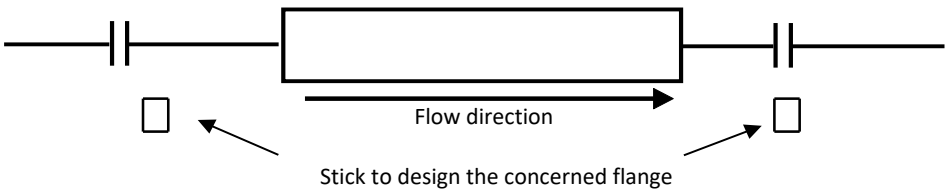
MASTER


TAG
031-2-JH
FLANGE TIGHTENED
ID STAMP RFM3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
031-2-JH
FLANGE ASSEMBLED
ID STAMP RFM3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
031-2-JH
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J6	: Joint 031-2-J6			Dwg	123A90-FDL-PP-DI-00031-02
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004217		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

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

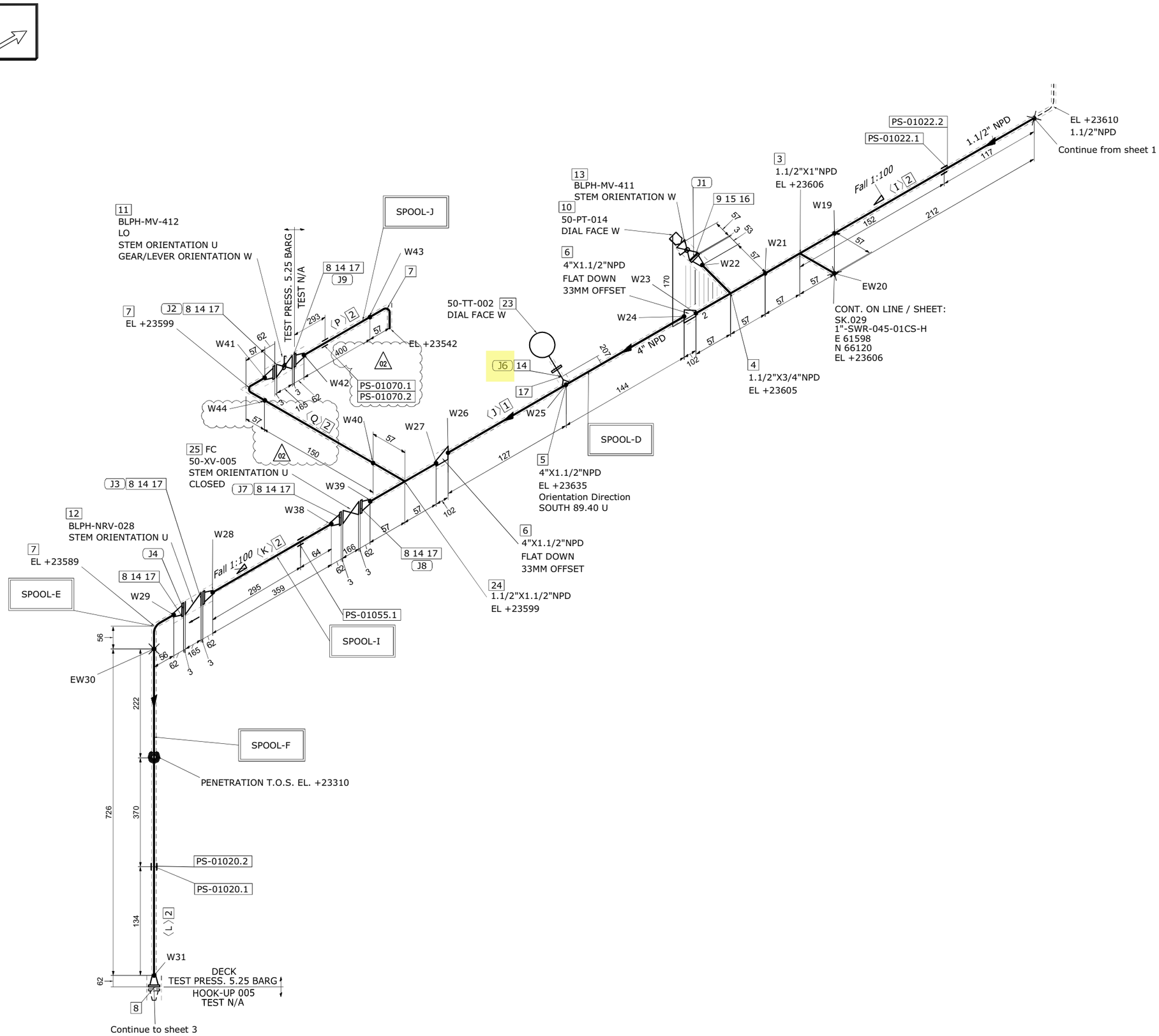
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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 2025-01-17T14:28:55.344Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-17T16:16:22.761Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	80.0 02
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

