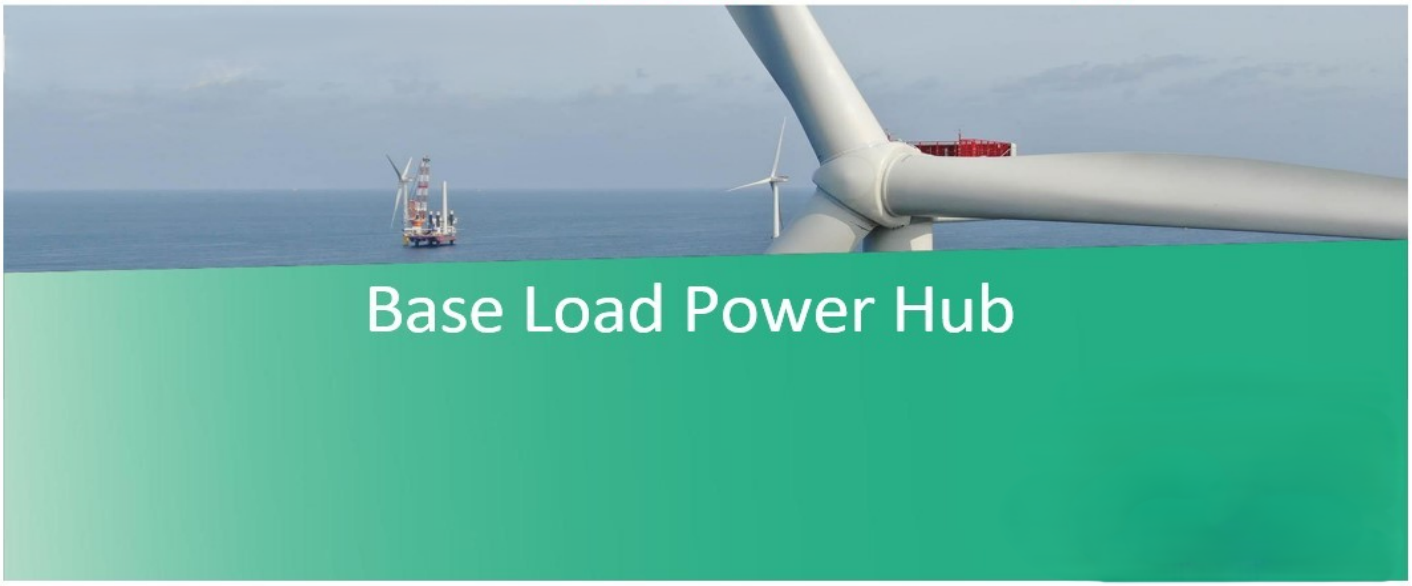
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	64 Nitrogen System
SUBSYSTEM	64-10 Nitrogen Distribution Network

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

Sub System N°:	64-10	Tick as appropriate	ONSHORE	O
Description:	Nitrogen Distribution Network		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*	O
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:	2025-02-28	
System:	64	/	Nitrogen System		
SubSystem:	64-10	/	Nitrogen Distribution Network		

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 26

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Sofia Marchetti	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2025-02-28	2025-02-28	2025-02-28	2025-02-28
Signature	Digitaly signed by Sofia Marchetti 2025-02-28T10:14:06.805Z	Digitaly signed by Anthony Iveson 2025-02-28T15:51:59.182Z	Digitaly signed by CPY NOT PRESEN 2025-02-28T16:20:17.259Z	Digitaly signed by CPY NOT PRESEN 2025-02-28T16:20:22.883Z

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

Instrumental	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
64-FG-001	Flow Gauge - Nitrogen to Hydrogen Vent Header	ONSHORE	C10000949	TJX04	100	2024-12-14	RFC 2
64-PSV-001	Pressure Safety Valve - Nitrogen to Distribution Header Vent System	ONSHORE	C10001191	CJX03	100	2025-02-10	RFC 2
64-PT-002	Pressure Transmitter - Nitrogen to Distribution Header Low Pressure	ONSHORE	C10000912	CJX08	100	2025-02-07	RFC 2
		ONSHORE	C10000950	TJX04	100	2024-10-14	RFC 2
64-PT-031A	Pressure Transmitter - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10000913	CJX08	100	2025-02-07	RFC 2
		ONSHORE	C10000951	TJX04	100	2024-10-14	RFC 2
64-PT-031B	Pressure Transmitter - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10000914	CJX08	100	2025-02-07	RFC 2
		ONSHORE	C10000952	TJX04	100	2024-10-14	RFC 2
64-PV-031A	Control Valve - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10001193	CJX27	100	2025-01-28	RFC 2
64-PV-031B	Control Valve - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10001194	CJX27	100	2025-01-28	RFC 2
64-PY-031A	Electropositioner - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002027	CJX00	100	2025-01-27	RFC 2
64-PY-031B	Electropositioner - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002028	CJX00	100	2025-01-27	RFC 2
64-ZSHL-031A	Open/closed Limit Switches - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002029	CJX00	100	2025-01-28	RFC 2
64-ZSHL-031B	Open/closed Limit Switches - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002030	CJX00	100	2025-01-28	RFC 2
AV-63005/64-PV-031A	Pneumatic Connection Air Supply - 64-PV-031A	ONSHORE	C10001957	CJX06	100	2025-01-29	RFC 2
AV-63005/64-PV-031B	Pneumatic Connection Air Supply - 64-PV-031B	ONSHORE	C10001958	CJX06	100	2025-01-29	RFC 2
AV-63010/64-SDV-001	Pneumatic Connection Air Supply - 64-SDV-001	ONSHORE	C10001977	CJX06	100	2025-02-04	RFC 2
BLPH-MV-386/64-PT-031A	Process Connection Nitrogen Gas - 64-PT-031A	ONSHORE	C10001992	CJX06	100	2025-02-12	RFC 2
C-64-PT-002/00-JE-21002	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000139	CJX10	100	2025-02-07	RFC 2
C-64-PT-031A/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000053	CJX10	100	2025-02-07	RFC 2
C-64-PT-031B/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000054	CJX10	100	2025-02-07	RFC 2
C-64-PY-031A/00-JE-11004	E/P POSITIONER / MARSHALLING PCS	ONSHORE	C10000055	CJX10	100	2025-01-27	RFC 2
C-64-PY-031B/00-JE-11004	E/P POSITIONER / MARSHALLING PCS	ONSHORE	C10000056	CJX10	100	2025-01-27	RFC 2
C-64-SDV-001/00-JE-22002	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000157	CJX10	100	2025-02-05	RFC 2
C-64-SDY-001/00-JE-23002	SOLENOID VALVE / MARSHALLING PCS	ONSHORE	C10001839	CJX10	100	2025-02-05	RFC 2
C-64-ZSH-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000108	CJX10	100	2025-01-27	RFC 2
C-64-ZSH-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000110	CJX10	100	2025-01-27	RFC 2
C-64-ZSL-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000107	CJX10	100	2025-01-27	RFC 2
C-64-ZSL-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000109	CJX10	100	2025-01-27	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

Instrumental	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
C-64-ZT-031A/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000059	CJX10	100	2025-01-27	RFC 2
C-64-ZT-031B/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000060	CJX10	100	2025-01-27	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
020-1-J1	Joint 020-1-J1	ONSHORE	C10004081	TMX27	100	2025-01-14	RFC 2
020-1-J2	Joint 020-1-J2	ONSHORE	C10004082	TMX27	100	2025-01-14	RFC 2
034-1-J1	Joint 034-1-J1	ONSHORE	C10004083	TMX27	100	2025-01-17	RFC 2
034-1-J2	Joint 034-1-J2	ONSHORE	C10004084	TMX27	100	2025-01-16	RFC 2
034-1-J3	Joint 034-1-J3	ONSHORE	C10004085	TMX27	100	2025-02-03	RFC 2
034-1-J4	Joint 034-1-J4	ONSHORE	C10004086	TMX27	100	2025-02-03	RFC 2
034-1-J5	Joint 034-1-J5	ONSHORE	C10004087	TMX27	100	2025-02-19	RFC 2
035-1-J1	Joint 035-1-J1	ONSHORE	C10004226	TMX27	100	2025-01-23	RFC 2
035-1-J2	Joint 035-1-J2	ONSHORE	C10004227	TMX27	100	2025-01-23	RFC 2
035-1-J3	Joint 035-1-J3	ONSHORE	C10004228	TMX27	100	2025-01-15	RFC 2
035-1-J4	Joint 035-1-J4	ONSHORE	C10004229	TMX27	100	2025-01-15	RFC 2
035-1-J5	Joint 035-1-J5	ONSHORE	C10004230	TMX27	100	2025-02-03	RFC 2
045-1-J1	Joint 045-1-J1	ONSHORE	C10004108	TMX27	100	2025-01-14	RFC 2
045-1-J2	Joint 045-1-J2	ONSHORE	C10004109	TMX27	100	2025-01-14	RFC 2
046-1-J1	Joint 046-1-J1	ONSHORE	C10004110	TMX27	100	2025-01-14	RFC 2
046-1-J2	Joint 046-1-J2	ONSHORE	C10004111	TMX27	100	2025-01-14	RFC 2
047-1-J1	Joint 047-1-J1	ONSHORE	C10004112	TMX27	100	2025-01-14	RFC 2
047-1-J2	Joint 047-1-J2	ONSHORE	C10004113	TMX27	100	2025-01-14	RFC 2
048-1-J1	Joint 048-1-J1	ONSHORE	C10004114	TMX27	100	2025-01-14	RFC 2
048-1-J2	Joint 048-1-J2	ONSHORE	C10004115	TMX27	100	2025-01-14	RFC 2
049-1-J1	Joint 049-1-J1	ONSHORE	C10004116	TMX27	100	2025-01-15	RFC 2
049-1-J2	Joint 049-1-J2	ONSHORE	C10004117	TMX27	100	2025-01-15	RFC 2
062-2-J1	Joint 062-2-J1	ONSHORE	C10004118	TMX27	100	2025-01-18	RFC 2
062-2-J2	Joint 062-2-J2	ONSHORE	C10004119	TMX27	100	2025-01-18	RFC 2
062-2-J3	Joint 062-2-J3	ONSHORE	C10004120	TMX27	100	2025-01-16	RFC 2
064-1-J1	Joint 064-1-J1	ONSHORE	C10003927	TMX27	100	2025-01-15	RFC 2
064-1-J2	Joint 064-1-J2	ONSHORE	C10003928	TMX27	100	2025-01-15	RFC 2
064-1-J3	Joint 064-1-J3	ONSHORE	C10003929	TMX27	100	2025-01-20	RFC 2
064-1-J4	Joint 064-1-J4	ONSHORE	C10003930	TMX27	100	2025-01-20	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
064-1-J5	Joint 064-1-J5	ONSHORE	C10003931	TMX27	100	2025-01-20	RFC 2
065-1-J1	Joint 065-1-J1	ONSHORE	C10004121	TMX27	100	2025-02-03	RFC 2
065-1-J2	Joint 065-1-J2	ONSHORE	C10004122	TMX27	100	2025-02-03	RFC 2
065-1-J3	Joint 065-1-J3	ONSHORE	C10004123	TMX27	100	2025-01-30	RFC 2
066-1-J3	Joint 066-1-J3	ONSHORE	C10004127	TMX27	100	2025-01-13	RFC 2
066-1-J4	Joint 066-1-J4	ONSHORE	C10004128	TMX27	100	2025-01-16	RFC 2
066-1-J5	Joint 066-1-J5	ONSHORE	C10004129	TMX27	100	2025-01-16	RFC 2
067-1-J1	Joint 067-1-J1	ONSHORE	C10004242	TMX27	100	2025-01-16	RFC 2
090-1-J1	Joint 090-1-J1	ONSHORE	C10004012	TMX27	100	2025-01-14	RFC 2
090-1-J2	Joint 090-1-J2	ONSHORE	C10004013	TMX27	100	2025-01-14	RFC 2
090-1-J3	Joint 090-1-J3	ONSHORE	C10004014	TMX27	100	2025-01-20	RFC 2
090-1-J4	Joint 090-1-J4	ONSHORE	C10004015	TMX27	100	2025-01-20	RFC 2
090-1-J5	Joint 090-1-J5	ONSHORE	C10004016	TMX27	100	2025-01-20	RFC 2
091-1-J1	Joint 091-1-J1	ONSHORE	C10004021	TMX27	100	2025-01-14	RFC 2
091-1-J2	Joint 091-1-J2	ONSHORE	C10004022	TMX27	100	2025-01-14	RFC 2
091-1-J3	Joint 091-1-J3	ONSHORE	C10004023	TMX27	100	2025-01-20	RFC 2
091-1-J4	Joint 091-1-J4	ONSHORE	C10004024	TMX27	100	2025-01-20	RFC 2
091-1-J5	Joint 091-1-J5	ONSHORE	C10004025	TMX27	100	2025-01-20	RFC 2
092-1-J1	Joint 092-1-J1	ONSHORE	C10004030	TMX27	100	2025-01-14	RFC 2
092-1-J2	Joint 092-1-J2	ONSHORE	C10004031	TMX27	100	2025-01-14	RFC 2
092-1-J3	Joint 092-1-J3	ONSHORE	C10004032	TMX27	100	2025-01-20	RFC 2
092-1-J4	Joint 092-1-J4	ONSHORE	C10004033	TMX27	100	2025-01-20	RFC 2
092-1-J5	Joint 092-1-J5	ONSHORE	C10004034	TMX27	100	2025-01-20	RFC 2
093-1-J1	Joint 093-1-J1	ONSHORE	C10004039	TMX27	100	2025-01-14	RFC 2
093-1-J2	Joint 093-1-J2	ONSHORE	C10004040	TMX27	100	2025-01-14	RFC 2
093-1-J3	Joint 093-1-J3	ONSHORE	C10004041	TMX27	100	2025-01-20	RFC 2
093-1-J4	Joint 093-1-J4	ONSHORE	C10004042	TMX27	100	2025-01-20	RFC 2
093-1-J5	Joint 093-1-J5	ONSHORE	C10004043	TMX27	100	2025-01-20	RFC 2
094-1-J1	Joint 094-1-J1	ONSHORE	C10004048	TMX27	100	2025-01-15	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
094-1-J2	Joint 094-1-J2	ONSHORE	C10004049	TMX27	100	2025-01-15	RFC 2
094-1-J3	Joint 094-1-J3	ONSHORE	C10004050	TMX27	100	2025-01-20	RFC 2
094-1-J4	Joint 094-1-J4	ONSHORE	C10004051	TMX27	100	2025-01-20	RFC 2
094-1-J5	Joint 094-1-J5	ONSHORE	C10004052	TMX27	100	2025-01-20	RFC 2
097-1-J1	Joint 097-1-J1	ONSHORE	C10004135	TMX27	100	2025-01-15	RFC 2
097-1-J2	Joint 097-1-J2	ONSHORE	C10004136	TMX27	100	2025-01-15	RFC 2
097-1-J3	Joint 097-1-J3	ONSHORE	C10004137	TMX27	100	2025-01-16	RFC 2
122-1-J1	Joint 122-1-J1	ONSHORE	C10004167	TMX27	100	2025-01-27	RFC 2
122-1-J2	Joint 122-1-J2	ONSHORE	C10004168	TMX27	100	2025-01-27	RFC 2
64-10-TP-020	Test Pack 64-10-TP-020	ONSHORE	C10003381	CLX02A	100	2024-12-13	RFC 2
		ONSHORE	C10003382	CLX02B	100	2025-02-07	RFC 2
		ONSHORE	C10003383	CXX02	100	2025-02-11	RFC 2
		ONSHORE	C10003384	TMX03	100	2024-12-13	RFC 2
		ONSHORE	C10003385	TMX05	100	2024-12-13	RFC 2
		ONSHORE	C10003388	TPLX05	100	2024-12-13	RFC 2
64-10-TP-023	Test Pack 64-10-TP-023	ONSHORE	C10003406	CLX02A	100	2024-12-24	RFC 2
		ONSHORE	C10003407	CLX02B	100	2025-02-06	RFC 2
		ONSHORE	C10003408	CXX02	100	2025-02-05	RFC 2
		ONSHORE	C10003409	TMX03	100	2024-12-24	RFC 2
		ONSHORE	C10003410	TMX05	100	2024-12-24	RFC 2
		ONSHORE	C10003412	TPLX05	100	2024-12-31	RFC 2
64-10-TP-047	Test Pack 64-10-TP-047	ONSHORE	C10003589	CLX02A	100	2025-01-03	RFC 2
		ONSHORE	C10003590	CLX02B	100	2025-02-11	RFC 2
		ONSHORE	C10003591	CXX02	100	2025-02-11	RFC 2
		ONSHORE	C10003592	TMX03	100	2025-01-03	RFC 2
		ONSHORE	C10003593	TMX05	100	2025-01-03	RFC 2
		ONSHORE	C10003595	TPLX05	100	2025-01-03	RFC 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
64-10-TP-051	Test Pack 64-10-TP-051	ONSHORE	C10003609	CLX02A	100	2024-12-10	RFC 2
		ONSHORE	C10003610	CLX02B	100	2025-02-03	RFC 2
		ONSHORE	C10003611	CXX02	100	2025-02-05	RFC 2

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STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC

ATEX	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
64-FG-001	Flow Gauge - Nitrogen to Hydrogen Vent Header	ONSHORE	C10000911	CJX01	100	2025-02-19	RFC 2
64-PCV-001	Air Set Filter - Hyrogen Storage to A-80000 Package Vent System	ONSHORE	C10002043	CJX01	100	2025-01-31	RFC 2
64-PG-001	Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10004848	CJX01	100	2025-02-01	RFC 2
64-PSV-001_1	Safety Valve - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10004852	CJX01	100	2025-02-03	RFC 2
64-SDV-001	On/Off Valve - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10001617	CJX01	100	2025-01-31	RFC 2
64-SDY-001	Solenoid Valve - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10002041	CJX01	100	2025-02-05	RFC 2
64-ZSHL-001	Limit Switch box- Nitrogen to Distribution Header Shut-Down	ONSHORE	C10002042	CJX01	100	2025-02-05	RFC 2

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	64	Nitrogen System
SUBSYSTEM	64-10	Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003202	A	035-1-J1 C10004226	The Instrument is in AISI 316 but the line is in CS. The isometric requires no insulation kit and flange management has been completed such as. But	.		KAlbonetti 2025-01-25	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003203	A	035-1-J2 C10004227	The Instrument is in AISI 316 but the line is in CS. The isometric requires no insulation kit and flange management has been completed such as. But	.		KAlbonetti 2025-01-25	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003577	A	64-10-TP-023 C10003407	Flange management activity to be done on joint J5 (BLPH-MV-167). Broken joint done without authorization	.		AMancini 2025-02-06	2025-02-20	LNovaga 2025-02-20	2025-02-20
C30003615	A	64-10-TP-023 C10003407	Check Valve BLPH-NRV-019 has no flow direction market visibly on its body. It is not possibile to confirm it has been mounted correctly	.		LNovaga 2025-02-08	2025-02-28	KAlbonetti 2025-02-28	2025-02-28
C30003681	A	64-10-TP-047 C10003591	Earthing lug totally painted.	.		KAlbonetti 2025-02-11	2025-02-26	KAlbonetti 2025-02-26	2025-02-26
C30001618	B	64-10-TP-051 C10003609	Spool has not been installed in erection. Inspection points from 4 to 6 of the "Inspection before testing" to be checked during	.		KAlbonetti 2024-12-10	2025-01-16	LNovaga 2025-01-16	2025-01-16
C30001846	B	64-10-TP-020 C10003381	Position F1 of the support PS-0358 has Horizontal misalignment.	-		MBruschi 2024-12-13	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001848	B	64-10-TP-020 C10003381	Position F1 of the support PS-03600 has horizontal misalignment.	-		MBruschi 2024-12-13	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001852	B	64-10-TP-020 C10003381	All supports S-211 need to check the gap, isolation rubber, ptfe bounded and lock nut in the reinstatement phase.	-		MBruschi 2024-12-13	2025-02-08	LNovaga 2025-02-08	2025-02-08

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PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001899	B	64-10-TP-020 C10003381	Support PS-02012 not assembled in erection. (Due lack of Valves' positioning)	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001900	B	64-10-TP-020 C10003381	Support PS-02016 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001901	B	64-10-TP-020 C10003381	Support PS-02020 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001904	B	64-10-TP-020 C10003381	Support PS-03014 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001909	B	64-10-TP-020 C10003381	Support PS-03037 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001910	B	64-10-TP-020 C10003381	Support PS-03047 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30002117	B	64-10-TP-023 C10003406	SK.34 (2/2): Position F2 of piping support PS-02095 is actually a HEA120 instead of UPN120.	.		KAlbonetti 2024-12-20			
C30002118	B	64-10-TP-023 C10003406	For all supports type S-211 the isolating ruber, the gap, the lock nuts and the washers shall be checked again during reinstatement because they	.		KAlbonetti 2024-12-20	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002135	B	64-10-TP-023 C10003406	Sk.66 (Sh.1/1): Support PS-01031.2: there is no STD S-211 and the structural part has not been drilled yet.	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002136	B	64-10-TP-023 C10003406	SK.034 (SH.1/2) spools A and B; SK.097 (SH.1/1) Spools A and B: these spools are moved +40 mm eastward. Alignement of supports and connection	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002137	B	64-10-TP-023 C10003406	Sk.34 (Sh.1/2): Support PS-01025.3: position R1 has not been assembled yet.	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002145	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) spool D: Flange joint J3 has been only temporary tightened. Flange management to be done during reinstatement.	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002146	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) spool G: between supports PS-03123.1 and PS-03122.1 the pipe is bended.	.		KAlbonetti 2024-12-24			
C30002147	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) Spool F: earthing plate W24. Position from W26 shall be changed from 638 mm to 350 mm.	.		KAlbonetti 2024-12-24			
C30002155	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) the support PS-02094.1 has been mounted and welded with a clockwise turn of 90°. In addition the L profile is shorter of 15	.		KAlbonetti 2024-12-24	2025-02-27	LNovaga 2025-02-27	2025-02-27
C30002337	B	64-10-TP-047 C10003589	SK.065 (SH.1/1): For PS-02024.1 the position R1 has not been installed yet. The support is also 5 mm shorter.	.		KAlbonetti 2025-01-03	2025-02-14	LNovaga 2025-02-14	2025-02-14
C30002339	B	64-10-TP-047 C10003589	Spool has not been installed in erection. Inspection point n.5 of the ITR to be checked during reinstatement.	.		KAlbonetti 2025-01-03	2025-02-14	LNovaga 2025-02-14	2025-02-14
C30003465	B	64-10-TP-051 C10003610	Standard S-211 on the support "PS-01009" must have 2mm of gap.	.		MBruschi 2025-02-03	2025-02-11	KAlbonetti 2025-02-11	2025-02-11

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003550	B	64-10-TP-023 C10003408	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05			
C30003551	B	64-10-TP-023 C10003408	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05			
C30003558	B	64-10-TP-051 C10003611	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05			
C30003559	B	64-10-TP-051 C10003611	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05			
C30003578	B	64-10-TP-023 C10003408	The valve BLPH-MV-386 has drain plug not painted.	.		KAlbonetti 2025-02-06			
C30003672	B	64-10-TP-020 C10003383	Several touch-ups to be still made.	.		KAlbonetti 2025-02-11			
C30003678	B	64-10-TP-047 C10003591	Color coding and fluid direction are missing from the line.	.		KAlbonetti 2025-02-11			
C30004168	B	64-10-TP-023 C10003406	Check Valve BLPH-NRV-019 has no flow direction market visibly on its body.	.		KAlbonetti 2025-02-28			
C30004169	B	64-10-TP-047 C10003590	Earthing lug on TP-47 (Sk.65) has been connected to two different earthing cables. Disconnect one and put to earth on structure or	.		KAlbonetti 2025-02-28			

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003216	B	C-64-ZSL-031B/ 00-JE-12006 C10000109	Missing cable tag SS , near the JB 00-JE-12006	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003217	B	C-64-ZSL-031B/ 00-JE-12006 C10000109	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003218	B	C-64-ZSH-031B/ 00-JE-12006 C10000110	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003219	B	C-64-ZSH-031B/ 00-JE-12006 C10000110	Missing cable tag SS , near the JB 00-JE-12006.	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003220	B	C-64-PY-031A/0 0-JE-11004 C10000055	Wrong cores identification tag. side J.B. 00-JE-11004 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003221	B	C-64-PY-031B/0 0-JE-11004 C10000056	Wrong cores identification tag. side J.B. 00-JE-11004 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003222	B	C-64-ZT-031A/0 0-JE-11005 C10000059	Wrong cores identification tag. side J.B. 00-JE-11005 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003223	B	C-64-ZT-031A/0 0-JE-11005 C10000059	Missing cable tag SS , near the JB 00-JE-11005	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003224	B	C-64-ZT-031A/0 0-JE-11005 C10000059	Wrong cores identification tag. side 64-ZT-031A . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003225	B	C-64-ZT-031B/00-JE-11005 C10000060	Wrong cores identification tag. side J.B. 00-JE-12005 / stru. 64-ZT-031B . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003226	B	C-64-ZT-031B/00-JE-11005 C10000060	Missing cable tag SS , near the JB 00-JE-11005	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003227	B	C-64-ZSL-031A/00-JE-12006 C10000107	Missing cable tag SS , near the JB 00-JE-12006	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003228	B	C-64-ZSL-031A/00-JE-12006 C10000107	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003229	B	C-64-ZSH-031A/00-JE-12006 C10000108	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003230	B	C-64-ZSH-031A/00-JE-12006 C10000108	Missing cable tag SS , near the JB 00-JE-12006	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003232	B	64-ZSHL-031B C10002030	The visual indicator cover (limit switch ZSHL) is damaged. To be replaced	.		APolo 2025-01-28			
C30003236	B	64-PV-031A C10001193	Missing suitable Plug "on Air set Filter".	.		APolo 2025-01-28			
C30003238	B	64-PV-031B C10001194	Missing suitable Plug "on Air set Filter".	.		APolo 2025-01-28			

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003570	B	C-64-SDY-001/00-JE-23002 C10001839	The cable installed is temporary. To be replaced	.		APolo 2025-02-05			
C30003580	B	C-64-PT-002/00-JE-21002 C10000139	The cable (between external cable tray and instrument) to be dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003581	B	64-PT-002 C10000912	Missing traffolyte tag side instrument	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003588	B	64-PT-002 C10000912	Missing tag SS , on the instrument.	.		APolo 2025-02-07	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003589	B	64-PT-002 C10000912	The earthing cable of the instrument to be connected and dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003590	B	C-64-PT-031B/00-JE-11004 C10000054	The cable (between external cable tray and instrument) to be dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003591	B	64-PT-031B C10000914	The earthing cable of the instrument to be connected and dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003592	B	64-PT-031B C10000914	Missing traffolyte tag side instrument	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003593	B	64-PT-031B C10000914	Missing tag SS , on the instrument.	.		APolo 2025-02-07	2025-02-21	AAndreani 2025-02-21	2025-02-21

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003598	B	C-64-PT-031A/00-JE-11004 C10000053	The cable (between external cable tray and instrument) to be dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003599	B	64-PT-031A C10000913	Missing traffolyte tag side instrument	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003600	B	64-PT-031A C10000913	Missing tag SS , on the instrument.	.		APolo 2025-02-07	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003601	B	64-PT-031A C10000913	The earthing cable of the instrument to be connected and dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003639	B	64-PSV-001 C10001191	Touch-up is required	.		GBertuccelli 2025-02-10			

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SYSTEM 64 Nitrogen System
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ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003421	B	64-SDV-001 C10001617	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31			
C30003422	B	64-SDV-001 C10001617	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			
C30003462	B	64-PG-001 C10004848	Equipment ATEX label is missing	.		Lmussi 2025-02-01			
C30003463	B	64-PG-001 C10004848	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003498	B	64-PSV-001_1 C10004852	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003499	B	64-PSV-001_1 C10004852	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003500	B	64-PSV-001_1 C10004852	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003501	B	64-PSV-001_1 C10004852	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003562	B	64-ZSHL-001 C10002042	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			

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SYSTEM	64	Nitrogen System
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ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003571	B	64-SDY-001 C10002041	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003572	B	64-SDY-001 C10002041	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30004019	B	64-FG-001 C10000911	Vendor to confirm earthing connection method	.		Lmussi 2025-02-19			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

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SYSTEM 64 Nitrogen System

SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003202	A	035-1-J1 C10004226	The Instrument is in AISI 316 but the line is in CS. The isometric requires no insulation kit and flange management has been completed such as. But	.		KAlbonetti 2025-01-25	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003203	A	035-1-J2 C10004227	The Instrument is in AISI 316 but the line is in CS. The isometric requires no insulation kit and flange management has been completed such as. But	.		KAlbonetti 2025-01-25	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30003577	A	64-10-TP-023 C10003407	Flange management activity to be done on joint J5 (BLPH-MV-167). Broken joint done without authorization	.		AMancini 2025-02-06	2025-02-20	LNovaga 2025-02-20	2025-02-20
C30003615	A	64-10-TP-023 C10003407	Check Valve BLPH-NRV-019 has no flow direction market visibly on its body. It is not possibile to confirm it has been mounted correctly	.		LNovaga 2025-02-08	2025-02-28	KAlbonetti 2025-02-28	2025-02-28
C30003681	A	64-10-TP-047 C10003591	Earthing lug totally painted.	.		KAlbonetti 2025-02-11	2025-02-26	KAlbonetti 2025-02-26	2025-02-26
C30001618	B	64-10-TP-051 C10003609	Spool has not been installed in erection. Inspection points from 4 to 6 of the "Inspection before testing" to be checked during	.		KAlbonetti 2024-12-10	2025-01-16	LNovaga 2025-01-16	2025-01-16
C30001846	B	64-10-TP-020 C10003381	Position F1 of the support PS-0358 has Horizontal misalignment.	-		MBruschi 2024-12-13	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001848	B	64-10-TP-020 C10003381	Position F1 of the support PS-03600 has horizontal misalignment.	-		MBruschi 2024-12-13	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001852	B	64-10-TP-020 C10003381	All supports S-211 need to check the gap, isolation rubber, ptfe bounded and lock nut in the reinstatement phase.	-		MBruschi 2024-12-13	2025-02-08	LNovaga 2025-02-08	2025-02-08

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SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30001899	B	64-10-TP-020 C10003381	Support PS-02012 not assembled in erection. (Due lack of Valves' positioning)	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001900	B	64-10-TP-020 C10003381	Support PS-02016 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001901	B	64-10-TP-020 C10003381	Support PS-02020 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001904	B	64-10-TP-020 C10003381	Support PS-03014 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001909	B	64-10-TP-020 C10003381	Support PS-03037 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30001910	B	64-10-TP-020 C10003381	Support PS-03047 not assembled in erection.	.		KAlbonetti 2024-12-16	2025-02-08	LNovaga 2025-02-08	2025-02-08
C30002117	B	64-10-TP-023 C10003406	SK.34 (2/2): Position F2 of piping support PS-02095 is actually a HEA120 instead of UPN120.	.	Changes have been recorded on RLMUs	KAlbonetti 2024-12-20	RDegliEsposti 2025-06-25	RDegliEsposti 2025-06-25	2025-06-25
C30002118	B	64-10-TP-023 C10003406	For all supports type S-211 the isolating ruber, the gap, the lock nuts and the washers shall be checked again during reinstatement because they	.		KAlbonetti 2024-12-20	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002135	B	64-10-TP-023 C10003406	Sk.66 (Sh.1/1): Support PS-01031.2: there is no STD S-211 and the structural part has not been drilled yet.	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19

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SYSTEM 64 Nitrogen System

SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30002136	B	64-10-TP-023 C10003406	SK.034 (SH.1/2) spools A and B; SK.097 (SH.1/1) Spools A and B: these spools are moved +40 mm eastward. Alignement of supports and connection	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002137	B	64-10-TP-023 C10003406	Sk.34 (Sh.1/2): Support PS-01025.3: position R1 has not been assembled yet.	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002145	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) spool D: Flange joint J3 has been only temporary tightened. Flange management to be done during reinstatement.	.		KAlbonetti 2024-12-24	2025-02-19	KAlbonetti 2025-02-19	2025-02-19
C30002146	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) spool G: between supports PS-03123.1 and PS-03122.1 the pipe is bended.	.		KAlbonetti 2024-12-24	2025-03-11	LNovaga 2025-03-11	2025-03-11
C30002147	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) Spool F: earthing plate W24. Position from W26 shall be changed from 638 mm to 350 mm.	.		KAlbonetti 2024-12-24	2025-04-02	LNovaga 2025-04-02	2025-04-02
C30002155	B	64-10-TP-023 C10003406	SK.062 (SH.2/2) the support PS-02094.1 has been mounted and welded with a clockwise turn of 90°. In addition the L profile is shorter of 15	.		KAlbonetti 2024-12-24	2025-02-27	LNovaga 2025-02-27	2025-02-27
C30002337	B	64-10-TP-047 C10003589	SK.065 (SH.1/1): For PS-02024.1 the position R1 has not been installed yet. The support is also 5 mm shorter.	.		KAlbonetti 2025-01-03	2025-02-14	LNovaga 2025-02-14	2025-02-14
C30002339	B	64-10-TP-047 C10003589	Spool has not been installed in erection. Inspection point n.5 of the ITR to be checked during reinstatement.	.		KAlbonetti 2025-01-03	2025-02-14	LNovaga 2025-02-14	2025-02-14
C30003465	B	64-10-TP-051 C10003610	Standard S-211 on the support "PS-01009" must have 2mm of gap.	.		MBruschi 2025-02-03	2025-02-11	KAlbonetti 2025-02-11	2025-02-11

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003550	B	64-10-TP-023 C10003408	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003551	B	64-10-TP-023 C10003408	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-04-17	LNovaga 2025-04-17	2025-04-17
C30003558	B	64-10-TP-051 C10003611	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-25	LNovaga 2025-03-25	2025-03-25
C30003559	B	64-10-TP-051 C10003611	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-04-11	LNovaga 2025-04-11	2025-04-11
C30003578	B	64-10-TP-023 C10003408	The valve BLPH-MV-386 has drain plug not painted.	.		KAlbonetti 2025-02-06	2025-04-17	LNovaga 2025-04-17	2025-04-17
C30003672	B	64-10-TP-020 C10003383	Several touch-ups to be still made.	.		KAlbonetti 2025-02-11	2025-02-28	LNovaga 2025-02-28	2025-02-28
C30003678	B	64-10-TP-047 C10003591	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-11	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30004168	B	64-10-TP-023 C10003406	Check Valve BLPH-NRV-019 has no flow direction market visibly on its body.	.		KAlbonetti 2025-02-28	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30004169	B	64-10-TP-047 C10003590	Earthing lug on TP-47 (Sk.65) has been connected to two different earthing cables. Disconnect one and put to earth on structure or	.		KAlbonetti 2025-02-28	2025-03-26	Gtangianu 2025-03-26	2025-03-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003216	B	C-64-ZSL-031B/ 00-JE-12006 C10000109	Missing cable tag SS , near the JB 00-JE-12006	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003217	B	C-64-ZSL-031B/ 00-JE-12006 C10000109	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003218	B	C-64-ZSH-031B/ 00-JE-12006 C10000110	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003219	B	C-64-ZSH-031B/ 00-JE-12006 C10000110	Missing cable tag SS , near the JB 00-JE-12006.	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003220	B	C-64-PY-031A/0 0-JE-11004 C10000055	Wrong cores identification tag. side J.B. 00-JE-11004 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003221	B	C-64-PY-031B/0 0-JE-11004 C10000056	Wrong cores identification tag. side J.B. 00-JE-11004 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003222	B	C-64-ZT-031A/0 0-JE-11005 C10000059	Wrong cores identification tag. side J.B. 00-JE-11005 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003223	B	C-64-ZT-031A/0 0-JE-11005 C10000059	Missing cable tag SS , near the JB 00-JE-11005	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003224	B	C-64-ZT-031A/0 0-JE-11005 C10000059	Wrong cores identification tag. side 64-ZT-031A . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003225	B	C-64-ZT-031B/00-JE-11005 C10000060	Wrong cores identification tag. side J.B. 00-JE-12005 / stru. 64-ZT-031B . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003226	B	C-64-ZT-031B/00-JE-11005 C10000060	Missing cable tag SS , near the JB 00-JE-11005	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003227	B	C-64-ZSL-031A/00-JE-12006 C10000107	Missing cable tag SS , near the JB 00-JE-12006	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003228	B	C-64-ZSL-031A/00-JE-12006 C10000107	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003229	B	C-64-ZSH-031A/00-JE-12006 C10000108	Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003230	B	C-64-ZSH-031A/00-JE-12006 C10000108	Missing cable tag SS , near the JB 00-JE-12006	.		APolo 2025-01-27	2025-01-29	APolo 2025-01-29	2025-01-29
C30003232	B	64-ZSHL-031B C10002030	The visual indicator cover (limit switch ZSHL) is damaged. To be replaced	.		APolo 2025-01-28	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30003236	B	64-PV-031A C10001193	Missing suitable Plug "on Air set Filter".	.		APolo 2025-01-28	2025-03-25	Gtangianu 2025-03-25	2025-03-25
C30003238	B	64-PV-031B C10001194	Missing suitable Plug "on Air set Filter".	.		APolo 2025-01-28	2025-03-26	Gtangianu 2025-03-26	2025-03-26

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003570	B	C-64-SDY-001/00-JE-23002 C10001839	The cable installed is temporary. To be replaced	.		APolo 2025-02-05	2025-04-02	Gtangianu 2025-04-02	2025-04-02
C30003580	B	C-64-PT-002/00-JE-21002 C10000139	The cable (between external cable tray and instrument) to be dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003581	B	64-PT-002 C10000912	Missing traffolyte tag side instrument	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003588	B	64-PT-002 C10000912	Missing tag SS , on the instrument.	.		APolo 2025-02-07	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003589	B	64-PT-002 C10000912	The earthing cable of the instrument to be connected and dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003590	B	C-64-PT-031B/00-JE-11004 C10000054	The cable (between external cable tray and instrument) to be dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003591	B	64-PT-031B C10000914	The earthing cable of the instrument to be connected and dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003592	B	64-PT-031B C10000914	Missing traffolyte tag side instrument	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003593	B	64-PT-031B C10000914	Missing tag SS , on the instrument.	.		APolo 2025-02-07	2025-02-21	AAndreani 2025-02-21	2025-02-21

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003598	B	C-64-PT-031A/00-JE-11004 C10000053	The cable (between external cable tray and instrument) to be dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003599	B	64-PT-031A C10000913	Missing traffolyte tag side instrument	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003600	B	64-PT-031A C10000913	Missing tag SS , on the instrument.	.		APolo 2025-02-07	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003601	B	64-PT-031A C10000913	The earthing cable of the instrument to be connected and dressed/fixed properly.	.		APolo 2025-02-07	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003639	B	64-PSV-001 C10001191	Touch-up is required	.		GBertuccelli 2025-02-10	2025-04-18	LNovaga 2025-04-18	2025-04-18
C30004398	B	64-PT-002 C10003186	ISSUE RELATED TO INSTRUMENT CALIBRATION	INSTRUMENT UNINSTALLED AND SENT TO VENDOR TERRANOVA FOR ANALYSIS & REPAIR	Instruments sent to TERRANOVA - To be closed after sail away	Alveson 2025-07-23	RDegliEsposti 2025-08-01	RDegliEsposti 2025-08-01	2025-08-01

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System
SUBSYSTEM 64-10 Nitrogen Distribution Network

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003421	B	64-SDV-001 C10001617	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-08	LNovaga 2025-04-08	2025-04-08
C30003422	B	64-SDV-001 C10001617	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-31	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003462	B	64-PG-001 C10004848	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003463	B	64-PG-001 C10004848	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003498	B	64-PSV-001_1 C10004852	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003499	B	64-PSV-001_1 C10004852	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003500	B	64-PSV-001_1 C10004852	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003501	B	64-PSV-001_1 C10004852	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003562	B	64-ZSHL-001 C10002042	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-02-05	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 64 Nitrogen System

SUBSYSTEM 64-10 Nitrogen Distribution Network

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003571	B	64-SDY-001 C10002041	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003572	B	64-SDY-001 C10002041	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-02-05	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30004019	B	64-FG-001 C10000911	Vendor to confirm earthing connection method	.		Lmussi 2025-02-19	2025-04-02	Ecarotenuto 2025-04-02	2025-04-02

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003681

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003591	1.4 Discipline	Piping
1.2 Item	64-10-TP-047	Test Pack 64-10-TP-047	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Earthing lug totally painted.

Name: Kangi Albonetti

Date: 2025-02-11

Signature:

3 - DEFECT ASSESSMENT

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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	2025-02-11
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Paint removed.

Name: Kangi Albonetti

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004019

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000911	1.4 Discipline	ATEX
1.2 Item	64-FG-001	Flow Gauge - Nitrogen to Hydrogen Vent Header	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Vendor to confirm earthing connection method

Name: Luca Mussi

Date: 2025-02-19

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-19
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Confirmed

Name: Eleonora Carotenuto

Date: 2025-04-02

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004168

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Related to PL C30003615. Check Valve BLPH-NRV-019 has no flow direction market visibly on its body.

Name: Kangi Albonetti

Date: 2025-02-28

Signature:

3 - DEFECT ASSESSMENT

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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	2025-02-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004169

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003590	1.4 Discipline	Piping
1.2 Item	64-10-TP-047	Test Pack 64-10-TP-047	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Earthing lug on TP-47 (Sk.65) has been connected to two different earthing cables. Disconnect one and put to earth on structure or keep two but connect them on opposite sides of the lug.

Name: Kangi Albonetti

Date: 2025-02-28

Signature:

3 - DEFECT ASSESSMENT

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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	2025-02-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

The activity was done.

Name: Giovanni Tangianu

Date: 2025-03-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004398

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003186	1.4 Discipline	Instrumental
1.2 Item	64-PT-002		Pressure Transmitter - Nitrogen to Distribution Header Low Pressure
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

ISSUE RELATED TO INSTRUMENT CALIBRATION

Name: Anthony Iveson
Date: 2025-07-23
Signature:

3 - DEFECT ASSESSMENT

3.1 Corrective action proposal	INSTRUMENT UNINSTALLED AND SENT TO VENDOR TERRANOVA FOR ANALYSIS & REPAIR		
3.2 Material required			
3.3 Priority	B PL B	Name	Anthony Iveson
3.4 Activity code	COMM Commissioning	Date	2025-07-23
3.5 Action by	COMM Commissioning	Signature	

4 - PERFORMED ACTION

Instruments sent to TERRANOVA - To be closed after sail away

Name: Raffaele Degli Esposti
Date: 2025-08-01
Signature:

5 - CLEARANCE CHECK

Instrument received and installed on site in Eemshaven. The instrument cannot be tested after installation at this stage as BLPH is not operative .

Name: Raffaele Degli Esposti
Date: 2025-10-15
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-10-15
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003570

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001839	1.4 Discipline	Instrumental
1.2 Item	C-64-SDY-001/00-JE-23002	SOLENOID VALVE / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The cable installed is temporary. To be replaced

Name: Alessio Polo

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

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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	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

The cable has been replaced.

Name: Giovanni Tangianu

Date: 2025-04-02

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


C-64-SDY-001/00-JE-23002
rotork


64-SDV-001

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003571

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002041	1.4 Discipline	ATEX
1.2 Item	64-SDY-001	Solenoid Valve - Nitrogen to Distribution Header Shut-Down	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing tag SS , on Solenoid Valve.

Name: Alessio Polo

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

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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	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


64-SDV-001

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003572

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002041	1.4 Discipline	ATEX
1.2 Item	64-SDY-001	Solenoid Valve - Nitrogen to Distribution Header Shut-Down	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)

Name: Alessio Polo
Date: 2025-02-05
Signature:

3 - DEFECT ASSESSMENT

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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	2025-02-05
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

The ATEX Register issued by FLUITEK has been updated and now reflects the equipment actually installed on BLPH. Document 123A90-DDL-EL-LIS-20094 will endorse and confirm the information contained in the updated ATEX Register.

Name: Raffaele Degli Esposti
Date: 2025-06-10
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-06-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


64-SDV-001


GYJ19.1148X
IECEx BAS10.0008
KTL-12-KB480-0213
Baseefa10ATEX0026
BAS21UKEX0642
UK CA
T4 T135°C(-60°C≤ Tamb ≤ +80°C)
T5 T100°C(-60°C≤ Tamb ≤ +55°C)
T6 T85°C (-60°C≤ Tamb ≤ +40°C)
Ex d IIC Gb
Ex tb IIIC Db
NEMA 4X/IP66 IP67
0598
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境严禁开盖
COVER SCREW A4-70 MINIMUM
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C@T6/105°C@T5/150°C@T4
VOLTAGE./ 额定电压：
SERIAL No./ 序列号：
MODEL No./ 型号：
Bifold
英国制造
UL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003577

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003407	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Flange management activity to be done on joint J5 (BLPH-MV-167). Broken joint done without authorization

Name: Andrea Mancini

Date: 2025-02-06

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Mancini
3.4 Activity code	MC Mechanical Completion	Date	2025-02-06
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Joint tightened again.

Name: Lorenzo Novaga

Date: 2025-02-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003578

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003408	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The valve BLPH-MV-386 has drain plug not painted.

Name: Kangi Albonetti

Date: 2025-02-06

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	2025-02-06
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-17

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-17

Signature:


64-PT-031B

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003580

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000139	1.4 Discipline	Instrumental
1.2 Item	C-64-PT-002/00-JE-21002	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The cable (between external cable tray and instrument) to be dressed/fixed properly.

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


ISOLATE



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003581

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000912	1.4 Discipline	Instrumental
1.2 Item	64-PT-002		Pressure Transmitter - Nitrogen to Distribution Header Low Pressure
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003588

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000912	1.4 Discipline	Instrumental
1.2 Item	64-PT-002		Pressure Transmitter - Nitrogen to Distribution Header Low Pressure
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003589

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000912	1.4 Discipline	Instrumental
1.2 Item	64-PT-002		Pressure Transmitter - Nitrogen to Distribution Header Low Pressure
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

The earthing cable of the instrument to be connected and dressed/fixed properly.

Name: Alessio Polo
Date: 2025-02-07
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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-13
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


DON'T REMOVE WITH POWER ON
MENU
OK
TERRANOVA
INSTRUMENT
VENT
PROCESS
MAIN
ISOL

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003590

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000054	1.4 Discipline	Instrumental
1.2 Item	C-64-PT-031B/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The cable (between external cable tray and instrument) to be dressed/fixed properly.

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

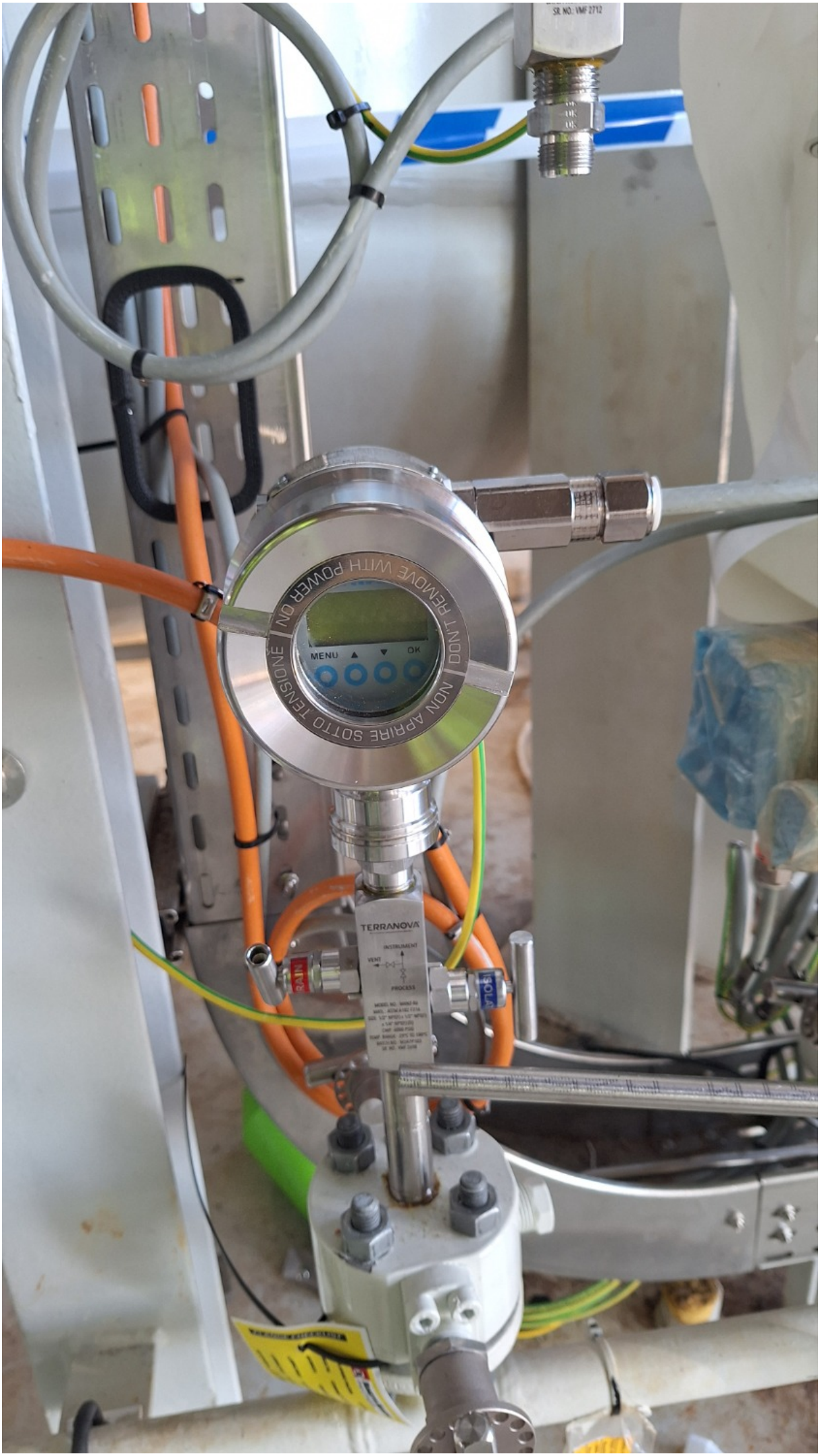
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


SR NO: VMF 2712
DON'T REMOVE WITH POWER ON
NON APRIRE SOTTO TENSIONE
MENU
OK
TERRANOVA
INSTRUMENT
VENT
PROCESS


DON'T REMOVE WITH POWER ON
MENU
TERRANOVA
INSTRUMENT
VENT
PROCESS


TERRANOVA
C-64-PT-0318/00-JE-11004

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003591

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000914	1.4 Discipline	Instrumental
1.2 Item	64-PT-031B		Pressure Transmitter - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

The earthing cable of the instrument to be connected and dressed/fixed properly.

Name: Alessio Polo
Date: 2025-02-07
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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

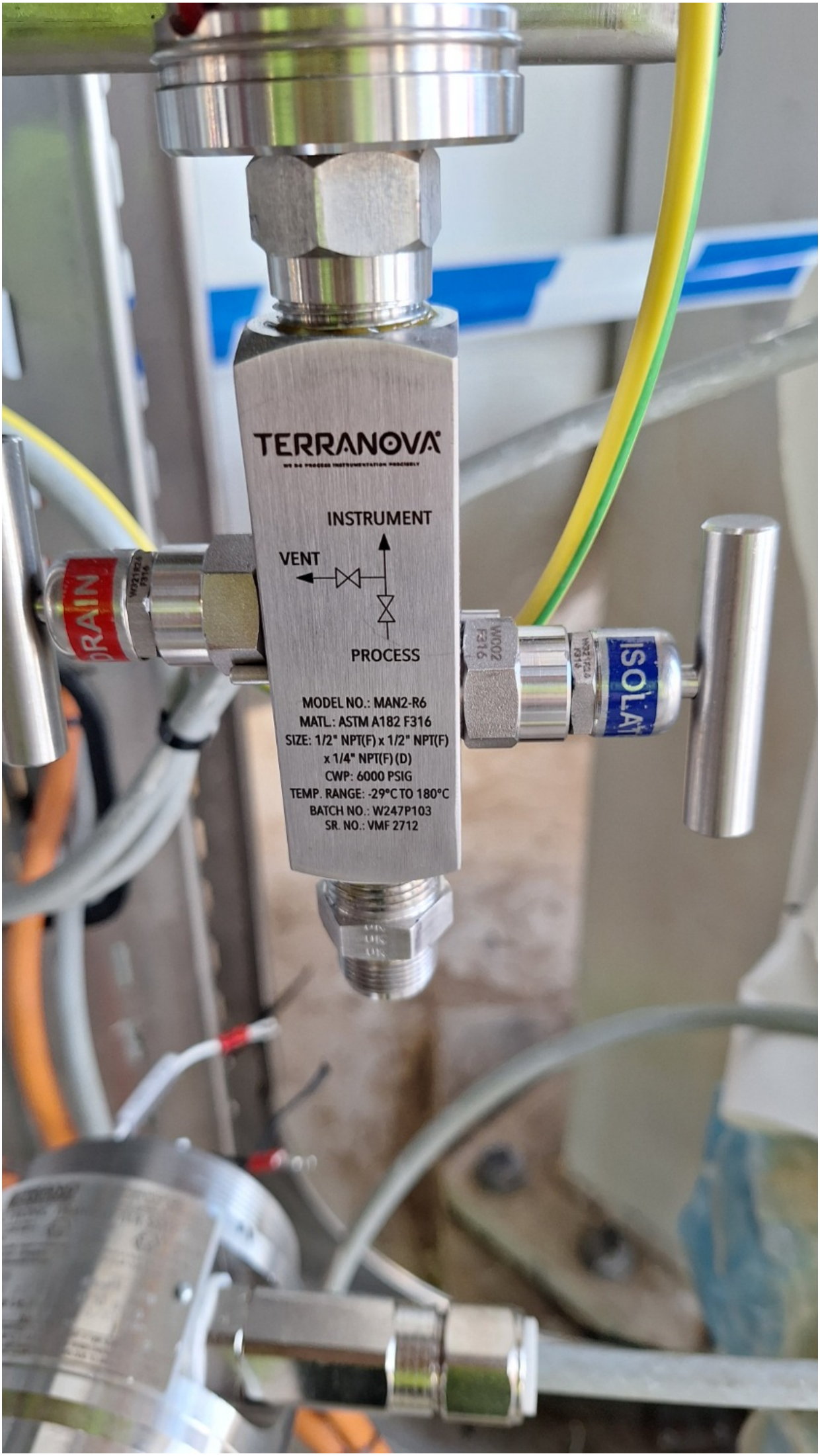
5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-13
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


TERRANOVA
INSTRUMENT
VENT
PROCESS
MODEL NO.: MAN2-R6
MATL.: ASTM A182 F316
SIZE: 1/2" NPT(F) x 1/2" NPT(F)
x 1/4" NPT(F) (D)
CWP: 6000 PSIG
TEMP. RANGE: -29°C TO 180°C
BATCH NO.: W247P103
SR. NO.: VMF 2712

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003592

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000914	1.4 Discipline	Instrumental
1.2 Item	64-PT-031B		Pressure Transmitter - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003593

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000914	1.4 Discipline	Instrumental
1.2 Item	64-PT-031B		Pressure Transmitter - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003598

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000053	1.4 Discipline	Instrumental
1.2 Item	C-64-PT-031A/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The cable (between external cable tray and instrument) to be dressed/fixed properly.

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003599

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000913	1.4 Discipline	Instrumental
1.2 Item	64-PT-031A		Pressure Transmitter - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003600

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000913	1.4 Discipline	Instrumental
1.2 Item	64-PT-031A		Pressure Transmitter - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo

Date: 2025-02-07

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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003601

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000913	1.4 Discipline	Instrumental
1.2 Item	64-PT-031A		Pressure Transmitter - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

The earthing cable of the instrument to be connected and dressed/fixed properly.

Name: Alessio Polo
Date: 2025-02-07
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	2025-02-07
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-13
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

TERRANOVA
DRAIN

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003615

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003407	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Check Valve BLPH-NRV-019 has no flow direction market visibly on its body. It is not possibile to confirm it has been mounted correctly in the line.

Name: Lorenzo Novaga
Date: 2025-02-08
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	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

NRV-019 has been mounted correctly.

Name: Kangi Albonetti
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003639

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001191	1.4 Discipline	Instrumental
1.2 Item	64-PSV-001		Pressure Safety Valve - Nitrogen to Distribution Header Vent System
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Touch-up is required

Name: Gabriele Bertuccelli

Date: 2025-02-10

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Gabriele Bertuccelli
3.4 Activity code	MC Mechanical Completion	Date	2025-02-10
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-18

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-18

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-18

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003672

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003383	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Several touch-ups to be still made.

Name: Kangi Albonetti

Date: 2025-02-11

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	2025-02-11
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-28

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003678

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003591	1.4 Discipline	Piping
1.2 Item	64-10-TP-047	Test Pack 64-10-TP-047	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-11

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	2025-02-11
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-03-21

Signature:

5 - CLEARANCE CHECK

Not applicable for this test pack.

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

C30003228

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000107	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSL-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003229

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000108	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSH-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003230

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000108	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSH-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing cable tag SS , near the JB 00-JE-12006

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003232

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002030	1.4 Discipline	Instrumental
1.2 Item	64-ZSHL-031B	Open/closed Limit Switches - Nitrogen Pressure Control to Distribution Header	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The visual indicator cover (limit switch ZSHL) is damaged. To be replaced

Name: Alessio Polo

Date: 2025-01-28

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	2025-01-28
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed the new cover.

Name: Giovanni Tangianu

Date: 2025-03-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


64-ZSHL-03AB
Limit Switch


MODEL:
SWITCH TYPE
ELECTR RATING
AMBIENT TEMP
CABLE ENTRIES
FOR SAFETY INSTRUCTIONS REFER TO DOCUMENT



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003236

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001193	1.4 Discipline	Instrumental
1.2 Item	64-PV-031A		Control Valve - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing suitable Plug "on Air set Filter".

Name: Alessio Polo

Date: 2025-01-28

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	2025-01-28
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

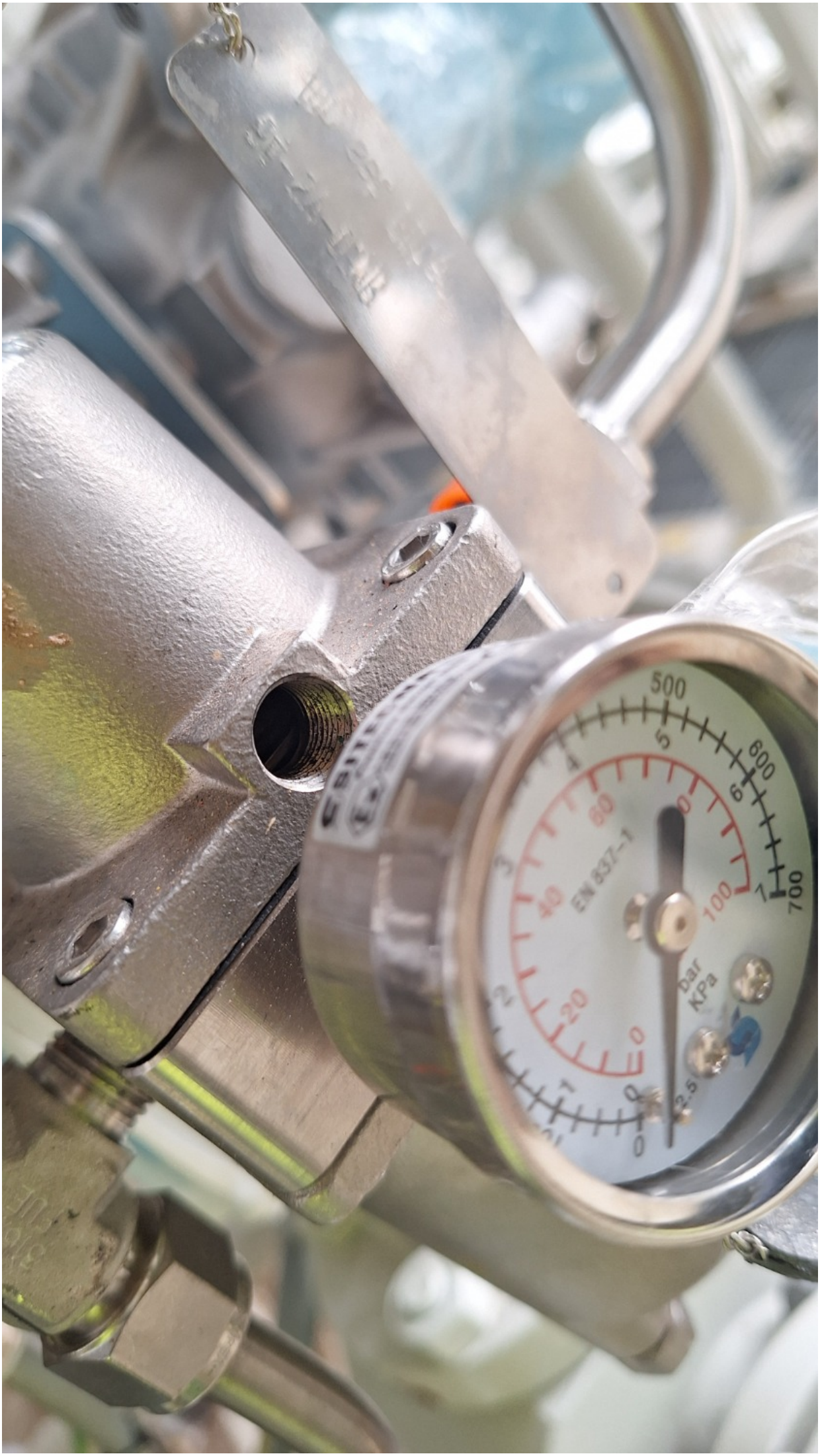
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


500
600
700
EN 837-1
bar
KPa


SITECNA
MILAN - ITALY
Pressure Gauge MBS
2024
Ex
CE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003238

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001194	1.4 Discipline	Instrumental
1.2 Item	64-PV-031B		Control Valve - Nitrogen Pressure Control to Distribution Header
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Missing suitable Plug "on Air set Filter".

Name: Alessio Polo

Date: 2025-01-28

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	2025-01-28
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed

Name: Giovanni Tangianu

Date: 2025-03-26

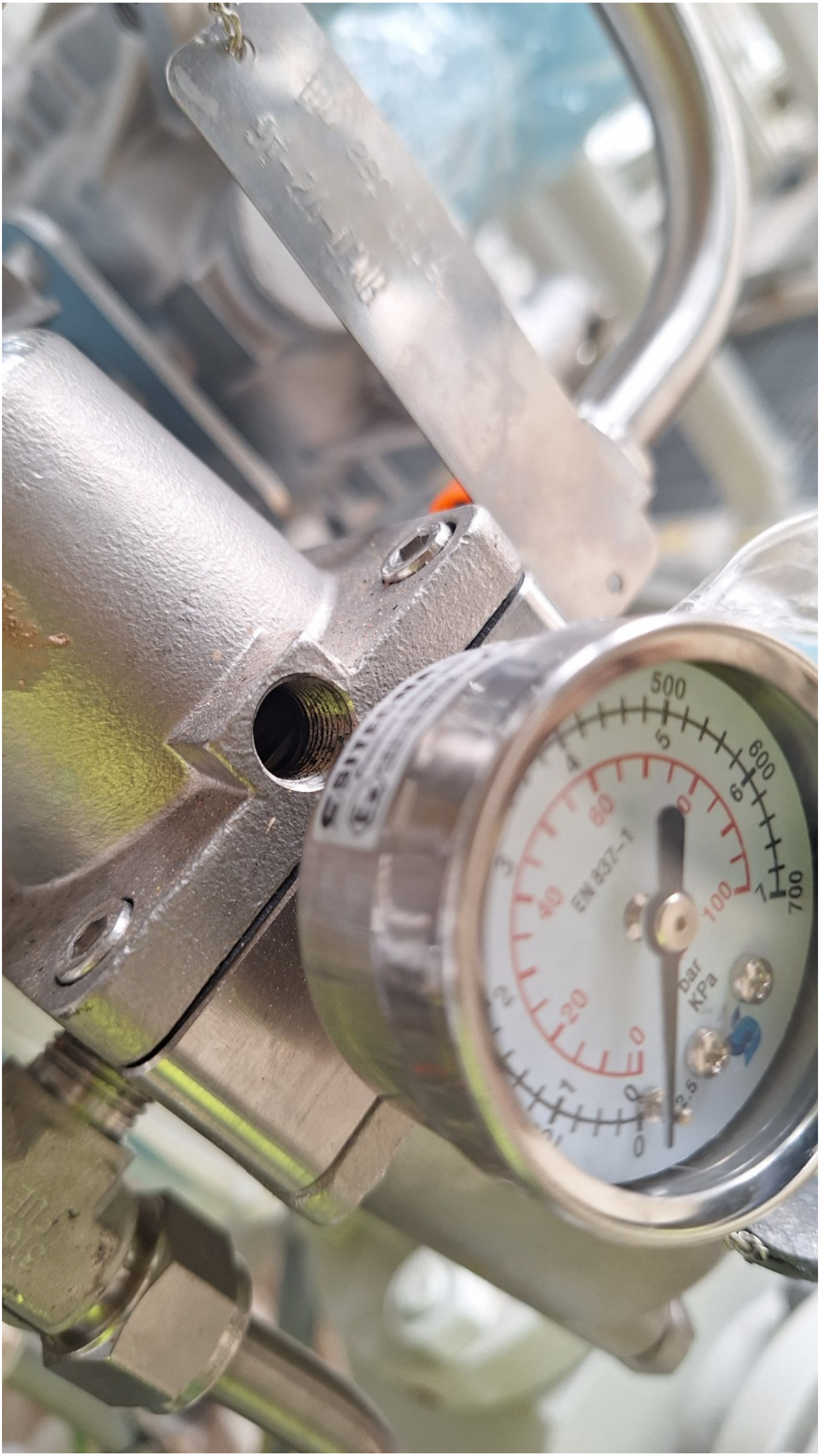
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


500
600
700
EN 837-1
bar
KPa


SITECNA
MILAN - ITALY
Pressure Gauge MBS
2024
Ex
CE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003421

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001617	1.4 Discipline	ATEX
1.2 Item	64-SDV-001		On/Off Valve - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-31
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-08

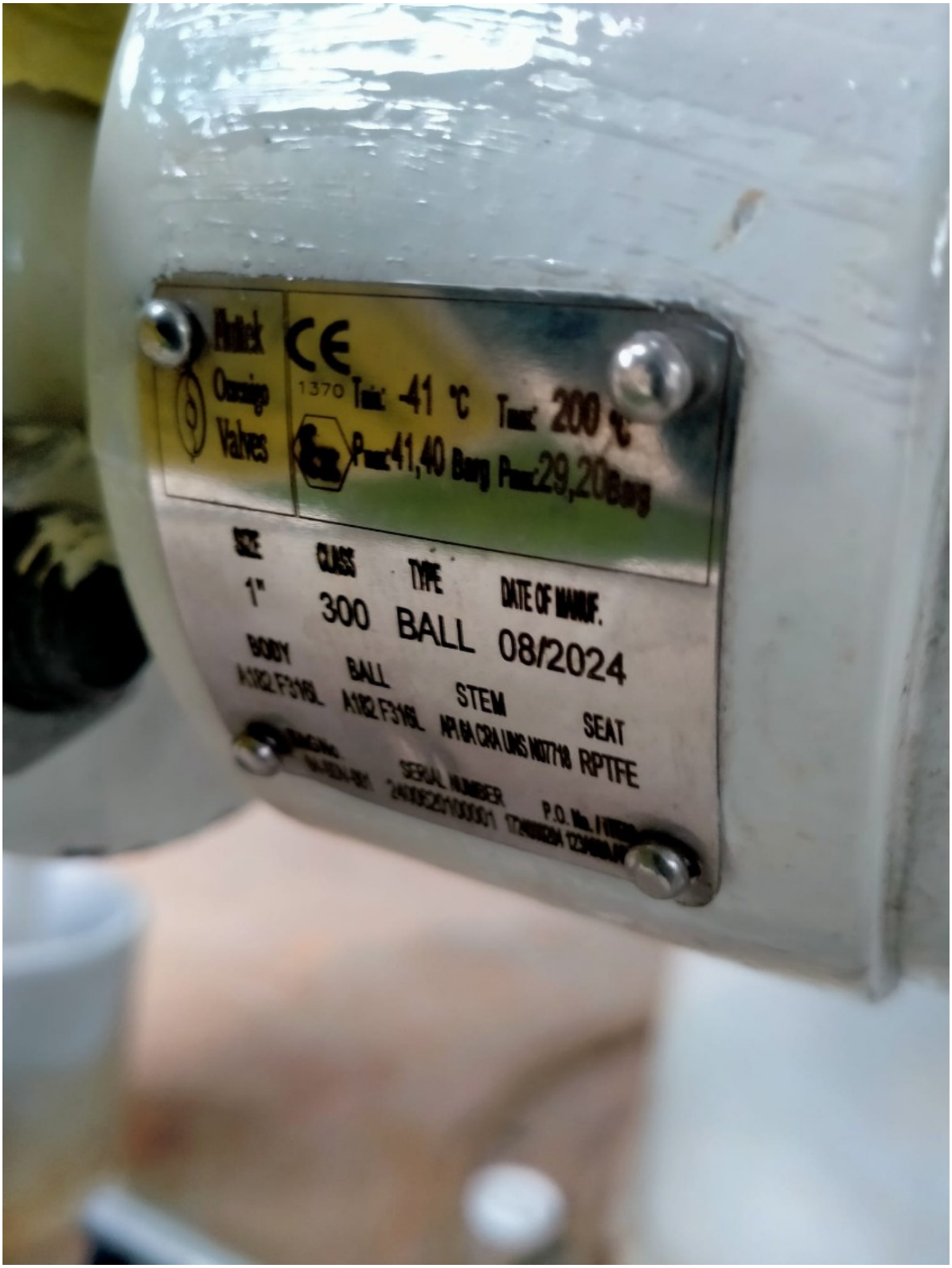
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


Antick
Oncinp
Valves
CE
1370
Tmin: -41 °C
Tmax: 200 °C
Pmax:41,40 Barg
Pmax:29,20Barg
SIZE
CLASS
TYPE
DATE OF MANUF.
1"
300
BALL
08/2024
BODY
BALL
STEM
SEAT
A182 F316L
A182 F316L
AP I 6A CRA UNS N07718
RPTFE
SERIAL NUMBER
P.O. No.

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003422

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001617	1.4 Discipline	ATEX
1.2 Item	64-SDV-001		On/Off Valve - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-31
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-31
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

The ATEX Register issued by FLUITEK has been updated and now reflects the equipment actually installed on BLPH. Document 123A90-DDL-EL-LIS-20094 will endorse and confirm the information contained in the updated ATEX Register.

Name: Raffaele Degli Esposti
Date: 2025-06-10
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-06-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003462

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004848	1.4 Discipline	ATEX
1.2 Item	64-PG-001	Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Equipment ATEX label is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-01
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003463

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004848	1.4 Discipline	ATEX
1.2 Item	64-PG-001	Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-01
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003465

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003610	1.4 Discipline	Piping
1.2 Item	64-10-TP-051	Test Pack 64-10-TP-051	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Standard S-211 on the support "PS-01009" must have 2mm of gap.

Name: Massimo Bruschi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-03
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Now the gap is acceptable.

Name: Kangi Albonetti

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003498

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004852	1.4 Discipline	ATEX
1.2 Item	64-PSV-001_1		Safety Valve - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-03
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003499

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004852	1.4 Discipline	ATEX
1.2 Item	64-PSV-001_1		Safety Valve - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-03
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003500

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004852	1.4 Discipline	ATEX
1.2 Item	64-PSV-001_1		Safety Valve - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-03
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003501

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004852	1.4 Discipline	ATEX
1.2 Item	64-PSV-001_1		Safety Valve - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	64-10		Nitrogen Distribution Network

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing

Name: Luca Mussi
Date: 2025-02-03
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-02-03
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

The ATEX Register issued by FLUITEK has been updated and now reflects the equipment actually installed on BLPH. Document 123A90-DDL-EL-LIS-20094 will endorse and confirm the information contained in the updated ATEX Register.

Name: Raffaele Degli Esposti
Date: 2025-06-10
Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti
Date: 2025-06-10
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003550

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003408	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-05

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	2025-02-05
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

C30003551

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003408	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

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

Name: Kangi Albonetti

Date: 2025-02-05

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	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-17

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-17

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-17

Signature:


AV-63005/64-PV

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003558

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003611	1.4 Discipline	Piping
1.2 Item	64-10-TP-051	Test Pack 64-10-TP-051	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-05

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	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003559

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003611	1.4 Discipline	Piping
1.2 Item	64-10-TP-051	Test Pack 64-10-TP-051	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

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

Name: Kangi Albonetti

Date: 2025-02-05

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	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-11

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-11

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003562

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002042	1.4 Discipline	ATEX
1.2 Item	64-ZSHL-001	Limit Switch box- Nitrogen to Distribution Header Shut-Down	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)

Name: Alessio Polo

Date: 2025-02-05

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	2025-02-05
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

The ATEX Register issued by FLUITEK has been updated and now reflects the equipment actually installed on BLPH. Document 123A90-DDL-EL-LIS-20094 will endorse and confirm the information contained in the updated ATEX Register.

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

Done

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

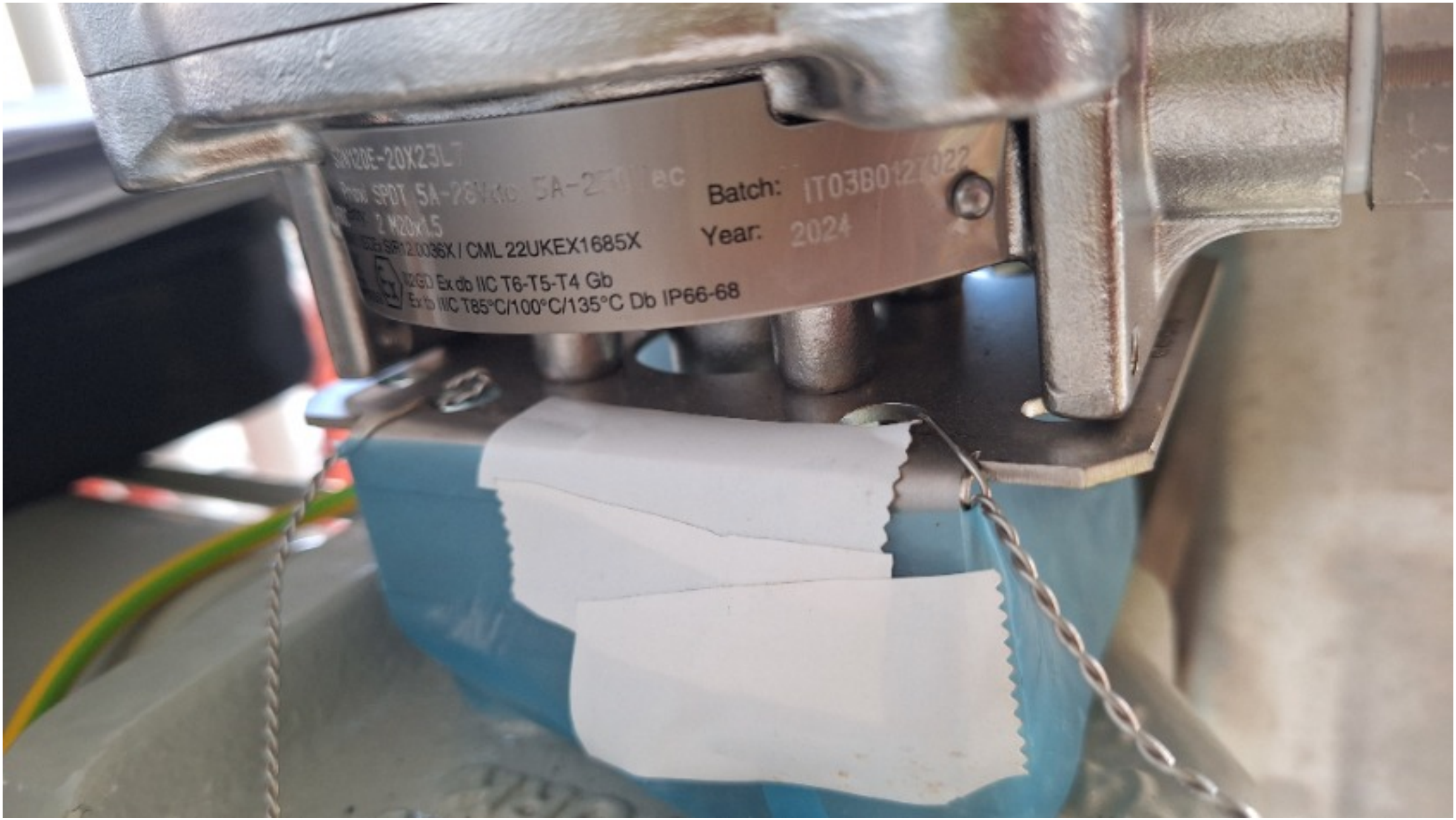
6- CLEARANCE APPROVAL

Name:

Date:

Signature:

64-ZSH-001
64-ZSL-001


SPDT 5A-28Vdc
Batch:
Year: 2024
Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db IP66-68


Batch:
Year: 2024
SIR12.0036X / CML 22UKEX1685X
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db IP66-68

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002136

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.034 (SH.1/2) spools A and B; SK.097 (SH.1/1) Spools A and B: these spools are moved +40 mm eastward. Alignement of supports and connection points to TP-029 to be verified during reinstatement.

Name: Kangi Albonetti

Date: 2024-12-24

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	2024-12-24
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

C30002137

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Sk.34 (Sh.1/2): Support PS-01025.3: position R1 has not been assembled yet.

Name: Kangi Albonetti

Date: 2024-12-24

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	2024-12-24
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

C30002145

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.062 (SH.2/2) spool D: Flange joint J3 has been only temporary tightened. Flange management to be done during reinstatement.

Name: Kangi Albonetti
Date: 2024-12-24
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	2024-12-24
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

C30002146

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.062 (SH.2/2) spool G: between supports PS-03123.1 and PS-03122.1 the pipe is bended.

Name: Kangi Albonetti

Date: 2024-12-24

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	2024-12-24
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

C30002147

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.062 (SH.2/2) Spool F: earthing plate W24. Position from W26 shall be changed from 638 mm to 350 mm.

Name: Kangi Albonetti
Date: 2024-12-24
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	2024-12-24
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

C30002155

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.062 (SH.2/2) the support PS-02094.1 has been mounted and welded with a clockwise turn of 90°. In addition the L profile is shorter of 15 mm and the pipe U-bolt position is shorter of the same measure.

Name: Kangi Albonetti

Date: 2024-12-24

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	2024-12-24
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Acceptable.

Name: Lorenzo Novaga

Date: 2025-02-27

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002337

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003589	1.4 Discipline	Piping
1.2 Item	64-10-TP-047	Test Pack 64-10-TP-047	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.065 (SH.1/1): For PS-02024.1 the position R1 has not been installed yet. The support is also 5 mm shorter.

Name: Kangi Albonetti

Date: 2025-01-03

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	2025-01-03
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

C30002339

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003589	1.4 Discipline	Piping
1.2 Item	64-10-TP-047	Test Pack 64-10-TP-047	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Spool has not been installed in erection. Inspection point n.5 of the ITR to be checked during reinstatement.

Name: Kangi Albonetti

Date: 2025-01-03

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	2025-01-03
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

C30003202

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004226	1.4 Discipline	Piping
1.2 Item	035-1-J1	Joint 035-1-J1	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The Instrument is in AISI 316 but the line is in CS. The isometric requires no insulation kit and flange management has been completed such as. But after talking with engineering, it has been clarified the insulation kit is needed.

Name: Kangi Albonetti

Date: 2025-01-25

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	2025-01-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

As for e-mail of the 19th from piping engineering, lack of insulation kit is acceptable.

Name: Kangi Albonetti

Date: 2025-02-19

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003203

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004227	1.4 Discipline	Piping
1.2 Item	035-1-J2	Joint 035-1-J2	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

The Instrument is in AISI 316 but the line is in CS. The isometric requires no insulation kit and flange management has been completed such as. But after talking with engineering, it has been clarified the insulation kit is needed.

Name: Kangi Albonetti

Date: 2025-01-25

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	2025-01-25
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

As for e-mail of the 19th from piping engineering, lack of insulation kit is acceptable.

Name: Kangi Albonetti

Date: 2025-02-19

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003216

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000109	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSL-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing cable tag SS , near the JB 00-JE-12006

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003217

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000109	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSL-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003218

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000110	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSH-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-12006 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003219

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000110	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSH-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing cable tag SS , near the JB 00-JE-12006.

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003220

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000055	1.4 Discipline	Instrumental
1.2 Item	C-64-PY-031A/00-JE-11004	E/P POSITIONER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-11004 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003221

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000056	1.4 Discipline	Instrumental
1.2 Item	C-64-PY-031B/00-JE-11004	E/P POSITIONER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-11004 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003222

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000059	1.4 Discipline	Instrumental
1.2 Item	C-64-ZT-031A/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-11005 . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003223

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000059	1.4 Discipline	Instrumental
1.2 Item	C-64-ZT-031A/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing cable tag SS , near the JB 00-JE-11005

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003224

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000059	1.4 Discipline	Instrumental
1.2 Item	C-64-ZT-031A/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side 64-ZT-031A . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003225

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000060	1.4 Discipline	Instrumental
1.2 Item	C-64-ZT-031B/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Wrong cores identification tag. side J.B. 00-JE-12005 / stru. 64-ZT-031B . (see document 123A90-DDL-IN-DG-40016 sh.3)

Name: Alessio Polo
Date: 2025-01-27
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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo
Date: 2025-01-29
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003226

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000060	1.4 Discipline	Instrumental
1.2 Item	C-64-ZT-031B/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing cable tag SS , near the JB 00-JE-11005

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003227

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000107	1.4 Discipline	Instrumental
1.2 Item	C-64-ZSL-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Missing cable tag SS , near the JB 00-JE-12006

Name: Alessio Polo

Date: 2025-01-27

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	2025-01-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-01-29

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001618

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003609	1.4 Discipline	Piping
1.2 Item	64-10-TP-051	Test Pack 64-10-TP-051	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Spool has not been installed in erection. Inspection points from 4 to 6 of the "Inspection before testing" to be checked during reinstatement.

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

Flange management activity done for TP-051

Name: Lorenzo Novaga

Date: 2025-01-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001846

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Position F1 of the support PS-03580 has Horizontal misalignment.

Name: Massimo Bruschi

Date: 2024-12-13

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-12-13
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001848

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Position F1 of the support PS-03600 has horizontal misalignment.

Name: Massimo Bruschi

Date: 2024-12-13

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-12-13
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001852

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

All supports S-211 need to check the gap, isolation rubber, ptfe bounded and lock nut in the reinstatement phase.

Name: Massimo Bruschi

Date: 2024-12-13

Signature:

3 - DEFECT ASSESSMENT

-

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Massimo Bruschi
3.4 Activity code	MC Mechanical Completion	Date	2024-12-13
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001899

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Support PS-02012 not assembled in erection. (Due lack of Valves' positioning)

Name: Kangi Albonetti

Date: 2024-12-16

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	2024-12-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001900

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Support PS-02016 not assembled in erection.

Name: Kangi Albonetti

Date: 2024-12-16

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	2024-12-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001901

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Support PS-02020 not assembled in erection.

Name: Kangi Albonetti

Date: 2024-12-16

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	2024-12-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001904

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Support PS-03014 not assembled in erection.

Name: Kangi Albonetti

Date: 2024-12-16

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	2024-12-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001909

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Support PS-03037 not assembled in erection.

Name: Kangi Albonetti

Date: 2024-12-16

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	2024-12-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30001910

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003381	1.4 Discipline	Piping
1.2 Item	64-10-TP-020	Test Pack 64-10-TP-020	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Support PS-03047 not assembled in erection.

Name: Kangi Albonetti

Date: 2024-12-16

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	2024-12-16
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Checked during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30002117

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

SK.34 (2/2): Position F2 of piping support PS-02095 is actually a HEA120 instead of UPN120.

Name: Kangi Albonetti
Date: 2024-12-20
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	2024-12-20
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:

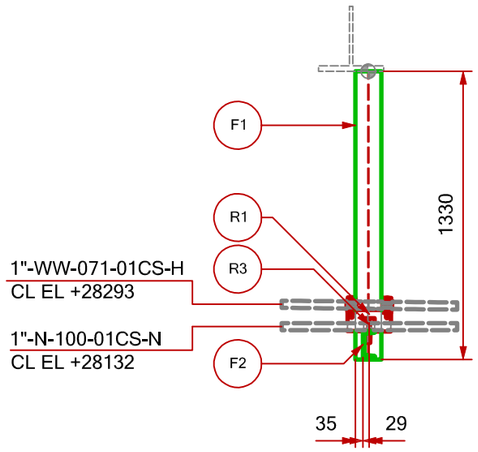
5 - CLEARANCE CHECK

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

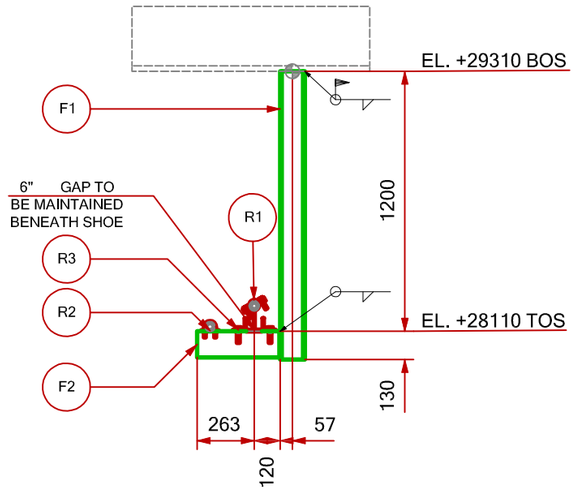
Name: Raffaele Degli Esposti
Date: 2025-06-25
Signature:

6- CLEARANCE APPROVAL

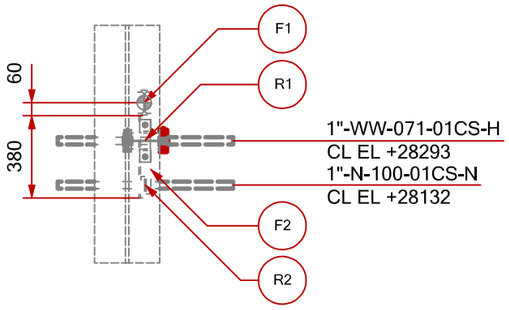
Name:
Date: 2025-06-25
Signature:



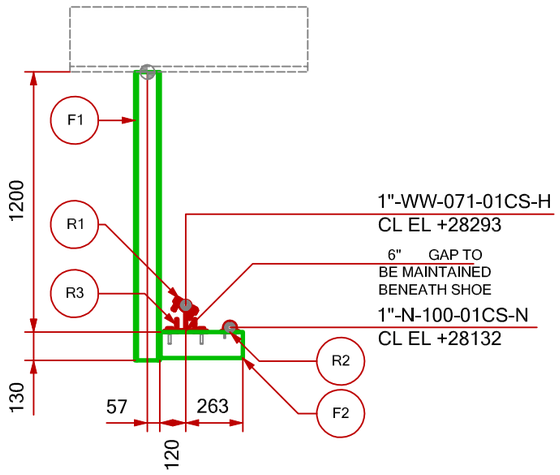
VIEW LOOKING NORTH



VIEW LOOKING WEST



PLAN VIEW

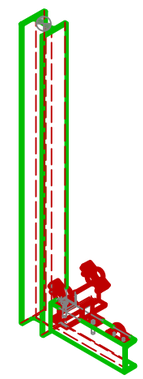


VIEW LOOKING EAST

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 HEA 120	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

C30002118

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

For all supports type S-211 the isolating ruber, the gap, the lock nuts and the washers shall be checked again during reinstatement because they have not been installed properly before the test.

Name: Kangi Albonetti
Date: 2024-12-20
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	2024-12-20
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

C30002135

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003406	1.4 Discipline	Piping
1.2 Item	64-10-TP-023	Test Pack 64-10-TP-023	
1.3 Subsystem	64-10	Nitrogen Distribution Network	

2 - OBSERVATION

Sk.66 (Sh.1/1): Support PS-01031.2: there is no STD S-211 and the structural part has not been drilled yet.

Name: Kangi Albonetti

Date: 2024-12-24

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	2024-12-24
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:

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

DRAWING NO. DRAWING_NO.

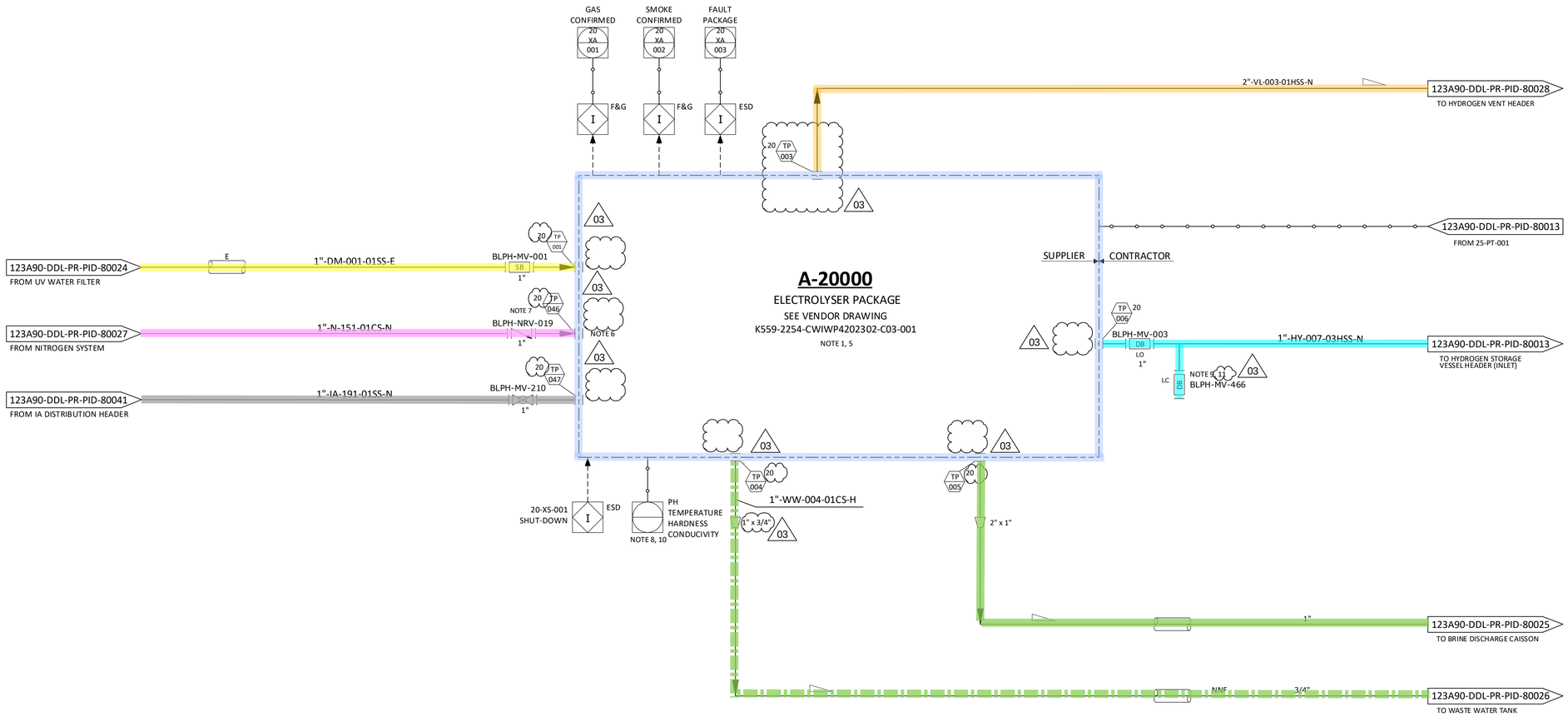
REV. REV

Instrument Air Distribution Network	SS 63-30
Watwr Desalination $ Distribution System	SS 50-10
Hydrogen Storage Vessel Header (Intel)	SS 43-00
Nitrogen Distribution Network	SS 64-10
Waste Water Brine Discharge System	SS 55-01
Waste Water Disposal Sustem	SS 55-00
Hydrogen 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. 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

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

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

V-63001
AIR RECEIVER

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

TP 041 | LO BLPH-MV-149
1-1/2"-IA-108-01SS-N
123A90-DDL-PR-PID-80041 TO INSTRUMENT AIR DISTRIBUTION HEADER

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

TO SAFE LOCATION
2"-AV-224-01CS-N
TP 043 | TP 045

NOTE 15
64 PI 002 L LL
64 HS 031
64 PIC 031A H L | 64 PIC 031B H L
64 PT 031A | 64 PT 031B | 64 PT 002
NOTE 1, 12 SET @ 30 barg
102 64 PSV 001
NOTE 10 TO ATM
2"-AV-160-01CS-N

INSTR. PIPING
64 PV 031A
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"

TP 042 | BLPH-MV-271 SB LO | 3/4" BLPH-MV-275
1"-N-158-01CS-N
FL-DC TYP.6 1"
1"-N-100-01CS-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
64 SDV 001 | 64 SDV 001 | NOTE 13 | NC FC TYP.2
01CS | 03HSS

A-64000
NITROGEN SYSTEM
SEE VENDOR DIAGRAM

ESD I | 64-XS-001 SHUT-DOWN ESD I | NOTE 14
64 XA 003 FAULT PACKAGE

1"-N-262-01CS-N

V-64001
NITROGEN RECEIVER
N-158 | N-100

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

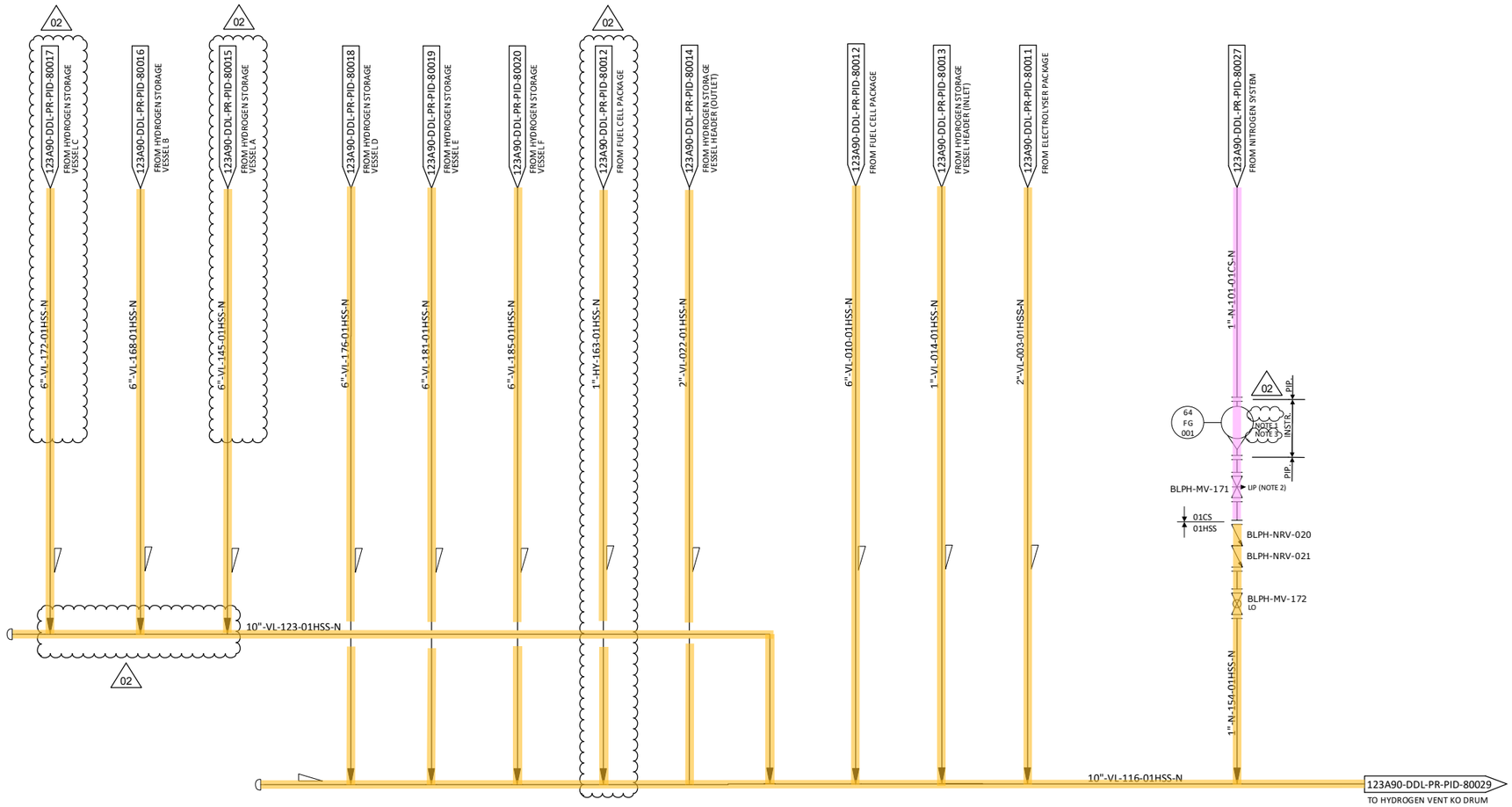
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DRAWING_NO.

REV.

Nitrogen Distrubution Network SS 64-10

Hydrogen Vent Header & Drum System SS 43-00



NOTES

1. FLOW METER 64-FG-001 SHALL BE READABLE FROM MANUAL VALVE MV-171.
2. VALVE BLPH-MV-171 TO BE LOCKED IN PLACE.
3. VERTICAL INSTALLATION. 02

HOLDS

1. DELETED.
2. 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
HYDROGEN VENT HEADER

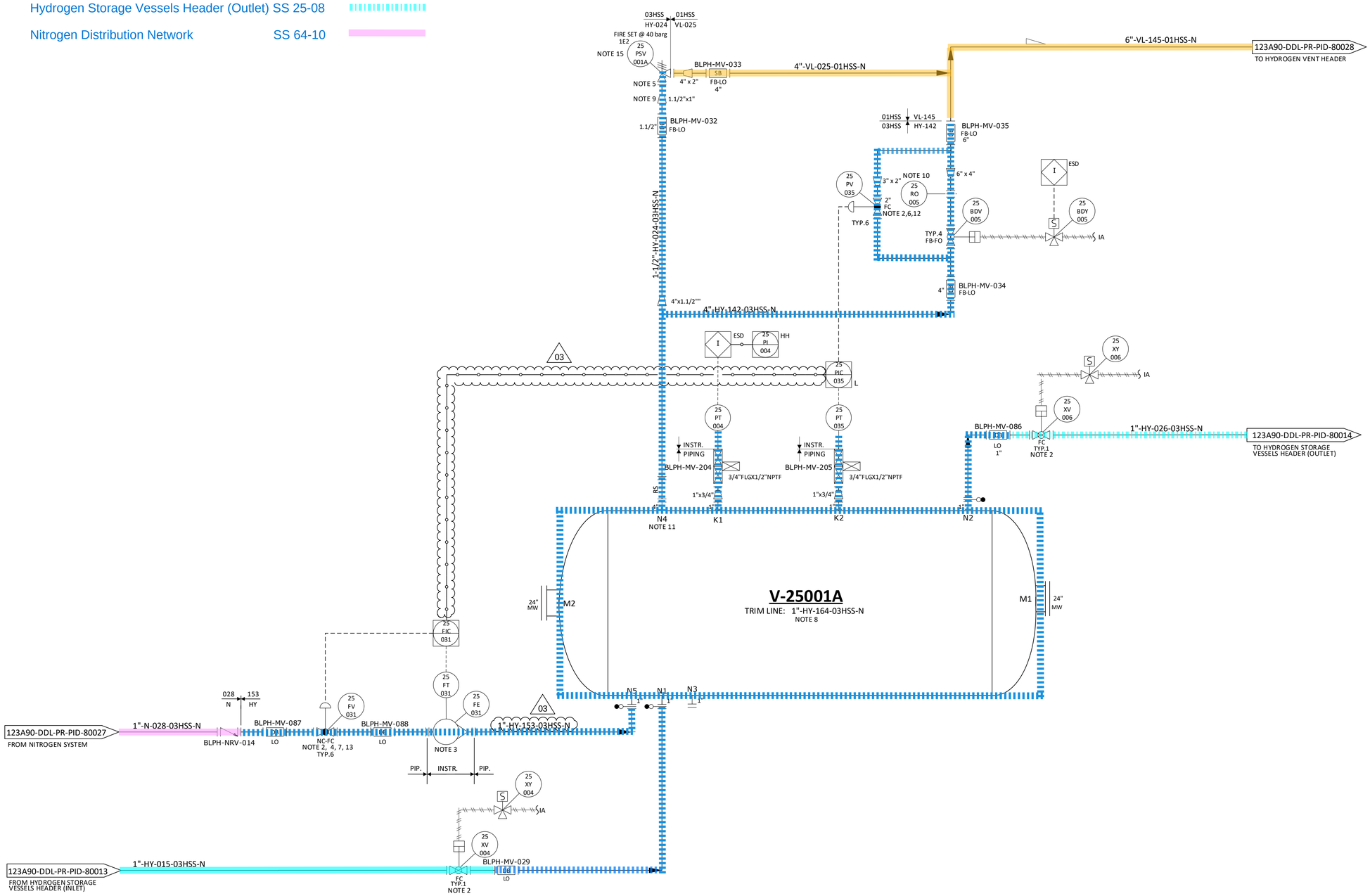
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80028	SHEET 001	REV. 02

File Name : FILE_NAME

DRAWING_NO. DRAWING_NO.