LINE DATA

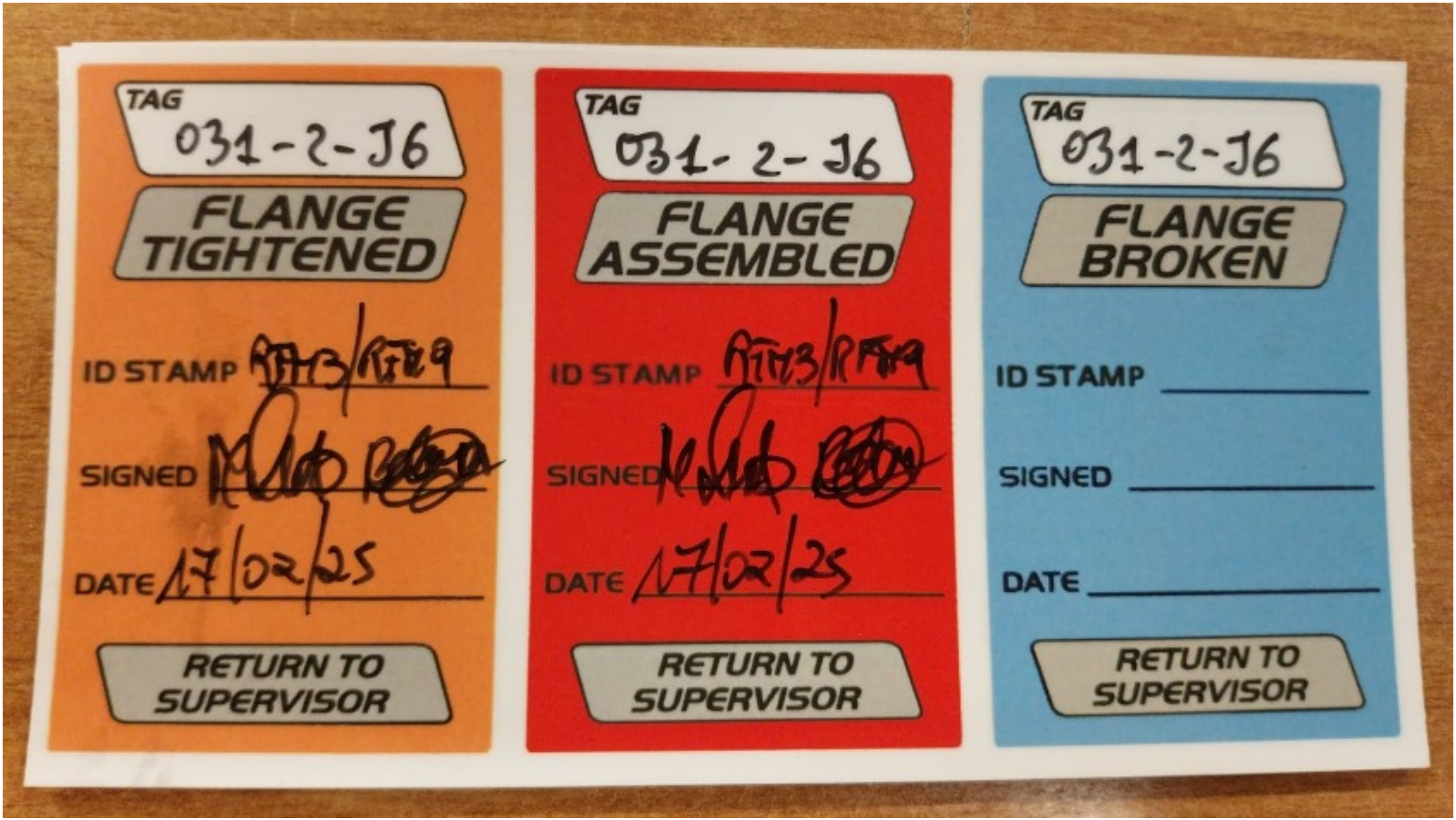
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80025
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

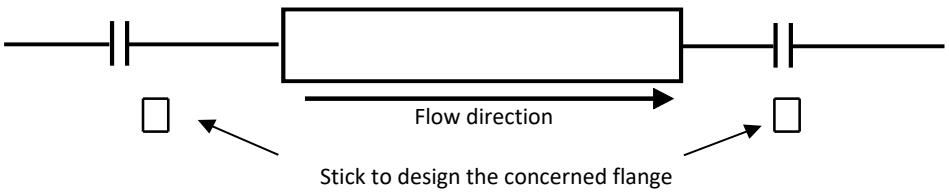
MASTER


TAG
031-2-J6
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 17/02/25
RETURN TO SUPERVISOR
TAG
031-2-J6
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 17/02/25
RETURN TO SUPERVISOR
TAG
031-2-J6
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J7	: Joint 031-2-J7			Dwg	123A90-FDL-PP-DI-00031-02
	S/Sys	55-01	: Waste Water Brine Discharge System			Module	LD/UD
TASK	code	C10004542		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-003