REV. REV

Hydrogen Storage Vessel A (V-25001A)	SS 25-01	
Hydrogen Vent Header & Drum System	SS 43-00	
Hydrogen Storage Vessels Header (inlet)	SS 25-07	
Hydrogen Storage Vessels Header (Outlet)	SS 25-08	
Nitrogen Distribution Network	SS 64-10	



NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-031) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT "DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-035 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-035 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-031 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-035 HAS FAILED TO CLOSE.
15. 25-PSV-001A SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL A

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-80015	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

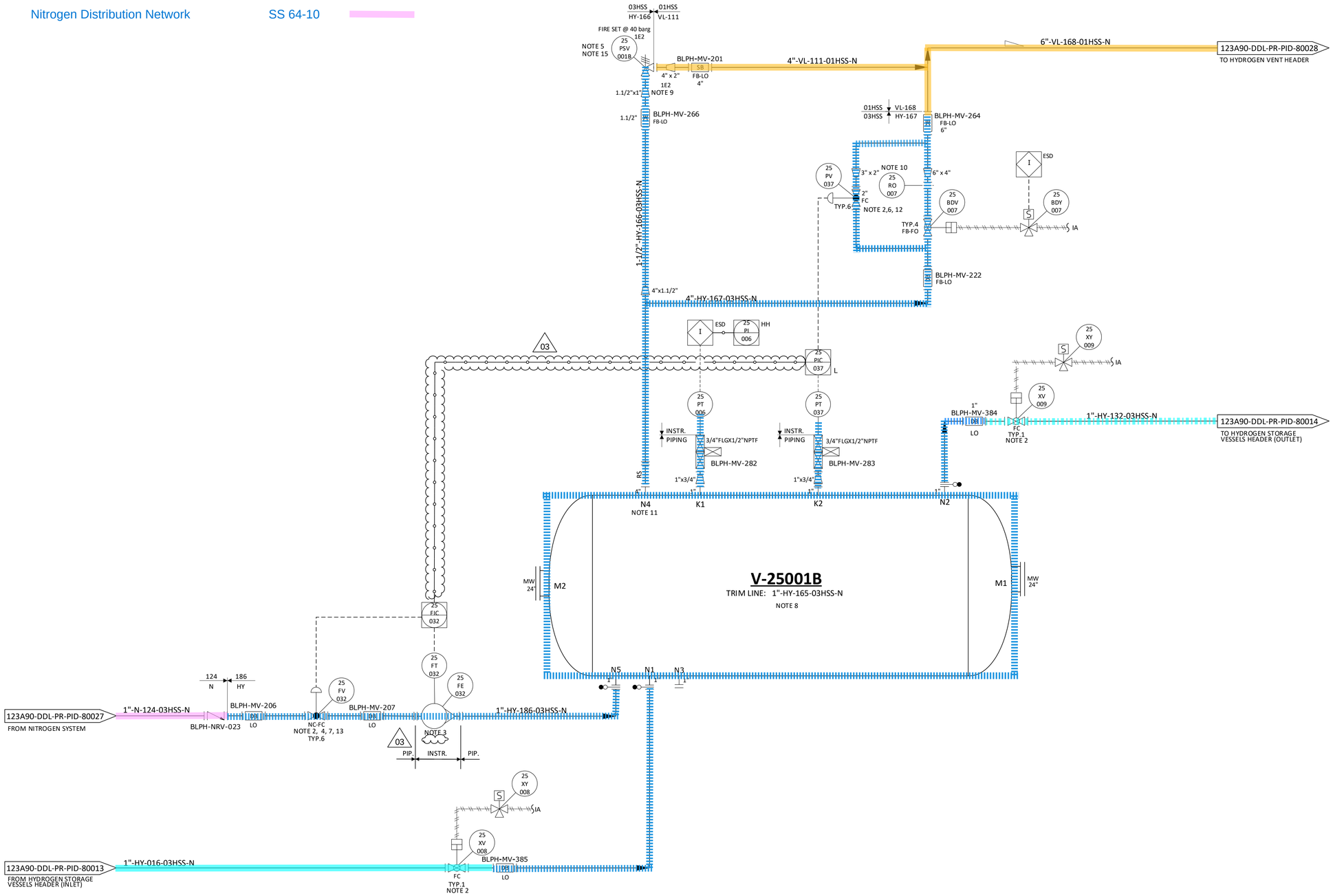
REV. REV

Hydrogen Storage Vessel B (V-25001B)	SS 25-02
Hydrogen Vent Header & Drum System	SS 43-00
Hydrogen Storage Vessels Header (inlet)	SS 25-07
Hydrogen Storage Vessels Header (Outlet)	SS 25-08
Nitrogen Distribution Network	SS 64-10

V-25001 B

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-032) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT "DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-037 BEING OPENED OUTSIDE OR A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC."PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-037 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-032 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-037 HAS FAILED TO CLOSE.
15. 25-PSV-001B SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL B

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-80016		SHEET 001 / REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Hydrogen Storage Vessel C (V-25001C) SS 25-03

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (inlet) SS 25-07

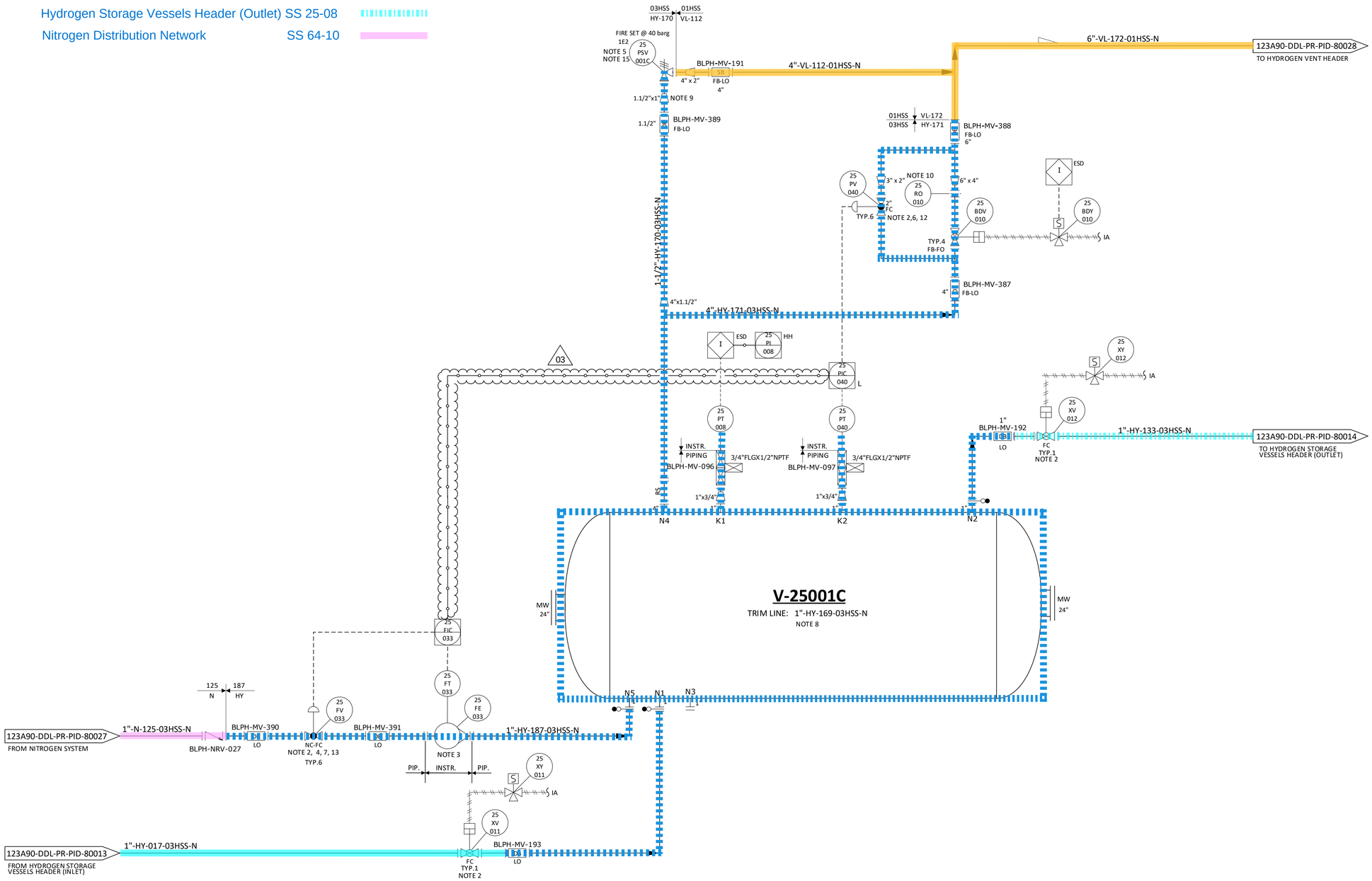
Hydrogen Storage Vessels Header (Outlet) SS 25-08

Nitrogen Distribution Network SS 64-10

V-25001 C

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-033) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-040 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-040 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-033 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-040 HAS FAILED TO CLOSE.
15. 25-PS-V001C SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL C

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-80017	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Hydrogen Storage Vessel D (V-25001D) SS 25-04

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (inlet) SS 25-07

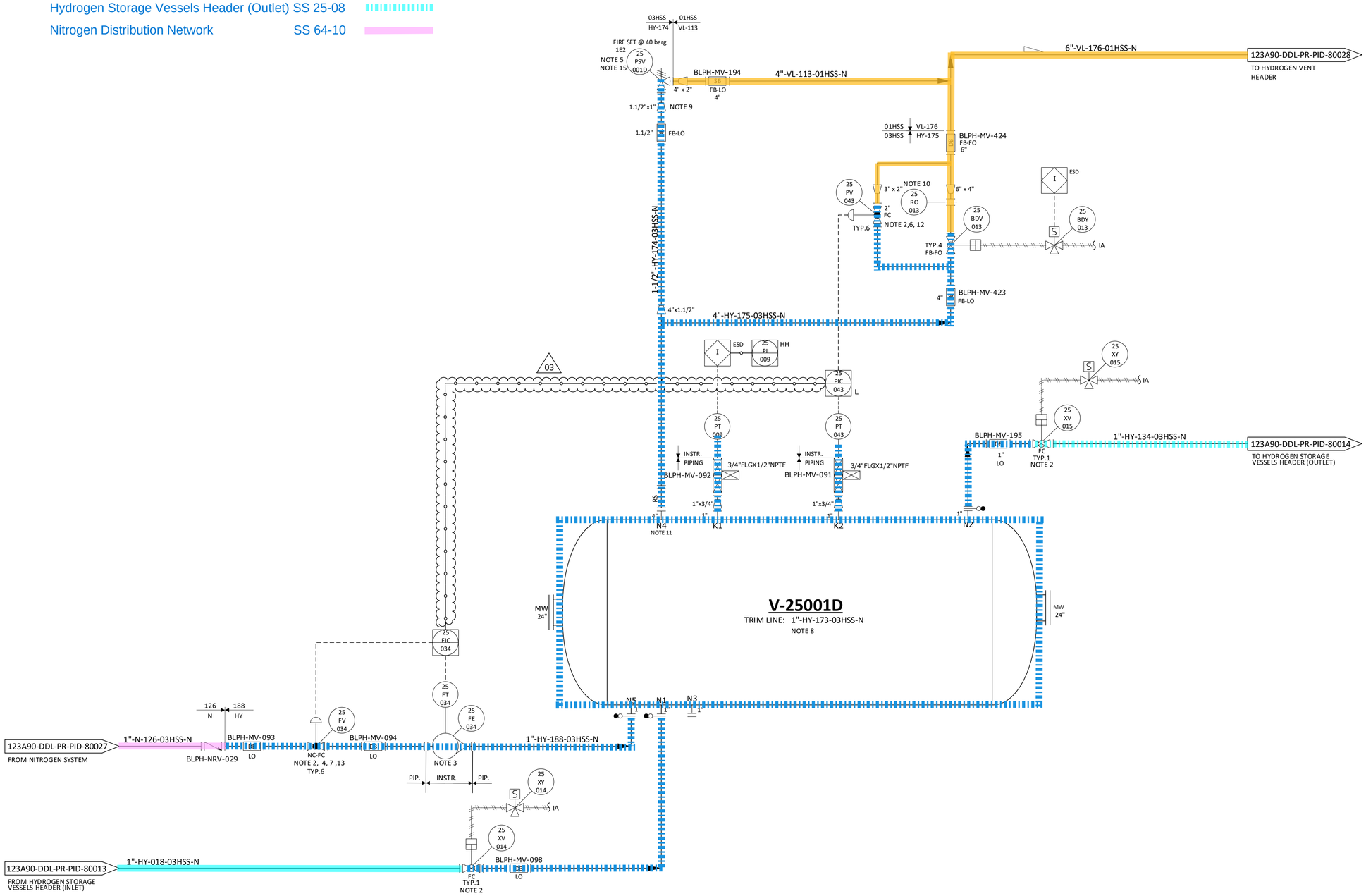
Hydrogen Storage Vessels Header (Outlet) SS 25-08

Nitrogen Distribution Network SS 64-10

V-25001_D

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS. 03
4. NITROGEN CONTROL VALVE (25-FV-034) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE.
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-043 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-043 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-034 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-043 HAS FAILED TO CLOSE.
15. 25-PSV-001D SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL D

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-80018	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

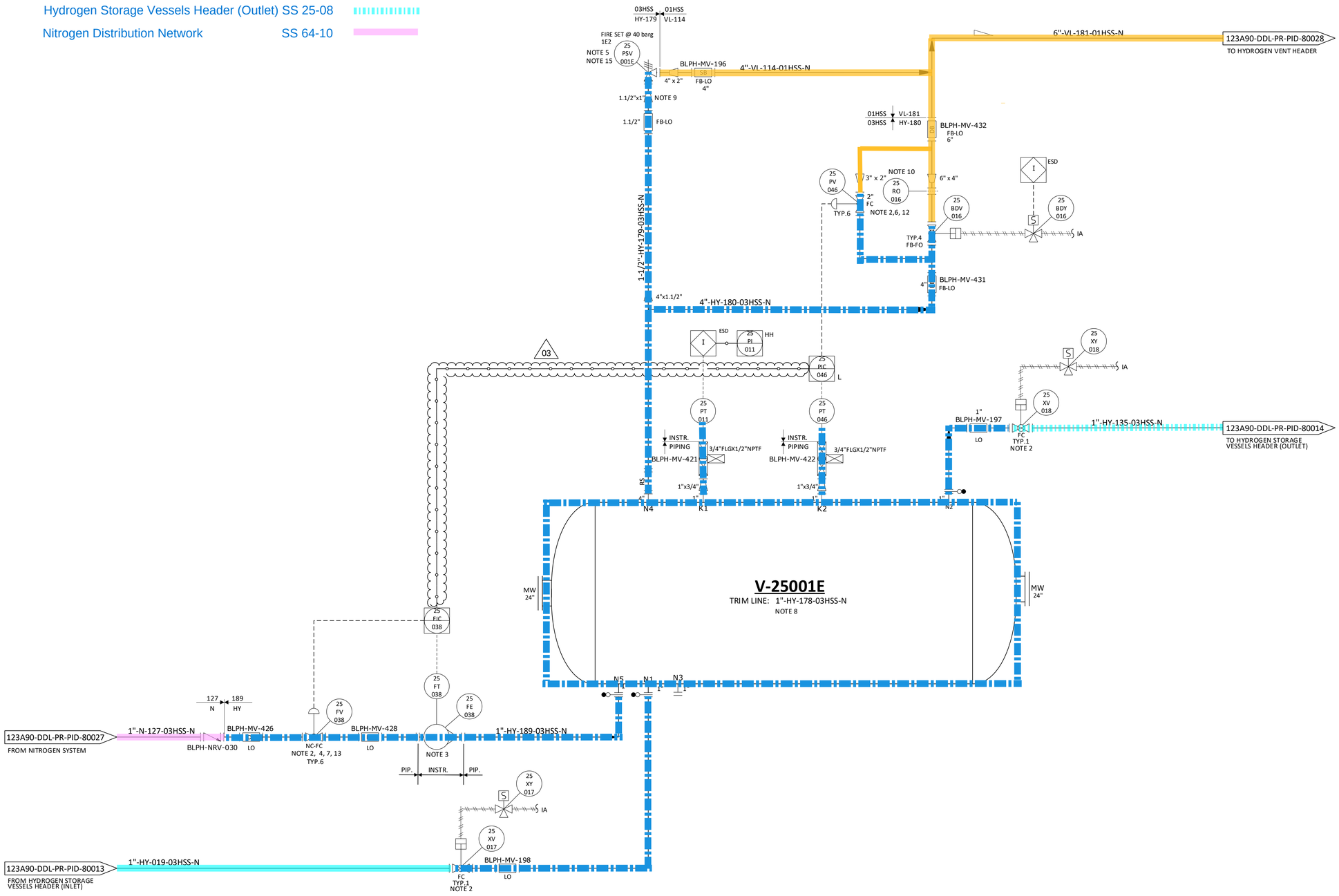
REV. REV

Hydrogen Storage Vessel E (V-25001E)	SS 25-05
Hydrogen Vent Header & Drum System	SS 43-00
Hydrogen Storage Vessels Header (inlet)	SS 25-07
Hydrogen Storage Vessels Header (Outlet)	SS 25-08
Nitrogen Distribution Network	SS 64-10

V-25001 E

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-038) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-046 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-046 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-038 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-046 HAS FAILED TO CLOSE.
15. 25-PSV-001E SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL E

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-80019	SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

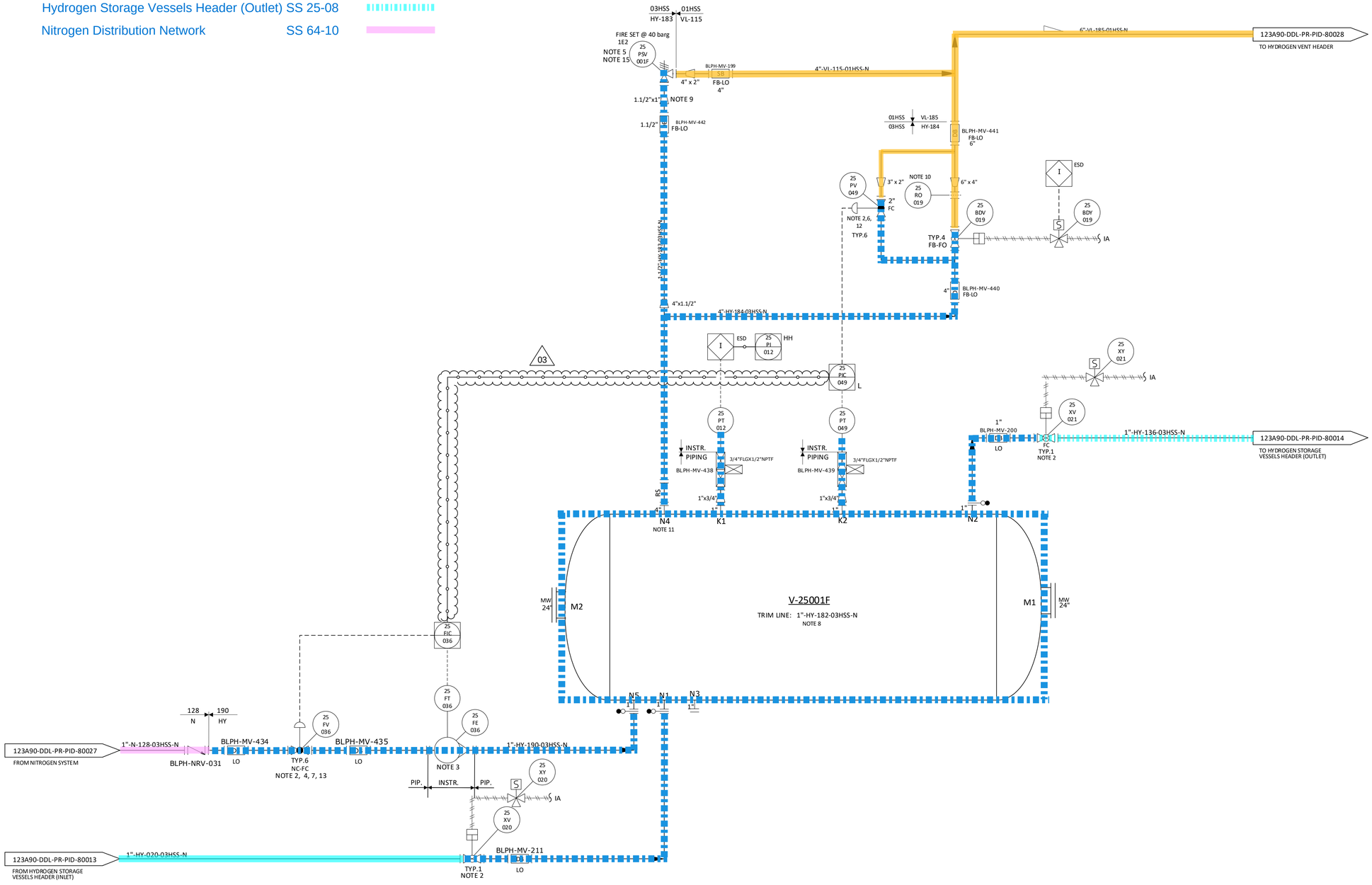
Hydrogen Storage Vessel F (V-25001F) SS 25-06

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (inlet) SS 25-07

Hydrogen Storage Vessels Header (Outlet) SS 25-08

Nitrogen Distribution Network SS 64-10



NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-036) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-049 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-049 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25FV036 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-049 HAS FAILED TO CLOSE.
15. 25-PSV-001F SIZED FOR FIRE.

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 HAZOP (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL F

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-80020	SHEET 001	REV. 03

File Name : FILE_NAME

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC & discipline : Y

ATEX	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
64-FG-001	Flow Gauge - Nitrogen to Hydrogen Vent Header	ONSHORE	C10000911	CJX01	100	2025-02-19	RFC 2
64-PCV-001	Air Set Filter - Hyrogen Storage to A-80000 Package Vent System	ONSHORE	C10002043	CJX01	100	2025-01-31	RFC 2
64-PG-001	Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10004848	CJX01	100	2025-04-24	RFC 2
64-PSV-001_1	Safety Valve - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10004852	CJX01	100	2025-02-03	RFC 2
64-SDV-001	On/Off Valve - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10001617	CJX01	100	2025-01-31	RFC 2
64-SDY-001	Solenoid Valve - Nitrogen to Distribution Header Shut-Down	ONSHORE	C10002041	CJX01	100	2025-02-05	RFC 2
64-ZSHL-001	Limit Switch box- Nitrogen to Distribution Header Shut-Down	ONSHORE	C10002042	CJX01	100	2025-02-05	RFC 2

ITEM	Tag	64-FG-001	: Flow Gauge - Nitrogen to Hydrogen Vent Header	Dwg	123A90-DDL-PR-PID-80028
	S/Sys	64-10	: Nitrogen Distribution Network	Module	LD
TASK	code	C10000911	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK / Discipline: ATEX / Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**	06C43100316				
Manufacturer	Brooks Instrument			**Model**	3809GCC08BFBC9A0V0AC				
Cert No.	D.o.C. by Manufacturer MBID 022 Rev. D			**Equipment Ambient Temp.**	-20°C to +70°C				
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex h	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66/67

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state "NA". Comments are required for 'Failure' column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	NA	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	NA	
13	Condition of enclosure gaskets is satisfactory	x	NA	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	NA	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	NA	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex "e" – Ex "n" – Ex "t")	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	NA	
25	There is no obvious damage to the cables	x	NA	
26	Cable glands are the correct type and installed correctly	x	NA	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	NA	

ITEM	Tag	64-FG-001	: Flow Gauge - Nitrogen to Hydrogen Vent Header		Dwg	123A90-DDL-PR-PID-80028	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10000911	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	NA	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	NA	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	64-FG-001	: Flow Gauge - Nitrogen to Hydrogen Vent Header		Dwg	123A90-DDL-PR-PID-80028	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10000911	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
	Authority:	NA	**Cert No:**	NA	**Type:**	NA

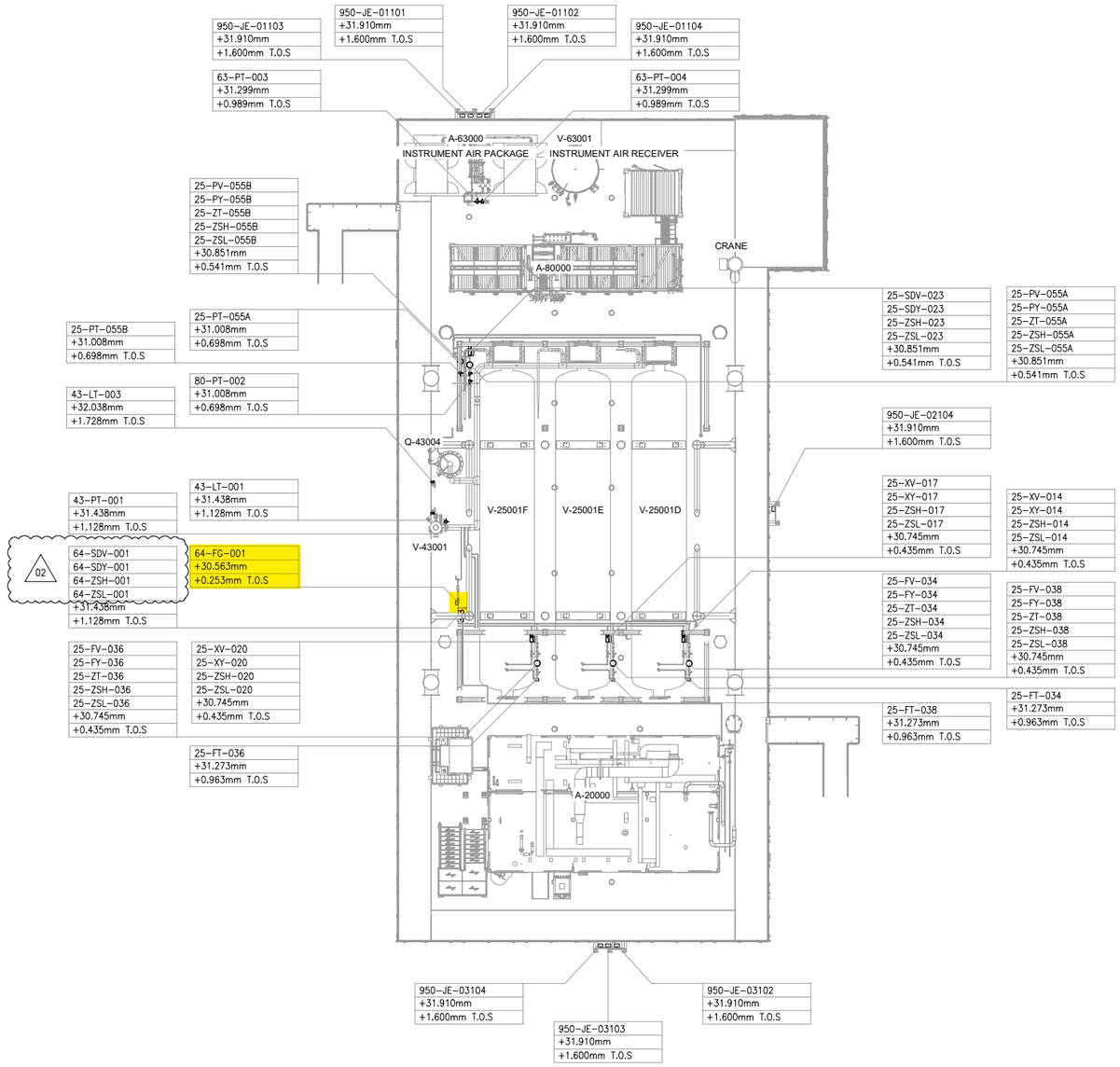
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Luca Mussi	
Date	2025-02-10	2025-02-19	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-10T10:55:34.894Z	PROVERLIS Digitaly signed by Luca Mussi 2025-02-19T11:16:03.285Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

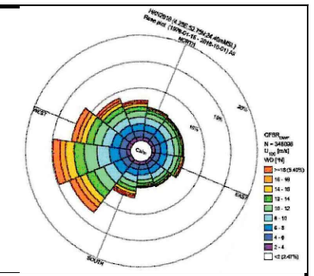


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	26/08/24	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

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 001	REV. 02

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40081**

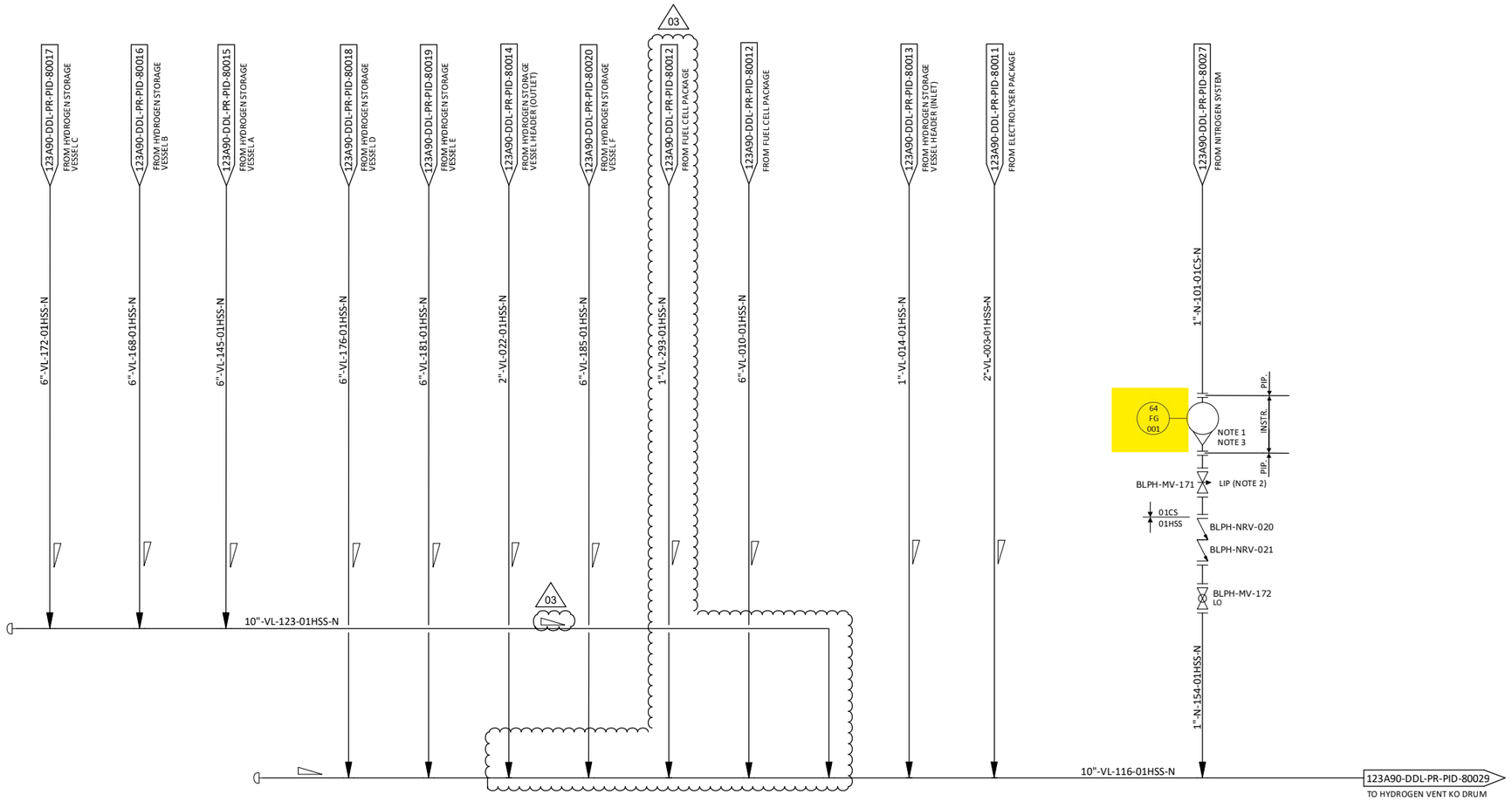
REV.:	DATE:	SIGNATURE:
2_A	07/10/24	G.Randi

ROSETTI MARINO SpA

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

DRAWING NO. DRAWING_NO.

REV. REV



NOTES

1. FLOW METER 64-FG-001 SHALL BE READABLE FROM MANUAL VALVE MV-171.
2. VALVE BLPH-MV-171 TO BE LOCKED IN PLACE.
3. VERTICAL INSTALLATION.

HOLDS

1. DELETED.
2. 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)

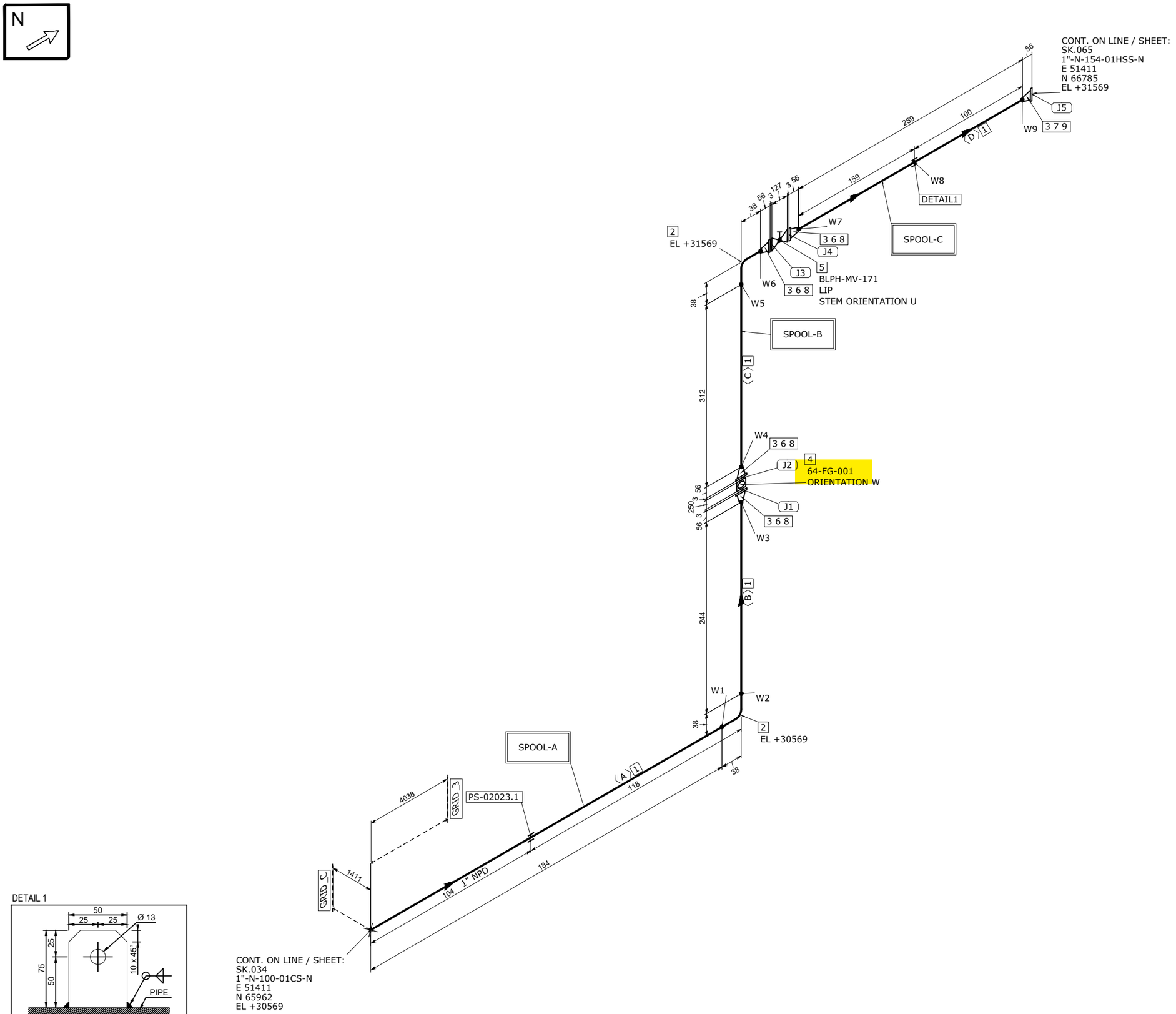
CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN VENT HEADER

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-80028		SHEET 001 / REV. 03

File Name : FILE_NAME



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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"-N-101-01CS-N

SK.035

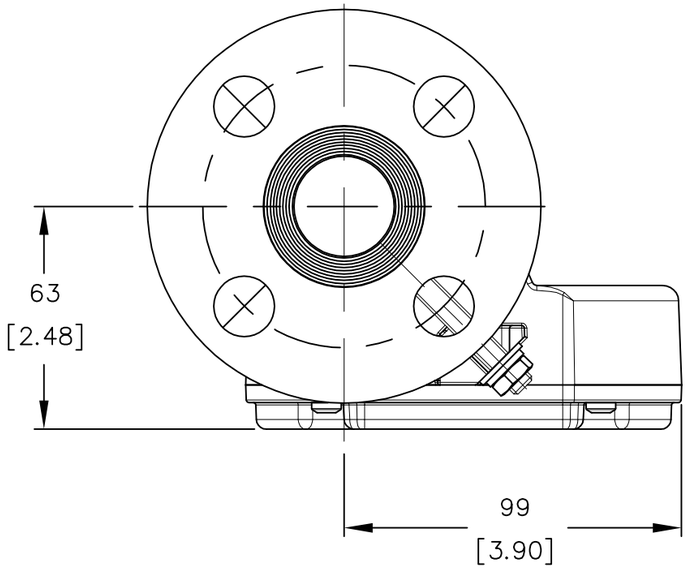
LINE DATA									
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[barg]	TEMP. AMB	MEDIUM Water		

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

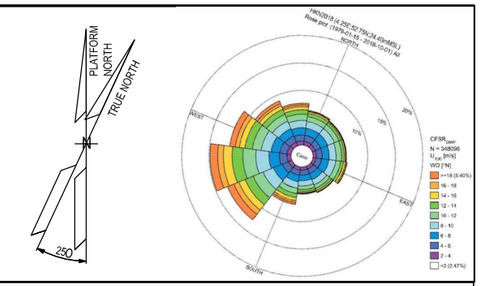
MASTER

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-00035	SHEET / OF 1/1	REV. 00



NO	DESCRIPTION	MATERIAL
1	BODY	316/316L SS
2	INDICATOR ASSY	316 SS
3	FLOAT ASSY	316L SS
4	FLANGE	316/316L SS
5	TAG PLATE / WIRE	316 SS
6	NAME PLATE	316L SS

METERSIZE: SIZE 8
FLANGE TYPE: 1" ANSI 150 Lbs RF WN
TAG NO: 64-FG-001
MODEL NO.: 3809GCC08BFBC9A0V0AC
METER RANGE: 1.5 – 15 NM3/H
WEIGHT: APPROX. 4.5 kg



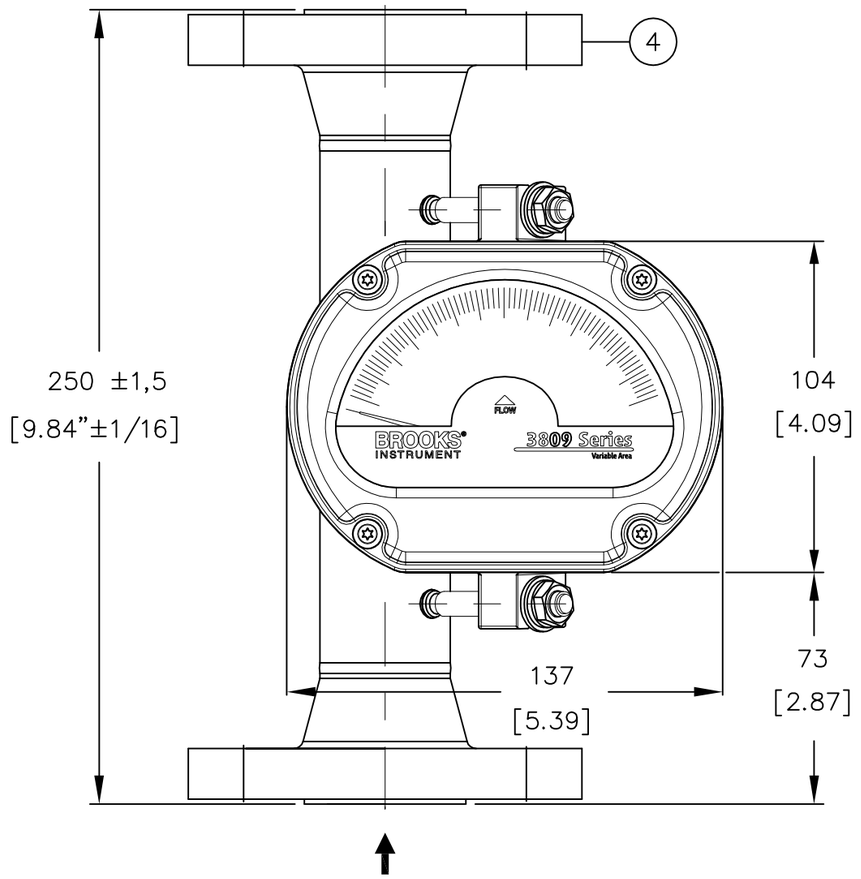
NOTES

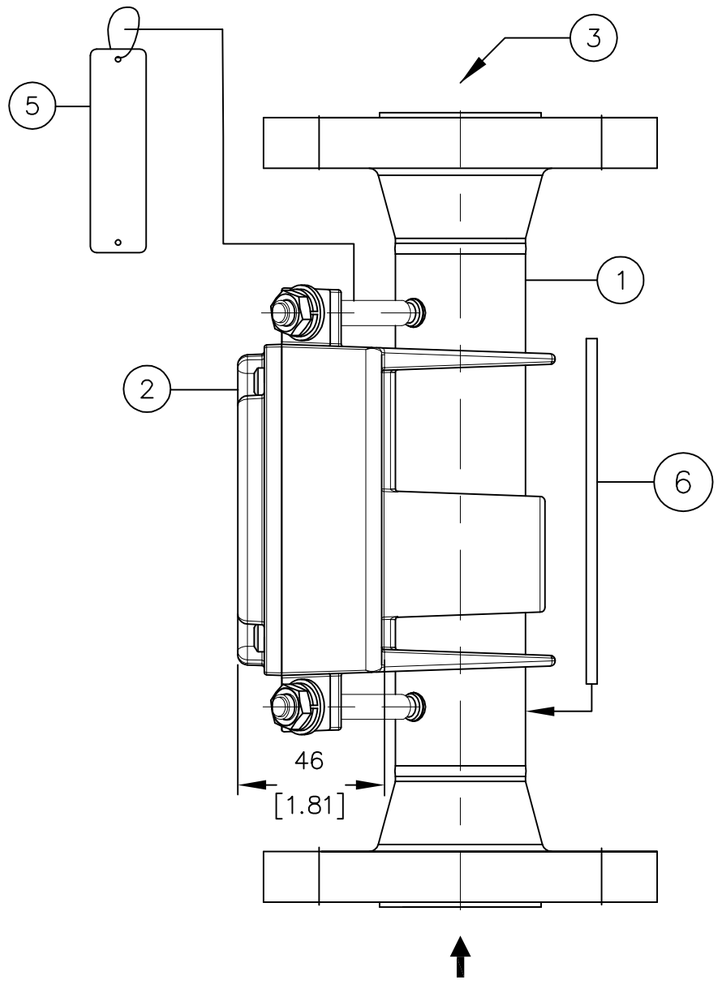
Straight run of pipe requirements:
There is no straight run of pipe needed. The meter can be installed immediately before and after a valve or elbow.
The recommended tube inside dia is 20mm.

Install the flowmeter with the inlet at the bottom and the outlet at the top within 5° of true vertical.

LEGEND

HOLDS





NOTE: DIMENSIONS IN mm [inch]

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
03	19/09/'24	LSZ	KP	KP	ACCEPTED FOR CONSTRUCTION (AFC)
02	19/07/'24	LSZ	KP	KP	ACCEPTED FOR CONSTRUCTION (AFC)
01	05/06/'24	LSZ	KP	KP	ACCEPTED FOR CONSTRUCTION (AFC)
00	15/05/'24	LSZ	KP	KP	ISSUE FOR REVIEW (IFR)

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

CROSSWIND

ROSETTI MARINO

TITLE : GENERAL ARRANGEMENT DRAWING
VARIABLE AREA
FLOWMETER

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE NTS
DRAWN LSZ	CHECKED KP	APPROVED KP	DATE 15/05/'24
A1	DRAWING NO. 1724000791-IN-DA-00003		SHEET 005 / REV. 03

Document Number: 1724000791-IN-DA-00003

GENERAL	1	Tag Number		64-FG-001	
	2	Service		NITROGEN TO VENT KO DRUM (V-43001)	
	3	P & ID No.		123A90-DDL-PR-PID-80028	
	4	Area Classification		ATEX Zone2 - IIC (IIB+H2) T1	
	5	Line No.		1"-N-101-01CS-N	
	6	Line Size	Line Schedule	1"	80
	7	Line Material		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITIONS	8	Fluid		NITROGEN	
	9			Units / @ Max. Flow / @ Norm. Flow / @ Min. Flow	
	10	Flow		Nm^3/hr / / 10 /	
	11	Temperature		°C / / 15 /	
	12	Pressure		barg / / 0 - 0.5 barg /	
	13	Max Velocity		3 - 5 m/sec	
	14	Fluid Conductivity	Min.	0.021 kcal/hr m K	
	15	Vacuum Possibility		NO	
	16	Ambient Temperature (min/norm/max)		-8.4 / 10.5 / 25 [°C]	
	17				
METERING ELEMENT	18				
	19				
	20	Connection Size	Type & Rating	1"	Flanged #300 RF
	21	Connection Materials		SS 316/316L Dual Cert.	
	22	Float Type		SELF-CLEANING	
	23	Float Material		SS 316L	
	24	Meter Casing		SS 316/316L Dual Cert.	
	25	Meter Scale Type	Meter Factor	-	-
	26	Meter Scale Range		1.5 - 15 Nm^3/h	
	27				
	28				
ASSOCIATED INSTRUMENT	29	Tag No.		-	
	30	Function		-	
	31	Mounting		-	
	32	Electrical Connection	Electrical Class	-	-
	33	Signal Cable Length		-	
	34	ATEX Certification	Ingress Protection	-	-
	35	Power Supply		-	
	36	Output		-	
	37	Accuracy	Repeatability	-	-
	38	Rangeability		-	
	39	Alarm Contact: No.	Form	-	-
	40	Alarm Contact: Rating		-	
	41	Alarm Contact: Action		-	
	42	SIL Certification	PED Certification	-	Required (8)
PURCHASE	43	Manufacturer		BROOKS INSTRUMENT	
	44	Model		3809GCC08BFBC9A0V0AC	
	45	Purchase Order Number		1724000791	

Notes:

No.	Date	By	Chkd	Appr	Description
02	06/12/2024	VB	LC	DL	Accepted for Construction (AFC)
01	29/08/2024	VB	LC	DL	Accepted for Construction (AFC)
00	23/02/2024	VB	LC	DL	ISSUED FOR REVIEW (IFR)

INSTRUMENT DATASHEET

Variable Area Flow Meter

CROSSWIND

ROSETTI MARINO

Sheet 11 of 11

Code : 301 | Dwg. No.: 123A90-DDL-IN-DS-40045 | Rev 02

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

BROOKS® INSTRUMENT

Beyond Measure

CE

Declaration of Conformity
No: MBID 022 Rev. D

Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU

Equipment: Non-Electrical Variable Area Flow Meter MT3809G series, MT3750 Series

As per Directive 2014/34/EU, Annex VIII, Module A "Internal production control", the product and quality system assessment procedure can be carried out by the manufacturer. In this module there is no involvement of a notified body in the conformity assessment activities. As per Chapter 3, Article 13 (1) (b) (ii) of the directive for equipment – group II, equipment categories 2 and non-electrical equipment, communication/deposit of the technical documentation to a notified body, and retention of such documentation by the notified body, are required.

In accordance with the requirements the technical documentation is deposited at DEKRA Certification B.V under technical construction file number 203104000-1604.

We certify that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN ISO 80079-36:2016 and **EN ISO 80079-37:2016**

The marking of the equipment shall include the following:

MT3809 Equipment:	**MT3750 Equipment:**
II2G Ex h IIC T6...T3 Gb	**II2G Ex h IIC T6...T3 Gb**
II2D Ex h IIIC T200°C Db	**II2D Ex h IIIC T200°C Db**
-20°C ≤ Ta ≤ 70°C	**-30°C ≤ Ta ≤ 70°C**

Special Conditions:
Enclosure contains glass & painted aluminum parts. If it is mounted in an area where the use of category 2G or 2D apparatus is required, it must be installed such that ignition source due to propagating brush discharge sparks are excluded.

The actual maximum surface temperature of the equipment depends not on the equipment itself, but on operating conditions of the process fluid/gas flowing through the equipment. The equipment by itself does not generate heat. Due to this reason the temperature class is marked as a range. The maximum permitted ambient and process temperature limits can be found in the operating instructions.

At start up especially for gas applications, ensure that the pressure is gradually increased through the piping system. A sudden pressure spike situation may result in a fast movement of the float within the VA flowmeter & the float may hit hard against the float stop.

Supply grounding connection by the process connections or earthing terminal.

June 10th, 2024
(Date of issue)

JP. Prego
VA Engineering Manager

Brooks Instrument | 407 West Vine Street | Hatfield, PA 19440 | USA | T : 1-215-362-3500 | F : 1-215-362-3745
www.BrooksInstrument.com

BROOKS INSTRUMENT
Beyond Measure

CE

Declaration of Conformity
No: MBID 022 Rev. D

Annex 1

Description
Variable Area Flowmeter Models MT3809G & MT3750 measure flow based on the variable area principle. The flow meter consists of an aluminium enclosure or stainless enclosure with windowed cover in type of protection constructional safety 'c'. The flow raises a float in a tapered tube increasing the area for the passage of flow. The float assumes distinct position for every constant rate flow. Flow rate indication is provided by means of magnetic coupling. A magnet encapsulated in the float is coupled to a rotatable magnet located in the rear of the indicator, turning the dial indicator mounted on the meter.

Nomenclature and Type Designation

Brooks Model 3809G series Variable Area Flow Meter

MT3809	G	M	...	6	...	V	...
I-IV	V	VI		XIV		XVII	XX

Mode Code Position	Explanation	Value	Explanation
I-IV	Model	MT3809	Variable Area Flowmeter (Metal Tube)
V	Model Revision	G	
VI	Material	A-Q	Material of construction of flow body
XIV	Indicator configuration	1,8 2,5,9	Aluminium housing * Stainless steel housing * (Both GP as well XP)
			NOTE * optionally painted in which case special conditions for safe use apply
XVII	Certs	V	ATEX – Zone 1/Zone 2, Non- Electrical

Brooks Model 3750 series Variable Area Flow Meter

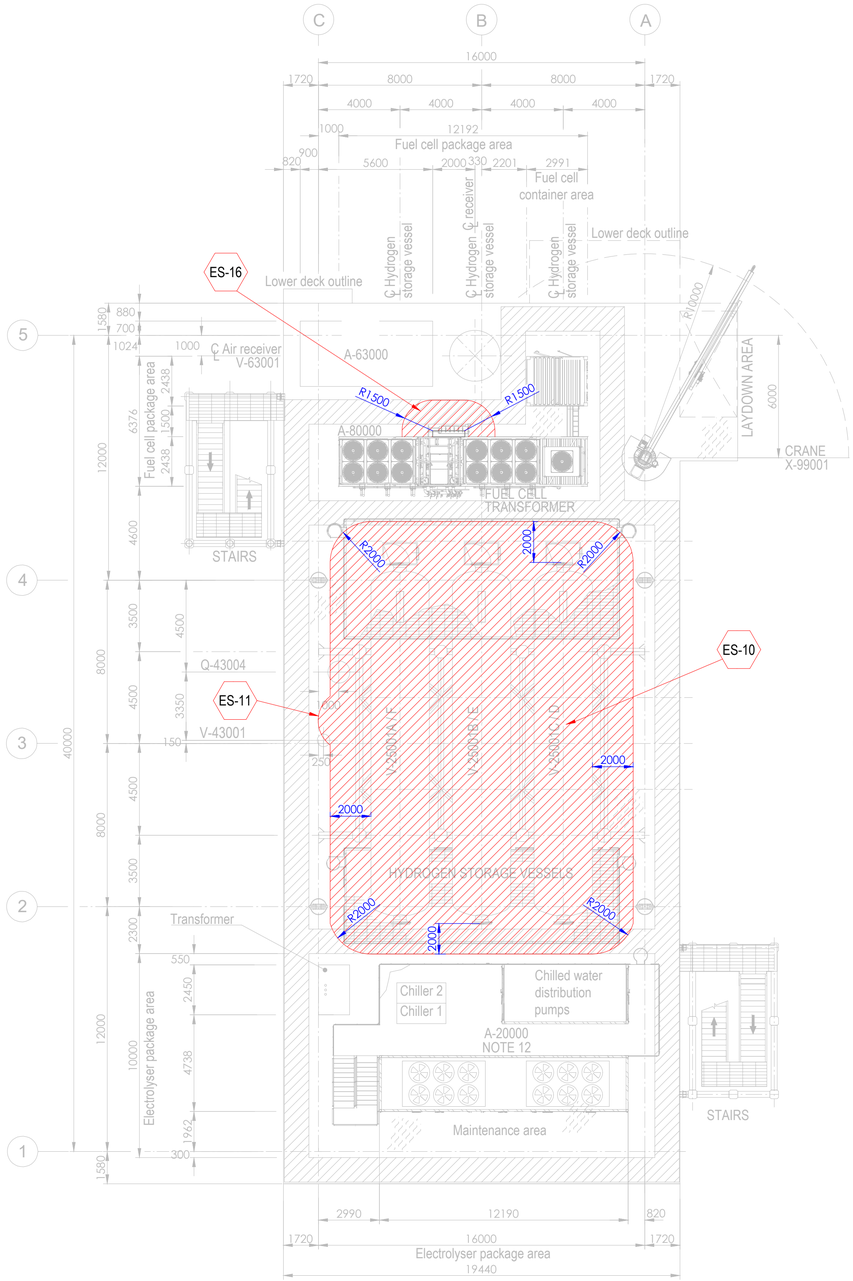
MT3750	C	M	...	U	A	...
I-IV	V	VI		XV	XIII	XVIII

Mode Code Position	Explanation	Value	Explanation
I-IV	Model	MT3750	Variable Area Flowmeter (Metal Tube)
V	Model Revision	C	
VI	Material	1-H	Material of construction of flow body
XV	Approvals	U	ATEX – Zone 1/Zone 2, Non- Electrical
XIII	Electrical Output	A	Aluminum Indicator only (no Electronics)

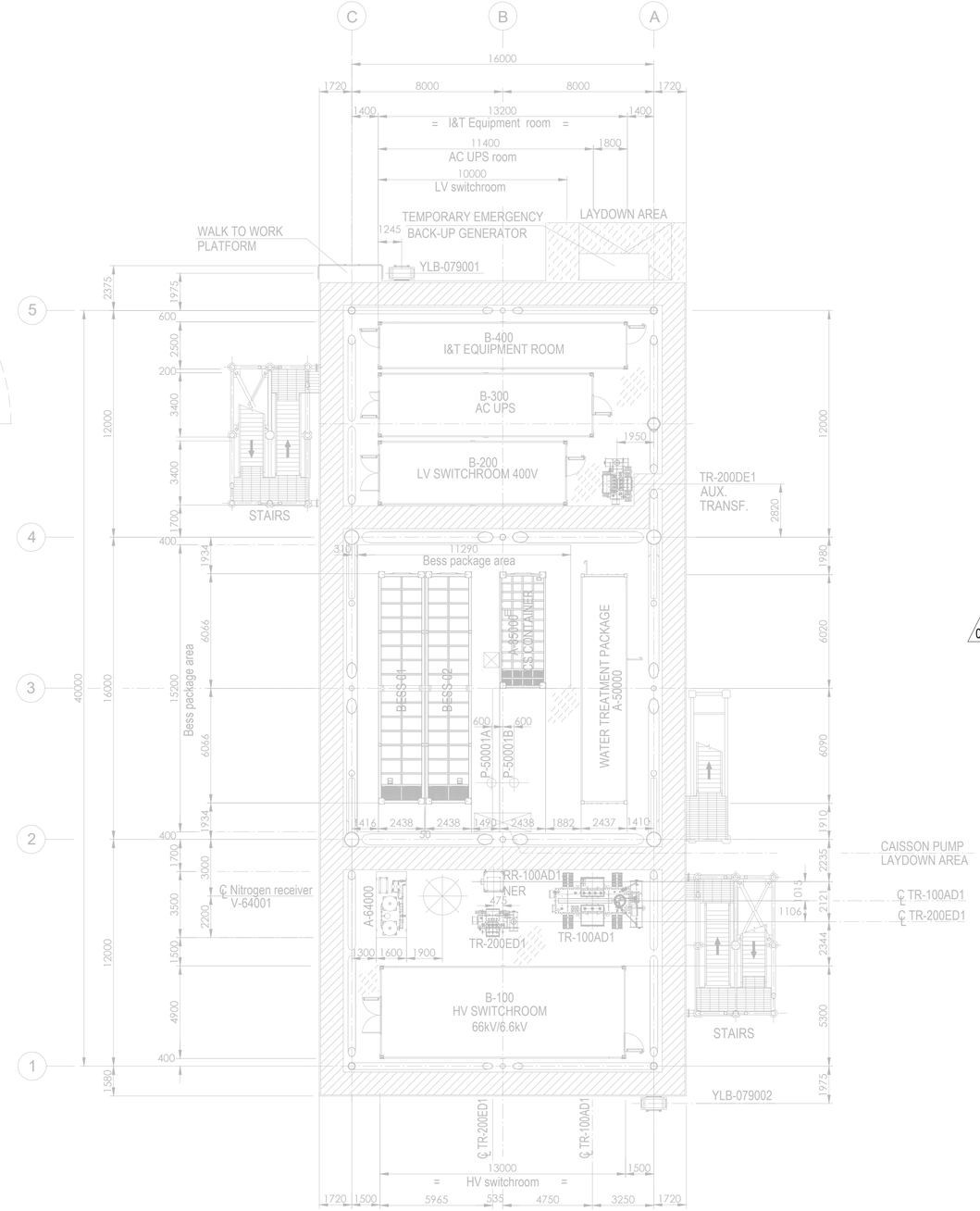
Brooks Instrument | 407 West Vine Street | Hatfield, PA 19440 | USA | T : 1-215-362-3500 | F : 1-215-362-3745
www.BrooksInstrument.com

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



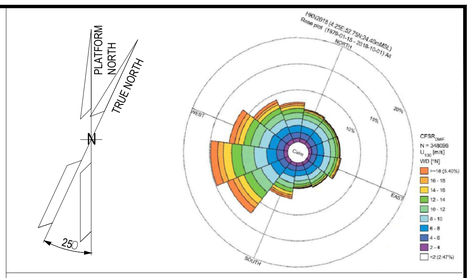
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

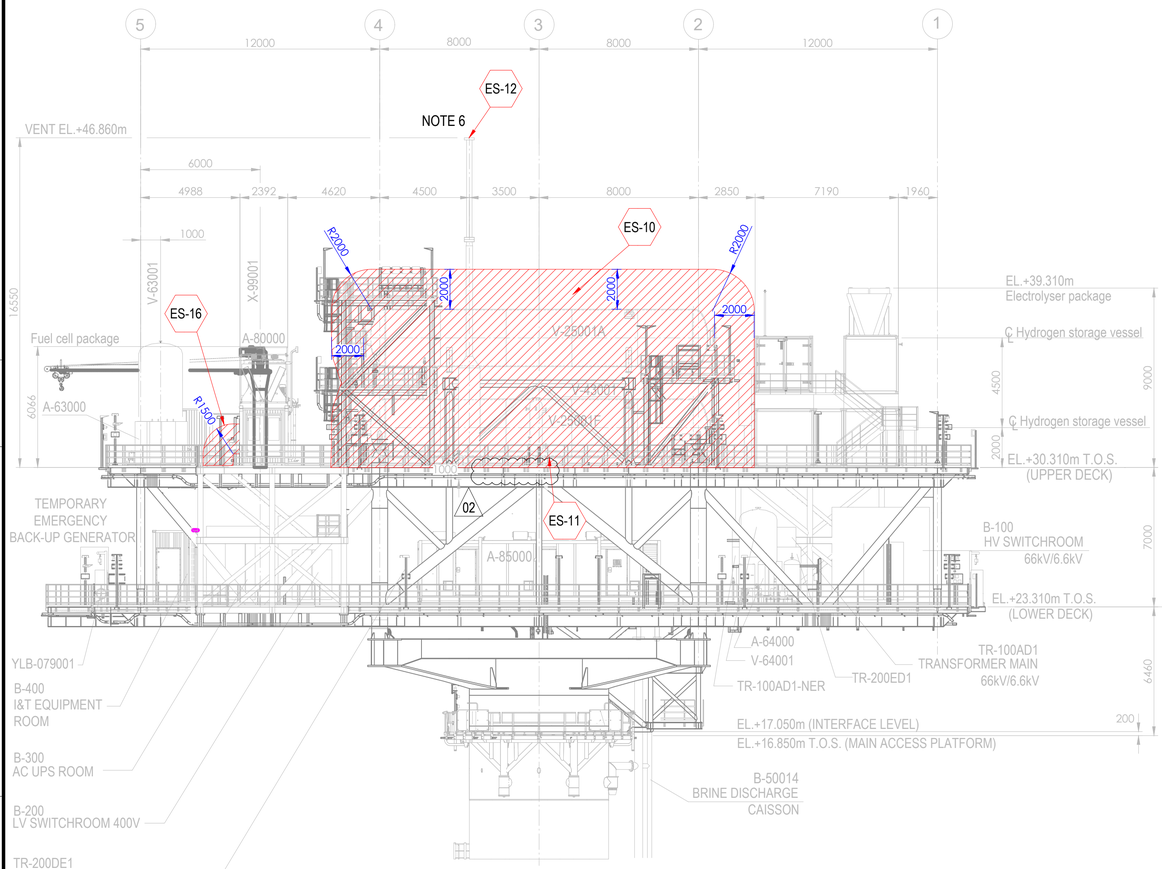
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

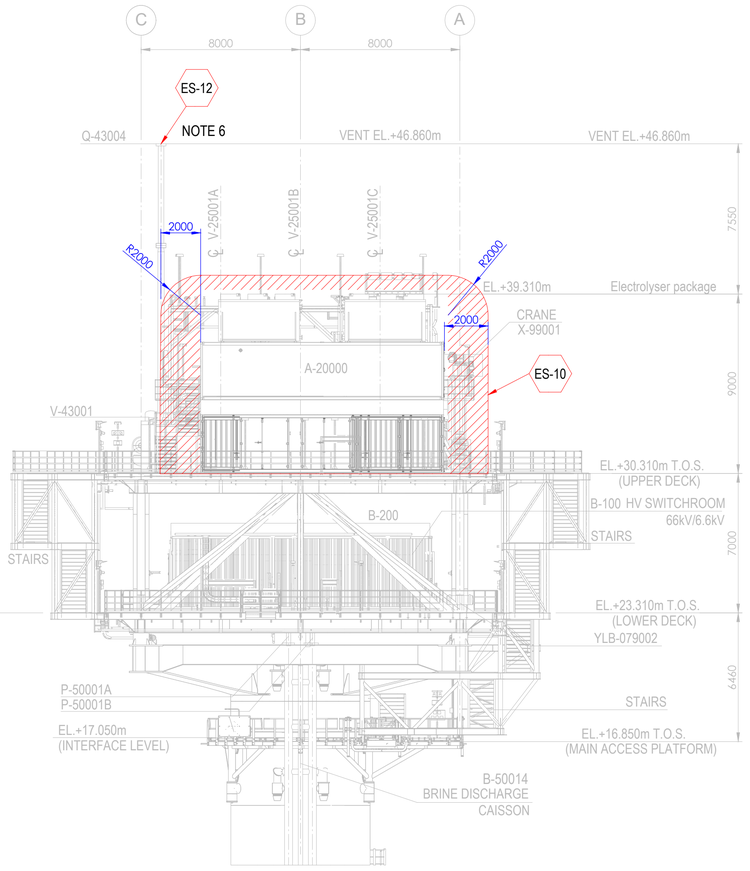
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

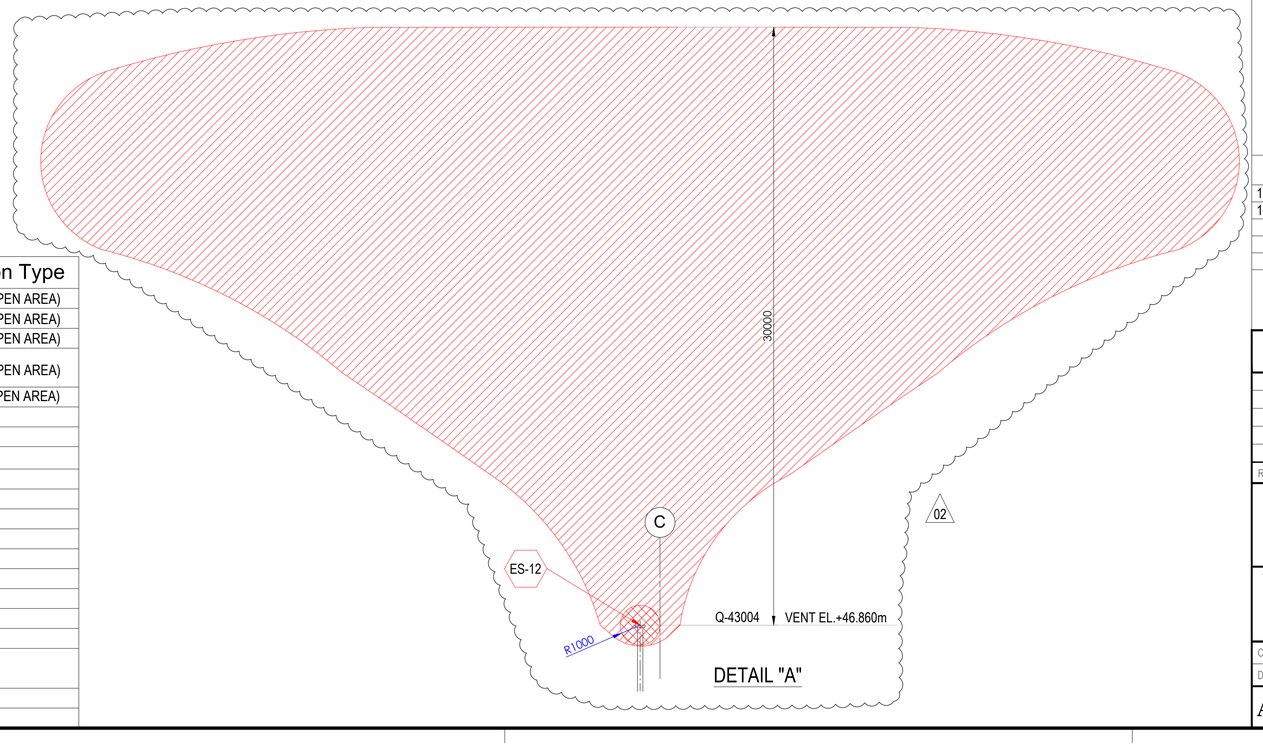


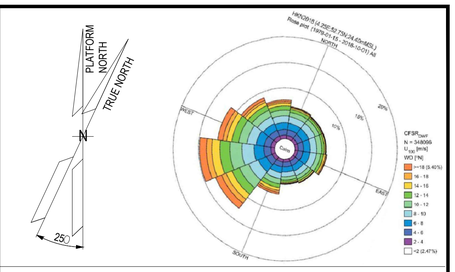
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	64-SDV-001	: On/Off Valve - Nitrogen to Distribution Header Shut-Down	Dwg	123A90-DDL-PR-PID-80027		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD		
TASK	code	C10001617	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		AF770301001 (Ball valve SN: 2400620100001)			
Manufacturer	Rotork			**Model**		CP/S-035-080A/AA			
Cert No.	Declaration of Conformity by Manufacturer			**Equipment Ambient Temp.**		-20 °C to + 40 °C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex h	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T5	**IP Rating**	IP66/IP67

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	NA	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	NA	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	NA	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	NA	
15	Electrical connections are tight	x	NA	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	NA	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	NA	
25	There is no obvious damage to the cables	x	NA	
26	Cable glands are the correct type and installed correctly	x	NA	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	NA	

ITEM	Tag	64-SDV-001	: On/Off Valve - Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10001617	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	NA	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	NA	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	NA	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	64-SDV-001	: On/Off Valve - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10001617		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01
							Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

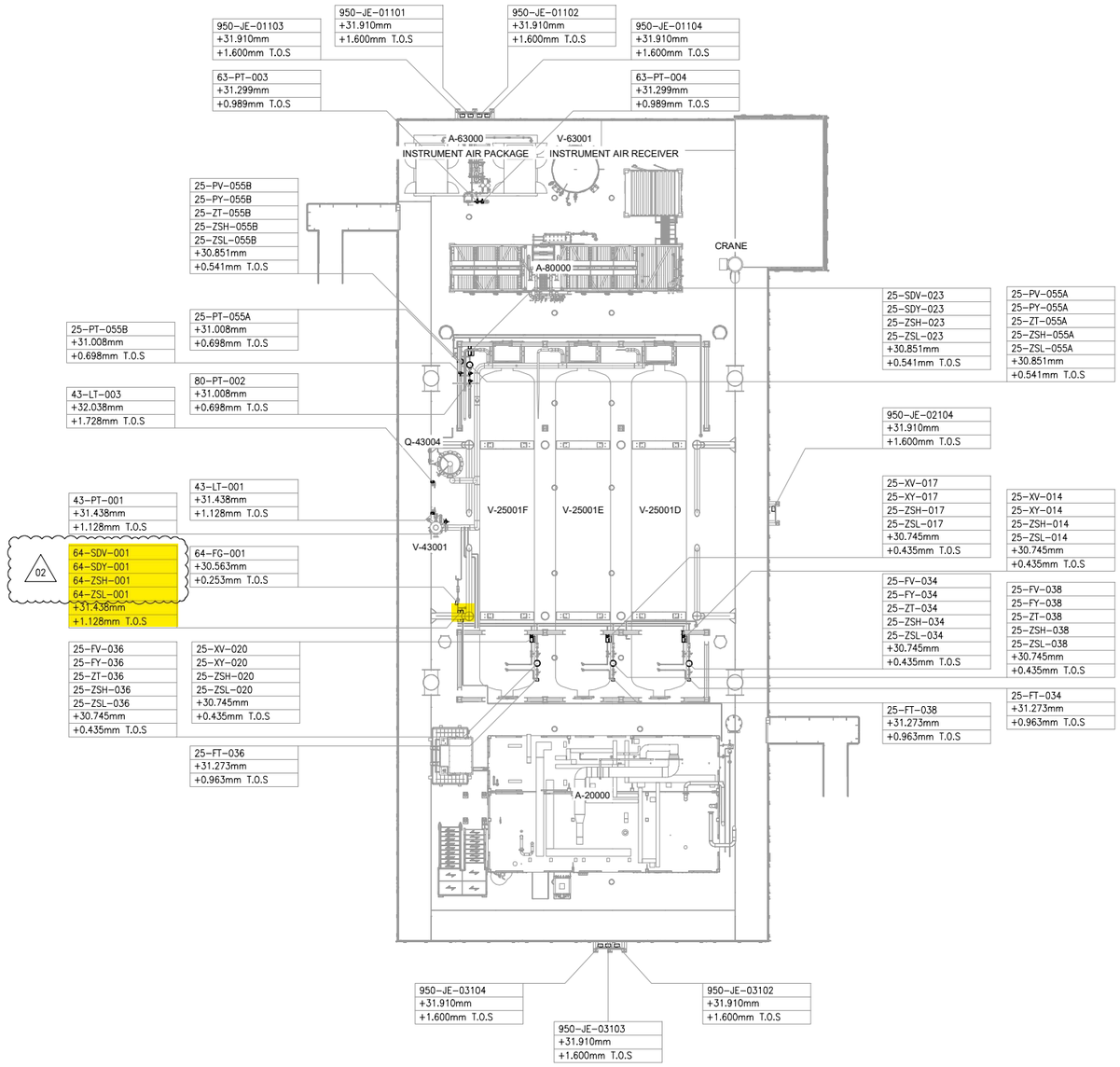
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Luca Mussi	
Date	2025-01-31	2025-01-31	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:34:23.393Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-31T11:09:48.681Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

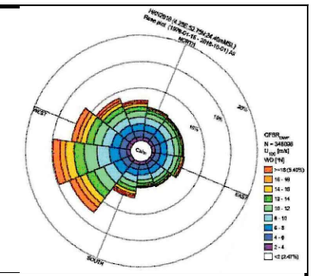


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-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 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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

03 63 TP 040 2" 2"x1.1/2"

V-63001
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019

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

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

63 PI 004 LL
63 PI 003 L
I ESD
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

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

NOTE 15
64 PI 002 L LL
I
64 HS 031
64 PIC 031A H L
64 PIC 031B H L
64 PT 031A
64 PT 031B
64 PT 002
NOTE 1, 12 SET @ 10 barg 1D2
64 PSV 001
NOTE 10 TO ATM
2"-AV-160-01CS-N
1.5" x 1"
SB BLPH-MV-278 FB-LO 1.1/2"
1-1/2"-N-197-01CS-N
1.5" x 1"

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-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

1" -N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL
64 SDV 001 S IA
64 SDV 001
NOTE 13
NC-FC TYP.2

01CS 03HSS

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

64 TP 042 BLPH-MV-271 SB LO
3/4" LC BLPH-MV-275 NOTE 16
64 TP 044
1"-N-262-01CS-N

1"-N-158-01CS-N
64 PV 031A FL-DC TYP.6 1"
64 PV 031B FL-DC TYP.6 1"
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
1"-N-100-01CS-N
N-158 N-100

I ESD → 64 XA 003 FAULT PACKAGE
64-XS-001 SHUT-DOWN I ESD
NOTE 14

V-64001
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03 64 TP 046

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 03 64-PV-031 CV FAILURE.
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

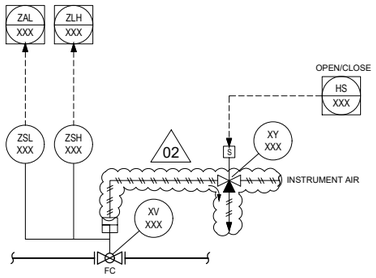
File Name : FILE_NAME

DRAWING NO.

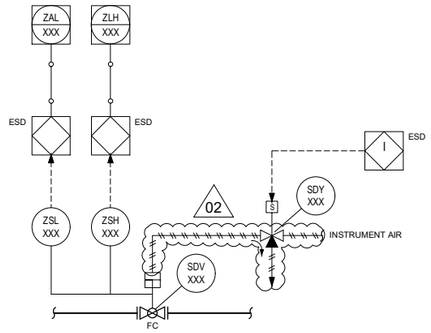
REV. 00

TYPICAL INSTRUMENTATION VALVE

TYP.1 (XV - ON OFF VALVES)

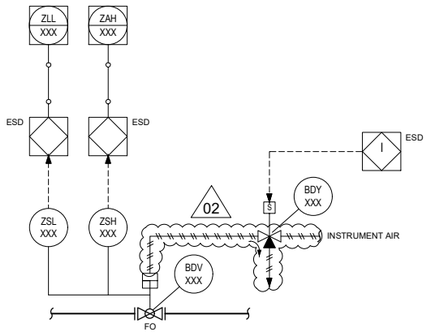


TYP.2 (SDV - SAFETY NO CRITICAL VALVES)



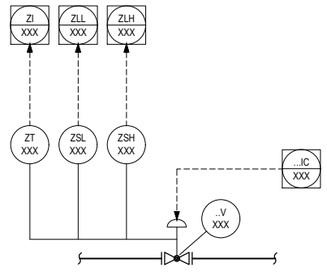
02

TYP.4 (BDV - SAFETY NO CRITICAL VALVES)



02

TYP.6 (CONTROL VALVES - CRITICAL)



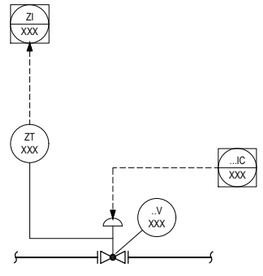
INSTRUMENT SYMBOLOGY DEFINITION

MEANINGS OF IDENTIFICATION LETTERS
THIS TABLE APPLIES TO THE FUNCTIONAL IDENTIFICATION OF INSTRUMENTS

	FIRST- LETTER		SUCCEEDING-LETTER		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
C				CONTROL	
E			SENSOR (PRIMARY ELEMENT) ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G			GLASS VIEWING DEVICE		
H	HAND				HIGH
I			INDICATE		
L	LEVEL				LOW
O			ORIFICE, OPEN		
P	PRESSURE, VACUUM				
R		RELIEF			
S		SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
V				VALVE, DAMPER, LOUVER	
X	UNCLASSIFIED				
Y				AUXILIARY DEVICES	
Z	POSITION DIMENSION				

NOTE: FOR FURTHER EXPLANATORY NOTES, REFER TO ANSI/ISA-5.1

TYP.7 (CONTROL VALVES - NOT CRITICAL)



NOTES

1. FOR GENERAL NOTES AND PIPING SYMBOLOGY SEE DRAWINGS: 123A90-DDL-PR-PID-80009 AND 123A90-DDL-PR-PID-80010.
2. DELETED.

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)

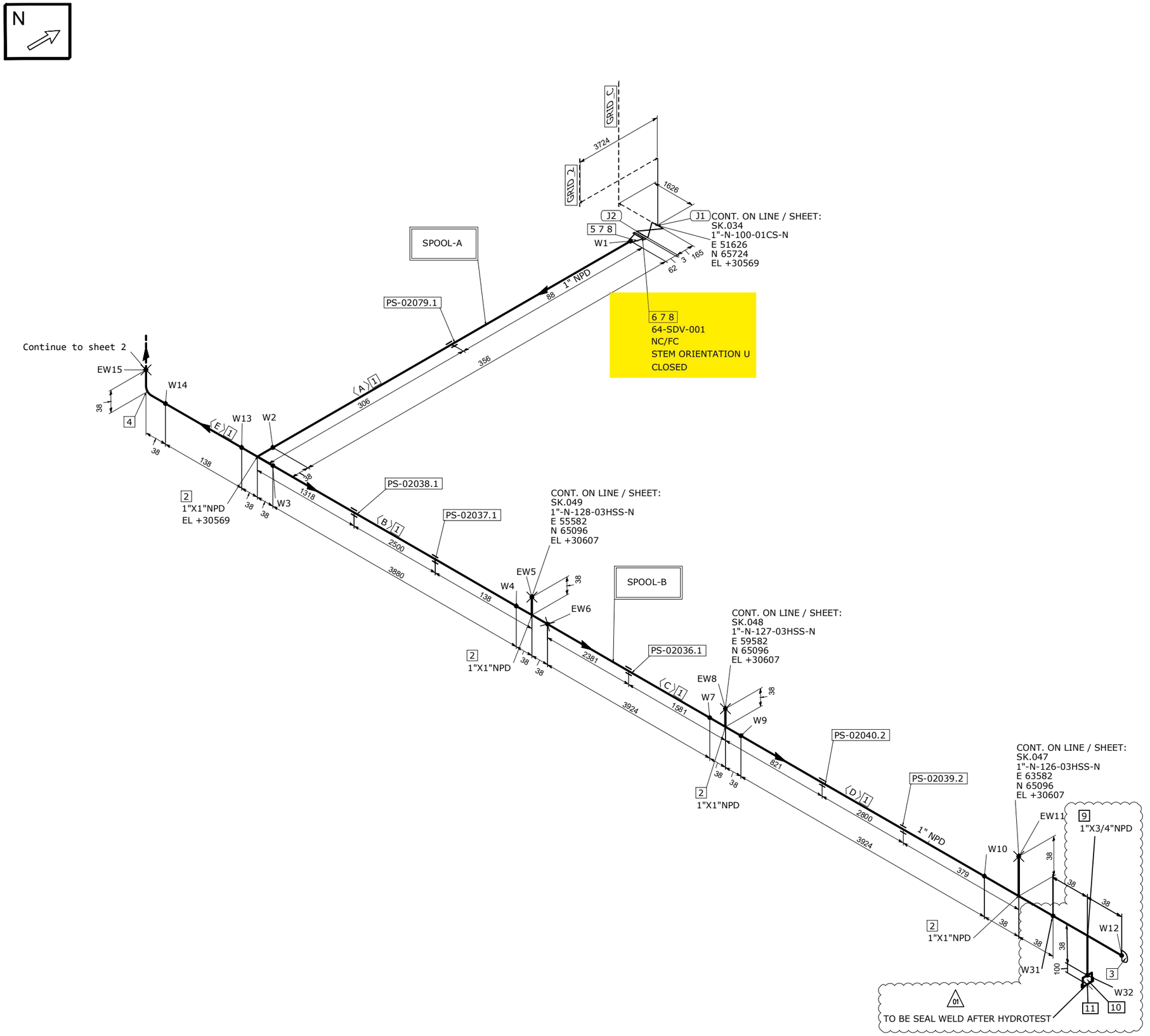
CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENTATION SYMBOLOGY

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-80042	SHEET 001	REV. 02

File Name :



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	12.2M	31.0
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	1.4
3	1	CAP0SS01030100	Cap ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8
9	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.4
10	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1		ON/OFF Ball Actuator Valve - 300#RF Flanged	1	41.0
7	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
8	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8
11	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2

FABRICATION WEIGHT [kg]	35.0
ERECTION WEIGHT [kg]	43.1
OVERALL WEIGHT [kg]	78.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
EW5	1	BW
EW6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
EW11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
EW15	1	BW
W31	1	BW
W32	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	356	BEVEL	BEVEL
B	1	3880	BEVEL	BEVEL
C	1	3924	BEVEL	BEVEL
D	1	3924	BEVEL	BEVEL
E	1	138	BEVEL	BEVEL

SUPPORT LIST

PS-02079.1
PS-02038.1
PS-02037.1
PS-02036.1
PS-02040.2
PS-02039.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	13.8
B	5.75	21.2
MONT	5	43.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-257-03HSS-N

SK.122

LINE DATA							
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

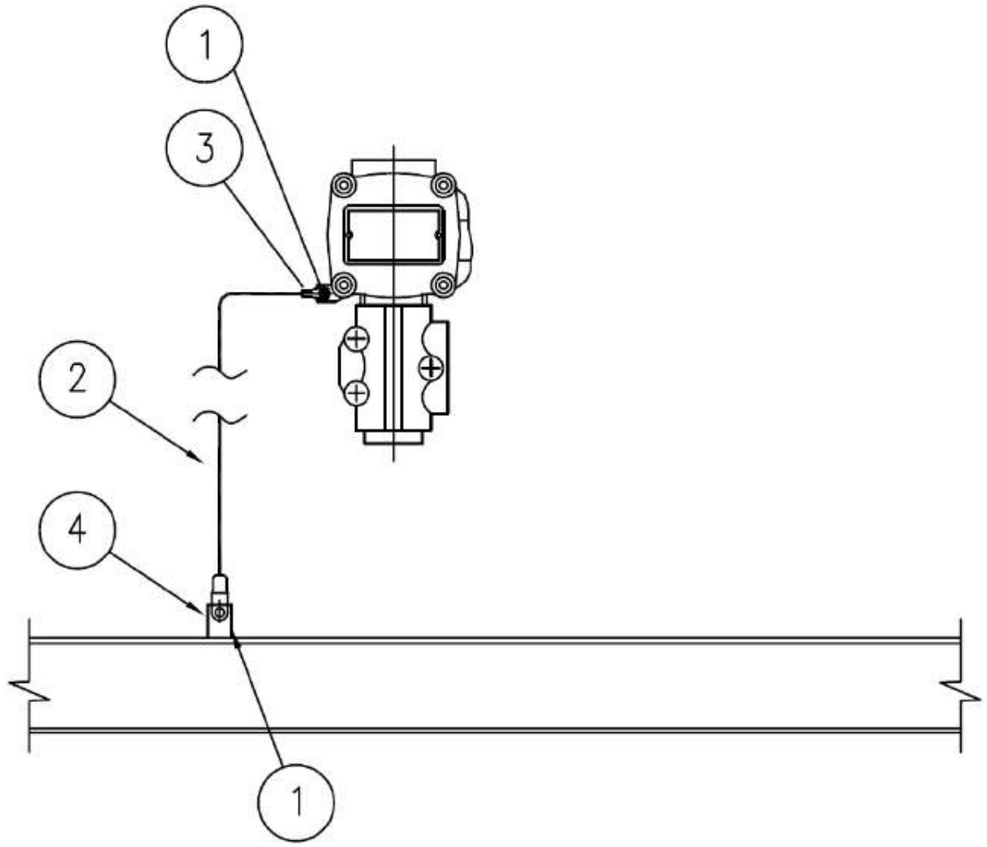
REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80027
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

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	17-09-2024
FORMAT	A3
DRAWING NO.	123A90-FDL-PP-DI-00122
SHEET / OF	1/2
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

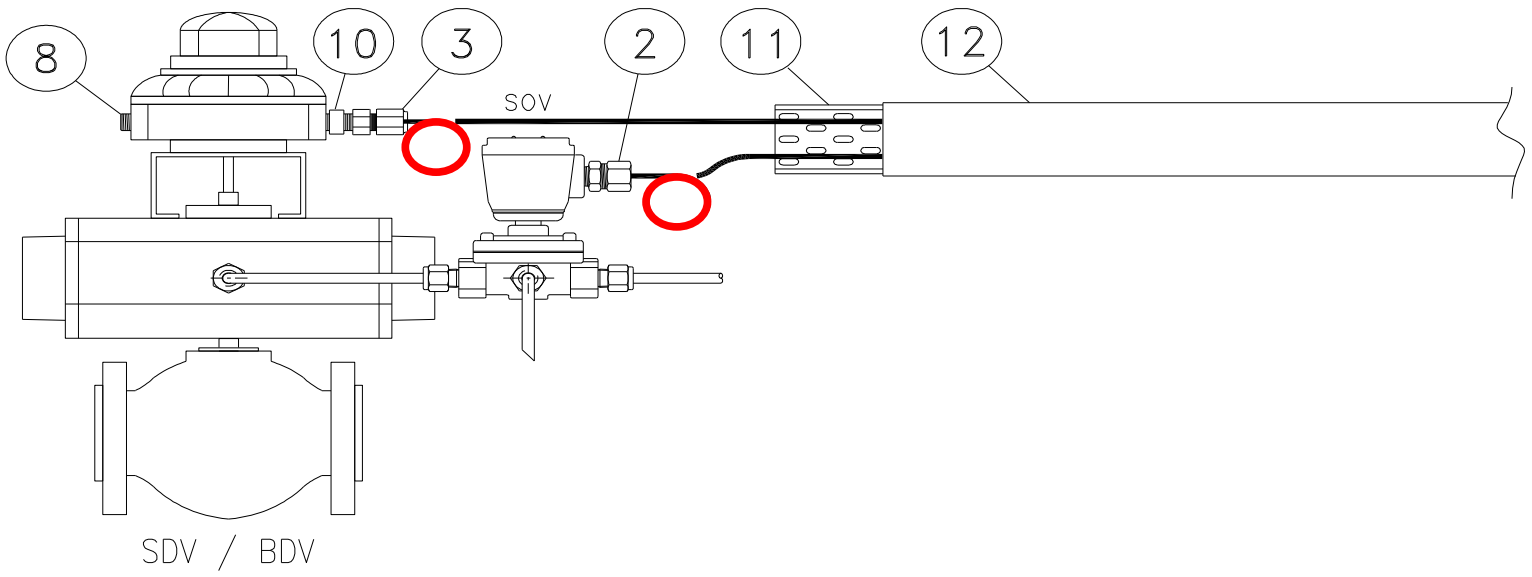
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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. 16 of 37 Date: 27/09/2024 Rev. 02

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



SDV / BDV

INSTRUMENT TAG	
1	25-BDV-005
2	25-BDV-007
3	25-BDV-010
4	25-BDV-013
5	25-BDV-016
6	25-BDV-019
7	25-BDV-022
8	25-SDV-001
9	25-SDV-023
10	64-SDV-001
11	
12	
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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
10		Nickel Plated Brass Adaptor Ex-d/e IIC (or IIB + H2) T1	M20 Male x M25 Female	1
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
3		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	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

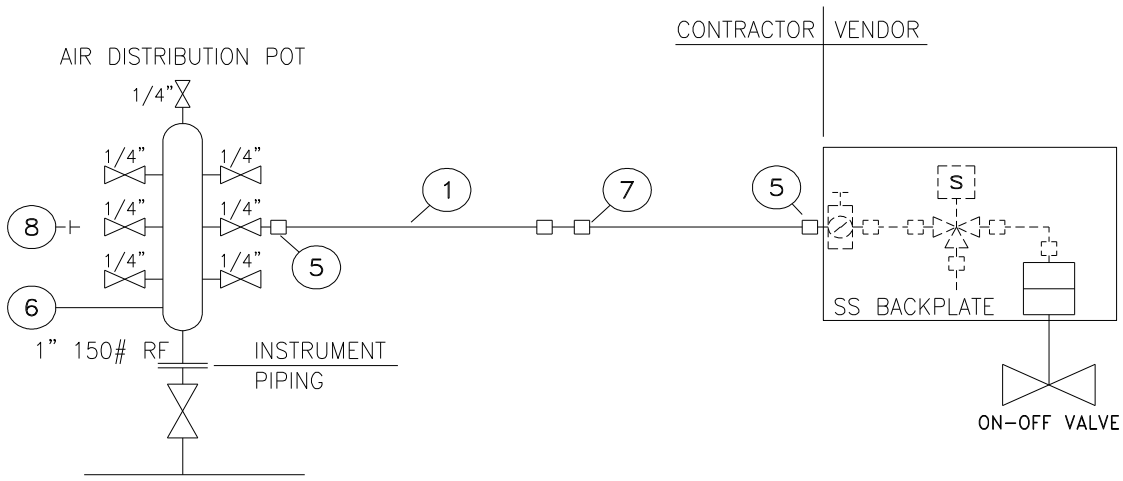
CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Pneumatic Hook-Ups	Sh. 6 of 6 Date: 08/07/2024 Rev. 01

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

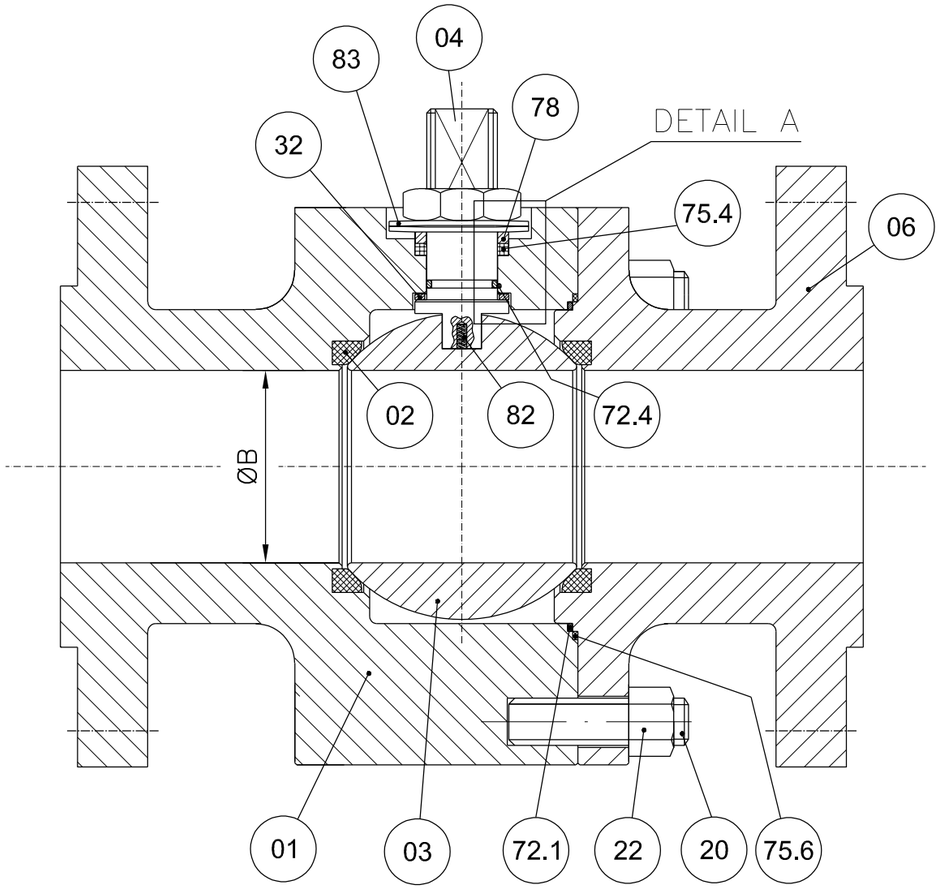


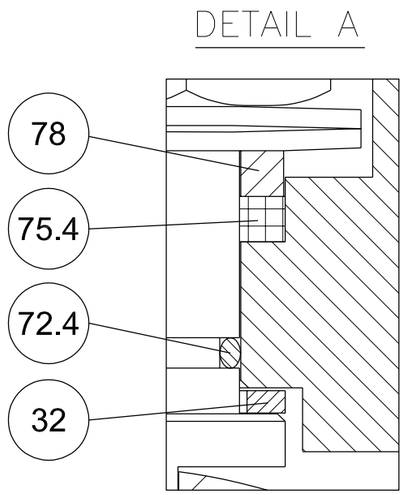
INSTRUMENT TAG	
1	25-BDV-022
2	25-BDV-005
3	25-BDV-007
4	25-BDV-010
5	25-BDV-013
6	25-BDV-016
7	25-BDV-019
8	25-SDV-001
9	25-SDV-023
10	25-XV-004
11	25-XV-006
12	25-XV-008
13	25-XV-009
14	25-XV-011
15	25-XV-012
16	25-XV-014
17	25-XV-015
18	25-XV-017
19	25-XV-018
20	25-XV-020
21	25-XV-021
22	25-XV-024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

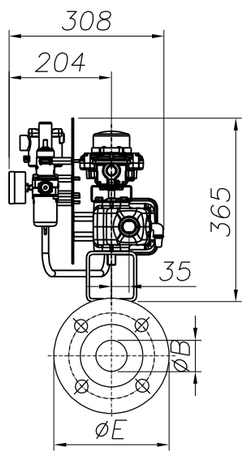
POS.	NORM/STD CODE	DESCRIPTION	SIZE/CONNECTION TYPE	Q.TY
8		SS316 PLUG	1/4" NPT	Note 1
7		SS316 UNION	1/2" O.D. x 1/2" O.D.	N. 1
6		SS316 AIR DISTRIBUTION POT	1" 150#RF - N. 7 1/4" BALL VALVES	Note 1
5		SS316 MALE CONNECTOR	1/4" NPT x 1/2" O.D.	N. 2
1		SS 316L TUBING	1/2" x 0,049"Thk	10 m

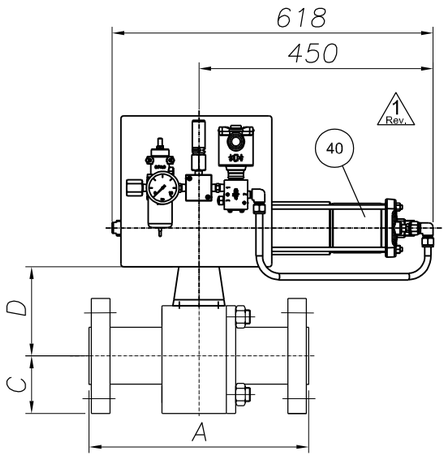
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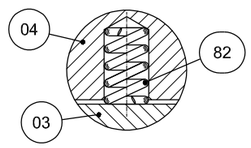


POS.	PART. NAME	MATERIAL
01	BODY	A182 F316/316L
02	SEAT	RPTFE
03	BALL	A182 F316/316L
04	STEM	API 6A CRA UNS N07718
06	CLOSURE	A182 F316/316L
20	STUD	A193 B8M
22	NUT	A194 Gr.8M
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301





ANTISTATIC DEVICE



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	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
08	80	BS03C01RFH	25-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
10	100	BS03C01RFH△	64-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
11	110	BS03C01RFH	25-XV-004	1	1"	300	RF	165	25	62	92	124	7	34	41
12	120	BS03C01RFH	25-XV-006	1	1"	300	RF	165	25	62	92	124	7	34	41
13	130	BS03C01RFH	25-XV-008	1	1"	300	RF	165	25	62	92	124	7	34	41
14	140	BS03C01RFH	25-XV-009	1	1"	300	RF	165	25	62	92	124	7	34	41
15	150	BS03C01RFH	25-XV-011	1	1"	300	RF	165	25	62	92	124	7	34	41
16	160	BS03C01RFH	25-XV-012	1	1"	300	RF	165	25	62	92	124	2 7	34	2 41

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
17	170	BS03C01RFH	25-XV-014	1	1"	300	RF	165	25	62	92	124	7	34	41
18	180	BS03C01RFH	25-XV-015	1	1"	300	RF	165	25	62	92	124	7	34	41
19	190	BS03C01RFH	25-XV-017	1	1"	300	RF	165	25	62	92	124	7	34	41
20	200	BS03C01RFH	25-XV-018	1	1"	300	RF	165	25	62	92	124	7	34	41
21	210	BS03C01RFH	25-XV-020	1	1"	300	RF	165	25	62	92	124	7	34	41
22	220	BS03C01RFH	25-XV-021	1	1"	300	RF	165	25	62	92	124	7	34	41
23	230	BS03C01RFH	25-XV-024	1	1"	300	RF	165	25	62	92	124	7	34	41
28	280	BS01C01RFH	80-XV-001	1	1"	150	RF	127	25	54	95	108	6	34	40

2 Rev.

CUSTOMER :	ROSETTI MARINO S.p.A.
P.O. N. :	1724000204 123A90A/REV.1
JOB N. :	240062

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2	ISSUED FOR APPROVAL	S.Madahar	22/04/2024	D.Barcella	22/04/2024	L.Mora	22/04/2024
1	ISSUED FOR APPROVAL	S.Madahar	15/04/2024	D.Barcella	15/04/2024	L.Mora	15/04/2024
0	FIRST ISSUE	S.Madahar	26/02/2024	D.Barcella	26/02/2024	L.Mora	26/02/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: **GENERAL ASSEMBLY DRAWING**

VALVE TYPE: **SPLIT BODY FLOATING BALL VALVE**

DRAWN: S.Madahar	DATE: 26/02/2024	
CHK'D: D.Barcella	DATE: 26/02/2024	
APPV'D: L.Mora	DATE: 26/02/2024	
SIZE: A3	SCALE: N.A.	DRAWING NAME: D240062-08

ALL RIGHTS OF THIS DRAWING ARE RESERVED.

Rev.: 2

GENERAL	1	Tag Number	Location			64-SDV-001	64
	2	Service				NITROGEN TO H2 STORAGE VESSELS INLET	
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80027	Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-N-128-03HSS-N	
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm	1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L	NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				NITROGEN GAS	
	8	Fluid State	Phase			GAS	GAS
	9	Operating Pressure Norm/Min/Max	[barg]			6 -	-
	10	Design Pressure	Full Vacuum	[barg]		10	
	11	Operating Temperature Norm/Min/Max	[°C]			AMB -	-
	12	Design Temperature	Minimum	Maxi	[°C]	-46	80
	13	Max. Diff. Pressure for Actuator Size	[bar]			10	
	14						
	15						
	16	Speed of	Design			Close : (12)	Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum	Open : -
	18						
	19						
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFHS)	
	21	Body Size	Body Form			1"	FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L	(*)
	23	Connections	Rating			FLANGED ASME B16.5	#300
	24	Flange Finish	Gasket Material			RF	Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)	II 2 G Ex h IIC T5 Gb
	26	Bolting				A193 B8M / A194 Gr. 8M	
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718 / RPTFE
	28	Leakage Class				(1, 3) TSO	
	29	Fire Safe				(2)	
ACTUATOR	30	Manufacturer	Type			Rotork	Spring Return
	31	Model No.	Size			CP/S	035-080A/AA
	32	Actuator Orientation	Actuator Form			Horizontal	Cylinder
	33	Ingress Protection	Certification			IP-66	(9)
	34	Air Supply	Min	Max	Design	4 barg / 10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE	CLOSE
	36	Fireproofing				NOT APPLICABLE	
	37	Solenoid Valve				64-SDY-001 (9, 14, 15, 16) - Bifold FP06P	
	38	Limit Switch Closed	Limit Switch Open			64-ZSL-001 (9, 17) - Soldo SS	64-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED	
	40	Air Set	Handwheel			(*)	NOT REQUIRED
	41	Mounting Position				HORIZONTAL	
	42	Partial Stroke Test Facility				NOT REQUIRED	
	43	Control Type				-	
	44	Electrical Connection	Electrical Class			No. (*) / M20	H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	- -
	46	No of Strokes Per Capacity				-	
	47	Safety Valve	Model			-	-
	48	Check Valve	Mounting			-	-
PURCHASE	49	Manufacturer				FLUITEK	
	50	Model				FB3	
	51	Purchase Order Number				1724000204	

NOTE
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 4.7 barg.

No.	Date	By	Chkd	Appr	Description
03	06/12/24				
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 15 of 33

Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

47	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
48	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323298	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
49	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
50	IFR	25-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
51	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
52	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620080001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
53	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771400801	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
54	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
55	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323312	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
56	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
57	IFR	25-SDV-023	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
58	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
59	IFR		floating ball valve	N.A	FLUITEK	1-1/2" 300#	2400620090001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
60	IFR		ACTUATOR	N.A	RFS	CP/S-035-100A/BA	AF771400901	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
61	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
62	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323300	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
63	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
64	IFR	64-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
65	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
66	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620100001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
67	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401001	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
68	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
69	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323293	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
70	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
71	IFR	25-XV-004	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
72	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
73	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620110001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
74	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401101	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
75	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
76	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323311	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
77	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
78	IFR	25-XV-006	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
79	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
80	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620120001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
81	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401201	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
82	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
83	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323287	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
84	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
85	IFR	25-XV-008	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
86	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
87	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620130001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
88	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401301	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
89	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
90	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323294	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
91	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
92	IFR		LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
93	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE

CONFORMITY DECLARATION ACCORDING TO EUROPEAN DIRECTIVE 2014/68/UE

DICHIARAZIONE DI CONFORMITÀ AI SENSI DELLA DIRETTIVA EUROPEA 2014/68/UE

THE MANUFACTURER
IL FABBRICANTE

Name Nome	FLUITEK ORSENIGO VALVES S.R.L.
Legal representative and role Legale rappresentante	P. Belotti – Managing Director
Declaration of conformity nr. Dichiarazione di conformità no.	240062
Sede legale Legal office	Via Dei Livelli di Sopra, 7/5 – 24060 COSTA DI MEZZATE (BERGAMO) – ITALY
Sede produttiva Operational office	Via Dei Livelli di Sopra, 7/5 – 24060 COSTA DI MEZZATE (BERGAMO) – ITALY
E-mail E-mail	info@fluitekvalves.com
Website Sito internet	www.fluitekvalves.com
Telephone Telefono	+39 035 666 501
Fax Fax	+39 035 666 5047

DECLARE THAT THE FOLLOWING PRESSURE EQUIPMENT
DICHIARA CHE I SEGUENTI ACCESSORI A PRESSIONE

JOB	FOV Pos.	Serial Number	Client Item	PO N.	Description	Quantity
240062	001	2400620010001	10	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	002	24000620020001	20	1724000204 123A90A	Ball valve 4'' 300#	**1**
240062	003	2400620030001	30	1724000204 123A90A	Ball valve 4'' 300#	**1**
240062	004	2400620040001	40	1724000204 123A90A	Ball valve 4'' 300#	**1**
240062	005	2400620050001	50	1724000204 123A90A	Ball valve 4'' 300#	**1**
240062	006	2400620060001	60	1724000204 123A90A	Ball valve 4'' 300#	**1**
240062	007	2400620070001	70	1724000204 123A90A	Ball valve 4'' 300#	**1**
240062	008	2400620080001	80	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	009	2400620090001	90	1724000204 123A90A	Ball valve 1-1/2'' 300#	**1**
240062	010	2400620100001	100	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	011	2400620110001	110	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	012	2400620120001	120	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	013	2400620130001	130	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	014	2400620140001	140	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	015	2400620150001	150	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	016	2400620160001	160	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	017	2400620170001	170	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	018	2400620180001	180	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	019	2400620190001	190	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	020	2400620200001	200	1724000204 123A90A	Ball valve 1'' 300#	**1**

Fluitek Valves	**CONFORMITY DECLARATION ACCORDING TO EUROPEAN DIRECTIVE 2014/68/UE** DICHIARAZIONE DI CONFORMITÀ AI SENSI DELLA DIRETTIVA EUROPEA 2014/68/UE

240062	021	2400620210001	210	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	022	2400620220001	220	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	023	2400620230001	230	1724000204 123A90A	Ball valve 1'' 300#	**1**
240062	024	2400620240001	240	1724000204 123A90A	Ball valve 1-1/2'' 150#	**1**
240062	025	2400620250001	250	1724000204 123A90A	Ball valve 1'' 150#	**1**
240062	026	2400620260001	260	1724000204 123A90A	Ball valve 1-1/2'' 150#	**1**
240062	027	2400620270001	270	1724000204 123A90A	Ball valve 1'' 150#	**1**
240062	028	2400620280001	280	1724000204 123A90A	Ball valve 1'' 150#	**1**

MET THE REQUIREMENTS OF DIRECTIVE 2014/68/UE
SONO CONFORMI AI REQUISITI DELLA DIRETTIVA 2014/68/UE

Conformity assessment procedure used: Procedura di valutazione di conformità utilizzata:	Module H annex III of Directive 2014/68/UE Modulo H Allegato III della Direttiva 2014/68/UE
Notified Body charged of conformity assessment: Organismo Notificato incaricato della valutazione di conformità:	Bureau Veritas (Notified Body No.1370) Bureau Veritas (Ente Notificato N°1370)
Not armonized standards applied to design and manufacture: Norme non armonizzate applicate alla progettazione e alla fabbricazione:	ASME B16.34, ASME VIII, ASME IX, UNI EN 1503 Part.2 ASME B16.34, ASME VIII, ASME IX, UNI EN 1503 Part.2
Classificazione dei fluidi condotta in conformità ai requisiti del	Regolamento CLP CE 1272/2008 Fluid group: **1**

Place COSTA DI MEZZATE (BG), Italy
Luogo COSTA DI MEZZATE (BG), Italia

Date 14/01/2025
Data



Signature
Firma

Fluitek Valves	**DECLARATION OF CONFORMITY ATEX 2014/34/EU** *Dichiarazione di Conformità ATEX 2014/34/EU*	**Cert. DDC No.** **240062 ATEX**

GENERAL INFORMATION – *INFORMAZIONI GENERALI*

Customer ***Cliente***	ROSETTI MARINO S.P.A.		
P. Order ***Ordine***	1724000204 123A90A	**Item/s** ***Item/s***	ALL
FOV Job ***Commessa FOV***	240062	**Position/s** ***Posizione/i***	ALL
Subject ***Oggetto***	BALL VALVE		
Date of execution ***Data di esecuzione***	24/07/2024		

STATEMENT – *DICHIARAZIONE*

We declare that this product has been manufactured in accordance with the Euporean Directive 2014/34/EU to the classification II 2 G/D Tx c.
Technical standards and specifications used are referenced in the Fluitek Orsenigo valves above stated internal job.
The equipment satisfies the provision of directive 2014/34/EU and of standards EN 1127-1, UNI CEI EN ISO 80079-36:2016.
Technical file deposited to Notified Body TUV RHEINLAND 0035.

REMARKS – *NOTE*

SIGNATURE – *FIRME*

Inspection Authority ***Ente Ispettivo***	**Customer Inspector** ***Ispettore Cliente***	**Quality Control** ***Controllo qualità***
		FLUITEK ORSENIGO VALVES S.R.L. Q.C.

rotork Fluid Systems	EU Declaration of Conformity	Rif. JOB nr: AF7703

Manufacturer: Rotork Fluid Systems S.r.l.

Address: Via Padre Jacques Hamel, 138/B
55016 Porcari, Lucca – Italy
Tel. +39 0583 2221
Fax. +39 0585 091362

Section PED: ☐ Applicable ☒ Not Applicable

Under its sole responsibility declares that the items specified below have been designed, manufactured, inspected and tested as required by the relevant provisions of the Pressure Equipment Directive 2014/68/UE.
The equipment has been submitted to the following conformity assessment procedures:

☐**Module H**: **CE-1370-PED-H-RTK 001-23-ITA** **Serial No.:**

☐ **Module H1**: **CE-1370-PED-H1-RTK 001-23-ITA** **Serial No.:**
CE-1370-PED-H1D-RTK 001-20-ITA
CE-1370-PED-H1D-RTK 002-20-ITA

Notified Body: Bureau Veritas Italia SPA Viale Monza 347 20126 MI – Italy
NB Number: 1370

Description: The pressure equipment is a part pressure of pneumatic actuator that is product of Rotork Fluid Systems for quart turn and linear valve. It is composed by a cylinder can and two flanges packaged by tie rods.

Other technical standards and specifications used:
VSR rev.1995; RACCOLTA "M"; RACCOLTA "S"; AD 2000-Merkblatt; ASME VIII Div.1/Div.2; ASME II; EN 13445-3

Section ATEX:

Under its sole responsibility declares that the actuators model:

☒ **GP/GH, CP/CH, RP/RH, LP/LH, HPG, HPL MARKED:** **II 2 G Ex h IIC T5 Gb X**
II 2 D Ex h IIIC T100°C Db X
IP 66M/67M

to which this declaration refers, are in compliance with the following European Directive: **ATEX 2014/34/EU** and they are manufactured according to the following harmonized standards:
EN 12100 / EN ISO 80079-36 / EN ISO 80079-37 / EN ISO4413 / EN ISO4414 / EN 60529

☐ **CQP/CQH MARKED:** **II 2 G Ex h IIC T5 Gb X**
II 2 D Ex h IIIC T100°C Db X
IP 66/68

to which this declaration refers, are in compliance with the following European Directive: **ATEX 2014/34/EU** and they are manufactured according to the following harmonized standards:
EN 12100 / EN ISO 80079-36 / EN ISO 80079-37 / EN ISO4413 / EN ISO4414 / EN 60529

☐ **GO, GOL, EH MARKED:** **II 2 G Ex 60079-46 II_ T_ _ X**
(II 2 D Ex 60079-46 III_ T_ _X)
IP 6_

to which this declaration refers, are in compliance with the following European Directive: **ATEX 2014/34/EU** and they are manufactured according to the following harmonized standards:
EN 12100 / EN ISO 80079-36 / EN ISO 80079-37 / EN ISO4413 / EN ISO4414 / IEC 60079-46, EN 60529

The conformity has been evaluated according to ***Annex VIII (Article 13, Point 1. (b)(ii))*** *of* ***ATEX 2014/34/EU*** *directive.*
TECHNICAL FILE N° TR 219 *(Receipt Number:* ***BVI/ATEX/ITA/24/080*** *Bureau Veritas ITA)*

Section API 6DX: ☐ Applicable ☒ Not Applicable

Under its sole responsibility, the Manufacturer declares that the items specified above have been designed, manufactured, inspected, and tested as required by the applicable provisions of the current edition of the product standard API 6DX and all addenda.

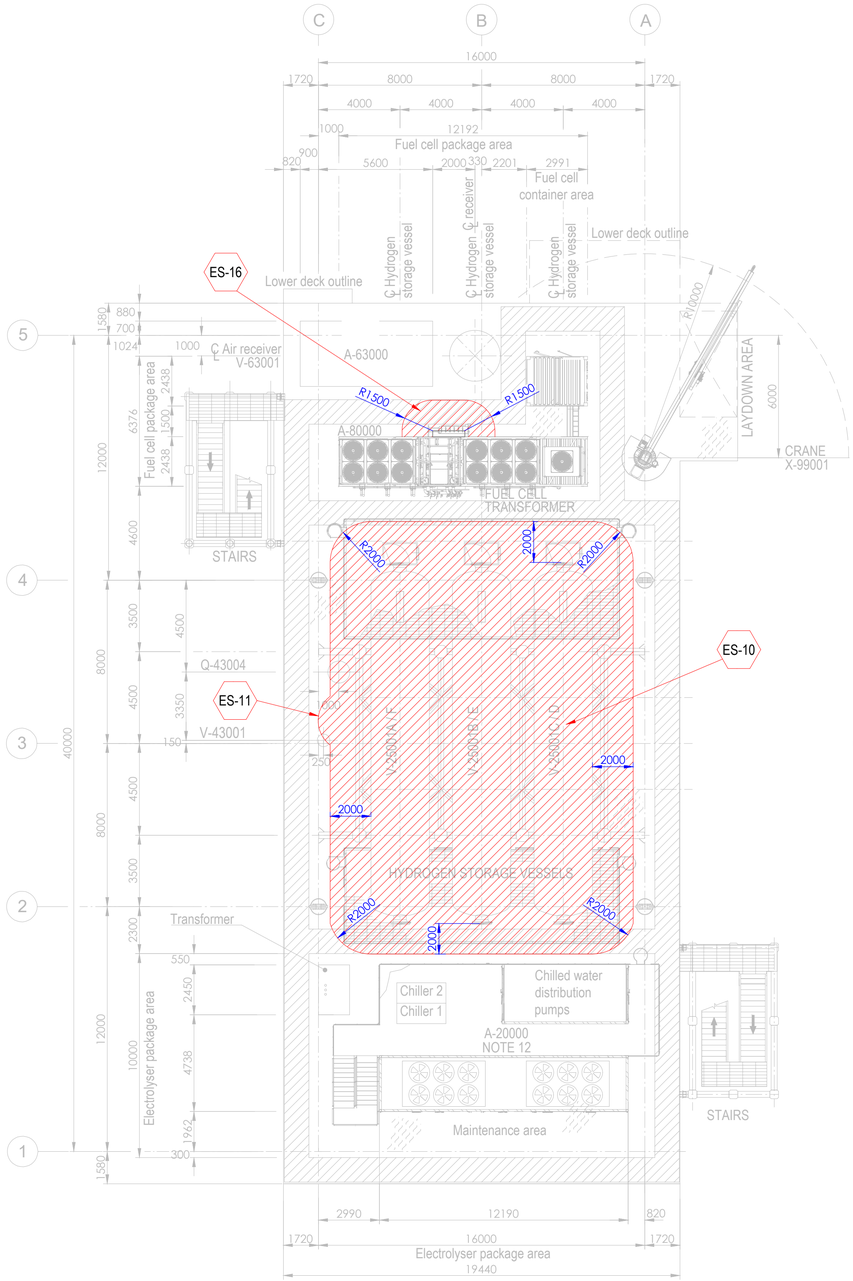
SIGNED ON BEHALF OF ROTORK FLUID SYSTEMS S.R.L. (authorized representative of):

Legal Representative: Metin Gerceker **Signature:**

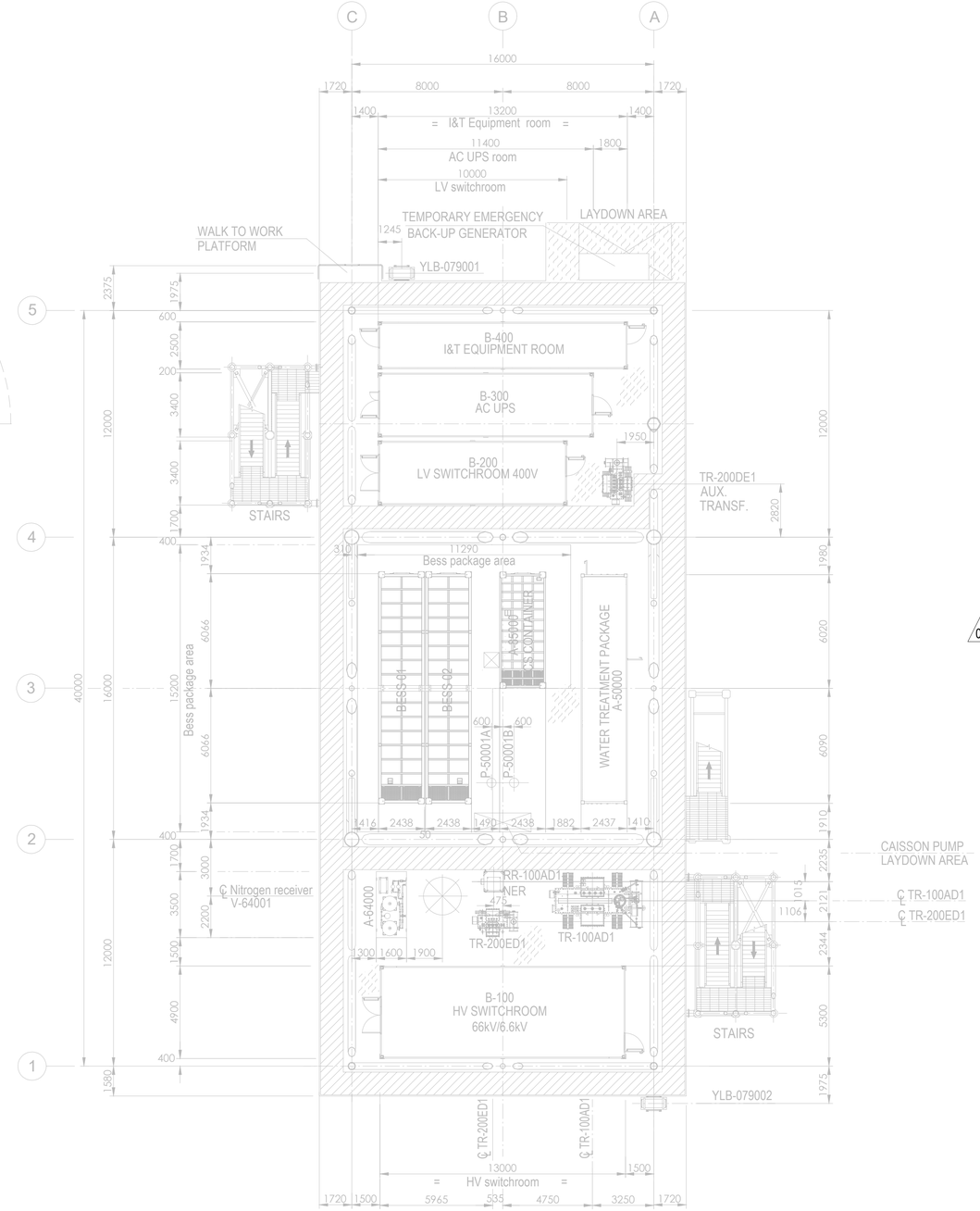
Place / date: Porcari / 05/02/2025

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



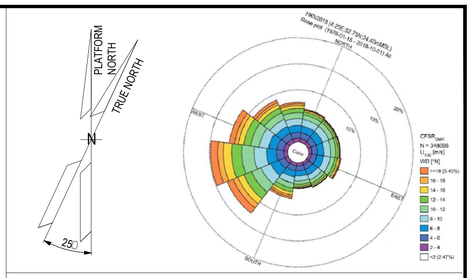
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

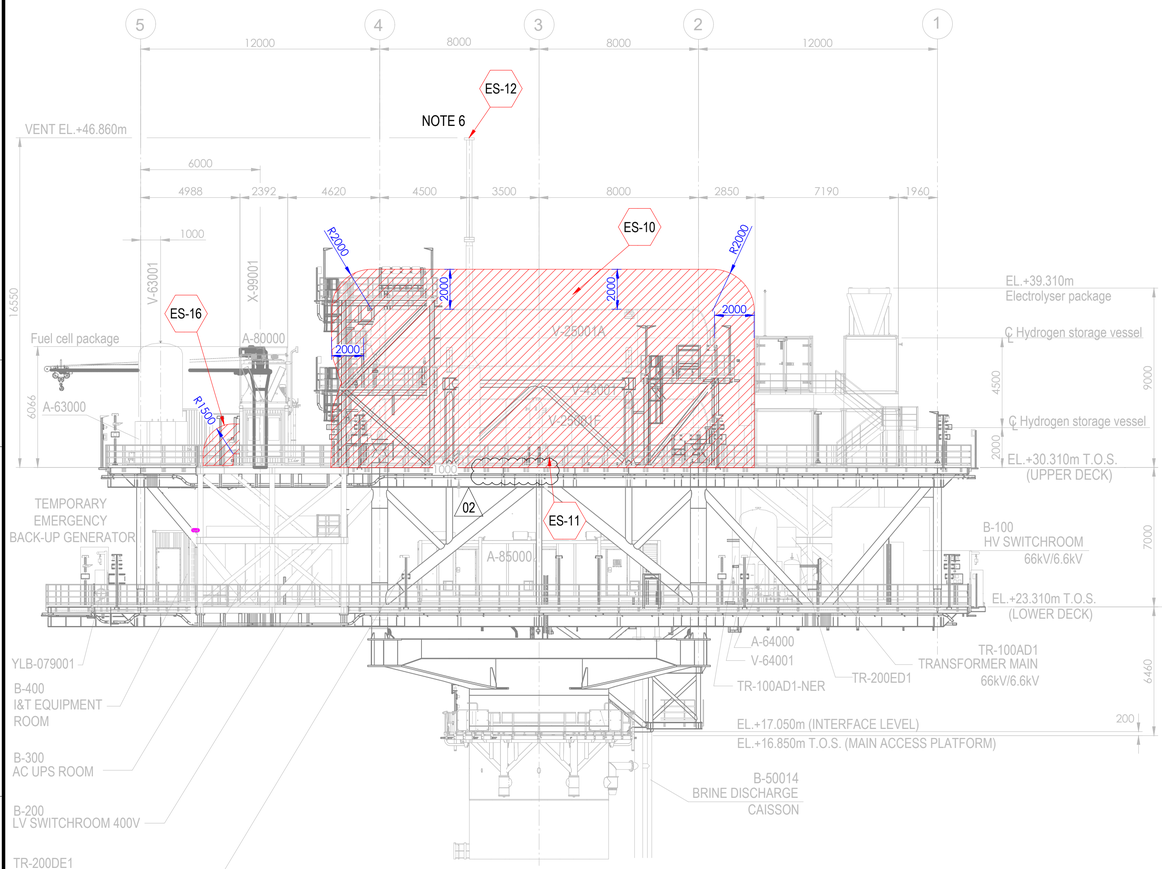
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

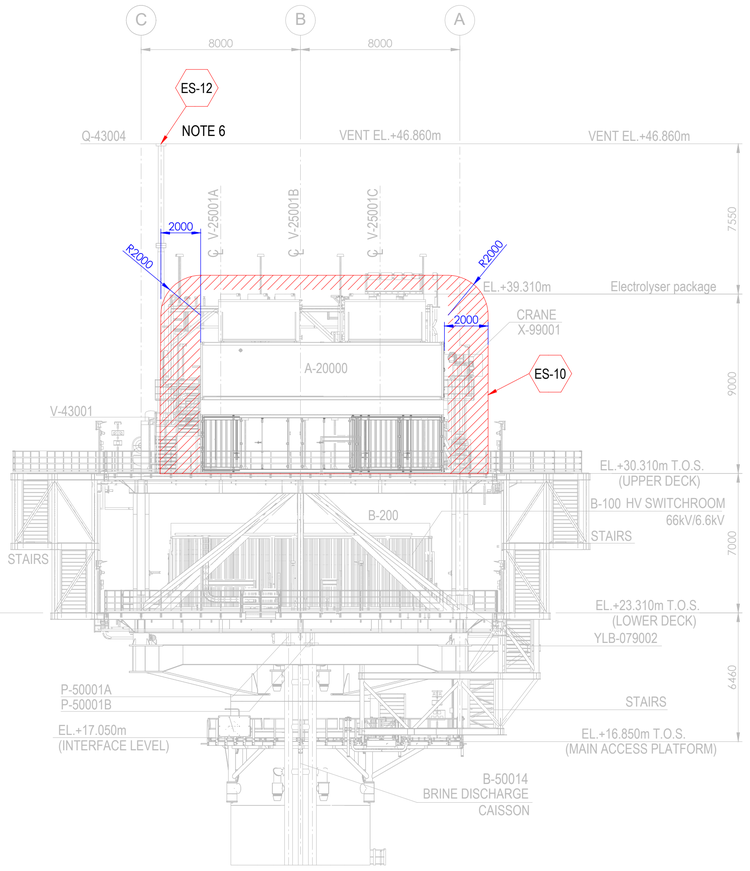
File Name : 123A90-DDL-SAF-DL-30022 Rev.02

DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

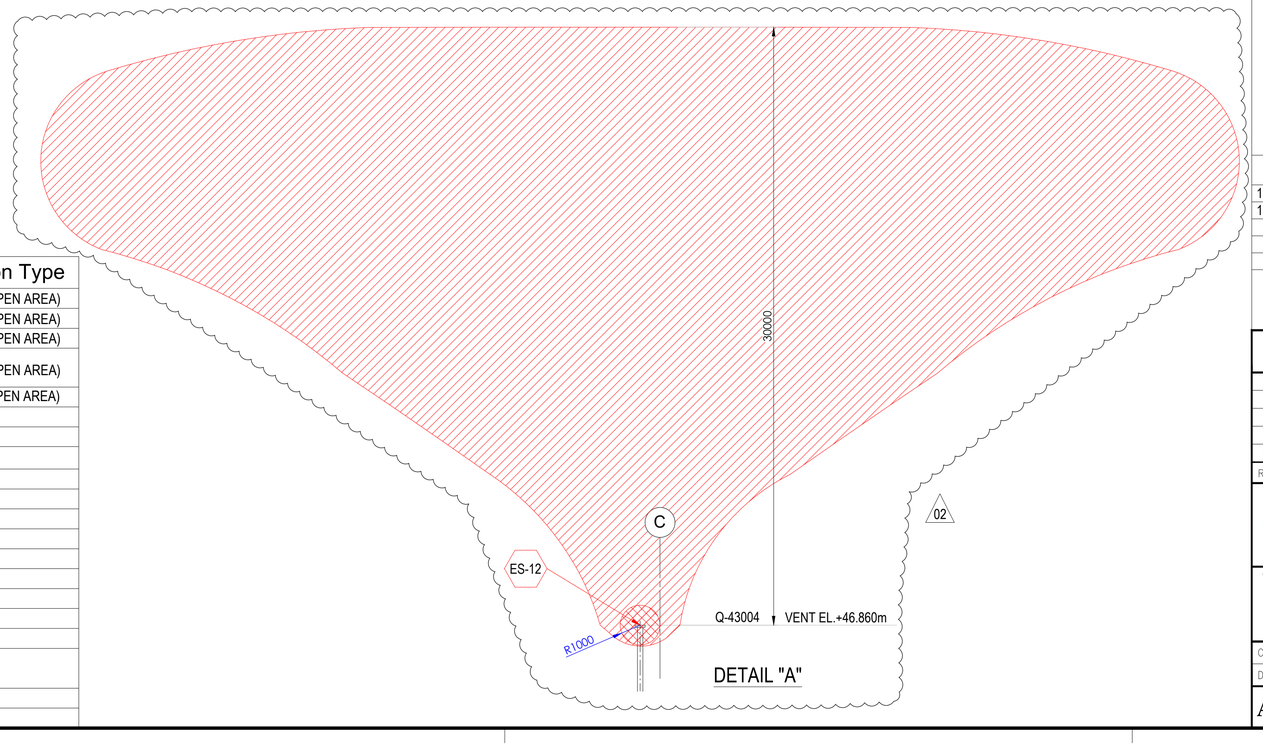


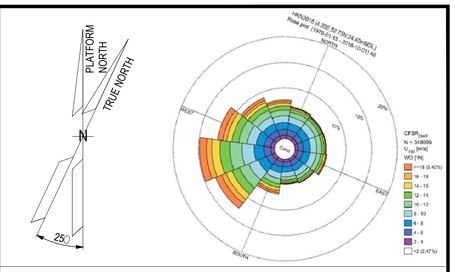
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

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2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	64-SDY-001	: Solenoid Valve - Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10002041	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		FL10524-1874			
Manufacturer	BIFOLD			**Model**		FP06P-77A			
Cert No.	Baseefa10ATEX0026			**Equipment Ambient Temp.**		-60°C +40°C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	PL	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	64-SDY-001	: Solenoid Valve - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10002041		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	OK	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	64-SDY-001	: Solenoid Valve - Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10002041	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

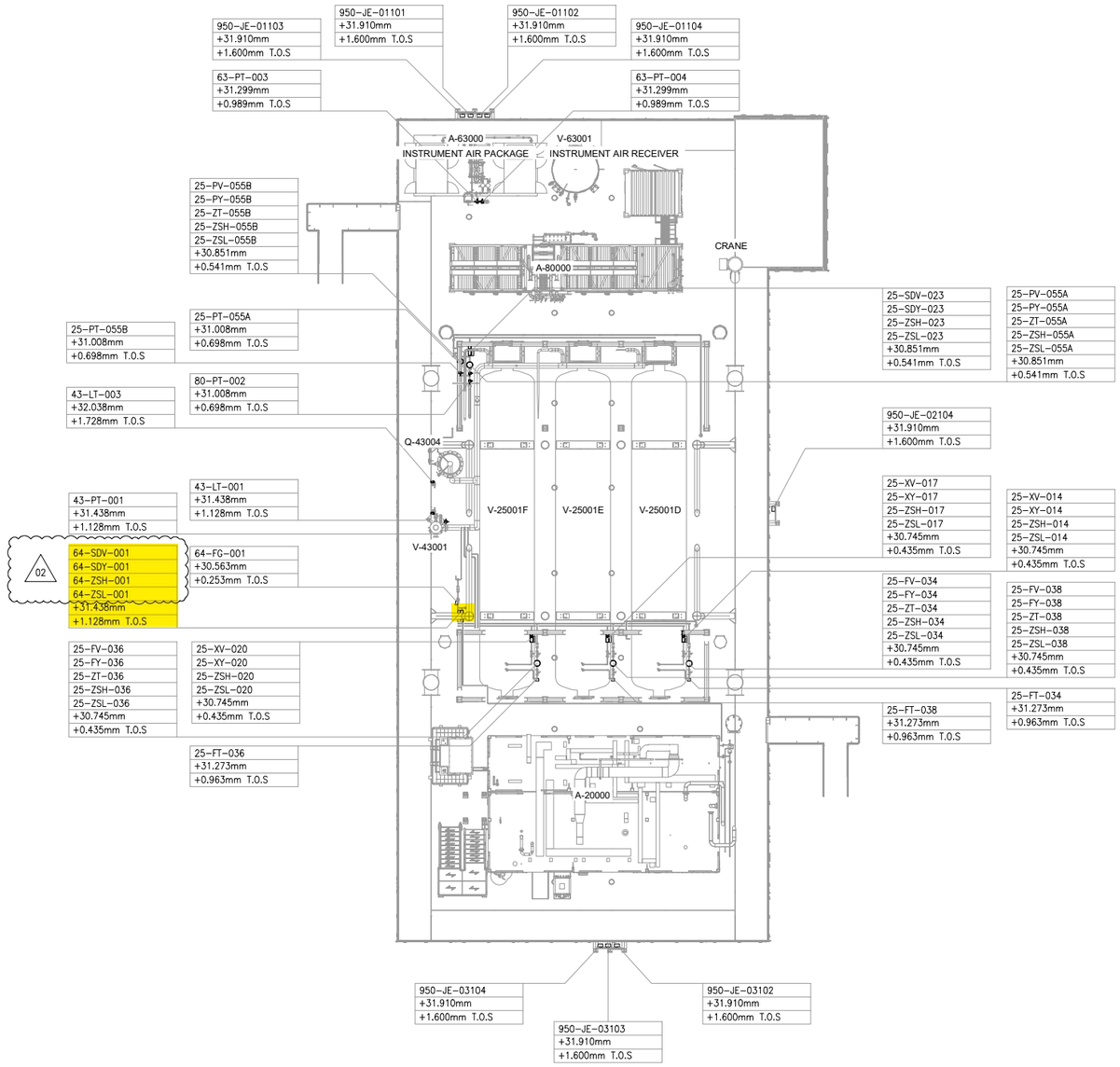
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-31	2025-02-05	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:37:05.180Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-05T17:16:52.662Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

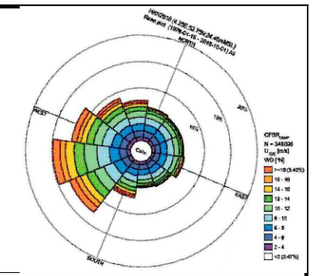


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-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 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

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 — 63 TP 040 — 2"

V-63001
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019

03 — 63 TP 041 — 2"x1.1/2"

LO BLPH-MV-149

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

63 PI 004 LL — I ESD — 63 PT 004

63 PI 003 L — 63 PT 003

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 — I

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

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

64 PT 031A — 64 PT 031B — 64 PT 002

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

INSTR. PIPING — 64 PV 031A — 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

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

03 — 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 NOTE 16

64 TP 044 — 1"-N-262-01CS-N

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

1"-N-100-01CS-N

64 SDV 001 — IA — 64 SDV 001 — NOTE 13 — NC-FC TYP.2

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

64 XA 003 — FAULT PACKAGE

03 — 64 TP 046

V-64001
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-23002	No.	MARSHALLING CABINET B400-SIS-001

<01>

25-SDY-001 (+ 1BK / - 2BK) — C-25-SDY-001/00-JE-23002, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

25-BDY-022 (+ 1BK / - 2BK) — C-25-BDY-022/00-JE-23002, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

25-SDY-023 (+ 1BK / - 2BK) — C-25-SDY-023/00-JE-23002, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

64-SDY-001 (+ 1BK / - 2BK) — C-64-SDY-001/00-JE-23002, 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS — NOTE-2

TB-1

1BK / 2BK	1 / 2	1BK / 2BK
	SH	
SPARE	3 / 4	3BK / 4BK
	SH	
5BK / 6BK	5 / 6	5BK / 6BK
	SH	
7BK / 8BK	7 / 8	7BK / 8BK
	SH	
9BK / 10BK	9 / 10	9BK / 10BK
	SH	
SPARE	11 / 12	11BK / 12BK
	SH	
	OS	

00-JE-23002/B400-SIS-001

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-23002

1BK	1	25-SDY-001
2BK	2	
3BK	3	SPARE
4BK	4	
5BK	5	25-BDY-022
6BK	6	
7BK	7	25-SDY-023
8BK	8	
9BK	9	64-SDY-001
10BK	10	
11BK	11	SPARE
12BK	12	

Shield Bar — I.E.

<01>

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

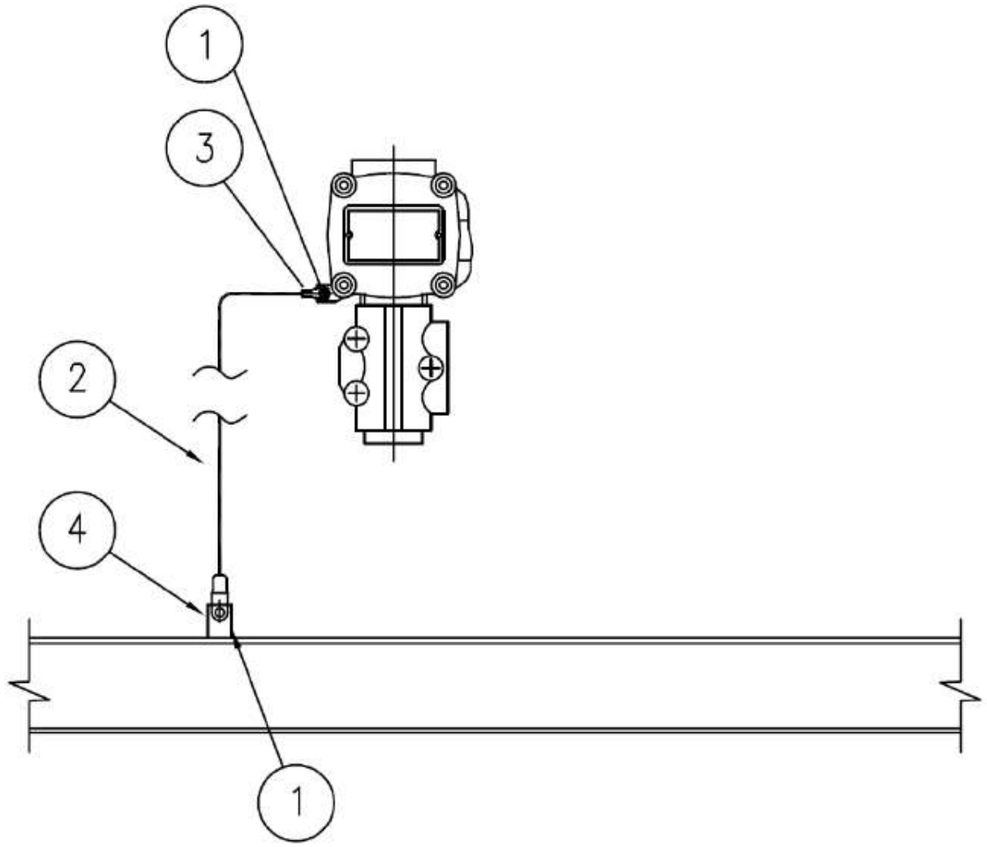
TITLE : BASE LOAD POWER HUB (BLPH)
I INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–23002

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

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 019	REV. 01

File Name : 123A90-DDL-IN-DG-40016_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

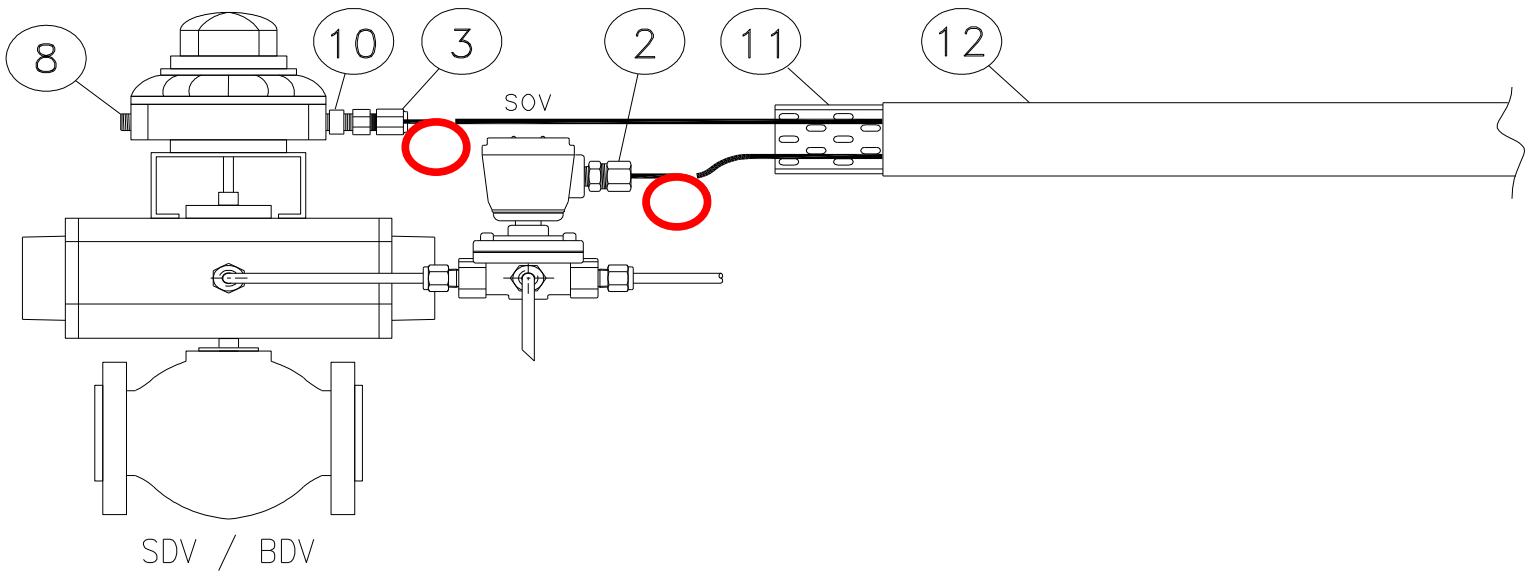
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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. 16 of 37 Date: 27/09/2024 Rev. 02

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



SDV / BDV

INSTRUMENT TAG	
1	25-BDV-005
2	25-BDV-007
3	25-BDV-010
4	25-BDV-013
5	25-BDV-016
6	25-BDV-019
7	25-BDV-022
8	25-SDV-001
9	25-SDV-023
10	64-SDV-001
11	
12	
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30	

NOTE:

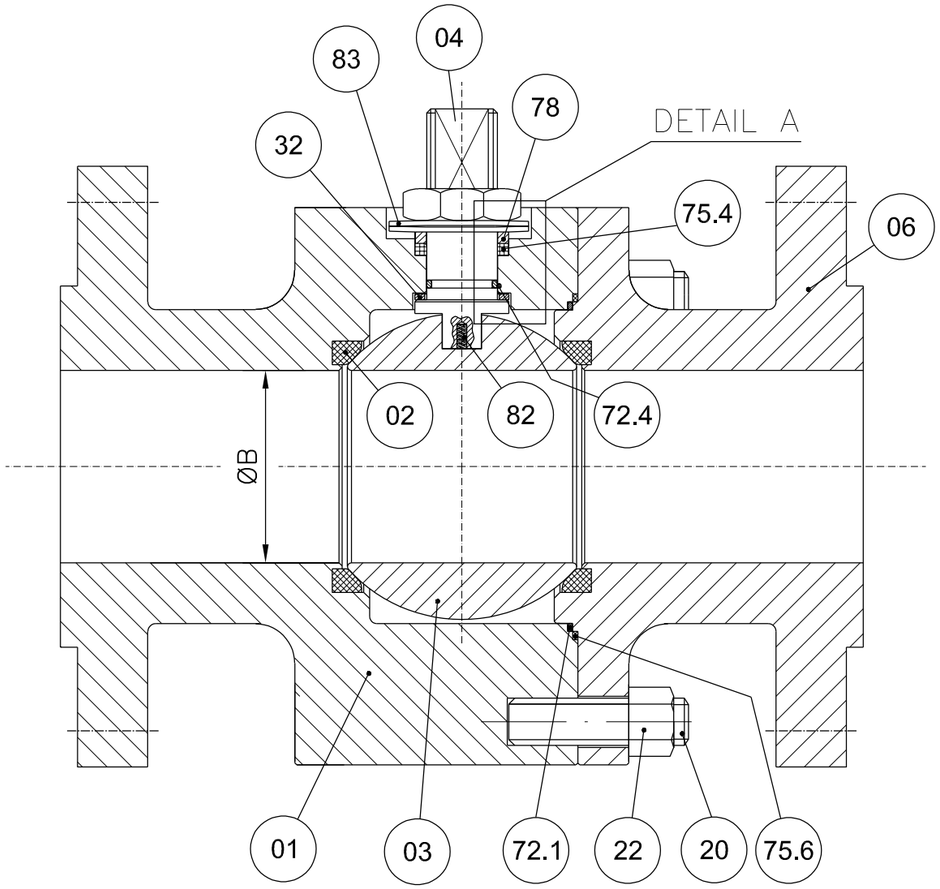
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

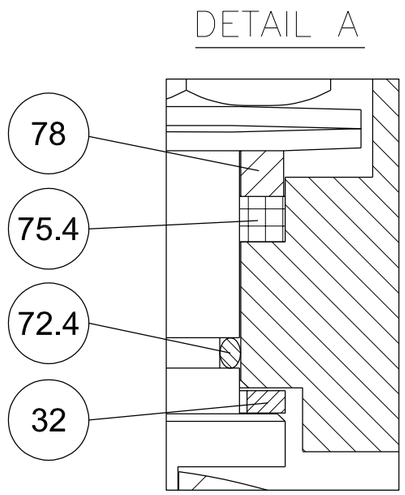
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

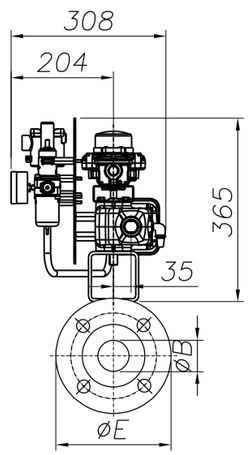
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
10		Nickel Plated Brass Adaptor Ex-d/e IIC (or IIB + H2) T1	M20 Male x M25 Female	1
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
3		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1

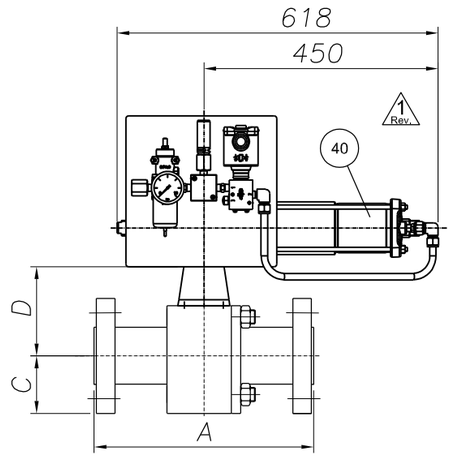
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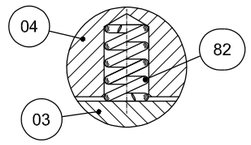


POS.	PART. NAME	MATERIAL
01	BODY	A182 F316/316L
02	SEAT	RPTFE
03	BALL	A182 F316/316L
04	STEM	API 6A CRA UNS N07718
06	CLOSURE	A182 F316/316L
20	STUD	A193 B8M
22	NUT	A194 Gr.8M
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301





ANTISTATIC DEVICE



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	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
08	80	BS03C01RFH	25-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
10	100	BS03C01RFH	64-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
11	110	BS03C01RFH	25-XV-004	1	1"	300	RF	165	25	62	92	124	7	34	41
12	120	BS03C01RFH	25-XV-006	1	1"	300	RF	165	25	62	92	124	7	34	41
13	130	BS03C01RFH	25-XV-008	1	1"	300	RF	165	25	62	92	124	7	34	41
14	140	BS03C01RFH	25-XV-009	1	1"	300	RF	165	25	62	92	124	7	34	41
15	150	BS03C01RFH	25-XV-011	1	1"	300	RF	165	25	62	92	124	7	34	41
16	160	BS03C01RFH	25-XV-012	1	1"	300	RF	165	25	62	92	124	2 7	34	2 41

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
17	170	BS03C01RFH	25-XV-014	1	1"	300	RF	165	25	62	92	124	7	34	41
18	180	BS03C01RFH	25-XV-015	1	1"	300	RF	165	25	62	92	124	7	34	41
19	190	BS03C01RFH	25-XV-017	1	1"	300	RF	165	25	62	92	124	7	34	41
20	200	BS03C01RFH	25-XV-018	1	1"	300	RF	165	25	62	92	124	7	34	41
21	210	BS03C01RFH	25-XV-020	1	1"	300	RF	165	25	62	92	124	7	34	41
22	220	BS03C01RFH	25-XV-021	1	1"	300	RF	165	25	62	92	124	7	34	41
23	230	BS03C01RFH	25-XV-024	1	1"	300	RF	165	25	62	92	124	7	34	41
28	280	BS01C01RFH	80-XV-001	1	1"	150	RF	127	25	54	95	108	6	34	40

CUSTOMER :	ROSETTI MARINO S.p.A.
P.O. N. :	1724000204 123A90A/REV.1
JOB N. :	240062

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2	ISSUED FOR APPROVAL	S.Madahar	22/04/2024	D.Barcella	22/04/2024	L.Mora	22/04/2024
1	ISSUED FOR APPROVAL	S.Madahar	15/04/2024	D.Barcella	15/04/2024	L.Mora	15/04/2024
0	FIRST ISSUE	S.Madahar	26/02/2024	D.Barcella	26/02/2024	L.Mora	26/02/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

VALVE TYPE: SPLIT BODY FLOATING BALL VALVE

DRAWN: S.Madahar	DATE: 26/02/2024	
CHK'D: D.Barcella	DATE: 26/02/2024	
APPV'D: L.Mora	DATE: 26/02/2024	
SIZE: A3	SCALE: N.A.	ALL RIGHTS OF THIS DRAWING ARE RESERVED.

DRAWING NAME: D240062-08 | Rev.: 2

GENERAL	1	Tag Number	Location			64-SDV-001	64
	2	Service				NITROGEN TO H2 STORAGE VESSELS INLET	
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80027	Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-N-128-03HSS-N	
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm	1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L	NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				NITROGEN GAS	
	8	Fluid State	Phase			GAS	GAS
	9	Operating Pressure Norm/Min/Max	[barg]			6 -	-
	10	Design Pressure	Full Vacuum	[barg]		10	
	11	Operating Temperature Norm/Min/Max	[°C]			AMB -	-
	12	Design Temperature	Minimum	Maxi	[°C]	-46	80
	13	Max. Diff. Pressure for Actuator Size	[bar]			10	
	14						
	15						
	16	Speed of	Design			Close : (12)	Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum	Open : -
	18						
	19						
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFHS)	
	21	Body Size	Body Form			1"	FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L	(*)
	23	Connections	Rating			FLANGED ASME B16.5	#300
	24	Flange Finish	Gasket Material			RF	Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)	II 2 G Ex h IIC T5 Gb
	26	Bolting				A193 B8M / A194 Gr. 8M	
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718 / RPTFE
	28	Leakage Class				(1, 3) TSO	
	29	Fire Safe				(2)	
ACTUATOR	30	Manufacturer	Type			Rotork	Spring Return
	31	Model No.	Size			CP/S	035-080A/AA
	32	Actuator Orientation	Actuator Form			Horizontal	Cylinder
	33	Ingress Protection	Certification			IP-66	(9)
	34	Air Supply	Min	Max	Design	4 barg / 10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE	CLOSE
	36	Fireproofing				NOT APPLICABLE	
	37	Solenoid Valve				64-SDY-001 (9, 14, 15, 16) - Bifold FP06P	
	38	Limit Switch Closed	Limit Switch Open			64-ZSL-001 (9, 17) - Soldo SS	64-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED	
	40	Air Set	Handwheel			(*)	NOT REQUIRED
	41	Mounting Position				HORIZONTAL	
	42	Partial Stroke Test Facility				NOT REQUIRED	
	43	Control Type				-	
	44	Electrical Connection	Electrical Class			No. (*) / M20	H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	- -
	46	No of Strokes Per Capacity				-	
	47	Safety Valve	Model			-	-
	48	Check Valve	Mounting			-	-
PURCHASE	49	Manufacturer				FLUITEK	
	50	Model				FB3	
	51	Purchase Order Number				1724000204	

NOTE
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 4.7 barg.

No.	Date	By	Chkd	Appr	Description
03	06/12/24				
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

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Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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47	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
48	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323298	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
49	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
50	IFR	25-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
51	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
52	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620080001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
53	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771400801	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
54	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
55	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323312	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
56	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
57	IFR	25-SDV-023	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
58	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
59	IFR		floating ball valve	N.A	FLUITEK	1-1/2" 300#	2400620090001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
60	IFR		ACTUATOR	N.A	RFS	CP/S-035-100A/BA	AF771400901	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
61	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
62	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323300	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
63	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
64	IFR	64-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
65	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
66	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620100001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
67	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401001	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
68	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
69	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323293	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
70	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
71	IFR	25-XV-004	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
72	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
73	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620110001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
74	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401101	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
75	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
76	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323311	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
77	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
78	IFR	25-XV-006	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
79	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
80	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620120001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
81	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401201	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
82	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
83	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323287	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
84	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
85	IFR	25-XV-008	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
86	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
87	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620130001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
88	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401301	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
89	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
90	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323294	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
91	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
92	IFR		LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
93	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa10ATEX0026 – Issue 15**

4 Product: **Type 27 & 77 Solenoid Operator**

5 Manufacturer: **Bifold Fluidpower Limited**

6 Address: **Chadderton, Oldham, Greater Manchester, OL9 9XA, UK**

7 This re-issued certificate extends EU Type Examination Certificate No. **Baseefa10ATEX0026** to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN 60079-1:2014** **EN 60079-31:2014**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

Ⓔx II 2GD **Ex db IIC T6 Gb (Tamb -60°C to +40°C)***
Ex tb IIIC T85°C Db (Tamb -60°C to +40°C)* IP66/67
***alternative Temperature class/Ambient combinations may also be marked, see schedule**

SGS Fimko Oy Customer Reference No. **1688** Project File No. **22/0377**

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Authorised Signatory for SGS Fimko Oy

13 **Schedule**

14 **Certificate Number Baseefa10ATEX0026 – Issue 15**

15 Description of Product

The Type 77 and Type 27 Solenoid Operators are rated at up to 240Vac or dc and have a maximum power dissipation of 14W. The Type 77 Solenoid Operator comprises a stainless steel cylindrical enclosure, whereas the Type 27 comprises an aluminium cylindrical enclosure, both have a spigot cover fitted with a silicone rubber seal.

In addition to the above there is also a two winding alternative designated the 'Pulse-Pulse Solenoid operator' which has a maximum combined coil rating limited to 20.5W.

The base of the enclosure is fitted with an adaptor bush which incorporates venting holes to allow the unit to be fitted onto a valve assembly rated up to a maximum pneumatic pressure of 10 bar. For hydraulic valves and valves with pneumatic pressures greater than 10 bar the top of the valve is provided with additional venting holes.

Internally the unit is fitted with a coil holder, coil and armature onto which is mounted an adjusting rod which forms a cylindrical joint with the adaptor bush and operates the valve when the solenoid is activated.

The cover may be fitted with a pushbutton or a rotary operator which can be used to operate the valve manually either momentarily or permanently.

The cover is secured using four stainless steel socket head cap screws grade of grade A4-70.

The equipment is marked:

Ex db IIC T6 Gb (Tamb -60°C to +40°C)*

Ex tb IIIC T85°C Db (Tamb -60°C to +40°C)* IP66/67

*The following alternative Temperature class/Ambient combinations may also be marked

T5/T100°C (Tamb -60°C to +55°C)

T4/T135°C (Tamb -60°C to +90°C)

An M20 or ½" NPT cable entry hole is provided as specified on the certified drawings for the accommodation of suitable IECEx Equipment (not a Component) certified cable entry device, with or without the interposition of a suitable IECEx Equipment certified (not a Component) flameproof thread adapter.

An M20 cable entry is provided unless the marking 'K85' appears in the Model No. marked on the label, in which case a ½" NPT cable entry hole is provided.

16 Report Number

See Certificate History

17 Specific Conditions of Use

None

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product:

Clause	Subject
1.4.1	External effects
1.4.2	Aggressive substances etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Issue	Date	Description
0-SL0070	0	2022.06.30	TYPE 27 & 77 SOLENOID LABEL - ROTORK BRAND - L240

Current drawings which remain unaffected by this issue:

Number	Issue	Date	Description
0-SC0004	1	09.07.20	Solenoid Lid Options G.A
0-SC0006	0	17.04.09	Latched Energised and Tamperproof Solenoid Options
0-SC0008	1	29.03.11	Override Cover Assembly
0-SC0009	0	12.02.15	Serial Numbers IIB, Type 77
**0-GA0870	0	07.11.17	General Arrangement L209 Variant – Fixed Head Operator
0-SC0003	11	20.09.21	Type 27 and 77 Solenoid Operator
0-SC0007	5	24.11.21	Sol. Operator Pulse-Pulse.
0-SL0056	4	13.01.22	Type 27 & 77 Solenoid housing label Ex d
0-SL0058	5	2022.02.07	Type 27 & 77 Solenoid housing label Ex d
0-SL0068	0	2022.01.17	Label Type 27 and 77 Solenoid Operator

**This drawing is common to this certificate and BAS02ATEX2048, BAS21UKEX0642 and is held with IECEx BAS 10.0008.

20 Certificate History

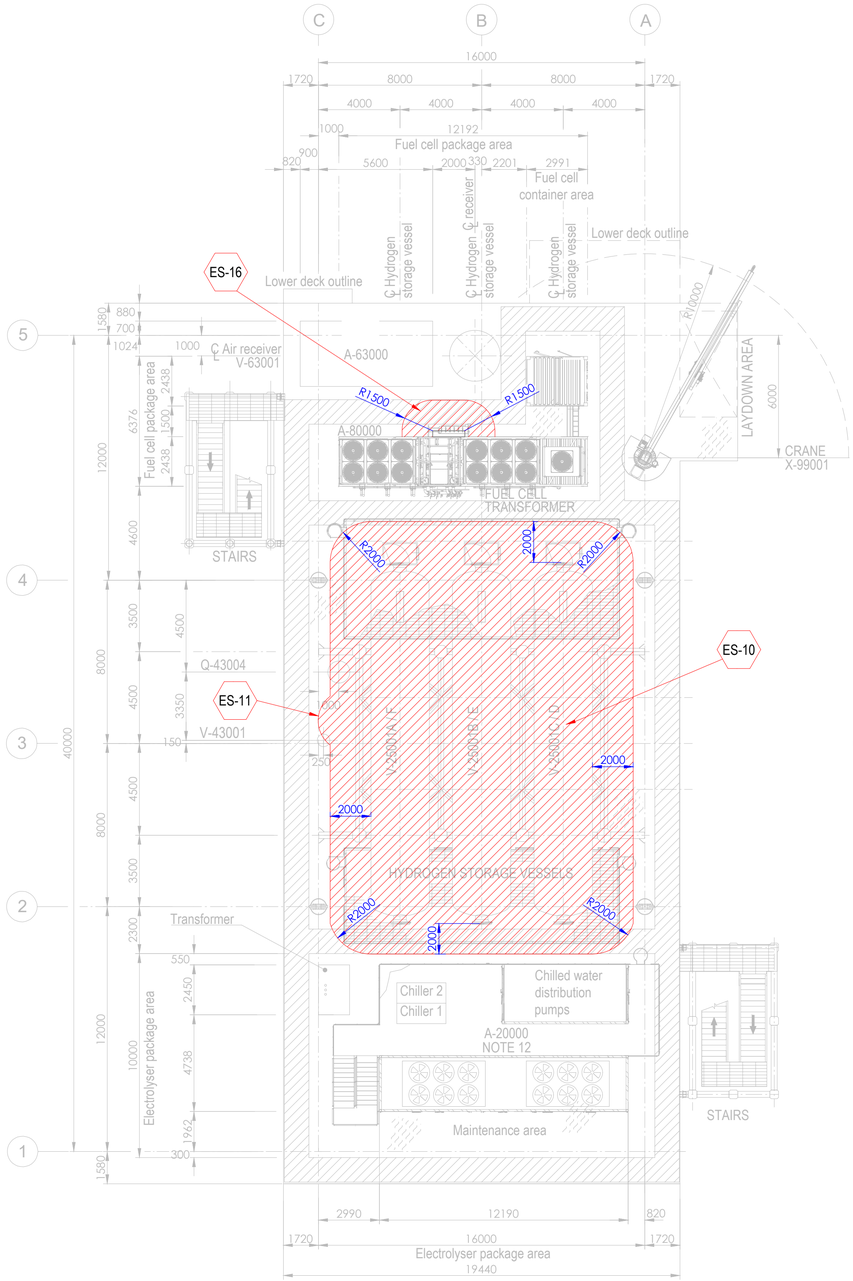
Certificate No.	Date	Comments
Baseefa10ATEX0026	20 April 2010	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2006, EN 60079-1: 2007, EN 61241-0: 2004 and EN 61241-1: 2004 is documented in Test Report No. GB/BAS/ExTR10.0014/00.
Baseefa10ATEX0026/1	7 April 2011	Amendment to the diametral tolerance for the adjusting rod. Omission of drawing 0-SC0001 (previously submitted in error). Alternative design of pushbutton override cover assembly. Minor drawing variations. Documented in Test Report No. GB/BAS/ExTR11.0084/00
Baseefa10ATEX0026/2	8 July 2011	Alternative internal design to form the Pulse-Pulse Solenoid Operator. This unit has two windings with a combined rating of 20.5W. Amended designation for the solenoid housing material. Documented in Test Report No. GB/BAS/ExTR11.0123/00
Baseefa10ATEX0026/3	2 April 2012	Alternative label design incorporating the complete range of temperature class and ambient temperature markings provided for by this certificate. Documented in Test Report No. GB/BAS/ExTR12.0086/00

Certificate No.	Date	Comments
Baseefa10ATEX0026/4	2 December 2013	A re-designation of the Type FP Solenoid Operator, to the Type 77 Solenoid Operator. A satisfactory assessment against the requirements of the updated standards IEC 60079-0: 2011 and IEC 60079-31: 2008 (superseding IEC 61241), complete with a review of the marking. Introduction of an alternative aluminium housing and cover material. Documented in Test Report No. GB/BAS/ExTR13.0291/00
Baseefa10ATEX0026/5	29 July 2014	This issue permits existing information (for example on Schedule Drawings) to be replaced by the revised certificate holders address. No other changes may be made to the certified design. Documented in Test Report No. None.
Baseefa10ATEX0026/6	17 February 2015	Clarification of the Type name. The Type 77 comprises a stainless steel housing and the Type 27 comprises an aluminium housing. To allow the introduction of alternative seal materials. To allow the Type 77 Solenoid Operators having Serial numbers as defined in drawing number 0-SC0009 to be marked with Ex d IIB T6 Gb. Documented in Test Report No. GB/BAS/ExTR14.0317/00
Baseefa10ATEX0026/7	23 June 2016	Minor drawing changes not affecting certification. Documented in Test Report No. GB/BAS/ExTR16.0164/00
Baseefa10ATEX0026/8	16 March 2017	To allow the introduction of an alternative low power circuit. To allow for correction of the Type designation listed on the EU-Type Examination Certificate Baseefa10ATEX0026 To allow for correction of description to include the Pulse Pulse Unit. Documented in Test Report No. GB/BAS/ExTR17.0076/00
Baseefa10ATEX0026/9	20 July 2017	To allow the introduction of an alternative low power circuit. Documented in Test Report No. GB/BAS/ExTR17.0211/00
Baseefa10ATEX0026/10	3 January 2018	To introduce an alternative non-rotational mounting arrangement to attach the adaptor bushing via the coil holder to the enclosure housing. Identification of threaded entry holes on the enclosure wall. Documented in Test Report No. GB/BAS/ExTR17.0274/00
Baseefa10ATEX0026/11	7 March 2018	To introduce alternative terminal plate with a different grounding point design. To introduce optional certification marks in addition to the existing one to be included on to the certification label marking. Documented in Test Report No. GB/BAS/ExTR 18.0041/00
Baseefa10ATEX0026/12	12 July 2019	To assess the Type 27 and 77 Solenoid Operator against the standards EN IEC 60079-0:2018, EN 60079-1:2014 and EN 60079-31:2014 To permit minor drawing changes to the certification label that do not affect certification Documented in Test Report No. GB/BAS/ExTR19.0100/00

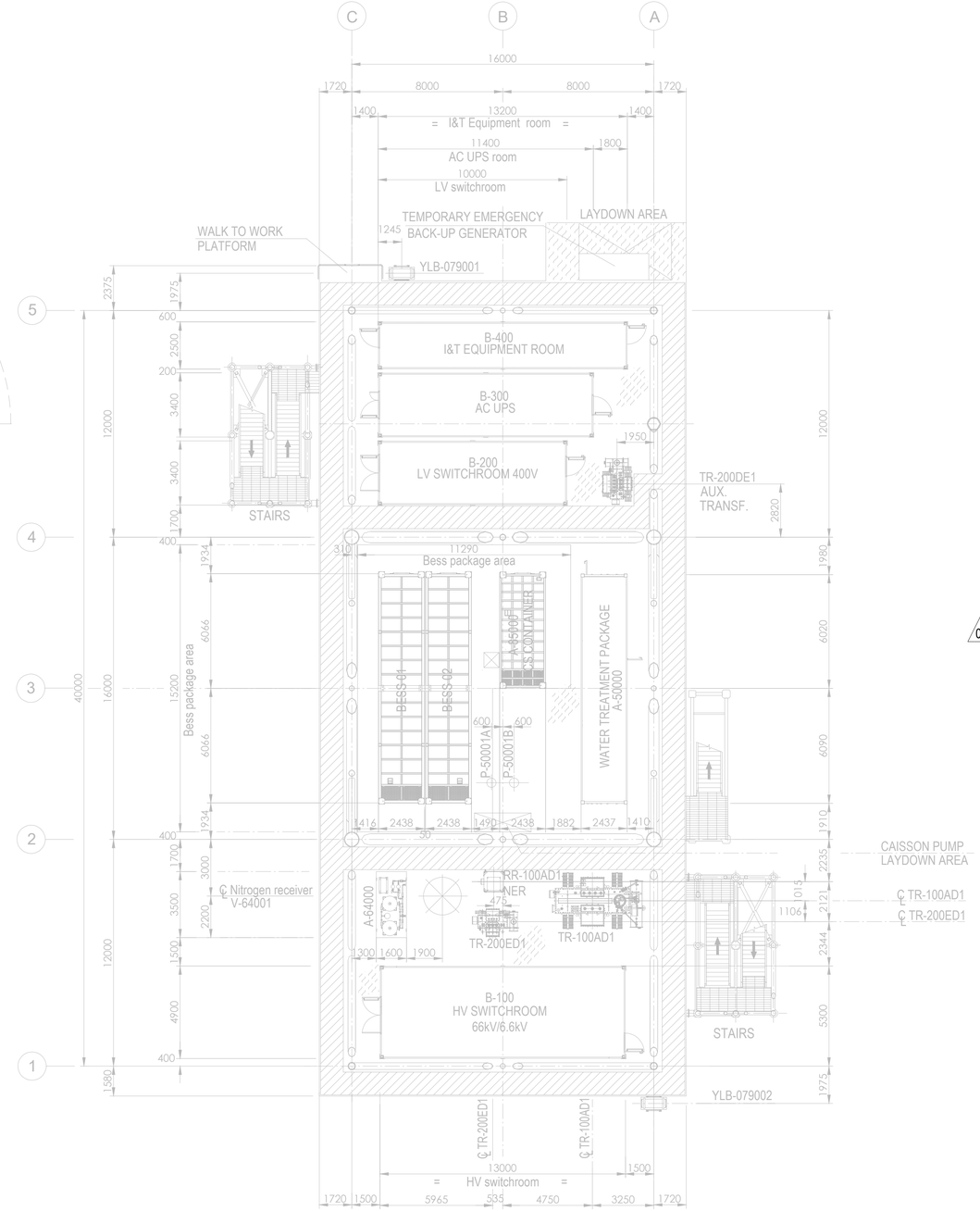
Certificate No.	Date	Comments
Baseefa10ATEX0026/13	14 July 2020	To introduce an alternative Detented Manual Over-Ride Lid (alternative spigoted cover), which allows the valve to be operated manually. Documented in Test Report No. GB/BAS/ExTR19.0341/00.
Baseefa10ATEX0026 – issue 14	11 February 2022	This issue of the certificate incorporates previously issued primary & supplementary certificates. To remove drawings 138-10, 138-10-K85, 0-S0252 and 0-S0254 transferring critical details to drawing 0-SC0003 revision 11. To remove drawing 0-SC0001. To add drawing 0-SL0068. To add an alternative encapsulant. To update the nameplate drawings to include UKEX details. Documented in Test Report No. GB/BAS/ExTR21.0158/00
Baseefa10ATEX0026 – issue 15	2 November 2022	This issue of the certificate incorporates previously issued primary & supplementary certificates. To add an alternative marking drawing with a different manufacturer branding. The assessment is documented in test report GB/BAS/ExTR22.0138/00
For drawings applicable to each issue, see original of that issue.		

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



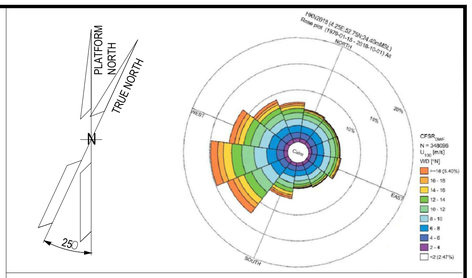
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

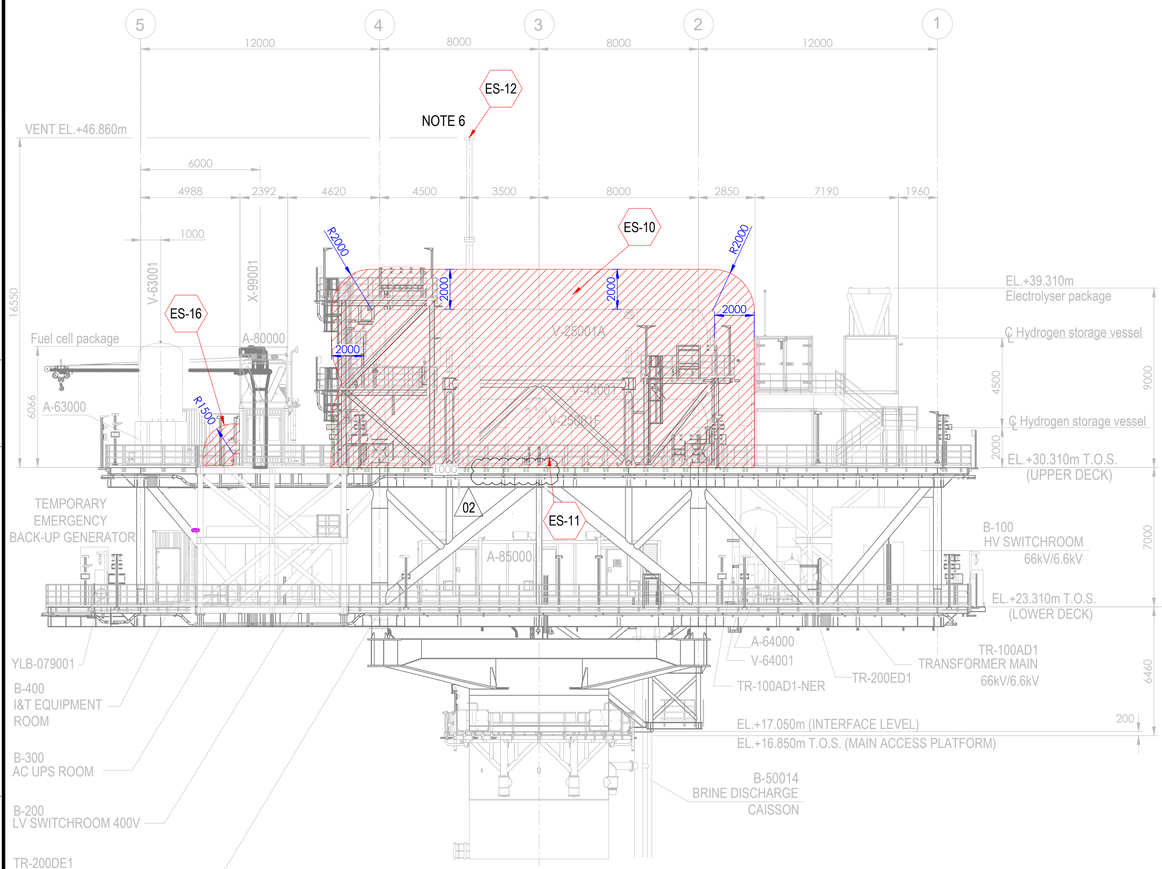
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

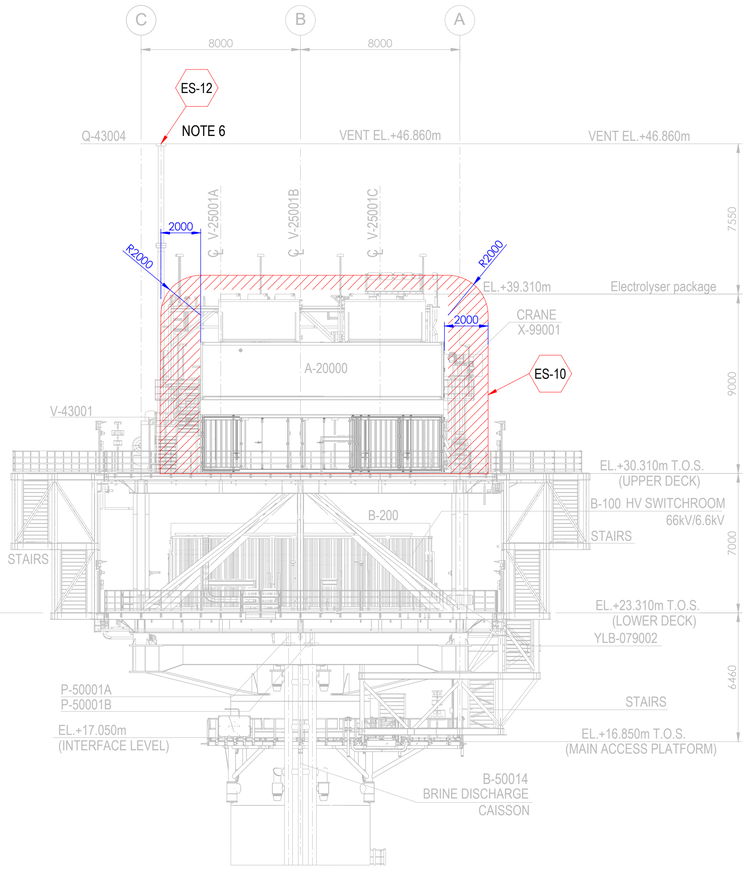
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

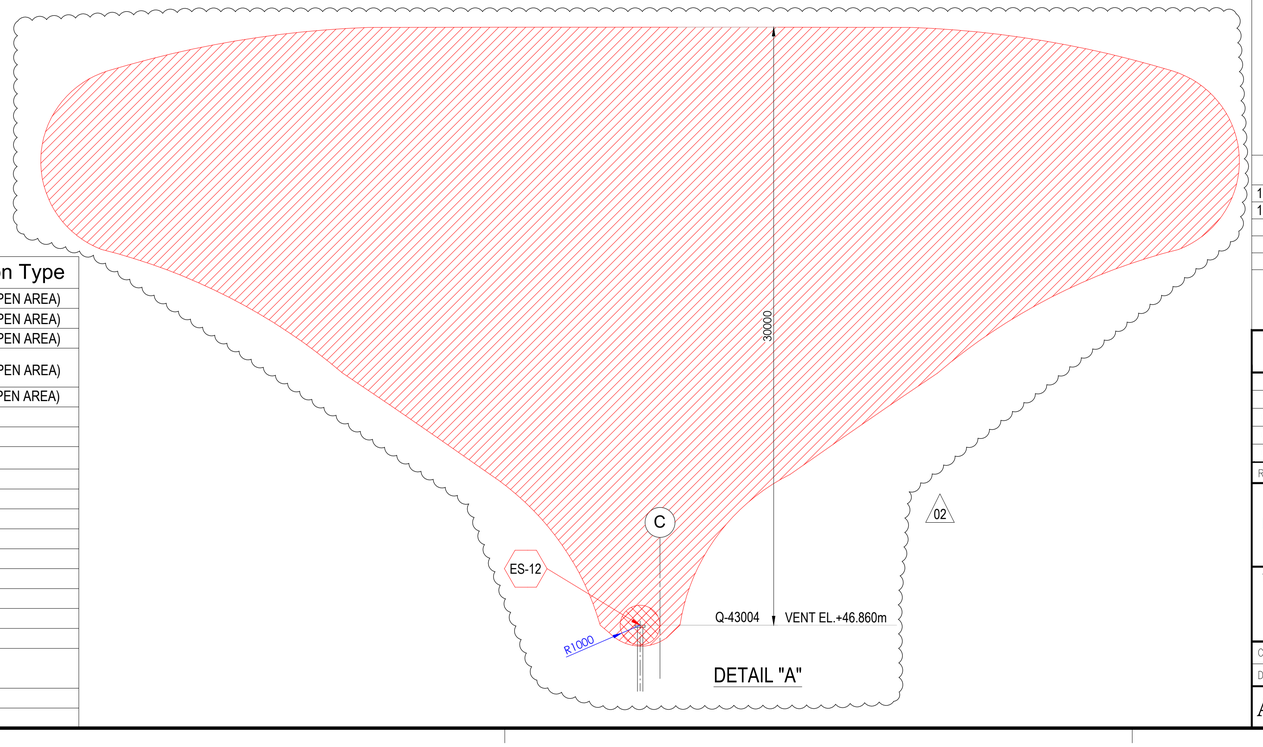


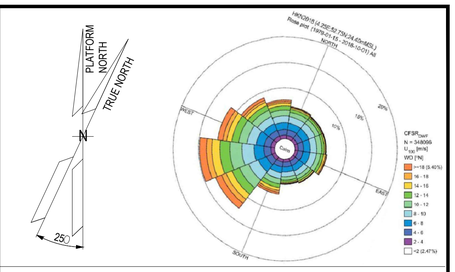
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	64-ZSHL-001	: Limit Switch box- Nitrogen to Distribution Header Shut-Down	Dwg	123A90-DDL-PR-PID-80027		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD		
TASK	code	C10002042	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		Batch: IT03B0127022			
Manufacturer	SOLDO			**Model**		SQN120E-20X23L7			
Cert No.	CML 19ATEX1359X			**Equipment Ambient Temp.**		-40°C to +80°C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex db	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66/68

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	OK	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		OK	
	Physical check	x	OK	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	OK	
13	Condition of enclosure gaskets is satisfactory	x	OK	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	OK	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	OK	
25	There is no obvious damage to the cables	x	OK	
26	Cable glands are the correct type and installed correctly	x	OK	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	OK	

ITEM	Tag	64-ZSHL-001	: Limit Switch box- Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10002042		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		OK	
	Physical check	x	OK	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	OK	
33	All cable cores are uniquely labeled	x	OK	
34	Cable cores not in use are correctly terminated	x	OK	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	OK	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	OK	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	OK	
52	Flame path are clean and undamaged	x	OK	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	64-ZSHL-001	: Limit Switch box- Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10002042	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

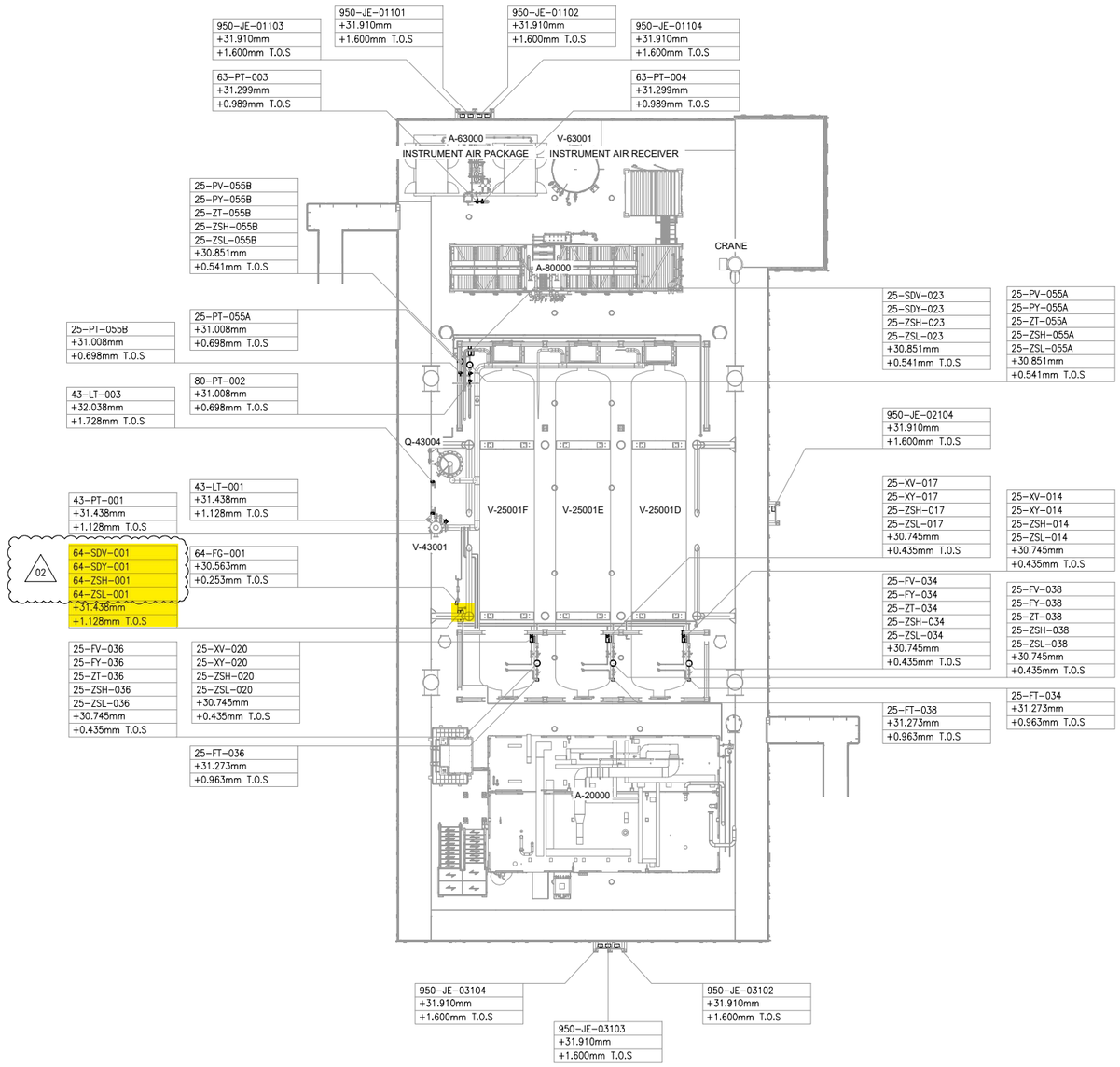
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-31	2025-02-05	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:37:17.706Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-05T16:14:01.712Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

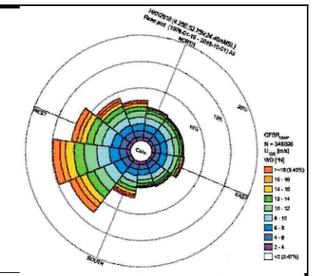


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-40081**
REV.: 2_A | DATE: 07/10/24 | SIGNATURE: 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 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

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 — 63 TP 040 — 2"

V-63001
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019

03 — 63 TP 041 — 2"x1.1/2"

LO BLPH-MV-149

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

63 PI 004 LL — I ESD — 63 PT 004

63 PI 003 L — 63 PT 003

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 — I

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

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

64 PT 031A — 64 PT 031B — 64 PT 002

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

INSTR. PIPING — 64 PV 031A — 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

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

03 — 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 NOTE 16

64 TP 044 — 1"-N-262-01CS-N

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

1"-N-100-01CS-N

64 SDV 001 — IA — 64 SDV 001 — NOTE 13 — NC-FC TYP.2

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

64 XA 003 — FAULT PACKAGE

03 — 64 TP 046

V-64001
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

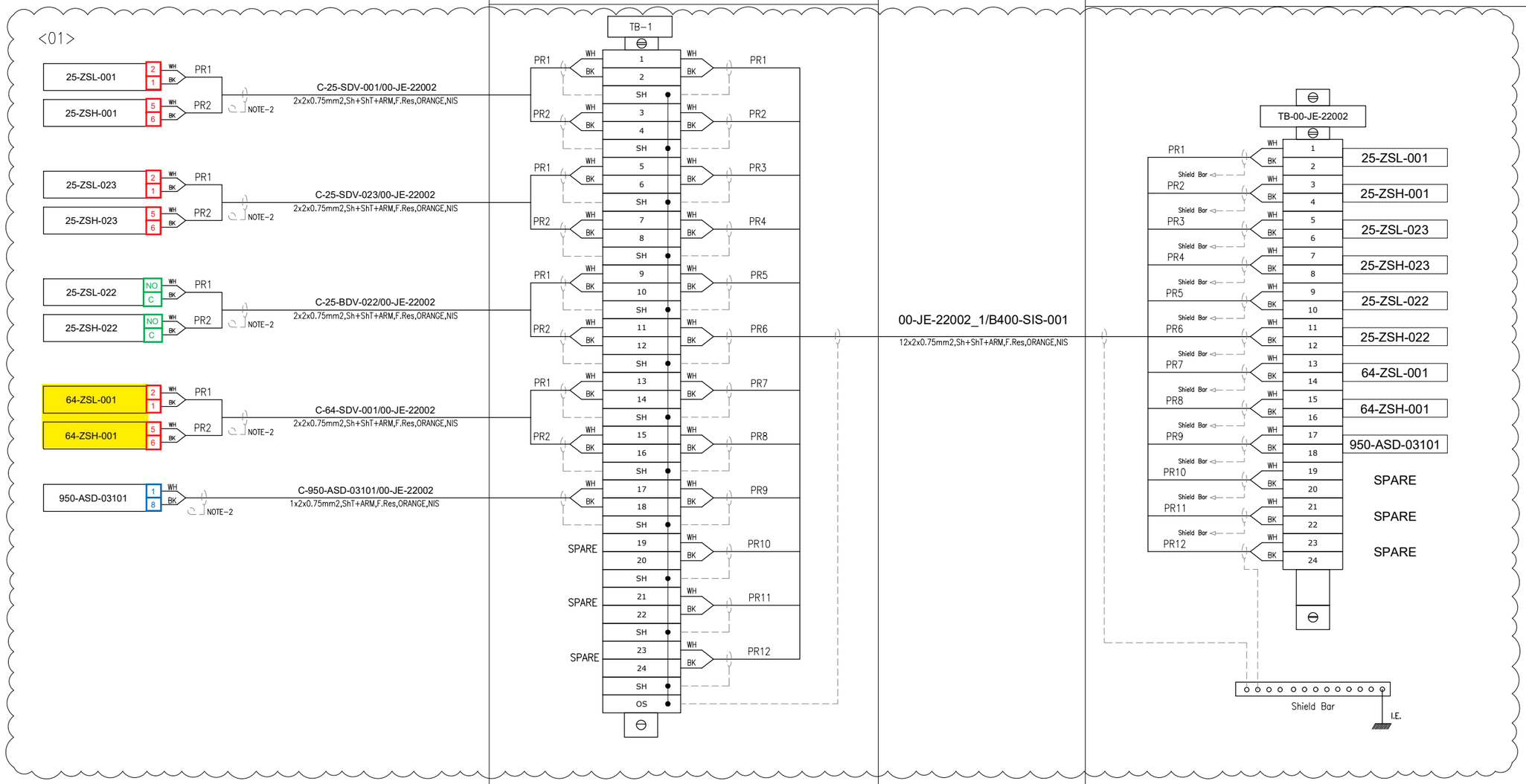
CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE	
A1	DRAWING NO. 123A90-DDL-PR-PID-80027		SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-22002	No.	MARSHALLING CABINET B400-SIS-001



VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

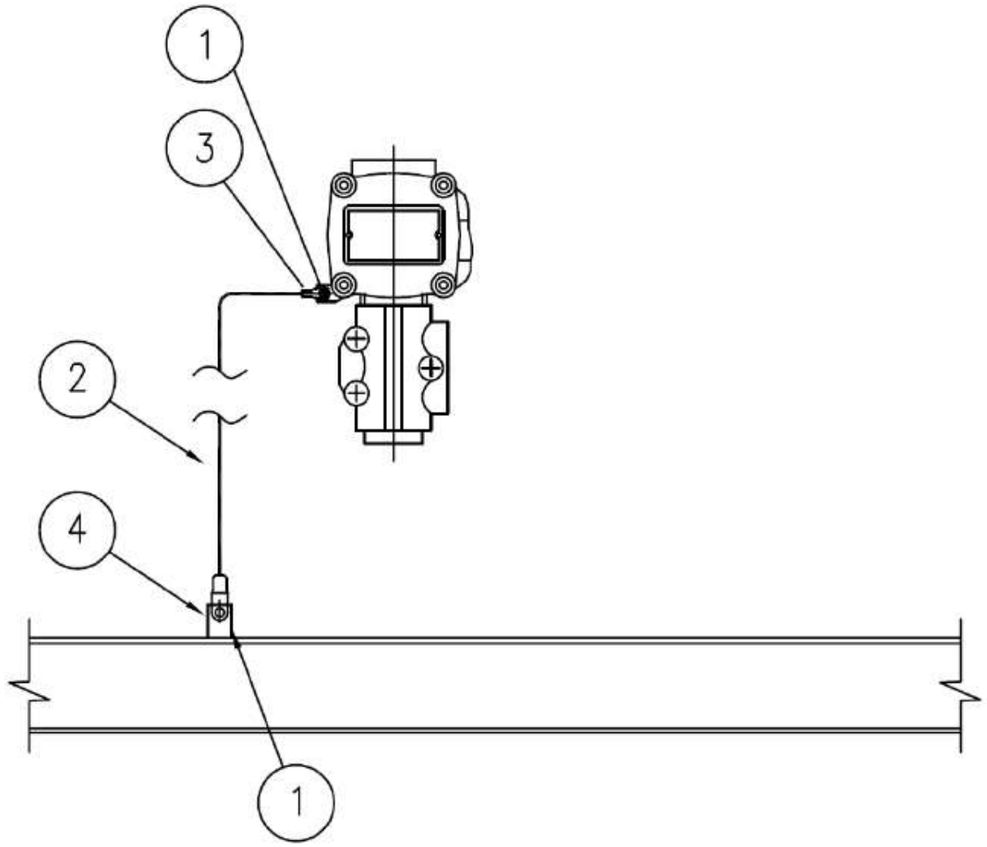
BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22002–SH.1 OF 2

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

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	012	01

File Name : 123A90-DDL-IN-DG-40016_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

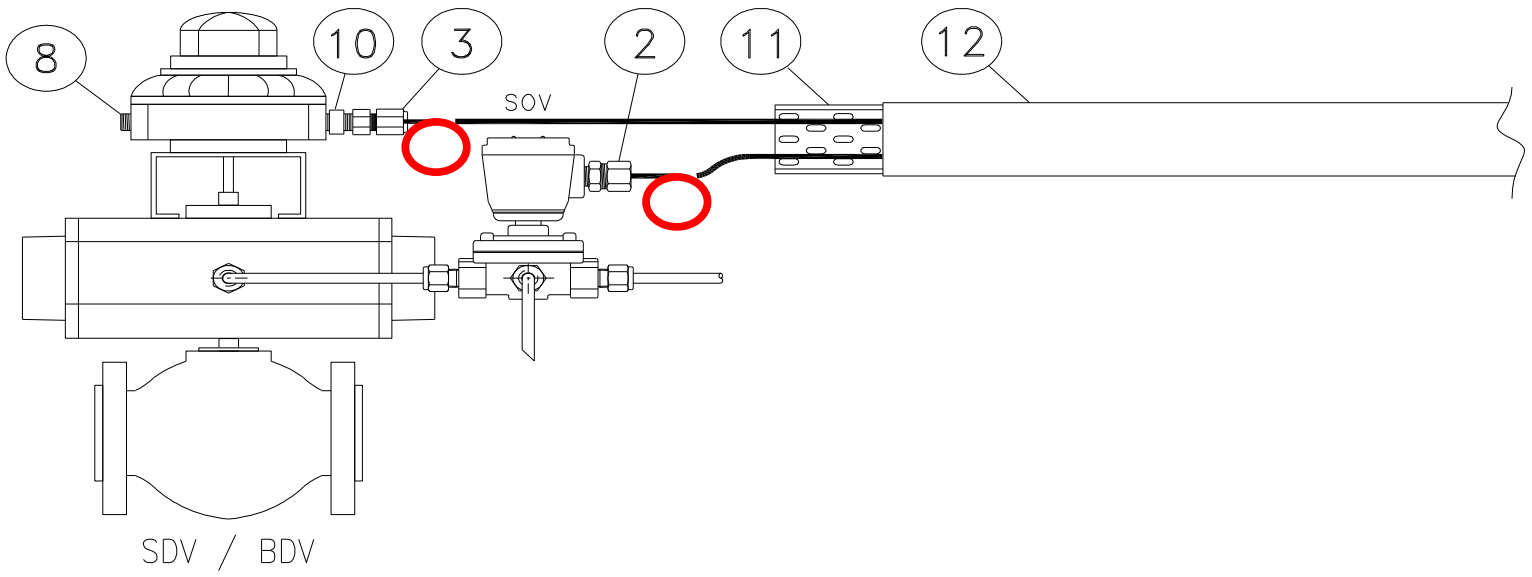
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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. 16 of 37 Date: 27/09/2024 Rev. 02

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



SDV / BDV

INSTRUMENT TAG	
1	25-BDV-005
2	25-BDV-007
3	25-BDV-010
4	25-BDV-013
5	25-BDV-016
6	25-BDV-019
7	25-BDV-022
8	25-SDV-001
9	25-SDV-023
10	64-SDV-001
11	
12	
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NOTE:

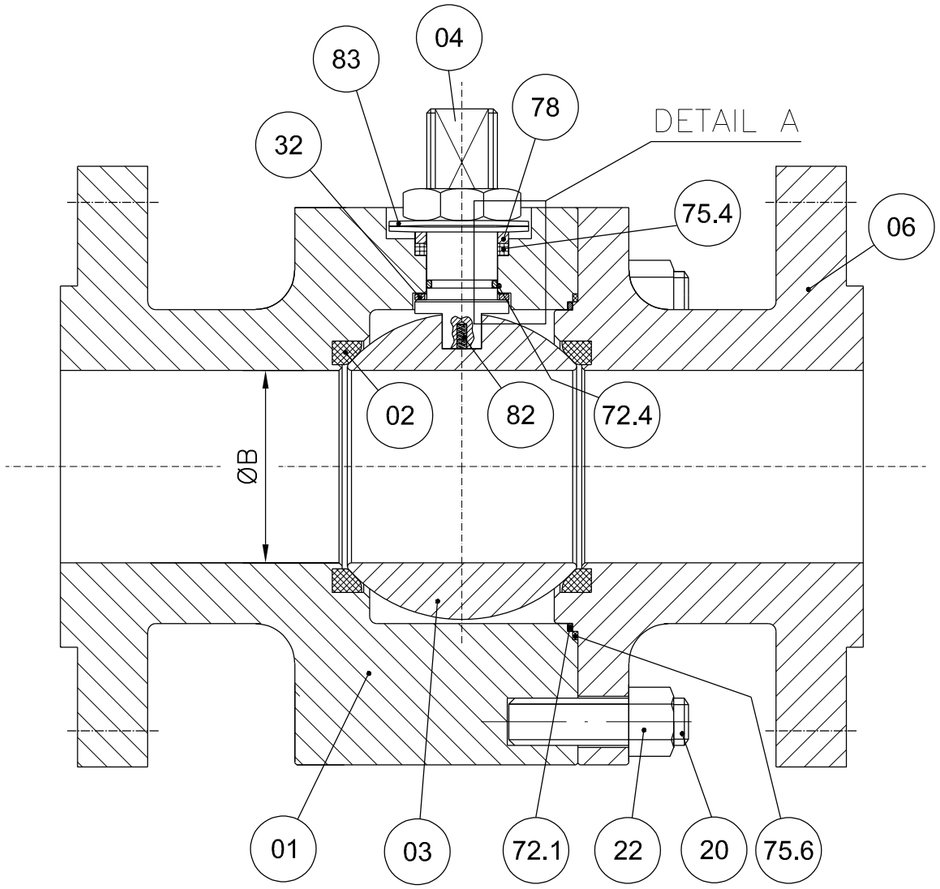
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

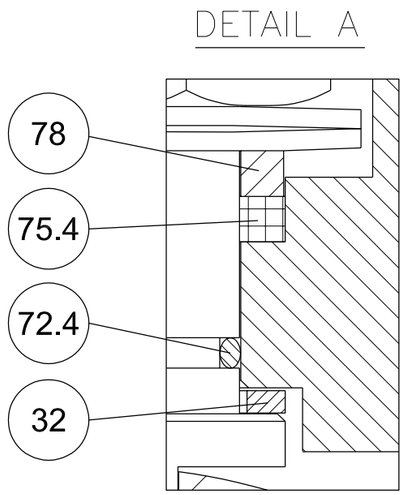
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

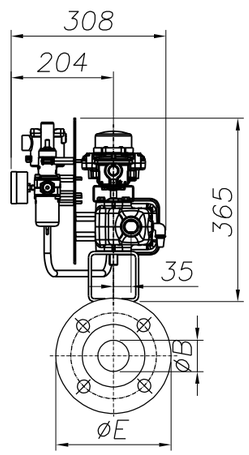
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
10		Nickel Plated Brass Adaptor Ex-d/e IIC (or IIB + H2) T1	M20 Male x M25 Female	1
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
3		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1

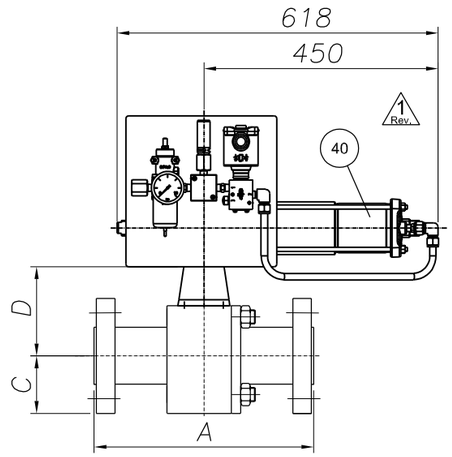
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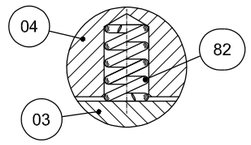


POS.	PART. NAME	MATERIAL
01	BODY	A182 F316/316L
02	SEAT	RPTFE
03	BALL	A182 F316/316L
04	STEM	API 6A CRA UNS N07718
06	CLOSURE	A182 F316/316L
20	STUD	A193 B8M
22	NUT	A194 Gr.8M
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301





ANTISTATIC DEVICE



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	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
08	80	BS03C01RFH	25-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
10	100	BS03C01RFH	64-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
11	110	BS03C01RFH	25-XV-004	1	1"	300	RF	165	25	62	92	124	7	34	41
12	120	BS03C01RFH	25-XV-006	1	1"	300	RF	165	25	62	92	124	7	34	41
13	130	BS03C01RFH	25-XV-008	1	1"	300	RF	165	25	62	92	124	7	34	41
14	140	BS03C01RFH	25-XV-009	1	1"	300	RF	165	25	62	92	124	7	34	41
15	150	BS03C01RFH	25-XV-011	1	1"	300	RF	165	25	62	92	124	7	34	41
16	160	BS03C01RFH	25-XV-012	1	1"	300	RF	165	25	62	92	124	2 7	34	2 41

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
17	170	BS03C01RFH	25-XV-014	1	1"	300	RF	165	25	62	92	124	7	34	41
18	180	BS03C01RFH	25-XV-015	1	1"	300	RF	165	25	62	92	124	7	34	41
19	190	BS03C01RFH	25-XV-017	1	1"	300	RF	165	25	62	92	124	7	34	41
20	200	BS03C01RFH	25-XV-018	1	1"	300	RF	165	25	62	92	124	7	34	41
21	210	BS03C01RFH	25-XV-020	1	1"	300	RF	165	25	62	92	124	7	34	41
22	220	BS03C01RFH	25-XV-021	1	1"	300	RF	165	25	62	92	124	7	34	41
23	230	BS03C01RFH	25-XV-024	1	1"	300	RF	165	25	62	92	124	7	34	41
28	280	BS01C01RFH	80-XV-001	1	1"	150	RF	127	25	54	95	108	6	34	40

CUSTOMER :	ROSETTI MARINO S.p.A.
P.O. N. :	1724000204 123A90A/REV.1
JOB N. :	240062

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2	ISSUED FOR APPROVAL	S.Madahar	22/04/2024	D.Barcella	22/04/2024	L.Mora	22/04/2024
1	ISSUED FOR APPROVAL	S.Madahar	15/04/2024	D.Barcella	15/04/2024	L.Mora	15/04/2024
0	FIRST ISSUE	S.Madahar	26/02/2024	D.Barcella	26/02/2024	L.Mora	26/02/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

VALVE TYPE: SPLIT BODY FLOATING BALL VALVE

DRAWN: S.Madahar	DATE: 26/02/2024	
CHK'D: D.Barcella	DATE: 26/02/2024	
APPV'D: L.Mora	DATE: 26/02/2024	
SIZE: A3	SCALE: N.A.	ALL RIGHTS OF THIS DRAWING ARE RESERVED.

DRAWING NAME: D240062-08 | Rev.: 2

GENERAL	1	Tag Number	Location			64-SDV-001	64
	2	Service				NITROGEN TO H2 STORAGE VESSELS INLET	
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80027	Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-N-128-03HSS-N	
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm	1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L	NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				NITROGEN GAS	
	8	Fluid State	Phase			GAS	GAS
	9	Operating Pressure Norm/Min/Max	[barg]			6 -	-
	10	Design Pressure	Full Vacuum	[barg]		10	
	11	Operating Temperature Norm/Min/Max	[°C]			AMB -	-
	12	Design Temperature	Minimum	Maxi	[°C]	-46	80
	13	Max. Diff. Pressure for Actuator Size	[bar]			10	
	14						
	15						
	16	Speed of	Design			Close : (12)	Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum	Open : -
	18						
	19						
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFHS)	
	21	Body Size	Body Form			1"	FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L	(*)
	23	Connections	Rating			FLANGED ASME B16.5	#300
	24	Flange Finish	Gasket Material			RF	Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)	II 2 G Ex h IIC T5 Gb
	26	Bolting				A193 B8M / A194 Gr. 8M	
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718 / RPTFE
	28	Leakage Class				(1, 3) TSO	
	29	Fire Safe				(2)	
ACTUATOR	30	Manufacturer	Type			Rotork	Spring Return
	31	Model No.	Size			CP/S	035-080A/AA
	32	Actuator Orientation	Actuator Form			Horizontal	Cylinder
	33	Ingress Protection	Certification			IP-66	(9)
	34	Air Supply	Min	Max	Design	4 barg / 10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE	CLOSE
	36	Fireproofing				NOT APPLICABLE	
	37	Solenoid Valve				64-SDY-001 (9, 14, 15, 16) - Bifold FP06P	
	38	Limit Switch Closed	Limit Switch Open			64-ZSL-001 (9, 17) - Soldo SS	64-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED	
	40	Air Set	Handwheel			(*)	NOT REQUIRED
	41	Mounting Position				HORIZONTAL	
	42	Partial Stroke Test Facility				NOT REQUIRED	
	43	Control Type				-	
	44	Electrical Connection	Electrical Class			No. (*) / M20	H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	- -
	46	No of Strokes Per Capacity				-	
	47	Safety Valve	Model			-	-
	48	Check Valve	Mounting			-	-
PURCHASE	49	Manufacturer				FLUITEK	
	50	Model				FB3	
	51	Purchase Order Number				1724000204	

NOTE
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 4.7 barg.

No.	Date	By	Chkd	Appr	Description
03	06/12/24				
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 15 of 33

Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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47	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
48	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323298	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
49	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
50	IFR	25-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
51	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
52	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620080001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
53	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771400801	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
54	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
55	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323312	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
56	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
57	IFR	25-SDV-023	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
58	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
59	IFR		floating ball valve	N.A	FLUITEK	1-1/2" 300#	2400620090001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
60	IFR		ACTUATOR	N.A	RFS	CP/S-035-100A/BA	AF771400901	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
61	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
62	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323300	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
63	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
64	IFR	64-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
65	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
66	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620100001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
67	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401001	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
68	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
69	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323293	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
70	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
71	IFR	25-XV-004	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
72	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
73	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620110001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
74	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401101	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
75	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
76	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323311	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
77	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
78	IFR	25-XV-006	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
79	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
80	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620120001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
81	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401201	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
82	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
83	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323287	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
84	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
85	IFR	25-XV-008	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
86	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
87	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620130001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
88	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401301	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
89	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
90	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323294	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
91	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
92	IFR		LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
93	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

EU Type Examination Certificate CML 19ATEX1359X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **SOLDO™ SK and SQ Series Limit Switch Boxes**

3 Manufacturer **Rotork Instruments Italy srl**

4 Address **Via Portico 17**
24050
Orio al Serio (BG)
Italy

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 67386717, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-31:2014

10 The equipment shall be marked with the following:

Ⅱ 2 G D

Ex db IIC T* Gb

Ex tb IIIC T*°C Db

Ta = -55°C to +*°C

**The ambient temperature classes and maximum surface temperature for dust depend upon the ambient temperature ranges. See Table in Section 11.*

11 Description

The SOLDO™ SK and SQ Series Limit Switch Boxes are electromechanical devices used to indicate the position of valves/actuators etc. by means of an electrical signal and an optional visual indicator. The metallic enclosure is constructed from aluminium (SK) or 316 or 316L stainless steel (SQ) and comprises of two enclosure halves secured with 4 x M6 stainless steel fasteners with a minimum property class of 500 MPa. An operating rod passes through each enclosure half for connection to the device being monitored. The rod operates the internal switch/sensor for signalling and passes through to the external indicator (when fitted). There are two threaded entries (M20 or ½" NPT) into the enclosure for cable entry.

The applicable ambient temperature ranges and corresponding Temperature Classes and Maximum Surface Temperatures for Dust are detailed in the table below:

Ambient Temp. Range	T Class	Maximum Surface Temp. for Dust
-55°C to +60°C	T6	T85°C
-55°C to +80°C	T5	T100°C
-55°C to +105°C	T4	T135°C

Rating:

Max. Voltage: 125 Vdc/250 Vac
Max. Current: 10 A
Max. Power: 10 W

Notes:

- Sira 12ATEX1098X is superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 12ATEX1098X.
- Where Sira 12ATEX1098X is specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

Variation 1

This variation introduced the following changes:

i. Introduction of power dissipation calculation as supporting certification document.

12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	04 Oct 2019	R12654A/00	Initial issue
1	27 Mar 2024	R17518A/00	Introduction of Variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

ii. The power dissipation inside the flameproof enclosure shall not exceed 10 W.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. The equipment is fitted with a non-conducting position indicator which could potentially generate an ignition-capable level of electrostatic charge under certain extreme conditions. Therefore, the equipment shall not be installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charge on the non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.

ii. The maximum temperature at the cable entry points may exceed 70°C. The user shall refer to the manufacturer's instructions document for guidance in respect of the selection of suitable cabling for the equipment.