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

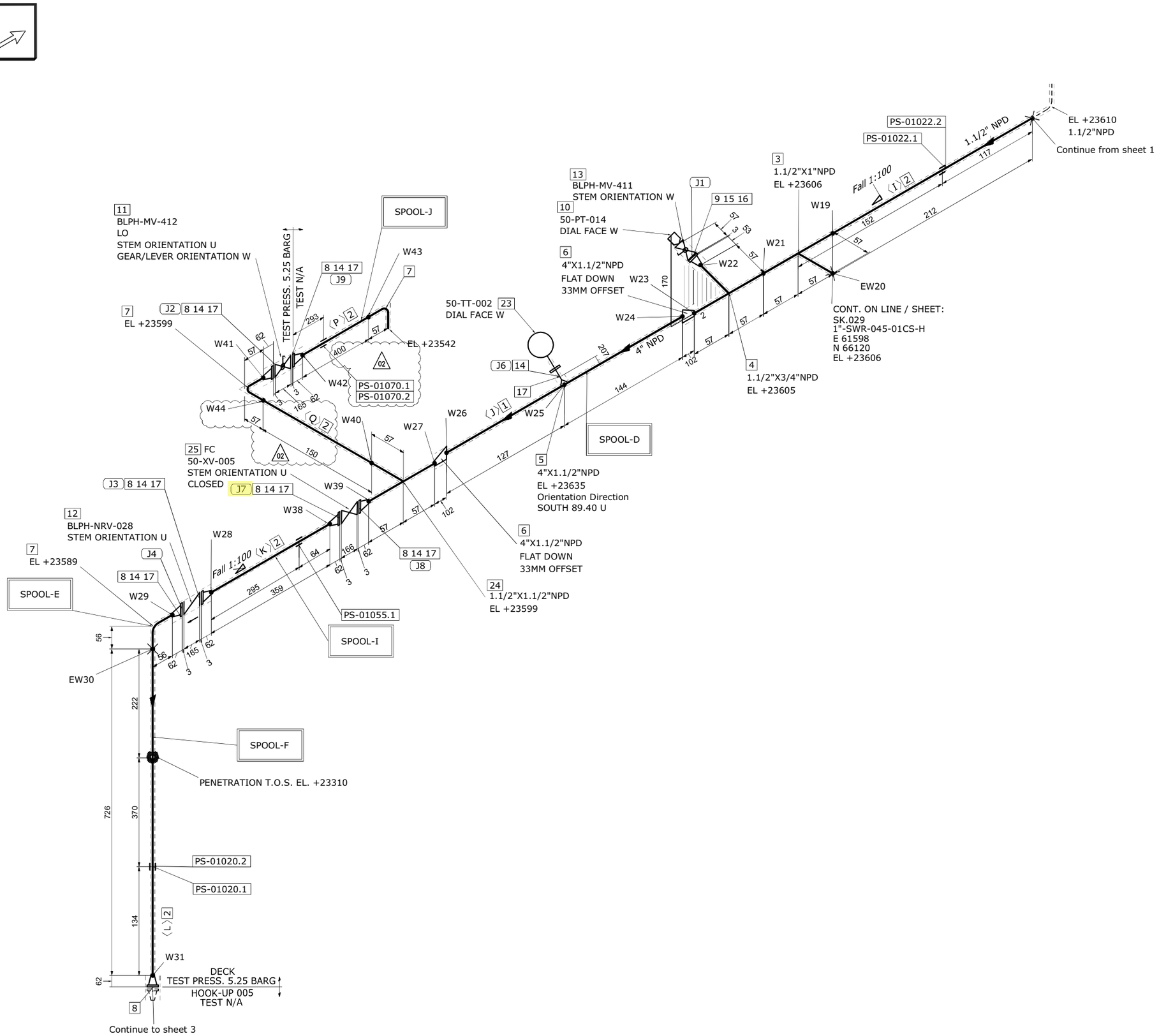
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:33:55.595Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:03:56.743Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