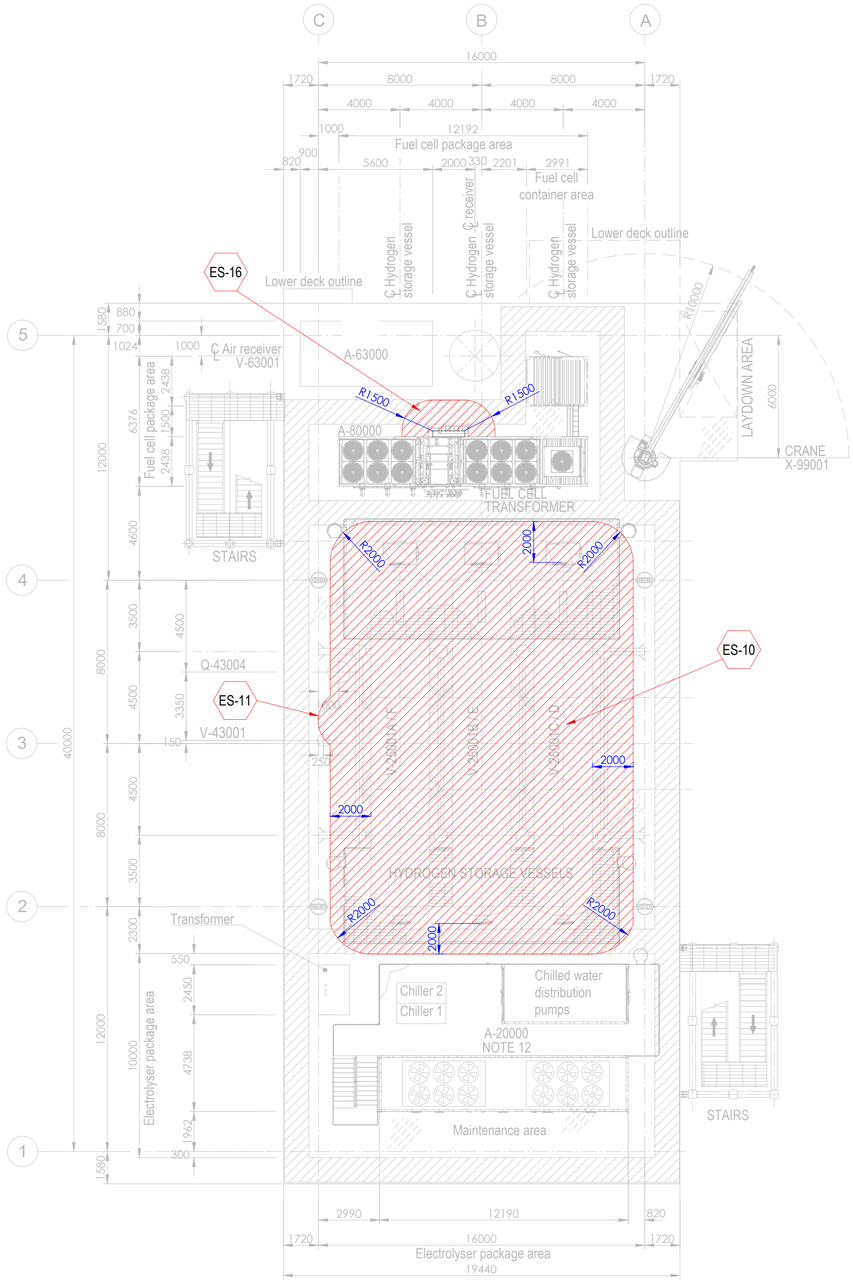
iii. Dust layers in excess of 50 mm shall not be allowed to form on the equipment.

iv. The following have a minimum flamepath width (L) and maximum gap (i_c) other than that detailed in EN 60079-1 Table 3 and are detailed below:

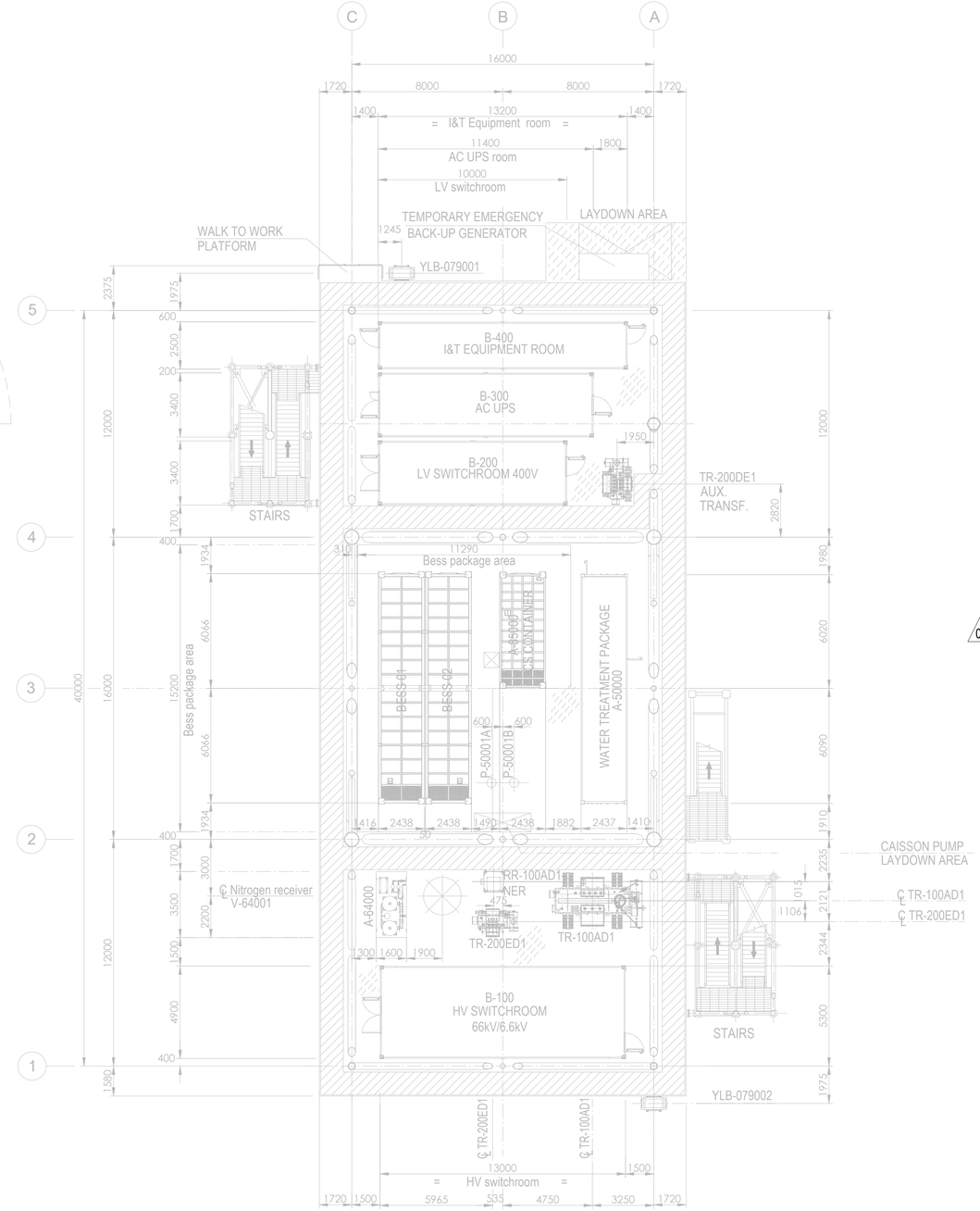
Flamepath	**Joint Width (L) mm**	**Max. Gap (i_c) mm**
Cover shaft/Cover	26	0.097
Body Shaft/Body	26	0.097

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



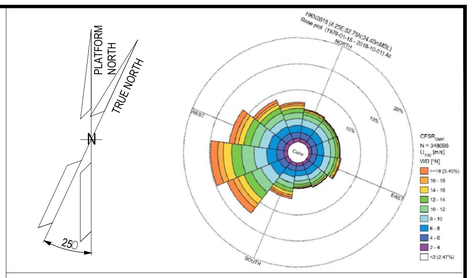
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

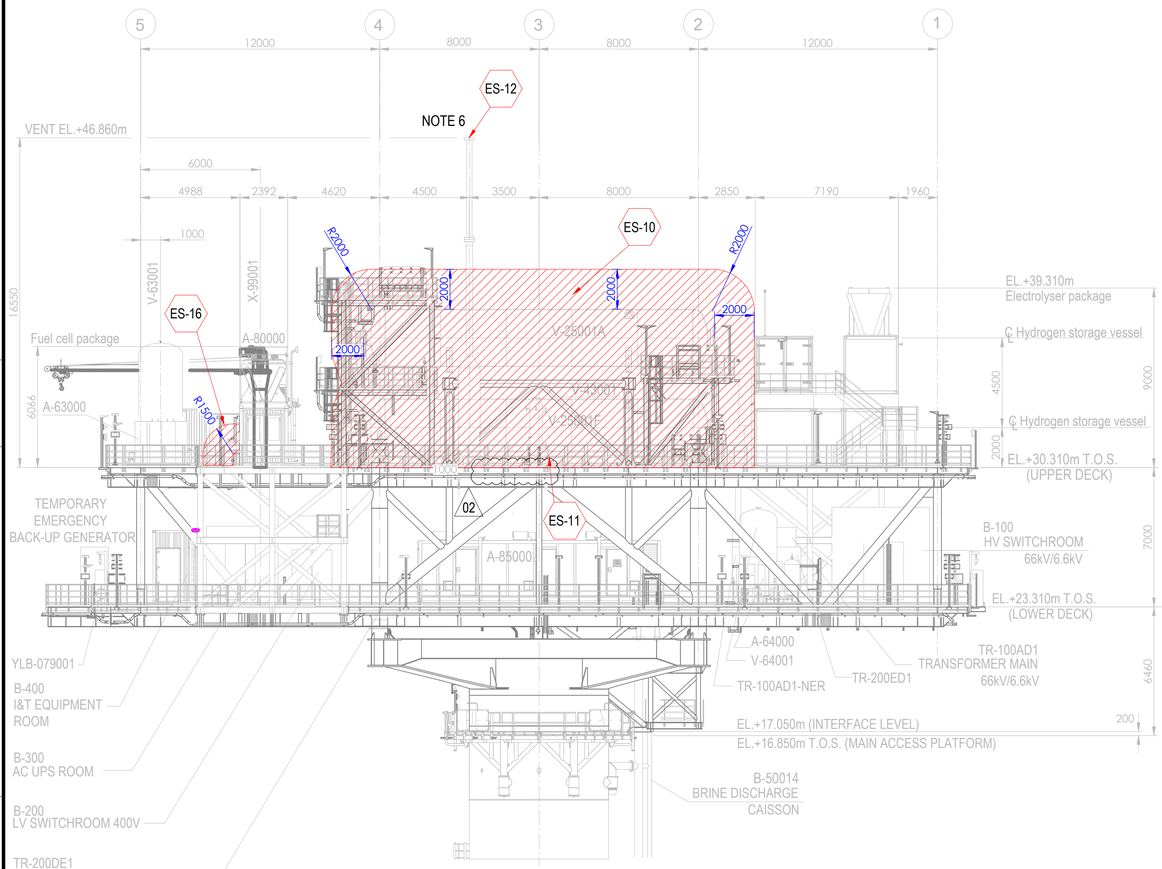
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

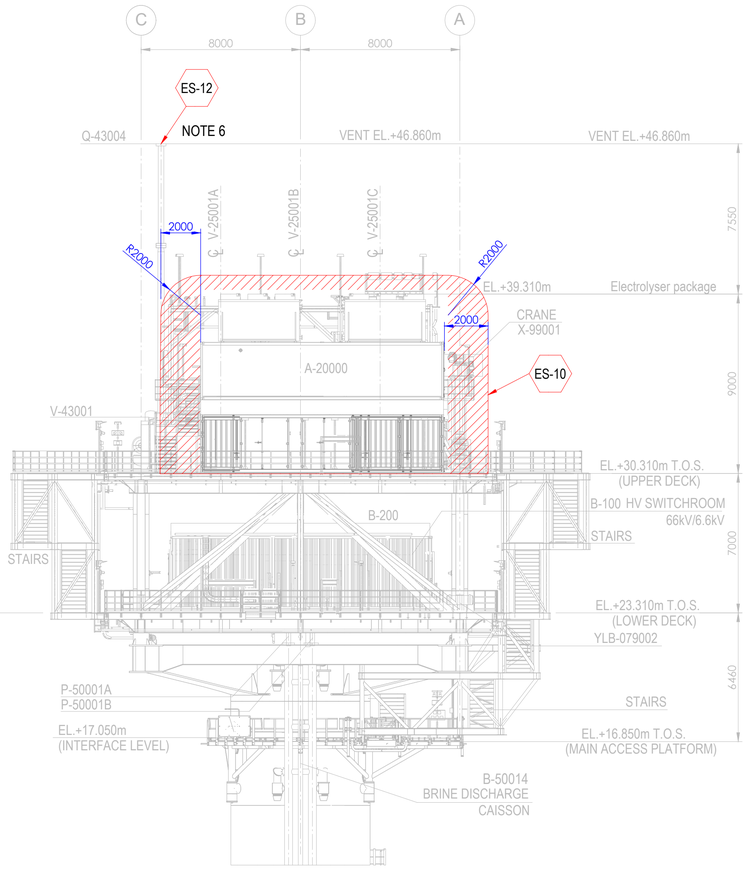
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

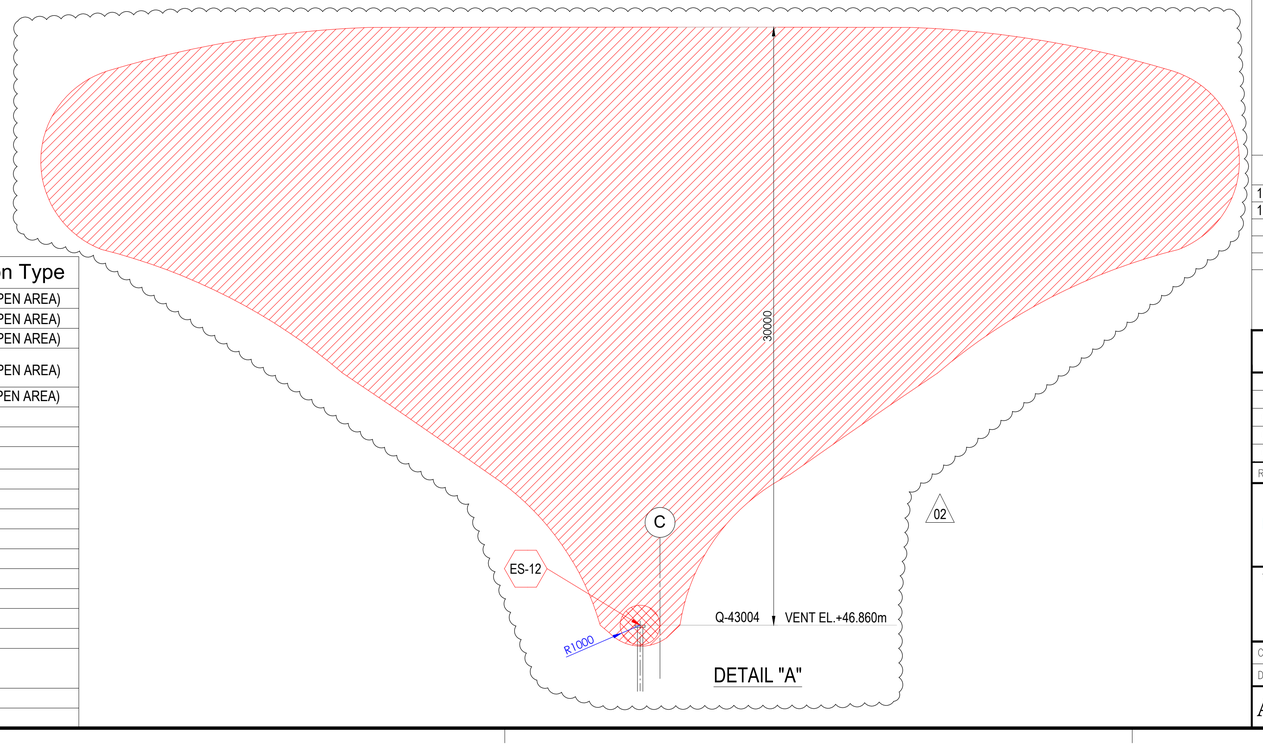


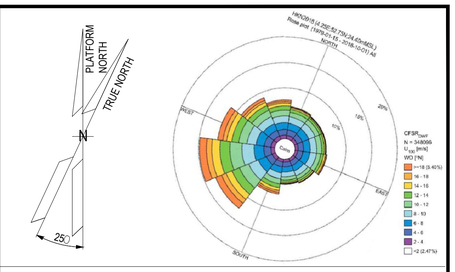
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	64-PCV-001	: Air Set Filter - Hyrogen Storage to A-80000 Package Vent System	Dwg	123A90-DDL-PR-PID-80012
	S/Sys	64-10	: Hydrogen Storage Vessels Header (Outlet)	Module	UD
TASK	code	C10002043	Location: Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity: CCK	Discipline: ATEX	Form: CJX01		Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		FL20524-1048			
Manufacturer	BIFOLD			**Model**		SH05-FR-SR-MD-10-X4			
Cert No.	D.o.C. by Manufacturer			**Equipment Ambient Temp.**		-20 °C to + 40 °C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex h	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP66

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	NA	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	NA	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	NA	
11	Threaded covers on enclosures are of the correct type, are tight and secured		OK	
	Physical check	x	OK	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	NA	
13	Condition of enclosure gaskets is satisfactory	x	NA	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	NA	
15	Electrical connections are tight	x	NA	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	NA	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	NA	
25	There is no obvious damage to the cables	x	NA	
26	Cable glands are the correct type and installed correctly	x	NA	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	NA	

ITEM	Tag	64-PCV-001	: Air Set Filter - Hyrogen Storage to A-80000 Package Vent System			Dwg	123A90-DDL-PR-PID-80012
	S/Sys	25-08	: Hydrogen Storage Vessels Header (Outlet)			Module	UD
TASK	code	C10002043		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	NA	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	NA	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	NA	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ROSETTI MARINO PROVERLIS CROSSWIND

ITEM	Tag	64-PCV-001	: Air Set Filter - Hyrogen Storage to A-80000 Package Vent System		Dwg	123A90-DDL-PR-PID-80012	
	S/Sys	25-08	: Hydrogen Storage Vessels Header (Outlet)		Module	UD	
TASK	code	C10002043	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

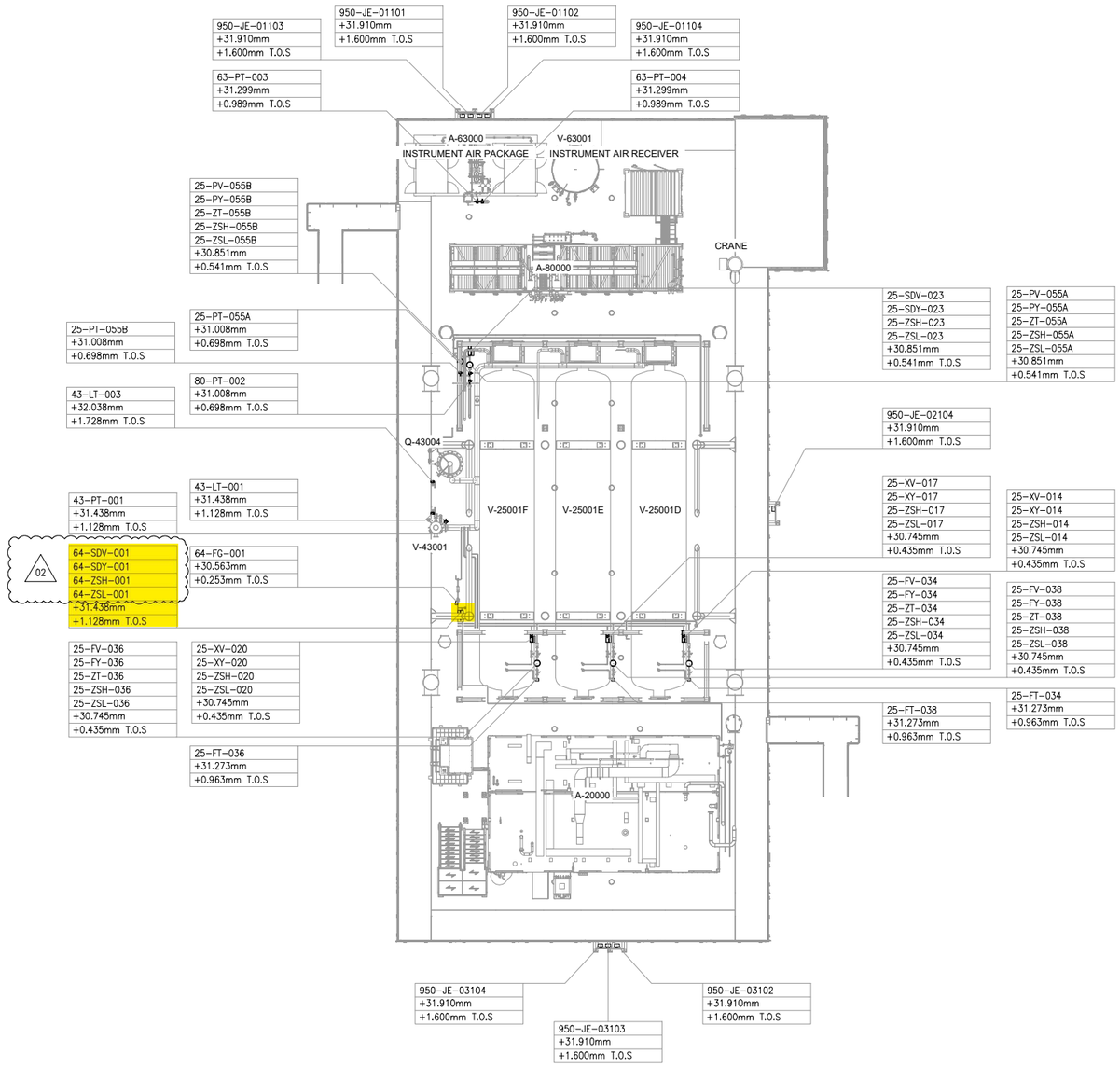
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Luca Mussi	
Date	2025-01-31	2025-01-31	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:37:33.200Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-31T12:34:48.293Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

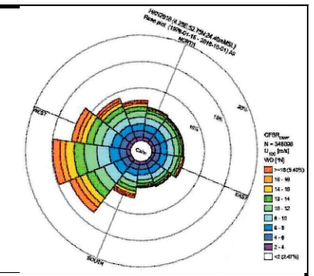


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-40081**
REV.: 2_A | DATE: 07/10/24 | SIGNATURE: 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 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

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 — 63 TP 040 — 2"

V-63001
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019

03 — 63 TP 041 — 2"x1.1/2"

LO BLPH-MV-149

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

63 PI 004 LL — I ESD — 63 PT 004

63 PI 003 L — 63 PT 003

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 — I

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

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

64 PT 031A — 64 PT 031B — 64 PT 002

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

INSTR. PIPING — 64 PV 031A — 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

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

03 — 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 NOTE 16

64 TP 044 — 1"-N-262-01CS-N

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

1"-N-100-01CS-N

64 SDV 001 — IA — 64 SDV 001 — NOTE 13 — NC-FC TYP.2

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

64 XA 003 — FAULT PACKAGE

03 — 64 TP 046

V-64001
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

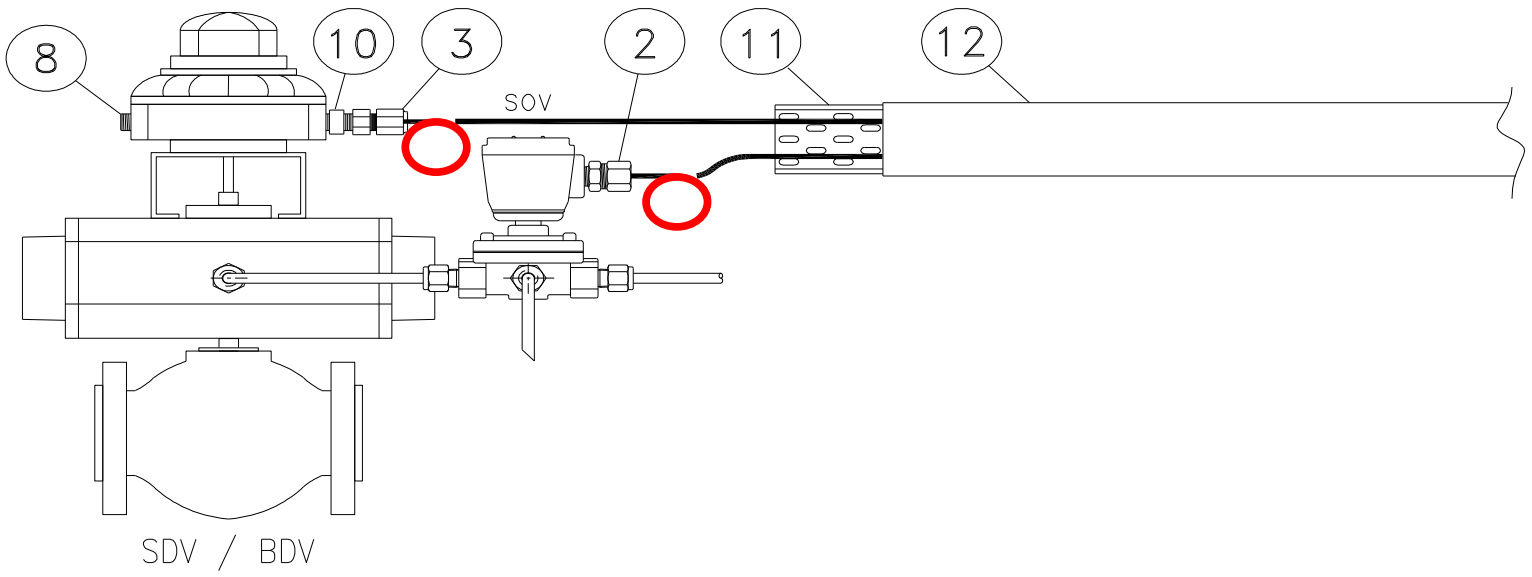
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

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

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 16 of 37 Date: 27/09/2024 Rev. 02

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



SDV / BDV

INSTRUMENT TAG	
1	25-BDV-005
2	25-BDV-007
3	25-BDV-010
4	25-BDV-013
5	25-BDV-016
6	25-BDV-019
7	25-BDV-022
8	25-SDV-001
9	25-SDV-023
10	64-SDV-001
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NOTE:

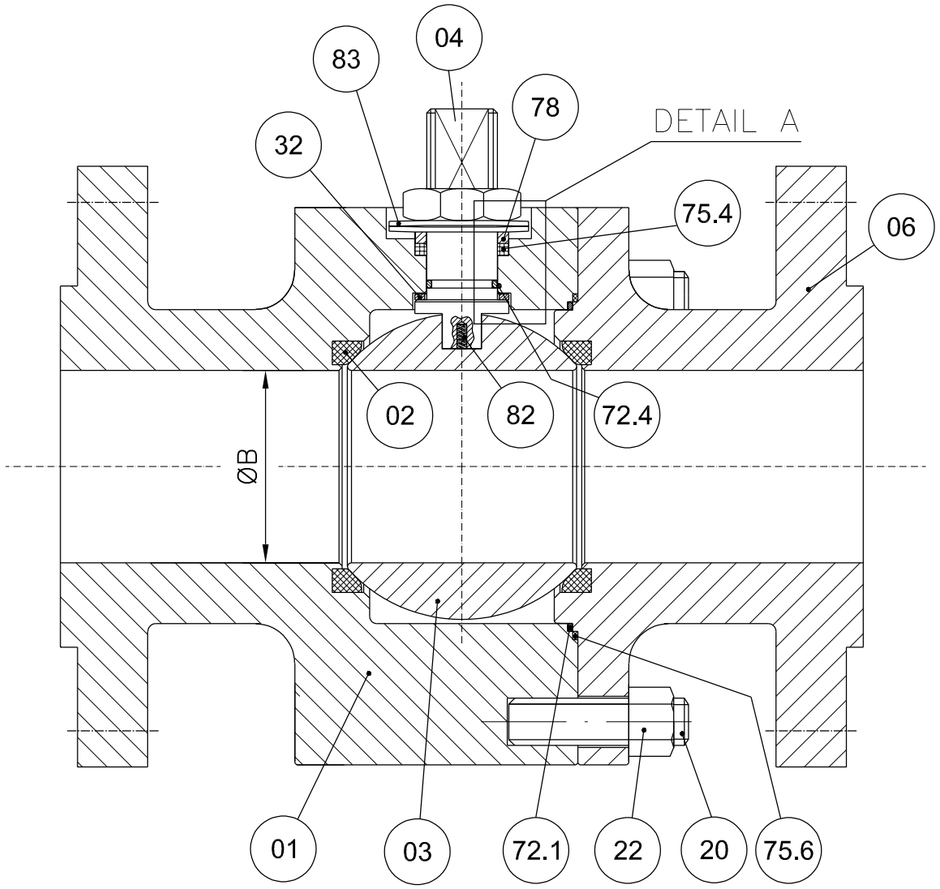
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

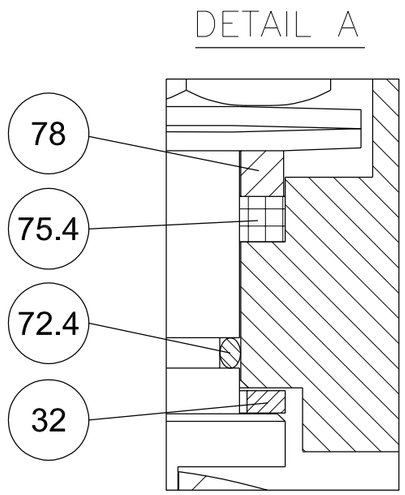
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

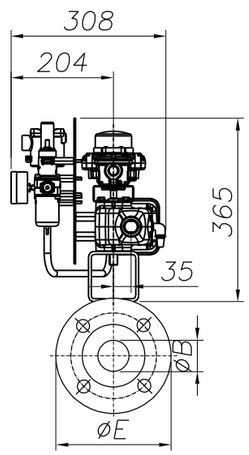
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
10		Nickel Plated Brass Adaptor Ex-d/e IIC (or IIB + H2) T1	M20 Male x M25 Female	1
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
3		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1

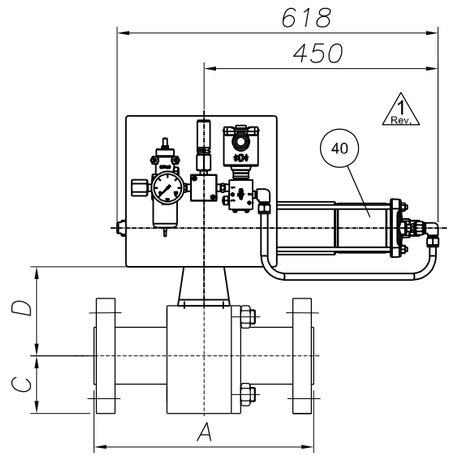
This document undergoes an issuance cycle within EDMS "Fusionlive".
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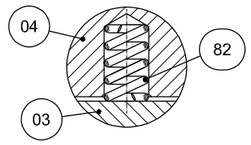


POS.	PART. NAME	MATERIAL
01	BODY	A182 F316/316L
02	SEAT	RPTFE
03	BALL	A182 F316/316L
04	STEM	API 6A CRA UNS N07718
06	CLOSURE	A182 F316/316L
20	STUD	A193 B8M
22	NUT	A194 Gr.8M
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301





ANTISTATIC DEVICE



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	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
08	80	BS03C01RFH	25-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
10	100	BS03C01RFH	64-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
11	110	BS03C01RFH	25-XV-004	1	1"	300	RF	165	25	62	92	124	7	34	41
12	120	BS03C01RFH	25-XV-006	1	1"	300	RF	165	25	62	92	124	7	34	41
13	130	BS03C01RFH	25-XV-008	1	1"	300	RF	165	25	62	92	124	7	34	41
14	140	BS03C01RFH	25-XV-009	1	1"	300	RF	165	25	62	92	124	7	34	41
15	150	BS03C01RFH	25-XV-011	1	1"	300	RF	165	25	62	92	124	7	34	41
16	160	BS03C01RFH	25-XV-012	1	1"	300	RF	165	25	62	92	124	2 7	34	2 41

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
17	170	BS03C01RFH	25-XV-014	1	1"	300	RF	165	25	62	92	124	7	34	41
18	180	BS03C01RFH	25-XV-015	1	1"	300	RF	165	25	62	92	124	7	34	41
19	190	BS03C01RFH	25-XV-017	1	1"	300	RF	165	25	62	92	124	7	34	41
20	200	BS03C01RFH	25-XV-018	1	1"	300	RF	165	25	62	92	124	7	34	41
21	210	BS03C01RFH	25-XV-020	1	1"	300	RF	165	25	62	92	124	7	34	41
22	220	BS03C01RFH	25-XV-021	1	1"	300	RF	165	25	62	92	124	7	34	41
23	230	BS03C01RFH	25-XV-024	1	1"	300	RF	165	25	62	92	124	7	34	41
28	280	BS01C01RFH	80-XV-001	1	1"	150	RF	127	25	54	95	108	6	34	40

CUSTOMER :	ROSETTI MARINO S.p.A.
P.O. N. :	1724000204 123A90A/REV.1
JOB N. :	240062

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2	ISSUED FOR APPROVAL	S.Madahar	22/04/2024	D.Barcella	22/04/2024	L.Mora	22/04/2024
1	ISSUED FOR APPROVAL	S.Madahar	15/04/2024	D.Barcella	15/04/2024	L.Mora	15/04/2024
0	FIRST ISSUE	S.Madahar	26/02/2024	D.Barcella	26/02/2024	L.Mora	26/02/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

VALVE TYPE: SPLIT BODY FLOATING BALL VALVE

DRAWN: S.Madahar	DATE: 26/02/2024	
CHK'D: D.Barcella	DATE: 26/02/2024	
APPV'D: L.Mora	DATE: 26/02/2024	
SIZE: A3	SCALE: N.A.	ALL RIGHTS OF THIS DRAWING ARE RESERVED.

DRAWING NAME: D240062-08 | Rev.: 2

GENERAL	1	Tag Number	Location			64-SDV-001	64
	2	Service				NITROGEN TO H2 STORAGE VESSELS INLET	
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80027	Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-N-128-03HSS-N	
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm	1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L	NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				NITROGEN GAS	
	8	Fluid State	Phase			GAS	GAS
	9	Operating Pressure Norm/Min/Max	[barg]			6 -	-
	10	Design Pressure	Full Vacuum	[barg]		10	
	11	Operating Temperature Norm/Min/Max	[°C]			AMB -	-
	12	Design Temperature	Minimum	Maxi	[°C]	-46	80
	13	Max. Diff. Pressure for Actuator Size	[bar]			10	
	14						
	15						
	16	Speed of	Design			Close : (12)	Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum	Open : -
	18						
	19						
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFHS)	
	21	Body Size	Body Form			1"	FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L	(*)
	23	Connections	Rating			FLANGED ASME B16.5	#300
	24	Flange Finish	Gasket Material			RF	Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)	II 2 G Ex h IIC T5 Gb
	26	Bolting				A193 B8M / A194 Gr. 8M	
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718 / RPTFE
	28	Leakage Class				(1, 3) TSO	
	29	Fire Safe				(2)	
ACTUATOR	30	Manufacturer	Type			Rotork	Spring Return
	31	Model No.	Size			CP/S	035-080A/AA
	32	Actuator Orientation	Actuator Form			Horizontal	Cylinder
	33	Ingress Protection	Certification			IP-66	(9)
	34	Air Supply	Min	Max	Design	4 barg / 10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE	CLOSE
	36	Fireproofing				NOT APPLICABLE	
	37	Solenoid Valve				64-SDY-001 (9, 14, 15, 16) - Bifold FP06P	
	38	Limit Switch Closed	Limit Switch Open			64-ZSL-001 (9, 17) - Soldo SS	64-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED	
	40	Air Set	Handwheel			(*)	NOT REQUIRED
	41	Mounting Position				HORIZONTAL	
	42	Partial Stroke Test Facility				NOT REQUIRED	
	43	Control Type				-	
	44	Electrical Connection	Electrical Class			No. (*) / M20	H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	- -
	46	No of Strokes Per Capacity				-	
	47	Safety Valve	Model			-	-
	48	Check Valve	Mounting			-	-
PURCHASE	49	Manufacturer				FLUITEK	
	50	Model				FB3	
	51	Purchase Order Number				1724000204	

NOTE
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 4.7 barg.

No.	Date	By	Chkd	Appr	Description
03	06/12/24				
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 15 of 33

Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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47	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
48	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323298	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
49	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
50	IFR	25-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
51	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
52	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620080001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
53	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771400801	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
54	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
55	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323312	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
56	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
57	IFR	25-SDV-023	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
58	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
59	IFR		floating ball valve	N.A	FLUITEK	1-1/2" 300#	2400620090001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
60	IFR		ACTUATOR	N.A	RFS	CP/S-035-100A/BA	AF771400901	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
61	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
62	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323300	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
63	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
64	IFR	64-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
65	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
66	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620100001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
67	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401001	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
68	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
69	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323293	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
70	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
71	IFR	25-XV-004	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
72	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
73	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620110001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
74	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401101	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
75	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
76	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323311	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
77	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
78	IFR	25-XV-006	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
79	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
80	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620120001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
81	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401201	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
82	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
83	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323287	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
84	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
85	IFR	25-XV-008	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
86	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
87	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620130001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
88	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401301	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
89	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
90	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323294	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
91	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
92	IFR		LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
93	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE

Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

Manufacturer: Bifold Fluidpower Ltd
Address: Broadgate, Oldham Broadway Business Park,
Chadderton, Oldham
Greater Manchester
OL9 9XA
UK

Tel: +44 (0)161-345-4777
E-mail: sales@bifold.co.uk

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

On behalf of the above company, I declare that, the *Object of the Declaration* described above is in conformity with the relevant Union harmonisation legislation: Directive 2014/34/EU, with the following limitation;

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

Technical basis for compliance with the Essential Health and Safety Requirements of Directive 2014/34/EU: -

BS EN 13463-1: 2009 – Non-electrical equipment for use in potentially explosive atmospheres. Basic method and requirements
BS EN 13463-5: 2011 – Non-electrical equipment for use in potentially explosive atmospheres. Protection by constructional safety 'c'

(A review against the following harmonised standards, shows no significant changes relevant to this equipment): -

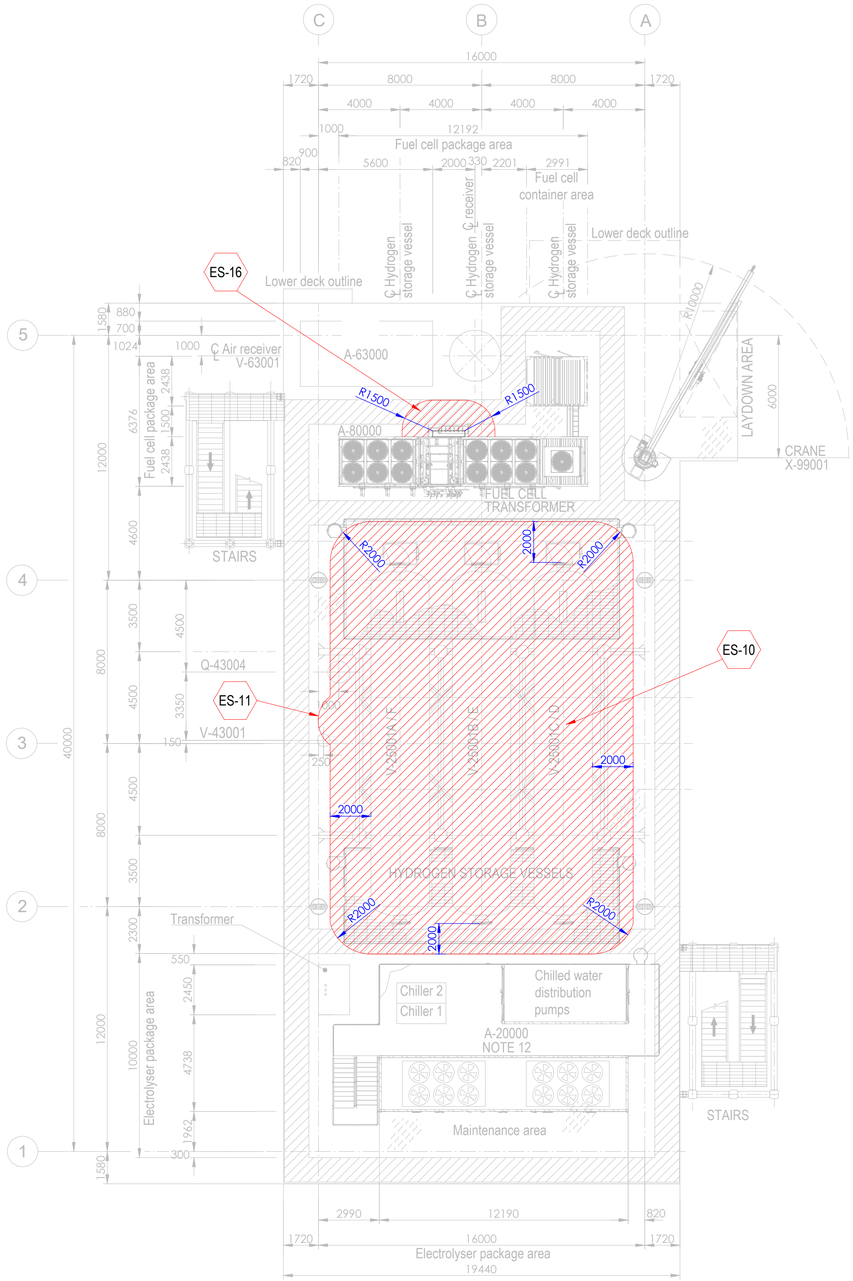
BS EN ISO 80079-36: 2016 – Explosive atmospheres. Non-electrical equipment for explosive atmospheres. Basic method and requirements
BS EN ISO 80079-37: 2016 – Explosive atmospheres. Non-electrical equipment for explosive atmospheres. Non-electrical type of protection constructional safety "c", control of ignition sources "b", liquid immersion "k"

Paul Barrow
Quality Manager

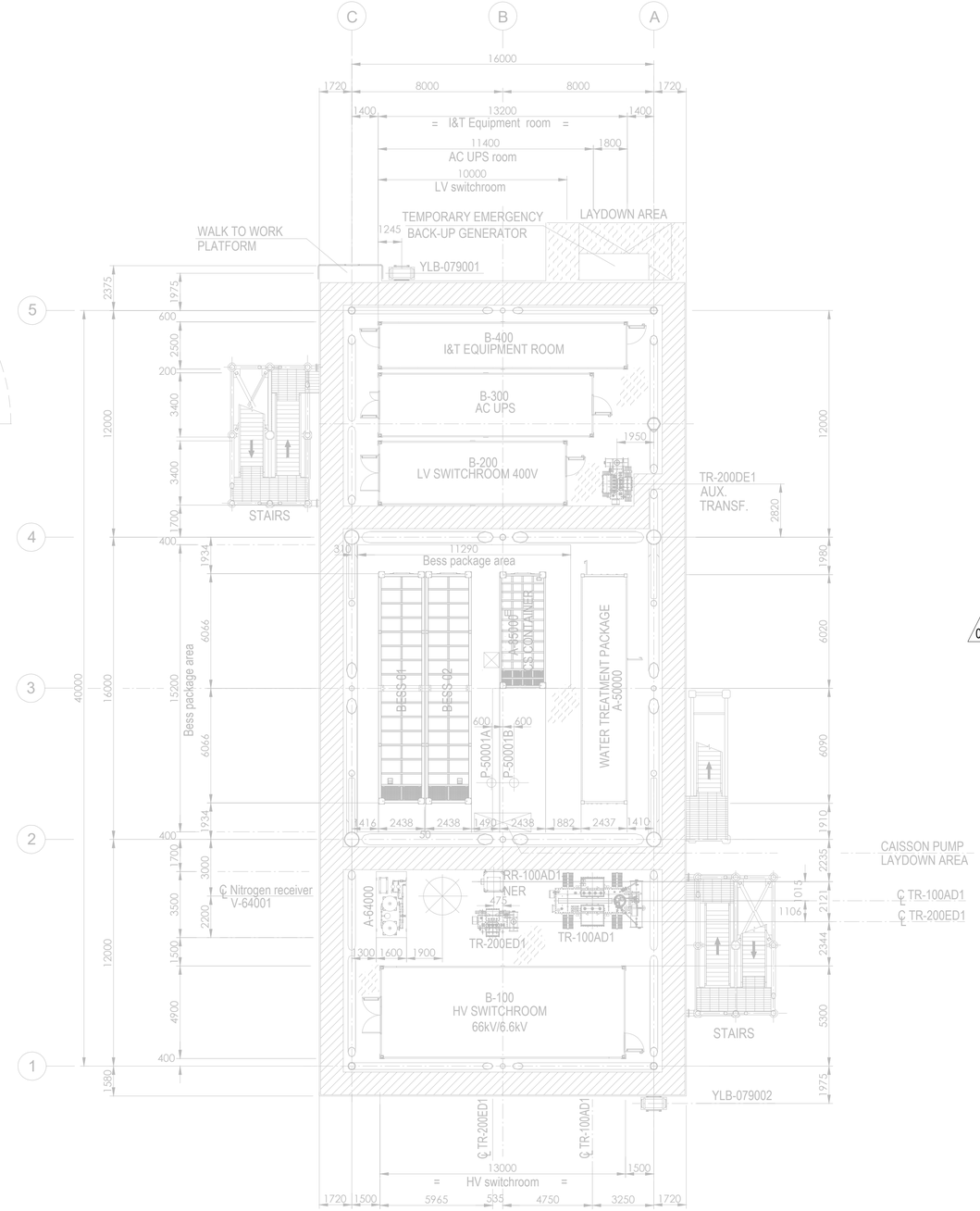
4th November 2020

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



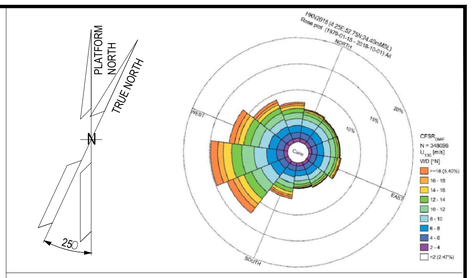
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

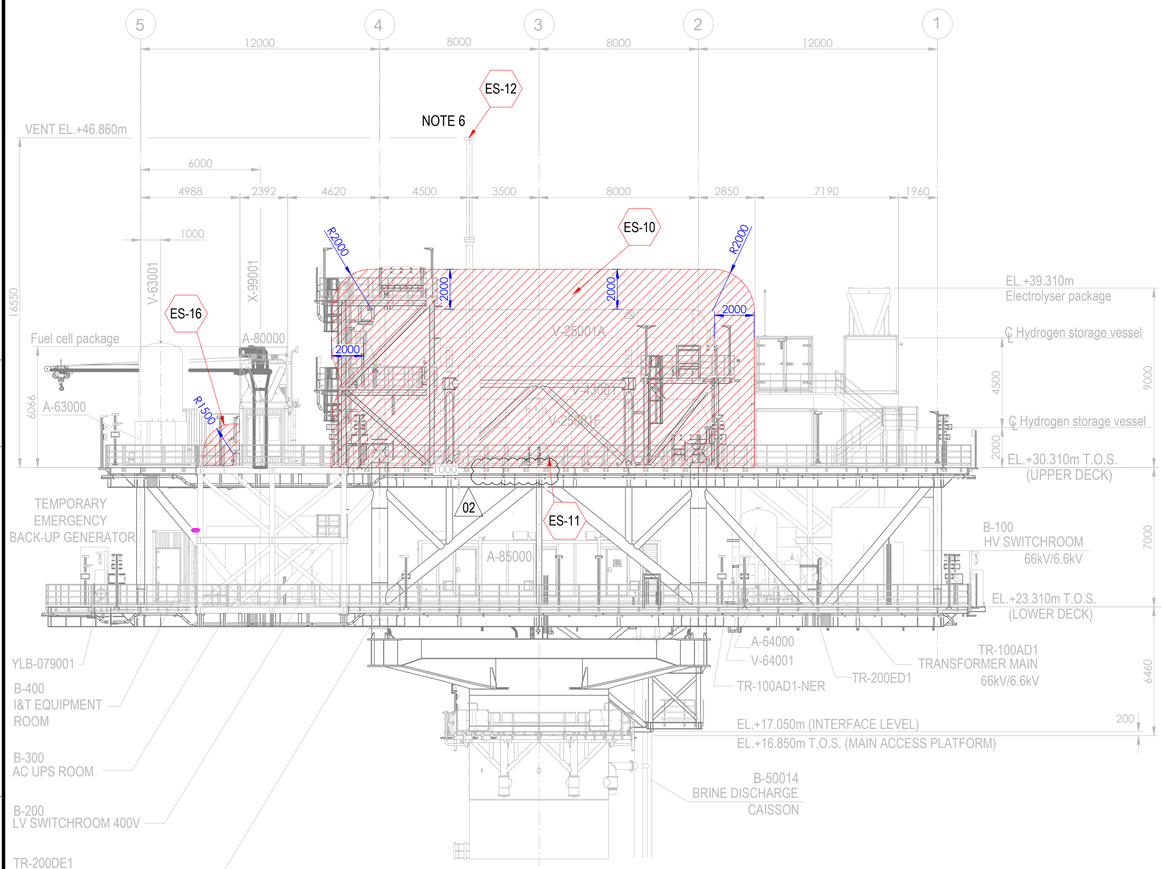
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

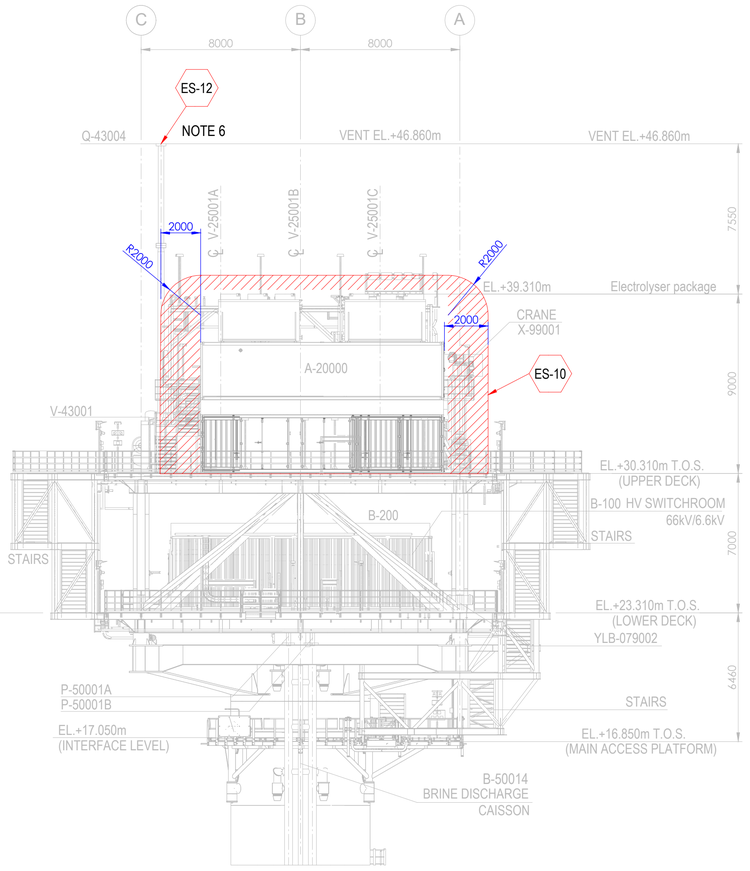
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

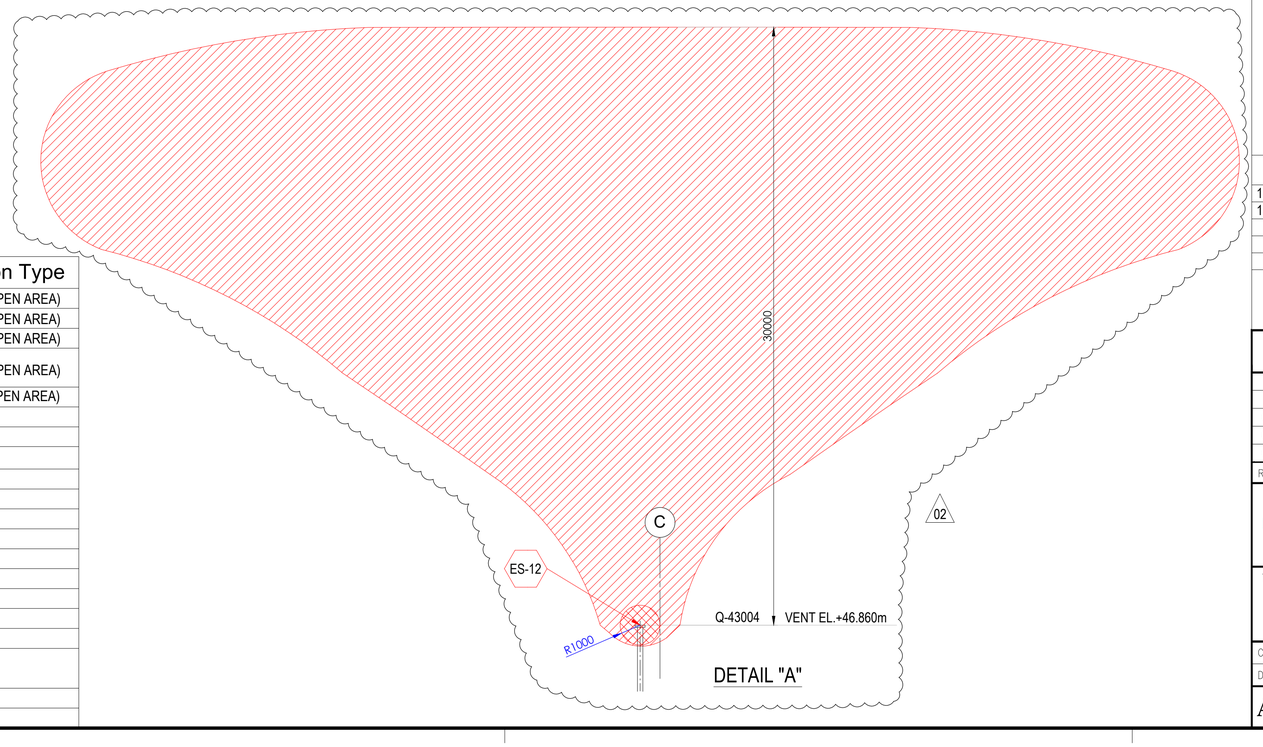


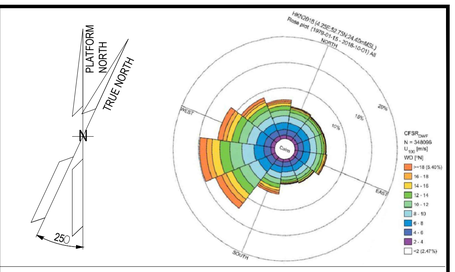
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	64-PG-001	: Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004848	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		PW00DE22RJ8			
Manufacturer	Wika			**Model**		233.50.63			
Cert No.	D.o.C. by Manufacturer reference 11564220			**Equipment Ambient Temp.**		-20 °C to +60 °C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex h	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP65

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state "NA". Comments are required for 'Failure' column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	NA	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	NA	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	NA	
13	Condition of enclosure gaskets is satisfactory	x	NA	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	NA	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	NA	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex "e" – Ex "n" – Ex "t")	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	NA	
25	There is no obvious damage to the cables	x	NA	
26	Cable glands are the correct type and installed correctly	x	NA	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	NA	

ITEM	Tag	64-PG-001	: Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004848	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	NA	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	NA	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	NA	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	64-PG-001	: Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10004848	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	VENDOR ROTORK (PER FLUITEK)	RM(ROSETTI MARINO)	
Name	Stefano Linari	Giovanni Tangianu	
Date	2025-04-24	2025-04-24	
Signature	Digitaly signed by Stefano Linari 2025-04-24T13:23:47.005Z	Digitaly signed by Giovanni Tangianu 2025-04-24T15:13:09.496Z	

ROTORK CONTROLS ITALIA srl
Via Portico 17
24050 Orio Al Serio (BG)

Telefono: 0039 (0)5832221

E-mail: rotork.italia@rotork.com



WIKA Product Pass Italiano

serial number

WIKA

64-sdv-001

Type 23X.50

Manometro a molla tubolare 232.50/233.50
Cassa in acciaio inox

Serial number:

PW00DE22RJ8

Item number:

57424821

Manufacturing date:

04/2025



ITEM	Tag	64-PG-001	: Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10004848	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		8975GNDW			
Manufacturer	Wika			**Model**		233.50.63			
Cert No.	D.o.C. by SITECD.o.C. by Manufacturer, reference 11564220NA			**Equipment Ambient Temp.**		-20 °C to +60 °C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex h	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	IP65

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	OK	
5	Equipment circuit identification is correct	x	NA	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	OK	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	NA	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	NA	
13	Condition of enclosure gaskets is satisfactory	x	NA	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	OK	
15	Electrical connections are tight	x	OK	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	NA	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	OK	
24	Type of cable is appropriate	x	NA	
25	There is no obvious damage to the cables	x	NA	
26	Cable glands are the correct type and installed correctly	x	NA	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	NA	

ITEM	Tag	64-PG-001	: Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004848	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	NA	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	NA	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	NA	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	64-PG-001	: Air Set Pressure Gauge Filter - Nitrogen to Distribution Header Shut-Down		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10004848	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline ATEX	Form	CJX01	Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks				
67	All Terminals are Ex n certified (if required on certificate)	x	NA	
68	Hermetically sealed and enclosed break devices are undamaged	x	NA	
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA	
70	Test port, if fitted, is functional (type “nR” only)	x	NA	
71	Breathing operation is satisfactory (type “nR” only)	x	NA	
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA	
73	The ventilation airflow is not impeded	x	NA	
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
76	Variable voltage/frequency installation complies with documentation	x	NA	
Extra Ex p checks				
77	Pressurization gas is correct type	x	NA	
78	Actual pressure is within maximum and minimum settings for equipment	x	NA	
79	Timers set as per certification documentation	x	NA	
80	Alarms and trip functions operate correctly as per certification documentation	x	NA	
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
82	Automatic electrical protective devices operate within permitted limits	x	NA	
83	Automatic electrical protective devices are set correctly	x	NA	
84	Protective gas inlet temperature is below maximum specified	x	NA	
85	Ducts, pipes and enclosures are in good condition	x	NA	
86	Protective gas is substantially free from contaminants	x	NA	
87	Protective gas pressure and/or flow is adequate	x	NA	
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA	
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA	
90	Specific conditions of use (if applicable) are complied with		NA	
Extra Ex i (Intrinsically Safe – IS) checks				
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA	
92	Cables are installed in accordance with the documentation	x	NA	
93	Segregation is maintained between IS and non-IS Circuits	x	NA	
94	Cable screens are isolated at one end (field side)	x	NA	
95	Cable screens are earthed in accordance with the documentation	x	NA	
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA	
97	Equipment installed is the one specified in the documentation	x	NA	
98	Ambient temperature range of the apparatus is correct for the installation	x	NA	
99	Service temperature range of the apparatus is correct for the installation	x	NA	
100	Installation is clearly labelled	x	NA	
101	Printed circuit boards are clean and undamaged	x	NA	
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA	
103	Point-to-point connections are all correct	x	NA	
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA	
105	Earth connections maintain the integrity of the type of protection	x	NA	
106	Intrinsically safe circuit earthing is satisfactory	x	NA	
107	Insulation resistance is satisfactory	x	NA	
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA	

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

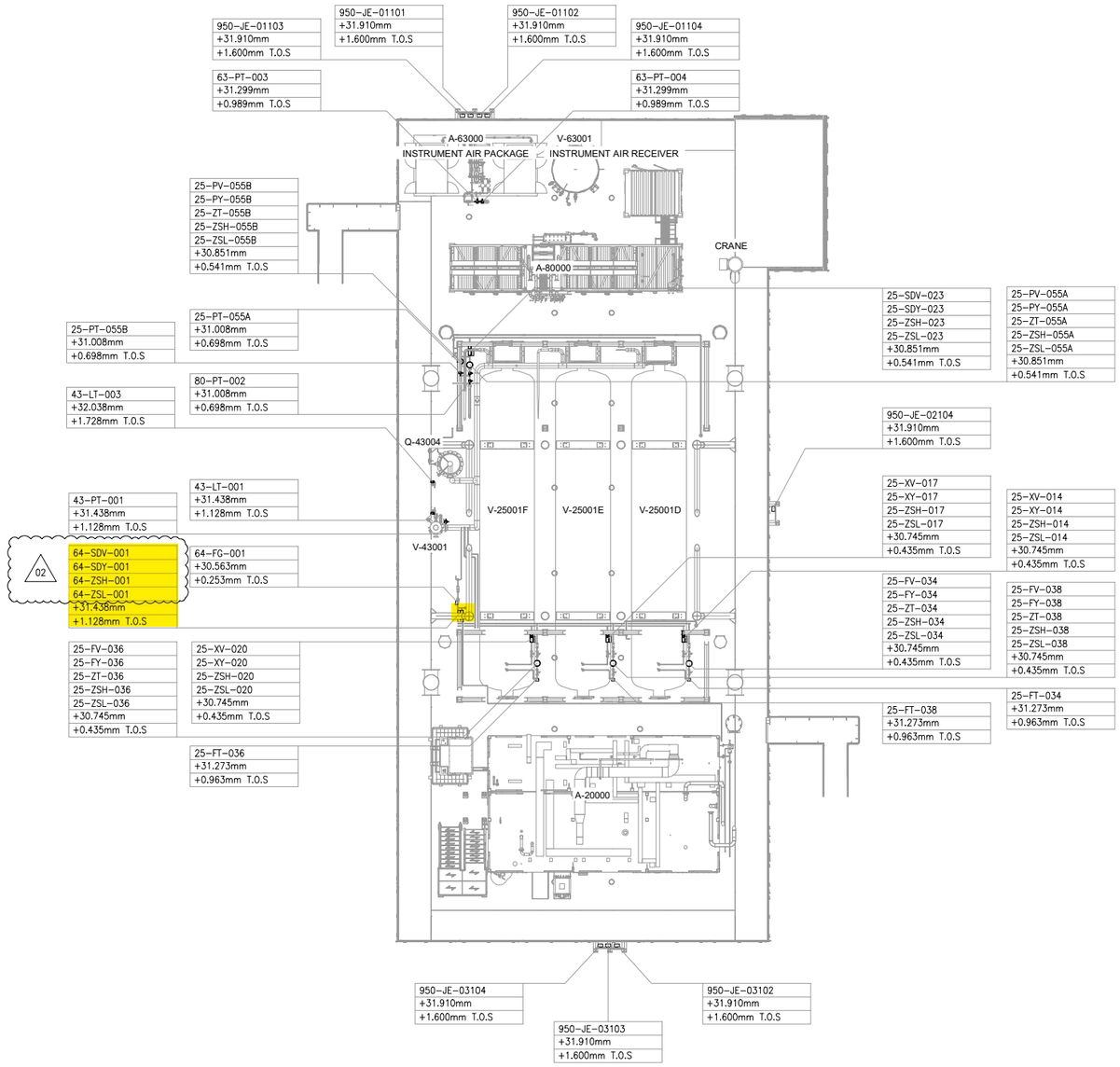
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Luca Mussi	
Date	2025-01-31	2025-02-01	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:39:12.974Z	PROVERLIS Digitaly signed by Luca Mussi 2025-02-01T13:03:25.069Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

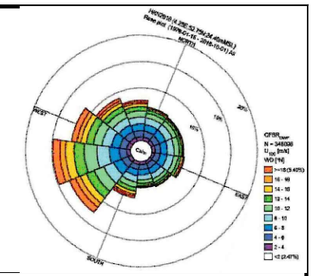


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-40081**
REV.: 2_A | DATE: 07/10/24 | SIGNATURE: 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 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

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 — 63 TP 040 — 2"

V-63001
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019

03 — 63 TP 041 — 2"x1.1/2"

LO BLPH-MV-149

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

63 PI 004 LL — I ESD — 63 PT 004

63 PI 003 L — 63 PT 003

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 — I

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

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

64 PT 031A — 64 PT 031B — 64 PT 002

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

INSTR. PIPING — 64 PV 031A — 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

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

03 — 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 NOTE 16

64 TP 044 — 1"-N-262-01CS-N

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

1"-N-100-01CS-N

64 SDV 001 — IA — 64 SDV 001 — NOTE 13 — NC-FC TYP.2

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

64 XA 003 — FAULT PACKAGE

03 — 64 TP 046

V-64001
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

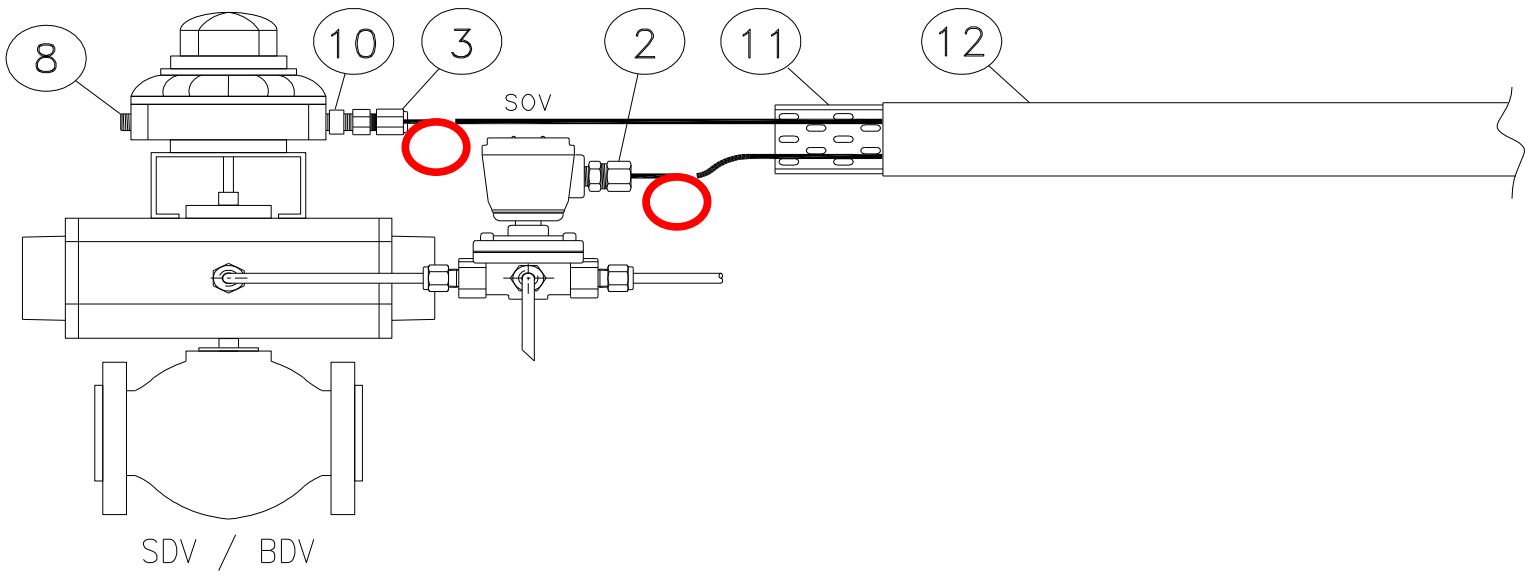
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

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

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 16 of 37 Date: 27/09/2024 Rev. 02

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



SDV / BDV

INSTRUMENT TAG	
1	25-BDV-005
2	25-BDV-007
3	25-BDV-010
4	25-BDV-013
5	25-BDV-016
6	25-BDV-019
7	25-BDV-022
8	25-SDV-001
9	25-SDV-023
10	64-SDV-001
11	
12	
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NOTE:

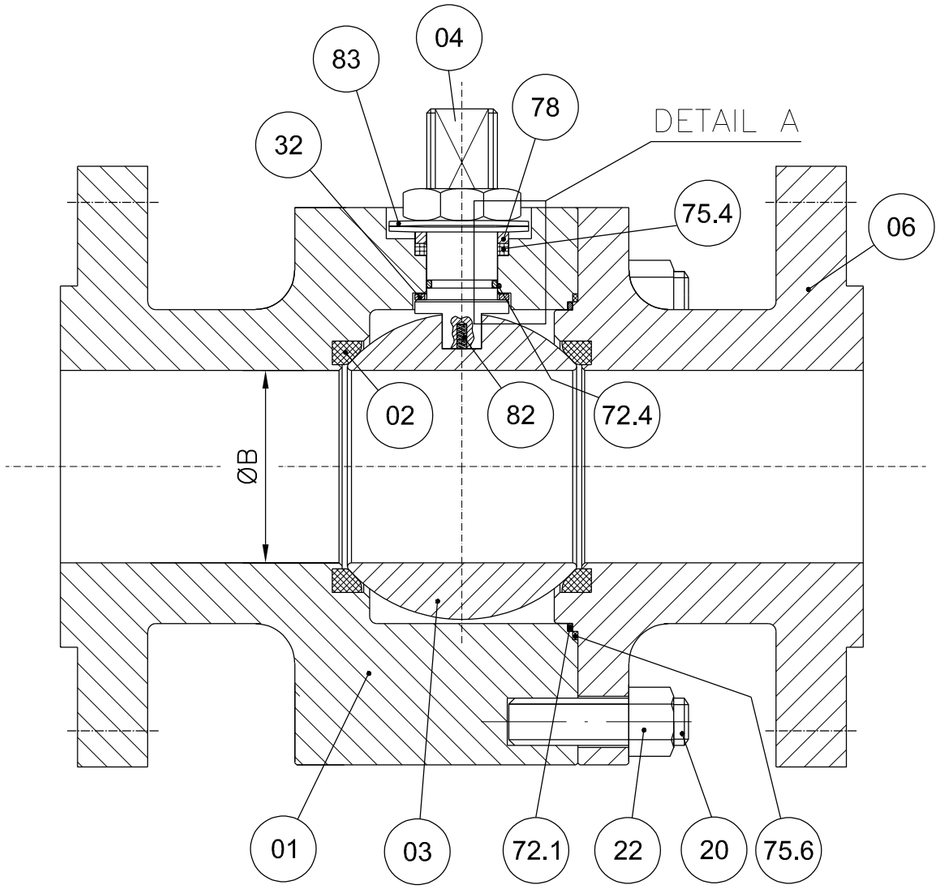
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

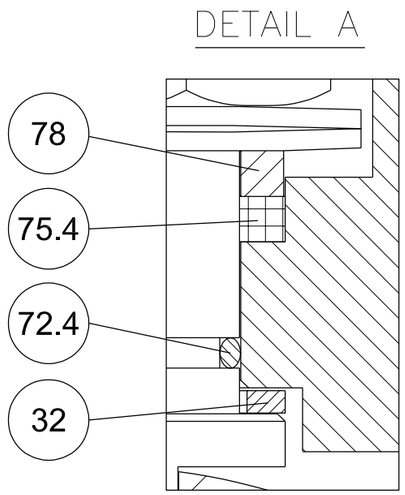
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

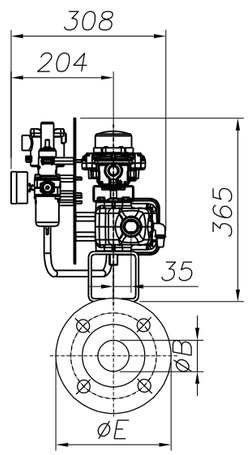
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
10		Nickel Plated Brass Adaptor Ex-d/e IIC (or IIB + H2) T1	M20 Male x M25 Female	1
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
3		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1

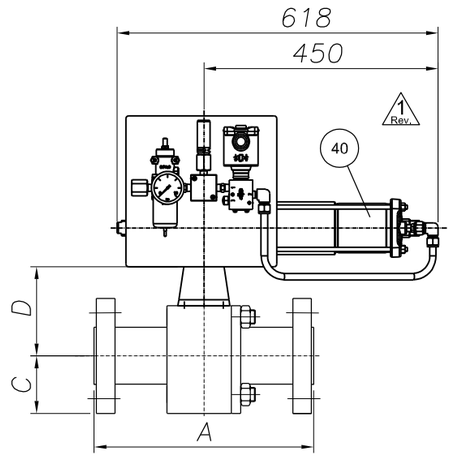
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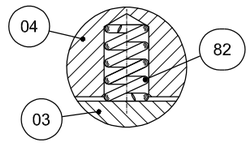


POS.	PART. NAME	MATERIAL
01	BODY	A182 F316/316L
02	SEAT	RPTFE
03	BALL	A182 F316/316L
04	STEM	API 6A CRA UNS N07718
06	CLOSURE	A182 F316/316L
20	STUD	A193 B8M
22	NUT	A194 Gr.8M
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301





ANTISTATIC DEVICE



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	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
08	80	BS03C01RFH	25-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
10	100	BS03C01RFH	64-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
11	110	BS03C01RFH	25-XV-004	1	1"	300	RF	165	25	62	92	124	7	34	41
12	120	BS03C01RFH	25-XV-006	1	1"	300	RF	165	25	62	92	124	7	34	41
13	130	BS03C01RFH	25-XV-008	1	1"	300	RF	165	25	62	92	124	7	34	41
14	140	BS03C01RFH	25-XV-009	1	1"	300	RF	165	25	62	92	124	7	34	41
15	150	BS03C01RFH	25-XV-011	1	1"	300	RF	165	25	62	92	124	7	34	41
16	160	BS03C01RFH	25-XV-012	1	1"	300	RF	165	25	62	92	124	2 7	34	2 41

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
17	170	BS03C01RFH	25-XV-014	1	1"	300	RF	165	25	62	92	124	7	34	41
18	180	BS03C01RFH	25-XV-015	1	1"	300	RF	165	25	62	92	124	7	34	41
19	190	BS03C01RFH	25-XV-017	1	1"	300	RF	165	25	62	92	124	7	34	41
20	200	BS03C01RFH	25-XV-018	1	1"	300	RF	165	25	62	92	124	7	34	41
21	210	BS03C01RFH	25-XV-020	1	1"	300	RF	165	25	62	92	124	7	34	41
22	220	BS03C01RFH	25-XV-021	1	1"	300	RF	165	25	62	92	124	7	34	41
23	230	BS03C01RFH	25-XV-024	1	1"	300	RF	165	25	62	92	124	7	34	41
28	280	BS01C01RFH	80-XV-001	1	1"	150	RF	127	25	54	95	108	6	34	40

CUSTOMER :	ROSETTI MARINO S.p.A.
P.O. N. :	1724000204 123A90A/REV.1
JOB N. :	240062

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2	ISSUED FOR APPROVAL	S.Madahar	22/04/2024	D.Barcella	22/04/2024	L.Mora	22/04/2024
1	ISSUED FOR APPROVAL	S.Madahar	15/04/2024	D.Barcella	15/04/2024	L.Mora	15/04/2024
0	FIRST ISSUE	S.Madahar	26/02/2024	D.Barcella	26/02/2024	L.Mora	26/02/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

VALVE TYPE: SPLIT BODY FLOATING BALL VALVE

DRAWN: S.Madahar	DATE: 26/02/2024	
CHK'D: D.Barcella	DATE: 26/02/2024	
APPV'D: L.Mora	DATE: 26/02/2024	
SIZE: A3	SCALE: N.A.	ALL RIGHTS OF THIS DRAWING ARE RESERVED.

DRAWING NAME: D240062-08 | Rev.: 2

GENERAL	1	Tag Number	Location			64-SDV-001	64
	2	Service				NITROGEN TO H2 STORAGE VESSELS INLET	
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80027	Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-N-128-03HSS-N	
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm	1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L	NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				NITROGEN GAS	
	8	Fluid State	Phase			GAS	GAS
	9	Operating Pressure Norm/Min/Max	[barg]			6 -	-
	10	Design Pressure	Full Vacuum	[barg]		10	
	11	Operating Temperature Norm/Min/Max	[°C]			AMB -	-
	12	Design Temperature	Minimum	Maxi	[°C]	-46	80
	13	Max. Diff. Pressure for Actuator Size	[bar]			10	
	14						
	15						
	16	Speed of	Design			Close : (12)	Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum	Open : -
	18						
	19						
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFHS)	
	21	Body Size	Body Form			1"	FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L	(*)
	23	Connections	Rating			FLANGED ASME B16.5	#300
	24	Flange Finish	Gasket Material			RF	Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)	II 2 G Ex h IIC T5 Gb
	26	Bolting				A193 B8M / A194 Gr. 8M	
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718 / RPTFE
	28	Leakage Class				(1, 3) TSO	
	29	Fire Safe				(2)	
ACTUATOR	30	Manufacturer	Type			Rotork	Spring Return
	31	Model No.	Size			CP/S	035-080A/AA
	32	Actuator Orientation	Actuator Form			Horizontal	Cylinder
	33	Ingress Protection	Certification			IP-66	(9)
	34	Air Supply	Min	Max	Design	4 barg / 10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE	CLOSE
	36	Fireproofing				NOT APPLICABLE	
	37	Solenoid Valve				64-SDY-001 (9, 14, 15, 16) - Bifold FP06P	
	38	Limit Switch Closed	Limit Switch Open			64-ZSL-001 (9, 17) - Soldo SS	64-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED	
	40	Air Set	Handwheel			(*)	NOT REQUIRED
	41	Mounting Position				HORIZONTAL	
	42	Partial Stroke Test Facility				NOT REQUIRED	
	43	Control Type				-	
	44	Electrical Connection	Electrical Class			No. (*) / M20	H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	- -
	46	No of Strokes Per Capacity				-	
	47	Safety Valve	Model			-	-
	48	Check Valve	Mounting			-	-
PURCHASE	49	Manufacturer				FLUITEK	
	50	Model				FB3	
	51	Purchase Order Number				1724000204	

NOTE
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 4.7 barg.

No.	Date	By	Chkd	Appr	Description
03	06/12/24				
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 15 of 33

Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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47	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
48	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323298	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
49	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
50	IFR	25-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
51	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
52	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620080001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
53	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771400801	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
54	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
55	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323312	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
56	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
57	IFR	25-SDV-023	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
58	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
59	IFR		floating ball valve	N.A	FLUITEK	1-1/2" 300#	2400620090001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
60	IFR		ACTUATOR	N.A	RFS	CP/S-035-100A/BA	AF771400901	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
61	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
62	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323300	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
63	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
64	IFR	64-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
65	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
66	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620100001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
67	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401001	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
68	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
69	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323293	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
70	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
71	IFR	25-XV-004	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
72	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
73	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620110001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
74	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401101	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
75	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
76	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323311	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
77	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
78	IFR	25-XV-006	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
79	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
80	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620120001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
81	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401201	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
82	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
83	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323287	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
84	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
85	IFR	25-XV-008	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
86	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
87	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620130001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
88	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401301	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
89	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
90	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323294	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
91	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
92	IFR		LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
93	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE

Bourdon tube pressure gauge, stainless steel
For the process industry, standard version
Models 232.50, 233.50, NS 63 [2 ½"], 100 [4"] and 160 [6"]

For further approvals, see page 6

Applications

- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive environments
- Chemical and petrochemical industries, oil and gas industry, power engineering and also water and wastewater technology
- Machine building and general plant construction

Special features

- Excellent load cycle stability and shock resistance
- With case filling (model 233.50) for applications with high dynamic pressure loads and vibrations
- Completely from stainless steel
- Scale ranges from 0 … 0.6 to 0 … 1,600 bar or 0 ... 10 to 0 ... 20,000 psi
- QR code on dial links to instrument-specific information



Bourdon tube pressure gauge, model 232.50, NS 100 [4"]

Description

This high-quality Bourdon tube pressure gauge has been designed especially for the process industry.

The use of high-quality stainless steel materials and the robust design are geared to applications in the chemical and process engineering industries. Thus the instrument is suitable for liquid and gaseous media, also in aggressive environments.

Scale ranges of 0 … 0.6 to 0 … 1,600 bar [0 ... 10 to 0 ... 20,000 psi] ensure the measuring ranges required for a wide variety of applications.

WIKA manufactures and qualifies the pressure gauge in accordance with the standards EN 837-1 and ASME B40.100. As a safety function, this instrument has a blow-out device with blow-out plug on the back of the case. In the event of a failure, overpressure can escape there.

The model 233.50 with liquid-filled case is suitable for high dynamic pressure loads and vibrations.

The QR code on the dial allows instrument-specific information such as the serial number, the order number, certificates and other product data to be retrieved from the internet easily and in the long term.

Smart in sensing

Data sheets showing similar products:
Stainless steel, safety version; see data sheet PM 02.04
Bourdon tube pressure gauge with switch contacts; see data sheet PV 22.02
Monel version; see data sheet PM 02.33
Pressure gauge per EN 837-1 with mounted diaphragm seal; see data sheet DS 95.12

Specifications

Basic information	
Standard	■ EN 837-1 ■ ASME B40.100
	For information on the “Selection, installation, handling and operation of pressure gauges”, see technical information IN 00.05.
Further version	■ Oil- and grease-free for oxygen ■ Per NACE [1] MR0175 / ISO 15156, use in H_2S-containing environments in oil and gas production ■ With pre-volume deflagration flame arrester [2] for mounting to zone 0 (EPL Ga); model 910.21; see data sheet AC 91.02 ■ Monel version; models 262 and 263; see data sheet PM 02.33
Nominal size (NS)	■ Ø 63 mm [2 ½"] ■ Ø 100 mm [4"] ■ Ø 160 mm [6"]
Connection location	■ Lower mount (radial) ■ Lower back mount ■ Centre back mount (only for NS 63 [2 ½"])
Window	Laminated safety glass (NS 63 [2 ½"]: Polycarbonate)
Case	
Design	Safety level “S1” per EN 837-1 With blow-out device at case circumference, 12 o'clock (NS 63 [2 ½"]) and on the back of the case (NS 100 [4"] and 160 [6"]) Scale ranges ≤ 0 ... 16 bar [≤ 0 ... 300 psi] with compensating valve to vent and reseal case
Material	■ Stainless steel 1.4301 (304) ■ Stainless steel 1.4571 (316Ti)
Ring	Bayonet ring, stainless steel
Mounting	■ Without ■ Panel mounting flange, stainless steel ■ Panel mounting flange, polished stainless steel ■ Triangular profile ring with mounting bracket, polished stainless steel ■ Surface mounting flange, stainless steel
Case filling (model 233.50)	■ Without ■ Glycerine ■ Glycerine-water mixture for NS 100 [4"] and 160 [6"] with scale range ≤ 0 ... 2.5 bar [≤ 0 ... 40 psi] or for NS 63 [2 ½"] with scale range ≤ 0 ... 4 bar [≤ 0 ... 60 psi] ■ Silicone oil
Movement	■ Stainless steel ■ Stainless steel 1.4404 (316L) ■ everlast® version

1) General information about NACE standards; see data sheet IN 00.21
2) Only for instruments with Ex approval

Measuring element	
Type of measuring element	Bourdon tube, C-type or helical type
Material	Stainless steel 1.4404 (316L)
Leak tightness	■ Helium tested, leakage rate: $< 5 \cdot 10^{-3}$ mbar l/s ■ Helium tested, leakage rate: $< 1 \cdot 10^{-6}$ mbar l/s

Accuracy specifications		
Accuracy class		
NS 63 [2 ½"]	■ EN 837-1	Class 1.6
	■ ASME B40.100	±2 % | ±1 % | ±2 % of measuring span (grade A)
NS 100 [4"], 160 [6"]	■ EN 837-1	Class 1.0
	■ ASME B40.100	±1 % of measuring span (grade 1A)
Temperature error	On deviation from the reference conditions at the measuring system: ≤ ±0.4 % per 10 °C [≤ ±0.4 % per 18 °F] of full scale value	
Reference conditions		
Ambient temperature	+20 °C [+68 °F]	

Scale ranges

bar	
0 ... 0.6 [1]	0 ... 40
0 ... 1	0 ... 60
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 160
0 ... 4	0 ... 250
0 ... 6	0 ... 400
0 ... 10	0 ... 600
0 ... 16	0 ... 1,000
0 ... 25	0 ... 1,600

kg/cm²	
0 ... 0.6 [1]	0 ... 40
0 ... 1	0 ... 60
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 160
0 ... 4	0 ... 250
0 ... 6	0 ... 400
0 ... 10	0 ... 600
0 ... 16	0 ... 1,000
0 ... 25	0 ... 1,600

kPa	
0 ... 60 [1]	0 ... 4,000
0 ... 100	0 ... 6,000
0 ... 160	0 ... 10,000
0 ... 250	0 ... 16,000
0 ... 400	0 ... 25,000
0 ... 600	0 ... 40,000
0 ... 1,000	0 ... 60,000
0 ... 1,600	0 ... 100,000
0 ... 2,500	0 ... 160,000

MPa	
0 ... 0.06 [1]	0 ... 4
0 ... 0.1	0 ... 6
0 ... 0.16	0 ... 10
0 ... 0.25	0 ... 16
0 ... 0.4	0 ... 25
0 ... 0.6	0 ... 40
0 ... 1	0 ... 60
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 160

psi	
0 ... 10 [1]	0 ... 1,000
0 ... 15	0 ... 1,500
0 ... 30	0 ... 2,000
0 ... 60	0 ... 3,000
0 ... 100	0 ... 4,000
0 ... 160	0 ... 5,000
0 ... 200	0 ... 6,000
0 ... 300	0 ... 7,500
0 ... 400	0 ... 10,000
0 ... 600	0 ... 15,000
0 ... 800	0 ... 20,000

1) Not available for NS 63 [2 ½"]

Vacuum and +/- scale ranges

bar	
-0.6 ... 0 [1]	-1 ... +5
-1 ... 0	-1 ... +9
-1 ... +0.6	-1 ... +15
-1 ... +1.5	-1 ... +24
-1 ... +3	

MPa	
-0.06 ... 0 [1]	-0.1 ... +0.5
-0.1 ... 0	-0.1 ... +0.9
-0.1 ... +0.06	-0.1 ... +1.5
-0.1 ... +0.15	-0.1 ... +2.4
-0.1 ... +0.3	

kPa	
-60 ... 0 [1]	-100 ... +500
-100 ... 0	-100 ... +900
-100 ... +60	-100 ... +1,500
-100 ... +150	-100 ... +2,400
-100 ... +300	

psi	
-30 inHg ... 0	-30 inHg ... +100
-30 inHg ... +15	-30 inHg ... +160
-30 inHg ... +30	-30 inHg ... +200
-30 inHg ... +60	-30 inHg ... +300

1) Not available for NS 63 [2 ½"]

Further details on: scale ranges	
Special scale ranges	Other scale ranges on request
Unit	■ bar ■ psi ■ kg/cm² ■ kPa ■ MPa
Increased overload safety	■ Without ■ 2 times ■ 3 times ■ 4 times ■ 5 times
	The possibility of selection depends on scale range and nominal size
Vacuum resistance	■ Without ■ Vacuum-resistant to -1 bar
Dial	
Scale colour	Black
Material	Aluminium
Special scale	■ Without ■ With temperature scale for refrigerant, e.g. for NH_3: R 717
	Other scales or customer-specific dials, e.g. with red mark, circular arcs or circular sectors, on request
Pointer	
Instrument pointer	Aluminium, black
Mark pointer/drag pointer	■ Without ■ Red mark pointer on dial, fixed ■ Red mark pointer on window, adjustable ■ Mark pointer on bayonet ring, adjustable ■ Red drag pointer on window, adjustable
Pointer stop pin	■ Without ■ At zero point (only for NS 63 [2 ½"]) ■ At 6 o'clock (only for NS 100 [4"], 160 [6"])

Process connection		
Standard	■ EN 837-1 ■ ISO 7 ■ ANSI/B1.20.1	
Size		
EN 837-1	■ G ⅛ B, male thread ■ G ¼ B, male thread ■ G ½ B, male thread ■ M12 x 1.5, male thread ■ M20 x 1.5, male thread	
ISO 7	■ R ¼, male thread ■ R ½, male thread	
ANSI/B1.20.1	■ ¼ NPT, male thread ■ ½ NPT, male thread	
Restrictor	■ Without ■ Ø 0.6 mm [0.024"], stainless steel ■ Ø 0.3 mm [0.012"], stainless steel	
Material (wetted)		
Process connection	Stainless steel 1.4404 (316L)	
Bourdon tube	Stainless steel 1.4404 (316L)	

→ Other process connections on request

Operating conditions		
Medium temperature		
Unfilled instruments	-40 ... +200 °C [-40 ... +392 °F]	
Instruments with glycerine filling	-20 ... +100 °C [-4 ... +212 °F]	
Instruments with silicone oil filling	-40 ... +100 °C [-40 ... +212 °F]	
Ambient temperature		
Unfilled instruments or with silicone oil filling	-40 ... +60 °C [-40 ... +140 °F]	
Instruments with glycerine filling	-20 ... +60 °C [-4 ... +140 °F]	
Pressure limitation		
NS 63 [2 ½"]	Steady	3/4 x full scale value
	Fluctuating	2/3 x full scale value
	Short time	Full scale value
NS 100 [4"], 160 [6"]	Steady	Full scale value
	Fluctuating	0.9 x full scale value
	Short time	1.3 x full scale value
Ingress protection per IEC/EN 60529	■ IP65 ■ IP66 (only selectable for scale ranges ≥ 0 ... 20 bar [0 ... 400 psi])	

Approvals

Logo	Description	Region
CE	**EU declaration of conformity** Pressure equipment directive PS > 200 bar, module A, pressure accessory	European Union
UKCA	**UKCA** Pressure equipment (safety) regulations	United Kingdom
-	**CRN** Safety (e.g. electr. safety, overpressure, ...) For full scale value ≤ 1,000 bar	Canada

Optional approvals

Logo	Description	Region
CE Ex	**EU declaration of conformity** ATEX directive Hazardous areas - Ex h Gas II 2G Ex h IIC T6 ... T1 Gb X Dust II 2D Ex h IIIC T85°C ... T450°C Db X	European Union
UKCA	**UKCA** Equipment and protective systems intended for use in potentially explosive atmospheres regulations	United Kingdom
EAC Ex	**EAC** Hazardous areas	Eurasian Economic Community
	Ex Ukraine Hazardous areas	Ukraine
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	**MChS** Permission for commissioning	Kazakhstan
-	**PAC Ukraine** Metrology, measurement technology	Ukraine
	PAC Uzbekistan Metrology, measurement technology	Uzbekistan
-	**PAC China** Metrology, measurement technology	China
	DNV Ships, shipbuilding (e.g. offshore)	International
-	**KBA** [1] Automotive	International
	Hydrogen-powered motor vehicles - (EC) no. 79/2009 and (EU) no. 406/2010	
	Components for motor vehicles using natural gas (CNG/LNG) – UN no. R 110	

1) Not available for all versions

Manufacturer's declaration

Logo	Description
-	Pressure equipment directive (PED) for maximum allowable pressure PS ≤ 200 bar
-	Suitability of wetted materials for drinking water in accordance with the European 4MS initiative
-	Suitability of wetted materials for hydrogen

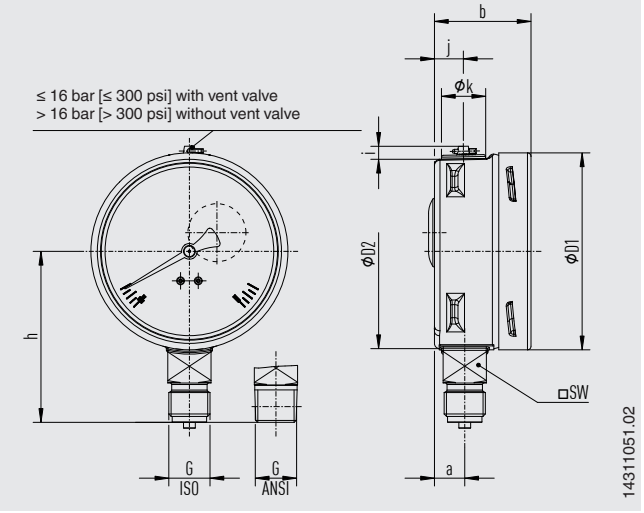
Certificates (option)

Certificates	
Certificates	■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy) ■ 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metal parts, indication accuracy) ■ PCA calibration certificate, traceable and accredited in accordance with ISO/IEC 17025 ■ Calibration certificate by a national accreditation body, traceable and accredited in accordance with ISO/IEC 17025 on request
Recommended calibration interval	1 year (dependent on conditions of use)

→ For approvals and certificates, see website

Dimensions in mm [in]

Lower mount (radial)



NS	Weight	
	Model 232.50	Model 233.50
63 [2 ½"]	approx. 0.16 kg [0.35 lbs]	approx. 0.20 kg [0.44 lbs]
100 [4"]	approx. 0.6 kg [1.32 lbs]	approx. 0.9 kg [1.98 lbs]
160 [6"]	approx. 1.1 kg [2.43 lbs]	approx. 2.0 kg [4.41 lbs]

Process connection with thread per EN 837-1

NS	G	Dimensions in mm [in]								
		h ±1	a	b	D1	D2	i	j	k	SW
63 [2 ½"]	G ¼ B	54 [2.13]	9.5 [0.37]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	G ⅛ B	51 [2.01]	9.5 [0.37]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	M12 x 1.5	54 [2.13]	9.5 [0.37]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	G ¼ B	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G ½ B	87 [3.43]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M12 x 1.5	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	87 [3.43]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	G ¼ B	111 [4.37]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G ½ B	118 [4.65]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M12 x 1.5	111 [4.37]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	118 [4.65]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Process connection with thread per ISO 7

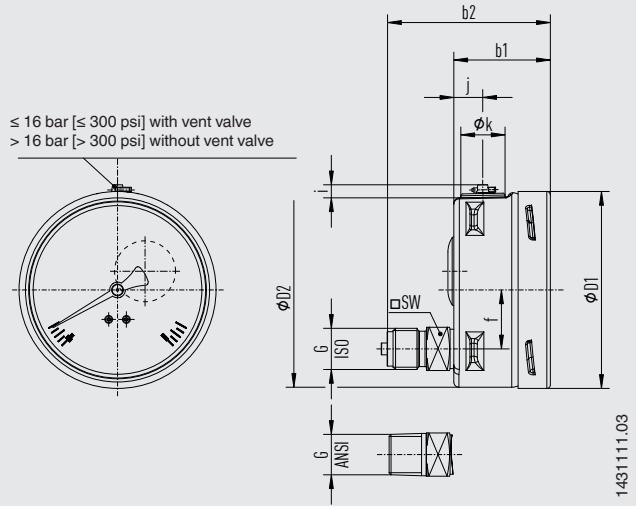
NS	G	Dimensions in mm [in]								
		h ±1	a	b	D1	D2	i	j	k	SW
63 [2 ½"]	R ¼	54 [2.13]	9.5 [0.37]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	R ¼	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R ½	86 [3.39]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	R ¼	111 [4.37]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R ½	117 [4.60]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]								
		h ±1	a	b	D1	D2	i	j	k	SW
63 [2 ½"]	¼ NPT	54 [2.13]	9.5 [0.37]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	⅛ NPT	51 [2.01]	9.5 [0.37]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	¼ NPT	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	½ NPT	86 [3.39]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	¼ NPT	111 [4.37]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	½ NPT	117 [4.60]	15.5 [0.61]	51.5 [2.03] 1)	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

1) Plus 16 mm [0.630 in] with scale range 0 ... 1,600 bar [0 ... 20,000 psi]

Lower back mount



NS	Weight	
	Model 232.50	Model 233.50
63 [2 ½"]	approx. 0.16 kg [0.35 lbs]	approx. 0.20 kg [0.44 lbs]
100 [4"]	approx. 0.6 kg [1.32 lbs]	approx. 0.9 kg [1.98 lbs]
160 [6"]	approx. 1.1 kg [2.43 lbs]	approx. 2.0 kg [4.41 lbs]

Process connection with thread per EN 837-1

NS	G	Dimensions in mm [in]								
		b1	b2 ±1	D1	D2	e	i	j	k	SW
63 [2 ½"]	G ¼ B	33 [1.30]	57 [2.24]	63 [2.48]	62 [2.44]	18.5 [0.73]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	G ⅛ B	33 [1.30]	54 [2.13]	63 [2.48]	62 [2.44]	18.5 [0.73]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	M12 x 1.5	33 [1.30]	57 [2.24]	63 [2.48]	62 [2.44]	18.5 [0.73]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	G ¼ B	49.5 [1.95]	76 [2.99]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G ½ B	49.5 [1.95]	83 [3.27]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M12 x 1.5	49.5 [1.95]	76 [2.99]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	49.5 [1.95]	83 [3.27]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	G ¼ B	51.5 [2.03] 1)	78 [3.07] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G ½ B	51.5 [2.03] 1)	85 [3.24] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M12 x 1.5	51.5 [2.03] 1)	78 [3.07] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	51.5 [2.03] 1)	85 [3.24] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Process connection with thread per ISO 7

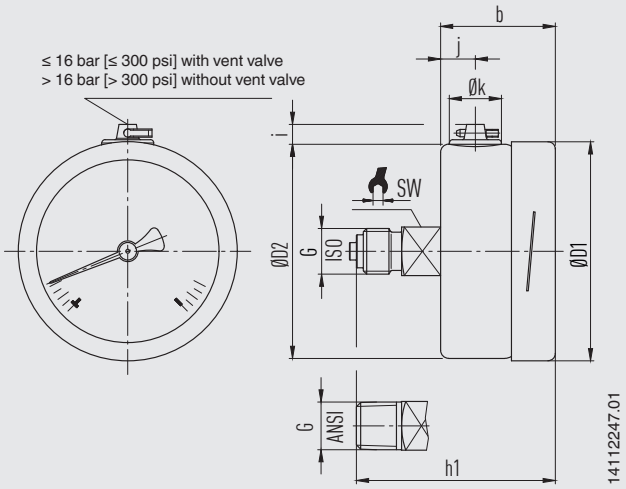
NS	G	Dimensions in mm [in]								
		b1	b2 ±1	D1	D2	e	i	j	k	SW
63 [2 ½"]	R ¼	33 [1.30]	57 [2.24]	63 [2.48]	62 [2.44]	18.5 [0.73]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	R ¼	49.5 [1.95]	76 [2.99]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R ½	49.5 [1.95]	82 [3.23]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	R ¼	51.5 [2.03] 1)	78 [3.07] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R ½	51.5 [2.03] 1)	84 [3.31] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]								
		b1	b2 ±1	D1	D2	e	i	j	k	SW
63 [2 ½"]	¼ NPT	33 [1.30]	57 [2.24]	63 [2.48]	62 [2.44]	50 [1.97]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	⅛ NPT	33 [1.30]	54 [2.13]	63 [2.48]	62 [2.44]	50 [1.97]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	¼ NPT	49.5 [1.95]	76 [2.99]	101 [3.98]	99 [3.90]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	½ NPT	49.5 [1.95]	82 [3.23]	101 [3.98]	99 [3.90]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	¼ NPT	51.5 [2.03] 1)	78 [3.07] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	½ NPT	51.5 [2.03] 1)	84 [3.31] 1)	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

1) Plus 16 mm [0.630 in] with scale ranges ≥ 0 ... 100 bar [≥ 0 ... 1,500 psi]

NS 63 [2 ½"], centre back mount



NS	Weight	
	Model 232.50	Model 233.50
63 [2 ½"]	approx. 0.16 kg [0.35 lbs]	approx. 0.20 kg [0.44 lbs]

Process connection with thread per EN 837-1

NS	G	Dimensions in mm [in]							
		h ±1	b	D1	D2	i	j	k	SW
63 [2 ½"]	G ¼ B	57 [2.24]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	G ⅛ B	54 [2.13]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	M12 x 1.5	57 [2.24]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]

Process connection with thread per ISO 7

NS	G	Dimensions in mm [in]							
		h ±1	b	D1	D2	i	j	k	SW
63 [2 ½"]	R ¼	57 [2.24]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]

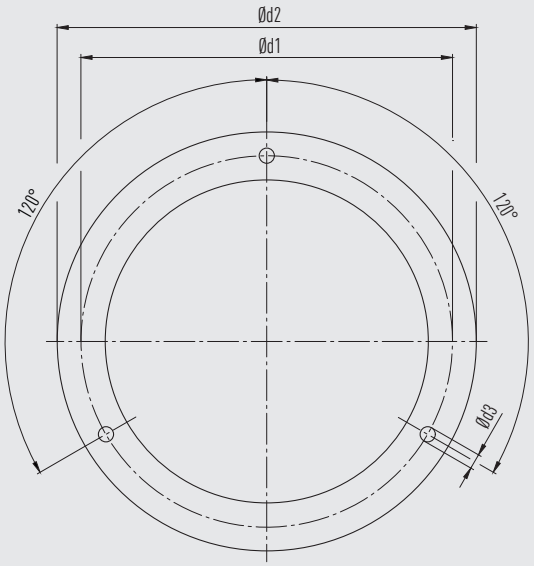
Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]							
		h ±1	b	D1	D2	i	j	k	SW
63 [2 ½"]	¼ NPT	57 [2.24]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	⅛ NPT	54 [2.13]	33 [1.30]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]

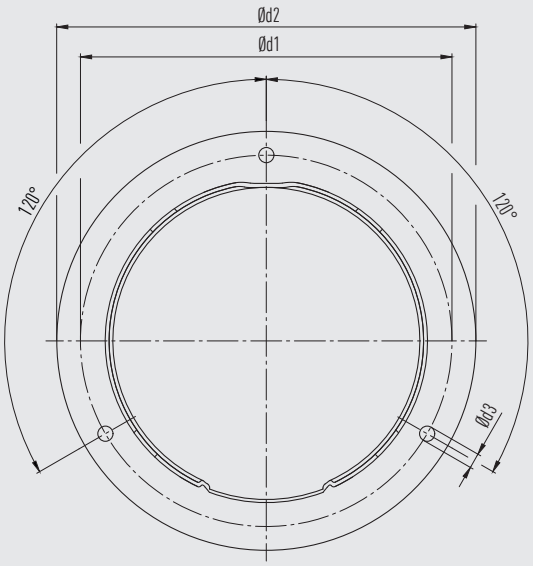
Accessories

Dimensions in mm [in]

Panel mounting flange

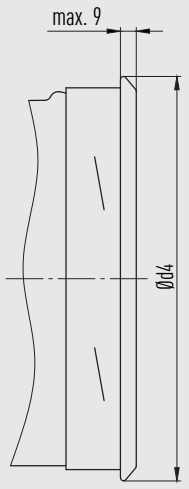


Surface mounting flange



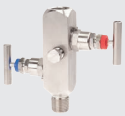
NS	Dimensions in mm [in]			
	Recommended panel cutout	d1	d2	d3
63 [2 ½"]	Ø 67 ±0.3 / Ø 2.6 [Ø 2.64 ±0.01 / Ø 0.10]	75 [2.95]	85 [3.35]	3.6 [0.14]
100 [4"]	Ø 104 ±0.5 / Ø 4.1 [Ø 4.04 ±0.02 / Ø 0.16]	117 [4.60]	132 [5.20]	4.8 [0.19]
160 [6"]	Ø 164 ±0.5 / Ø 6.5 [Ø 6.46 ±0.02 / Ø 0.26]	178 [7.01]	196 [7.72]	5.8 [0.23]

Triangular profile ring



NS	Dimensions in mm [in]	
	Recommended panel cutout	d4
63 [2 ½"]	Ø 64.5 ±0.5 / Ø 2.5 [Ø 2.54 ±0.02 / Ø 0.01]	≤ 69 [2.72]
100 [4"]	Ø 102 ±1.0 / Ø 4.0 [Ø 4.02 ±0.04 / Ø 0.16]	≤ 108 [4.25]
160 [6"]	Ø 162.6 ±1.0 / Ø 6.4 [Ø 6.40 ±0.04 / Ø 0.25]	≤ 168 [6.61]

Accessories and spare parts

Model		Description
	**910.17**	Seals → See data sheet AC 09.08
	**910.15**	Syphons → See data sheet AC 09.06
	**910.13**	Overpressure protector → See data sheet AC 09.04
	**IV10, IV11**	Needle valve and multiport valve → See data sheet AC 09.22
	**IV20, IV21**	Block-and-bleed valve → See data sheet AC 09.19
	**IVM**	Monoflange, process and instrument version → See data sheet AC 09.17
	**BV**	Ball valve, process and instrument version → See data sheet AC 09.28
	**IBF2, IBF3**	Monoblock with flange connection → See data sheet AC 09.25

Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options

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The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.
In case of a different interpretation of the translated and the English data sheet, the English wording shall prevail.

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EU-Konformitätserklärung
EU Declaration of Conformity

Dokument Nr. / ***Document No.*** **11564220** — **Revision** / ***Issue*** **07**

Wir erklären in alleiniger Verantwortung, dass die mit CE gekennzeichneten Produkte
We declare under our sole responsibility that the CE marked products

Typenbezeichnung / ***Type Designation***

23a.50.063 + option ATEX | **23a.50.1*0 + option ATEX**
26a.50.063 + option ATEX | **26a.50.1*0 + option ATEX**
23a.30.063 + option ATEX | **23a.30.1*0 + option ATEX**
26a.30.063 + option ATEX | **26a.30.1*0 + option ATEX**
23a.53.063 + option ATEX | **23a.53.100 + option ATEX**
23a.54.063 + option ATEX | **23a.54.100 + option ATEX**
23a.36.1*0 + option ATEX
PG23LT.063 + option ATEX | **PG23LT.1*0 + option ATEX**
PG23CP.063 + option ATEX | **PG23CP.100 + option ATEX**
PG28.1*0 + option ATEX
PG23HP-S.1*0 + option ATEX | **PG23HP-P.1*0 + option ATEX**

*** Nominal size**
0 = 100mm
6 = 160mm

a Case filling
2 = Without case filling
3 = With case filling

Beschreibung / ***Description***: **Rohrfederdruckmessgerät** / ***Bourdon Tube Pressure Gauge***

gemäß gültigem Datenblatt / *according to the valid data sheet*: PM 02.02, PM 02.04, PM 02.12, PM 02.15, PM 02.22, PM 02.24, PM 02.32, PM 02.28, PM 02.29

mit den nachfolgenden relevanten Harmonisierungsvorschriften der Union übereinstimmen
are in conformity with the following relevant Union harmonisation legislation

Angewandte harmonisierte Normen oder sonstige technische Spezifikationen:
Applied harmonised standards or other technical specifications:

2014/68/EU	Druckgeräterichtlinie (DGRL) (1) *Pressure Equipment Directive (PED)* (1)	
2014/34/EU	Explosionsschutz (ATEX) (2) *Explosion protection (ATEX)* (2)	
Ex	II 2G Ex h IIC T6 … T1 Gb X II 2D Ex h IIIC T85 °C … T450 °C Db X	EN ISO 80079-36 :2016 EN ISO 80079-37 :2016

(1) PS > 200 bar; Modul A, druckhaltendes Ausrüstungsteil
PS > 200 bar; Module A, pressure accessory

(2) Modul A „interne Fertigungskontrolle“. Die Dokumentation ist hinterlegt unter der Nummer 074/24 bei der Notifizierten Stelle der EU, IBExU Institut für Sicherheitstechnik GmbH (EU ID-Nr. 0637).
Module A “Internal Control of Production”. The Documentation is deposited under registration number 074/24 at Notified Body of EU, IBExU Institut für Sicherheitstechnik GmbH (EU ID 0637). .