LINE DATA

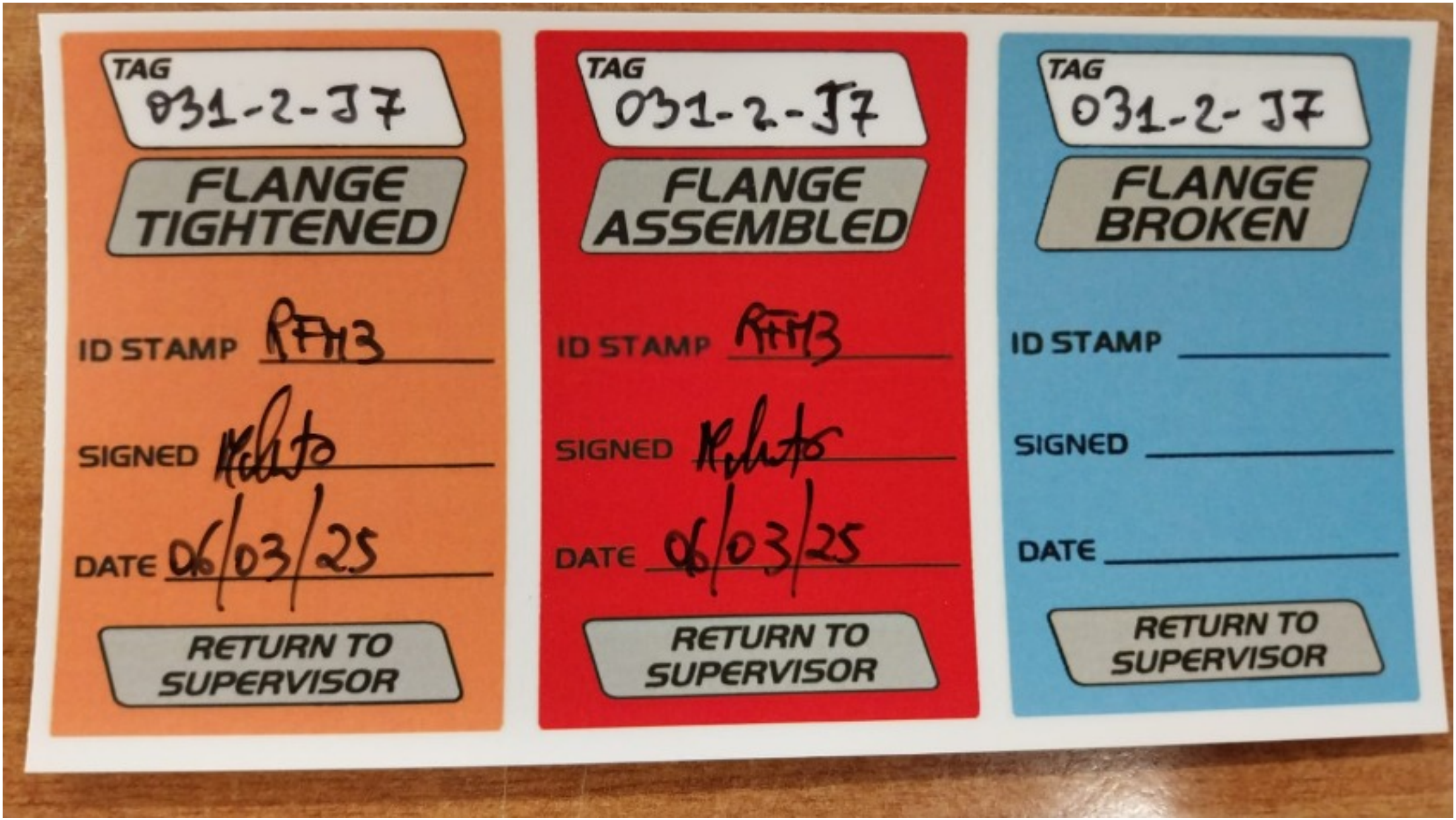
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80025
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

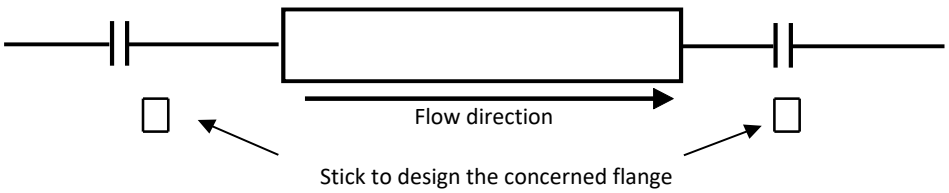
MASTER


TAG
031-2-J7
FLANGE TIGHTENED
ID STAMP RFH3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
031-2-J7
FLANGE ASSEMBLED
ID STAMP RFH3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
031-2-J7
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J8	: Joint 031-2-J8		Dwg	123A90-FDL-PP-DI-00031-02	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/UD	
TASK	code	C10004543	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Piping	Form	TMX27	Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