Unterzeichnet für und im Namen von / *Signed for and on behalf of*

WIKA Alexander Wiegand SE & Co. KG

Klingenberg, 2024-04-24

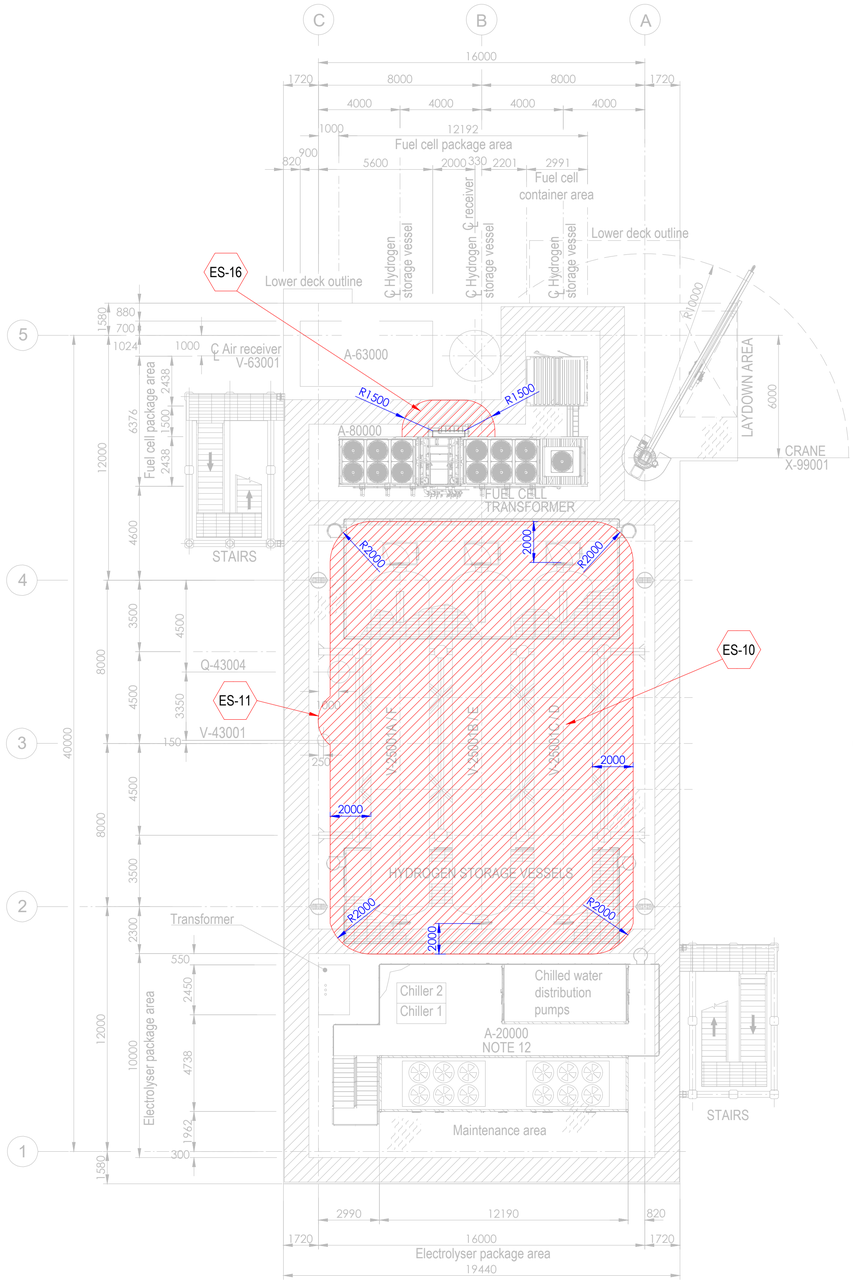
Sascha Schnellbacher, Vice President
CoE Gauges, Sensors & Instruments

Mariusz Lubomski, Director of Quality
CoE Gauges, Sensors & Instruments

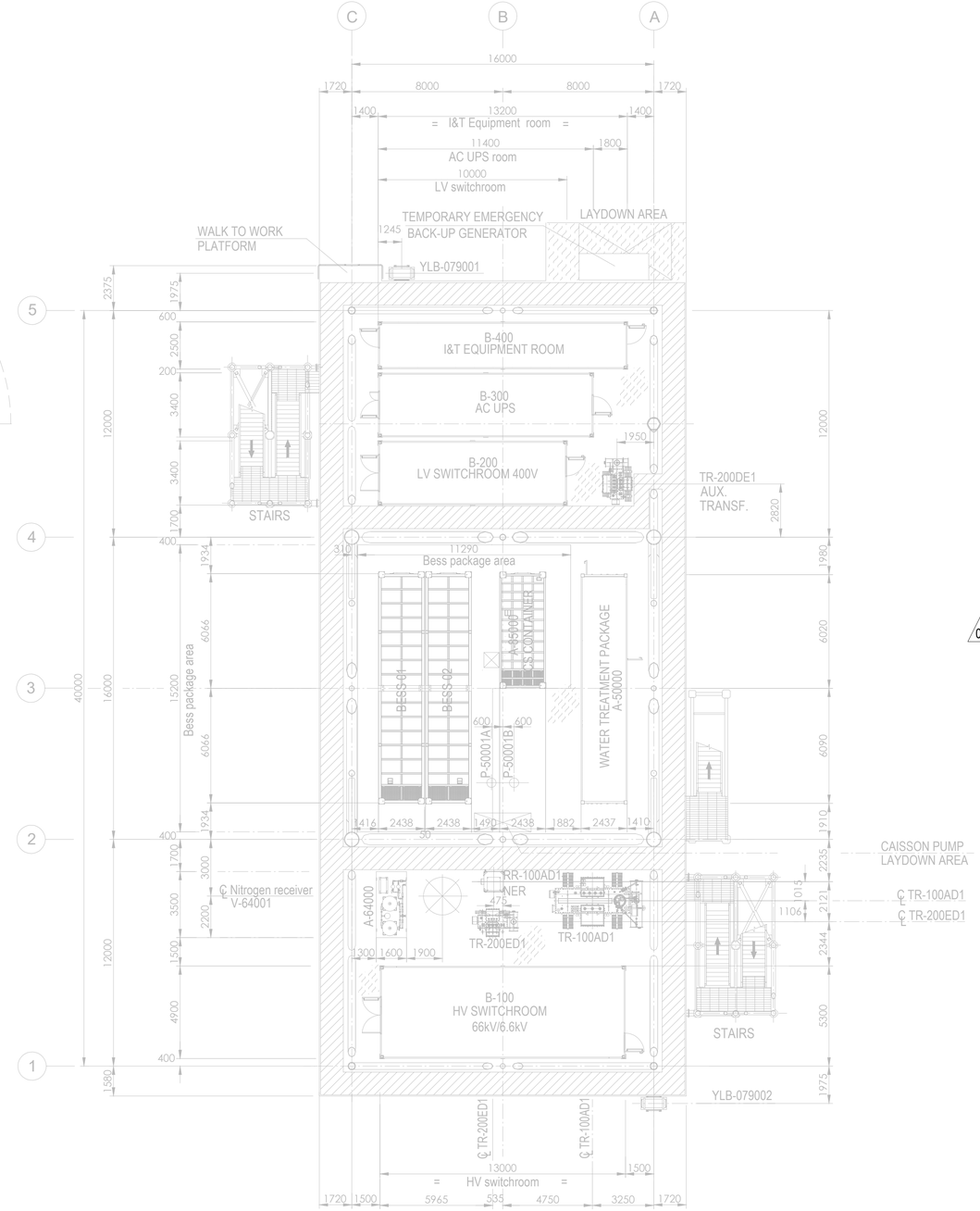
Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



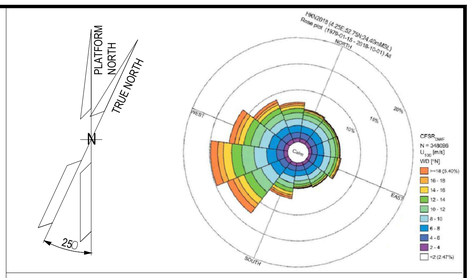
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

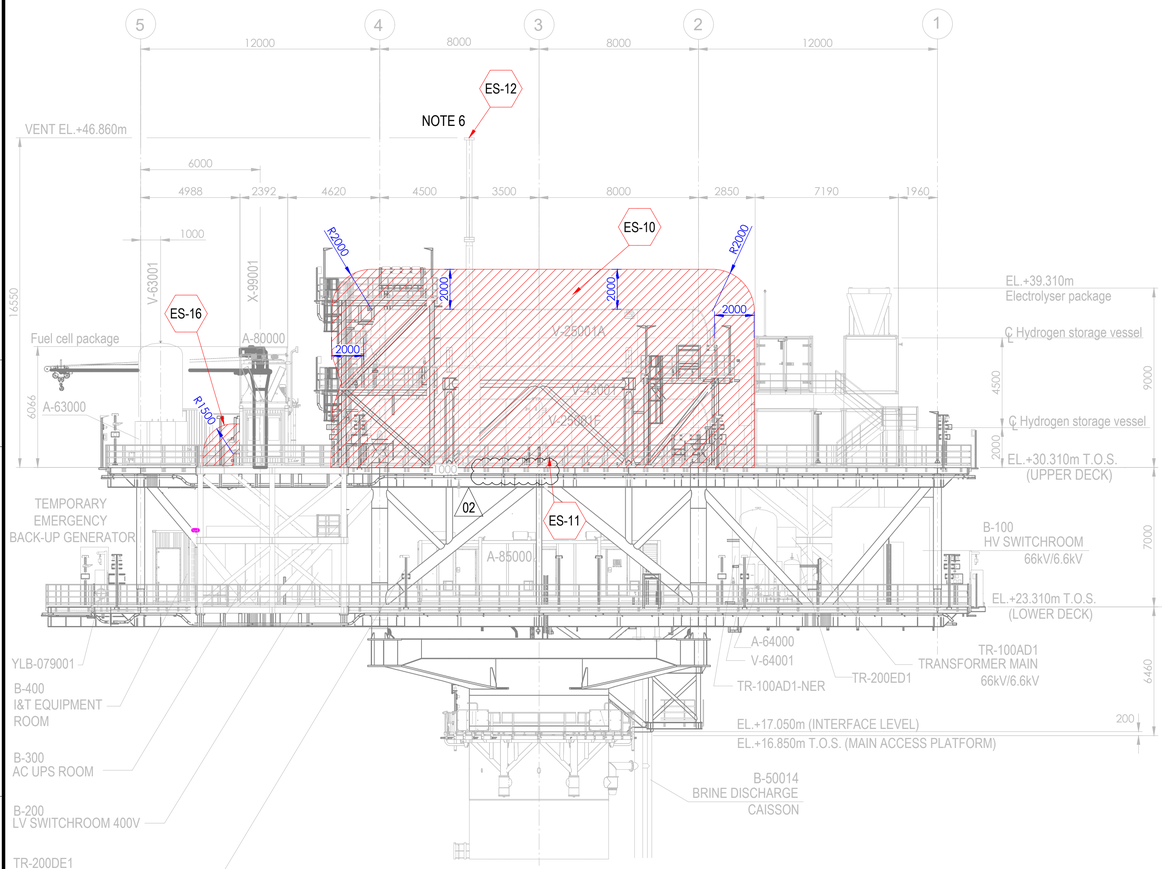
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

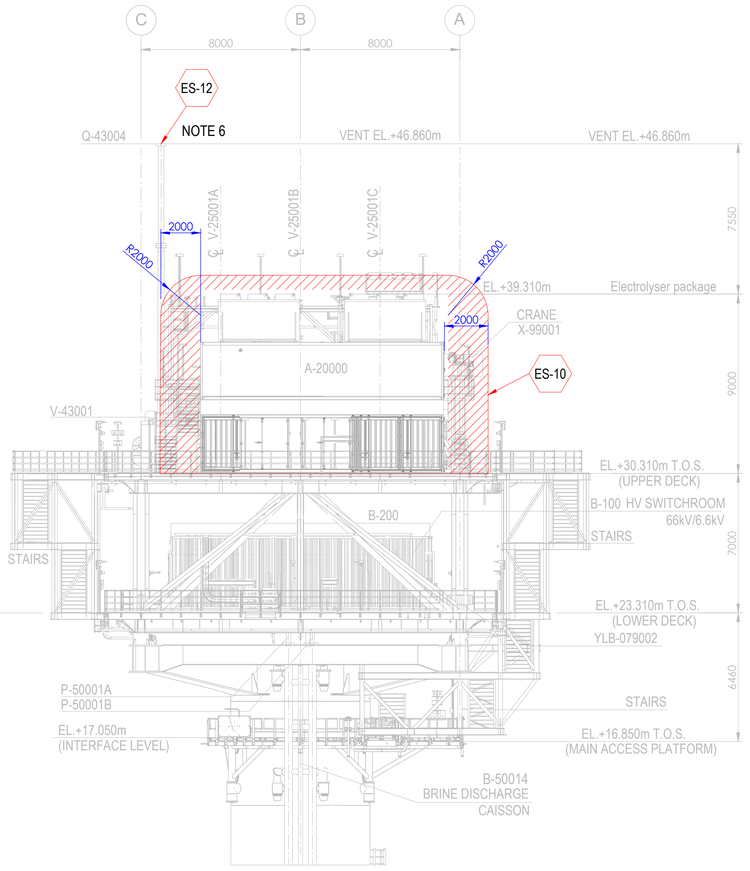
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

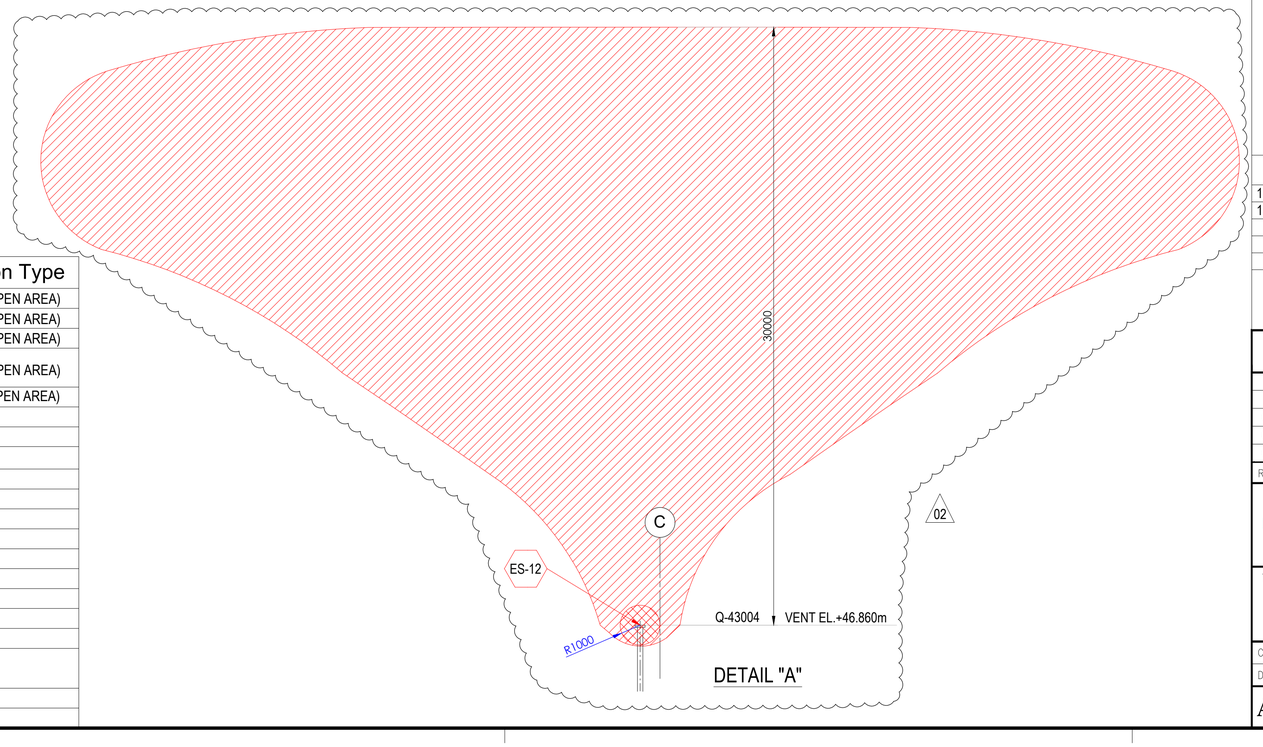


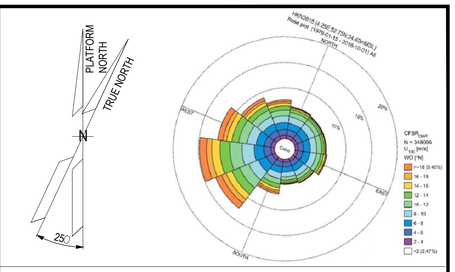
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

ITEM	Tag	64-PSV-001_1	: Safety Valve - Nitrogen to Distribution Header Shut-Down	Dwg	123A90-DDL-PR-PID-80027		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD		
TASK	code	C10004852	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01

Hazardous Area Equipment Detailed Inspection

Schedule Ref. #				**Area Code**					
Area Class Drawing	123A90-DDL-SAF-DL-30022			**Serial No.**		25308829			
Manufacturer	NUOVA GENERAL INSTRUMENTS			**Model**		D10/S			
Cert No.	D.o.C. by Manufacturer			**Equipment Ambient Temp.**		-20 °C to +40 °C			
Area Classification	HAZARDOUS	**Zone**	2	**Gas group**	IIC	**Temp class**	T1		
Equipment Protection Type	Ex h	**EPL**	Gb	**Gas group**	IIC	**Temp class**	T6	**IP Rating**	NA

Detailed Note:

1) Inspection shall only be performed by competent personnel

2) All fields are to be completed. Any non-applicable field shall state “NA”. Comments are required for ‘Failure’ column ONLY.

3) An Inspection Sheet should be completed for EACH individual item of Equipment.

	General Equipment	Detailed	OK/NA/PL	Comments
1	Equipment is appropriate to the EPL / Zone requirements of the area	x	OK	
2	Equipment group is correct	x	OK	
3	Equipment temperature class is correct	x	OK	
4	Degree of IP protection of equipment is appropriate for the level of protection	x	NA	
5	Equipment circuit identification is correct	x	NA	
6	Equipment circuit identification is available	x	NA	
7	Enclosure glass parts and glass-to-metal sealing gaskets and / or compounds are satisfactory	x	NA	
8	There is no damage or unauthorized modifications	x	OK	
9	There is no evidence of unauthorized modifications	x	OK	
10	Bolts, cable entry devices (direct and indirect) & blanking elements are of the correct type, are complete & tight		NA	
	Physical check	x	NA	
11	Threaded covers on enclosures are of the correct type, are tight and secured		NA	
	Physical check	x	NA	
12	Joint surfaces are clean and undamaged and gaskets, if any, are satisfactory and positioned correctly	x	NA	
13	Condition of enclosure gaskets is satisfactory	x	NA	
14	There is no evidence or ingress of water or dust in the enclosure in accordance with the IP rating	x	NA	
15	Electrical connections are tight	x	NA	
16	Bridging links do not reduce creepage / clearance and are allowed	x	NA	
17	Unused terminals are tightened	x	NA	
18	Encapsulated components are undamaged	x	NA	
19	Flameproof components are undamaged	x	NA	
20	Fluorescent lamps are not indicating EOL effects (only for Ex “e” – Ex “n” – Ex “t”)	x	NA	
21	HID lamps are not indicating EOL effects	x	NA	
22	Lamp type, rating, pin configuration and position are correct	x	NA	
23	Breathing and drainage devices are satisfactory	x	NA	
24	Type of cable is appropriate	x	NA	
25	There is no obvious damage to the cables	x	NA	
26	Cable glands are the correct type and installed correctly	x	NA	
27	Sealing of trunking, ducts, pipes and or conduits is satisfactory	x	NA	
28	Stopping boxes and cable boxes are corrected filled	x	NA	

ITEM	Tag	64-PSV-001_1	: Safety Valve - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004852		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

29	Integrity of conduit system and interface with mixed system maintained	x	NA	
30	Earthing connections, including any supplementary earthing bonding connections are satisfactory (for example connections are tight and conductors are of sufficient cross-section		NA	
	Physical check	x	NA	
31	Automated electric protective devices operate within permitted limits	x	NA	
32	Special conditions (if applicable) have been complied with.	x	NA	
33	All cable cores are uniquely labeled	x	NA	
34	Cable cores not in use are correctly terminated	x	NA	
35	Equipment is adequately protected against corrosion, weather, vibration and other adverse factors	x	OK	
36	No undue accumulation of dust and dirt	x	OK	
37	All equipment housings are clean and dry	x	NA	
38	All moving parts are free and have no mechanical damage	x	NA	
	Applicable for Installation of Heating Systems			
39	Temperature sensors function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
40	Safety cut off devices function according to manufacturer's documents (only applicable for Ex-d e Ex-e)	x	NA	
41	The setting of the safety cut off is sealed (only applicable for Ex-d e Ex-e)	x	NA	
42	Reset of a heating system safety cut off possible with tool only(only applicable for Ex-d e Ex-e)	x	NA	
43	Auto-reset is not possible (only applicable for Ex-d e Ex-e)	x	NA	
44	Reset of a safety cut off under fault conditions is prevented (only applicable for Ex-d e Ex-e)	x	NA	
45	Safety cut off independent from control system (only applicable for Ex-d e Ex-e)	x	NA	
46	Level switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
47	Flow switch is installed and correctly set, if required (only applicable for Ex-d e Ex-e)	x	NA	
	Extra Ex d checks			
48	Obstructions adjacent to flame proof flanged joints are in accordance with IEC 60079-14	x	NA	
49	Ex d conduits seals are fitted to all conduits and satisfactorily sealed	x	NA	
50	Cable glands are of the correct type and installed correctly	x	NA	
51	Adaptors, reducers, stop ends, etc. are all certified Ex d	x	NA	
52	Flame path are clean and undamaged	x	NA	
53	Flange gap dimensions are within tolerances	x	NA	
54	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
55	The ventilation airflow is not impeded	x	NA	
56	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
57	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
58	Variable voltage/frequency installation complies with documentation	x	NA	
	Extra Ex e checks			
59	All Equipment is Ex e certified (including components within enclosure)	x	NA	
60	Power conductors are not bunched together causing possible hot spots	x	NA	
61	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are undamaged, motor foundations have no indentations or cracks	x	NA	
62	Insulation resistance (IR) of the motor windings is satisfactory	x	NA	
63	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA	
64	The ventilation airflow is not impeded	x	NA	
65	Motor protection devices operate within the permitted tE or tA time limits.	x	NA	
66	Variable voltage/frequency installation complies with documentation	x	NA	

ITEM	Tag	64-PSV-001_1	: Safety Valve - Nitrogen to Distribution Header Shut-Down			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004852		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	ATEX	Form	CJX01 Hazardous Area Equipment Detailed Inspection

Extra Ex n (nR, nL) checks					
67	All Terminals are Ex n certified (if required on certificate)	x	NA		
68	Hermetically sealed and enclosed break devices are undamaged	x	NA		
69	Restricted breathing properties satisfactory (conduct vacuum test)	x	NA		
70	Test port, if fitted, is functional (type “nR” only)	x	NA		
71	Breathing operation is satisfactory (type “nR” only)	x	NA		
72	Motor fans have sufficient clearance to the enclosure and/or covers, cooling systems are	x	NA		
73	The ventilation airflow is not impeded	x	NA		
74	Insulation resistance (IR) of the motor windings is satisfactory	x	NA		
75	Motor protection devices operate within the permitted tE or tA time limits.	x	NA		
76	Variable voltage/frequency installation complies with documentation	x	NA		
Extra Ex p checks					
77	Pressurization gas is correct type	x	NA		
78	Actual pressure is within maximum and minimum settings for equipment	x	NA		
79	Timers set as per certification documentation	x	NA		
80	Alarms and trip functions operate correctly as per certification documentation	x	NA		
81	Fault loop impedance (TN systems) or earthing resistance (IT systems) is satisfactory	x	NA		
82	Automatic electrical protective devices operate within permitted limits	x	NA		
83	Automatic electrical protective devices are set correctly	x	NA		
84	Protective gas inlet temperature is below maximum specified	x	NA		
85	Ducts, pipes and enclosures are in good condition	x	NA		
86	Protective gas is substantially free from contaminants	x	NA		
87	Protective gas pressure and/or flow is adequate	x	NA		
88	Pressure and/or flow indicators, alarms and interlocks function correctly	x	NA		
89	Conditions of spark and particle barriers of ducts for exhausting the gas in hazardous area are satisfactory	x	NA		
90	Specific conditions of use (if applicable) are complied with		NA		
Extra Ex i (Intrinsically Safe – IS) checks					
91	Equipment has adequate circuit identification for ‘IS’ Installation	x	NA		
92	Cables are installed in accordance with the documentation	x	NA		
93	Segregation is maintained between IS and non-IS Circuits	x	NA		
94	Cable screens are isolated at one end (field side)	x	NA		
95	Cable screens are earthed in accordance with the documentation	x	NA		
96	Safety barrier units, relays and other energy limiting devices are of the approved type, installed in	x	NA		
97	Equipment installed is the one specified in the documentation	x	NA		
98	Ambient temperature range of the apparatus is correct for the installation	x	NA		
99	Service temperature range of the apparatus is correct for the installation	x	NA		
100	Installation is clearly labelled	x	NA		
101	Printed circuit boards are clean and undamaged	x	NA		
102	The maximum voltage Um of the associated apparatus is not exceeded	x	NA		
103	Point-to-point connections are all correct	x	NA		
104	Earth continuity is satisfactory (e.g. connections are tight, conductors are of sufficient cross-section)	x	NA		
105	Earth connections maintain the integrity of the type of protection	x	NA		
106	Intrinsically safe circuit earthing is satisfactory	x	NA		
107	Insulation resistance is satisfactory	x	NA		
108	Short-circuit protection of the power supply is in accordance with the documentation	x	NA		

	BARRIER:	**Manufacturer:**	NA	**Model:**	NA		
		Authority:	NA	**Cert No:**	NA	**Type:**	NA

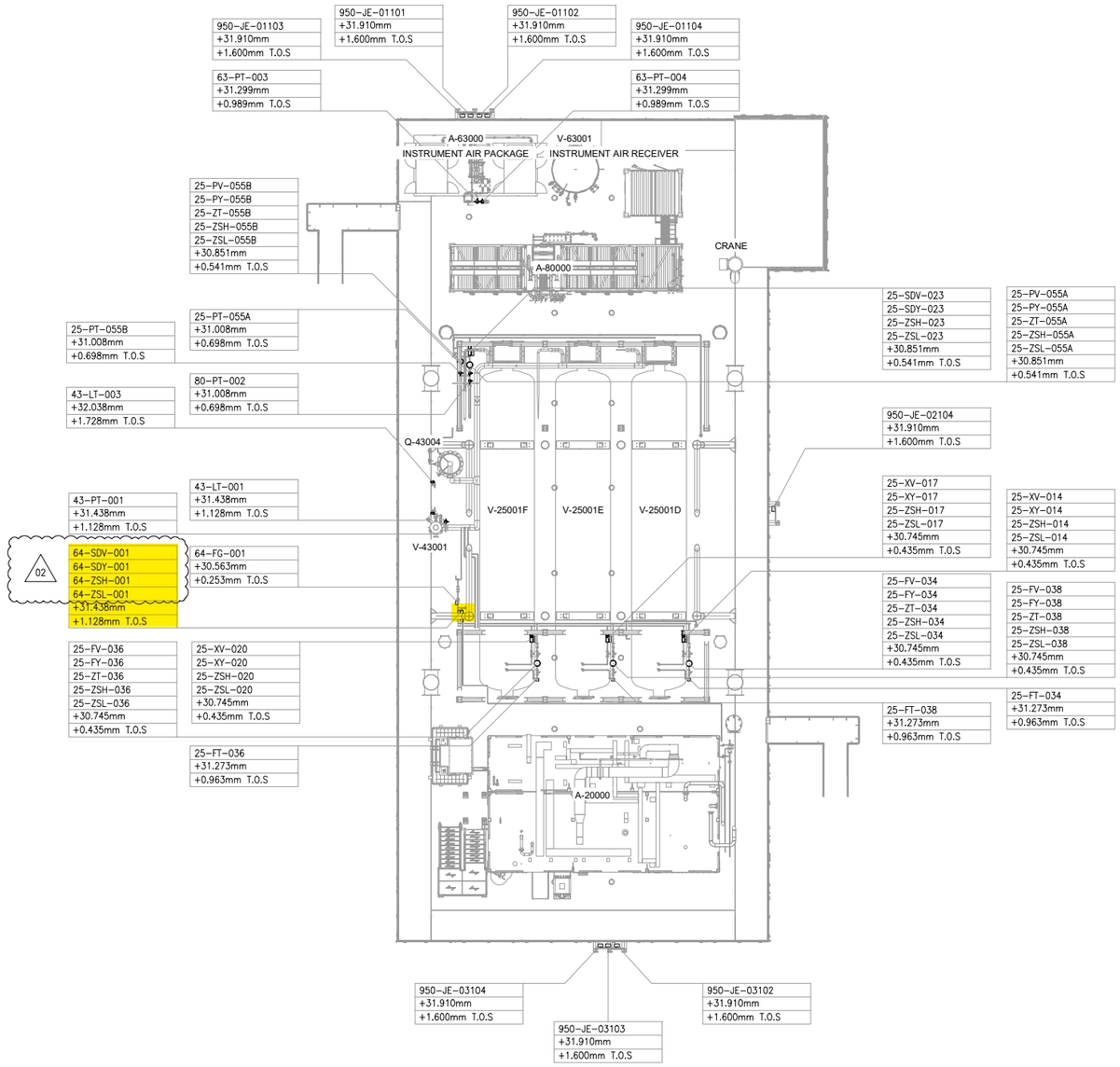
Remarks: Initial inspection should be detailed and carried out before equipment is brought into service as per IEC 60079-17

Please mark only one box as appropriate	
●	**Passed - Complete**
	Failed

Page 3/3	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Luca Mussi	
Date	2025-01-31	2025-02-03	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:39:43.691Z	PROVERLIS Digitaly signed by Luca Mussi 2025-02-03T12:44:35.588Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

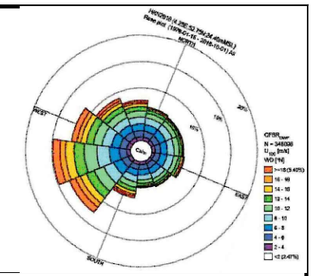


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-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 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

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 — 63 TP 040 — 2"

V-63001
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019

03 — 63 TP 041 — 2"x1.1/2"

LO BLPH-MV-149

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

63 PI 004 LL — I ESD — 63 PT 004

63 PI 003 L — 63 PT 003

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 — I

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

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

64 PT 031A — 64 PT 031B — 64 PT 002

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

INSTR. PIPING — 64 PV 031A — 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

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

03 — 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

3/4" LC — BLPH-MV-275 NOTE 16

64 TP 044 — 1"-N-262-01CS-N

64 PV 031A — FL-DC TYP.6 1" — N-158

64 PV 031B — FL-DC TYP.6 1" — N-100

1"-N-100-01CS-N

64 SDV 001 — IA — 64 SDV 001 — NOTE 13 — NC-FC TYP.2

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

64 XA 003 — FAULT PACKAGE

03 — 64 TP 046

V-64001
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

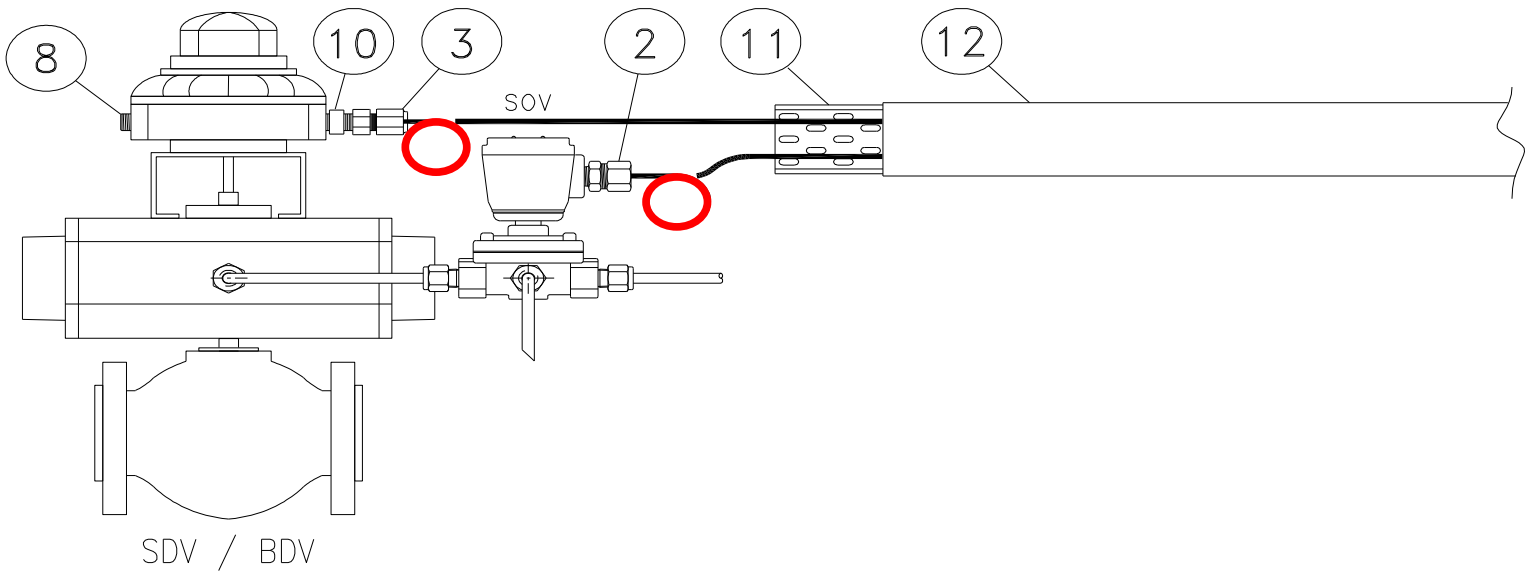
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

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

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Electrical Hook-Ups	Sh. 16 of 37 Date: 27/09/2024 Rev. 02

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



SDV / BDV

INSTRUMENT TAG	
1	25-BDV-005
2	25-BDV-007
3	25-BDV-010
4	25-BDV-013
5	25-BDV-016
6	25-BDV-019
7	25-BDV-022
8	25-SDV-001
9	25-SDV-023
10	64-SDV-001
11	
12	
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NOTE:

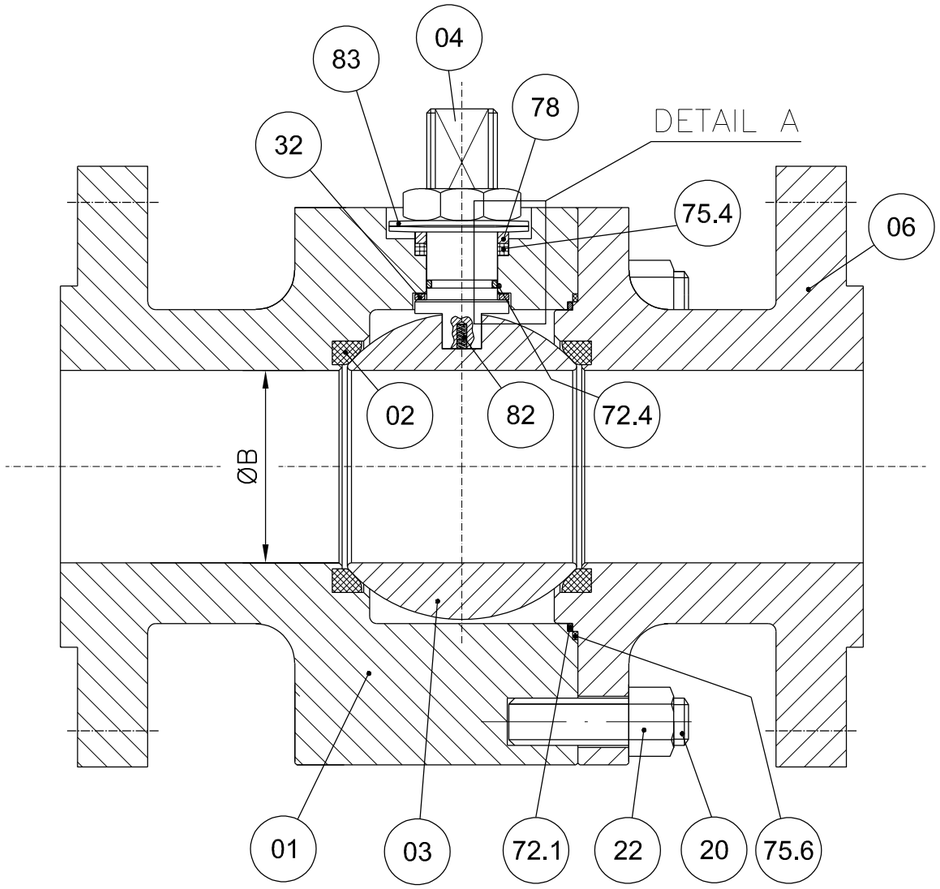
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

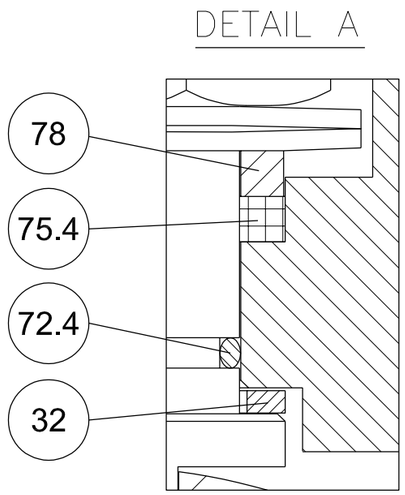
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

ROSETTI MARINO SpA

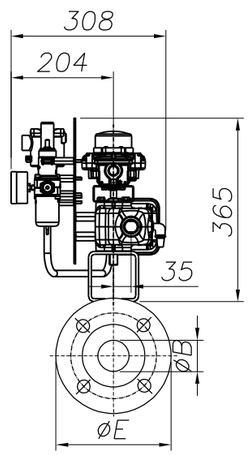
POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
12		Cover for cable tray, FRP, Grey Color	50 W x 10 H x 5 THK	3 mt
11		Perforated cable tray, FRP, Grey Color	50 W x 50 H x 5 THK	3 mt
10		Nickel Plated Brass Adaptor Ex-d/e IIC (or IIB + H2) T1	M20 Male x M25 Female	1
8		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1
3		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M25	1
2		Nickel Plated Brass Plug Ex-d/e IIC (or IIB + H2) T1	M20	1

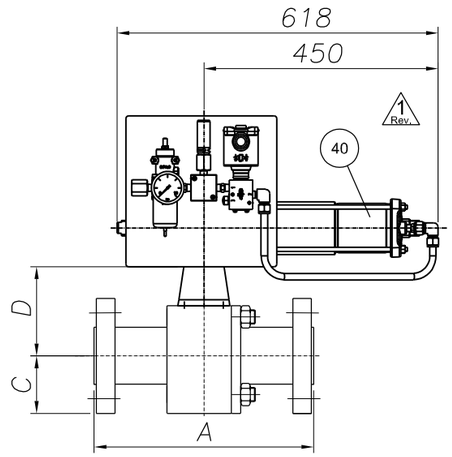
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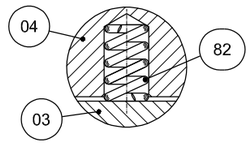


POS.	PART. NAME	MATERIAL
01	BODY	A182 F316/316L
02	SEAT	RPTFE
03	BALL	A182 F316/316L
04	STEM	API 6A CRA UNS N07718
06	CLOSURE	A182 F316/316L
20	STUD	A193 B8M
22	NUT	A194 Gr.8M
32	THRUST BEARING	RPTFE
40	PNEUMATIC ACTUATOR	MFR. STD.
72.1	FLANGE O-RING	VITON GLT/AED
72.4	STEM O-RING	VITON GLT/AED
75.4	STEM GASKET	GRAPHITE
75.6	FLANGE GASKET	GRAPHITE
78	PACKING RING	A479 Tp.316
82	ANTISTATIC DEVICE	INCONEL X750
83	BELLEVILLE WASHER	AISI 301





ANTISTATIC DEVICE



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	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
08	80	BS03C01RFH	25-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
10	100	BS03C01RFH	64-SDV-001	1	1"	300	RF	165	25	62	92	124	7	34	41
11	110	BS03C01RFH	25-XV-004	1	1"	300	RF	165	25	62	92	124	7	34	41
12	120	BS03C01RFH	25-XV-006	1	1"	300	RF	165	25	62	92	124	7	34	41
13	130	BS03C01RFH	25-XV-008	1	1"	300	RF	165	25	62	92	124	7	34	41
14	140	BS03C01RFH	25-XV-009	1	1"	300	RF	165	25	62	92	124	7	34	41
15	150	BS03C01RFH	25-XV-011	1	1"	300	RF	165	25	62	92	124	7	34	41
16	160	BS03C01RFH	25-XV-012	1	1"	300	RF	165	25	62	92	124	2 7	34	2 41

(*): To Be Confirmed

POS:	ITEM:	DATA SHEET:	TAG:	Q.TY:	SIZE:	CLASS:	ENDS:	A	ØB	C	D(*)	ØE	Vlv. WT. (kg):	Act. WT. (kg):	Tot. WT. (kg):
17	170	BS03C01RFH	25-XV-014	1	1"	300	RF	165	25	62	92	124	7	34	41
18	180	BS03C01RFH	25-XV-015	1	1"	300	RF	165	25	62	92	124	7	34	41
19	190	BS03C01RFH	25-XV-017	1	1"	300	RF	165	25	62	92	124	7	34	41
20	200	BS03C01RFH	25-XV-018	1	1"	300	RF	165	25	62	92	124	7	34	41
21	210	BS03C01RFH	25-XV-020	1	1"	300	RF	165	25	62	92	124	7	34	41
22	220	BS03C01RFH	25-XV-021	1	1"	300	RF	165	25	62	92	124	7	34	41
23	230	BS03C01RFH	25-XV-024	1	1"	300	RF	165	25	62	92	124	7	34	41
28	280	BS01C01RFH	80-XV-001	1	1"	150	RF	127	25	54	95	108	6	34	40

CUSTOMER :	ROSETTI MARINO S.p.A.
P.O. N. :	1724000204 123A90A/REV.1
JOB N. :	240062

Rev.	DESCRIPTION	DRAWN	DATE	CHK'D	DATE	APPV'D	DATE
3							
2	ISSUED FOR APPROVAL	S.Madahar	22/04/2024	D.Barcella	22/04/2024	L.Mora	22/04/2024
1	ISSUED FOR APPROVAL	S.Madahar	15/04/2024	D.Barcella	15/04/2024	L.Mora	15/04/2024
0	FIRST ISSUE	S.Madahar	26/02/2024	D.Barcella	26/02/2024	L.Mora	26/02/2024

DRAWING NOT IN SCALE

Fluitek Valves

DESCRIPTION: GENERAL ASSEMBLY DRAWING

VALVE TYPE: SPLIT BODY FLOATING BALL VALVE

DRAWN: S.Madahar	DATE: 26/02/2024	
CHK'D: D.Barcella	DATE: 26/02/2024	
APPV'D: L.Mora	DATE: 26/02/2024	
SIZE: A3	SCALE: N.A.	ALL RIGHTS OF THIS DRAWING ARE RESERVED.

DRAWING NAME: D240062-08 | Rev.: 2

GENERAL	1	Tag Number	Location			64-SDV-001	64
	2	Service				NITROGEN TO H2 STORAGE VESSELS INLET	
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80027	Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-N-128-03HSS-N	
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm	1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L	NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				NITROGEN GAS	
	8	Fluid State	Phase			GAS	GAS
	9	Operating Pressure Norm/Min/Max	[barg]			6 -	-
	10	Design Pressure	Full Vacuum	[barg]		10	
	11	Operating Temperature Norm/Min/Max	[°C]			AMB -	-
	12	Design Temperature	Minimum	Maxi	[°C]	-46	80
	13	Max. Diff. Pressure for Actuator Size	[bar]			10	
	14						
	15						
	16	Speed of	Design			Close : (12)	Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum	Open : -
	18						
	19						
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFHS)	
	21	Body Size	Body Form			1"	FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L	(*)
	23	Connections	Rating			FLANGED ASME B16.5	#300
	24	Flange Finish	Gasket Material			RF	Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)	II 2 G Ex h IIC T5 Gb
	26	Bolting				A193 B8M / A194 Gr. 8M	
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718 / RPTFE
	28	Leakage Class				(1, 3) TSO	
	29	Fire Safe				(2)	
ACTUATOR	30	Manufacturer	Type			Rotork	Spring Return
	31	Model No.	Size			CP/S	035-080A/AA
	32	Actuator Orientation	Actuator Form			Horizontal	Cylinder
	33	Ingress Protection	Certification			IP-66	(9)
	34	Air Supply	Min	Max	Design	4 barg / 10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE	CLOSE
	36	Fireproofing				NOT APPLICABLE	
	37	Solenoid Valve				64-SDY-001 (9, 14, 15, 16) - Bifold FP06P	
	38	Limit Switch Closed	Limit Switch Open			64-ZSL-001 (9, 17) - Soldo SS	64-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED	
	40	Air Set	Handwheel			(*)	NOT REQUIRED
	41	Mounting Position				HORIZONTAL	
	42	Partial Stroke Test Facility				NOT REQUIRED	
	43	Control Type				-	
	44	Electrical Connection	Electrical Class			No. (*) / M20	H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	- -
	46	No of Strokes Per Capacity				-	
	47	Safety Valve	Model			-	-
	48	Check Valve	Mounting			-	-
PURCHASE	49	Manufacturer				FLUITEK	
	50	Model				FB3	
	51	Purchase Order Number				1724000204	

NOTE
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 4.7 barg.

No.	Date	By	Chkd	Appr	Description
03	06/12/24				
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 15 of 33

Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

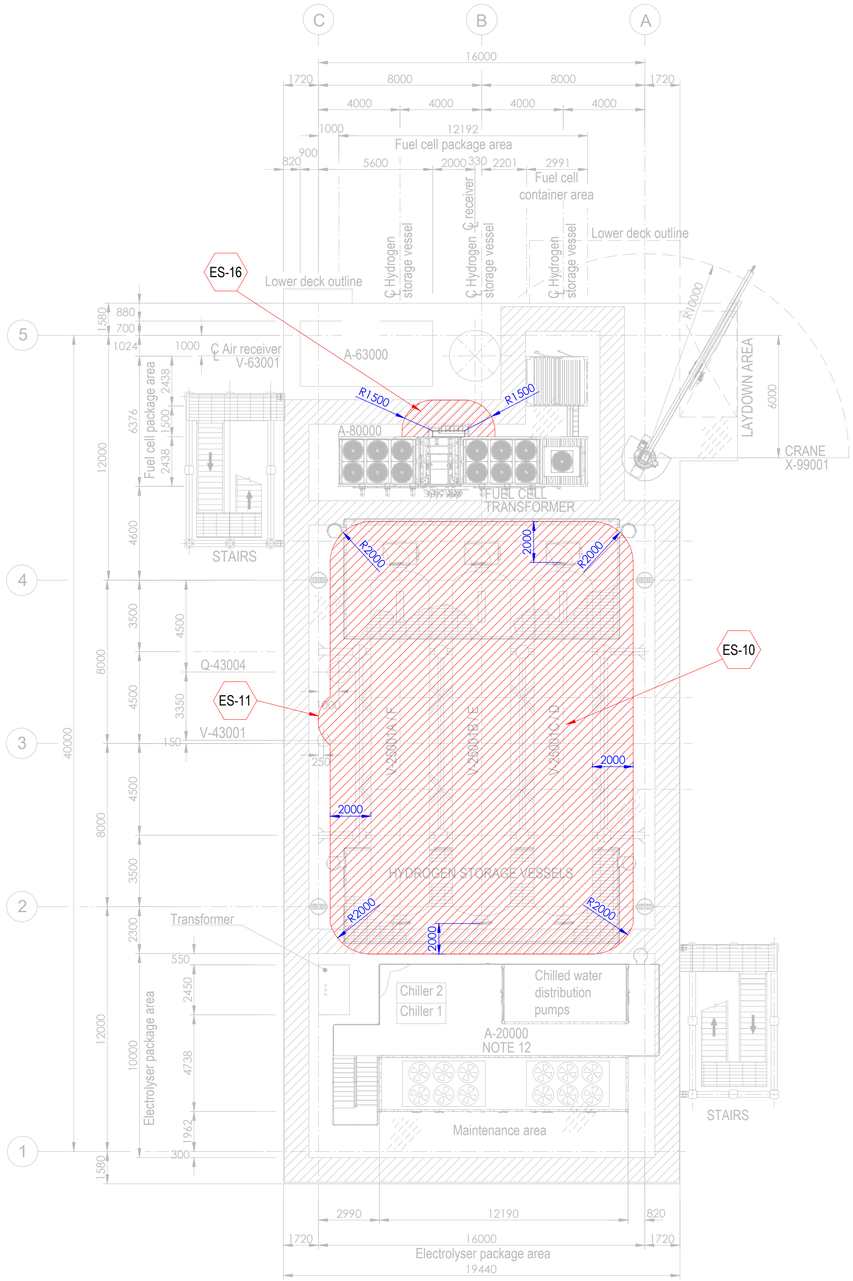
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47	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
48	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323298	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
49	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
50	IFR	25-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
51	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
52	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620080001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
53	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771400801	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
54	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
55	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323312	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
56	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
57	IFR	25-SDV-023	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
58	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
59	IFR		floating ball valve	N.A	FLUITEK	1-1/2" 300#	2400620090001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
60	IFR		ACTUATOR	N.A	RFS	CP/S-035-100A/BA	AF771400901	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
61	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
62	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323300	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
63	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
64	IFR	64-SDV-001	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
65	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
66	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620100001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
67	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401001	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
68	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
69	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323293	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
70	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
71	IFR	25-XV-004	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
72	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
73	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620110001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
74	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401101	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
75	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
76	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323311	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
77	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
78	IFR	25-XV-006	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
79	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
80	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620120001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
81	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401201	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
82	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
83	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323287	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
84	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
85	IFR	25-XV-008	LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
86	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
87	IFR		floating ball valve	N.A	FLUITEK	1" 300#	2400620130001	Ex db IIC T6 / Ex tb IIIC T85°C Db	TF ATEX/2020	557/Ex-Ab 3221/20	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE
88	IFR		ACTUATOR	N.A	RFS	CP/S-035-080A/AA	AF771401301	II 2 G Ex h IIC T5 Gb X II 2 D Ex h IIIC T5 Db X	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR ACTUATOR	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
89	IFR		FILTER REGULATOR	N.A	BIFOLD	F.R. BIFOLD 1/4" SH06-FR-SR-MD-10-X4	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR F.R.	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
90	IFR		RELIEF	N.A	NGI	D10/S INOX+VITON T.4,7 bar	024323294	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR RELIEF	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
91	IFR		PRESSURE GAUGE	N.A	WIKA	233.50.63	NOT AVAILABLE	NO	123A90-DDL-IN-DS-40030	NOT EXISTING A ATEX CERTIFICATE FOR PRESSURE GAUGE	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	YES	NONE
92	IFR		LIMIT SWITCHES BOX	N.A	SOLDO	FP06P-S1-04-32-NU-V-77A-24D-57	NOT REQUIRED IN PROJECT	Ex II 2GD Ex d IIC T4/T6	123A90-DDL-IN-DS-40030	CML 19ATEX1359X	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	YES
93	IFR		SOLENOID VALVE	N.A	BIFOLD	SQN120E-20X23L7	NOT REQUIRED IN PROJECT	Ex db IIC T6 / Ex tb IIIC T85°C Db	123A90-DDL-IN-DS-40030	Baseefa10ATEX0026	Zone 2, Gas Group IIC	N.A	1724000204	FLUITEK VALVES Srl	N.A	N.A	NO	NONE

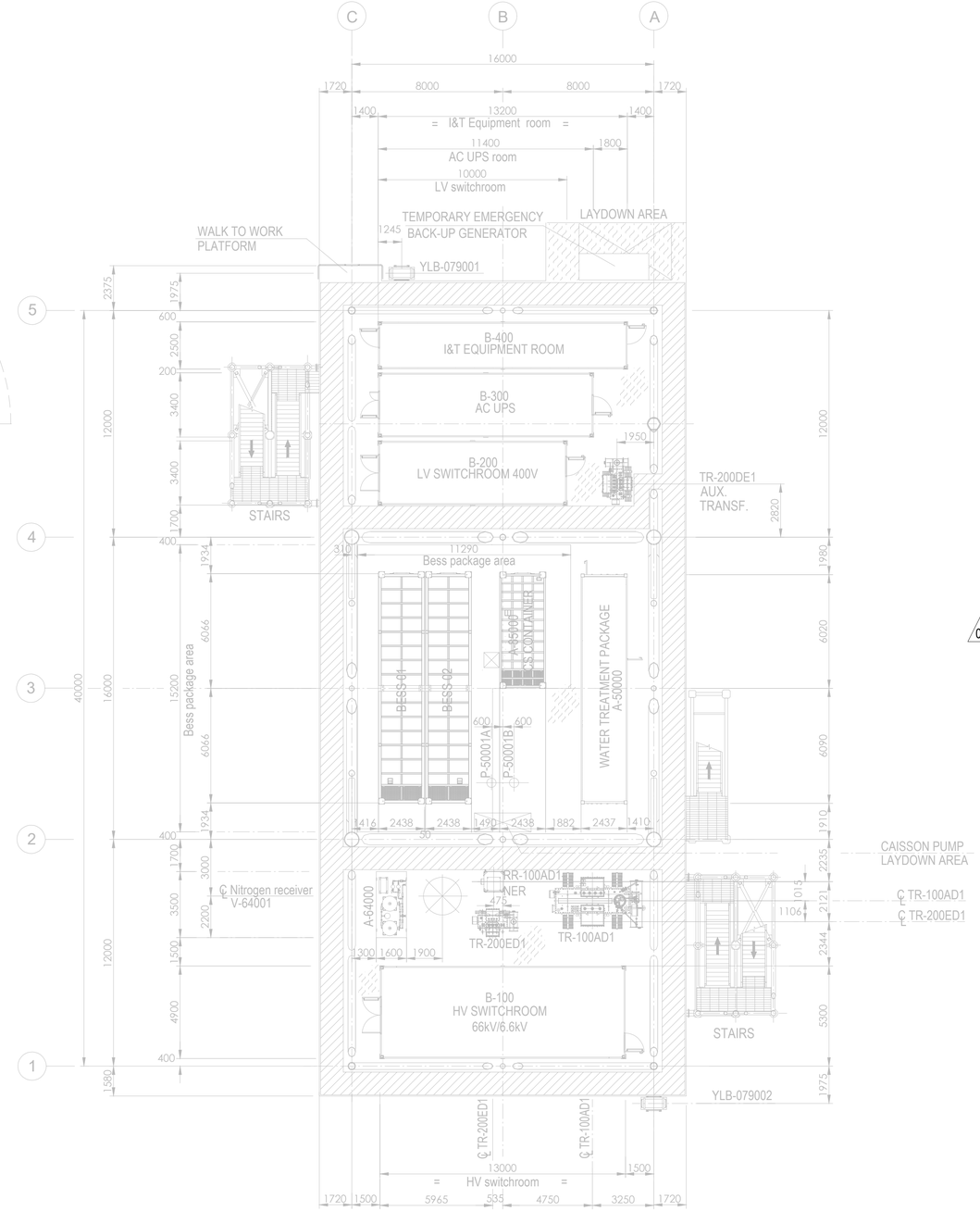
Tag Number	Tag Description	Location	P.O.	Vendor	Manufacturer	Serial Number	Model Type Catalogue Number	Installation Zone	ATEX Certificate Number	Reference Document	ATEX Certification Marking	Notes / Comments	Skid / Package	Electrical Equip.	Barrier Calculation Ref.	Special Conditions of Safe Use Applicable	3D Location
50-XY-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-XY-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSH-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-001	Sea water from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-002	Sea water recirculation from pump P-50001A	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-003	Sea water from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-004	Sea water recirculation from pump P-50001B	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
50-ZSL-005	Drain Water discharge to Caisson	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	
55-LIT-001	Vessel T-55001 level	LOWER DECK	1724000979	Terranova Srl	Tokio Heiki Inc.	105429 (VE241368)	KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6		FM13ATEX0069X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	-	N/A	False	N/A	True	
63-PT-003	Instrument air to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240652	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
63-PT-004	Instrument air to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240653	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-FG-001	Nitrogen to hydrogen vent header	LOWER DECK	1724000791	Brooks Instrument	Brooks Instrument	3809G-211096	3809GCC08BFBC9A0V0AC	ATEX -ZONE 1/ZONE 2 - NO ELEC	MBID 022 Rev. A	1724000791-IN-DA-00003	II 2 G Ex h IIC T6..T3 Gb	N/A	N/A	False	N/A	True	
64-PG-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PG-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	MBS6P4S2PN07-ATEX	FR04	ATEX ZONE 2	MBS6P4S2PN07-ATEX	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-PSV-001	Nitrogen to distribution header vent system	LOWER DECK	1724000518	Technical Srl	Technical Srl	291505	320-D10-L2	Zone 2	Declaration of Conformity by Technical Srl	1724000518-IN-DA-00003 / 1724000518-IN-DS-00004	II 2G Ex h IIC T6..T1 Gb	-	N/A	False	N/A	False	
64-PSV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03804	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PSV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	COITECH	24-03805	SLK	ATEX ZONE 2	SLKL-08HA74-015	1724000740-IN-DA-00004	CE Ex - II 2 GD Ex h X	N/A	N/A	False	N/A	True	
64-PT-002	Nitrogen to distribution header low pressure	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240656	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240654	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PT-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000979	Terranova Srl	Terranova Srl	SE240655	SST76-H-7-K-2-0-2-1-4 + MAN2-R6		TI17ATEX304X	1724000979-IN-DA-00003 / 1724000979-IN-DS-00004	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	-	N/A	False	N/A	True	
64-PV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	ATEX ZONE 2	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	ATEX ZONE 2	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400597	CV-8407	II 2G	ATEX - SN 2400597	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-PY-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	AST SpA	2400598	CV-8407	II 2G	ATEX - SN 2400598	1724000740-IN-DA-00004	CE Ex - II 2 G Ex h IIC T6..T1 Gb X	N/A	N/A	False	N/A	True	
64-SDV-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N/A	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	False	N/A	True	HAZARDOUS-AREA_6
64-SDY-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-SV-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-SV-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	SITECNA	FR08411S00SSNB2 TRACE 24/1638	FR04	ATEX ZONE 2	FR08411S00SSNB2 TRACE 24/1638	1724000740-IN-DA-00004	CE Ex - 2G Ex h IIC T6/T5 Gb X	N/A	N/A	False	N/A	True	
64-ZSH-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSH-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSH-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-001	Nitrogen to distribution header shut-down	LOWER DECK	1724000204	RFS	SOLDO	N.A.	FP06P-S1-04-32-NU-V-77A-24D-57	Zone 2, Gas Group IIC	CML 19ATEX1359X	1724000204-IN-DG-00006	Ex II 2GD Ex d IIC T4/T6	N/A	N/A	True	N/A	True	HAZARDOUS-AREA_6
64-ZSL-031A	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
64-ZSL-031B	Nitrogen pressure control to distribution header	LOWER DECK	1724000740	AST SpA	EISENBAU	Batch:44219	GUARDABOX - GD SERIES GDSN0LIS2MS290	ATEX ZONE 2	FIDI 20 ATEX 0039X	1724000740-IN-DA-00004	CE Ex - II 2G Ex db IIC T6..T4	N/A	N/A	True	N/A	True	
77-HS-001A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11391	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-001B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11392	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11393	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-002B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11394	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11395	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-003B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11396	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004A	Proximity Switch	LOWER DECK	1724000821	Fores	EATON	24-11397	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-004B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11398	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11399	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-005B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11400	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11401	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-006B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11402	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11403	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-007B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11404	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008A	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11405	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	
77-HS-008B	Hand Switch	LOWER DECK	1724000821	Fores	EATON	24-11406	GHG 432	II 2 G	BVS 22 ATEX E032 X	1724000821-COM-LIS-00011	II 2 G Ex ed ib m IIC T6	-	N/A	True	N/A	True	

DRAWING NO. 123A90-DDL-SAF-DL-30022

REV. 02



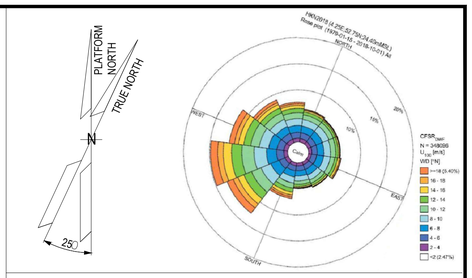
PLAN ON UPPER DECK
EL+30.310 T.O.S.



PLAN ON LOWER DECK
EL+23.310 T.O.S.

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	A-50000	WATER TREATMENT PACKAGE		

Tag No.	Equipment Tag	Description	Material	Ventilation Type
12	A-64000	NITROGEN SYSTEM		
13	B-100	HV SWITCHROOM 66kV/6.6kV		
14	B-200	LV SWITCHROOM 400V		
15	B-300	AC UPS EQUIPMENT ROOM		
16	B-400	I&T EQUIPMENT ROOM		
17	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
18	RR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
19	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
20	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
21	X-99001	CRANE		
22	V-64001	NITROGEN RECEIVER		



NOTES

1. ALL DIMENSIONS IN mm U.N.O.
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17].
6. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
7. IDENTIFIED EMISSION SOURCES DETAIL.

02
8. FOR DETAILS RELATED TO ELECTROLYSER PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING 224J10-DDL-PP-DA-00001 REV 0.
9. FOR DETAILS RELATED TO FUELL CELL PACKAGE INTERNAL ENCLOSURES REFER TO DRAWING K559-2254-CWIWP4202202-B01-001 REV 009".
10. THE N.6 HYDROGEN STORAGE VESSELS ARE NOT CLASSIFIED INTERNALLY SINCE THEY ARE DESIGNED TO CONTAIN HYDROGEN OR NITROGEN FOR THE ENTIRE DURATION OF THE 2 YEARS OF OPERATION.

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK
123A90-DDL-PP-DS-70072	PLOT PLAN - ELEVATION LOOKING NORTH & EAST

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/25	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
LOWER & UPPER DECK

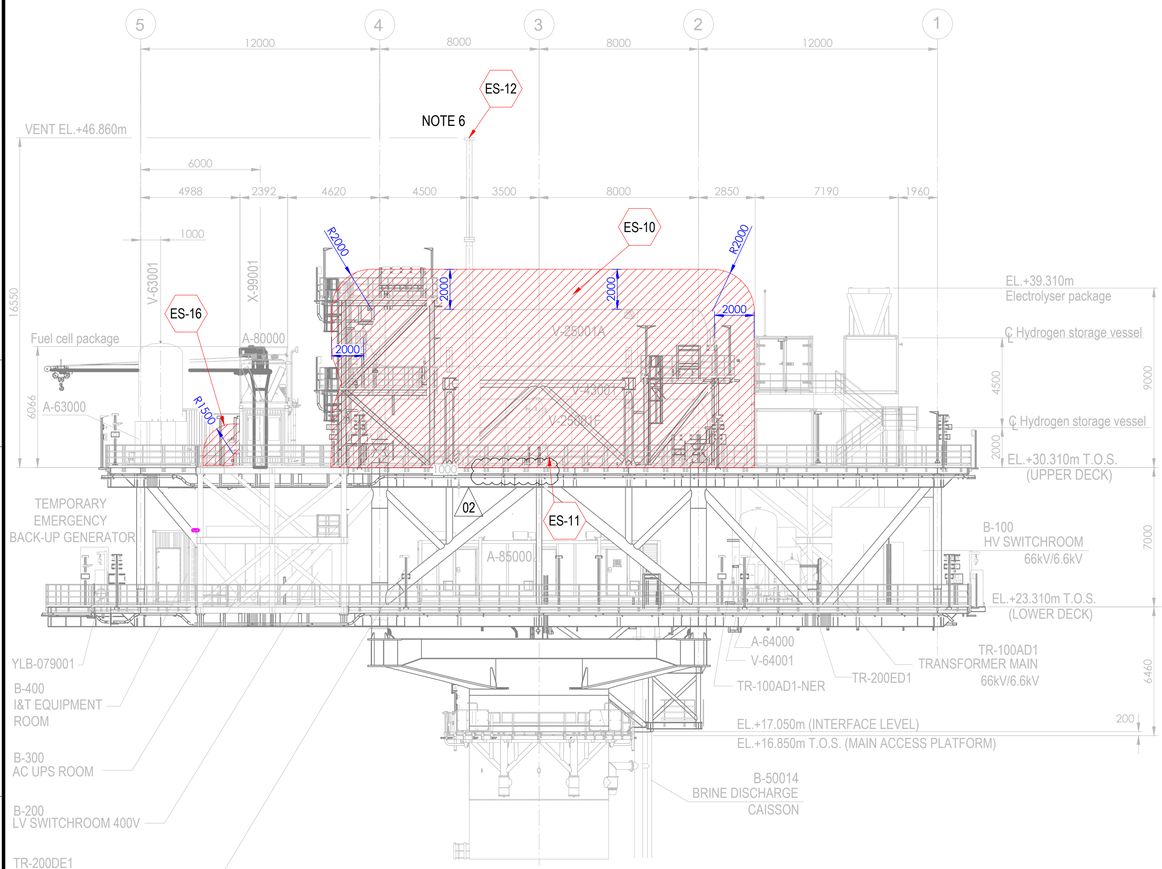
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

	DRAWING NO.	SHEET	REV.
A1	123A90-DDL-SAF-DL-30022	001	02

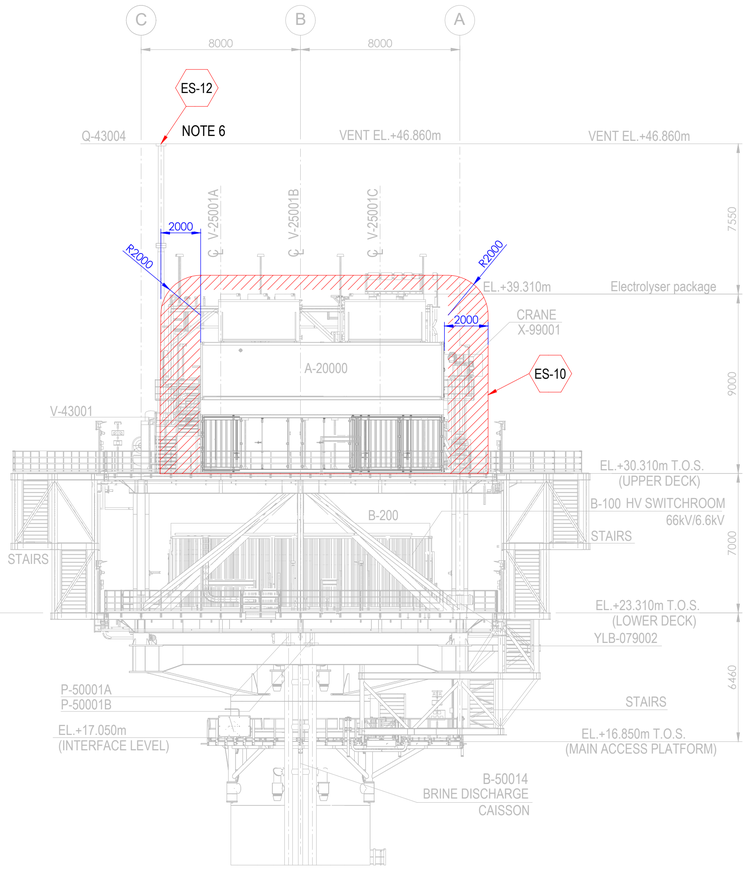
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DRAWING NO. 123A90-DDL-SAF-DL-30024

REV. 02

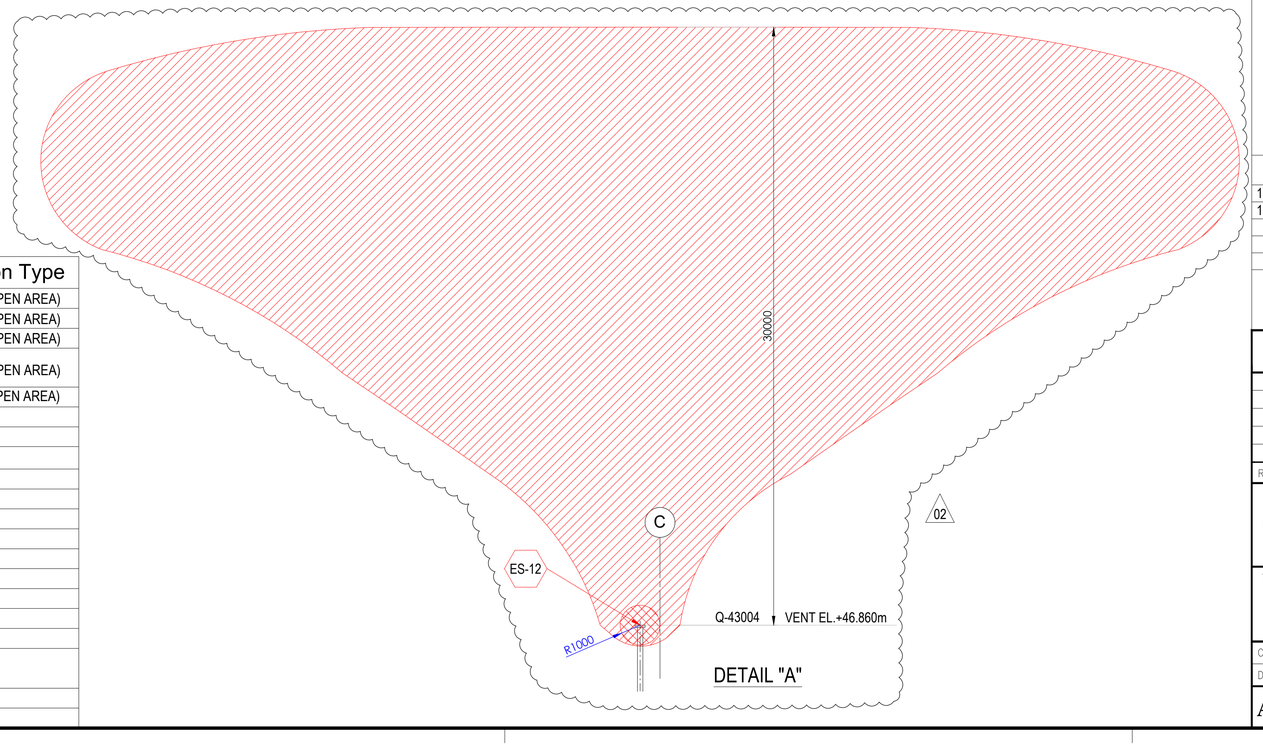


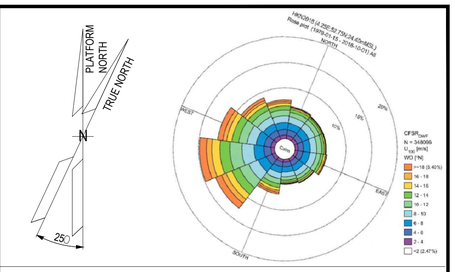
ELEVATION LOOKING EAST



ELEVATION LOOKING NORTH

Tag No.	Equipment Tag	Description	Material	Ventilation Type
01	P-50001 A/B	SEA WATER LIFT PUMPS	SEA WATER	NATURAL (OPEN AREA)
02	Q-43004	HYDROGEN VENT	HYDROGEN	NATURAL (OPEN AREA)
03	V-43001	HYDROGEN VENT KO DRUM	HYDROGEN	NATURAL (OPEN AREA)
04	V-25001 (A/B/C/D/E/F)	HYDROGEN STORAGE VESSELS	HYDROGEN	NATURAL (OPEN AREA)
05	V-63001	INSTRUMENT AIR RECEIVER	INSTRUMENT AIR	NATURAL (OPEN AREA)
06	A-20000	ELECTROLYSER PACKAGE		
07	A-63000	INSTRUMENT AIR PACKAGE		
08	A-80000	FUEL CELL PACKAGE		
09	A-85000	BESS PACKAGE		
10	YLB-079001/2	LIFE RAFTS		
11	B-100	HV SWITCHROOM 66kV/6.6kV		
12	B-200	LV SWITCHROOM 400V		
13	B-300	AC UPS EQUIPMENT ROOM		
14	B-400	I&T EQUIPMENT ROOM		
15	TR-100AD1	TRANSFORMER MAIN 66kV/6.6kV		
16	TR-100AD1-NER	NEUTRAL EARTHING RESISTOR		
17	TR-200DE1	TRANSFORMER AUX. 6.6kV/0.4kV		
18	TR-200ED1	SOLAR TRANSFORMER PV FARM EQUIPMENT		
19	X-99001	CRANE		
20	V-64001	NITROGEN RECEIVER		





NOTES

1. ALL DIMENSIONS IN mm U.N.O
2. ALL ELEVATIONS IN METERS.
3. PLATFORM NORTH DIRECTION IS N 25°W.
4. VENT TOP SHALL BE REACHEABLE FOR MAINTENANCE PURPOSE.
5. THE BESS IS CONSIDERED SAFE AREA EXCEPT EXTRACTORES FROM BATTERIES , CURRENTLY NOT SHOWN IN DRAWINGS, SINCE INFORMATION FROM VENDOR IS NOT YET AVAILABLE.[ES17]
6. FOR ES12 PLUME, PLEASE REFER TO THE DETAIL "A" BELOW. (02)
7. THE LOCATION OF EMISSION SOURCES ON THE LAYOUT ARE ONLY INDICATIVE. EMISSION SOURCES CONSIDERED ARE PRESENT WITHIN THE EXTENSION OF HAZARDOUS CLASSIFIED AREAS SHOWN ON THE LAYOUT. THIS IS BECAUSE VALVES AND FLANGES,WHICH ARE CONSIDERED POTENTIAL SOURCES OF RELEASE POINTS FOR FLAMMABLE GAS ARE NOT SHOWN ON CURRENT LAYOUT PROVIDED. THE SAME APPLIES TO THE EMISSION SOURCES FOR CPI'S ITEM.
8. IDENTIFIED EMISSION SOURCES DETAIL

EMISSION SOURCE No.	IDENTIFIED AREAS
ES10	HYDROGEN STORAGE VESSLES
ES11	HYDROGEN VENT KO DRUM
ES12	HYDROGEN VENT
ES16	FUEL CELL

LEGEND

ZONE 0 — ZONE 1

ZONE 2 — ES EMISSION SOURCES

REFERENCE DOCUMENTS

123A90-DDL-PP-DS-70070	PLOT PLAN - LOWER & UPPER DECK
123A90-DDL-PP-DS-70071	PLOT PLAN - BELOW LOWER DECK

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	15/01/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	27/08/24	MMA	CCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	08/02/24	MMA	CCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
HAZARDOUS AREA CLASSIFICATION
ELEVATION LOOKING NORTH & EAST

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN M. MAGNI	CHECKED C. CARACCIOLO	APPROVED D. LO STERZO	DATE 03/07/24

A1 | DRAWING NO. 123A90-DDL-SAF-DL-30024 | SHEET 001 | REV. 02

File Name : 123A90-DDL-SAF-DL-30024 Rev.02

Rotork Fluid Systems s.r.l.
Via padre Jacques Hamel, 138 B
55016 Porcari, Lucca
Italy

Tel. +39 0583 2221
Fax. +39 0585 091362
http://www.rotork.com

rotork
Fluid Systems

DECLARATION

Rotork Fluid Systems s.r.l. herewith declares that for the job AF7703, as the supplier of the following equipment:

Product: Safety Relief Valve (PSV)
Type/Model: D10/S INOX
Serial Number(s): 025308828; 025308829; 025308830; 025308831; 025308832; 025308833; 025308834; 025308835; 025308836; 025308837; 025308838; 025308839; 025308840; 025308841; 025308842; 025308843; 025308844; 025308845; 025308846; 025308847; 025308848; 025308849; 025308850; 025308851; 025308852; 025308853; 025308854; 025308855.
Intended Use: Installation in ATEX Zone 2 – Gas Group IIC / IIB + H_2
Category: II 2G
Protection Type: Ex h IIC T6 Gb X (non-electrical equipment)

Hereby declares under its sole responsibility that the above equipment has been purchased in full compliance with the requirements of:

- Directive 2014/34/EU (ATEX)
- Harmonised standards: EN ISO 80079-36:2016 and EN ISO 80079-37:2016
- The relevant essential health and safety requirements as set out in Annex II of Directive 2014/34/EU.

This product is not yet in service and is currently installed but not operational. According to applicable legislation and guidance (including the Blue Guide 2022 and ATEX Guidelines 3rd Edition, July 2023), the CE and ATEX markings can be legitimately applied, even if the equipment has already been installed.
The conformity assessment procedure followed is: Internal production control (Annex VIII – Module A), with the technical documentation deposited with the Notified Body:
Notified Body: TUV SUD Italia – NB N° 0948
Reference: TUV IT 18 ATEX 032 AR
We hereby authorise the application of the ATEX marking in situ, under our responsibility, following the above.
This declaration is issued under the sole responsibility of the supplier.

Lucca, 18/04/2025

On behalf of Rotork Fluid Systems s.r.l.

Lucia Fregoli – Quality Manager

NUOVA GENERAL INSTRUMENTS s.r.l.
LOC. CAMPASSO - 29010 PIANELLO VALTIDONE (PC) Italy - Tel. +39 0523994629 - Fax +39 0523997219
http:// www.nuovageneral.it - E-mail: info@nuovageneral.it - P.IVA 01337040339 - C.F. 01317650065
REA-PC 117793 - Reg. Imp.PC 01317650065 - Capitale Sociale € 100.000,00 i.v.

N. **025308829**

Tipo: (Typ.): **D10/S INOX**

Dis. : **009-0 Rev. 24/10/22**

DICHIARAZIONE DI CONFORMITÁ UE Allegato IV, D. E. 2014/68/UE - Allegato VIII, D.E. 2014/34/UE
DECLARATION OF CONFORMITY EU Annex IV, E. D. 2014/68/EU - Annex VIII, E.D. 2014/34/EU
KONFORMITATSERKLARUNG EU Anlage IV Richtlinie 2014/68/EU - Anlage VIII Richtlinie 2014/34/EU
DECLARATION DE CONFORMITÉ UE Annexe IV D.E. 2014/68/UE - Annex VIII D.E. 2014/34/UE

VALVOLA DI SICUREZZA
SAFETY VALVE
SICHERHEITSVENTIL
SOUPAPE DE SURETE

PROGETTO , COSTRUZIONE E COLLAUDO CONFORME ALLA DIRETTIVA 2014/68/UE - 15/05/14 CATEGORIA IV Modulo H1
DESIG , MANUFACTURE AND TEST ACCORDING TO 2014/68/EU DIRECTIVE - 15/05/14 CLASS IV Module H1
PROJEKT , KONSTRUKTION UND ABNAHMEPRUFUNG GEMAB EG-RICHTLINIE 2014/68/EU - 15/05/14 KATEGORIE IV Formblatt H1
PROJET,FABRICATION ET VERIFICATION CONFORME A LA DIRECTIVE 2014/68/UE-15/05/14 CATEGORIE IV Module H1

Garanzia qualità totale Nr. : **Full quality assurance system Nr. :**
Garantie gesamte Qualität Nr. : **Garantie qualité totale Nr.:**
Module H1 : DGR-0036-QS-1180-24

Norme e spec. utilizzate : (Codes or spec.ref.) : *(Angewandte normen und spezifikationen) :* (Regulements et spec. utilise):
AD-Merkblatt A2 - VdTUV-Merkblatt Sicherheitsventil 100 / Racc."E"1979 / EN80079-36:2016 -37:2016 / ISO4126-1 / AS1271:2003 / EN13648-1 / UNI 10197

Organismo notificato: (Notified body): *(Meldestelle):* (Organisme agree):
TÜV SÜD Industrie Service GmbH
Westendstraße 199
D 80686 Munich
0036

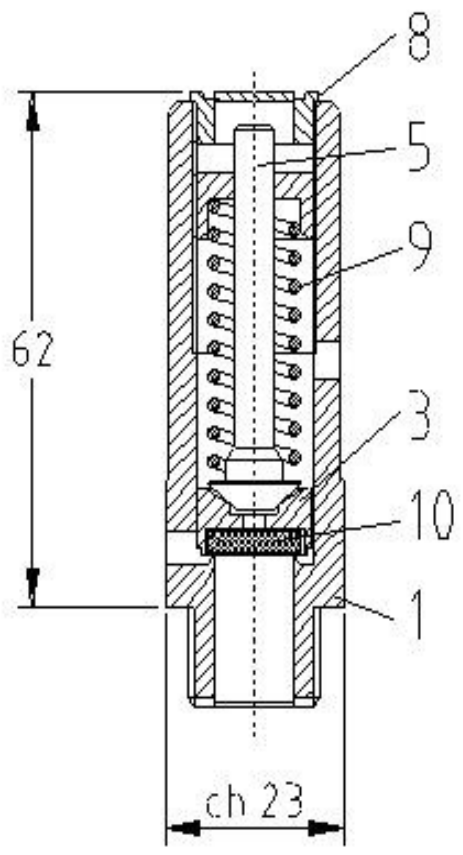
II 2G Ex h IIC T6 Gb X
File : TÜV IT 18 ATEX 032 AR

Questa dichiarazione di conformità è rilasciata sotto la sola responsabilità del produttore. - *This declaration of conformity is issued under the sole responsability of the manufacturer.* - Diese Konformitätserklärung wird unter der alleinigen Verantwortung des Herstellers ausgestellt.
Cette déclaration de conformité est émise sous la seule responsabilité du fabricant.

Fluido - *Fluid* - **Fluide**
G / S / L
Group 1 or 2

- Marchio del costruttore: (Manifacturer's Mark): *(Herstellerzeichen):* **(Marquae du constructeur)**

- Materiali: (Material): *(Material):* **(Matériaux):**



1- UNI EN 10088 1.4404
3- UNI EN 10088 1.4404
5- UNI EN 10088 1.4404
8- UNI EN 10088 1.4404
9- UNI EN 10270-3 1.4310

10 VITON (-20 / +200 °C)

Anno costruzione:
(Year of manufacture):
(Baujahr):
(Annee de fabrication):
2025

- P.N.: **60** *(Nenndruck):*

- h / do: **0,4**

- D.N.: (Nominal Diameter): *(Anschlusgewinde):* **(D.N):**

- Entrata: (In): *(Eintritt):* **1/2" NPT** **(Entre):**

- Uscita: (Out): *(Austritt):* **(Sortie):**

- Diametro orifizio: do (Opening diameter): do *(Innen durchmrsser): do* **(Diametre orifice):do** **10** mm

- Area: (Area): *(Offnung):* **(Surface):** **0,785** cm²

- Alzata: h (Valve Lift): h *(Hub): h* **(Haussement): h** **4** mm

- Limiti di temperatura di esercizio dei materiali utilizzati a pressione atmosferica: (Operating temperature limits for materials used at atmospheric pressure): *(Betriebstemperaturgrenze der unter Luftdruck verwendeten Materialien):* **(Limites de température de fonctionnement des matériaux utilisés sous pression atmosphérique):** **-20 / +200 °C**

- Coefficiente di efflusso : (Flow coefficient.): *(AusfluBziffer.):* **(Coefficient d'écoulement** **Kd 0,86**

- Coefficiente di efflusso ridotto : (Reduced flow coefficient): *(Reduzierte Ausflußziffer):* **(Coefficient d'écoulement réduit** **Kdr = 0,9xKd = 0,77**

- Pressione di taratura: (Setting Pressure): *(Abgleichungssdruck):* **(Pression de tarage):** **4,7** bar g

- Variabilità campo di taratura: (Variability Setting Filed): *(Abgleichungsberelch):* **(Variabilite champ de tarage):** **3,1 - 5** bar g

- Sovrappressione: (Overpressure): *(Uber-Unterdruck):* **(Surpression):** **10%** % della pressione di taratura (% of Setting Pressure) *(% Abgieichungsdruck)* **(% De la pression de tarage)**

- Scarto di chiusura: (Closing variation): *(Unterdruck):* **(Ecart de fermature):** **15%** % della pressione di taratura (% of Setting Pressure) *(% Abgieichungsdruck)* **(% De la pression de tarage)**

TIPO FLUIDO: (FLUID TYPE): *(MEDIUM):* (Type de fluide): **ARIA-AIR-LUFT** Temper. : **0** °C
- Scarico in atmosfera: (Discharge in Atmosphere): *(AbfluB gegen Atmosphare):* **(Decharge en atmosphere):** **328,02** kg/h **253,73** Nm³ / h **4228,82** lt/min.

TIPO FLUIDO: (FLUID TYPE): *(MEDIUM):* (Type de fluide):
- Scarico in atmosfera: (Discharge in Atmosphere): *(AbfluB gegen Atmosphare):* **(Decharge en atmosphere):** kg/h Nm³ / h lt/min.

TIPO FLUIDO: (FLUID TYPE): *(MEDIUM):* (Type de fluide):
- Scarico in atmosfera: (Discharge in Atmosphere): *(AbfluB gegen Atmosphare):* **(Decharge en atmosphere):** kg/h Nm³ / h lt/min.

Si dichiara che la valvola ha subito con buon esito il controllo finale compreso il test di tenuta (90% Pset) e la prova idraulica del corpo a 1,5 x P.N.
We declare that this valve has passed successfully the test, the seat tightness test (90% Pset) and the hydraulic test of the body to 1,5 x P.N.
Hiermit bestätigen wir, dass das Ventil die Abschlusskontrolle einschließlich der Sitzdichtheit (90%Pset) und hydraulischen Gehäuseprüfung mit einem Druck von 1,5 x P.N.
On declare que la soupape a ete soumise avec resultat satisfiant a le control final y-compri l'epreuve d'étanchéité (90% Pset) et l'epreuve hydraulique du corps a 1,5xPN.

EN 10204 3.1 Cod. : **00F16D10SSVNPAX047**

Nr.Ord. : D2500700 REV 1

S.V. Code : 00F16D10SSVNPAX047

Date : 17/04/2025

NUOVA GENERAL INSTRUMENTS SRL
Albertini Patrizia (CEO)

NUOVA GENERAL INSTRUMENTS

	I Descrizione ATEX-UKEX	GB Atex-UKEX Description	D *Beschreibung ATEX-UKEX*	F Description ATEX-UKEX	ES Descripción ATEX-UKEX
	Simbolo rappresentativo per dispositivi certificati ATEX-UKEX	Representative symbol of ATEX-UKEX certified equipment	*Repräsentatives Symbol für ATEX-UKEX zertifizierte Geräte*	Symbole représentatif des équipements certifiés ATEX-UKEX	*Símbolo representativo para dispositivos con certificación ATEX-UKEX*
II	Gruppo dell'apparecchio	Equipment's group	*Gerätegruppe*	Groupe d'appareils	*Grupo de dispositivos*
2	Categoria dell'apparecchio	Equipment's category	*Gerätekategorie*	Catégorie d'appareils	*Categoría de dispositivos*
G	Protezione delle atmosfere esplosive dovute a presenza di GAS, VAPORI E NEBBIE	Protected to explosive atmosphere due to GAS, STEAM and FOG	*Schutz explosionsfähiger Atmosphären durch GAS, DAMPF UND NEBEL*	Protection des atmosphères explosives grâce à la présence de GAZ, VAPEURS ET BROUILLARDS	*Protección de atmósferas explosivas debido a la presencia de GAS, VAPOR Y NIEBLA*
GD	Protezione delle atmosfere esplosive dovute a presenza di GAS, VAPORI, NEBBIE, NUBI e POLVERI	Protected to explosive atmosphere due to GAS, STEAM, FOG and DUST	*Schutz explosionsfähiger Atmosphären durch GAS, DAMPF, NEBEL, WOLKEN und PULVER*	Protection des atmosphères explosives grâce à la présence de GAZ, VAPEURS, BROUILLARDS, NUAGES et POUSSIÈRES	*Protección de atmósferas explosivas debido a la presencia de GAS, VAPORES, NIEBLA, NUBES y POLVO*
Ex h (Type of protection "c" constructional safety)	Indicazione di apparecchiatura non elettrica	Non-electrical equipment indication	*Hinweis auf nichtelektrische Geräte*	Indication des équipements non électriques	*Indicación de equipos no eléctricos*
IIC	Sottodivisione del gruppo di apparecchi	Equipment group subdivision	*Unterteilung der Gerätegruppe*	Subdivision du groupe d'appareils	*Subdivisión del grupo de dispositivos*
T6	Temperatura massima di parete ≤85°C	Maximum surface temperature ≤85°C	*Maximale Oberflächentemperatur ≤85 ° C*	Température maximale de paroi ≤85 ° C	*Temperatura máxima de la pared ≤85 ° C*
Gb	Equipment Protection Level (EPL)	Equipment Protection Level (EPL)	*Equipment Protection Level (EPL)*	Equipment Protection Level (EPL)	*Equipment Protection Level (EPL)*
GbDb	Equipment Protection Level (EPL)	Equipment Protection Level (EPL)	*Equipment Protection Level (EPL)*	Equipment Protection Level (EPL)	*Equipment Protection Level (EPL)*
X	La massima temperatura superficiale potrebbe essere superiore alla classe di temperatura, si raccomanda come massima temperatura il valore maggiore tra T6 e la max Temperatura ammissibile per la tenuta (V. COC)	The max surface temperature could be higher than the temperature class, it is recommended as max temperature the higher value between T6 and the max Admissible temperature for the seal (V. COC)	*Die max. Oberflächentemperatur kann höher sein als die Temperaturklasse, als max. Temperatur wird der höhere Wert zwischen T6 und der max. zulässigen Temperatur für die Dichtung (V. COC) empfohlen.*	La température de surface maximale peut être supérieure à la classe de température, il est recommandé comme température maximale la valeur la plus élevée entre T6 et la température maximale admissible pour le joint (V. COC)	*La temperatura máxima de la superficie podría ser superior a la clase de temperatura, se recomienda como temperatura máxima el valor más alto entre T6 y la temperatura máxima admisible para el sello (V. COC)*

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC & discipline : I

Instrumental	64-10 Nitrogen Distribution Network

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
64-FG-001	Flow Gauge - Nitrogen to Hydrogen Vent Header	ONSHORE	C10000949	TJX04	100	2024-12-14	RFC 2
64-PSV-001	Pressure Safety Valve - Nitrogen to Distribution Header Vent System	ONSHORE	C10001191	CJX03	100	2025-02-10	RFC 2
64-PT-002	Pressure Transmitter - Nitrogen to Distribution Header Low Pressure	ONSHORE	C10000912	CJX08	100	2025-02-07	RFC 2
		ONSHORE	C10000950	TJX04	100	2024-10-14	RFC 2
64-PT-031A	Pressure Transmitter - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10000913	CJX08	100	2025-02-07	RFC 2
		ONSHORE	C10000951	TJX04	100	2024-10-14	RFC 2
64-PT-031B	Pressure Transmitter - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10000914	CJX08	100	2025-02-07	RFC 2
		ONSHORE	C10000952	TJX04	100	2024-10-14	RFC 2
64-PV-031A	Control Valve - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10001193	CJX27	100	2025-01-28	RFC 2
64-PV-031B	Control Valve - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10001194	CJX27	100	2025-01-28	RFC 2
64-PY-031A	Electropositioner - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002027	CJX00	100	2025-01-27	RFC 2
64-PY-031B	Electropositioner - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002028	CJX00	100	2025-01-27	RFC 2
64-ZSHL-031A	Open/closed Limit Switches - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002029	CJX00	100	2025-01-28	RFC 2
64-ZSHL-031B	Open/closed Limit Switches - Nitrogen Pressure Control to Distribution Header	ONSHORE	C10002030	CJX00	100	2025-01-28	RFC 2
AV-63005/64-PV-031A	Pneumatic Connection Air Supply - 64-PV-031A	ONSHORE	C10001957	CJX06	100	2025-01-29	RFC 2
AV-63005/64-PV-031B	Pneumatic Connection Air Supply - 64-PV-031B	ONSHORE	C10001958	CJX06	100	2025-01-29	RFC 2
AV-63010/64-SDV-001	Pneumatic Connection Air Supply - 64-SDV-001	ONSHORE	C10001977	CJX06	100	2025-02-04	RFC 2
BLPH-MV-386/64-PT-031A	Process Connection Nitrogen Gas - 64-PT-031A	ONSHORE	C10001992	CJX06	100	2025-02-12	RFC 2
C-64-PT-002/00-JE-21002	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000139	CJX10	100	2025-02-07	RFC 2
C-64-PT-031A/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000053	CJX10	100	2025-02-07	RFC 2
C-64-PT-031B/00-JE-11004	PRESSURE TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000054	CJX10	100	2025-02-07	RFC 2
C-64-PY-031A/00-JE-11004	E/P POSITIONER / MARSHALLING PCS	ONSHORE	C10000055	CJX10	100	2025-01-27	RFC 2
C-64-PY-031B/00-JE-11004	E/P POSITIONER / MARSHALLING PCS	ONSHORE	C10000056	CJX10	100	2025-01-27	RFC 2
C-64-SDV-001/00-JE-22002	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000157	CJX10	100	2025-02-05	RFC 2
C-64-SDY-001/00-JE-23002	SOLENOID VALVE / MARSHALLING PCS	ONSHORE	C10001839	CJX10	100	2025-02-05	RFC 2
C-64-ZSH-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000108	CJX10	100	2025-01-27	RFC 2
C-64-ZSH-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000110	CJX10	100	2025-01-27	RFC 2
C-64-ZSL-031A/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000107	CJX10	100	2025-01-27	RFC 2
C-64-ZSL-031B/00-JE-12006	PROXIMITY SWITCH / MARSHALLING PCS	ONSHORE	C10000109	CJX10	100	2025-01-27	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC & discipline : I

Instrumental	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
C-64-ZT-031A/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000059	CJX10	100	2025-01-27	RFC 2
C-64-ZT-031B/00-JE-11005	POSITION TRANSMITTER / MARSHALLING PCS	ONSHORE	C10000060	CJX10	100	2025-01-27	RFC 2

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-PT-031A/00-JE-11004	: PRESSURE TRANSMITTER / MARSHALLING PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD/LD_B-100_Ext	
TASK	code	C10000053	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	64-PT-031A	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		0,8	Ω
	SCREEN		0,8	Ω
	EARTH		NA	Ω
	ARMr		0,8	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

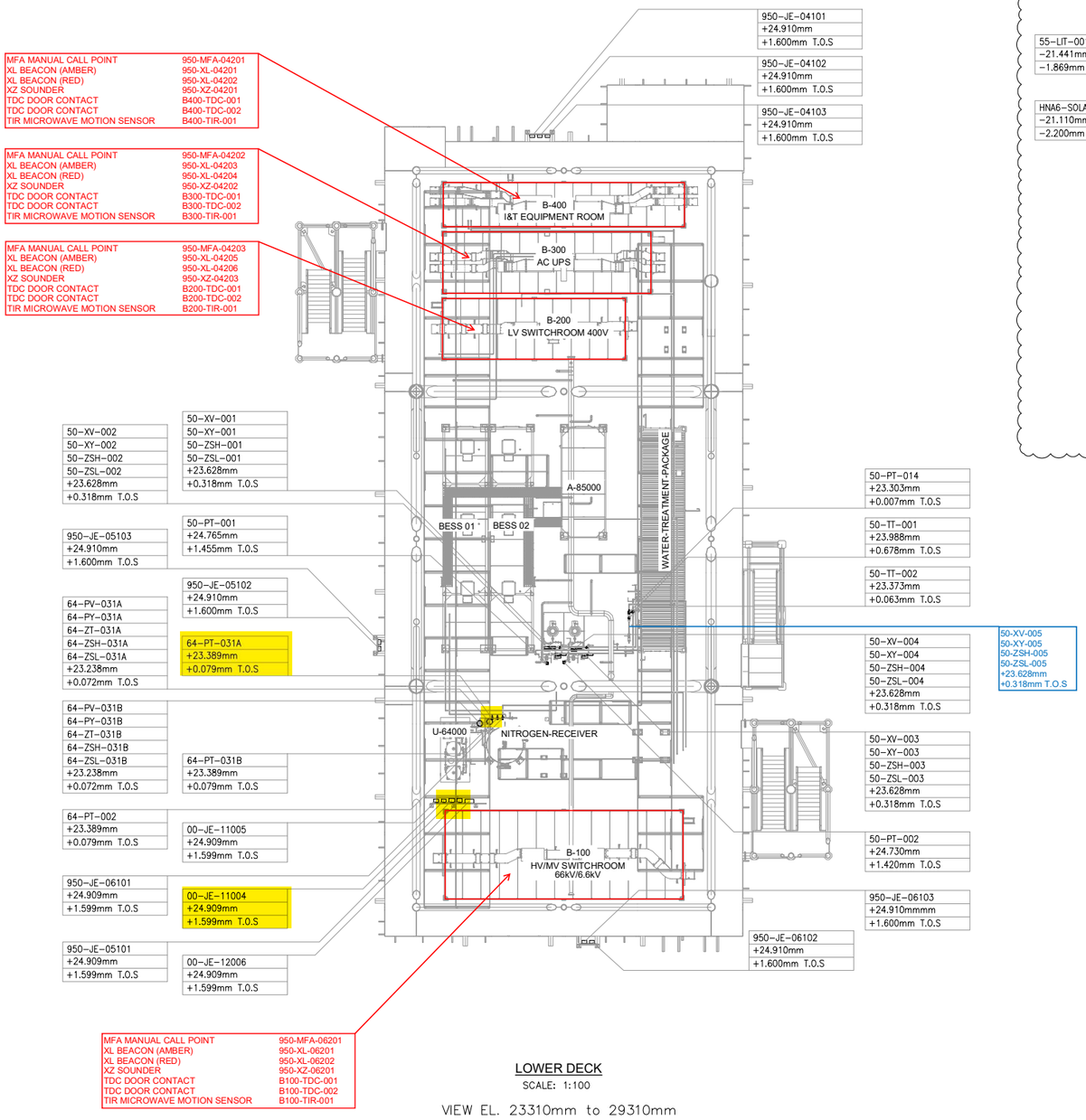
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000682

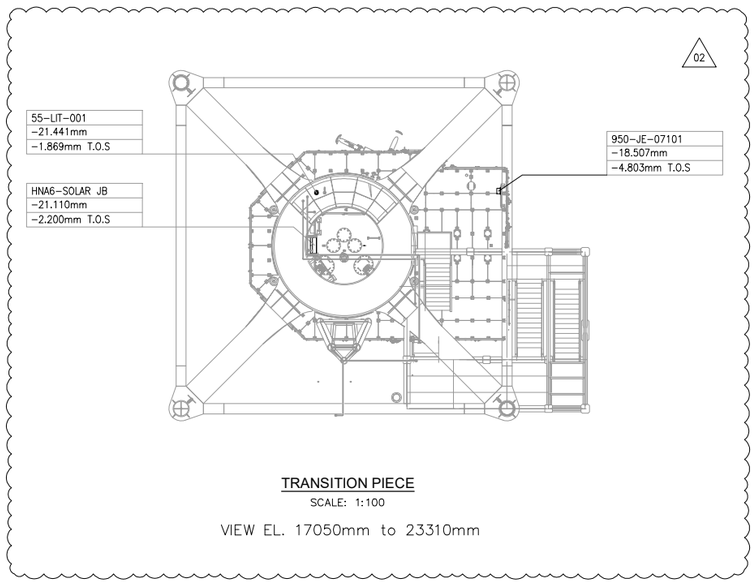
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-05	2025-02-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-05T10:09:58.925Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-07T17:03:58.831Z	

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

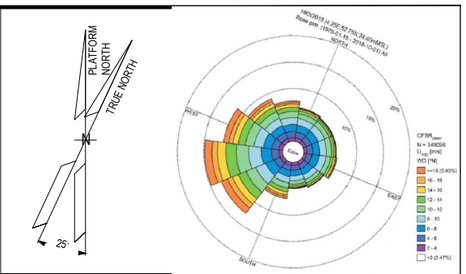
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

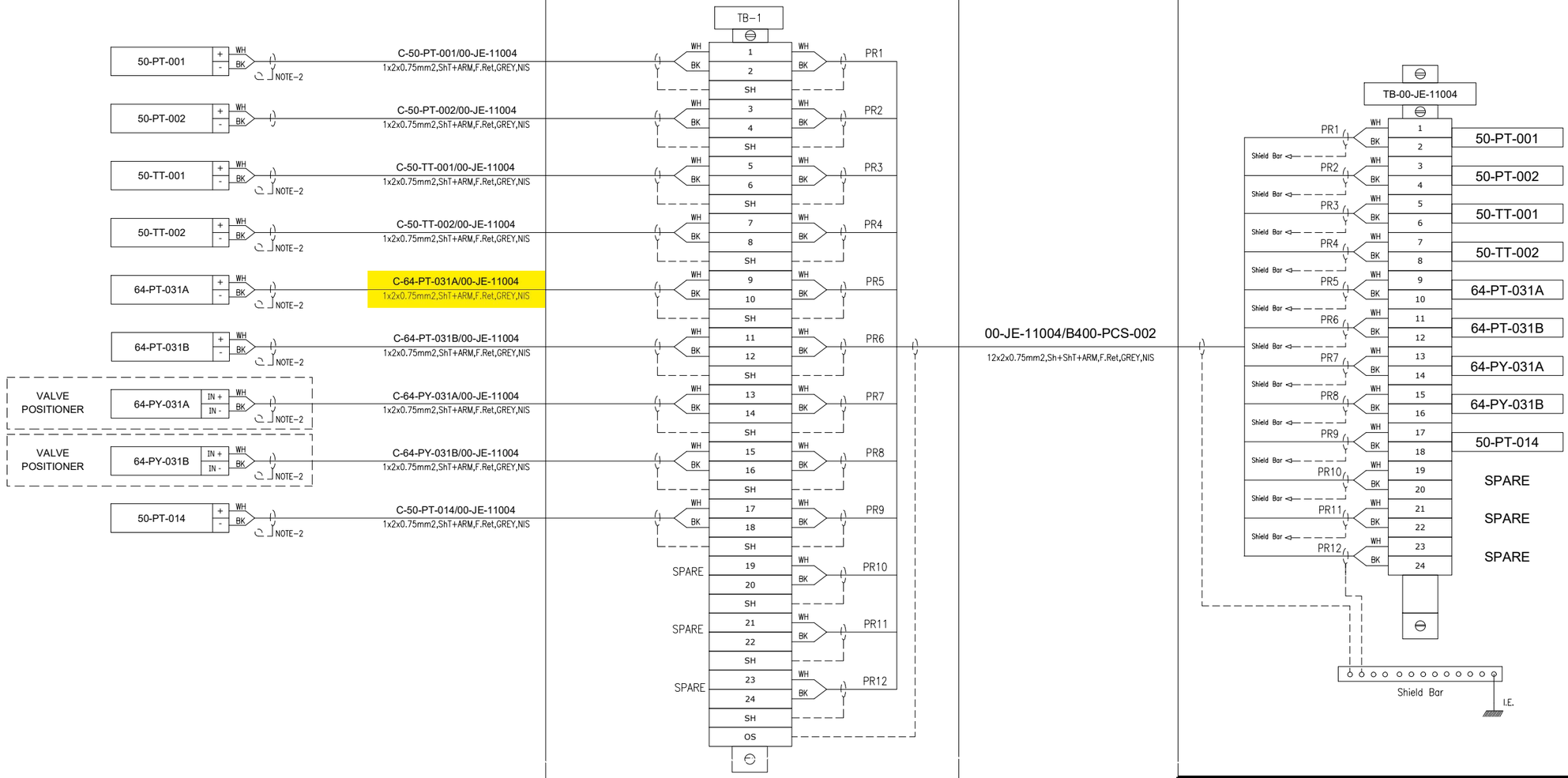
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11004	No.	MARSHALLING CABINET B400-PCS-002

<01>



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

REV.:	DATE:	SIGNATURE:
1_I	29/01/25	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
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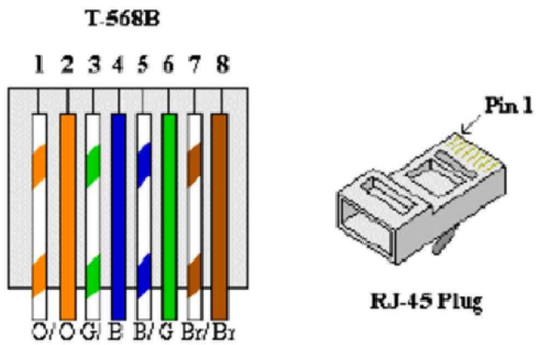
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



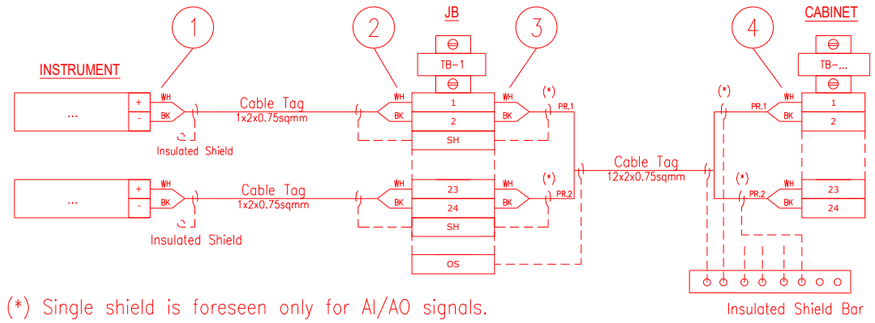
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

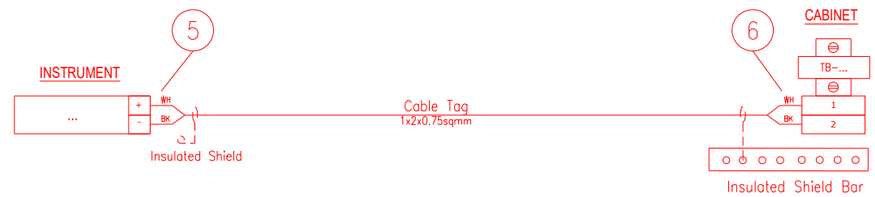
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

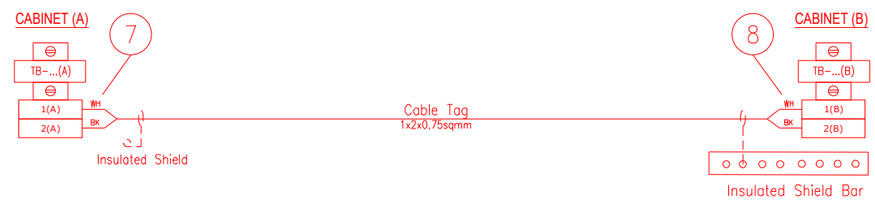
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_I	29/01/25	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

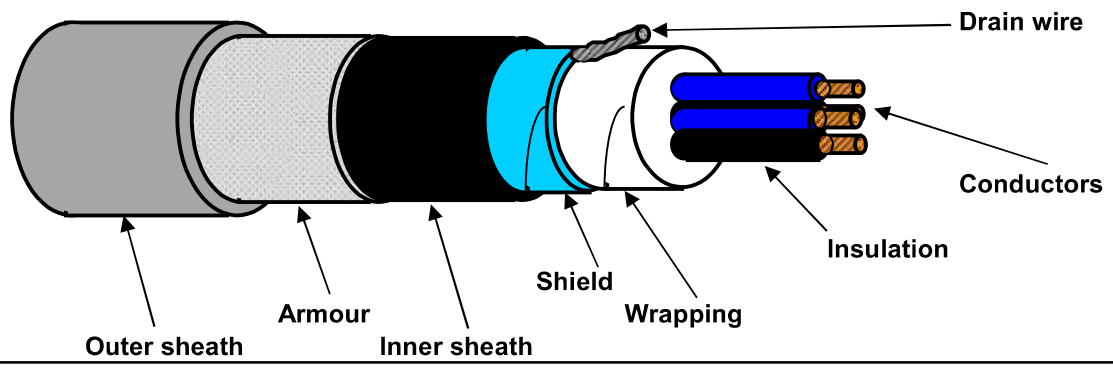
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-PT-031A/00-JE-11004	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-PT-031A	Pressure Transmitter	Lower Deck	00-JE-11004	AI/AO JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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 | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-PT-031B/00-JE-11004	: PRESSURE TRANSMITTER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	LD/LD_B-100_Ext		
TASK	code	C10000054	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	64-PT-031B	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		0,8	Ω
	SCREEN		0,8	Ω
	EARTH		NA	Ω
	ARMr		0,8	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

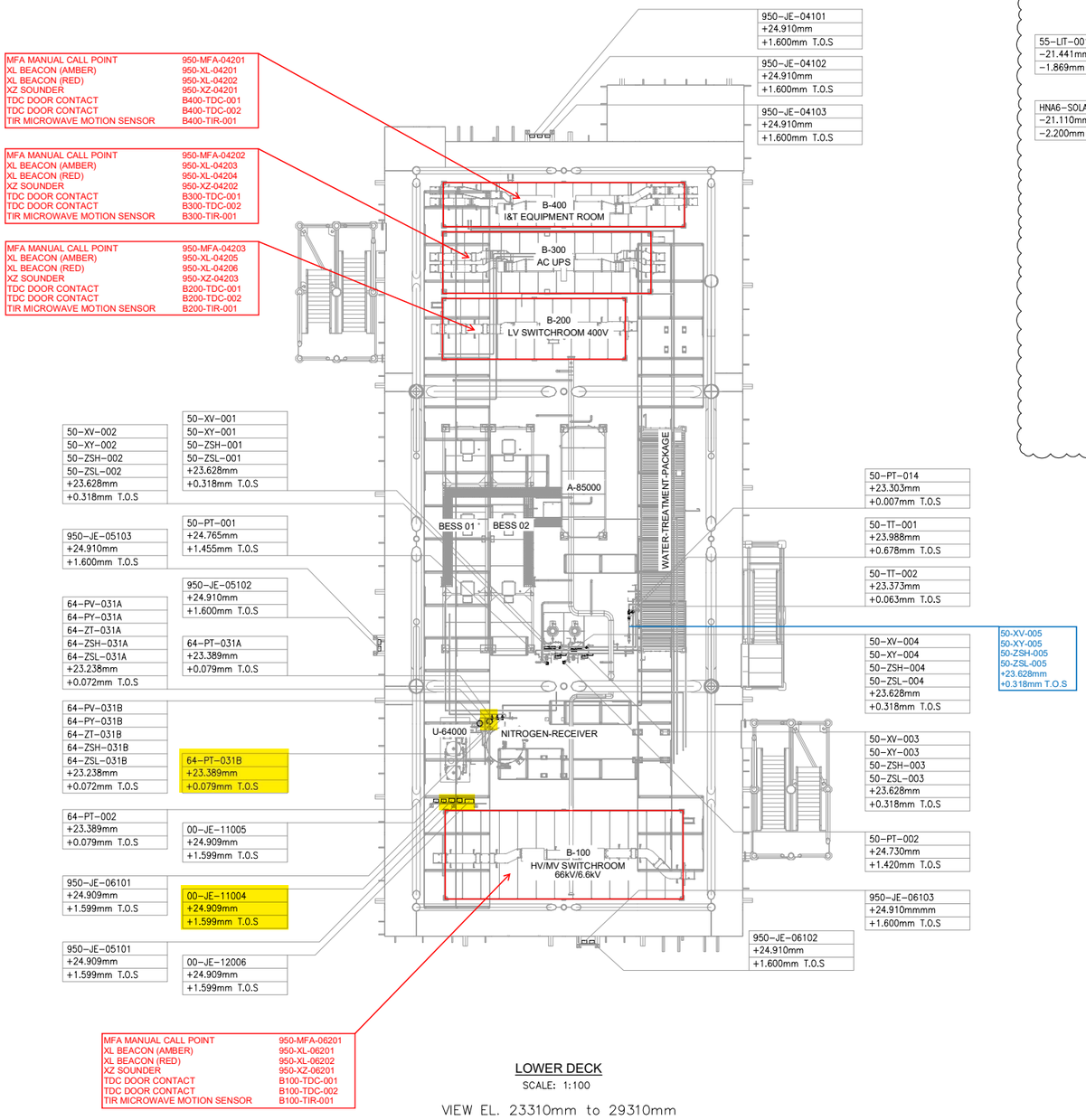
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680

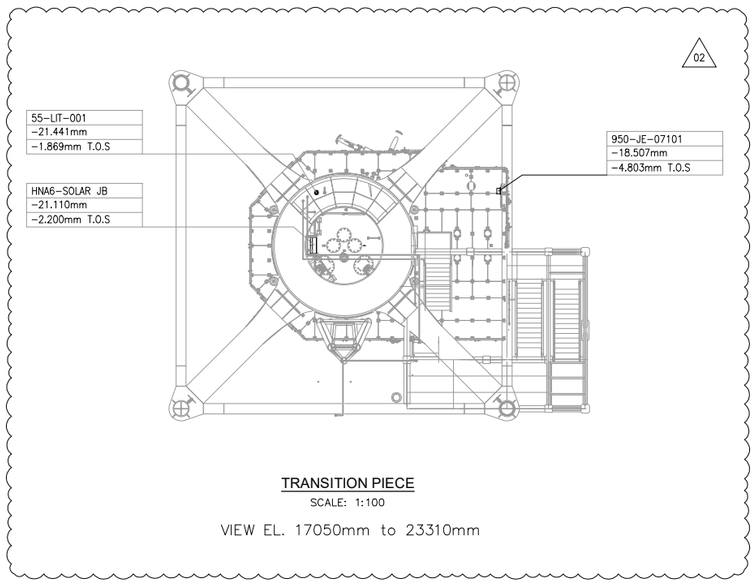
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-05	2025-02-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-05T10:10:22.540Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-07T16:21:57.057Z	