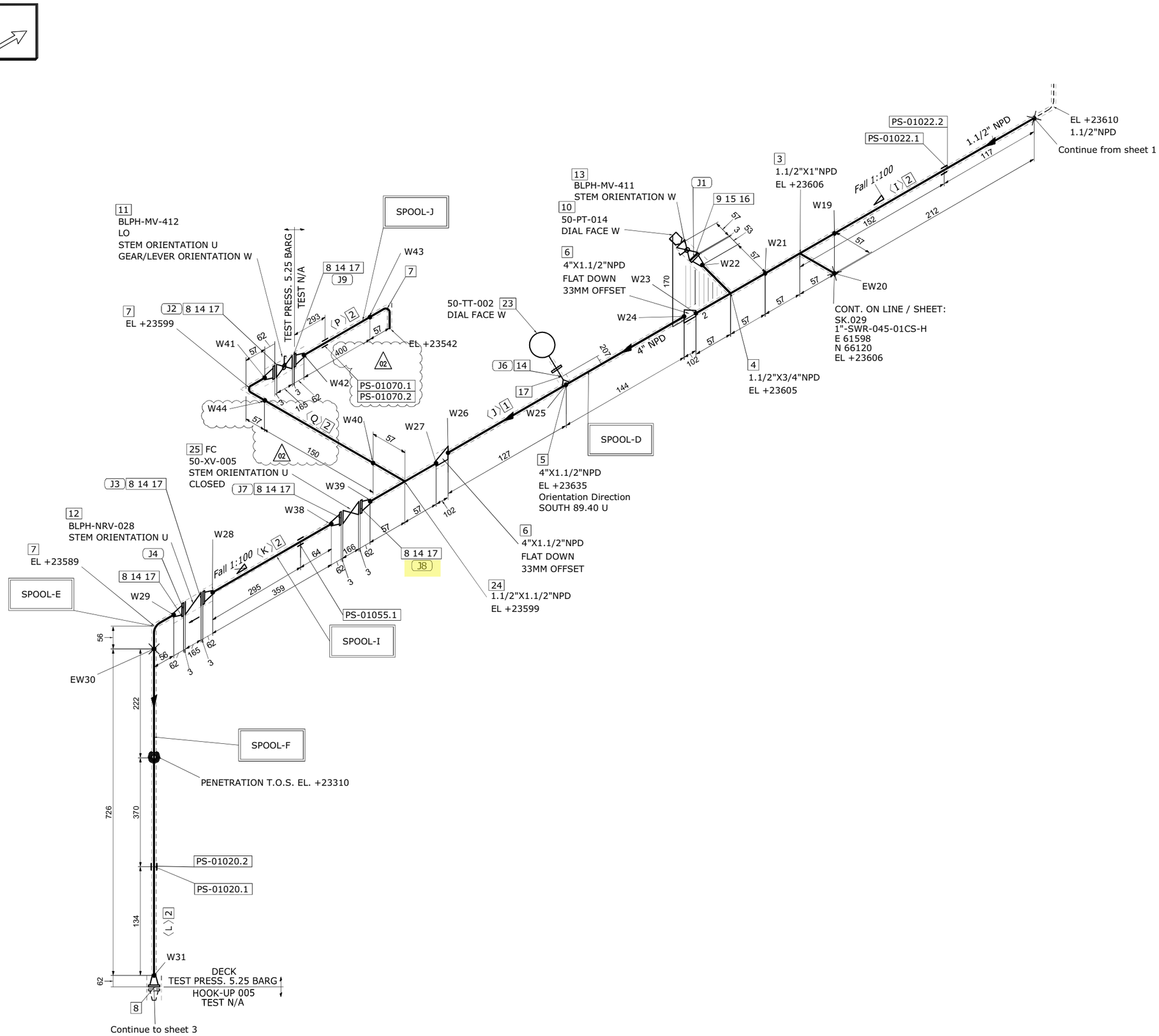
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	2025-03-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:34:13.228Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-03-06T15:04:02.582Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	80.0 02
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1.1/2	212	BEVEL	BEVEL
J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
E	1.5	2.3
F	1.5	5.7
I	3.0	5.5
J	3.0	2.8
MONT	2.5	26.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	14-10-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
DATE	14-10-2024				
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00031	SHEET / OF	2/3
REV.	02				