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

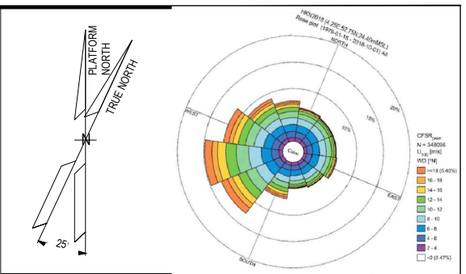
REV. 02



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

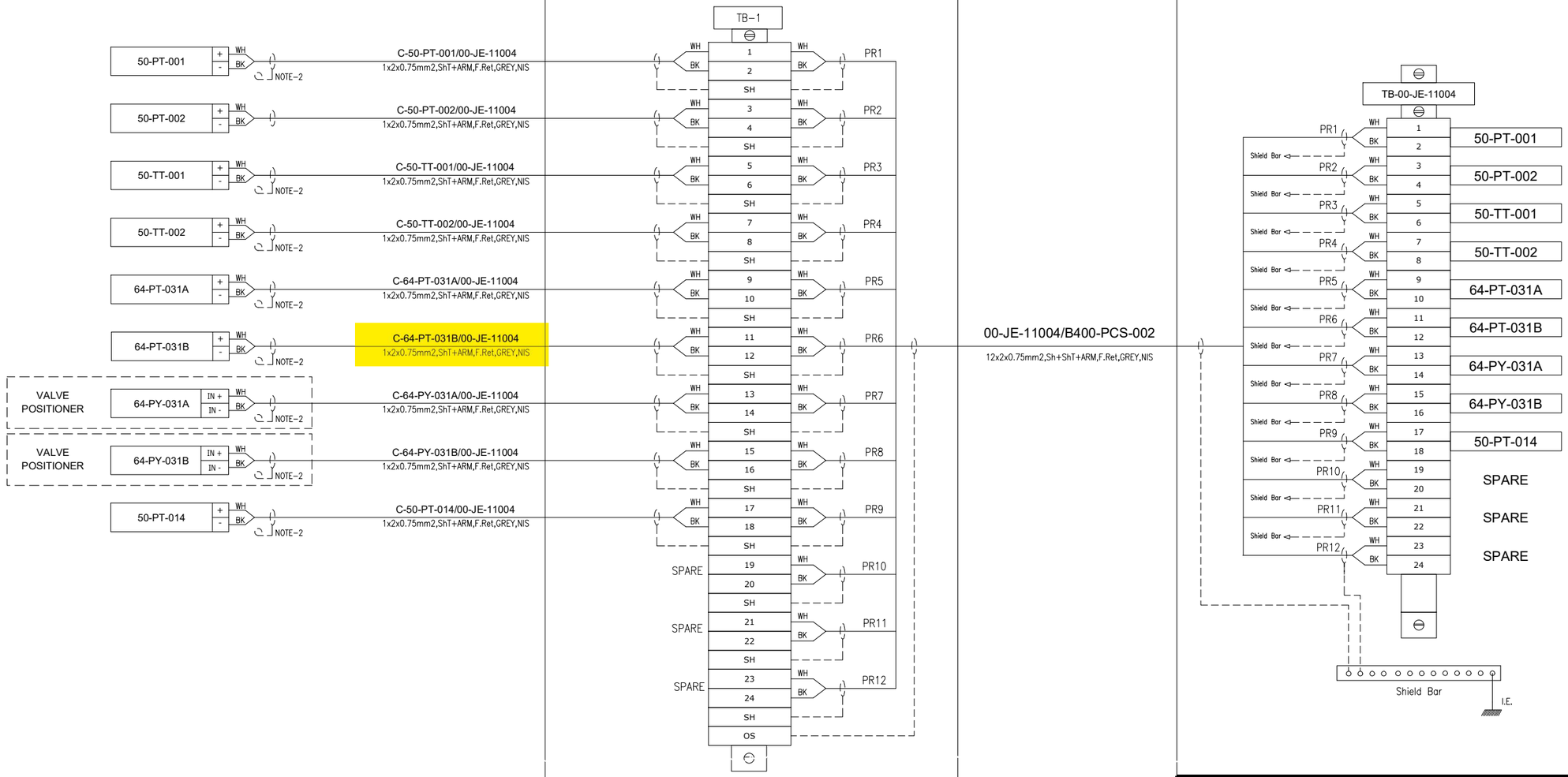
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DRAWING NO. 123A90-DDL-IN-DG-40015

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_I	29/01/25	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

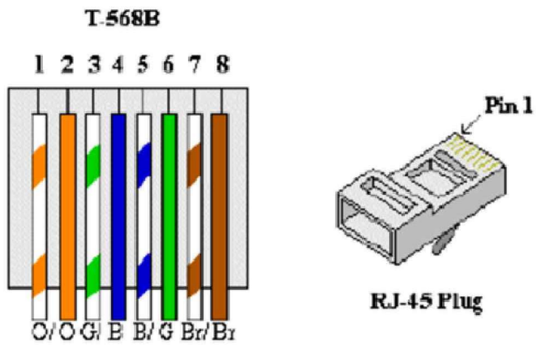
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



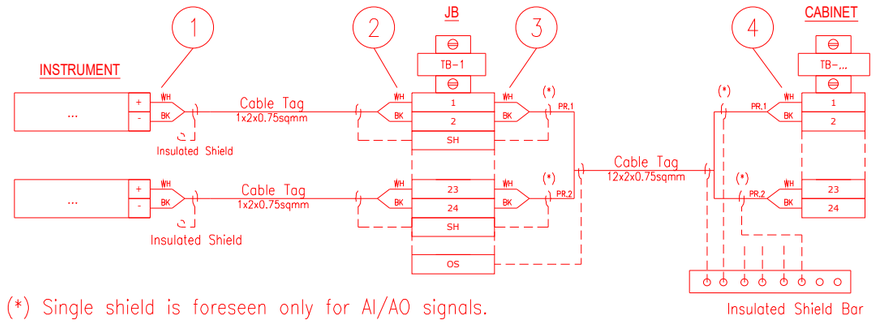
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

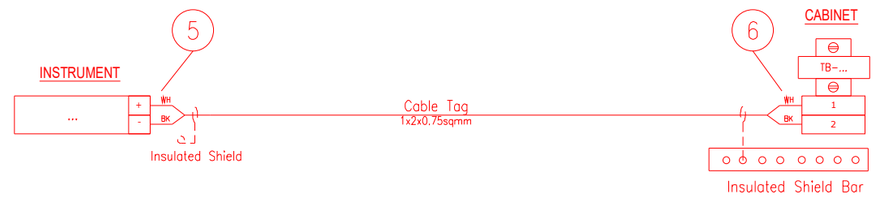
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

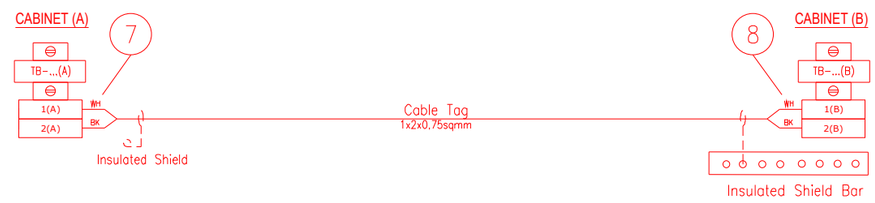
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_I	29/01/25	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

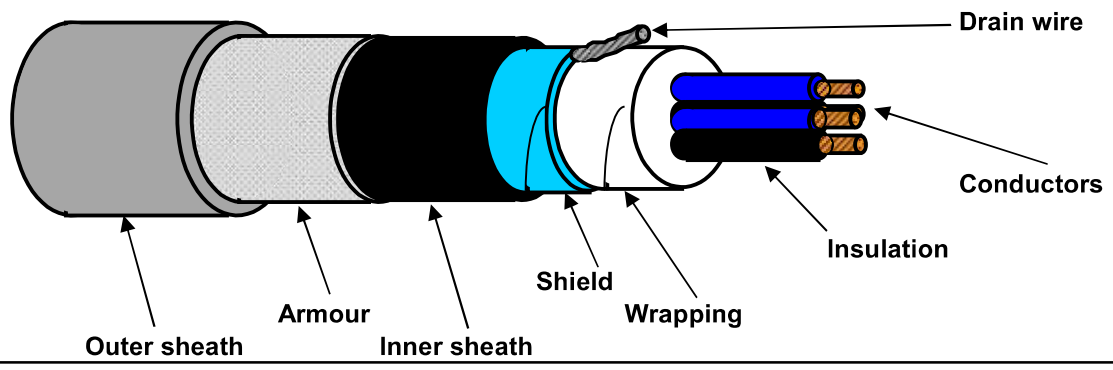
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-PT-031B/00-JE-11004	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-PT-031B	Pressure Transmitter	Lower Deck	00-JE-11004	AI/AO JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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 | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-PY-031A/00-JE-11004 : E/P POSITIONER / MARSHALLING PCS				Dwg	123A90-DDL-IN-LIS-40091
	S/Sys	64-10 : Nitrogen Distribution Network				Module	UD/LD_B-100_Ext
TASK	code	C10000055		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: 64-PY-031A | 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.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	OK
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	OK
12	Check gland plate for single core cables is non-ferrous.	NA
13	If required produce Red Line Mark Up for "AS BUILT"	

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0,8	Ω
	SCREEN		0,8	Ω
	EARTH		NA	Ω
	ARMr		0,8	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

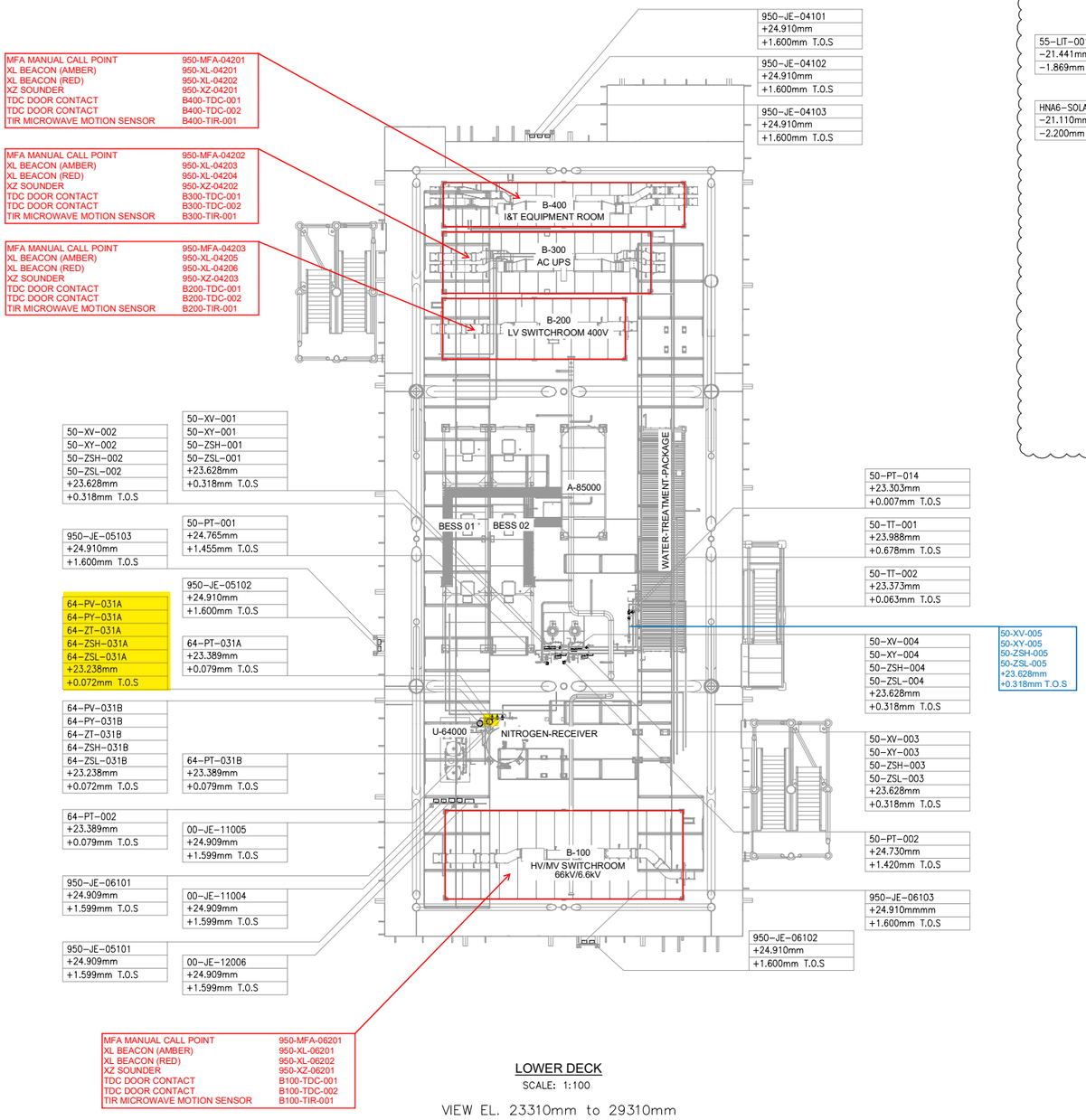
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Nota 5: refer to PL C30000680/C30000682

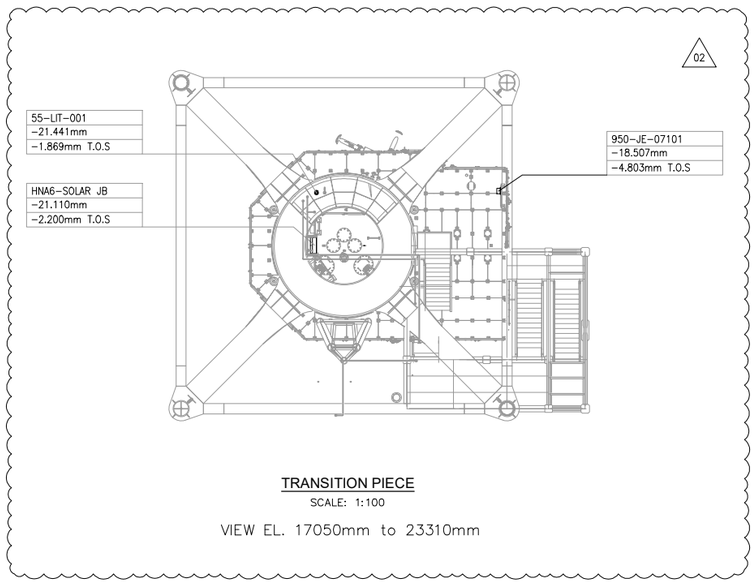
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:23:46.695Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:31:40.903Z	

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

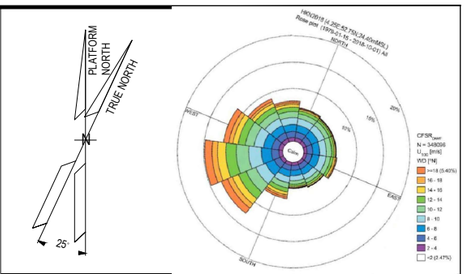
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

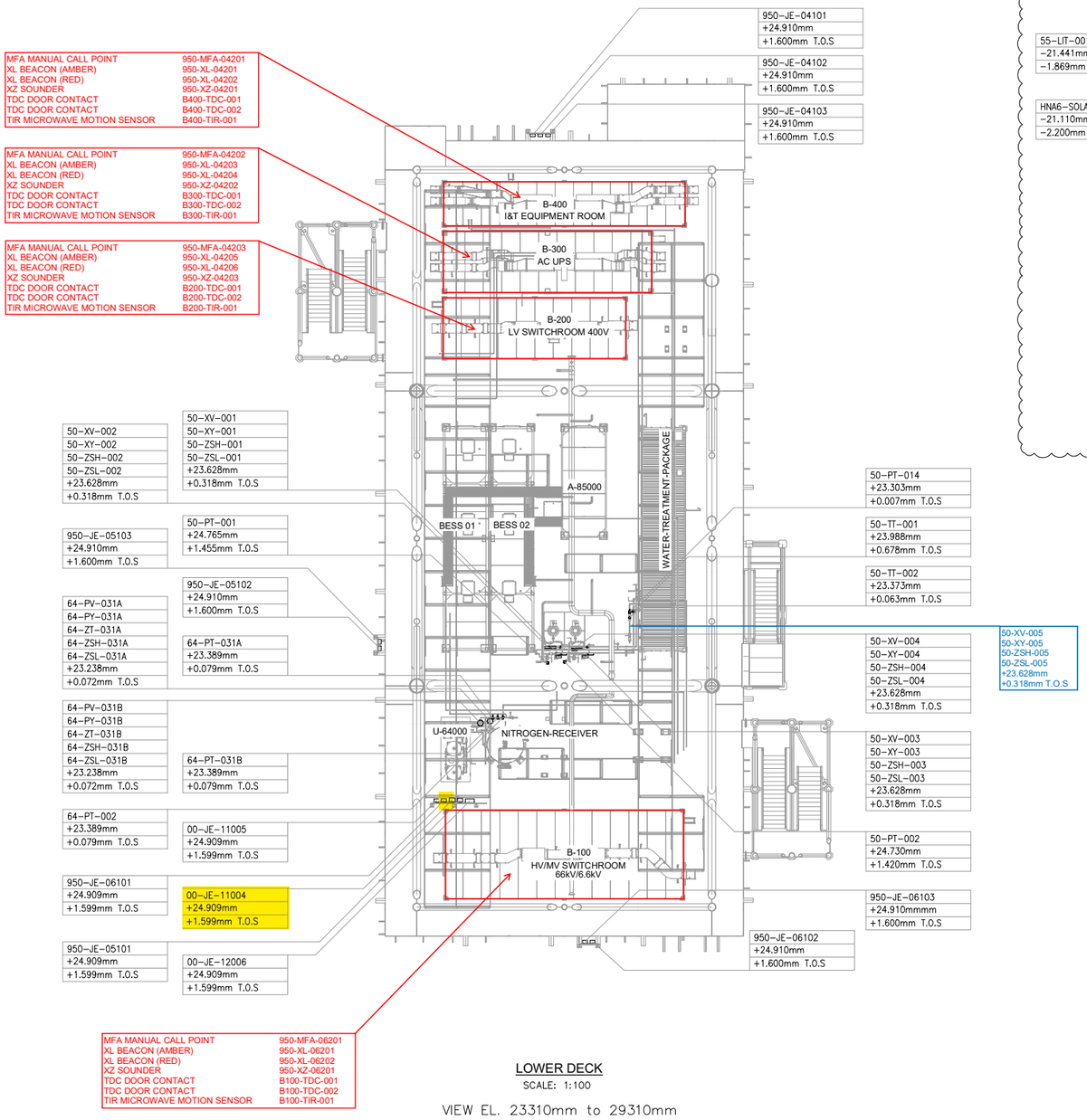
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

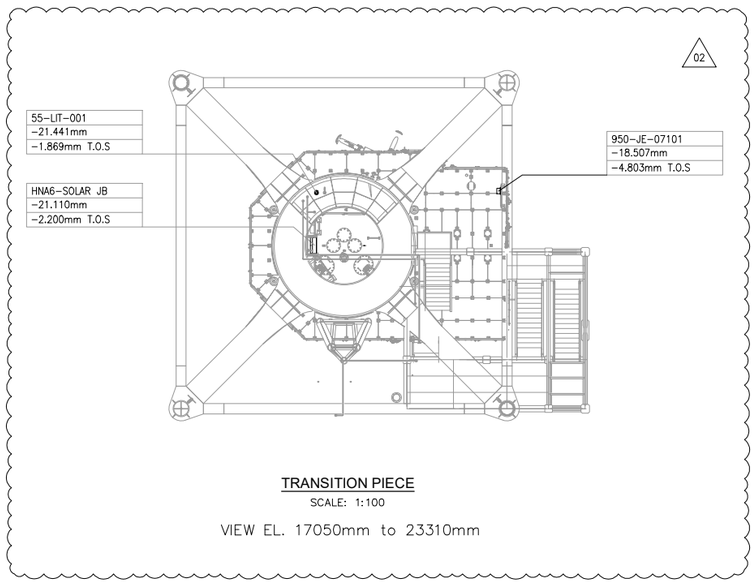
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

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

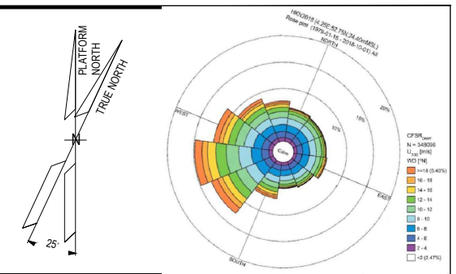
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-11004	No.	MARSHALLING CABINET B400-PCS-002

<01>

INSTRUMENTS		JUNCTION BOX 00-JE-11004	MULTICABLE No.	MARSHALLING CABINET B400-PCS-002
50-PT-001 (+ WH, - BK) NOTE-2	C-50-PT-001/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	TB-1: 1 WH, 2 BK, SH → PR1	00-JE-11004/B400-PCS-002 12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS	TB-00-JE-11004: PR1 WH 1, BK 2 → 50-PT-001
50-PT-002 (+ WH, - BK) NOTE-2	C-50-PT-002/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	3 WH, 4 BK, SH → PR2		PR2 WH 3, BK 4 → 50-PT-002
50-TT-001 (+ WH, - BK) NOTE-2	C-50-TT-001/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	5 WH, 6 BK, SH → PR3		PR3 WH 5, BK 6 → 50-TT-001
50-TT-002 (+ WH, - BK) NOTE-2	C-50-TT-002/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	7 WH, 8 BK, SH → PR4		PR4 WH 7, BK 8 → 50-TT-002
64-PT-031A (+ WH, - BK) NOTE-2	C-64-PT-031A/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	9 WH, 10 BK, SH → PR5		PR5 WH 9, BK 10 → 64-PT-031A
64-PT-031B (+ WH, - BK) NOTE-2	C-64-PT-031B/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	11 WH, 12 BK, SH → PR6		PR6 WH 11, BK 12 → 64-PT-031B
VALVE POSITIONER 64-PY-031A (IN +, IN - ; WH, BK) NOTE-2	C-64-PY-031A/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	13 WH, 14 BK, SH → PR7		PR7 WH 13, BK 14 → 64-PY-031A
VALVE POSITIONER 64-PY-031B (IN +, IN - ; WH, BK) NOTE-2	C-64-PY-031B/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	15 WH, 16 BK, SH → PR8		PR8 WH 15, BK 16 → 64-PY-031B
50-PT-014 (+ WH, - BK) NOTE-2	C-50-PT-014/00-JE-11004 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS	17 WH, 18 BK, SH → PR9		PR9 WH 17, BK 18 → 50-PT-014
		SPARE 19 WH, 20 BK, SH → PR10		PR10 WH 19, BK 20 → SPARE
		SPARE 21 WH, 22 BK, SH → PR11		PR11 WH 21, BK 22 → SPARE
		SPARE 23 WH, 24 BK, SH → PR12		PR12 WH 23, BK 24 → SPARE
		OS		Shield Bar → I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	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

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	123A90-DDL-IN-DG-40015	009	01

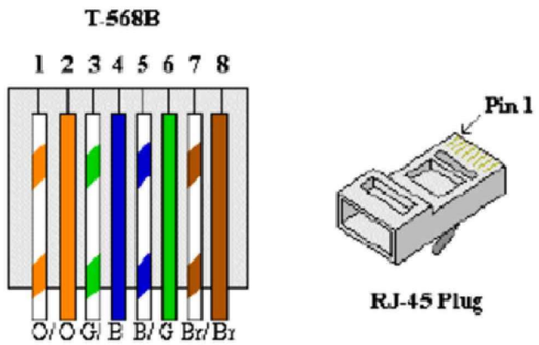
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



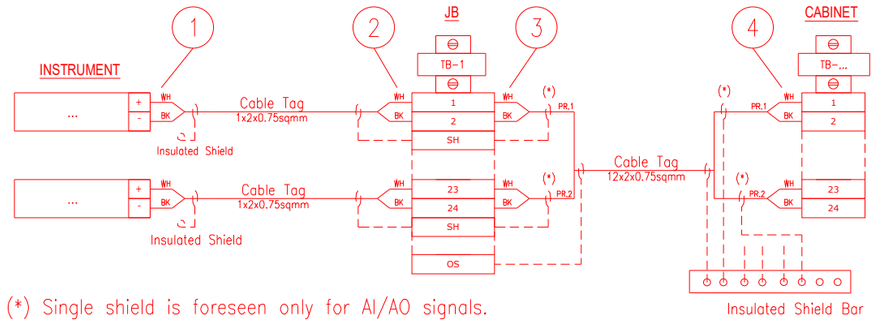
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

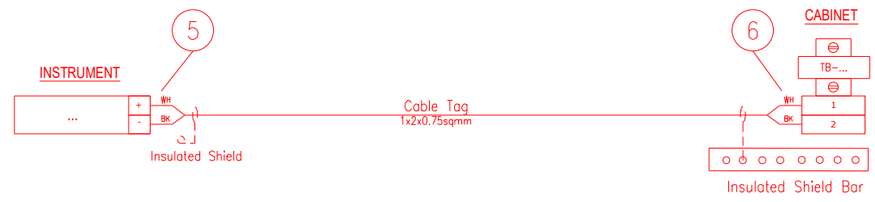
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

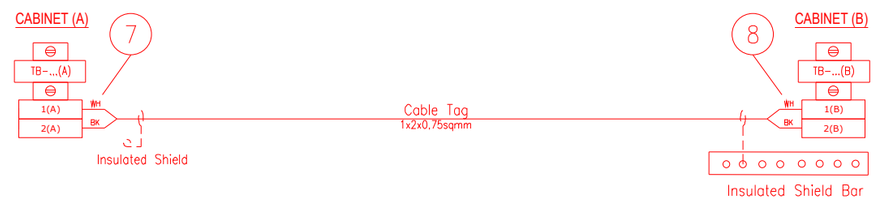
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	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

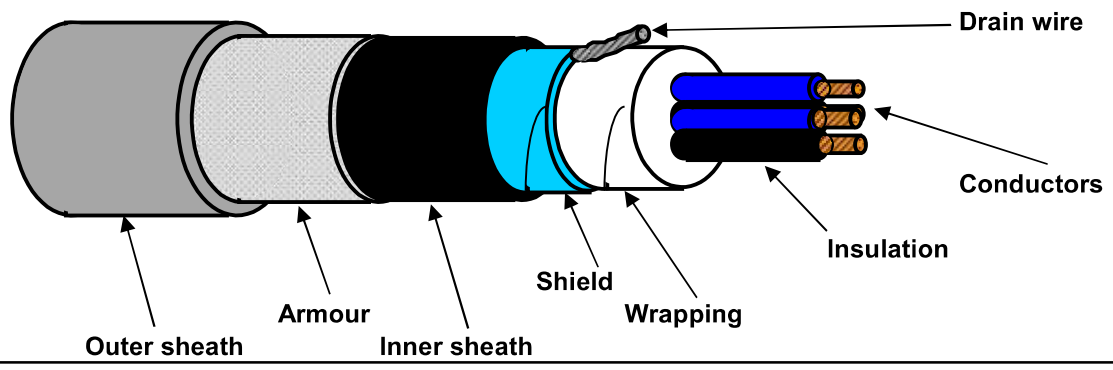
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File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-PY-031A/00-JE-11004	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-PY-031A	E/P Positioner	Upper Deck	00-JE-11004	AI/AO JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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 | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-PY-031B/00-JE-11004 : E/P POSITIONER / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10 : Nitrogen Distribution Network			Module	LD/LD_B-100_Ext	
TASK	code	C10000056	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	64-PY-031B	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.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	OK
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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		0,8	Ω
	SCREEN		0,8	Ω
	EARTH		NA	Ω
	ARMr		0,8	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

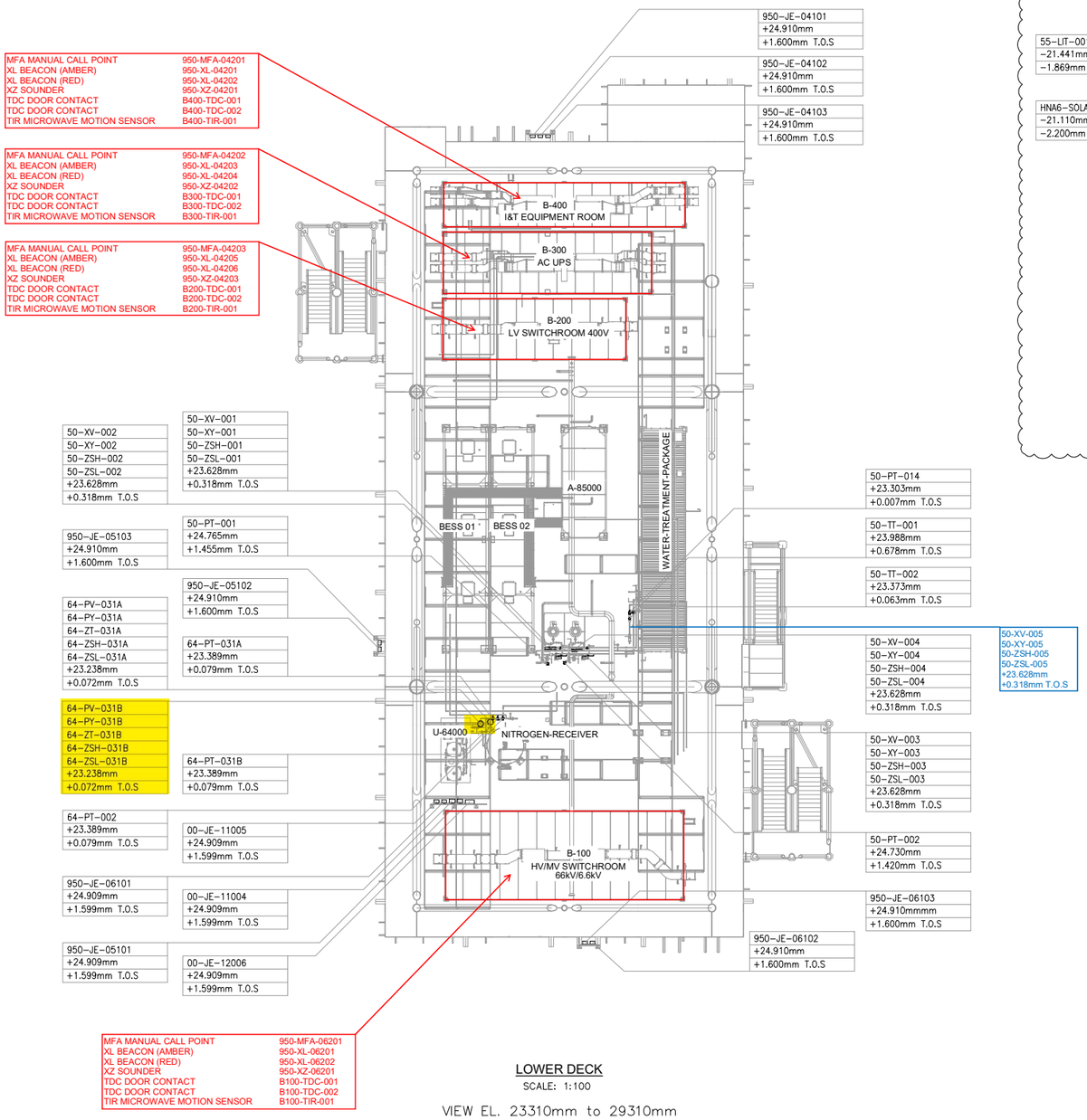
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

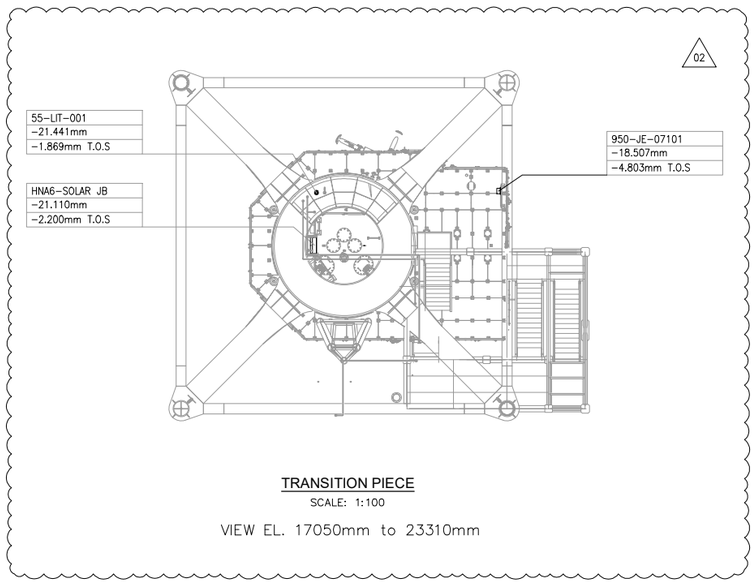
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:24:02.456Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:34:35.052Z	

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

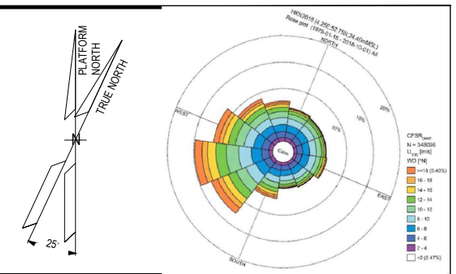
REV. 02



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

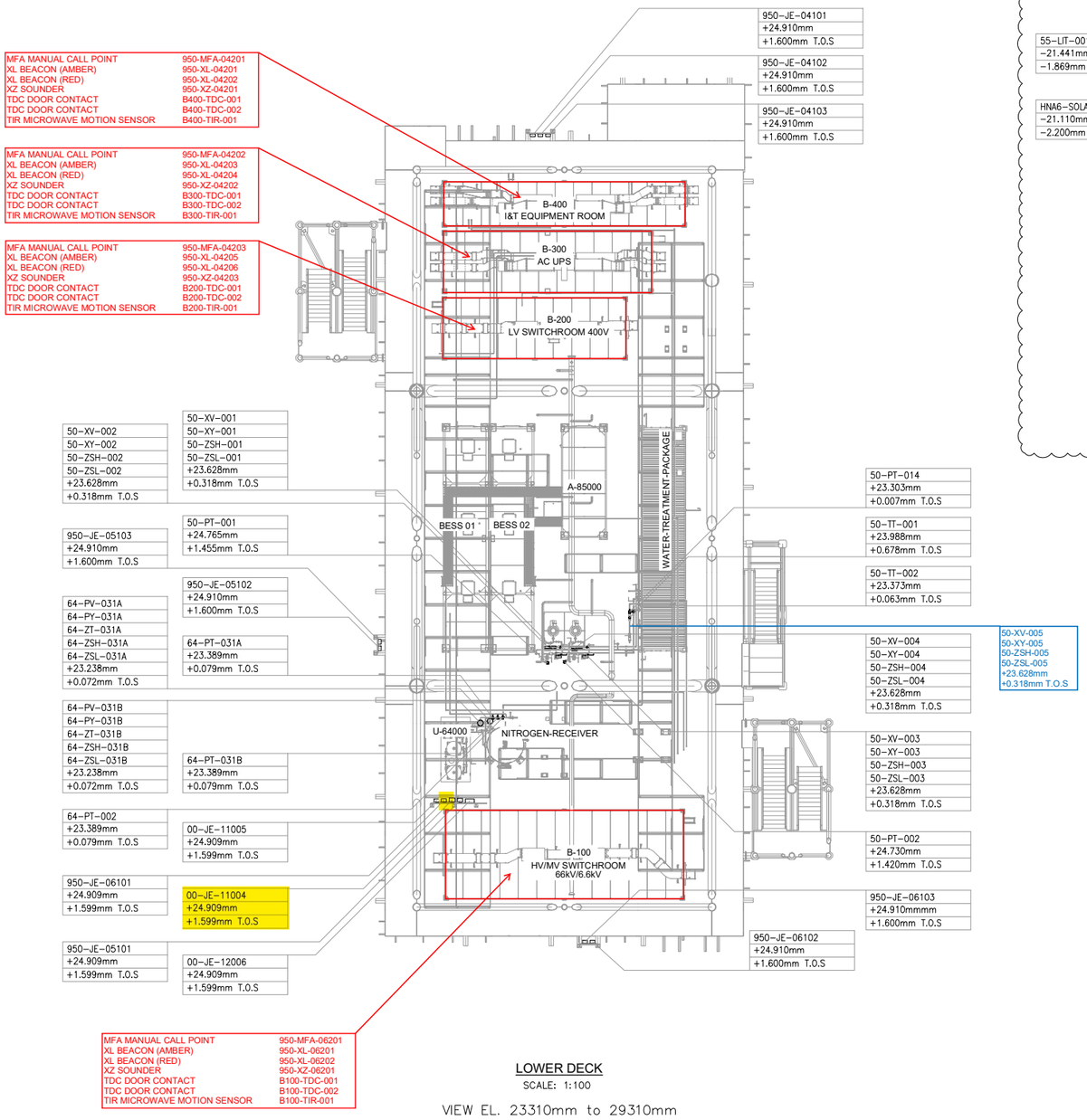
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

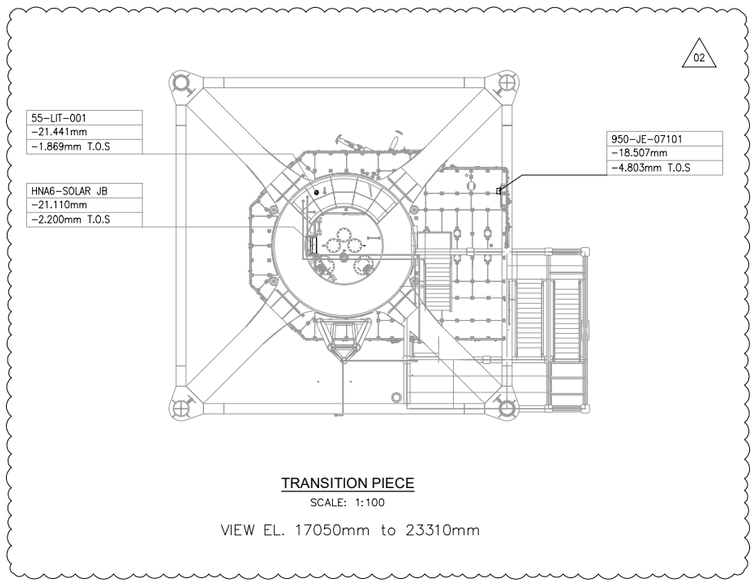
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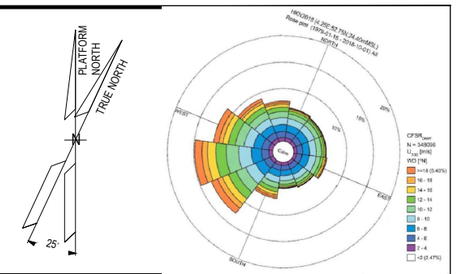
REV. 02



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

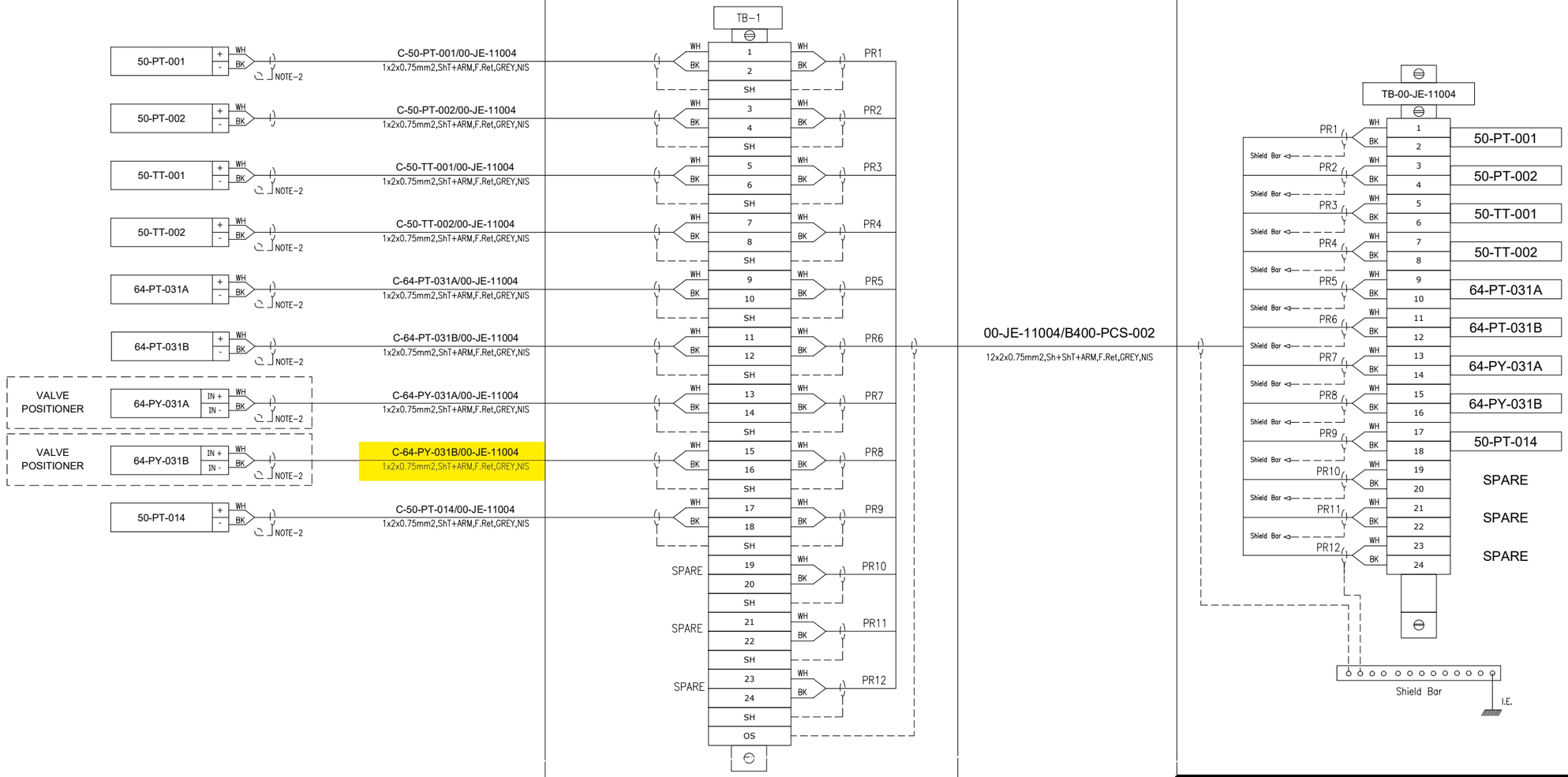
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DRAWING NO. 123A90-DDL-IN-DG-40015

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_H	24/01/25	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

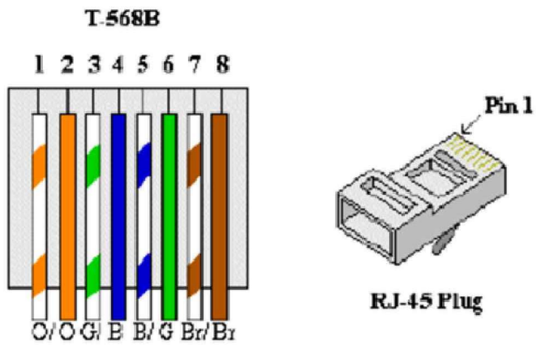
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



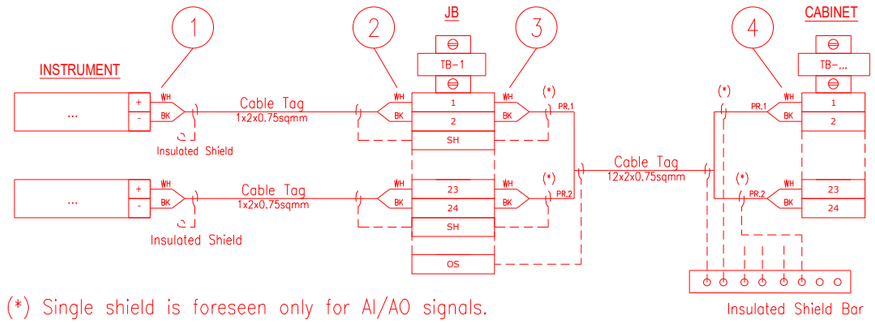
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

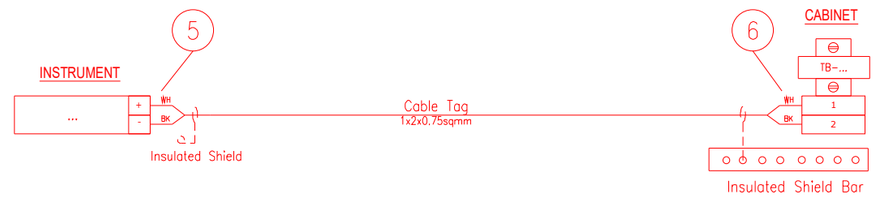
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

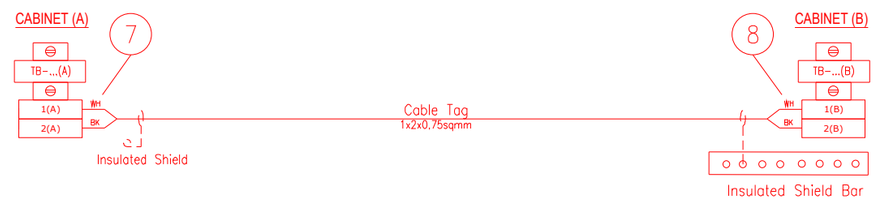
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

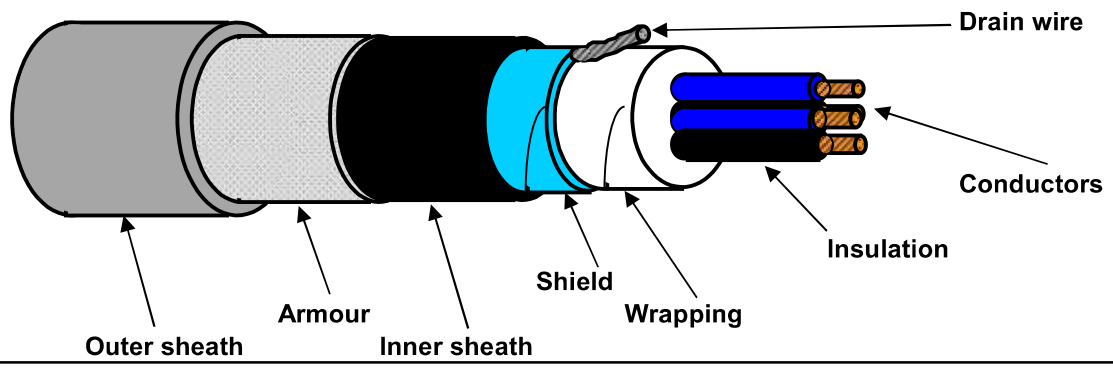
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-PY-031B/00-JE-11004	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-PY-031B	E/P Positioner	Lower Deck	00-JE-11004	AI/AO JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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-64-ZT-031A/00-JE-11005	: POSITION TRANSMITTER / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD/LD_B-100_Ext		
TASK	code	C10000059	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	64-ZT-031A	To	00-JE-11005		

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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	0,8	Ω
	SCREEN	0,8	Ω
	EARTH	NA	Ω
	ARMr	0,8	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

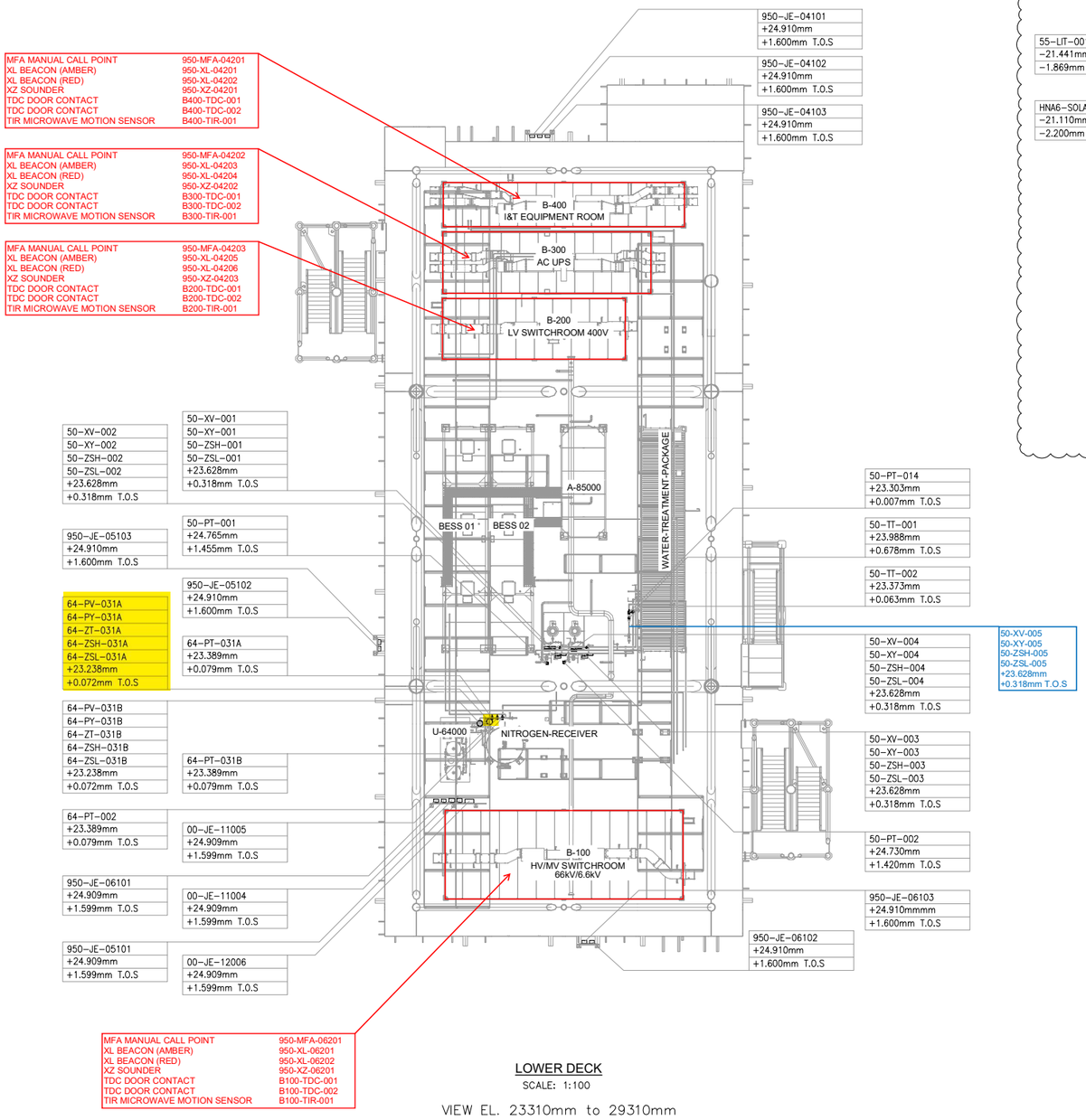
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

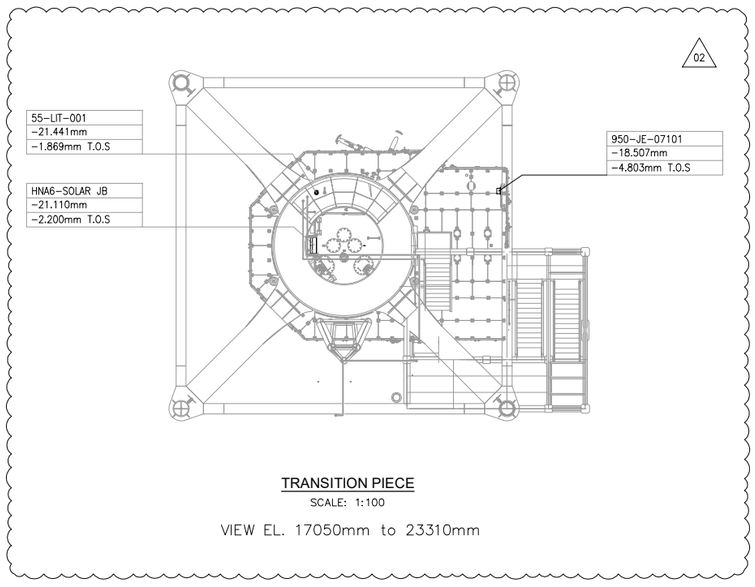
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:24:16.989Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:38:26.254Z	

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

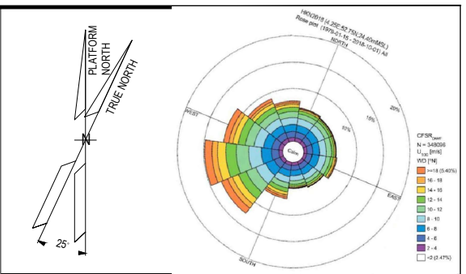
REV. 02



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

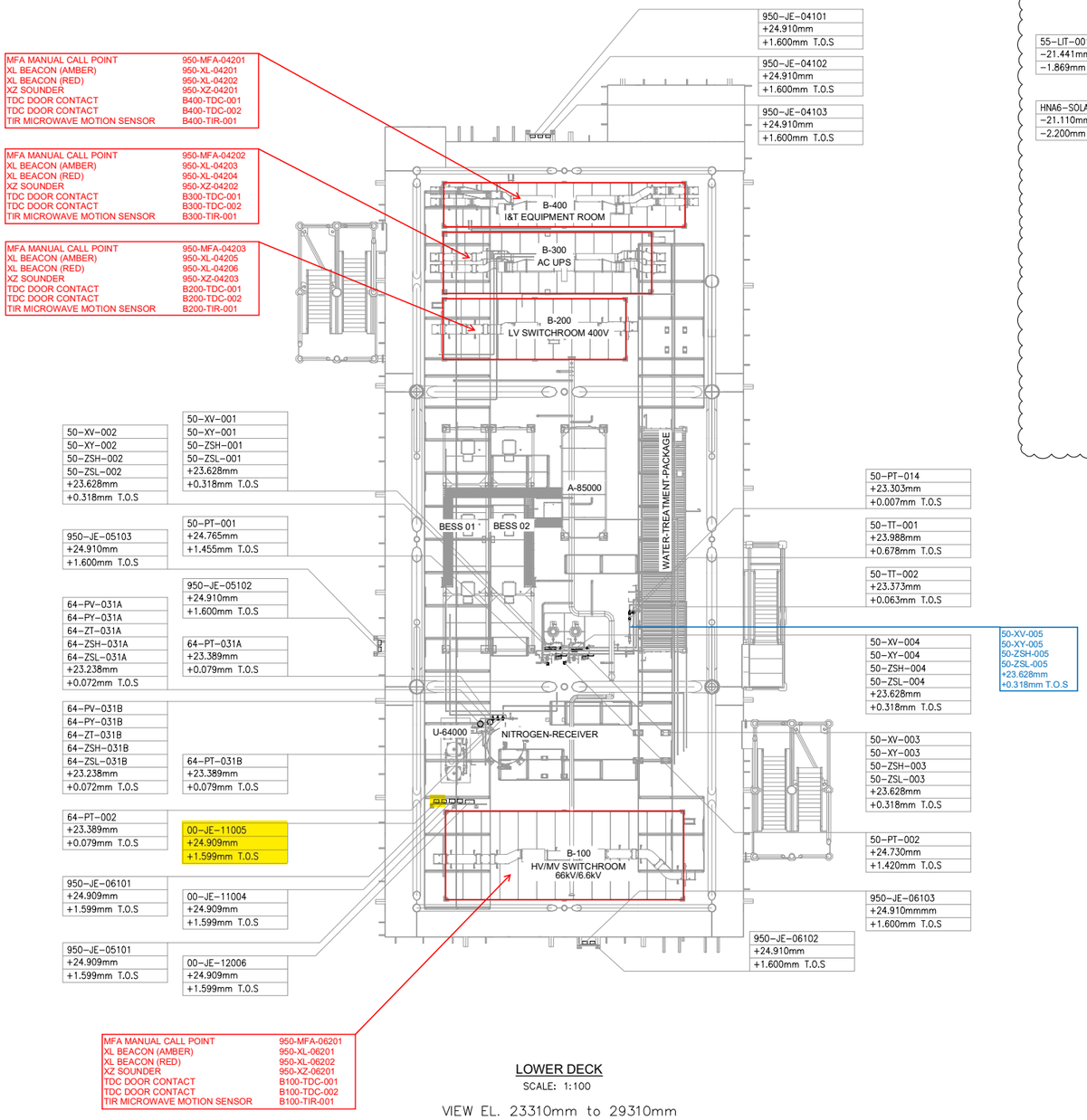
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

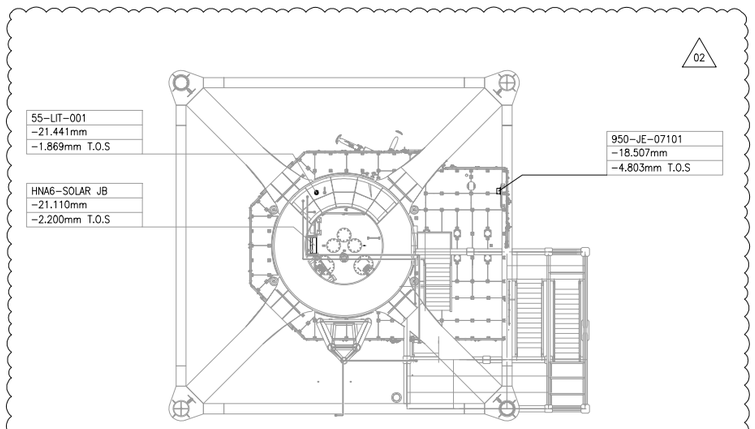
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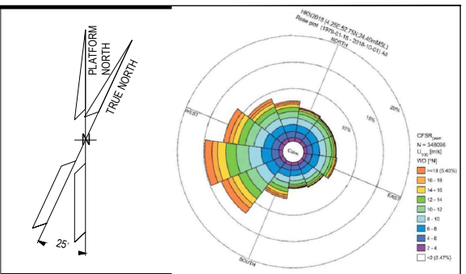
REV. 02



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

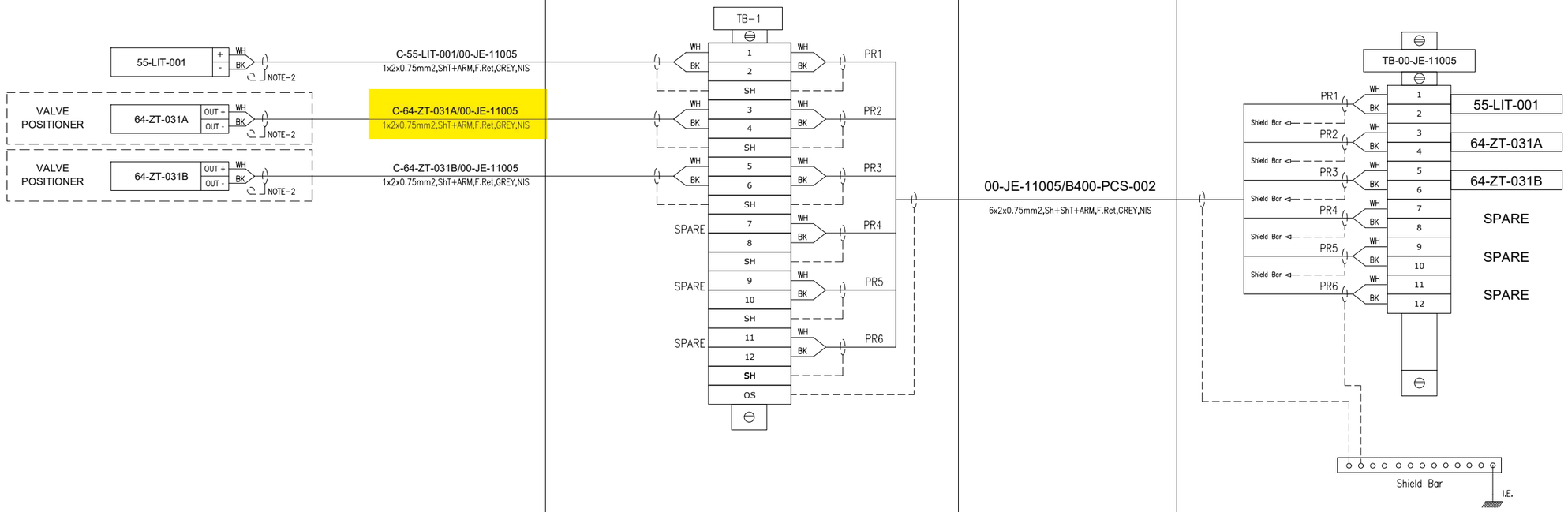
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DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

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

<01>



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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

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

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

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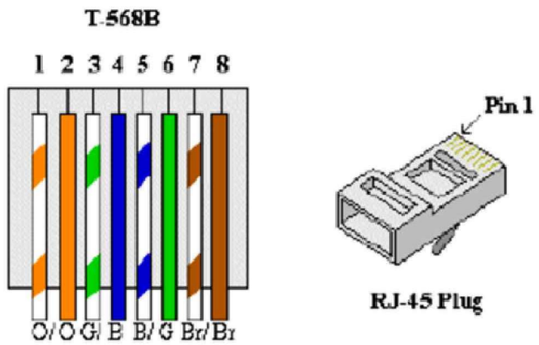
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



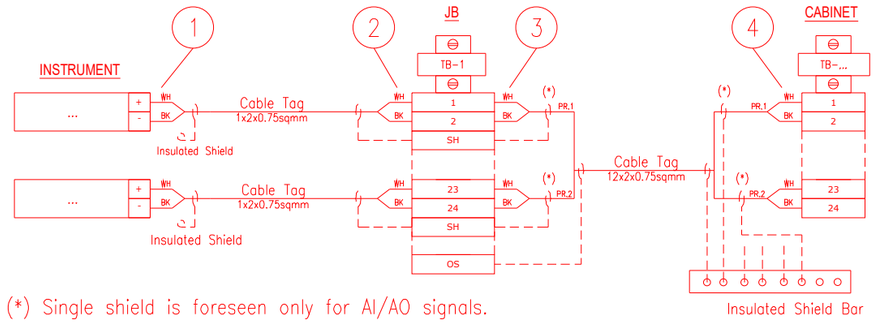
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

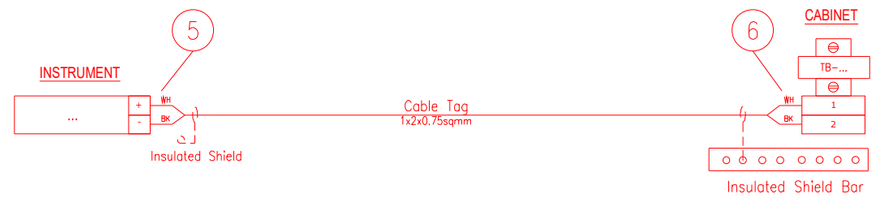
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

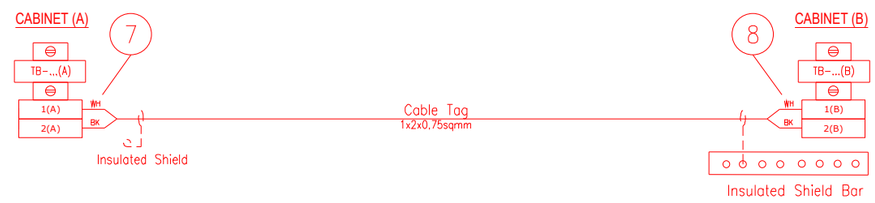
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

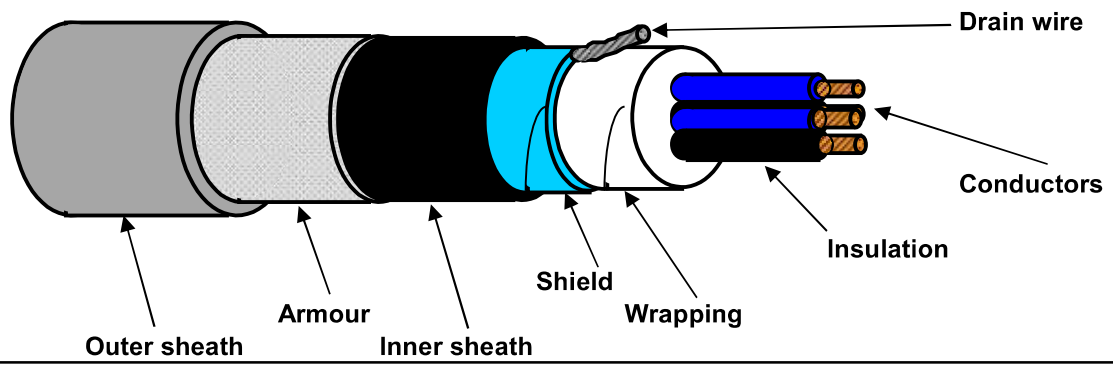
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-ZT-031A/00-JE-11005	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-ZT-031A	Position Transmitter	Upper Deck	00-JE-11005	AI/AO JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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

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



TECHNICAL FEATURES

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

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

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

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

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-ZT-031B/00-JE-11005 : POSITION TRANSMITTER / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10 : Nitrogen Distribution Network			Module	LD/LD_B-100_Ext	
TASK	code	C10000060	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	64-ZT-031B		To	00-JE-11005	

1	Check cable is as specified in project cable schedule.	OK
2	Check relevant documents are at the latest revision.	OK
3	Check cable is routed in accordance with cable layout drawings.	OK
4	Check cable for any physical damage.	OK
5	Check cable is adequately supported and correctly fixed to rack according to Project specification.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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	0,8	Ω
	SCREEN	0,8	Ω
	EARTH	NA	Ω
	ARMr	0,8	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

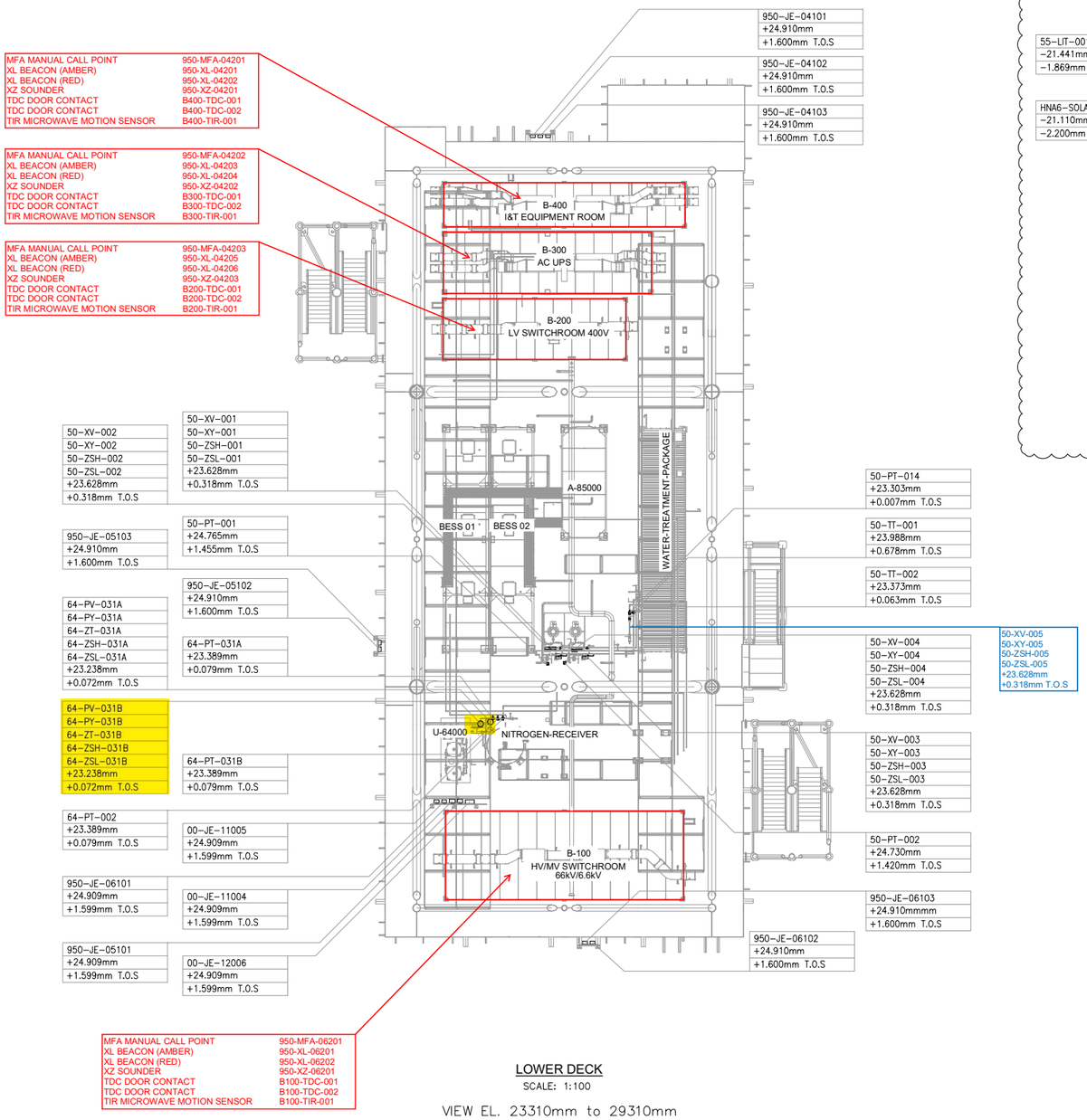
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

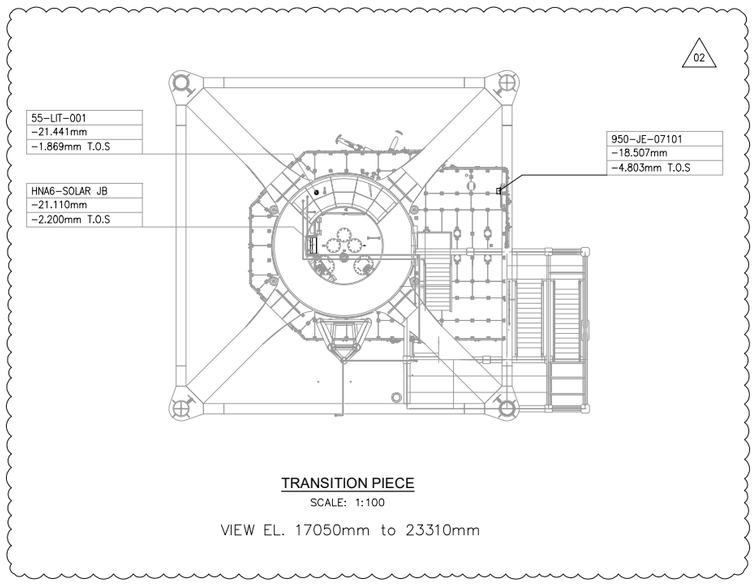
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:24:26.250Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:40:12.149Z	

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

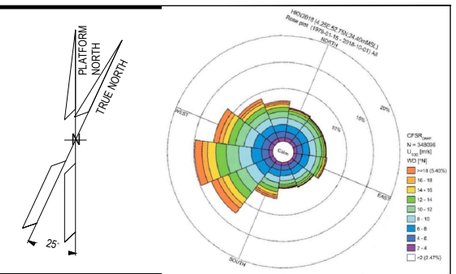
REV. 02



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

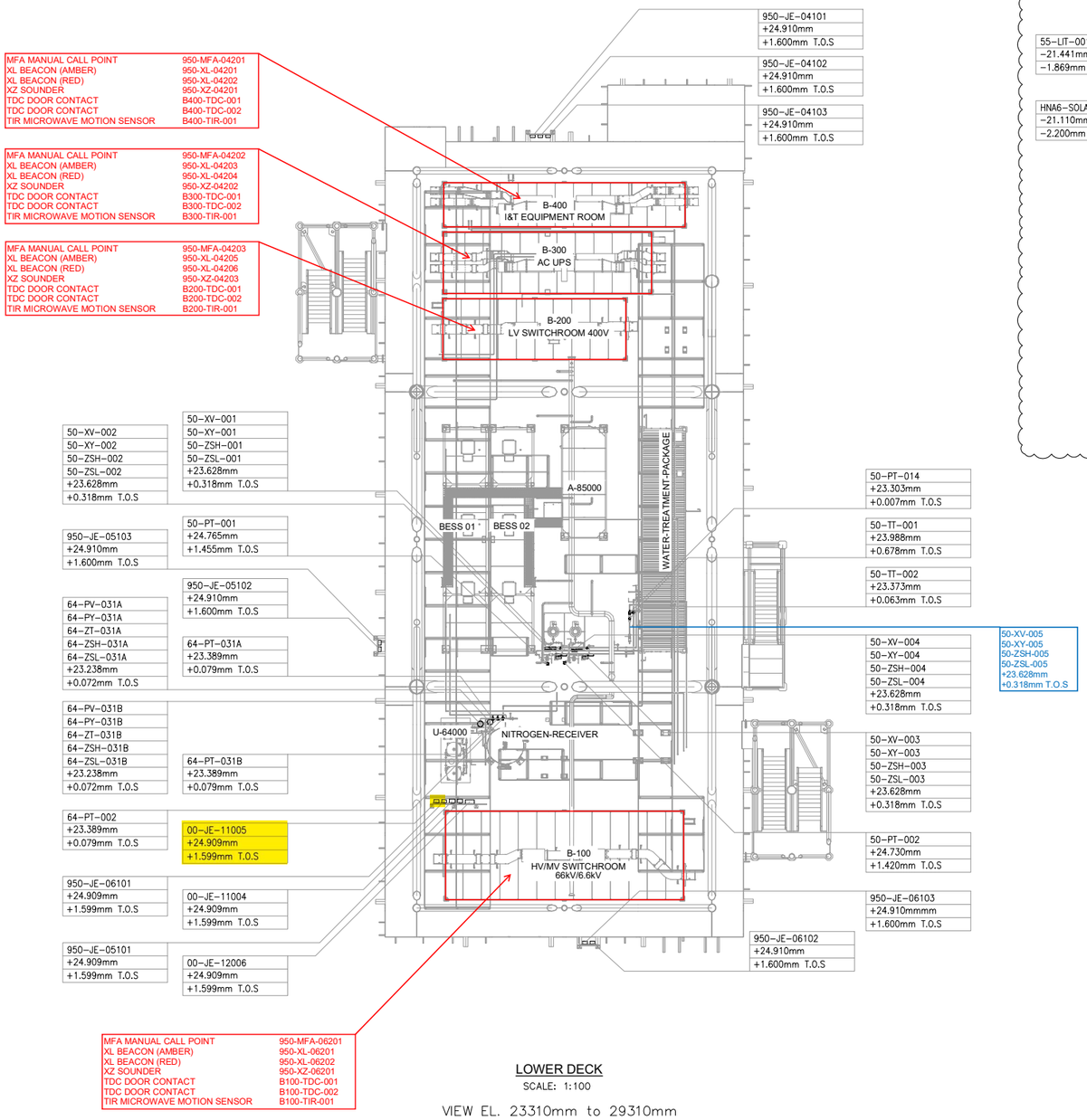
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

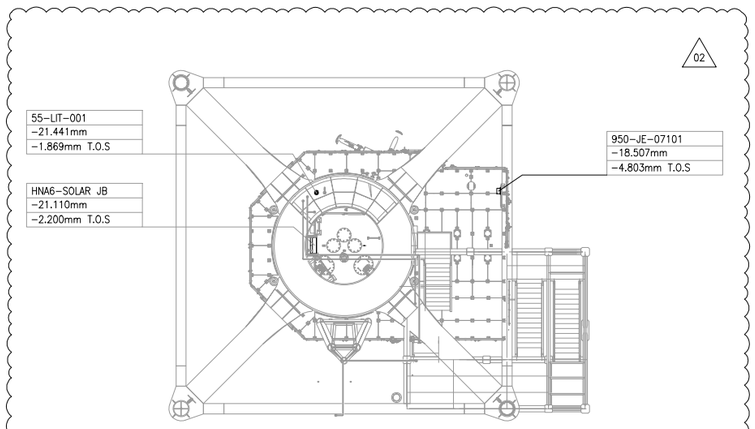
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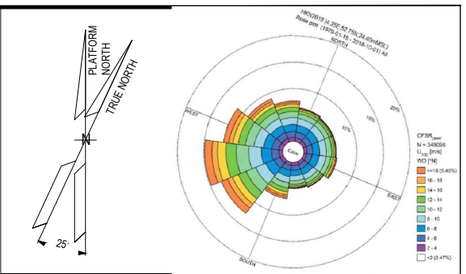
REV. 02



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



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



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LEGEND

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HOLDS

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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

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CROSSWIND

ROSETTI MARINO

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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

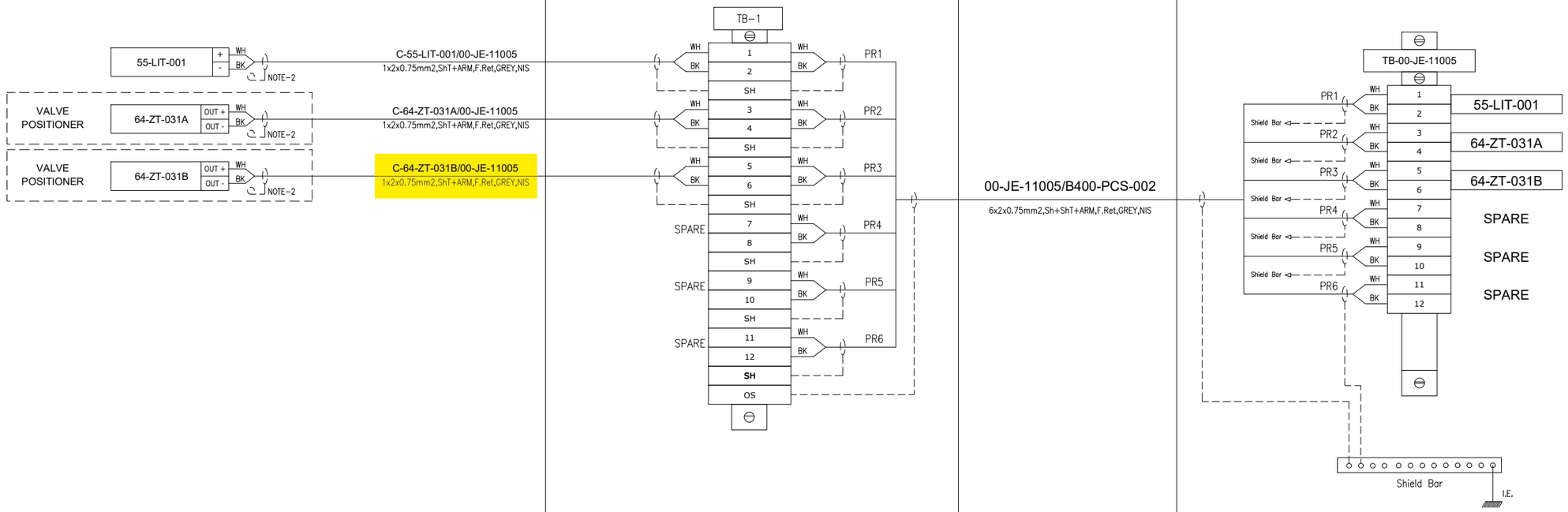
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DRAWING NO. 123A90-DDL-IN-DG-40015

REV. 01

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

<01>



VALID FOR CONSTRUCTION

FDL DWG: **123A90-FDL-IN-DG-40015**

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

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

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

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

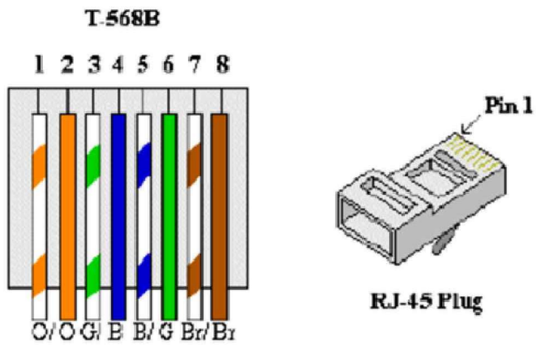
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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

REV. 01

NOTES:

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



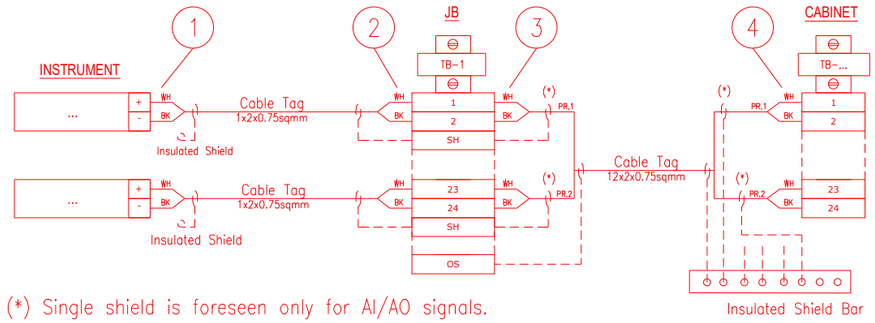
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

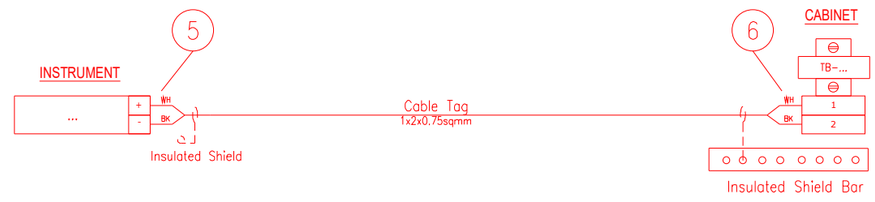
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

PHILOSOPHY OF CROSS-FERRULING:

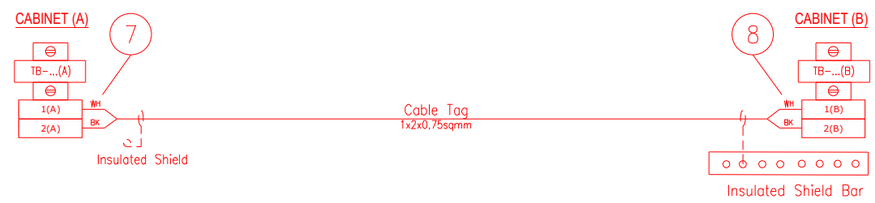
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



INSTRUMENT CONNECTION STRAIGHT TO CABINET



CABINET CONNECTION TO CABINET



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

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

REFERENCE DRAWINGS:

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

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

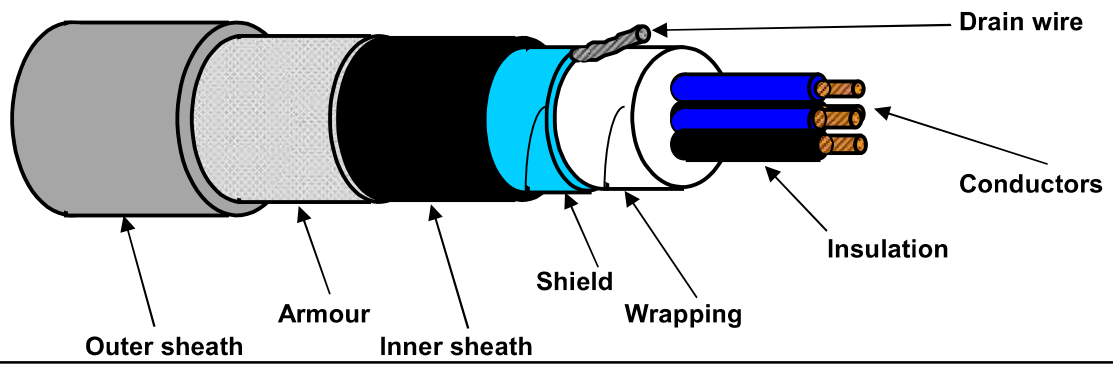
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-ZT-031B/00-JE-11005	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-ZT-031B	Position Transmitter	Lower Deck	00-JE-11005	AI/AO JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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

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



TECHNICAL FEATURES

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

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

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

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

ROSETTI MARINO

CROSSWIND

ITEM	Tag	C-64-ZSL-031A/00-JE-12006	: PROXIMITY SWITCH / MARSHALLING PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD/LD_B-100_Ext	
TASK	code	C10000107		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	64-ZSL-031A		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.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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	0,8	Ω
	SCREEN	0,8	Ω
	EARTH	NA	Ω
	ARMr	0,8	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

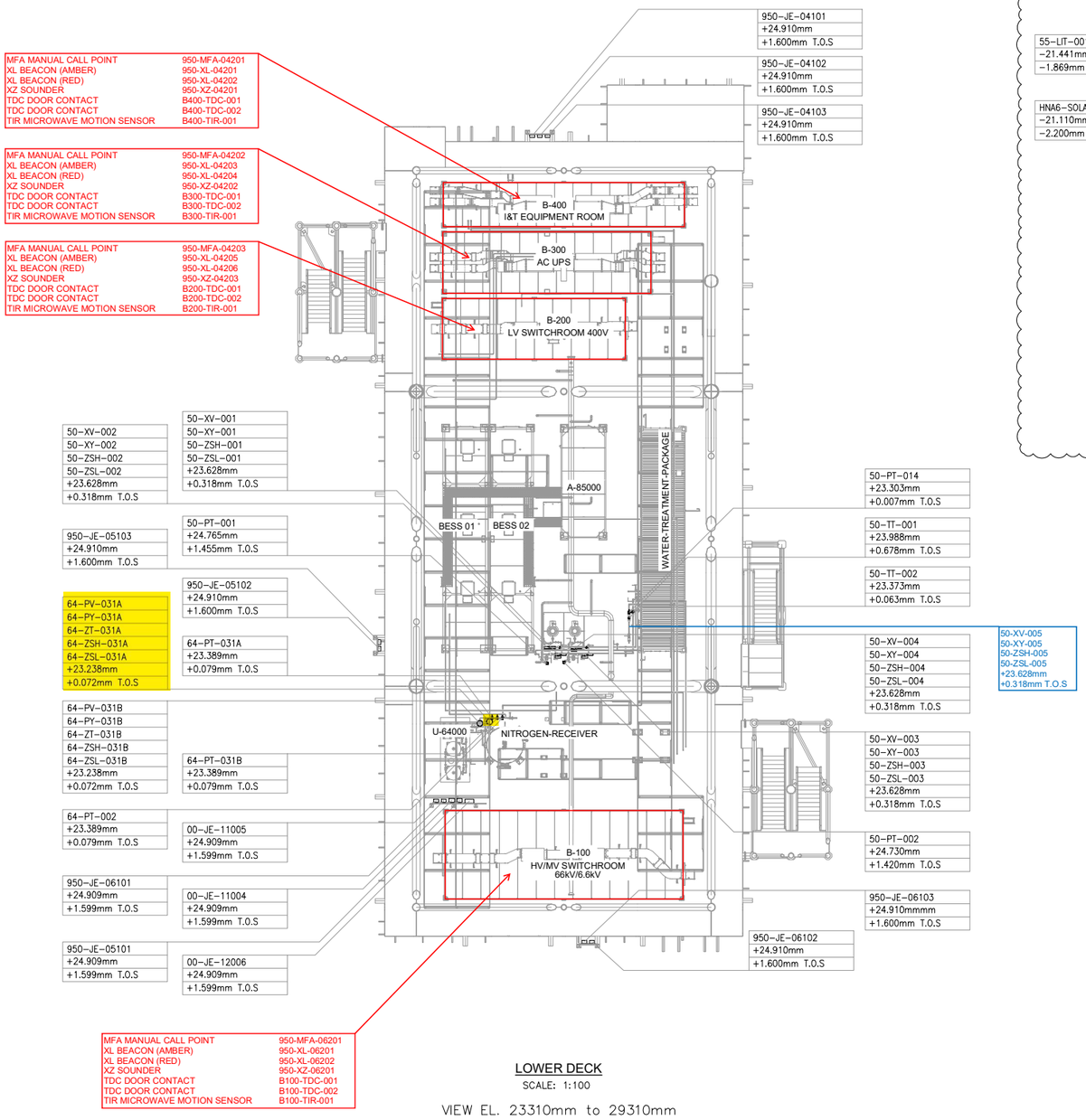
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

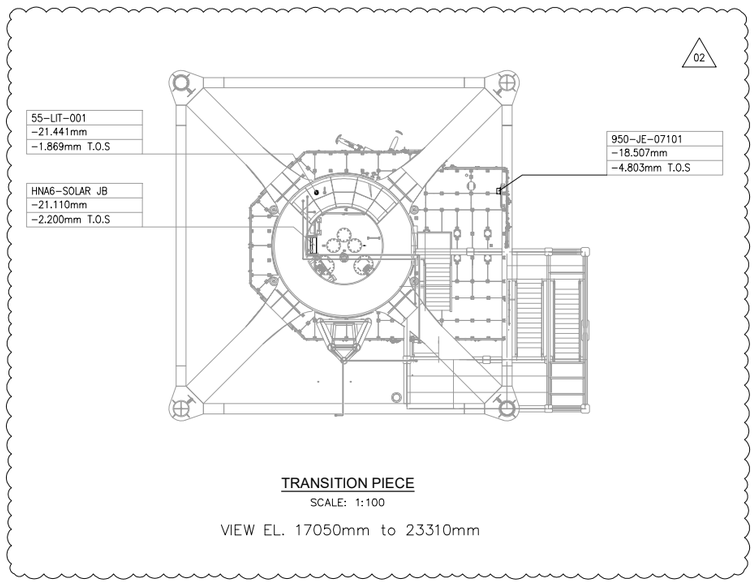
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:37:34.991Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T17:16:50.105Z	

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

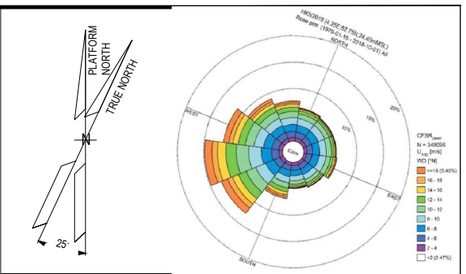
REV. 02



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



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



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- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

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123A90-DDL-IN-DG-40016	INSTRUMENT-SAFETY SYSTEM WIRING DIAGRAMS
123A90-DDL-IN-DL-40083	INSTRUMENT MAIN CABLES ROUTING-UPPER DECK

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00	22/12/23	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

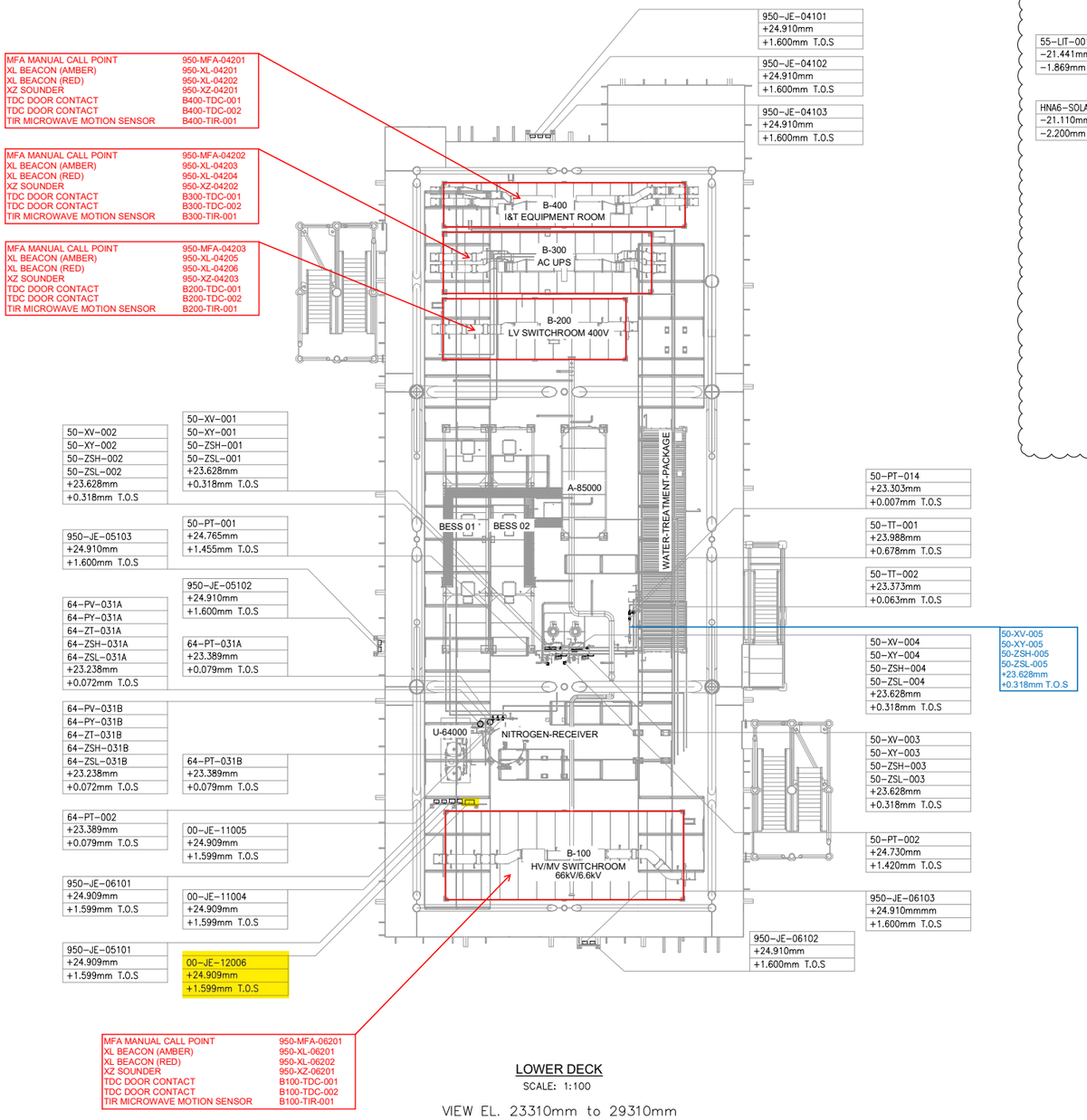
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

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

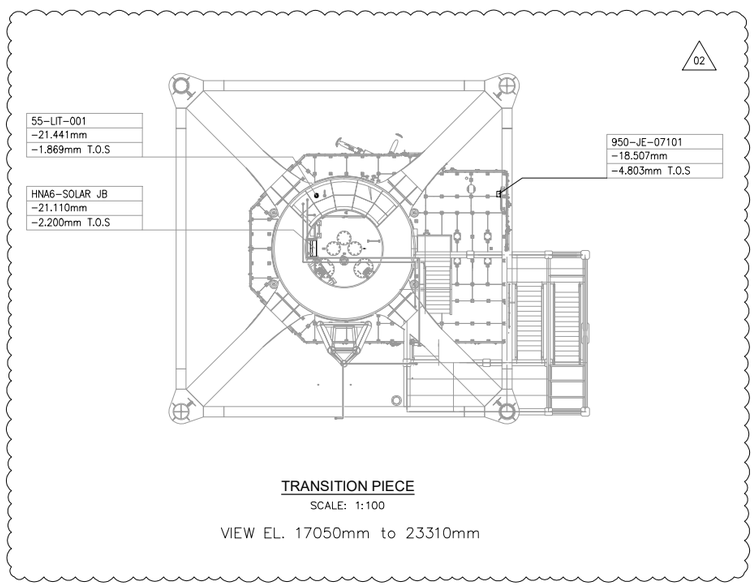
DRAWING NO. 123A90-DDL-IN-DL-40080

REV. 02

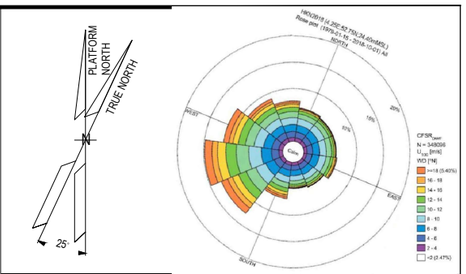


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

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

<01>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2, 3) WH/BK — NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

64-ZSH-031A (5, 6) WH/BK — NOTE-2

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2, 3) WH/BK — NOTE-2

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

64-ZSH-031B (5, 6) WH/BK — NOTE-2

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

	25	PR1
	26	
	SH	
	27	PR2
	28	
	SH	
	29	PR3
	30	
	SH	
	31	PR4
	32	
	SH	
SPARE	33	PR5
	34	
	SH	
SPARE	35	PR6
	36	
	SH	
SPARE	37	PR7
	38	
	SH	
SPARE	39	PR8
	40	
	SH	
SPARE	41	PR9
	42	
	SH	
SPARE	43	PR10
	44	
	SH	
SPARE	45	PR11
	46	
	SH	
SPARE	47	PR12
	48	
	SH	
	OS	

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1	25	64-ZSL-031A
	26	
PR2	27	64-ZSH-031A
	28	
PR3	29	64-ZSL-031B
	30	
PR4	31	64-ZSH-031B
	32	
PR5	33	SPARE
	34	
PR6	35	SPARE
	36	
PR7	37	SPARE
	38	
PR8	39	SPARE
	40	
PR9	41	SPARE
	42	
PR10	43	SPARE
	44	
PR11	45	SPARE
	46	
PR12	47	SPARE
	48	

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-12006-SH.2 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 023	REV. 01

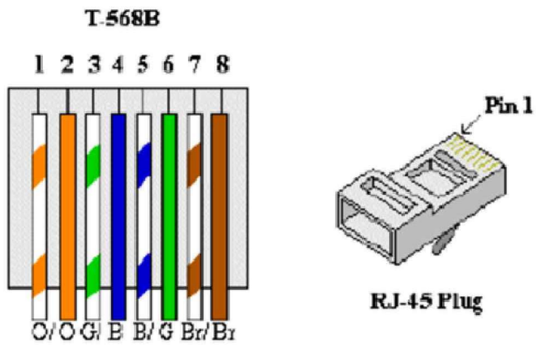
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



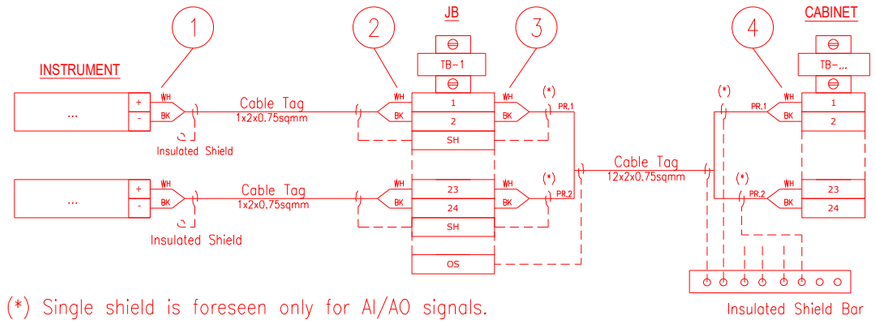
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

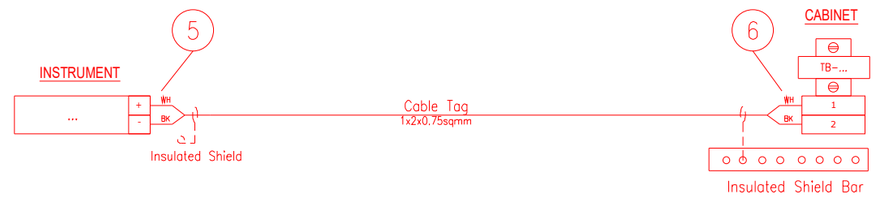
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

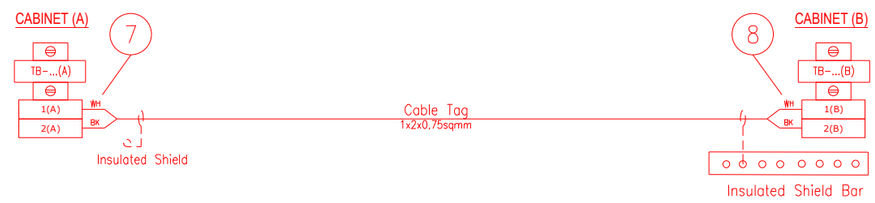
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

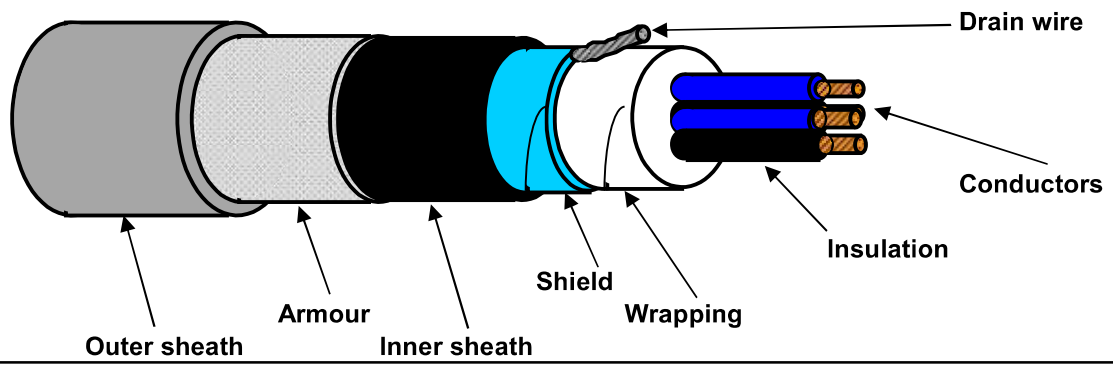
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-ZSL-031A/00-JE-12006	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-ZSL-031A	Proximity Switch	Upper Deck	00-JE-12006	DI JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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

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



TECHNICAL FEATURES

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

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

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

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

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-64-ZSH-031A/00-JE-12006	: PROXIMITY SWITCH / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD/LD_B-100_Ext		
TASK	code	C10000108	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	64-ZSH-031A	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.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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	0,8	Ω
	SCREEN	0,8	Ω
	EARTH	NA	Ω
	ARMr	0,8	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

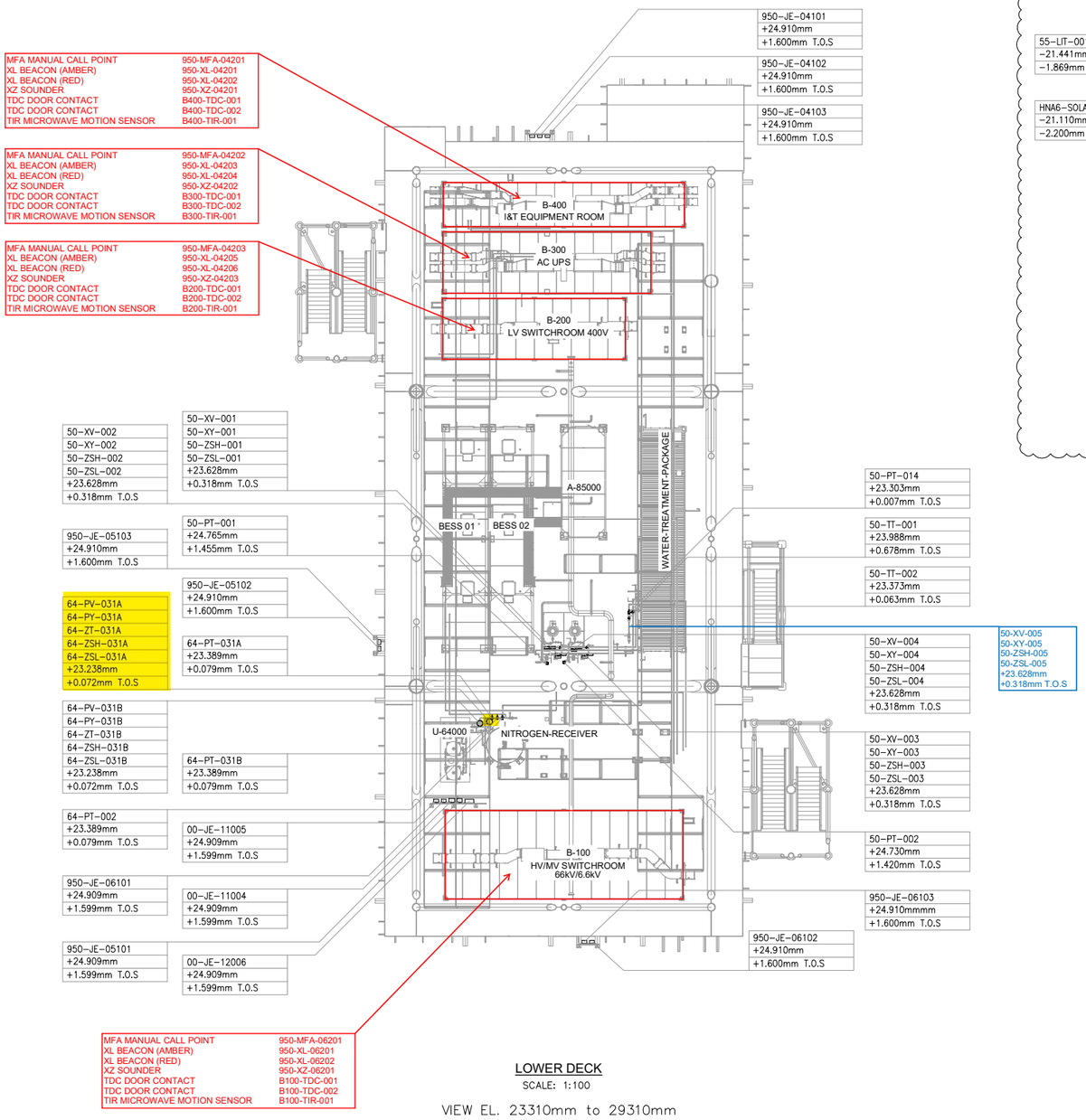
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