LINE DATA

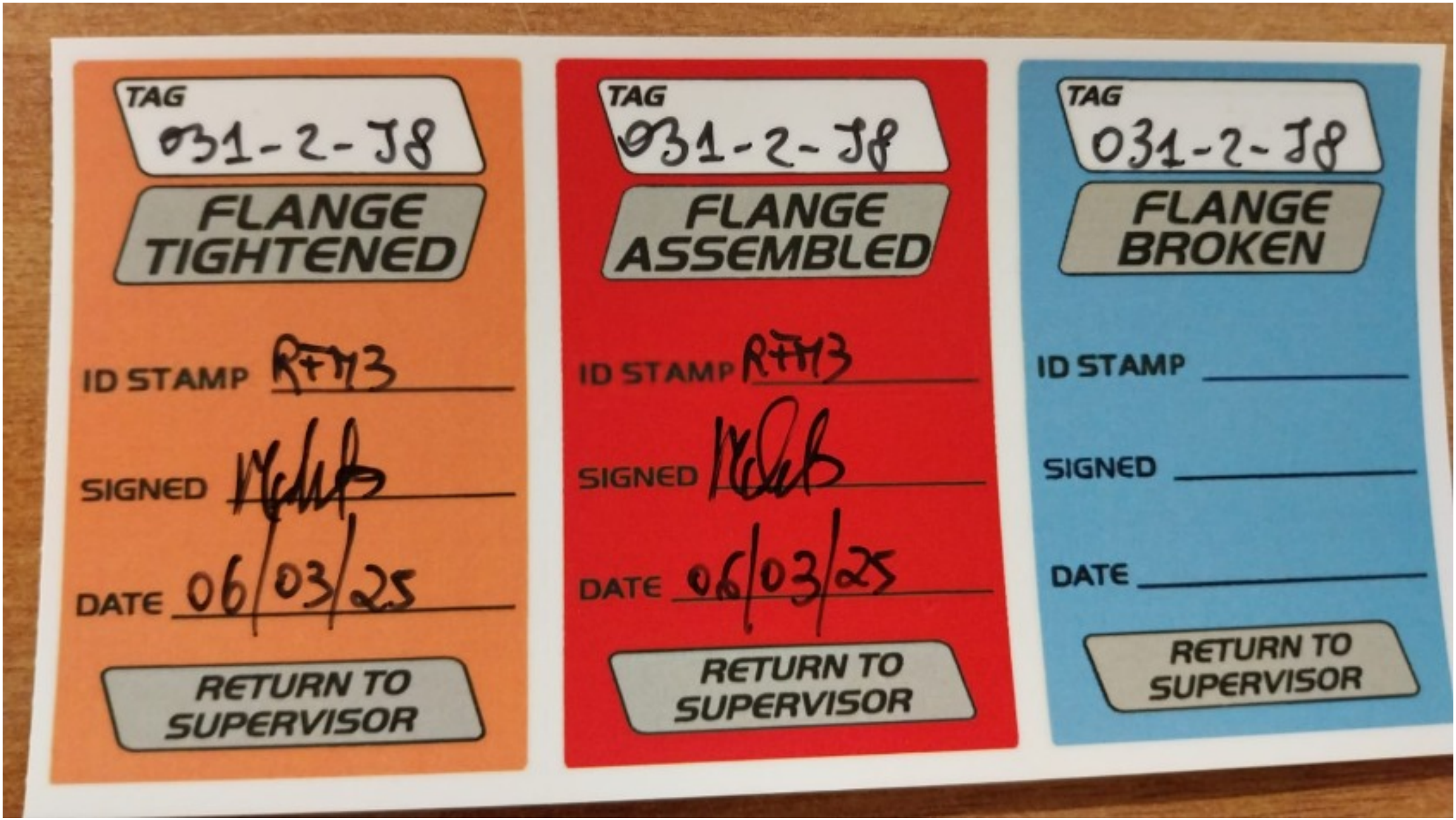
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5	[barg]	TEMP. -46 / 100	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 5.25	[barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80025
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

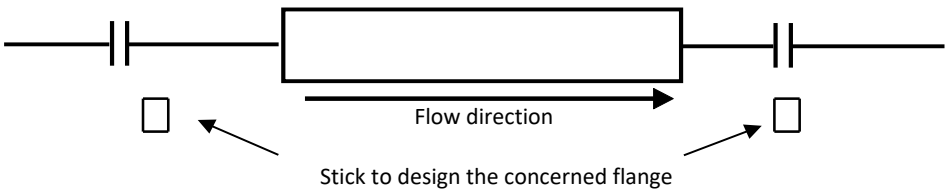
MASTER


TAG
031-2-J8
FLANGE TIGHTENED
ID STAMP R+M3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
031-2-J8
FLANGE ASSEMBLED
ID STAMP R+M3
SIGNED
DATE 06/03/25
RETURN TO SUPERVISOR
TAG
031-2-J8
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	031-2-J9	: Joint 031-2-J9		Dwg	123A90-FDL-PP-DI-00031-02	
	S/Sys	55-01	: Waste Water Brine Discharge System		Module	LD/UD	
TASK	code	C10004544	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Piping	Form	TMX27	Bolt tensioning / torquing