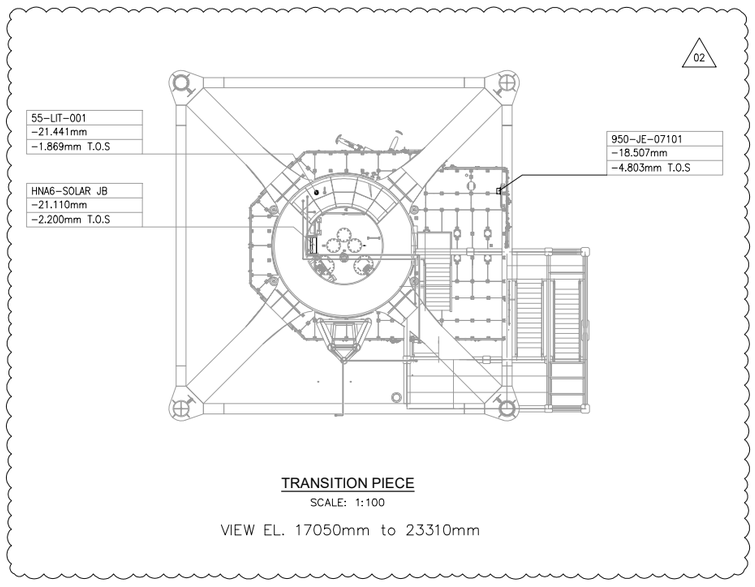
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:38:11.490Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:58:09.043Z	

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

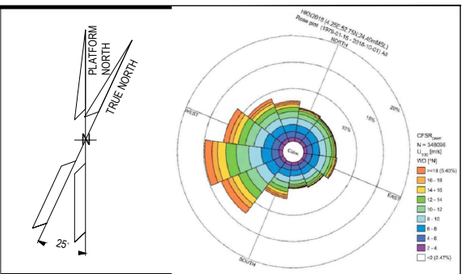
REV. 02



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

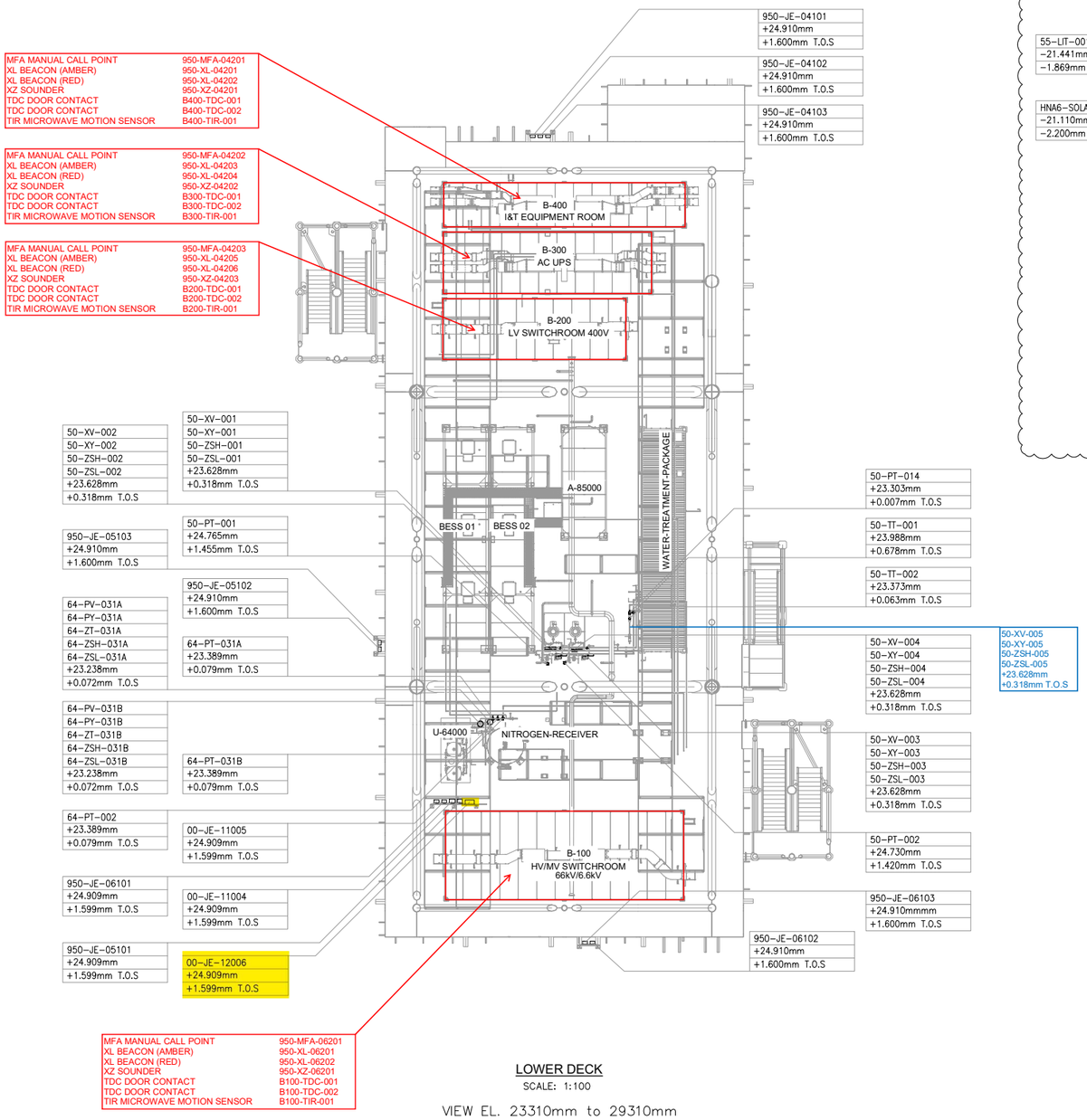
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

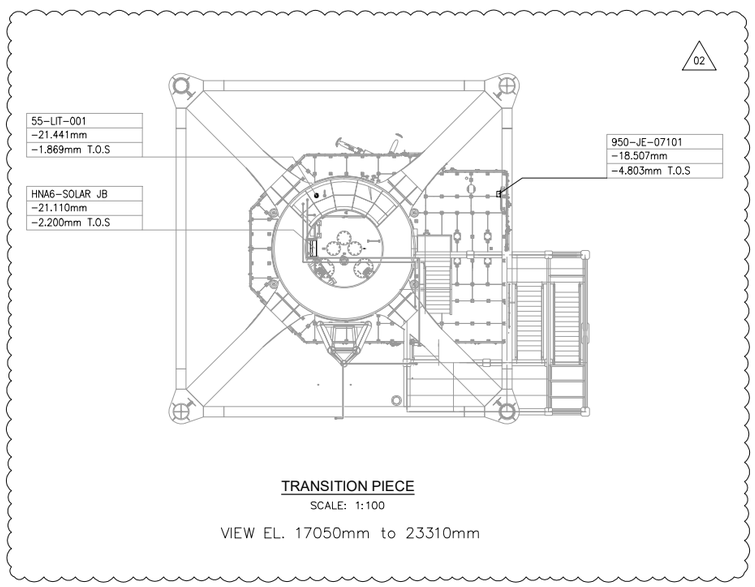
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REV. 02

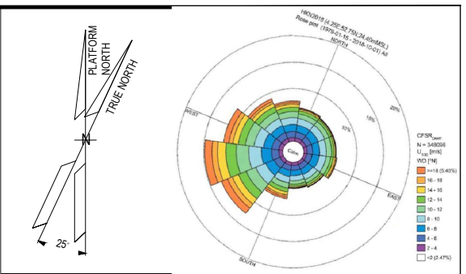


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

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

<01>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2, 3) WH, BK — NOTE-2

64-ZSH-031A (5, 6) WH, BK — NOTE-2

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2, 3) WH, BK — NOTE-2

64-ZSH-031B (5, 6) WH, BK — NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

	25	PR1
	26	
	SH	
	27	PR2
	28	
	SH	
	29	PR3
	30	
	SH	
	31	PR4
	32	
	SH	
SPARE	33	PR5
	34	
	SH	
SPARE	35	PR6
	36	
	SH	
SPARE	37	PR7
	38	
	SH	
SPARE	39	PR8
	40	
	SH	
SPARE	41	PR9
	42	
	SH	
SPARE	43	PR10
	44	
	SH	
SPARE	45	PR11
	46	
	SH	
SPARE	47	PR12
	48	
	SH	
	OS	

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1	25	64-ZSL-031A
	26	
PR2	27	64-ZSH-031A
	28	
PR3	29	64-ZSL-031B
	30	
PR4	31	64-ZSH-031B
	32	
PR5	33	SPARE
	34	
PR6	35	SPARE
	36	
PR7	37	SPARE
	38	
PR8	39	SPARE
	40	
PR9	41	SPARE
	42	
PR10	43	SPARE
	44	
PR11	45	SPARE
	46	
PR12	47	SPARE
	48	

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

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

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
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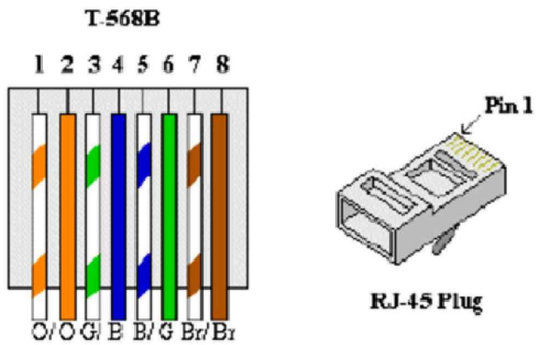
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



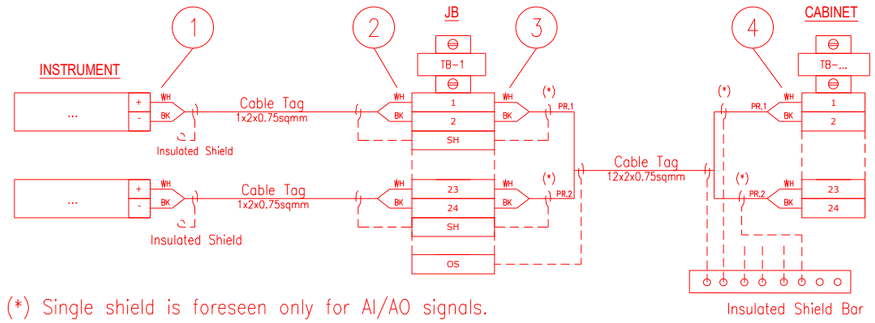
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

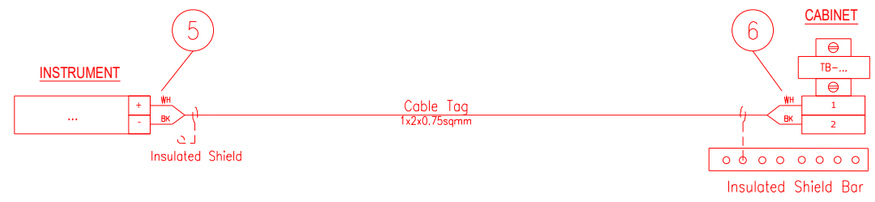
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

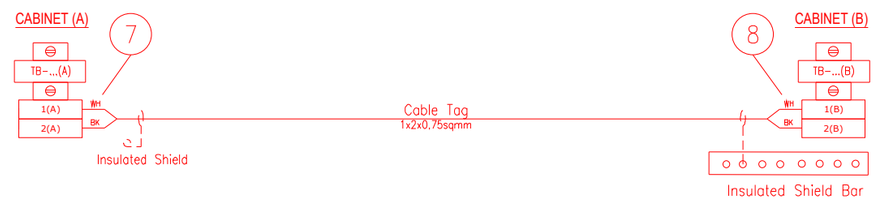
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

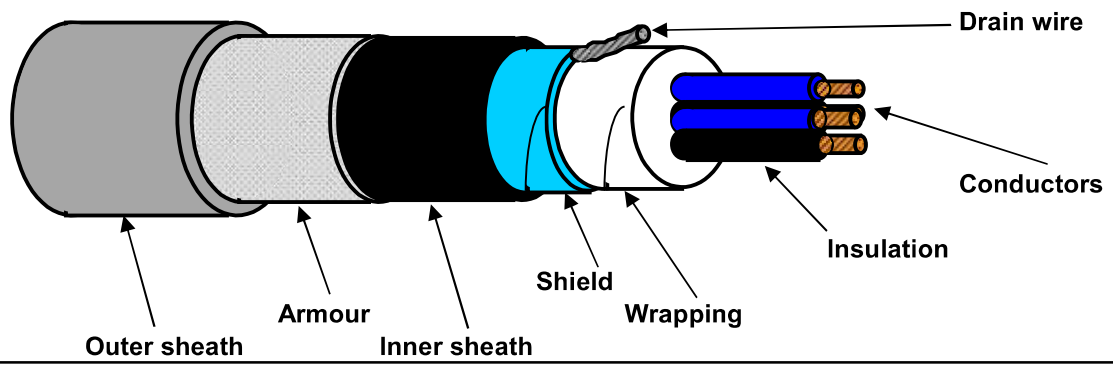
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-ZSH-031A/00-JE-12006	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-ZSH-031A	Proximity Switch	Upper Deck	00-JE-12006	DI JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-13 / L-SEC-1L / L-SEC-1M / L-SEC-16

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 | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-ZSL-031B/00-JE-12006 : PROXIMITY SWITCH / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10 : Nitrogen Distribution Network			Module	LD/LD_B-100_Ext	
TASK	code	C10000109	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	64-ZSL-031B	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.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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	0,8	Ω
	SCREEN	0,8	Ω
	EARTH	NA	Ω
	ARMr	0,8	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

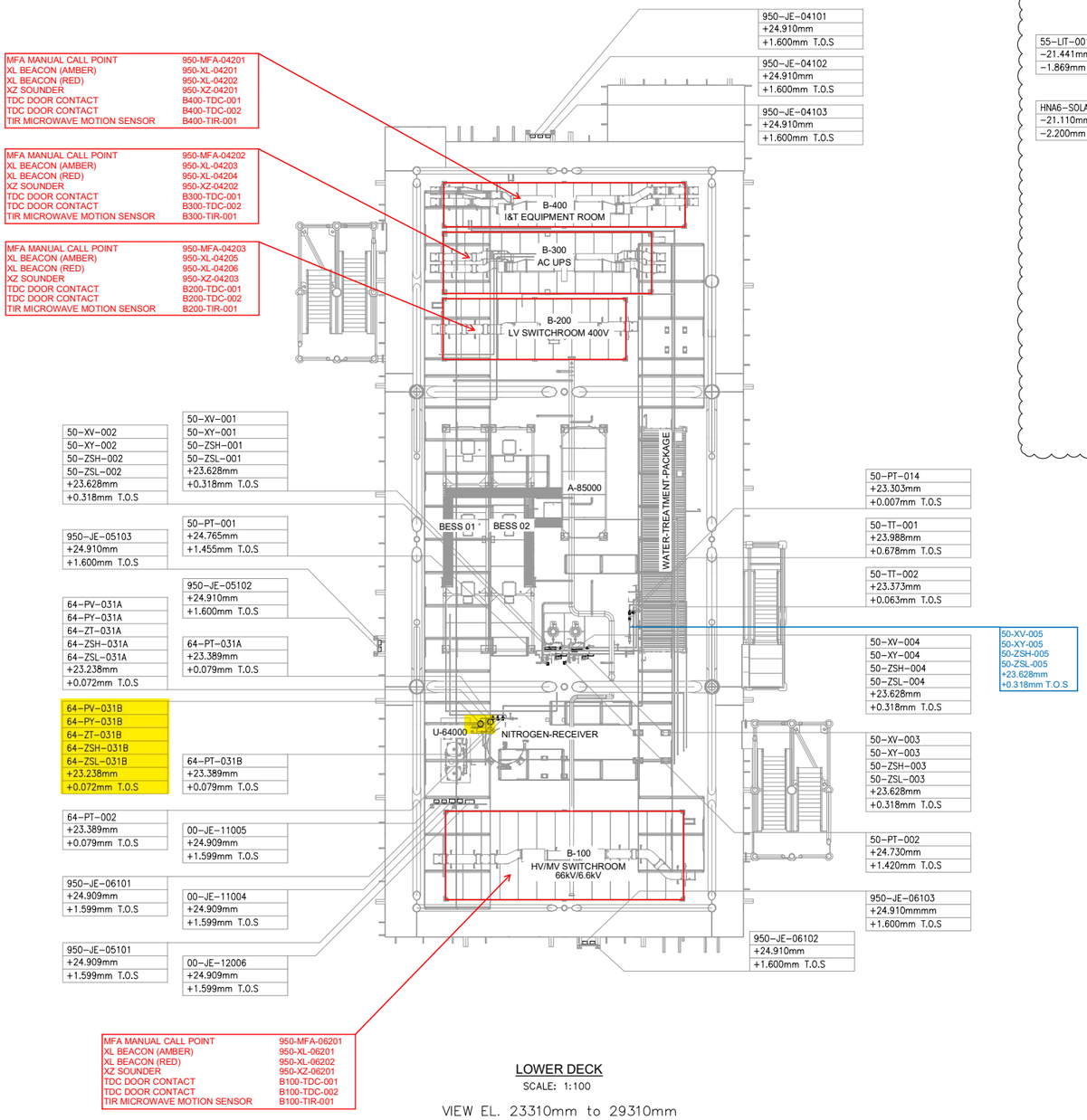
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

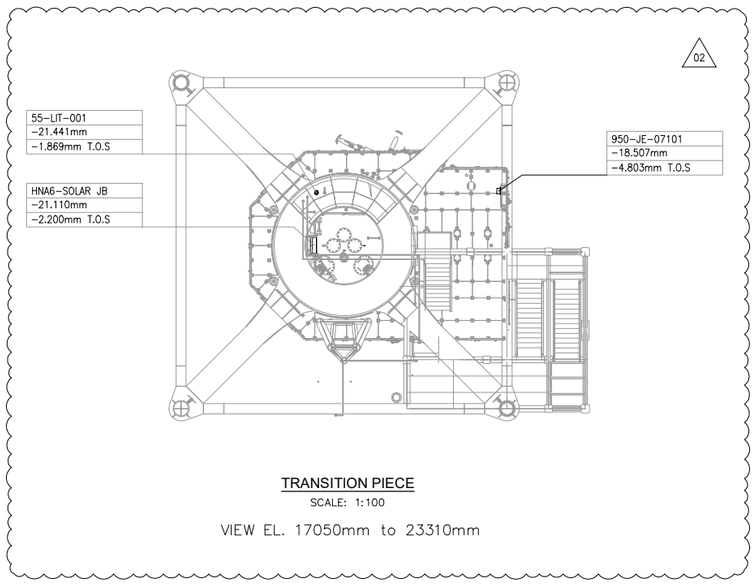
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:38:49.503Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:25:12.320Z	

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

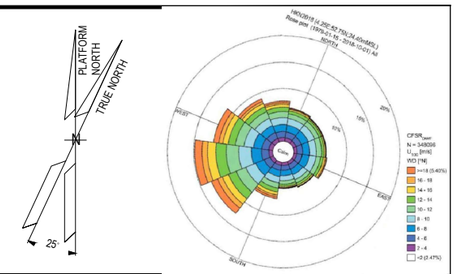
REV. 02



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

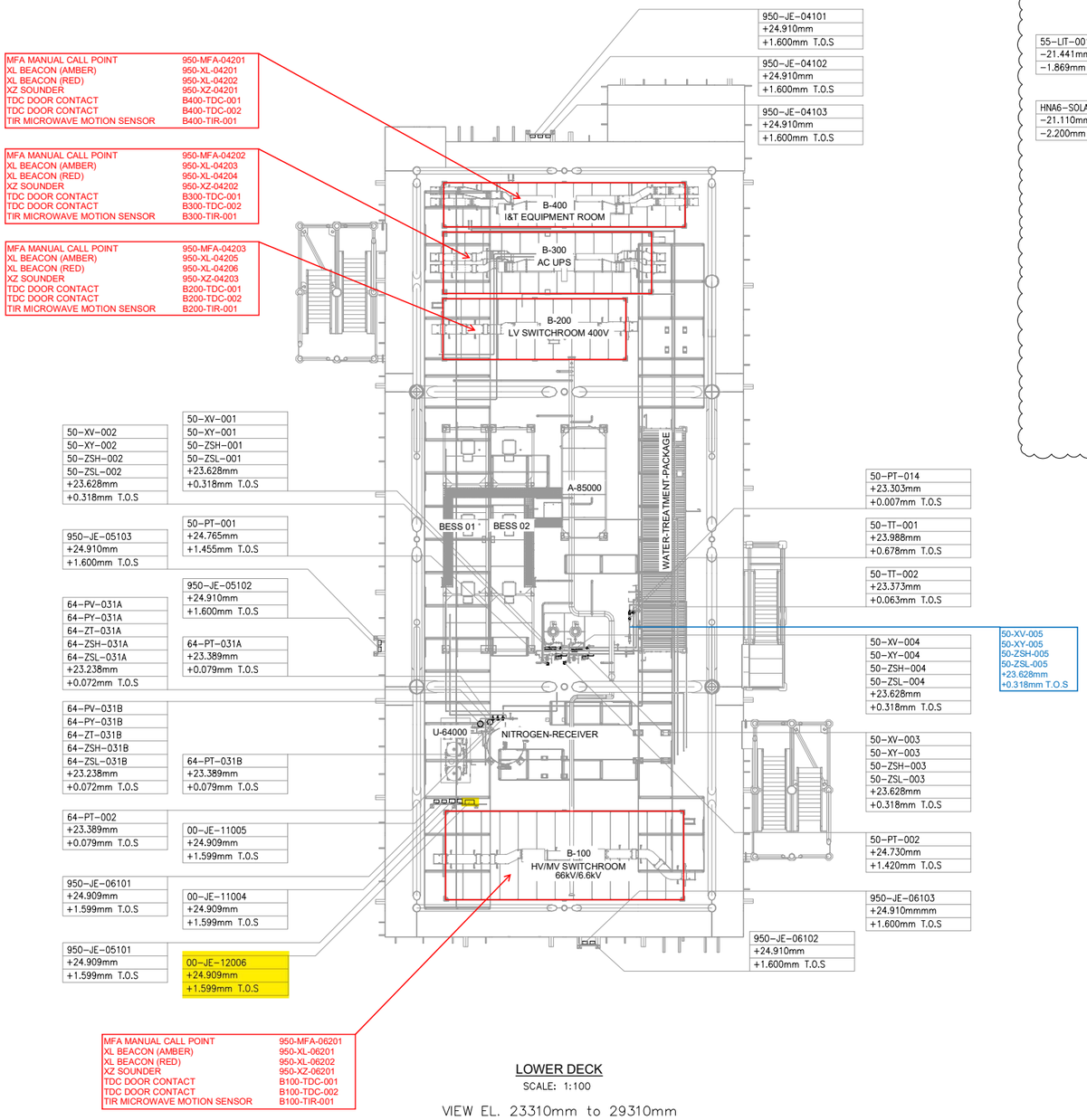
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

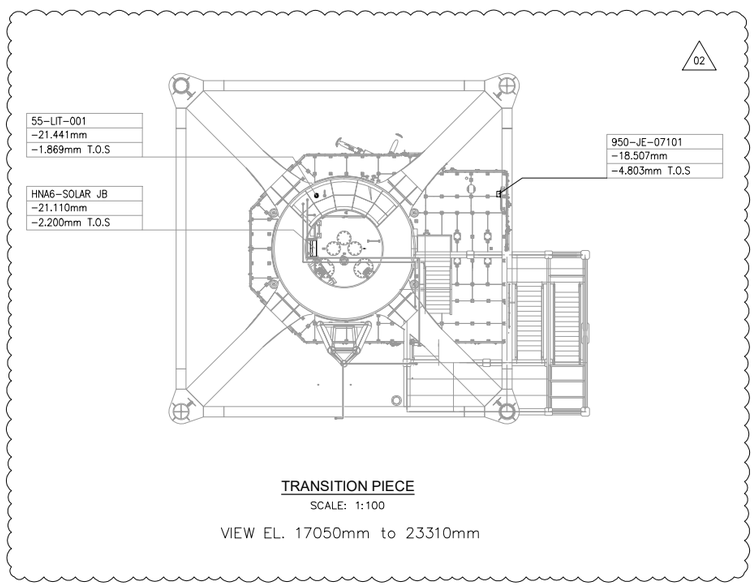
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REV. 02

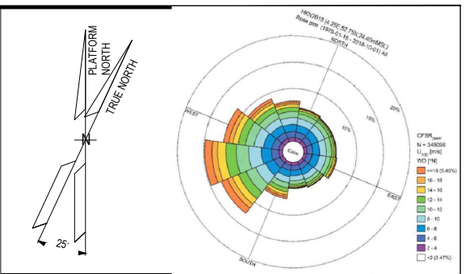


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

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

<01>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2 WH, 3 BK) NOTE-2 — C-64-ZSL-031A/00-JE-12006, 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

64-ZSH-031A (5 WH, 6 BK) NOTE-2 — C-64-ZSH-031A/00-JE-12006, 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2 WH, 3 BK) NOTE-2 — C-64-ZSL-031B/00-JE-12006, 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

64-ZSH-031B (5 WH, 6 BK) NOTE-2 — C-64-ZSH-031B/00-JE-12006, 1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

	25	WH/BK	PR1
	26		
	SH		
	27	WH/BK	PR2
	28		
	SH		
	29	WH/BK	PR3
	30		
	SH		
	31	WH/BK	PR4
	32		
	SH		
SPARE	33	WH/BK	PR5
	34		
	SH		
SPARE	35	WH/BK	PR6
	36		
	SH		
SPARE	37	WH/BK	PR7
	38		
	SH		
SPARE	39	WH/BK	PR8
	40		
	SH		
SPARE	41	WH/BK	PR9
	42		
	SH		
SPARE	43	WH/BK	PR10
	44		
	SH		
SPARE	45	WH/BK	PR11
	46		
	SH		
SPARE	47	WH/BK	PR12
	48		
	SH		
	OS		

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1	25	WH/BK	64-ZSL-031A
Shield Bar	26		
PR2	27	WH/BK	64-ZSH-031A
Shield Bar	28		
PR3	29	WH/BK	64-ZSL-031B
Shield Bar	30		
PR4	31	WH/BK	64-ZSH-031B
Shield Bar	32		
PR5	33	WH/BK	SPARE
Shield Bar	34		
PR6	35	WH/BK	SPARE
Shield Bar	36		
PR7	37	WH/BK	SPARE
Shield Bar	38		
PR8	39	WH/BK	SPARE
Shield Bar	40		
PR9	41	WH/BK	SPARE
Shield Bar	42		
PR10	43	WH/BK	SPARE
Shield Bar	44		
PR11	45	WH/BK	SPARE
Shield Bar	46		
PR12	47	WH/BK	SPARE
	48		

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

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

CONTRACT NO./TITLE			SCALE 1:1
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 23/02/2024
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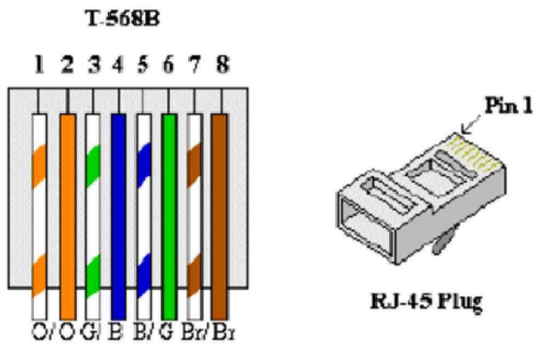
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



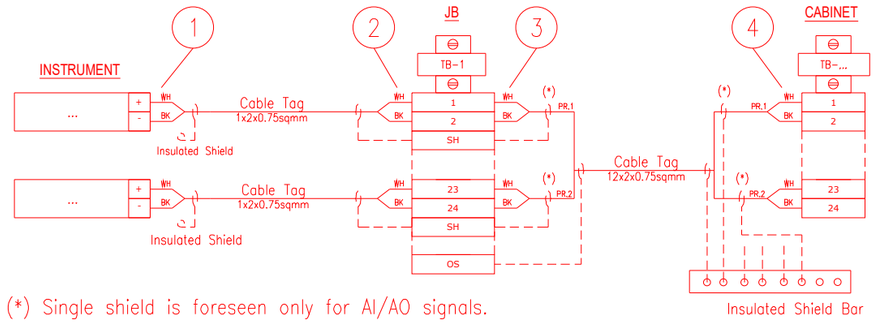
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

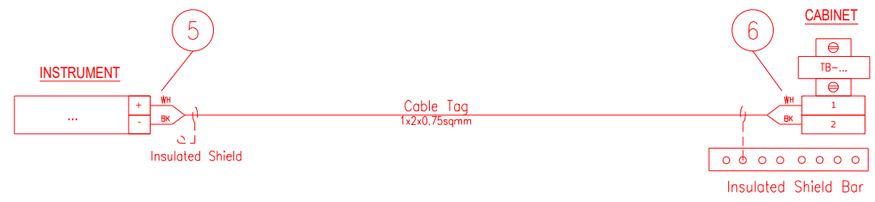
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

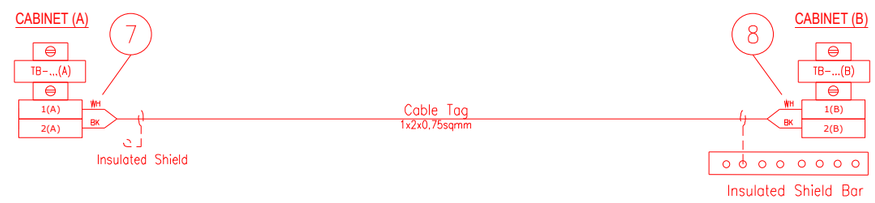
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	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

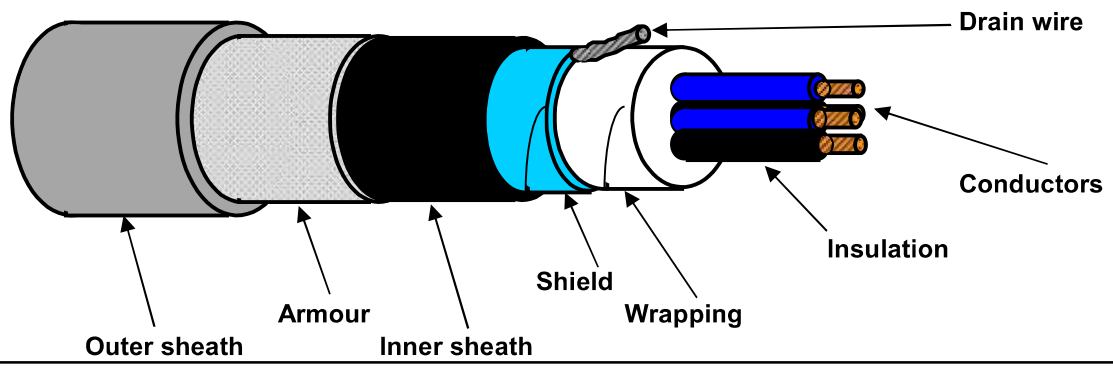
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File Name : 123A90-DDL-IN-DG-40015_Rev.01

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-ZSL-031B/00-JE-12006	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-ZSL-031B	Proximity Switch	Lower Deck	00-JE-12006	DI JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-1L / L-SEC-1M / L-SEC-16

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

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



TECHNICAL FEATURES

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

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

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

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

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	C-64-ZSH-031B/00-JE-12006 : PROXIMITY SWITCH / MARSHALLING PCS			Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10 : Nitrogen Distribution Network			Module	LD/LD_B-100_Ext	
TASK	code	C10000110	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	64-ZSH-031B	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.	Note
6	Check bending radius is within the specified limits.	OK
7	Check cable is correctly loomed and segregated in accordance with specification.	OK
8	Check cable and core marking are in accordance with specification.	OK
9	Check cable labelling is in accordance with specification.	PL
10	Check that glands, shrouds and earthing are in accordance with specification.	OK
11	Check terminations are in accordance with termination diagram	PL
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		0,8	Ω
	SCREEN		0,8	Ω
	EARTH		NA	Ω
	ARMr		0,8	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

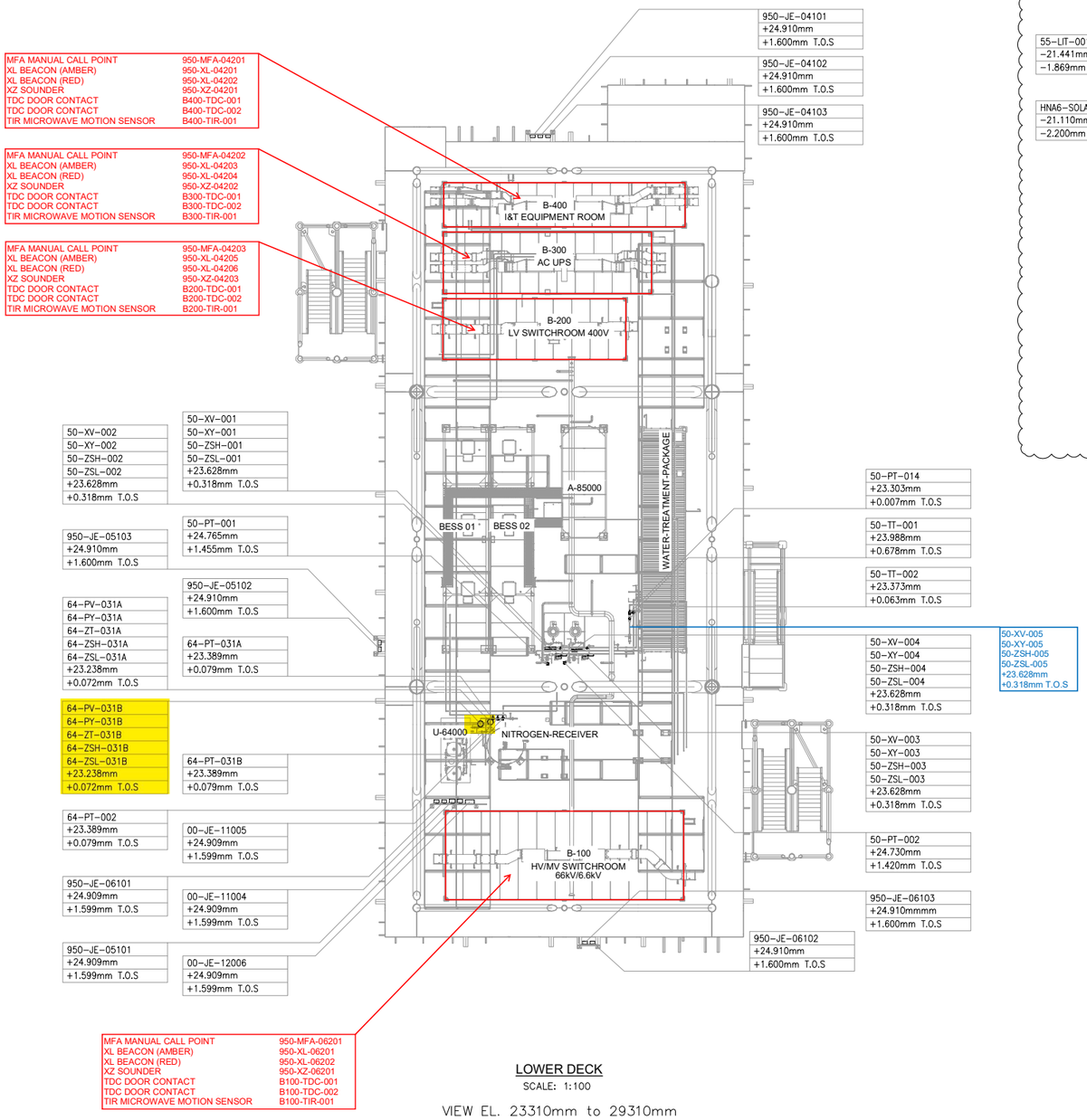
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 Calibration date: N°LAT 042 00768/24 12/10/2024

Comments Nota 5: refer to PL C30000680/C30000682

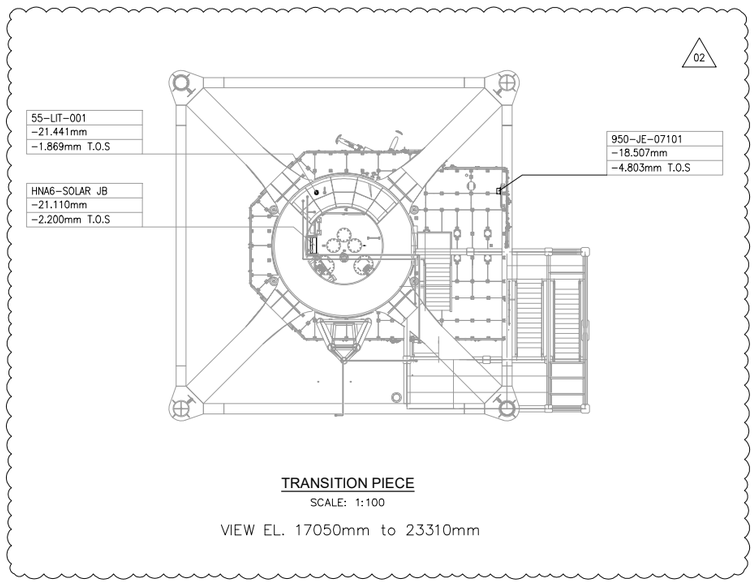
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:39:06.199Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T16:28:45.724Z	

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

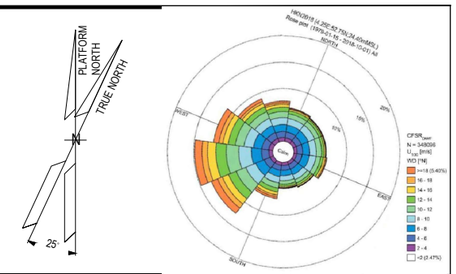
REV. 02



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

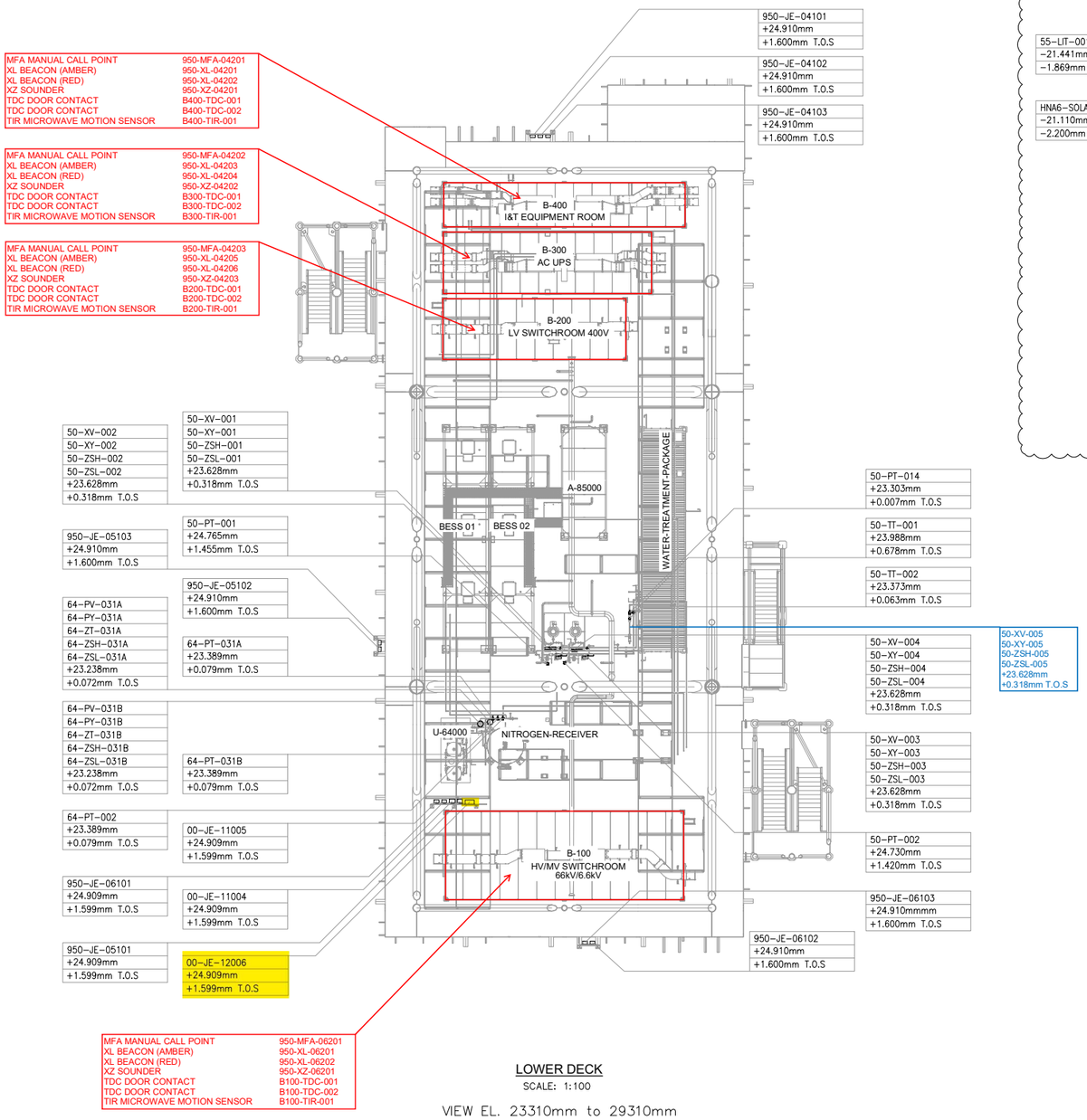
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

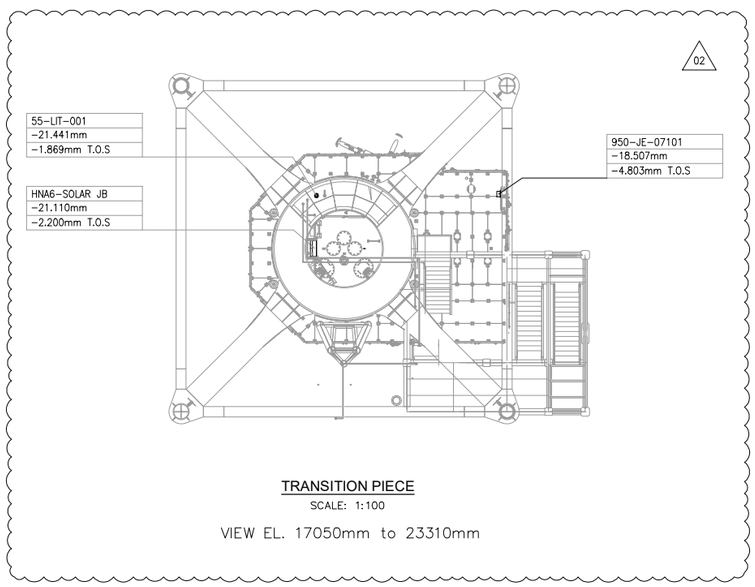
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REV. 02

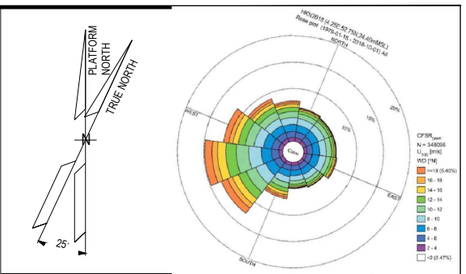


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

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

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

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

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

REV. 01

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

<01>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2, 3) WH, BK — NOTE-2

64-ZSH-031A (5, 6) WH, BK — NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2, 3) WH, BK — NOTE-2

64-ZSH-031B (5, 6) WH, BK — NOTE-2

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

WH, BK	25	WH, BK	PR1
	26		
	SH		
WH, BK	27	WH, BK	PR2
	28		
	SH		
WH, BK	29	WH, BK	PR3
	30		
	SH		
WH, BK	31	WH, BK	PR4
	32		
	SH		
SPARE	33	WH, BK	PR5
	34		
	SH		
SPARE	35	WH, BK	PR6
	36		
	SH		
SPARE	37	WH, BK	PR7
	38		
	SH		
SPARE	39	WH, BK	PR8
	40		
	SH		
SPARE	41	WH, BK	PR9
	42		
	SH		
SPARE	43	WH, BK	PR10
	44		
	SH		
SPARE	45	WH, BK	PR11
	46		
	SH		
SPARE	47	WH, BK	PR12
	48		
	SH		
	OS		

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1 WH, BK	25	64-ZSL-031A
Shield Bar	26	
PR2 WH, BK	27	64-ZSH-031A
Shield Bar	28	
PR3 WH, BK	29	64-ZSL-031B
Shield Bar	30	
PR4 WH, BK	31	64-ZSH-031B
Shield Bar	32	
PR5 WH, BK	33	SPARE
Shield Bar	34	
PR6 WH, BK	35	SPARE
Shield Bar	36	
PR7 WH, BK	37	SPARE
Shield Bar	38	
PR8 WH, BK	39	SPARE
Shield Bar	40	
PR9 WH, BK	41	SPARE
Shield Bar	42	
PR10 WH, BK	43	SPARE
Shield Bar	44	
PR11 WH, BK	45	SPARE
Shield Bar	46	
PR12 WH, BK	47	SPARE
	48	

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

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

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

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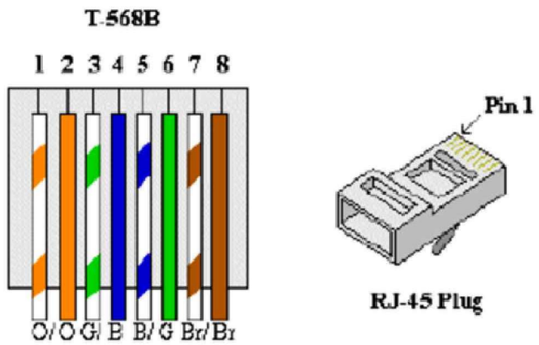
File Name : 123A90-DDL-IN-DG-40015_Rev.01

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:



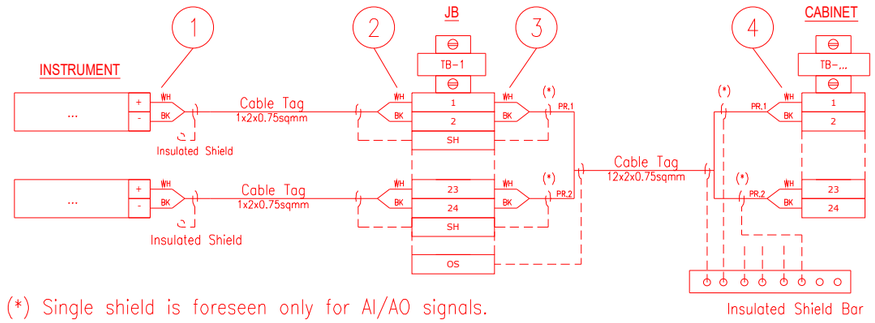
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

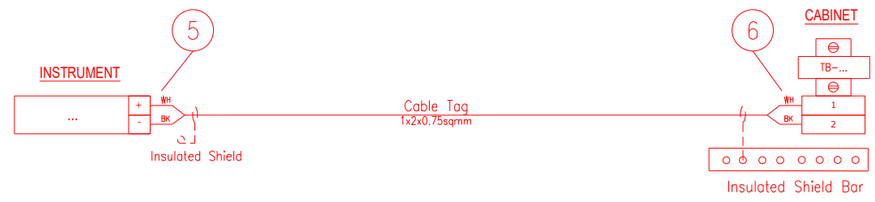
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

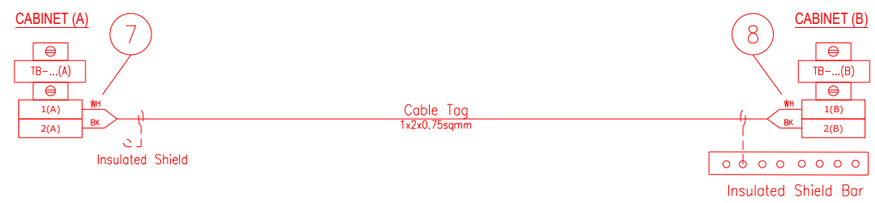
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

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

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

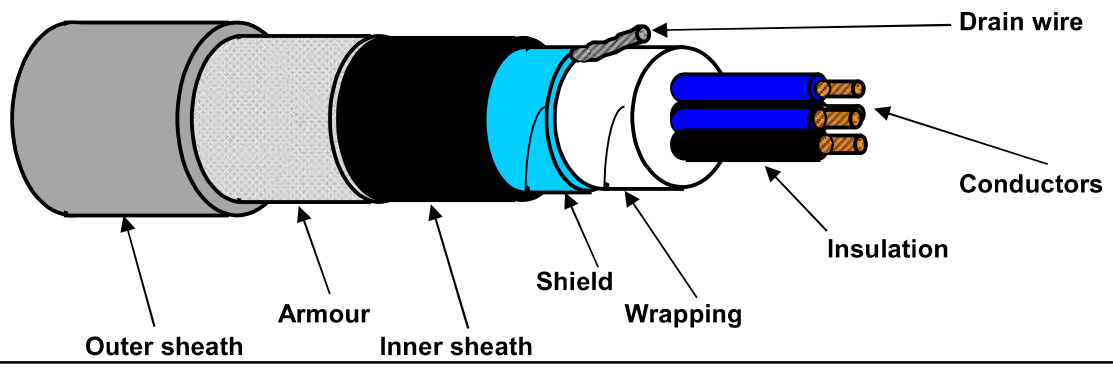
A3	DRAWING NO. 123A90-DDL-IN-DG-40015	SHEET 003	REV. 01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-ZSH-031B/00-JE-12006	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-ZSH-031B	Proximity Switch	Lower Deck	00-JE-12006	DI JB to PCS	Lower Deck (B-100) Ext.	SMICV01-1X2X0,75	Cable Cu Cl.2/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Grey	M20S	T2_M20S_Double			T2_M20S_Double				L-SEC-14 / L-SEC-13 / L-SEC-1L / L-SEC-1M / L-SEC-16

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-64-PT-002/00-JE-21002	: PRESSURE TRANSMITTER / MARSHALLING PCS		Dwg	123A90-DDL-IN-LIS-40091	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD/UD	
TASK	code	C10000139	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-MICA-XLPE-OS-LSZH-SWB-LSZH — Cores/Size mm²: 1X2X0,75 mm2 — Color: ORANGE

From: 64-PT-002 — To: 00-JE-21002

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	0,8	Ω
	SCREEN	0,8	Ω
	EARTH	NA	Ω
	ARMr	0,8	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

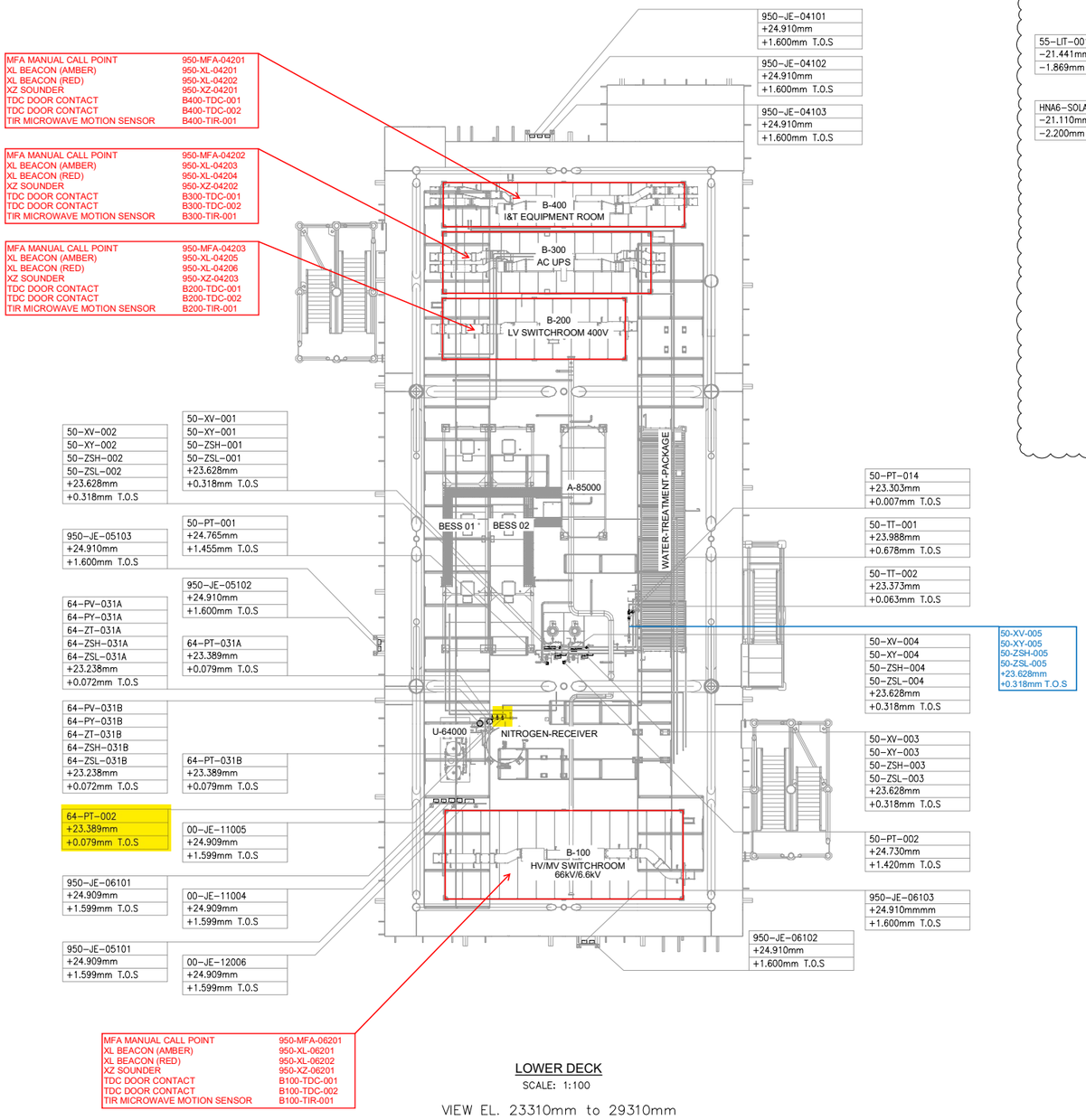
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 — Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Nota 5: refer to PL C30000680/C30000682

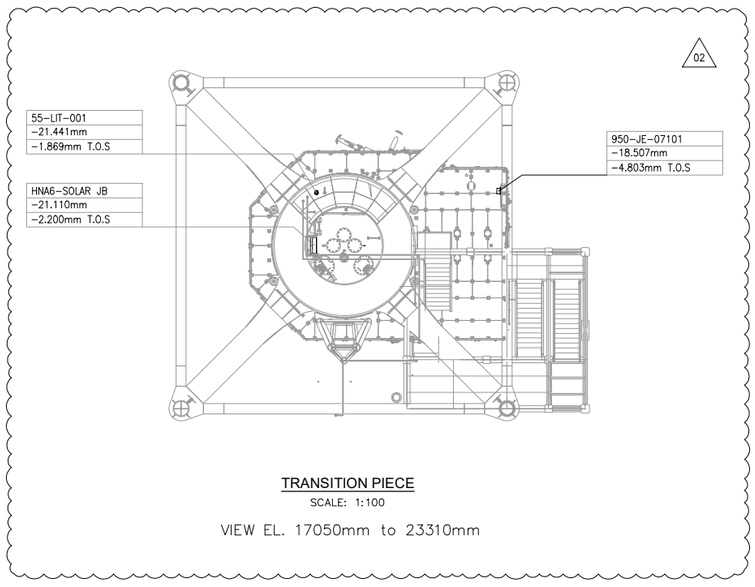
Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-05	2025-02-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-05T10:17:38.035Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-07T07:28:50.011Z	

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

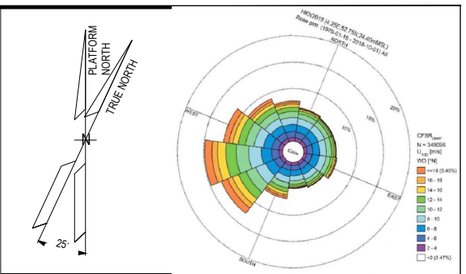
REV. 02



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



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



NOTES

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

LEGEND

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

HOLDS

REFERENCE DOCUMENTS

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

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND

ROSETTI MARINO

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

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

ROSETTI MARINO SpA

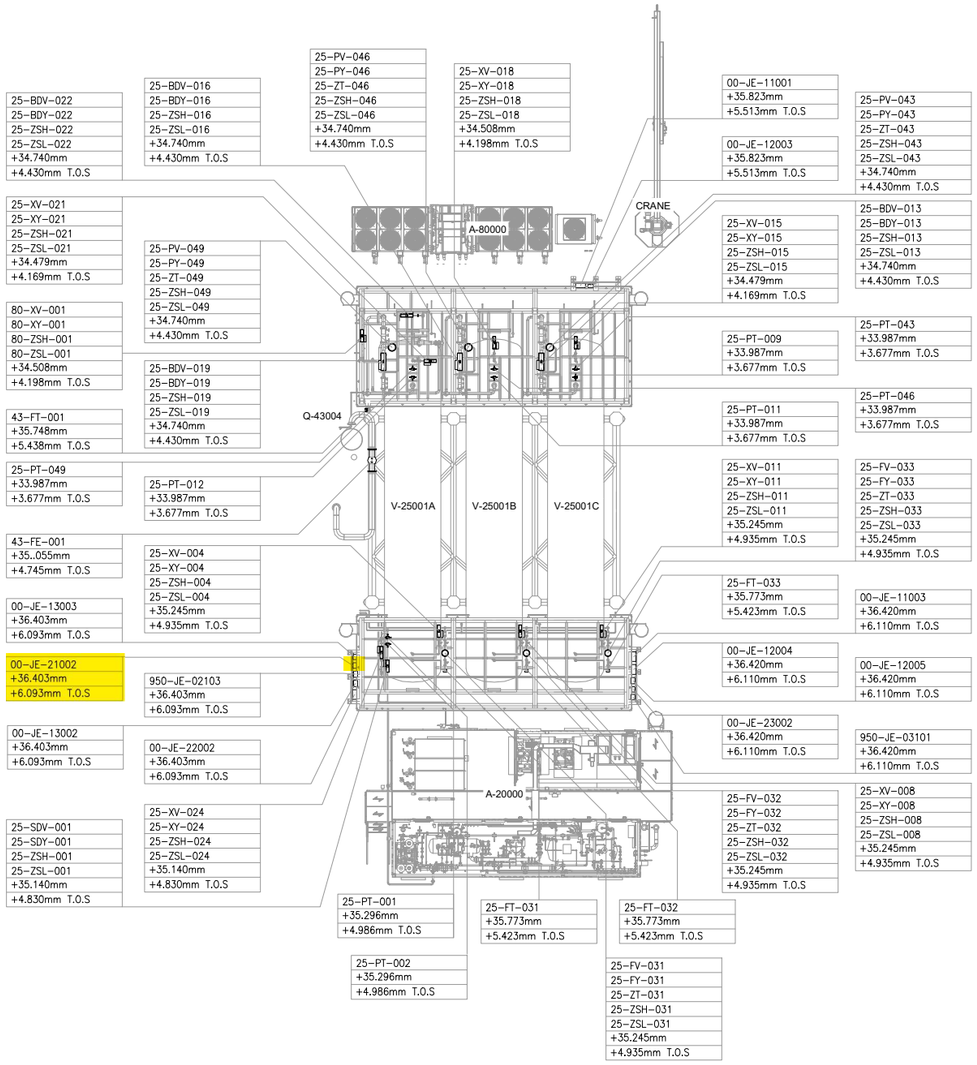
TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT LOCATION LAYOUT–LOWER DECK
TOS EL. 23.310M

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

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

DRAWING NO. 123A90-DDL-IN-DL-40081

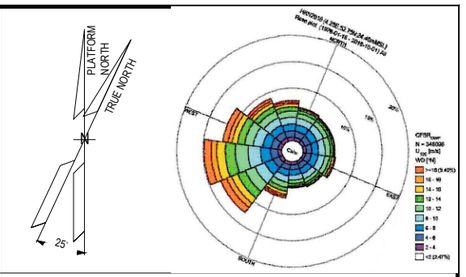
REV. 02



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)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION

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

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

ROSETTI MARINO SpA

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.	SHEET	REV.
	123A90–DDL–IN–DL–40081	002	02

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

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-21002	No.	MARSHALLING CABINET B400-SIS-001

<01>

25-PT-002 (+ WH, - BK) — NOTE-2
C-25-PT-002/00-JE-21002
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

80-PT-002 (+ WH, - BK) — NOTE-2
C-80-PT-002/00-JE-21002
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

43-LT-001 (+ WH, - BK)
C-43-LT-001/00-JE-21002
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

64-PT-002 (+ WH, - BK) — NOTE-2
C-64-PT-002/00-JE-21002
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

WH/BK	1	PR1
	2	
	SH	
WH/BK	3	PR2
	4	
	SH	
WH/BK	5	PR3
	6	
	SH	
WH/BK	7	PR4
	8	
	SH	
SPARE	9	PR5
	10	
	SH	
SPARE	11	PR6
	12	
	SH	
	OS	

00-JE-21002/B400-SIS-001
6x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-21002

PR1 (WH/BK)	1	25-PT-002
Shield Bar	2	
PR2 (WH/BK)	3	80-PT-002
Shield Bar	4	
PR3 (WH/BK)	5	43-LT-001
Shield Bar	6	
PR4 (WH/BK)	7	64-PT-002
Shield Bar	8	
PR5 (WH/BK)	9	SPARE
Shield Bar	10	
PR6 (WH/BK)	11	SPARE
	12	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–21002

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

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	006	01

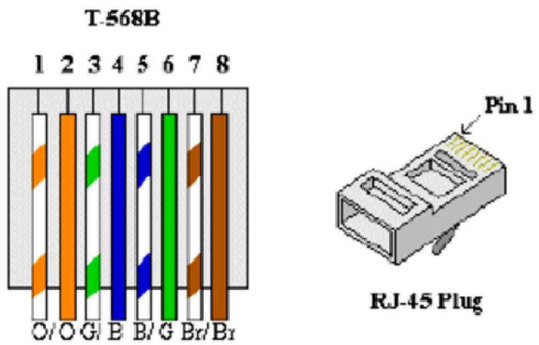
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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:



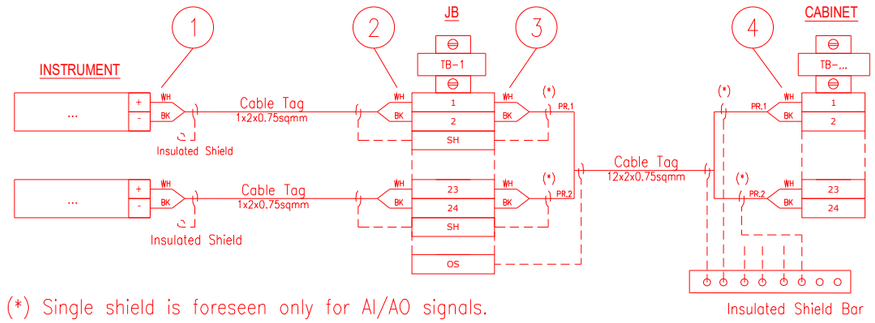
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

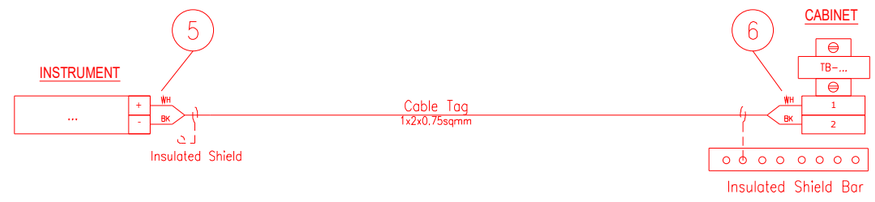
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

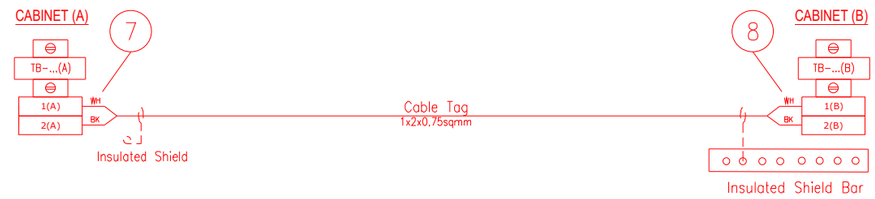
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	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

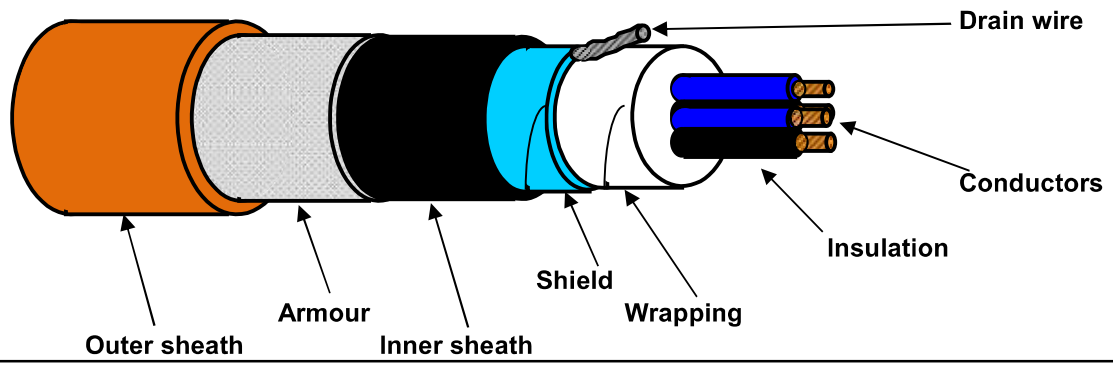
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-PT-002/00-JE-21002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-PT-002	Pressure Transmitter	Lower Deck	00-JE-21002	AI/AO JB to SIS	Upper Deck	SMICV08-1X2X0,75	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 1x2x0,75mm² - Orange	M20S	T2_M20S _Double			T2_M20S_D ouble				L-SEC-14 / L-SEC-13 / L-SEC-11 / L-SEC-1J / U-SEC-14A / U-SEC-15

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

1X2X0,75 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus 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 :	10/1mt	
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 1,1 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:	**Orange**	
Outer printing (INKJET) :	**FLEI - 1X2X0,75 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(8,5 ± 10%) mm	
Over armour diameter :	(9,3 ± 10%) mm	
Outer diameter :	(11,7 ± 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		
Fire Resistant test :	**IEC 60331.21**	
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			

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The data provided (and any assent for the treatment will be used to the sense of the article 13 of the Regulation (UE) 2016/679 also by such 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.

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-64-SDV-001/00-JE-22002	: PROXIMITY SWITCH / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD		
TASK	code	C10000157	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-MICA-XLPE-IS-OS-LSZH-SWB-LSZH — Cores/Size mm²: 2X2X0,75 mm2 — Color: ORANGE

From: 64-SDV-001 — To: 00-JE-22002

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

INSULATION	CORE to EARTH	>999	MΩ
	CORE to CORE	>999	MΩ
	CORE to SCREEN	>999	MΩ
	CORE to ARMr	>999	MΩ
	SCREEN to EARTH	>999	MΩ
	SCREEN to ARMr	>999	MΩ
CONTINUITY	CORES	0,7	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

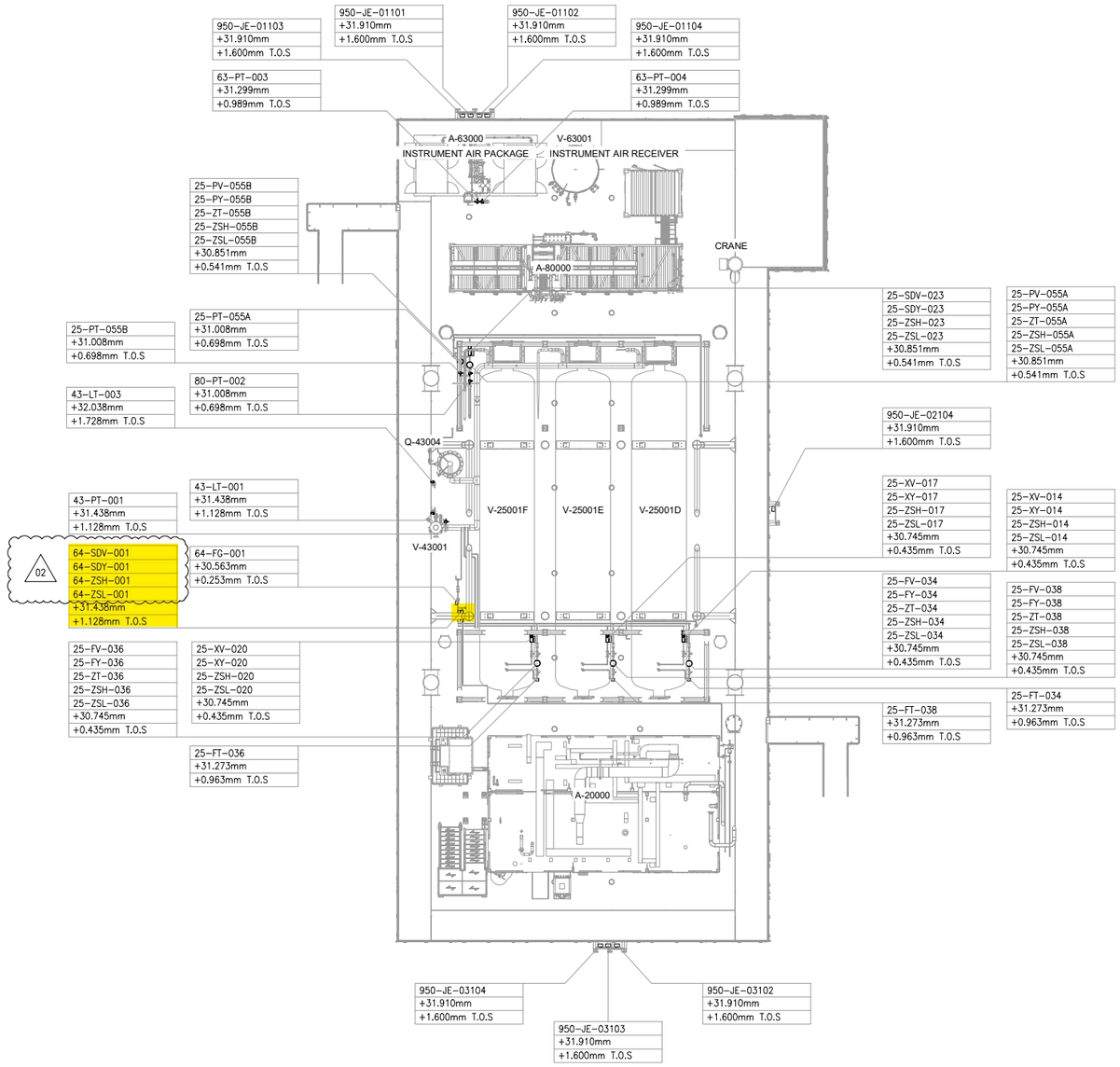
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 — Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Nota 5: refer to PL C30000682

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-31	2025-02-05	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:32:50.883Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-05T16:00:00.970Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

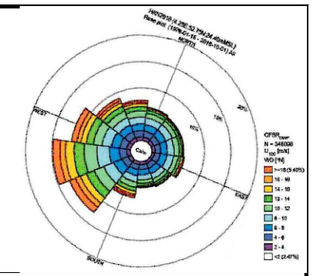


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





NOTES

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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

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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)
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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

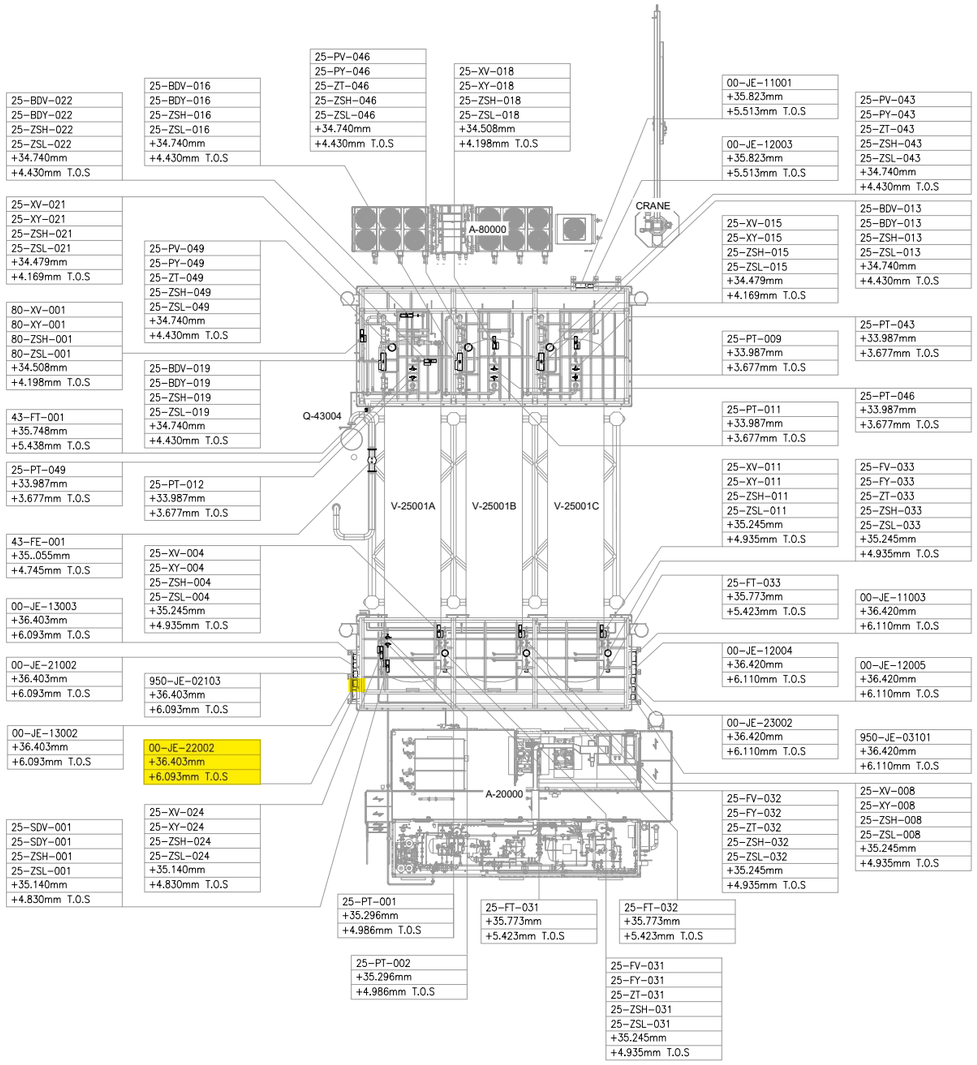
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24

A1	DRAWING NO. 123A90-DDL-IN-DL-40081	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

DRAWING NO. 123A90-DDL-IN-DL-40081

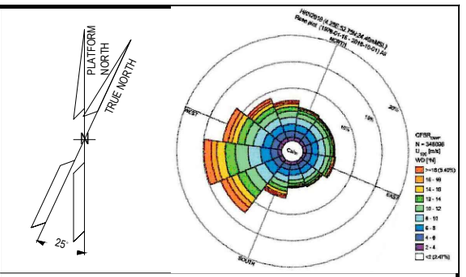
REV. 02



UPPER DECK

SCALE: 1:100

VIEW EL. 33740mm to 36500mm



NOTES

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- ELECTRONIC INSTRUMENT
- CONTROL / ON-OFF VALVE

HOLDS

REFERENCE DOCUMENTS

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123A90-DDL-IN-DG-40015	INSTRUMENT-CCS WIRING DIAGRAMS
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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)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40081**

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

ROSETTI MARINO SpA

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-40016

REV. 01

FIELD

INSTRUMENTS

JUNCTION BOX

00-JE-22002

MULTICABLE

No.

I&T EQUIPMENT ROOM (ITER)

MARSHALLING CABINET

B400-SIS-001

<01>

25-ZSL-001 (2, 1) WH BK PR1
25-ZSH-001 (5, 6) WH BK PR2
NOTE-2
C-25-SDV-001/00-JE-22002
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

25-ZSL-023 (2, 1) WH BK PR1
25-ZSH-023 (5, 6) WH BK PR2
NOTE-2
C-25-SDV-023/00-JE-22002
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

25-ZSL-022 (NO, C) WH BK PR1
25-ZSH-022 (NO, C) WH BK PR2
NOTE-2
C-25-BDV-022/00-JE-22002
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

64-ZSL-001 (2, 1) WH BK PR1
64-ZSH-001 (5, 6) WH BK PR2
NOTE-2
C-64-SDV-001/00-JE-22002
2x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

950-ASD-03101 (1, 8) WH BK
NOTE-2
C-950-ASD-03101/00-JE-22002
1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

PR1 WH	1	WH	PR1
PR1 BK	2	BK	
	SH		
PR2 WH	3	WH	PR2
PR2 BK	4	BK	
	SH		
PR1 WH	5	WH	PR3
PR1 BK	6	BK	
	SH		
PR2 WH	7	WH	PR4
PR2 BK	8	BK	
	SH		
PR1 WH	9	WH	PR5
PR1 BK	10	BK	
	SH		
PR2 WH	11	WH	PR6
PR2 BK	12	BK	
	SH		
PR1 WH	13	WH	PR7
PR1 BK	14	BK	
	SH		
PR2 WH	15	WH	PR8
PR2 BK	16	BK	
	SH		
	17	WH	PR9
	18	BK	
	SH		
SPARE	19	WH	PR10
	20	BK	
	SH		
SPARE	21	WH	PR11
	22	BK	
	SH		
SPARE	23	WH	PR12
	24	BK	
	SH		
	OS		

00-JE-22002_1/B400-SIS-001
12x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-22002

PR1 WH	1	25-ZSL-001
Shield Bar	2	
PR2 WH	3	25-ZSH-001
Shield Bar	4	
PR3 WH	5	25-ZSL-023
Shield Bar	6	
PR4 WH	7	25-ZSH-023
Shield Bar	8	
PR5 WH	9	25-ZSL-022
Shield Bar	10	
PR6 WH	11	25-ZSH-022
Shield Bar	12	
PR7 WH	13	64-ZSL-001
Shield Bar	14	
PR8 WH	15	64-ZSH-001
Shield Bar	16	
PR9 WH	17	950-ASD-03101
Shield Bar	18	
PR10 WH	19	SPARE
Shield Bar	20	
PR11 WH	21	SPARE
Shield Bar	22	
PR12 WH	23	SPARE
	24	

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–22002–SH.1 OF 2

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

	DRAWING NO.	SHEET	REV.
A3	123A90–DDL–IN–DG–40016	012	01

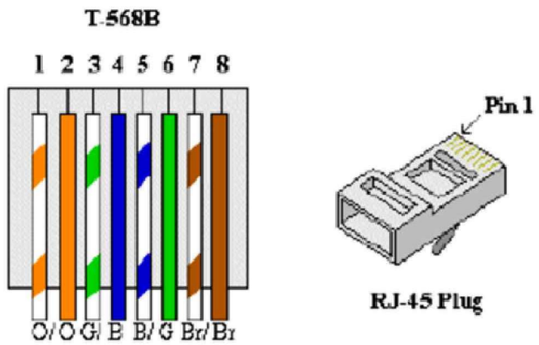
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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:



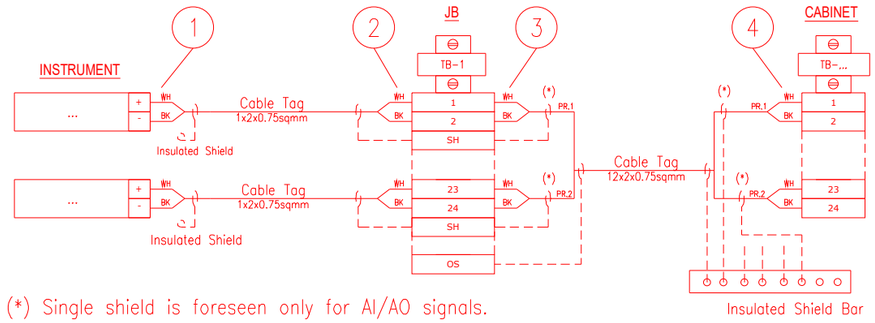
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

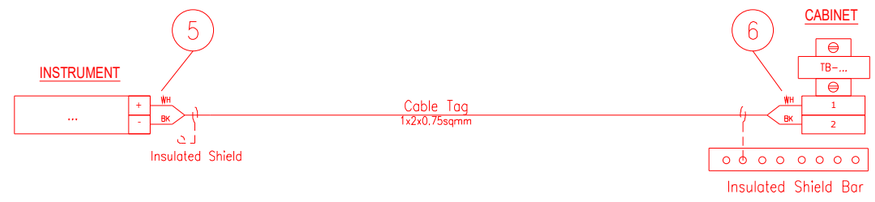
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

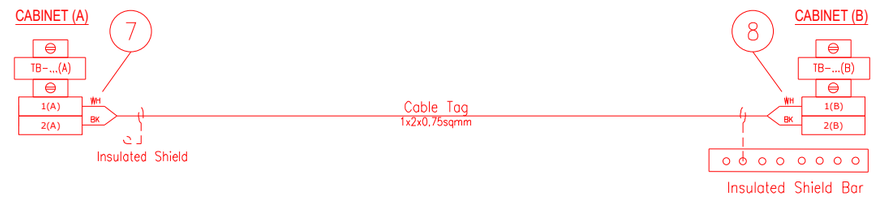
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	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

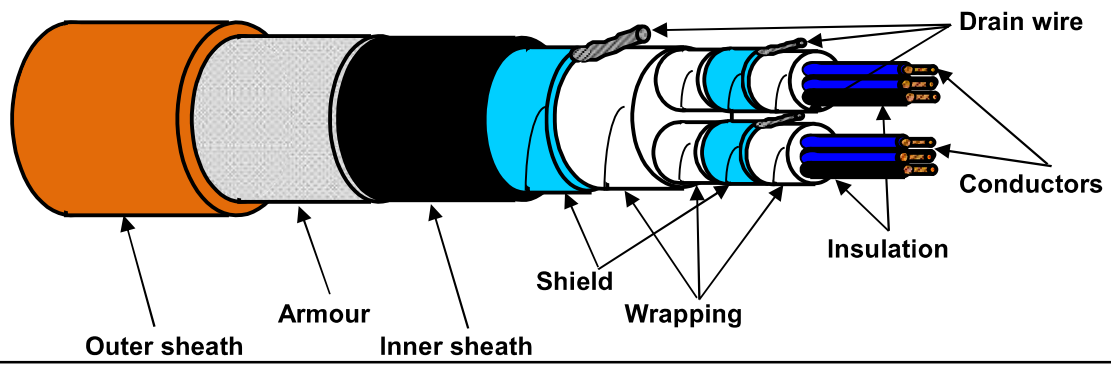
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-SDV-001/00-JE-22002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-SDV-001	On/Off Valve	Upper Deck	00-JE-22002	DI JB to SIS	Upper Deck	SMICV09-2X2X0,75	Cable Cu Cl.2/MGT/XLPE/IS/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2x0,75mm² - Orange	M25	T2_M25_ Double	M20	ADAP_M2 0MxM25F	T2_M25_Do uble				U-SEC-16 / U-SEC-14B / U-SEC-15

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

2X2X0,75 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus XLPE, Nominal Thickness 0,5 mm	
Cores colour code :	**White - Black (each core NUMBERED for PAIR identification)**	
Pair Assembling :	10/1mt	
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 :	5/1mt	
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 1,3 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 1,5 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2X0,75 SQMM - MGT/XLPE/IS/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(15,1 ± 10%) mm	
Over armour diameter :	(16,3 ± 10%) mm	
Outer diameter :	(19,3 ± 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		
Fire Resistant test :	**IEC 60331.21**	
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 herein are meant for the transmission will be used in the sense of the article 19 of the Regulation (UE) 2016/679 also to such subjects outside it, 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	64-PT-002	: Pressure Transmitter - Nitrogen to Distribution Header Low Pressure			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10000912		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX08 Electrical Instrument

Installation Check

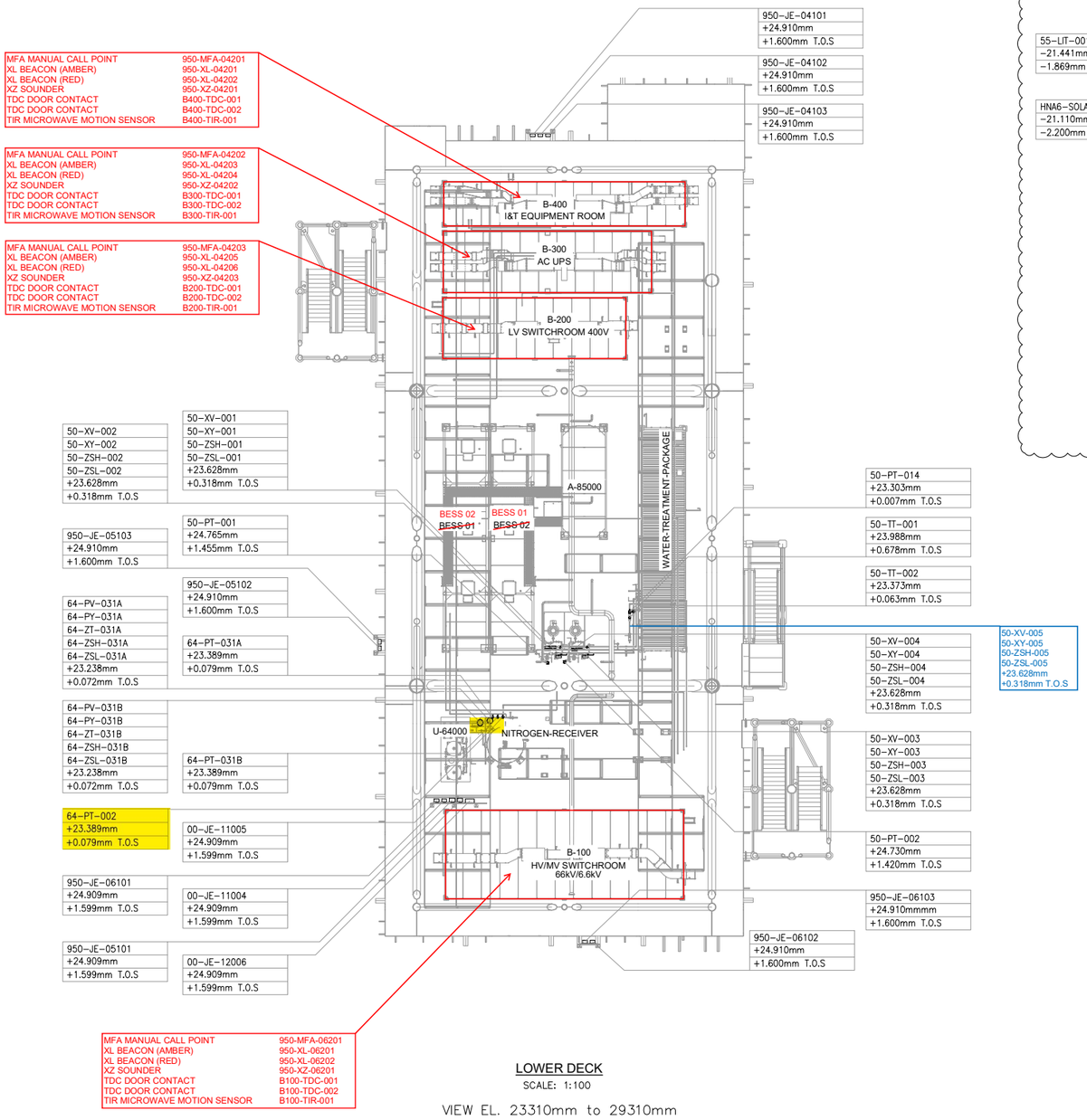
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check identification (tag number, tag plates).	PL
5	Check supporting and protection against vibrations.	OK
6	Check calibration certificate (TJX04)	OK
7	Visual Check electrical connections.	OK
8	Check earthing connections.	OK
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:

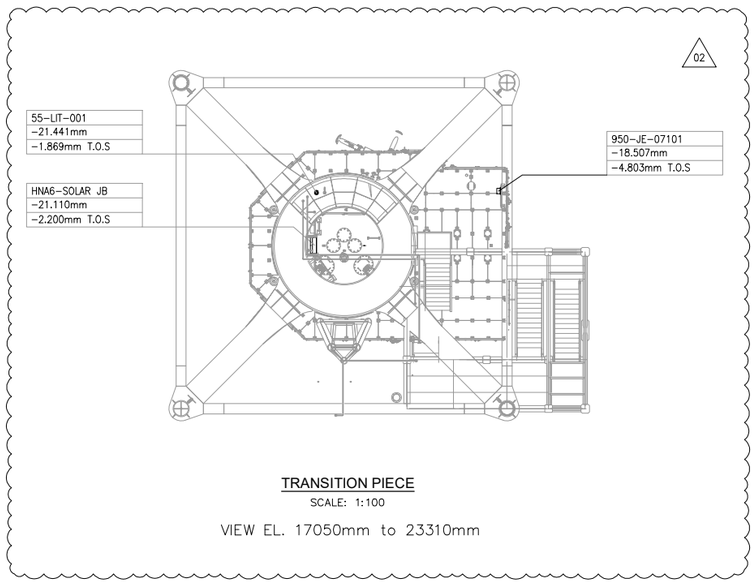
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ics impianti	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-06	2025-02-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-06T16:35:41.952Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-07T15:58:01.333Z	

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

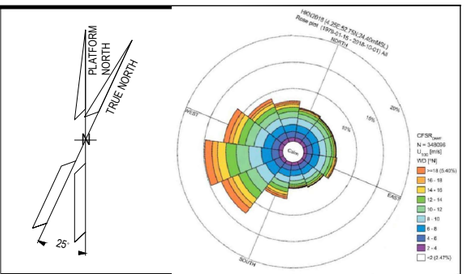
REV. 02



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

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

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

NOTE 1, 12
SET @ 10 barg
1D2
64 PSV 001
NOTE 10
TO ATM
2"-AV-160-01CS-N

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

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-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

1" -N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDV 001
64 SDV 001
NOTE 13
NC-FC TYP.2
01CS 03HSS

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

64 TP 042 — BLPH-MV-271 — SB — LO — 1"-N-158-01CS-N
3/4" LC — BLPH-MV-275 — NOTE 16
64 TP 044 — 1"-N-262-01CS-N

INSTR. PIPING
64 PV 031A — FL-DC TYP.6 1" — 3/4" FLG x 1/2" NPTF — BLPH-MV-386
64 PV 031B — FL-DC TYP.6 1" — 3/4" FLG x 1/2" NPTF — BLPH-MV-166
BLPH-MV-167 3/4" FLG x 1/2" NPTF
1"-N-100-01CS-N
N-158 N-100

ESD I — 64-XS-001 SHUT-DOWN — ESD I — NOTE 14
64 XA 003 — FAULT PACKAGE

03 — 64 TP 046 — **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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 03 64-PV-031 CV FAILURE.
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

DRAWING NO. 123A90-DDL-IN-DG-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-21002	No.	MARSHALLING CABINET B400-SIS-001

<01>

25-PT-002 (+ WH, - BK) — NOTE-2 — C-25-PT-002/00-JE-21002 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

80-PT-002 (+ WH, - BK) — NOTE-2 — C-80-PT-002/00-JE-21002 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

43-LT-001 (+ WH, - BK) — C-43-LT-001/00-JE-21002 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

64-PT-002 (+ WH, - BK) — NOTE-2 — C-64-PT-002/00-JE-21002 1x2x0.75mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

WH/BK	1	WH/BK	PR1
	2		
	SH		
WH/BK	3	WH/BK	PR2
	4		
	SH		
WH/BK	5	WH/BK	PR3
	6		
	SH		
WH/BK	7	WH/BK	PR4
	8		
	SH		
SPARE	9	WH/BK	PR5
	10		
	SH		
SPARE	11	WH/BK	PR6
	12		
	SH		
	OS		

00-JE-21002/B400-SIS-001
6x2x0.75mm2,Sh+ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-21002

PR1	1	WH/BK	25-PT-002
Shield Bar	2		
PR2	3	WH/BK	80-PT-002
Shield Bar	4		
PR3	5	WH/BK	43-LT-001
Shield Bar	6		
PR4	7	WH/BK	64-PT-002
Shield Bar	8		
PR5	9	WH/BK	SPARE
Shield Bar	10		
PR6	11	WH/BK	SPARE
	12		

Shield Bar — I.E.

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

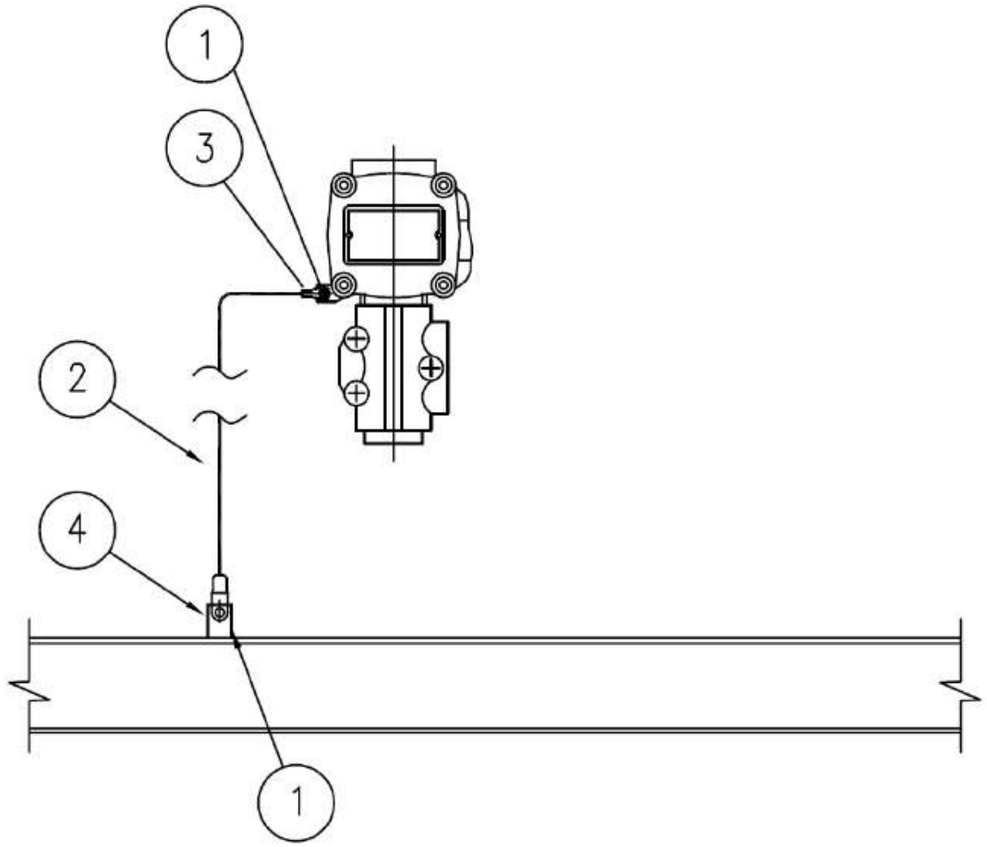
TITLE : BASE LOAD POWER HUB (BLPH)
INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–21002

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

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 006	REV. 01

File Name : 123A90-DDL-IN-DG-40016_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

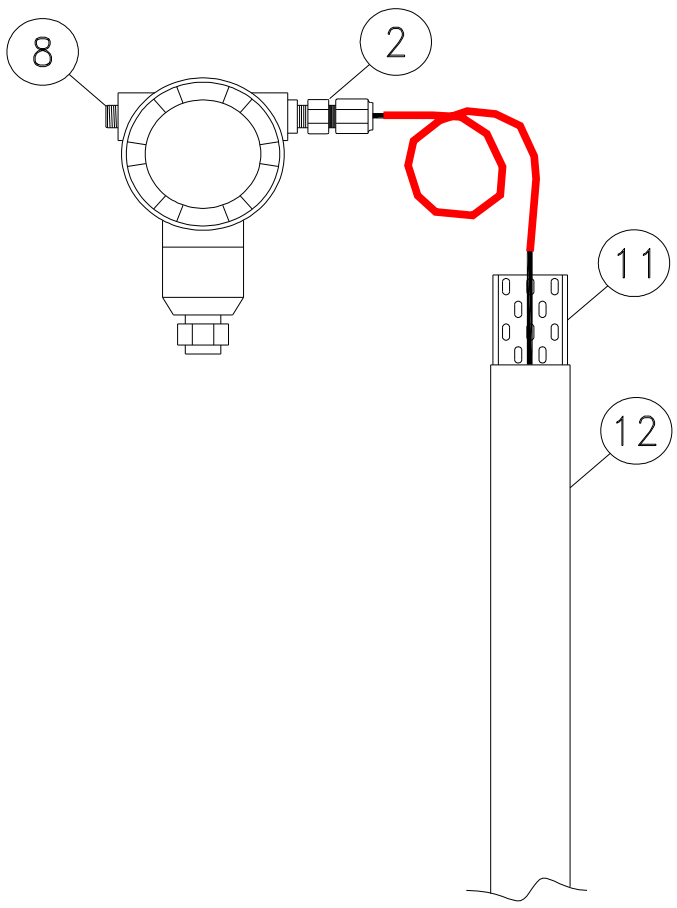
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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. 7 of 37 Date: 27/09/2024 Rev. 02

ELECTRICAL HOOK-UP FOR PRESSURE TRANSMITTERS



INSTRUMENT TAG	
1	25-PT-002
2	25-PT-004
3	25-PT-006
4	25-PT-008
5	25-PT-009
6	25-PT-011
7	25-PT-012
8	63-PT-004
9	64-PT-002
10	80-PT-002
11	
12	
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NOTE:

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

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

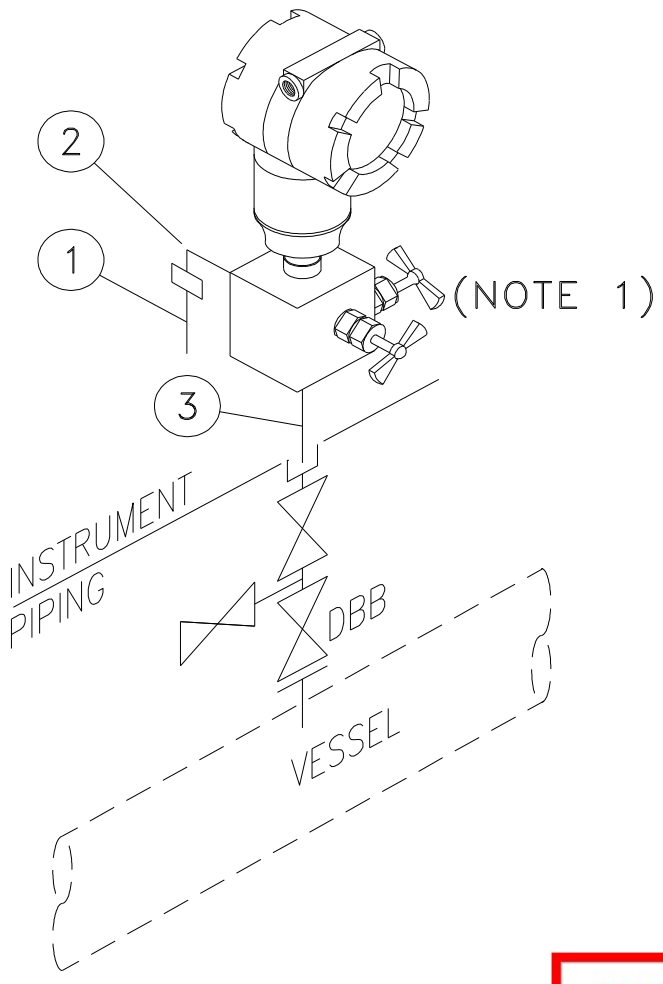
ROSETTI MARINO SpA

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	1

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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	

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40077**

REV.:	DATE:	SIGNATURE:
2_B	17/01/25	G.Randi

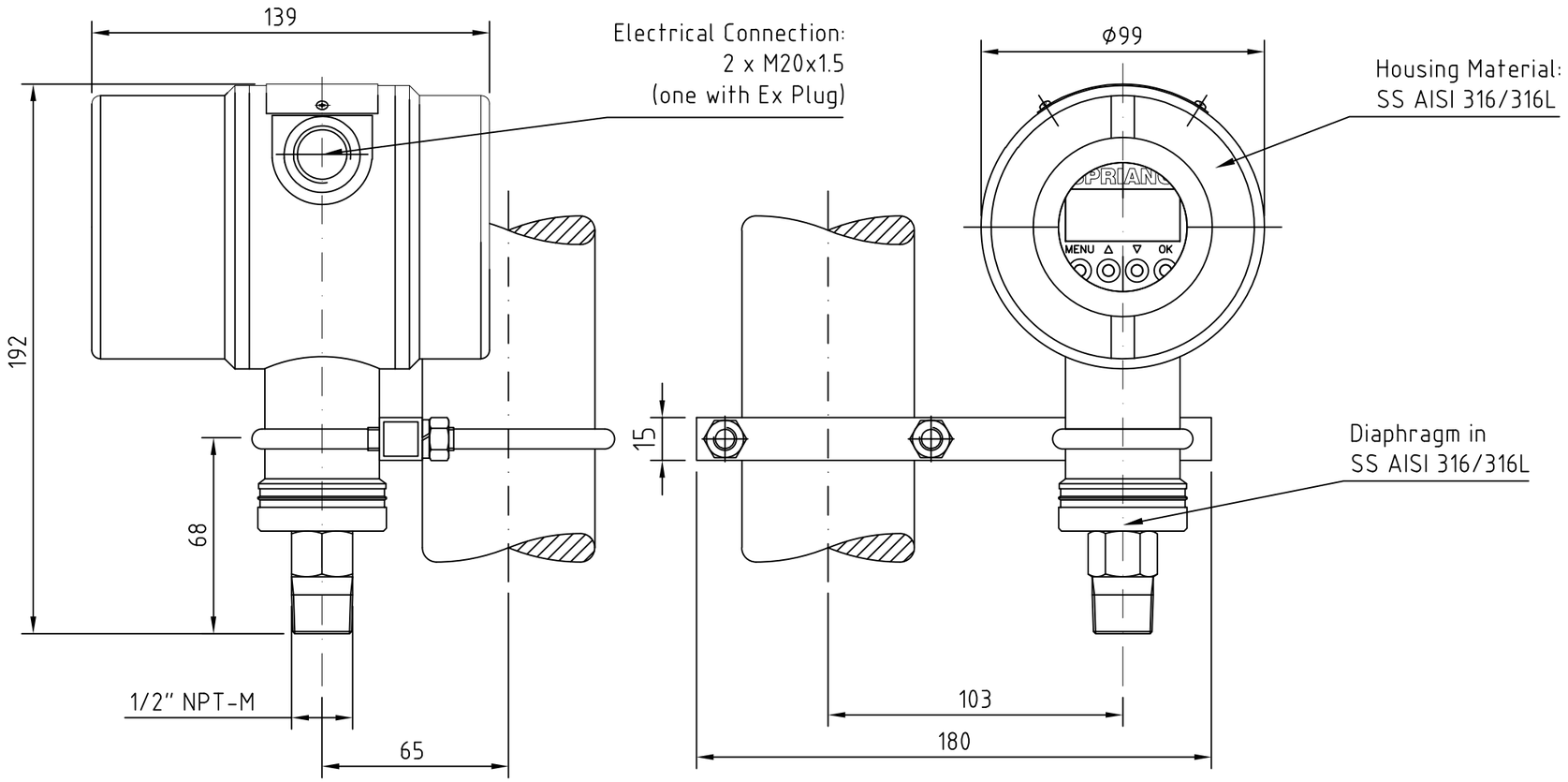
ROSETTI MARINO SpA

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

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

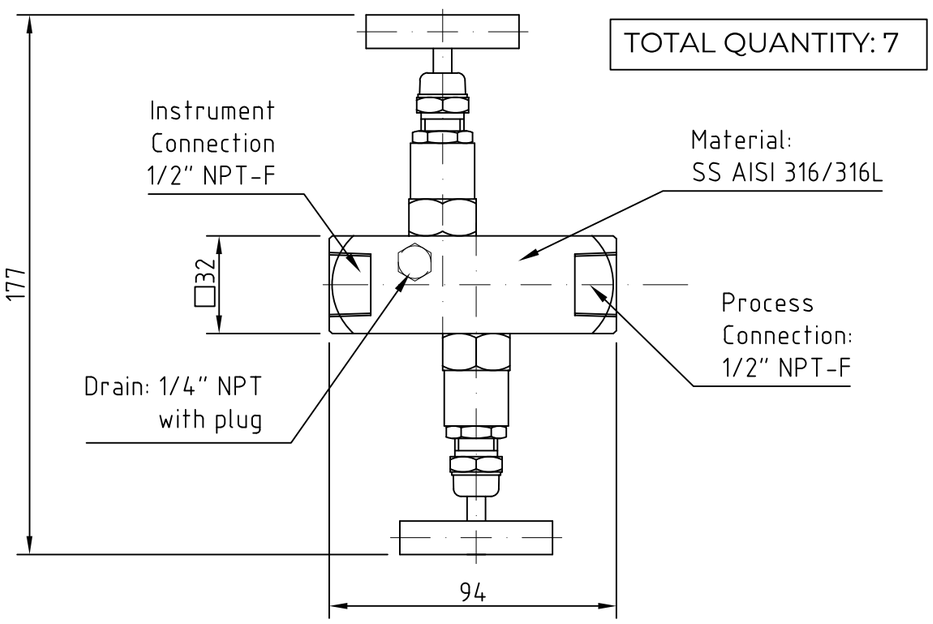


TAG LIST

#	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



TOTAL QUANTITY: 7

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.Toni	G.Aurelio	G.Nicolini	S.Valletta
02	02/JULY/24	THIRD ISSUE	FOR CONSTRUCTION	M.Toni	G.Aurelio	G.Nicolini	S.Valletta
01	13/JUN/24	SECOND ISSUE	FOR CONSTRUCTION	M.Toni	G.Aurelio	G.Nicolini	S.Valletta
00	24/MAY/24	FIRST ISSUE	FOR APPROVAL	M.Toni	G.Aurelio	G.Nicolini	S.Valletta

CROSSWIND ROSETTI MARINO

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

TERRANOVA
SPIRIANO Vulcanic MECFRELA
TERRANOVA SRL

DRAWING TITLE: DIMENSIONAL DRAWINGS

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

GENERAL	1	Tag Number		64-PT-002	
	2	Service		NITROGEN FROM U-64000 TO NITROGEN DISTRIBUTION HEADER	
	3	P&ID Number	Location	123A90-DDL-PR-PID-80027	1"-N-100-01CS-N
	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		NITROGEN	
	9	Pressure Des.	Oper. [barg]	10	7(Max.)
	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	10
	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 32 of 35

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

ITEM	Tag	64-PT-031A	: Pressure Transmitter - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10000913		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX08 Electrical Instrument

Installation Check

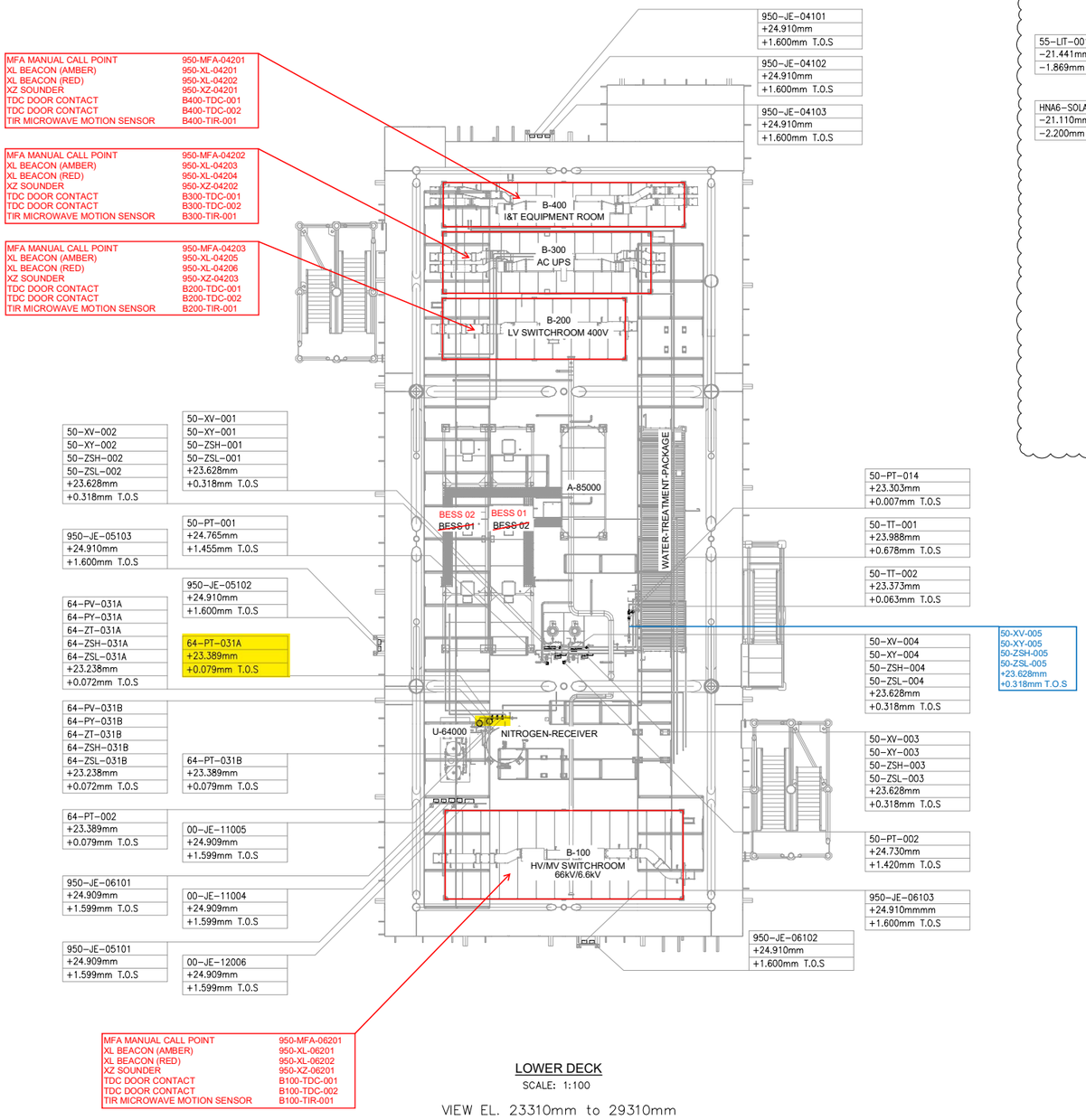
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check identification (tag number, tag plates).	PL
5	Check supporting and protection against vibrations.	OK
6	Check calibration certificate (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).	NA
12	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

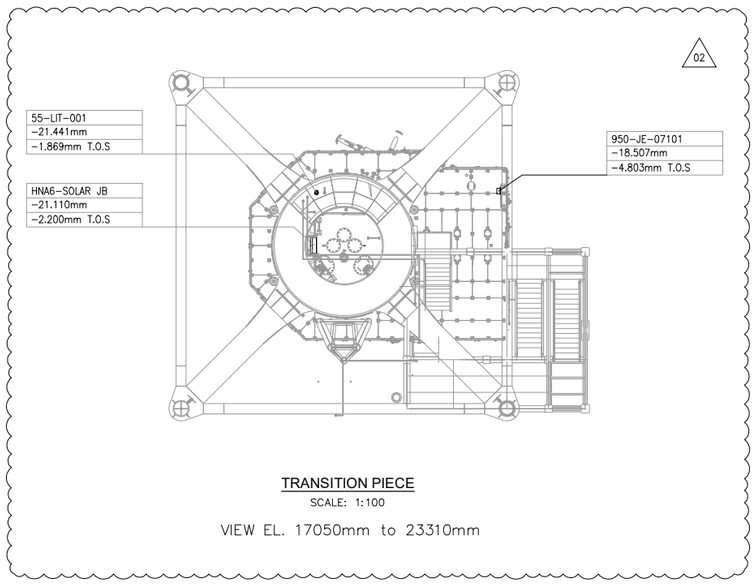
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-06	2025-02-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-06T16:37:33.389Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-07T17:14:16.934Z	

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

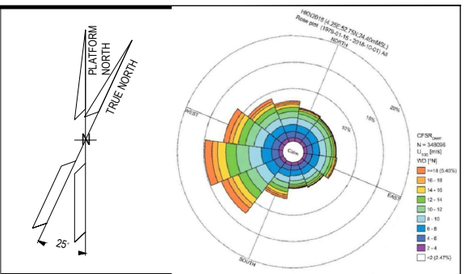
REV. 02



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

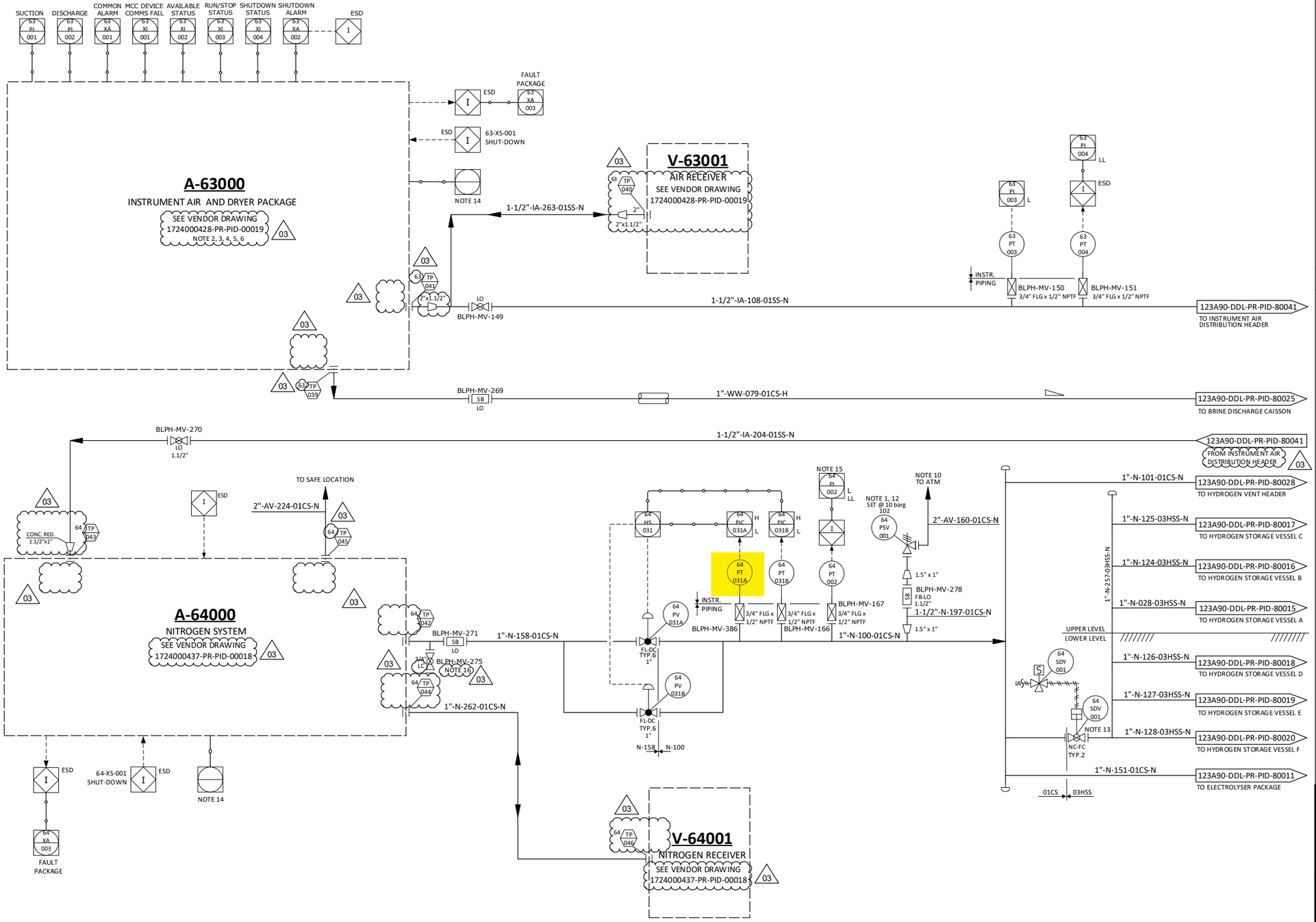
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

DRAWING NO. DRAWING_NO.