Test Pack N.: TP-003

EQUIPMENT TAG



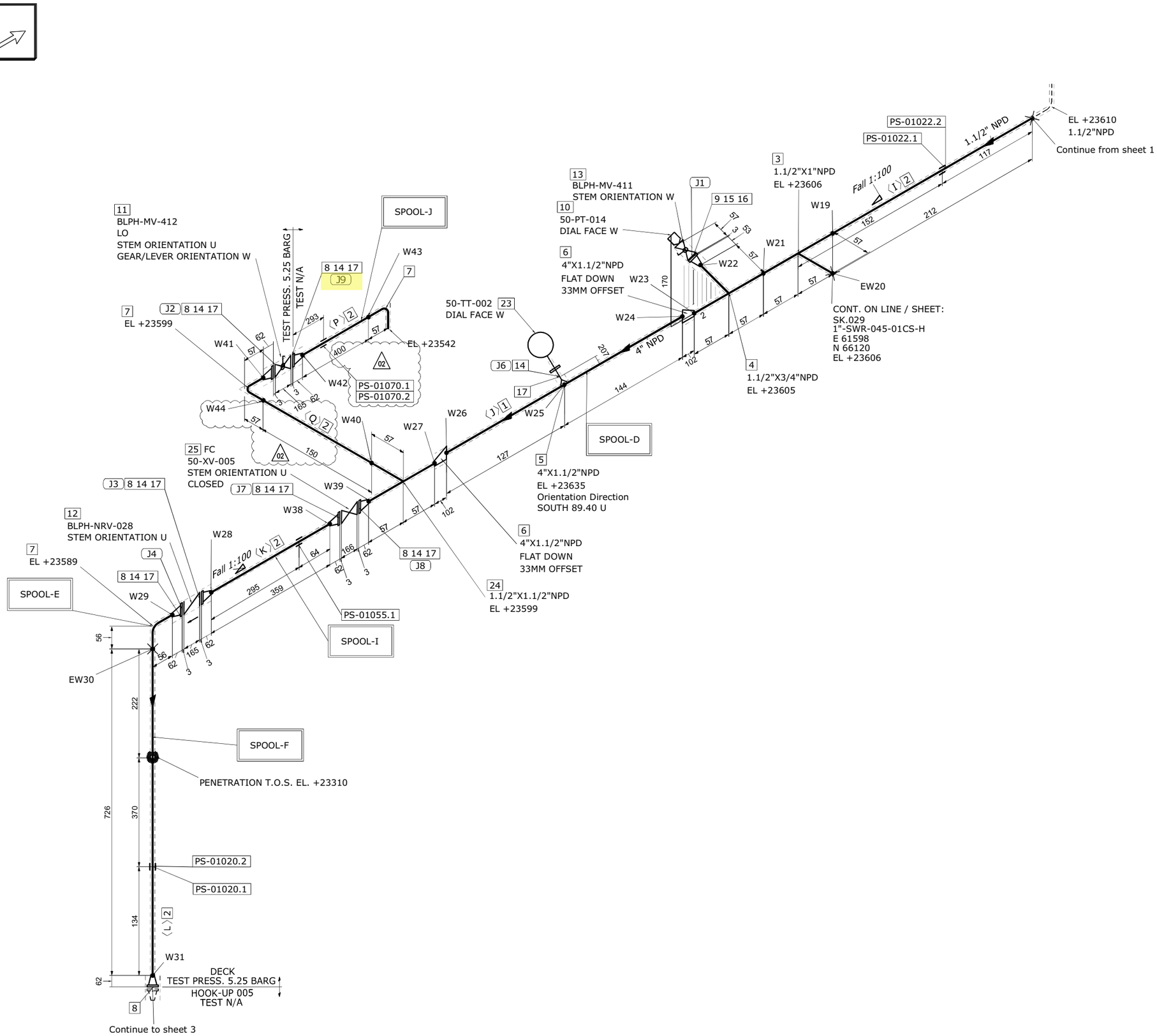
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	Lorenzo Novaga	
Date	2025-01-17	2025-01-17	
Signature	Digitaly signed by Emanuele Delfino 2025-01-17T05:51:30.544Z	Digitaly signed by Lorenzo Novaga 2025-01-17T07:48:49.694Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	4	PIPECS03750400	Pipe ASME B36.10M PE 6,02 SML ASTM/ASME A/SA333 Gr.6	0.3M	4.4
2	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	1.9M 02	10.0
3	1.1/2X1	TER0CS26141H01	Tee Reducing ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
4	1.1/2X3/4	TER0CS04991H3Q	Tee Reducing ASME B16.9 BW 5,08x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.0
5	4X1.1/2	ONFRCS0296041H	NipoFlange Reinforced Manuf.s STD 150LB RF 6,02x5,08 FRG ASTM/ASME A/SA350 Gr.LF2	1	3.3
6	4X1.1/2	REE0CS1728041H	Reducer Eccentric ASME B16.9 BW 6,02x5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	2	3.3
7	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.5
8	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	7	12.6
9	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
24	1.1/2X 1.1/2	TEE0CS05251H00	Tee ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	1.1

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	1/2		Pressure Transmitter - Online	1	2.0
11	1.1/2	VBC0NN24721H00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	14.5
12	1.1/2	VDRNNN02591H00	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
13	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	1	5.0
14	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	7	0.5
15	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
16	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
17	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
23	1.1/2		Temperature Trasmitter 150#	1	0.0
25	1.1/2		ON/OFF Ball Actuator Valve - 150#RF Flanged	1	54.0

FABRICATION WEIGHT [kg]	39.1
ERECTION WEIGHT [kg]	02 80.0
OVERALL WEIGHT [kg]	119.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W19	1.1/2	BW
EW20	1	BW
W21	1.1/2	BW
W22	3/4	BW
W23	1.1/2	BW
W24	4	BW
W25	1.1/2	LET
W26	4	BW
W27	1.1/2	BW
W28	1.1/2	BW
W29	1.1/2	BW
EW30	1.1/2	BW
W31	1.1/2	BW
W38	1.1/2	BW
W39	1.1/2	BW
W40	1.1/2	BW
W41	1.1/2	BW
W42	1.1/2	BW
W43	1.1/2	BW
W44	1.1/2 02	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
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J	4	271	BEVEL	BEVEL
K	1.1/2	359	BEVEL	BEVEL
L	1.1/2	726	BEVEL	BEVEL
P	1.1/2	400	BEVEL	BEVEL
Q	1.1/2	150 02	BEVEL	BEVEL

SUPPORT LIST

PS-01022.1
PS-01022.2
PS-01055.1
PS-01020.1
PS-01020.2
PS-01070.1
PS-01070.2 02

SPOOL	WELD [inches]	WEIGHT [kg]
D	20.75 02	22.8
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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. 1-1/2"-WW-073-01CS-H

SK.031

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 14-10-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00031	SHEET / OF 2/3	REV. 02

LINE DATA

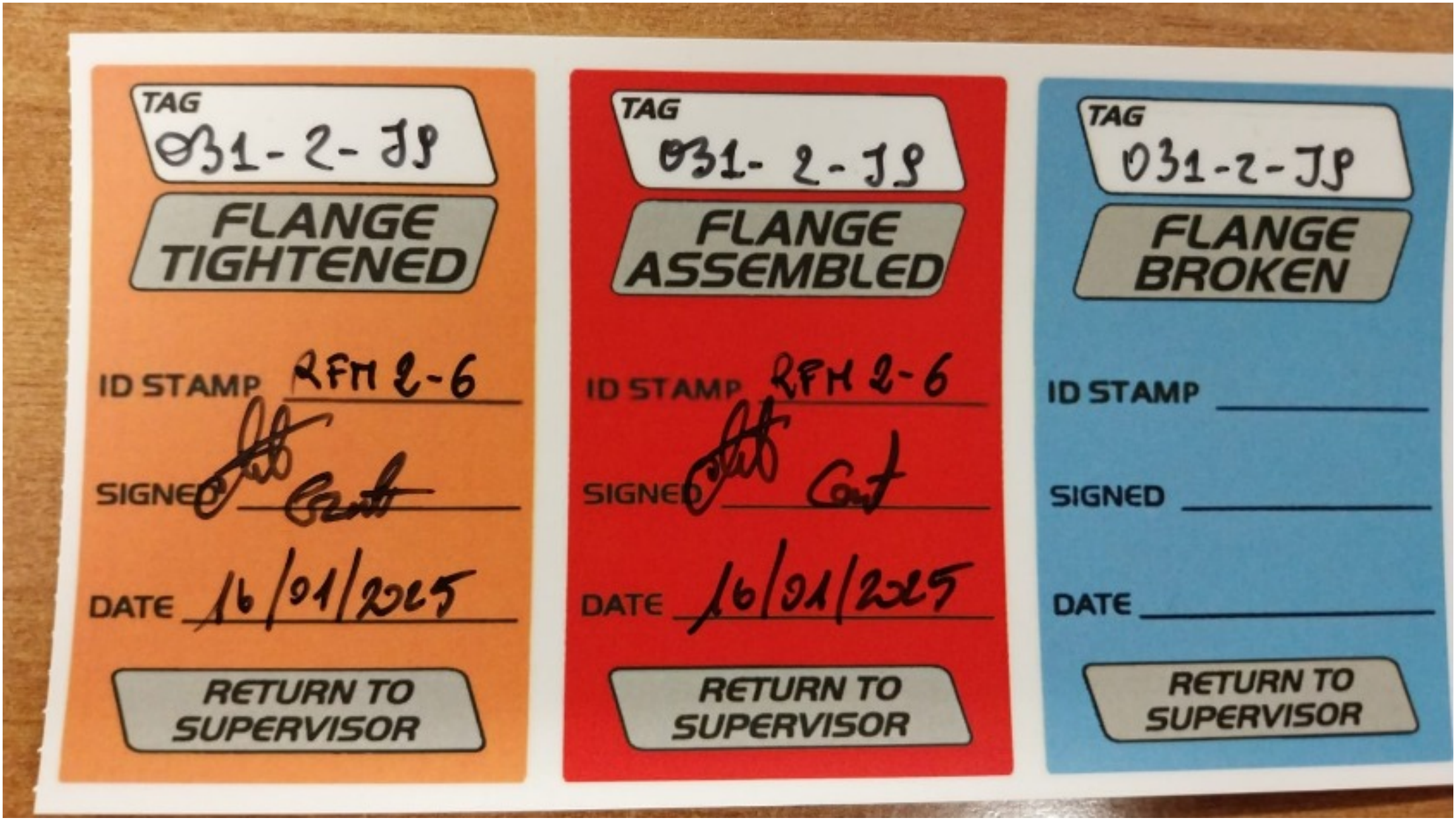
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1D	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80025
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
031-2-JS
FLANGE TIGHTENED
ID STAMP RFM 2-6
SIGNED
DATE 16/01/2025
RETURN TO SUPERVISOR
TAG
031-2-JS
FLANGE ASSEMBLED
ID STAMP RFM 2-6
SIGNED
DATE 16/01/2025
RETURN TO SUPERVISOR
TAG
031-2-JS
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

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