REV. REV

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

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



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

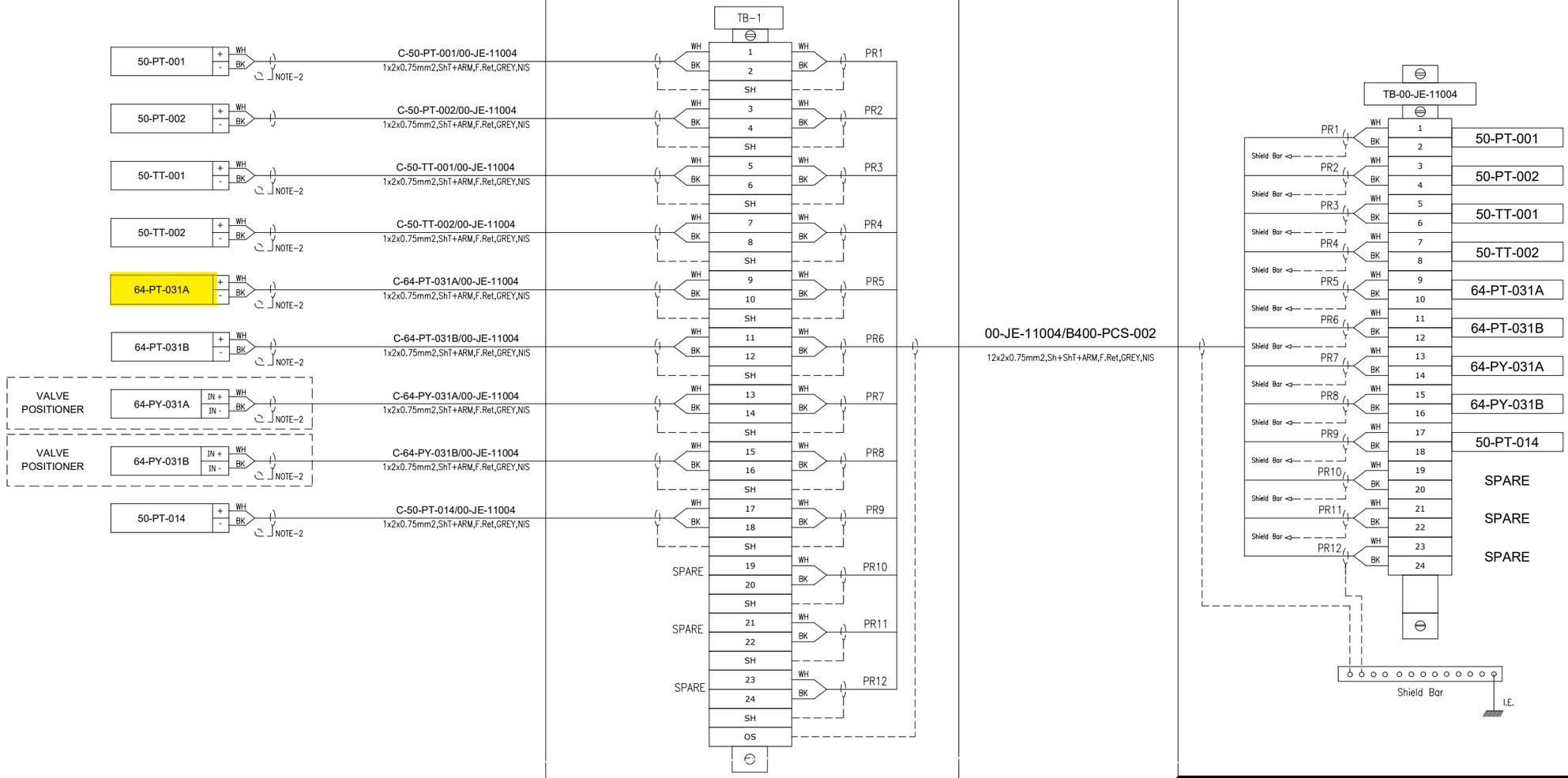
File Name : FILE_NAME

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_I	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

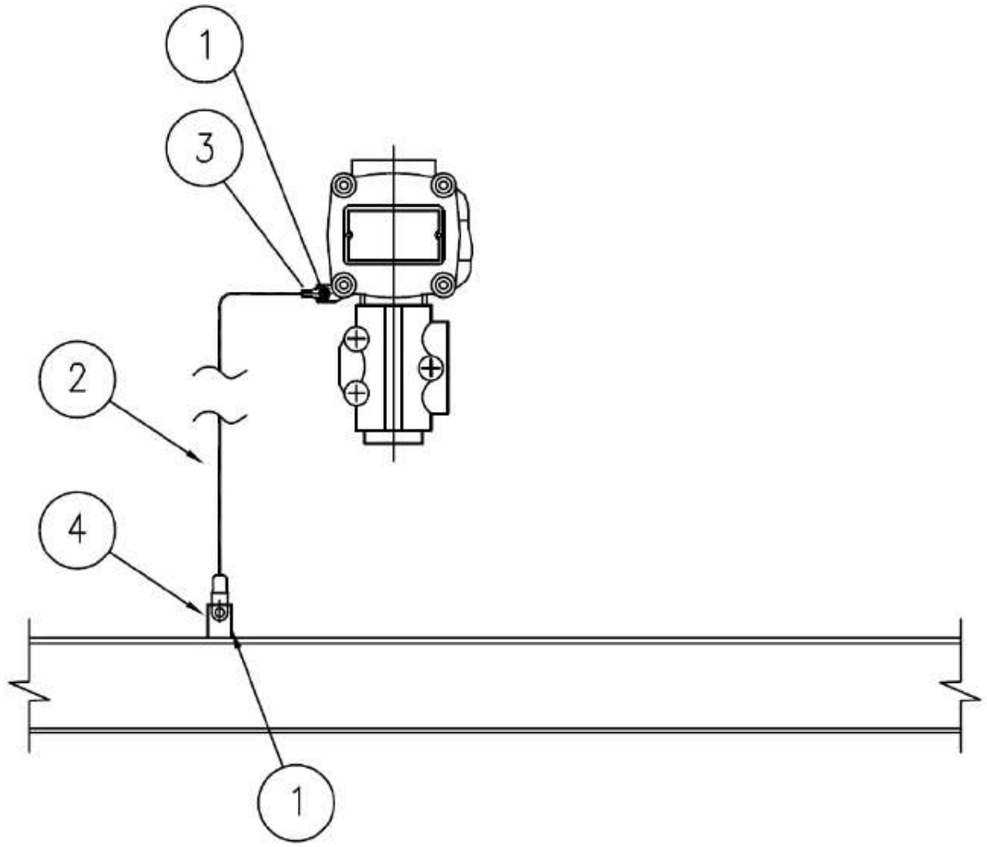
TITLE :

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

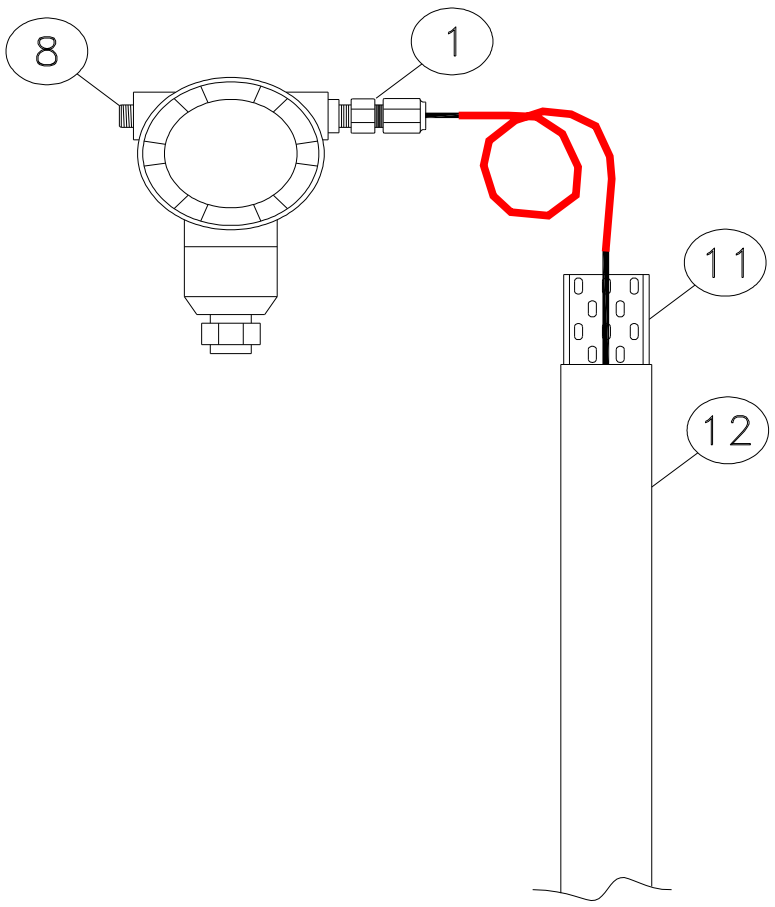
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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:

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

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

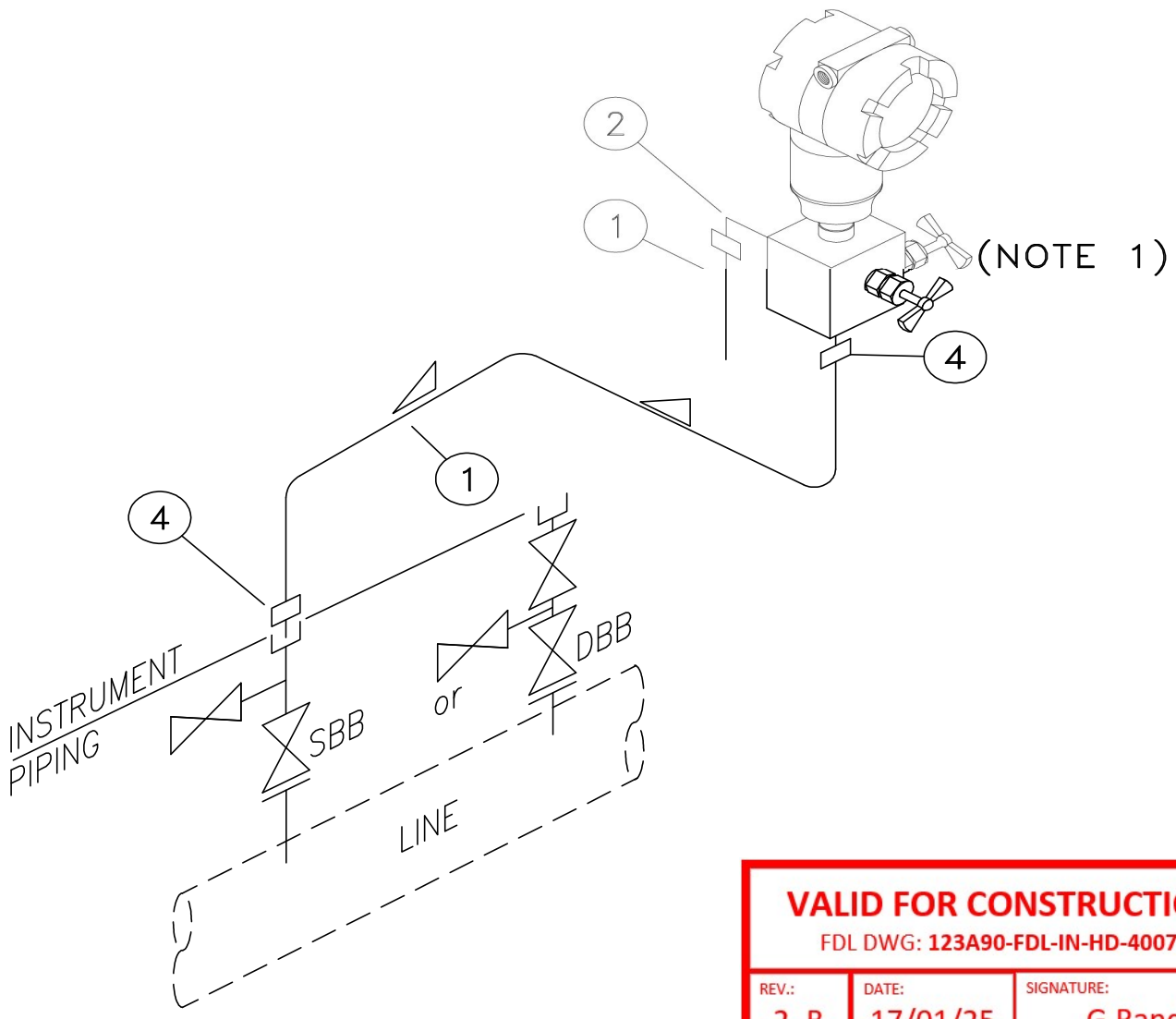
ROSETTI MARINO SpA

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	1

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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. 9 of 8 Date: 05/02/2024 Rev. 00

PRESSURE TRANSMITTERS - Installation for Gas Service



INSTRUMENT TAG	
1	64-PT-031A
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VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40077**

REV.:	DATE:	SIGNATURE:
2_B	17/01/25	G.Randi

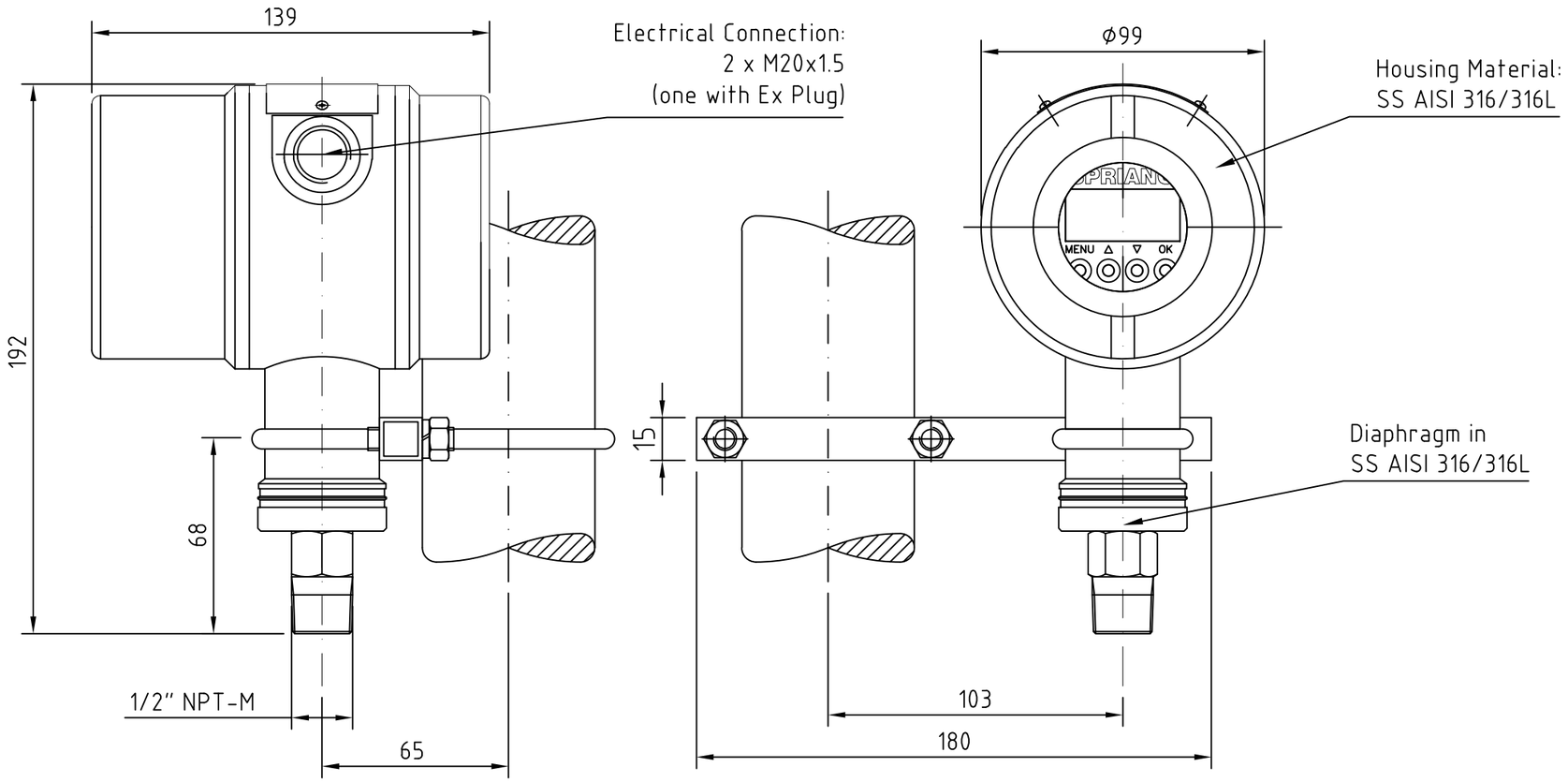
ROSETTI MARINO SpA

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

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
4		SS316 MALE CONNECTOR	1/2" NPT x 1/2" O.D.	N. 2
2		SS316 90° ELBOW	1/4" NPT x 1/2" O.D.	N. 1
1		SS 316L TUBING (NOTE 2)	1/2" x 0,049"Thk	4 m

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

SST76 PRESSURE TRANSMITTERS

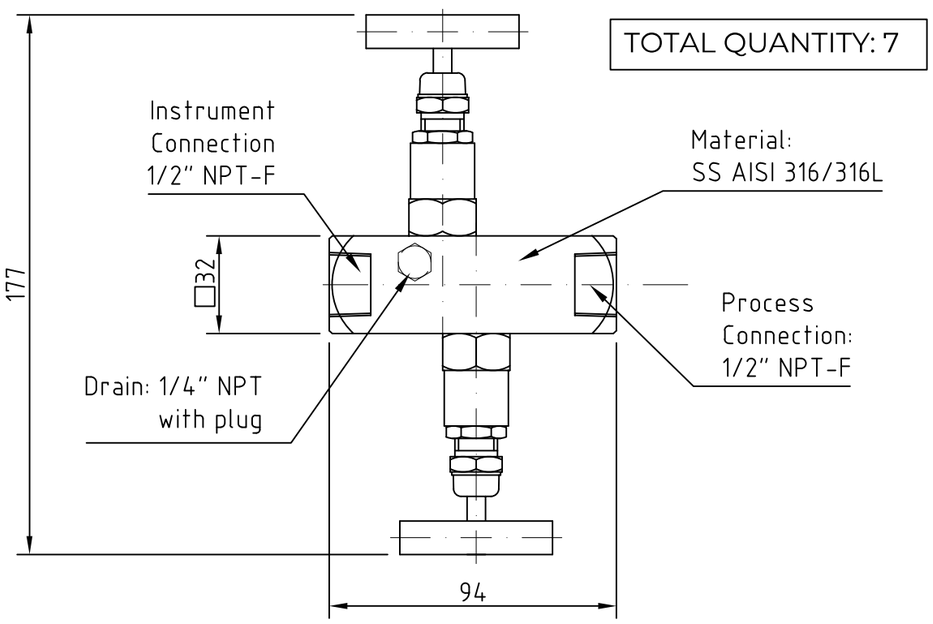


TAG LIST

#	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.Toni	G.Aurelio	G.Nicolini	S.Valletta
02	02/JULY/24	THIRD ISSUE	FOR CONSTRUCTION	M.Toni	G.Aurelio	G.Nicolini	S.Valletta
01	13/JUN/24	SECOND ISSUE	FOR CONSTRUCTION	M.Toni	G.Aurelio	G.Nicolini	S.Valletta
00	24/MAY/24	FIRST ISSUE	FOR APPROVAL	M.Toni	G.Aurelio	G.Nicolini	S.Valletta

CROSSWIND ROSETTI MARINO

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

TERRANOVA
SPIRIANO VinCenzi MECFELA
TERRANOVA SRL

DRAWING TITLE: DIMENSIONAL DRAWINGS

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

GENERAL	1	Tag Number		64-PT-031A	
	2	Service		NITROGEN FROM U-64000 TO NITROGEN DISTRIBUTION HEADER	
	3	P&ID Number	Location	123A90-DDL-PR-PID-80027	1"-N-100-01CS-N
	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		NITROGEN	
	9	Pressure Des.	Oper. [barg]	10	7(Max.)
	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	10
	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 30 of 35

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

ITEM	Tag	64-PT-031B	: Pressure Transmitter - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10000914		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX08 Electrical Instrument

Installation Check

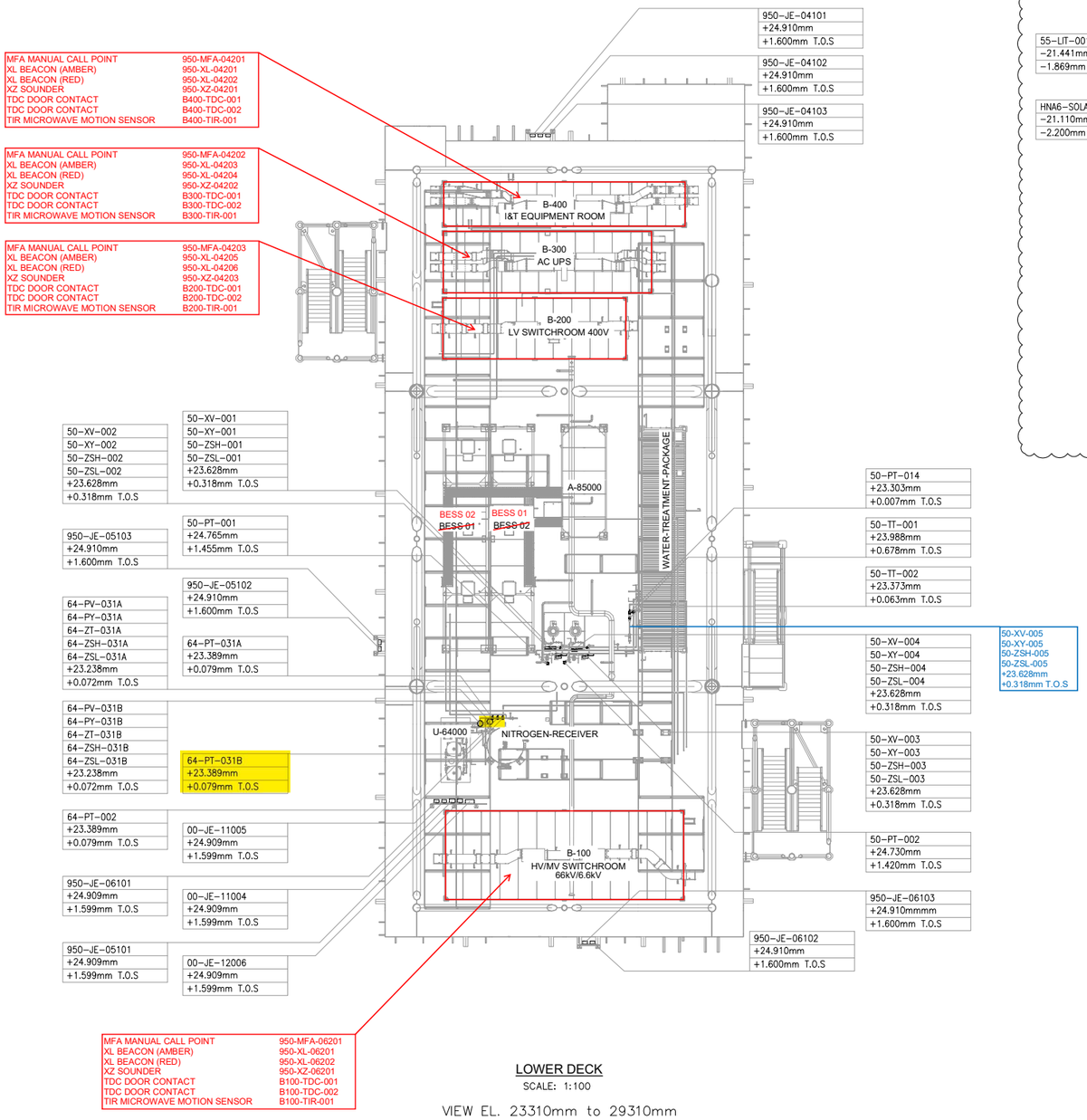
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check identification (tag number, tag plates).	PL
5	Check supporting and protection against vibrations.	OK
6	Check calibration certificate (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).	NA
12	If required produce Red Line Mark Up for "AS BUILT"	

Comments:

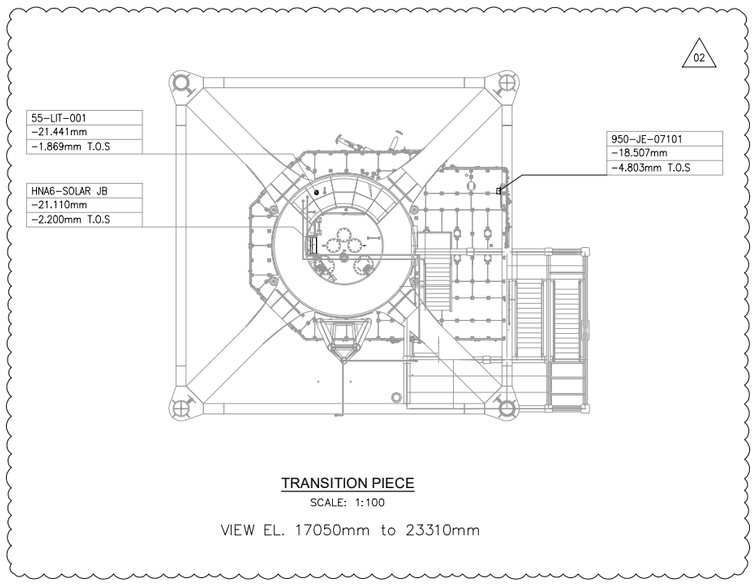
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-02-06	2025-02-07	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-06T16:41:09.355Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-07T16:31:43.367Z	

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

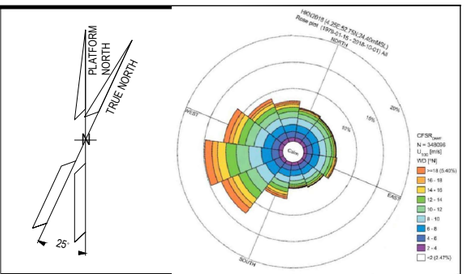
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N
03 → 3/4" LC | BLPH-MV-275 NOTE 16 | 03 → 64 TP 044 | 1"-N-262-01CS-N

ESD I → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN ESD I
NOTE 14

NOTE 15: 64 PI 002 L LL | I
64 HS 031
64 PIC 031A H L | 64 PT 031A
64 PIC 031B H L | 64 PT 031B
64 PT 002
64 PV 031A | FL-DC TYP.6 1"
64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100
INSTR. PIPING
3/4" FLG x 1/2" NPTF | BLPH-MV-386
3/4" FLG x 1/2" NPTF | BLPH-MV-166
3/4" FLG x 1/2" NPTF | BLPH-MV-167
1"-N-100-01CS-N

NOTE 1, 12 SET @ 10 barg 1D2 | 64 PSV 001 | NOTE 10 TO ATM | 2"-AV-160-01CS-N
1.5" x 1" | SB | BLPH-MV-278 FB-LO 1.1/2" | 1-1/2"-N-197-01CS-N | 1.5" x 1"

03 → 64 TP 046 | **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

1" N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDV 001 S | IA
64 SDV 001 | NOTE 13 | NC-FC TYP.2
01CS | 03HSS

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-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

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

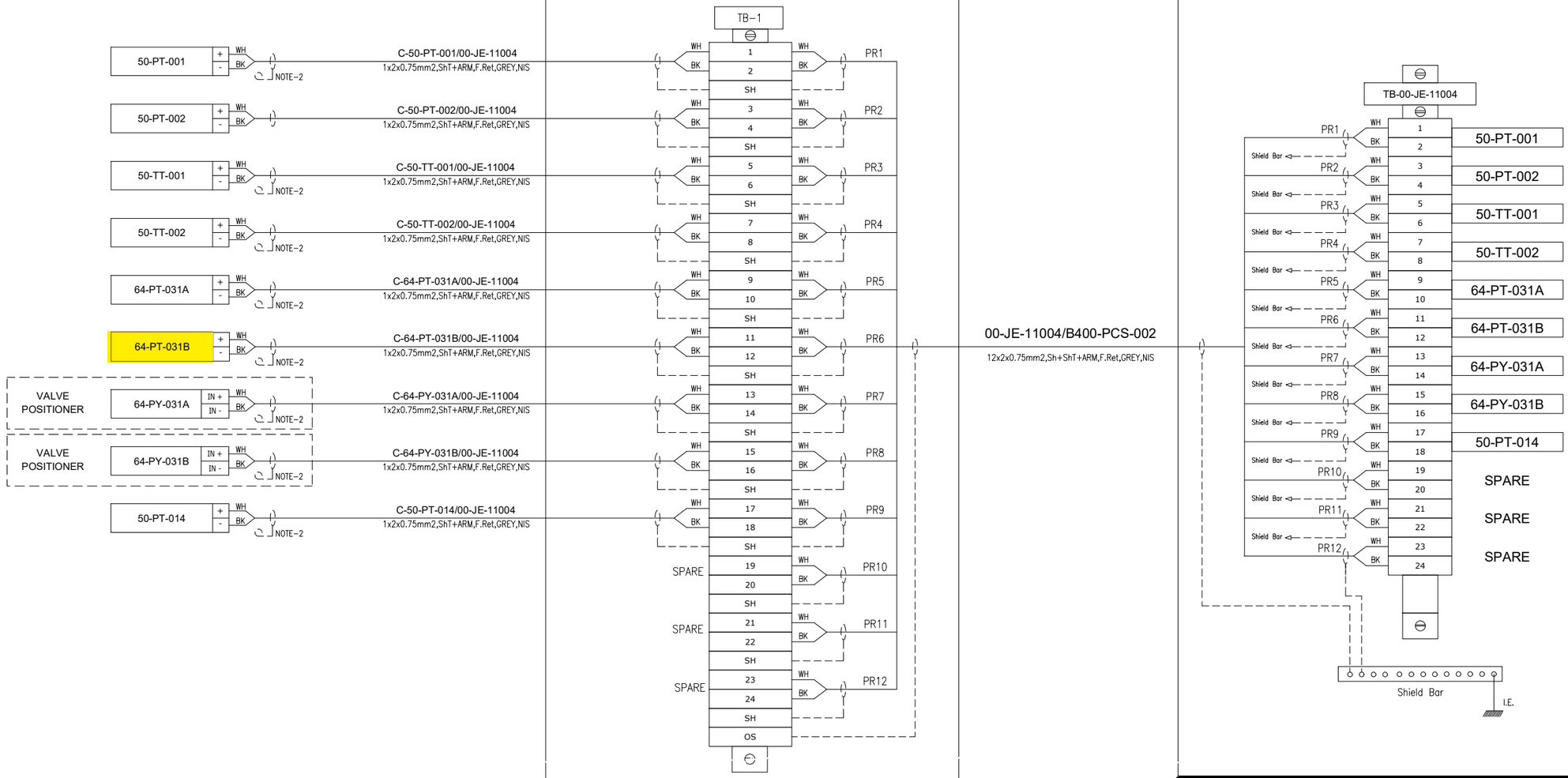
File Name : FILE_NAME

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_I	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

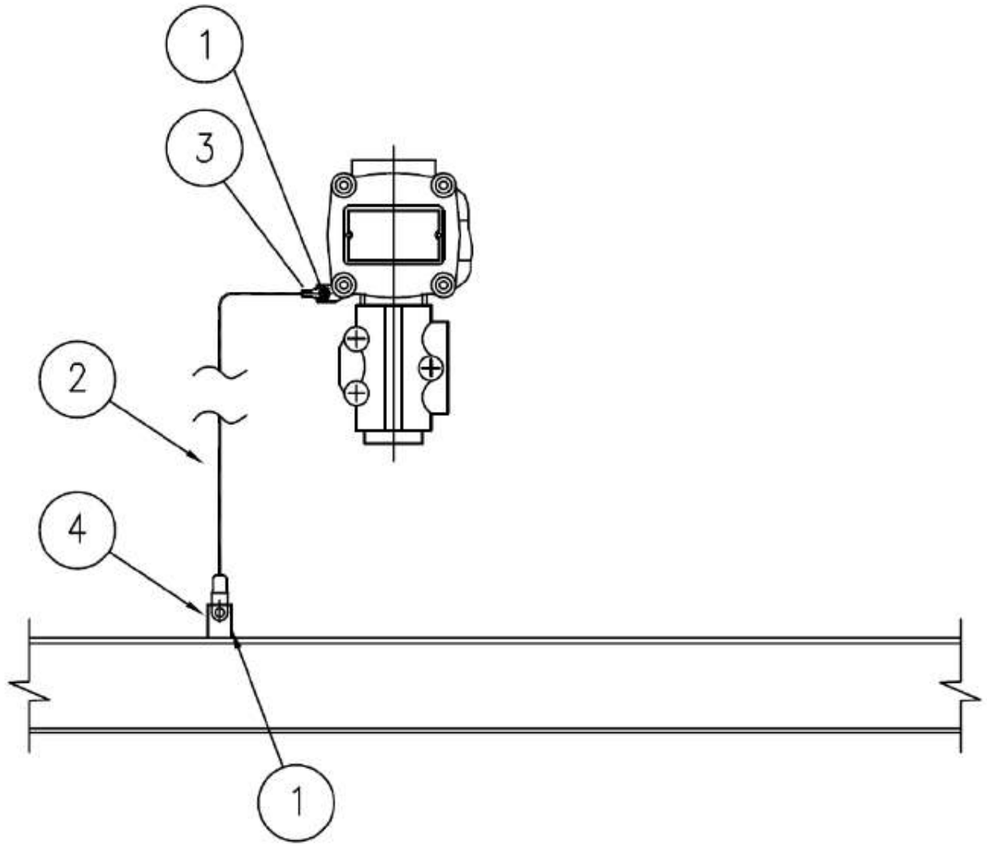
TITLE :

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

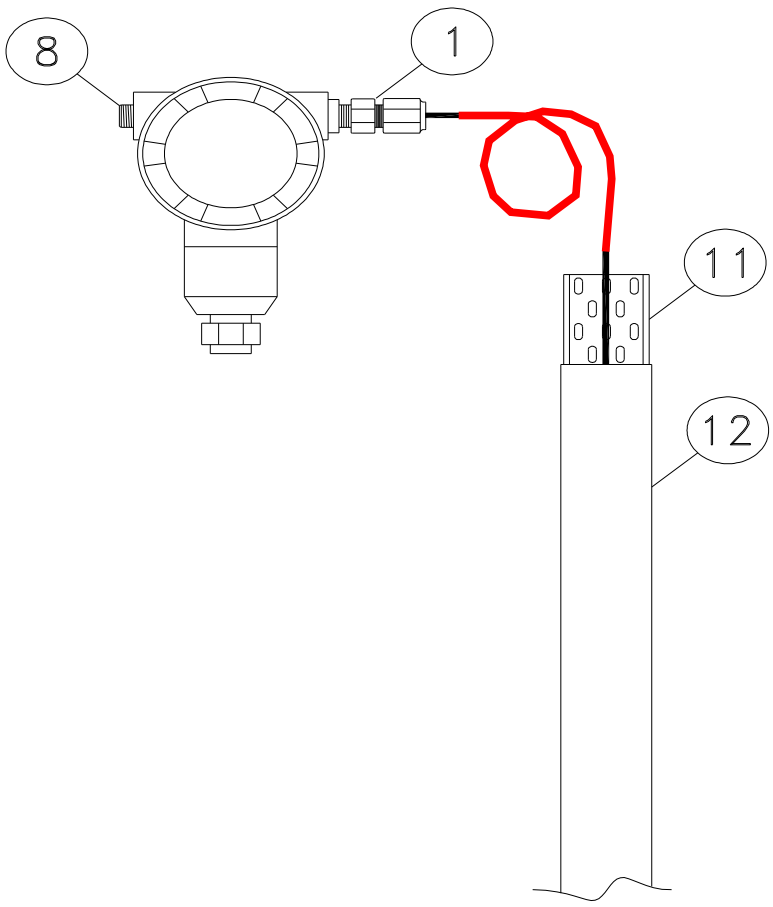
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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
15	
16	
17	
18	
19	
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

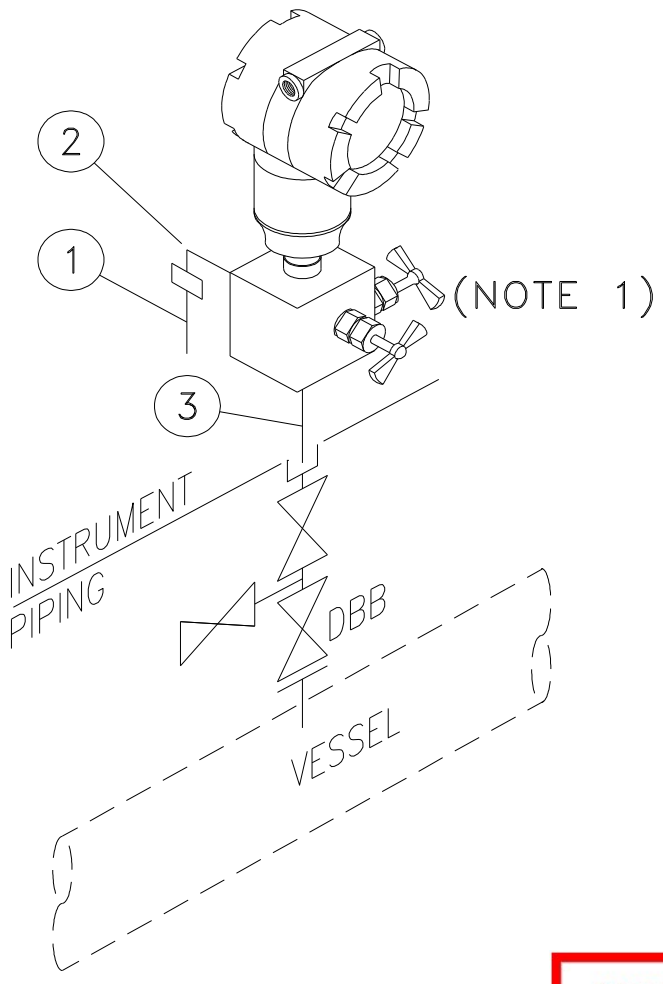
ROSETTI MARINO SpA

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	1

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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	

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40077**

REV.:	DATE:	SIGNATURE:
2_B	17/01/25	G.Randi

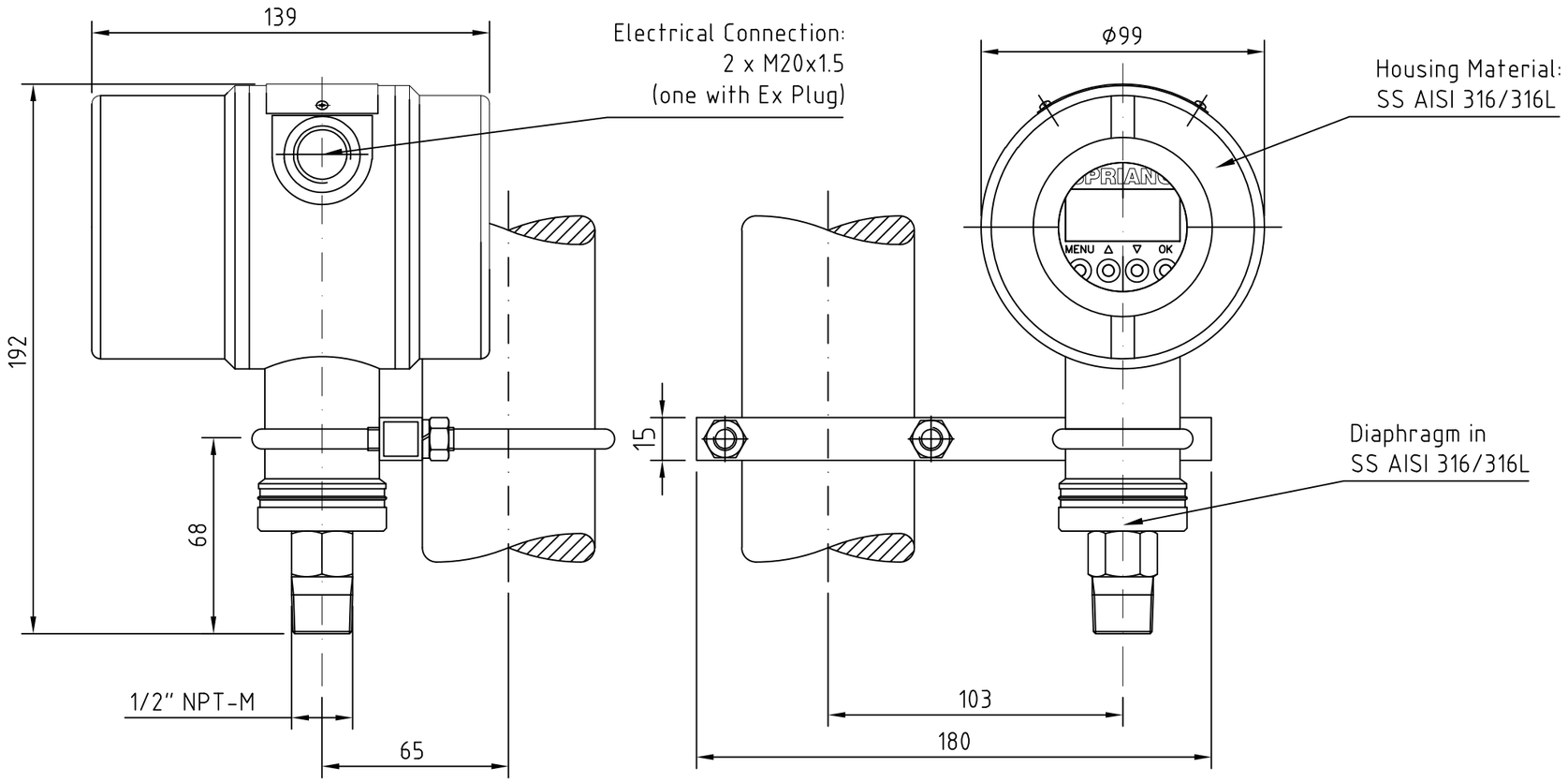
ROSETTI MARINO SpA

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

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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SST76 PRESSURE TRANSMITTERS

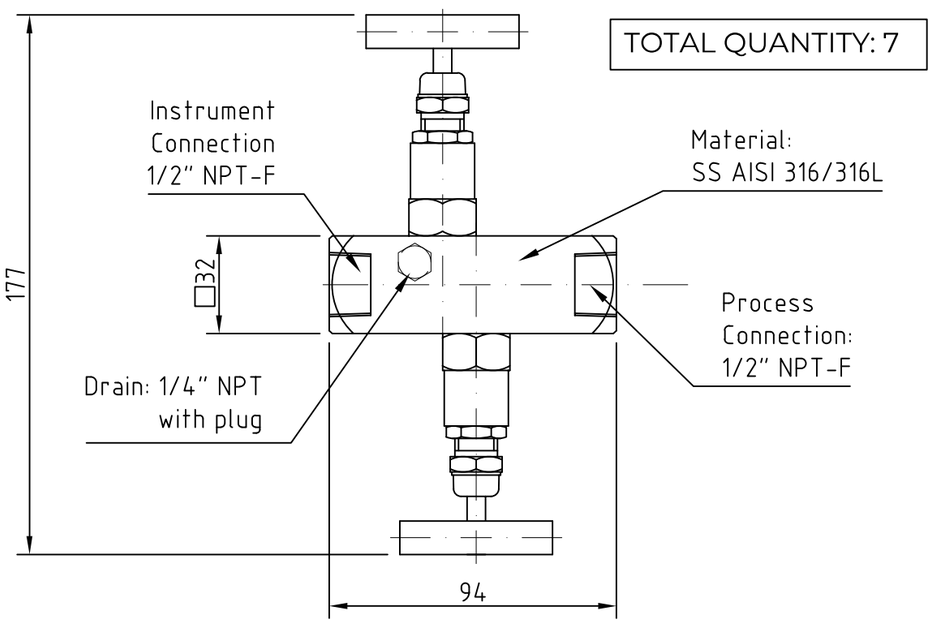


TAG LIST

#	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.Toni	G.Amodio	G.Nicolini	S.Valletta
02	02/JULY/24	THIRD ISSUE	FOR CONSTRUCTION	M.Toni	G.Amodio	G.Nicolini	S.Valletta
01	13/JUN/24	SECOND ISSUE	FOR CONSTRUCTION	M.Toni	G.Amodio	G.Nicolini	S.Valletta
00	24/MAY/24	FIRST ISSUE	FOR APPROVAL	M.Toni	G.Amodio	G.Nicolini	S.Valletta

CROSSWIND ROSETTI MARINO

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

TERRANOVA
SPIRIANO Vulcanic MECFRELA
TERRANOVA SRL

DRAWING TITLE: DIMENSIONAL DRAWINGS

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

GENERAL	1	Tag Number		64-PT-031B	
	2	Service		NITROGEN FROM U-64000 TO NITROGEN DISTRIBUTION HEADER	
	3	P&ID Number	Location	123A90-DDL-PR-PID-80027	1"-N-100-01CS-N
	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		NITROGEN	
	9	Pressure Des.	Oper. [barg]	10	7(Max.)
	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	10
	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 31 of 35

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

ITEM	Tag	64-FG-001	: Flow Gauge - Nitrogen to Hydrogen Vent Header		Dwg	123A90-DDL-PR-PID-80028	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10000949	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° 1724000791-QC-PRO-00008

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

MODEL N° :	MT3809 / 3809GCC08BFBC9A0V0AC	SERIAL N° :	06C43100316
DATA SHEET N° :	1724000791-IN-DS-00004	Rev :	04
TEST EQUIPMENT :	Note	SERIAL N° :	Note

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 Yes

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

TEST DETAILS
CALIBRATION FIGURES

CALIBRATION POINTS	RISING						FALLING						UNITS
INPUT A	Note												
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: Note: See attachment

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Francesco Zucca	Eleonora Carotenuto	
Date	2024-12-11	2024-12-14	
Signature	PROVERLIS Digitaly signed by Francesco Zucca 2024-12-11T09:41:21.458Z	PROVERLIS Digitaly signed by Eleonora Carotenuto 2024-12-14T07:54:50.556Z	

Product/Calibration Data Sheet

PPDS: 3.2
VASE: 5.9

Device Information

Serial Number
06C43100316

Model Number
MT3809

Customer Name
ROSETTI MARINO S.p.A

Customer PO Number
6032967

Customer Fluid
N2

Full Scale Flow
15 m3/h

Reference Temperature
0.00 °C

Customer Pressure
0.5 bar(g)

Customer Viscosity
0.0174cP

Customer Temperature
15.00 °C

Customer Fluid Density
0.0018 GM/CC

Calibration Information

Calibration Fluid
AIR

Calibration Flow Rate
276.7536 lpm

Calibration Pressure
9.765 psig

Calibration Temperature
70.00 °F

Calibration Location
Szekesfehervar

Calibration Procedure
834P054 // CAL038

Calibration Software/Revision
VA CAL.Rev 2.8.5.0 SW PN 805E002

Calibration Date
9/20/2024

Calibration System ID
06000/004

Calibrator Clock Number
472

Mechanical Information

Tube
Size 8-B

Float
8-B, 316L SS

Meter Accuracy
1

Accuracy Scale
% FS

Customer Tag or Part #
64-FG-001

Reference Number
1

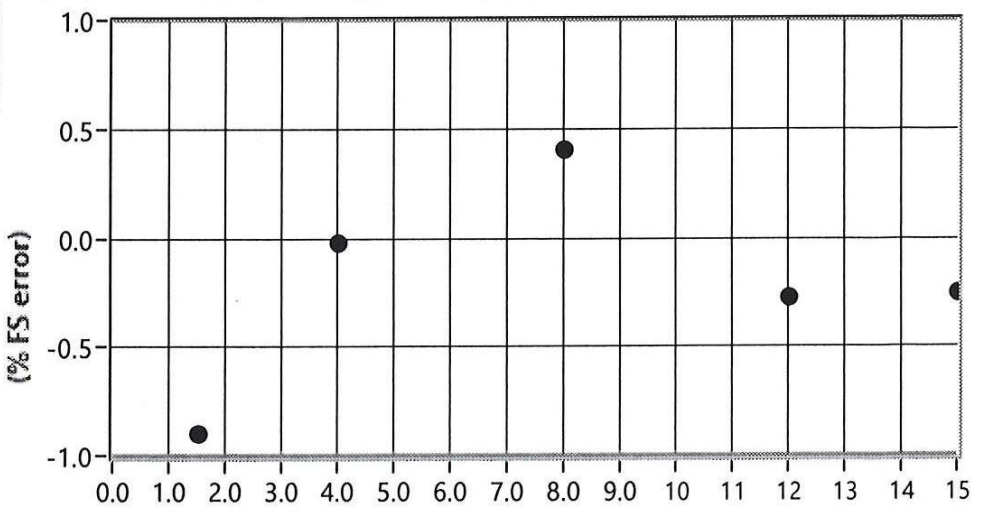
Alternate ID
N/A

Calibration Notes
WITNESSED ON 04/OCT/2024

Scale Check Data

Scale Reading	Flow (m3/h)	Error (% of FS)
15.00	14.962804	-0.25
12.00	11.959594	-0.27
8.00	8.061258	0.41
4.00	3.997155	-0.02
1.50	1.366097	-0.89

Error vs Scale Indicated Value-Error limit acc. 1 % FS



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F (215) 362-3745
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Brooks Instrument
1-4-4 Kitasuna Koto-Ku
Tokyo, 136-0073, Japan
T 011-81-3-5633-7105
F 011-81-3-5633-7124

BROOKS® INSTRUMENT

This report shall not be reproduced, except in full, without written approval from Brooks Instrument.

On behalf of RM

Ref. OPN-001

[X] Witness [ ] Review
Name: Vince Szulo
Date:

Witnessed by
Milad Mousavi, Falkrum
on behalf of Crosswind
04.10-2024

GENERAL	1	Tag Number		64-FG-001	
	2	Service		NITROGEN TO VENT KO DRUM (V-43001)	
	3	P & ID No.		123A90-DDL-PR-PID-80028	
	4	Area Classification		ATEX Zone2 - IIC (IIB+H2) T1	
	5	Line No.		1"-N-101-01CS-N	
	6	Line Size	Line Schedule	1"	80
	7	Line Material		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITIONS	8	Fluid		NITROGEN	
	9			Units / @ Max. Flow / @ Norm. Flow / @ Min. Flow	
	10	Flow		Nm^3/hr / / 10 /	
	11	Temperature		°C / / 15 /	
	12	Pressure		barg / / 0 - 0.5 barg /	
	13	Max Velocity		3 - 5 m/sec	
	14	Fluid Conductivity	Min.	0.021 kcal/hr m K	
	15	Vacuum Possibility		NO	
	16	Ambient Temperature (min/norm/max)		-8.4 / 10.5 / 25 [°C]	
	17				
METERING ELEMENT	18				
	19				
	20	Connection Size	Type & Rating	1"	Flanged #300 RF
	21	Connection Materials		SS 316/316L Dual Cert.	
	22	Float Type		SELF-CLEANING	
	23	Float Material		SS 316L	
	24	Meter Casing		SS 316/316L Dual Cert.	
	25	Meter Scale Type	Meter Factor	-	-
	26	Meter Scale Range		1.5 - 15 Nm^3/h	
	27				
	28				
ASSOCIATED INSTRUMENT	29	Tag No.		-	
	30	Function		-	
	31	Mounting		-	
	32	Electrical Connection	Electrical Class	-	-
	33	Signal Cable Length		-	
	34	ATEX Certification	Ingress Protection	-	-
	35	Power Supply		-	
	36	Output		-	
	37	Accuracy	Repeatability	-	-
	38	Rangeability		-	
	39	Alarm Contact: No.	Form	-	-
	40	Alarm Contact: Rating		-	
	41	Alarm Contact: Action		-	
	42	SIL Certification	PED Certification	-	Required (8)
PURCHASE	43	Manufacturer		BROOKS INSTRUMENT	
	44	Model		3809GCC08BFBC9A0V0AC	
	45	Purchase Order Number		1724000791	

Notes:

No.	Date	By	Chkd	Appr	Description
02	06/12/2024	VB	LC	DL	Accepted for Construction (AFC)
01	29/08/2024	VB	LC	DL	Accepted for Construction (AFC)
00	23/02/2024	VB	LC	DL	ISSUED FOR REVIEW (IFR)

INSTRUMENT DATASHEET

Variable Area Flow Meter

CROSSWIND

ROSETTI MARINO

Sheet 11 of 11

Code : 301 | Dwg. No.: 123A90-DDL-IN-DS-40045 | Rev 02

General Data	1	Tag Number					64-FG-001			
	2	Service					NITROGEN TO VENT KO DRUM (V-43001)			
	3	Area Classification					ATEX Zone2 - IIC (IIB+H2) T1			
	4	Line No.		Line Class			1"-N-101-01CS-N			
	5	Line Size		Line Schedule			1"		Thk (mm) = 4.55	
	6	P&ID No.					123A90-DDL-PR-PID-80028			
	7									
Process Data	8	Fluid		State			NITROGEN		GAS	
	9	Ambient Temperature (min/norm/max)					-8.4 / 10.5 / 25			°C
	10	Design Pressure								bar (G)
	11	Flow Rate	Min.	Nor.	Max.	Units		10		NM3/H
	12	Press.	Min.	Nor.	Max.	Units		0 - 0.5		bar (G)
	13	Temp.	Min.	Nor.	Max.	Units		15		°C
	14	Density	Min.	Nor.	Max.	Units				
	15	Molecular Weight	Min.	Nor.	Max.	Units				
	16	Viscosity	Min.	Nor.	Max.	Units				cP
	17	Pressure Drop					55			mbar
	18									
Meter	19	Type					Armoured Metal Tube Variable Area Flowmeters - Magnetic			
	20	Connection Size & Type					1" ANSI 150# RF Flange			
	21	Tube Material					316SS/316L SS Dual Cert.			
	22	Float Material					316L SS			
	23	Connection Material					316SS/316L SS Dual Cert.			
	24	Meter Scale Range					1.5 - 15			NM3/H
	25	Accuracy					1% F.S. / Direct Reading Scale			
	26	Inlet Direction		Outlet Direction			Bottom		Top	
	27									
Indicator / Transmitter	28	Output Signal					Local Indicator			
	29	Calibration Range					N/A			-
	30	Power Supply					N/A			
	31	Elect. Connection		Elect. Material			N/A			N/A
	32	Elect. Protect Class					N/A			
	33	Surge Protection Device					N/A			
	34	Indicator Housing					316SS Housing, Shatterproof Window, IP66/67			
	35									
Accessories / Special Service	36	Adjustable Valve					N/A			
	37	Valve Connection Size & Type					N/A			
	38	Pressure Gauge		Pressure Regulator			N/A		N/A	
	39	Painting					N/A			
	40	Tag Plate (316SS wired)					Included			
	41	Name Plate (316SS wired)					Included			
	42									
Purchase	43	Manufacturer					Brooks Instrument			
	44	Model No.					3809GCC08BFBC9A0V0AC			
	45	Serial No.								
	46	Purchase Order Number					PO 1724000791			
	47									

Notes :

No.	By	Date	Revision
C	KP	19/09/2024	Issued for Approval
B	KP	01/07/2024	Issued for Approval
A	KP	05/05/2024	Issued for Review

INSTRUMENT DATA SHEET FOR ROTAMETER

BROOKS® INSTRUMENT *Beyond Measure*

Doc. No.	Instrument Data Sheet	Sheet	7 of 7
		Rev.	C

VA Web Sizing App v5.9

Step 4: Generate scale details

User input fields are shaded.

Fluid Name	NITROGEN, N2		
Temperature	15 °C	Density	0.00177 GM/CC
Back Pressure	0.5 BARG	Viscosity	0.01742 cP
Phase	Gas		
Flow Type	Standard Volumetric Flow		
Flow Rate	15 NM3/H		
Ref Cond	0 °C & 1 atm		
Prod Family	MT3809	Tube	Size 8-B
Size	8	Float	8-B, 316L SS

This application performs VA flow meter sizing calculations only. Product pressure and temperature limitations are not considered. This application is not intended to replace the selection by a qualified person.

Scale Details

Scale Details

```
Scale range: 1.5 - 15
NM3/H N2 @ 15 °C & 0.5 BARG
```

Comments

Tag Number: 64-FG-001

ITEM	Tag	64-PT-002	: Pressure Transmitter - Nitrogen to Distribution Header Low Pressure		Dwg	123A90-DDL-IN-DS-40039	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10000950	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-QHSE-PRO-00122

MODEL N° :	SST76_Series	SERIAL N° :	SE240656
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 Attached

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:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (Rosetti Marino)	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-14	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T13:37:24.651Z	Firma Digitale Sicura Giovanni Tangianu 2024-10-14T18:03:52+0200	

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C.F. Part. IVA 02764420390

Plant	CROSSWIND	Description	NITROGEN FROM U-64000 TO NITROGEN DISTR. HEADER		
Area	N.P.	Loop Tag	64-PI-002	Instrument Tag	64-PT-002
Type of verification	periodic	Calibration range	0,00 ÷ 10,00 bar	Report N°	025
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
64-PT-002	SPRIANO	SST76	SE240656

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	4,00	4,001	+0,001	+0,006
2,50	8,00	7,996	-0,004	-0,026
5,00	12,00	12,002	+0,002	+0,014
7,50	16,00	15,990	-0,010	-0,062
10,00	20,00	19,972	-0,028	-0,174
7,50	16,00	15,986	-0,014	-0,087
5,00	12,00	12,003	+0,003	+0,019
2,50	8,00	7,998	-0,002	-0,012
0,00	4,00	3,999	-0,001	-0,006
		max error detected %		0,174

Check: FAILED

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 Instruments scores 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.
bar	mA	mA	mA	
0	4,00	4,000	0,000	0,000
2,5	8,00	8,002	0,002	0,013
5	12,00	12,000	0,000	0,000
7,5	16,00	15,992	-0,008	-0,050
10	20,00	19,999	-0,001	-0,013
7,5	16,00	15,994	-0,006	-0,038
5	12,00	12,001	0,001	0,006
2,5	8,00	8,001	0,001	0,006
0	4,00	3,999	-0,001	-0,006
		errore massimo rilevato %		0,050

Check: PASSED

Verification activation of blocks/threshold alarms

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

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
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Tel. 0544 685411
C.F. e P.IVA 02764420390

GENERAL	1	Tag Number			64-PT-002	
	2	Service			NITROGEN FROM U-64000 TO NITROGEN DISTRIBUTION HEADER	
	3	P&ID Number	Location		123A90-DDL-PR-PID-80027	1"-N-100-01CS-N
	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			NITROGEN	
	9	Pressure Des.	Oper.	[barg]	10	7(Max.)
	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	10
	15	Elevation	Suppression		-	-
	16	Element Type			Diaphragm	
	17	Element Material			SS AISI 316/316L	
	18	Body Material	Body Rating		AISI 316 SS	150 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		SIL2	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	64-PT-031A	: Pressure Transmitter - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-IN-DS-40039
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10000951		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-QHSE-PRO-00122

MODEL N° :	SST76_Series	SERIAL N° :	SE240654
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 Attached

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:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	rm Rosetti Marino	
Name	Carmelo Bongiovanni	Giovanni Tangianu	
Date	2024-10-14	2024-10-14	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T13:37:35.707Z	Firma Digitale Sicura Giovanni Tangianu 2024-10-14T18:06:01+0200	

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C.F. Part. IVA 02764420390

Plant	CROSSWIND	Description	NITROGEN FROM A-64000 TO NITROGEN DISTR. HEADER		
Area	N.P.	Loop Tag	64-PI-031A	Instrument Tag	64-PT-031A
Type of verification	periodic	Calibration range	0,00 ÷ 10,00 bar	Report N°	023
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
64-PT-31A	SPRIANO	SST76	SE240654

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	4,00	4,000	+0,000	+0,000
2,50	8,00	7,999	-0,001	-0,006
5,00	12,00	11,994	-0,006	-0,039
7,50	16,00	15,998	-0,002	-0,013
10,00	20,00	20,000	+0,000	+0,000
7,50	16,00	15,999	-0,001	-0,006
5,00	12,00	11,995	-0,005	-0,031
2,50	8,00	8,000	+0,000	+0,000
0,00	4,00	4,001	+0,001	+0,006
		max error detected %		0,039

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

CHECK RESULT: *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			64-PT-031A	
	2	Service			NITROGEN FROM A-64000 TO NITROGEN DISTRIBUTION HEADER	
	3	P&ID Number	Location		123A90-DDL-PR-PID-80027	1"-N-100-01CS-N
	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			NITROGEN	
	9	Pressure Des.	Oper.	[barg]	10	7(Max.)
	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	10
	15	Elevation	Suppression		-	-
	16	Element Type			Diaphragm	
	17	Element Material			SS AISI 316/316L	
	18	Body Material	Body Rating		AISI 316 SS	150 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	

This document undergoes an issuance cycle within EDMS Fusionlive". Its distribution is electronically controlled. Once printed shall be considered as “NOT CONTROLLED” copy

ITEM	Tag	64-PT-031B	: Pressure Transmitter - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-IN-DS-40039
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10000952		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-QHSE-PRO-00122

MODEL N° :	SST76_Series	SERIAL N° :	SE240655
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 Attached

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	2024-10-14	2024-10-14	
Signature	PROVERLIS Digitaly signed by Carmelo Bongiovanni 2024-10-14T13:37:48.5542	Firma Digitale Sicura Giovanni Tangianu 2024-10-14T18:08:18+0200	

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	NITROGEN FROM U-64000 TO NITROGEN DISTR. HEADER		
Area	N.P.	Loop Tag	64-PI-031B	Instrument Tag	64-PT-031B
Type of verification	periodic	Calibration range	0,00 ÷ 10,00 bar	Report N°	024
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
64-PT-031B	SPRIANO	SST76	SE240655

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	4,00	4,000	+0,000	+0,000
2,50	8,00	7,998	-0,002	-0,012
5,00	12,00	11,995	-0,005	-0,031
7,50	16,00	15,992	-0,008	-0,050
10,00	20,00	19,999	-0,001	-0,006
7,50	16,00	15,994	-0,006	-0,038
5,00	12,00	11,994	-0,006	-0,038
2,50	8,00	7,997	-0,003	-0,019
0,00	4,00	4,001	+0,001	+0,006
		max error detected %		0,050

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

CHECK RESULT: *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			64-PT-031B	
	2	Service			NITROGEN FROM U-64000 TO NITROGEN DISTRIBUTION HEADER	
	3	P&ID Number	Location		123A90-DDL-PR-PID-80027	1"-N-100-01CS-N
	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			NITROGEN	
	9	Pressure Des.	Oper.	[barg]	10	7(Max.)
	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	10
	15	Elevation	Suppression		-	-
	16	Element Type			Diaphragm	
	17	Element Material			SS AISI 316/316L	
	18	Body Material	Body Rating		AISI 316 SS	150 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	64-PSV-001	: Pressure Safety Valve - Nitrogen to Distribution Header Vent System			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10001191		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX03		Relief Valve

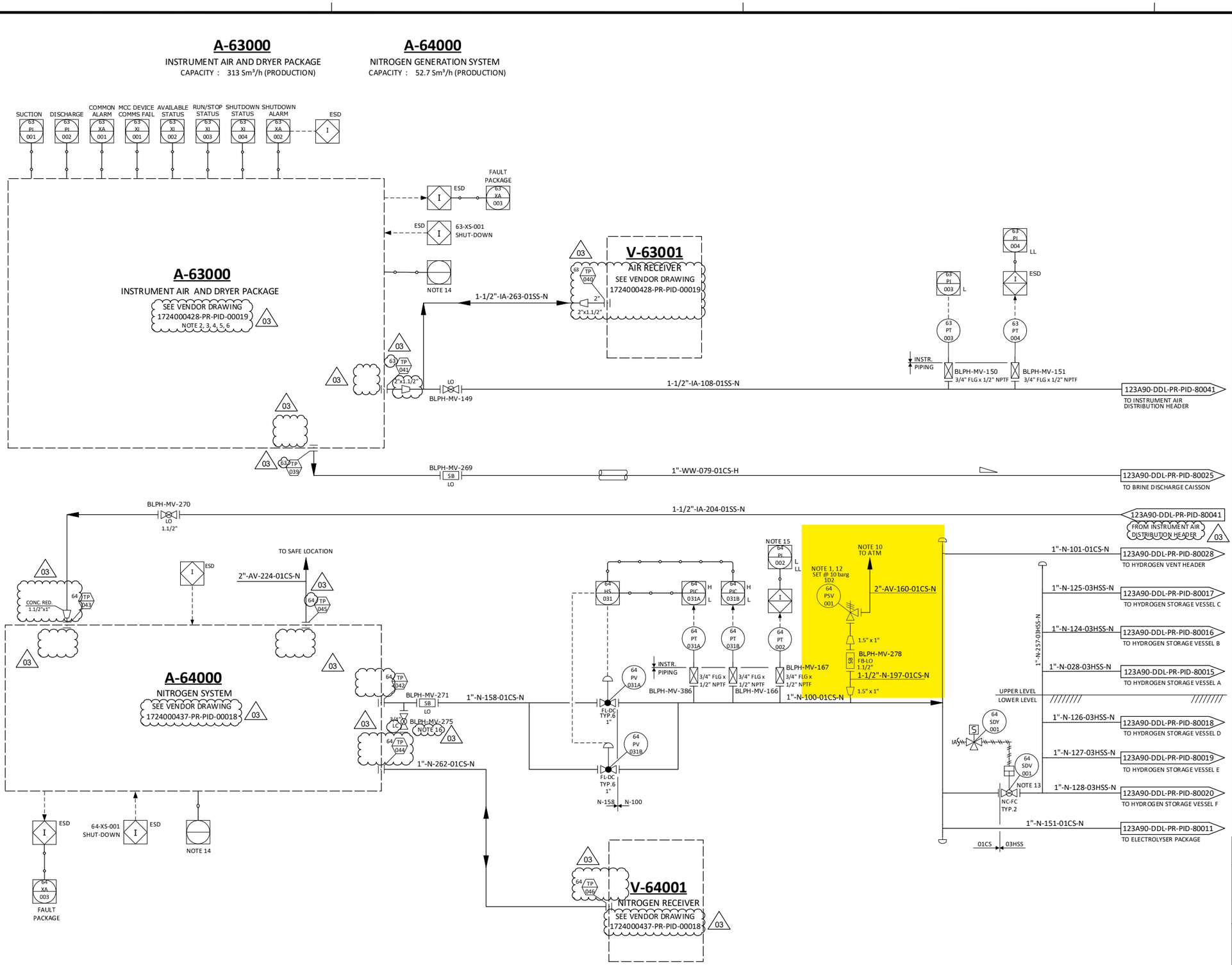
1	Check for mechanical damage.	PL
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check valve orientation is correclty installed	OK
5	Check identification (tag number, tag plate with SN, setting value, setting date…etc).	OK
6	Check calibration certificate and date against tag plate values.	OK
7	Check supporting and protection against vibrations.	OK
8	Check accessibility conforms to specifications, with platforming where necessary.	OK
9	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	Gabriele Bertuccelli	
Date	2025-01-31	2025-02-10	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:34:06.923Z	PROVERLIS Digitaly signed by Gabriele Bertuccelli 2025-02-10T15:30:35.714Z	

DRAWING NO. DRAWING_NO.

REV. REV



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)

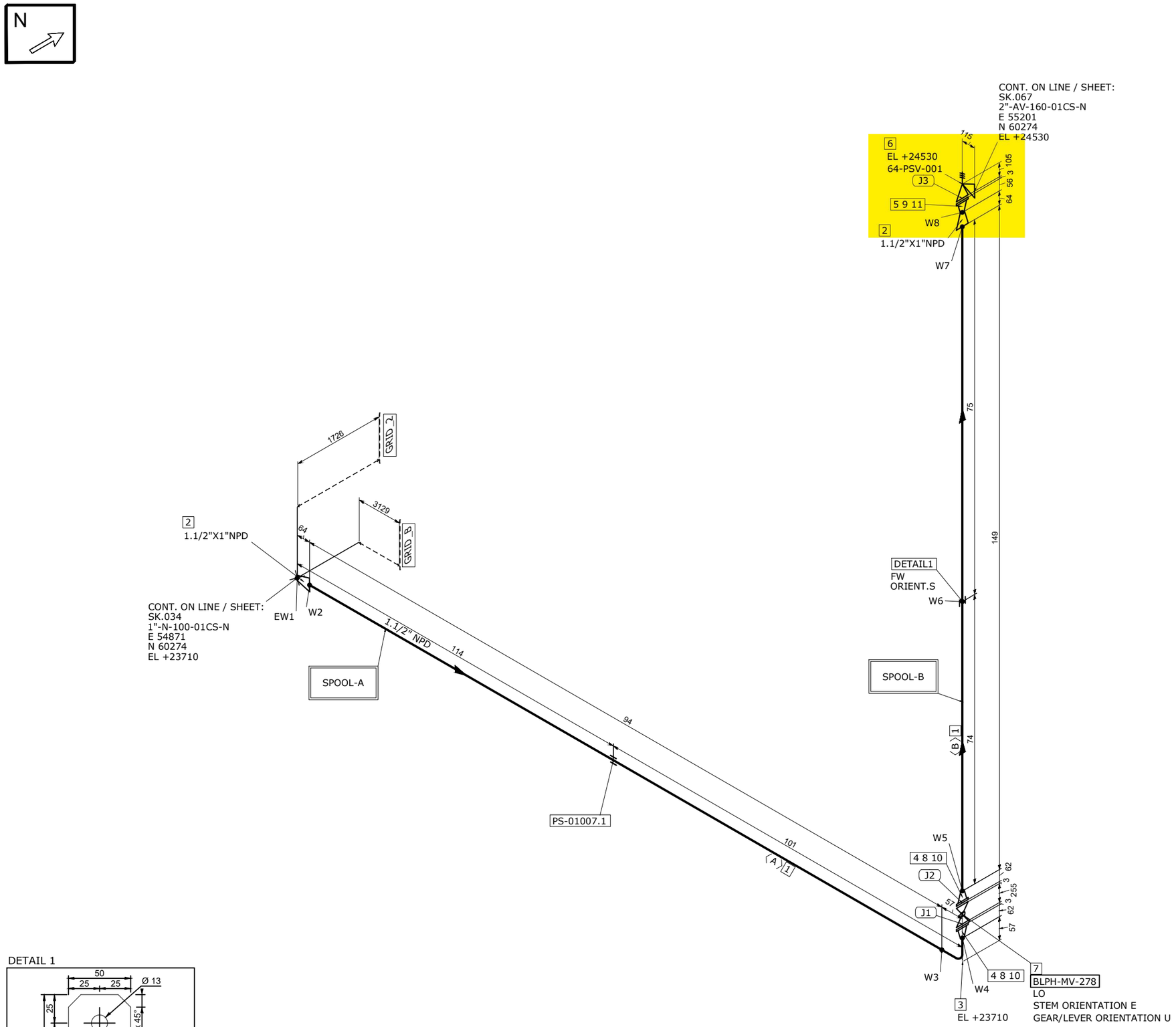
CROSSWIND

ROSETTI MARINO

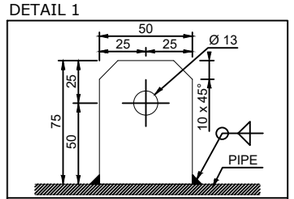
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

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



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	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	0.2M	1.3
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.7
3	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.5
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	2	3.6
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2X1		SAFETY VALVE FLG.150/150#	1	15.0
7	1.1/2	VLBLNN01291H00	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	26.4
8	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
9	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
10	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
11	1/2	SB20BO34450200	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.7

FABRICATION WEIGHT [kg]	7.5
ERECTION WEIGHT [kg]	43.3
OVERALL WEIGHT [kg]	50.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW1	1	BW
W2	1.1/2	BW
W3	1.1/2	BW
W4	1.1/2	BW
W5	1.1/2	BW
W6		FW
W7	1.1/2	BW
W8	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	94	BEVEL	BEVEL
B	1.1/2	149	BEVEL	BEVEL

SUPPORT LIST

PS-01007.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	4.5	3.2
B	4	4.4
MONT	1	43.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-N-197-01CS-N

SK.097

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [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

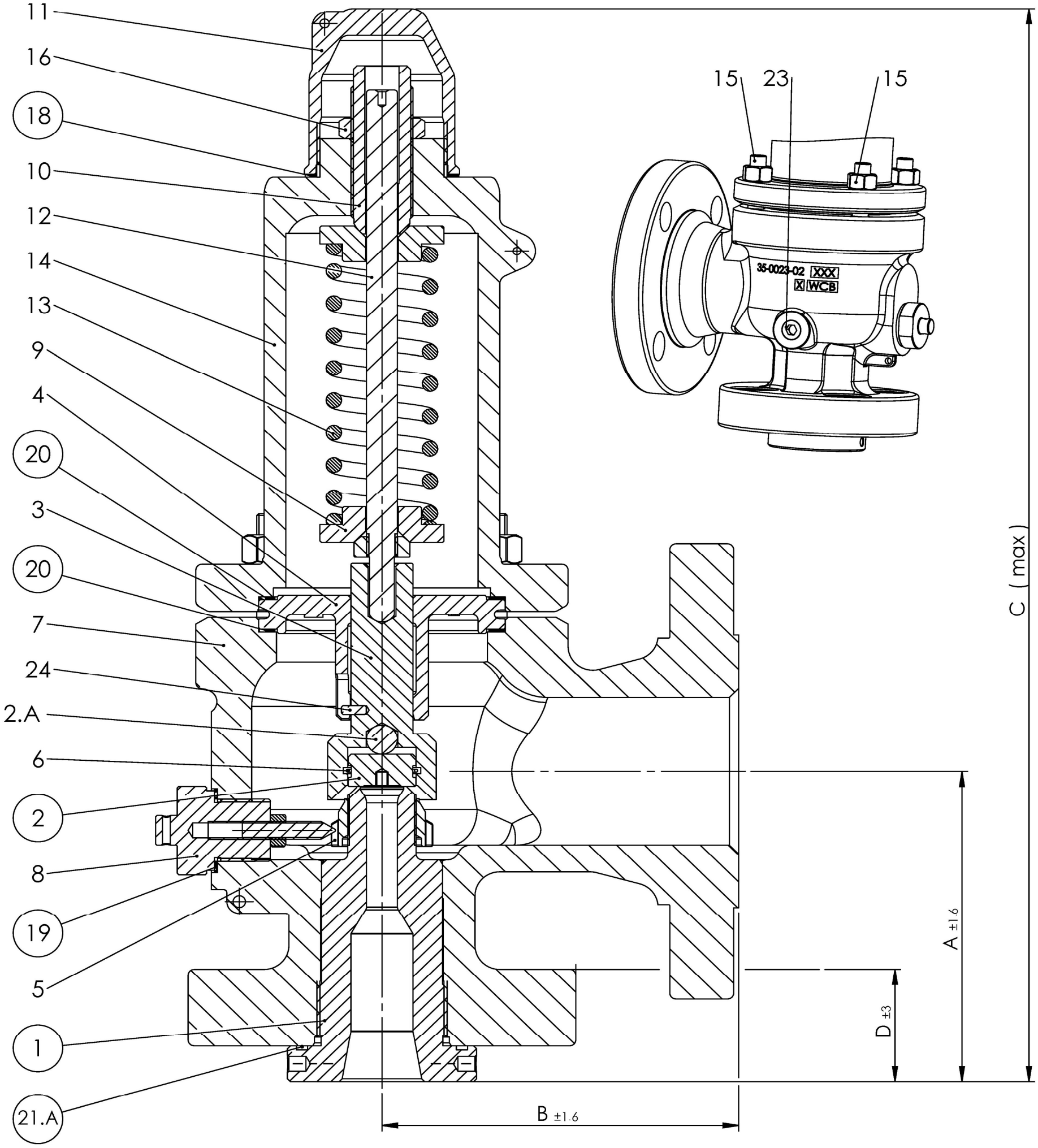
NOTES

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 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00097	SHEET / OF 1/1	REV. 00

○ recommended spare parts

Overall dimensions in accordance with API 526



Flange dimensions as per ASME B16.5 except for inlet flange thickness that may be higher than minimun specified.

Connections ASME B16.5			Dimensions (mm)						Orifice / area cm²	Weight
INLET	OUTLET	RF	A	B	C max	D	E	F	D	kg
1" 150 RF	2" 150 RF		105	115	380	37.5			0.785	15
Model 320-D10-L2			Tag 64-PSV-001 64-PSV-001_S						Job. n° 23/3962	
Customer ROSETTI MARINO spa			Order. n° 1724000518 123A90A						Doc. n° 23/3962_DWG_8	

Rev.	Date	Description	Prepared	Checked	Approved
1	17/04/2024	ADD. VALVE	DI VIRGILIO L.	PASQUALINI C.	BIANCHI R.
0	18/03/2024	ISSUED for ORDER	DI VIRGILIO L.	PASQUALINI C.	BIANCHI R.

tecHnical VIGNATE - MI - ITALY

Type: D1 1" 150 RF

jpg : 320-D10

ITALIAN VALVES MANUFACTURER SINCE 1973	Safety valve - 30000 Series - Bill of material	Job. n° 23/3962
	Model 320-D10-L2 / Tag 64-PSV-001 64-PSV-001_S	SPT-075

		LANGUAGE	IT/EN		TYPE	320	Accessori 0
		MATERIAL CLASS	L2	-	SPRING	36	AISI 316
Quantity	Peening	DESCRIZIONE / PART DESCRIPTION			MATERIALE / PART MATERIAL		
	1	Boccaglio / Nozzle			A479 316L		
	2	Otturatore / Disc			A479 316L		
	2a	Sfera / Ball			SS 420		
	3	Portaotturatore / Disc-holder			A747 CB7Cu-1		
	4	Guida / Liner			SS 316L		
	5	Anello Blowdown / Blowdown ring			SS 316L		
	6	Anello otturatore / Disc ring			SS 316		
	7	Corpo / Body			A352 LCB		
	8	Vite blowdown / Blowdown screw			SS 316L		
	9	Piattello molla / Spring washer			STAINLESS STEEL		
	10	Vite taratura / Adjusting screw			SS 431		
	11	Cappello / Cap			A352 LCB		
	12	Stelo / Stem			SS 316L		
	13	Molla / Spring			AISI 316		
	14	Coperchio / Bonnet			A352 LCB		
	15	Tiranteria / Bolting - nut			A193 B8M / A194 8M		
	16	Controdado / Lock nut			SS 316L		
	18	Guarnizione / Gasket			ARMED GRAPHITE		
	19	Guarnizione / Gasket			ARMED GRAPHITE		
	20	Guarnizione / Gasket			ARMED GRAPHITE		
	21a	Guarnizione boccaglio / Nozzle gasket			ARMED GRAPHITE		
	23	Tappo drenaggio / Drain plug			SS 316		
	24	Spina / Pin			SS 316		

Note / Remarks

Rev.	Date	Description	Prepared	Checked	Approved
1	17/04/2024	ADD. VALVE	DI VIRGILIO L.	PASQUALINI C.	BIANCHI R.
0	18/03/2024	ISSUED for ORDER	DI VIRGILIO L.	PASQUALINI C.	BIANCHI R.

GENERAL	1	Tag Number		64-PSV-001	
	2	Service		HYDROGEN FROM STORAGE VESSEL(V-25001F) TO HYDROGEN VENT HEADER	
	3	P&ID Number	Equipment No.	123A90-DDL-PR-PID-80027	-
	4	Nozzle (Full, Semi)	Line No.	Full	X"-N-197-01CS-N
	5	Design Safety, Relief, Safety-Relief		SAFETY-RELIEF (14)	
	6	Type Conventional, Bellow, Pilot Operated		Conventional	
	7	Bonnet Type		Closed	
	8	Design Conditions		17.7 barg @ 100°C	
PROCESS CONDITIONS	9	Fluid	State	NITROGEN	GAS
	10	Required Capacity		61,34 kg/h	
	11	Molecular Mass		28	
	12	Oper. Pressure	Set Pressure	7 barg	10 barg
	13	Oper. Temperature	RelievingTemperature	25°C	25°C
	14	Back Pressure	Constant		
	15		Variable		
	16		Total	0.1 barg	
	17	% Allowable Overpressure		10%	
	18	Overpressure Factor			
	19	Compressibility Factor		0.9952	
	20	Latent Heat of Vaporization			
	21	Ratio of Specific Heats		1.399	
	22	Relief Density			
	23	Relief Viscosity		0.01851 cP	
	24	Barometric Pressure		as per design basis	
	25				
BASIS AND SELECTION	26	Design Code		API STD 526	
	27	Sizing Basis		API STD 520 (Fire)	
	28	Calculated Area		0.0727 (8, 22)	
	29	Selected Area		0.785 cm2 (8, 22)	
	30	Orifice Designation		D (8, 22)	
	31				
CONNECTIONS	32	Inlet Size, Rating & Style		Flanged ASME B16.5 / 1" / #150	
	33	Outlet Size, Rating & Style		Flanged ASME B16.5 / 2" / #150	
MATERIALS	34	Body and Bonnet		ASTM A352 LCB (23)	
	35	Seat and Rings		AISI 316 (15)	
	36	Resilient Seat Seal		-	
	37	Guide and Rings		AISI 316L (15)	
	38	Spring		AISI 316 (15)	
	39	Bellows		-	
	40				
	41				
OPTIONS	42	Cap: Screwed or Bolted		Screwed	
	43	Lever: Plain or Packed		-	
	44	Test Gag		-	
	45				
	46				
PURCHASE	47	Manufacturer		Technical	
	48	Model		320-D10-L2	
	49	Purchase Order Number		1724000518 123A90A	
	50				

Notes:

No.	Date	By	Chkd	Appr	Description
01	28/08/24	VB	LC	DL	Accepted for Construction
00	11/12/23	VB	LC	DL	Issued for Review

INSTRUMENT DATASHEET

Pressure Safety Valves

CROSSWIND

ROSETTI MARINO

Sheet 12 of 13

Code: Dwg. No.: Rev 01

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV ISO 9001

DICHIARAZIONE DI COSTRUZIONE PER VALVOLE DI SICUREZZA SERIE 30.000N

CONSTRUCTION DECLARATION FOR SAFETY VALVES SERIAL 30.000N

n° 23/3962-8-193 | PROCEDURA/PROCEDURE N°IL 42

Matricola/Serial:	291505	Anno/Year:	2024
Cod. o Mod:	320-D10-L2	Classe:	L2
Ingresso/Inlet:	1" 150RF	Press. eser./Operating press.:	7 barg
Uscita/Outlet:	2" 150RF	Temp. d'eser./Operating temp.:	25 °C
Orifizio/Orifice:	10 mm	Area:	0,785 cm²
Taratura/Set Press.:	10 barg	Contropres./Back pressure:	
Quantità/Quantity:	1	Imp.Variabile/Imp.Variable:	
Sigla/Tag:	64-PSV-001	Generata/Generated:	0,1 barg

materiale/material		access.	vern./paint.
Corpo/Body:	A 352 LCB		CLIENT CYCLE
Boccaglio/Nozzle:	A 479 316L		note
Otturature/Disc:	AISI 316L		
Molla/Spring:	AISI 316		

Sovrappressione 10% - Scarto chiusura 7%	Overpressure 10% - Blowdown 7%
Alzata mm. 2,5 - Fluido NITROGEN	Lift mm. 2,5 - Fluid NITROGEN
Regolazione molla ±5% della taratura.	Spring regulation ±5% of set pressure.

COLLAUDO BANCO DI PROVA a temperatura ambiente

Hydrostatic Pressure
Corpo/Body 30 bar
Bocc./Nozzle 30 bar

TEST ON BENCH ambient temperature

Pressione taratura
Set pressure: 10 bar

Strumento utilizzato per la verifica
Pressure gauge: C23-003-08

Taratura,tenuta sede/Set pressure,seat tightness(API 527): POSITIVO/SATISFACTORY

Controllo dimensionale/Dimensional check (IL 42 Procedure): POSITIVO/SATISFACTORY

Ordine n° / Order n°	Cliente / Customer	Ispettore / Inspector	Ispettore / Inspector
1724000518 123A90A	ROSETTI MARINO Spa		L. FONTANA ON BEHALF OF ROSETTI MARINE S.p.A ☐ REVIEW ☒ WITNESS 2024 AGO 0 8

Mod. Prg. 005 - 01/18

DICHIARAZIONE DI CONFORMITÀ EU *CONFORMITY DECLARATION*

Il fabbricante *The supplier* tecHnical srl dichiara sotto la sua responsabilità che l'accessorio di sicurezza descritto sopra *declares under the sole responsibility that the mentioned safety device*

è conforme alle disposizioni legislative che traspongono *suits the provisions of the law that transposes the* **Directive 2014/68/EU**

MARCATURA - *MARK* CE 0496 Modulo - *Module* H1

CERTIFICATO GARANZIA QUALITÀ TOTALE - FULL QUALITY ASSURANCE CERTIFICATE CE PED. N. 124433-2012-CE-ITA-ACCREDIA

ENTE NOTIFICATO DI SORVEGLIANZA - *NOTIFIED BODY* DNV Business Assurance Italy S.r.l.

NORMATIVE ARMONIZZATE APPLICATE - APPLIED HARMONIZED STANDARDS: EN ISO 4126-1; EN ISO 4126-7

VIGNATE (MI) - ITALY

DATA - *DATE*

2024-ago-08

tecHnical srl

Authorised Representative
Enrica Brenna

tecHnical srl - Sede Legale, Stab. ed Uffici:
Via Toscana, 9 -20052Vignate (Mi) Italy

Telefono ++39-0295361240 - Telefax ++39-029560273
E-mail: sales@technical.it - Web site: www.technical.it

8/8/24

ITEM	Tag	64-PV-031A	: Control Valve - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10001193		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX27 Control Valve-Pneumatic/Hydraulic Type

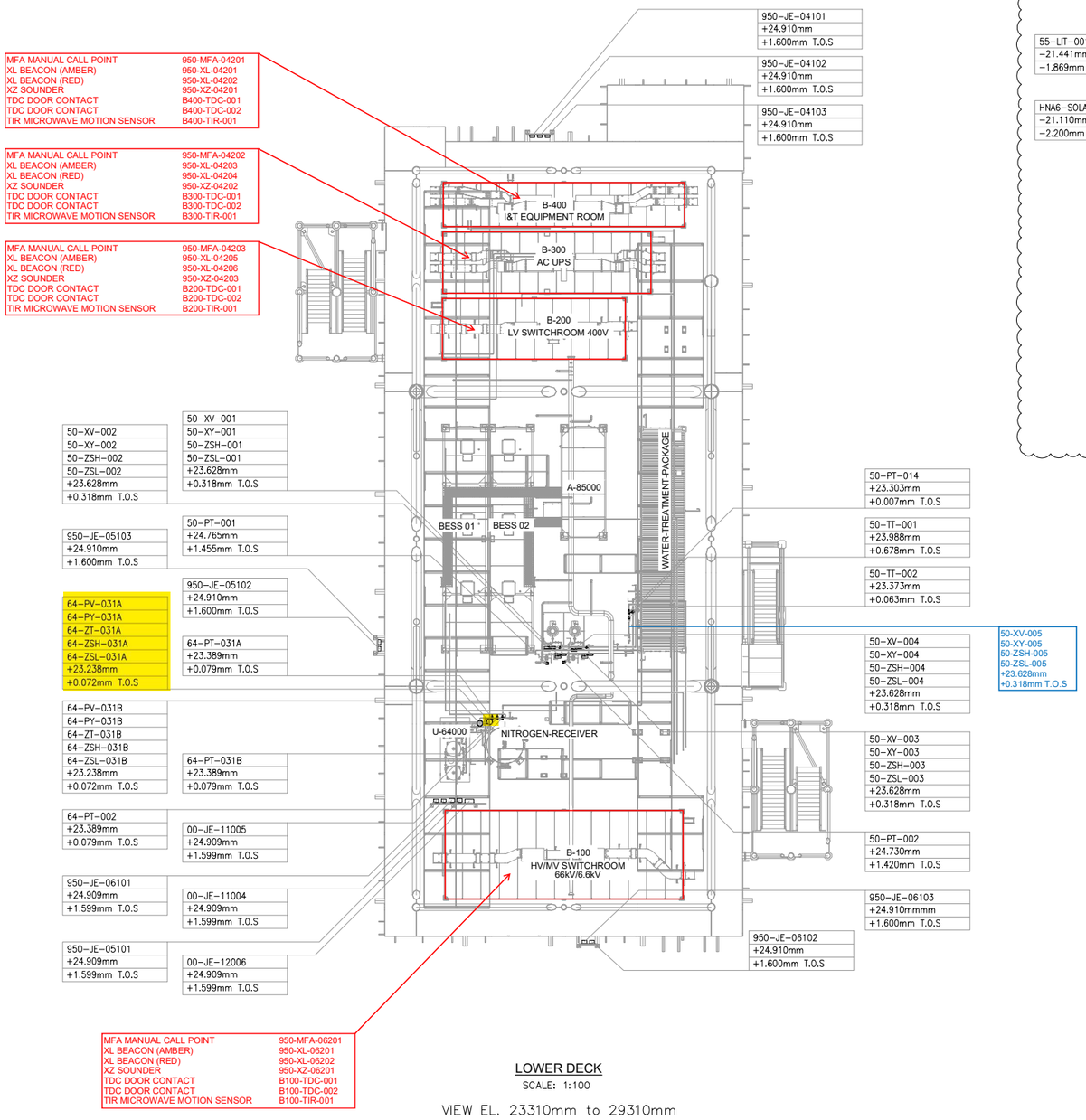
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	PL
3	Check installation conforms to P&ID, typical and hook-up drawing.	OK
4	Check valve is installed in accordance with flow direction.	OK
5	Check identification (tag number, tag plates).	OK
6	Check supporting and protection against vibrations.	OK
7	Check accessibility conforms to specifications, with platforming where necessary.	OK
8	Check connections between actuator and electro-positioner.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments

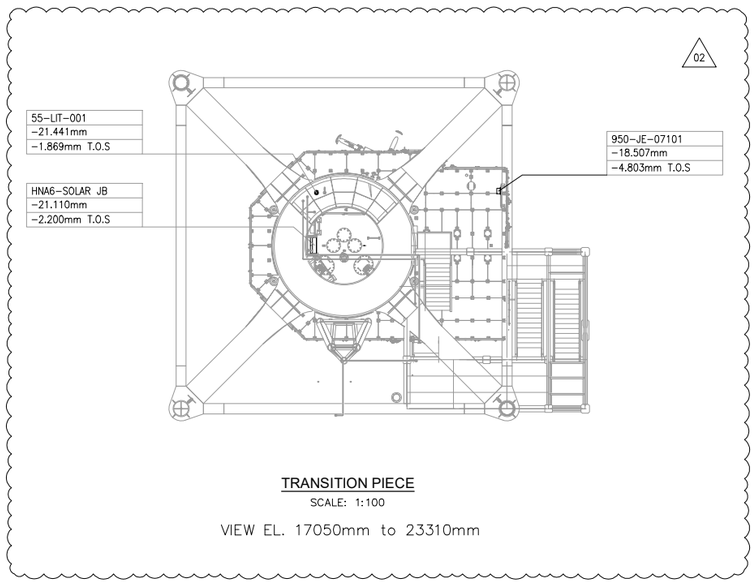
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-28	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:41:29.706Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-28T12:38:33.048Z	

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

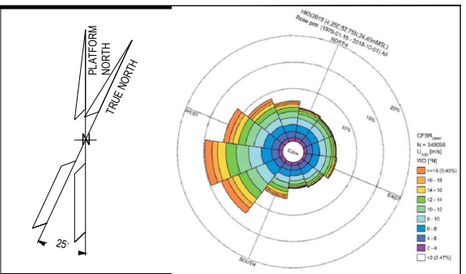
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | I ESD

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

03 → 3/4" LC — BLPH-MV-275 NOTE 16 — 03 → 64 TP 044 — 1"-N-262-01CS-N

I ESD → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN I ESD
NOTE 14

NOTE 15: 64 PI 002 L LL | I ESD

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

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

INSTR. PIPING | 64 PV 031A | FL-DC TYP.6 1" | 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 | 1"-N-100-01CS-N

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

64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

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-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

1" N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDV 001 S — IA
64 SDV 001 — NOTE 13 — NC-FC TYP.2
01CS | 03HSS

03 → 64 TP 046 — **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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 03 64-PV-031 CV FAILURE.
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

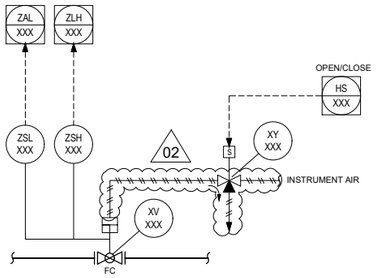
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DRAWING NO.

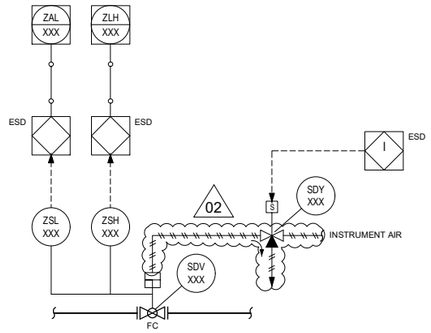
REV. 00

TYPICAL INSTRUMENTATION VALVE

TYP.1 (XV - ON OFF VALVES)

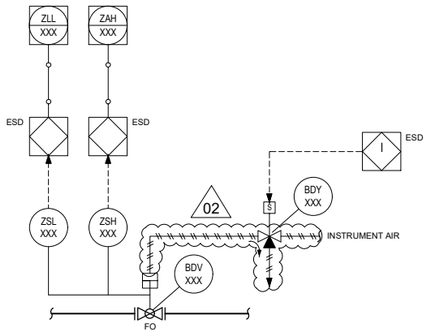


TYP.2 (SDV - SAFETY NO CRITICAL VALVES)



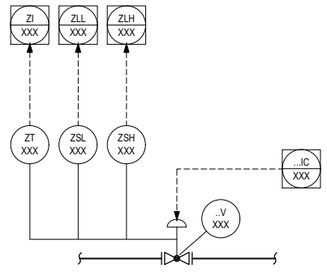
02

TYP.4 (BDV - SAFETY NO CRITICAL VALVES)

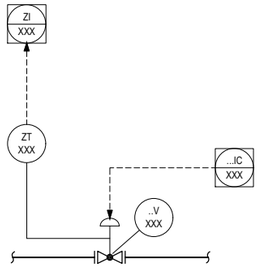


02

TYP.6 (CONTROL VALVES - CRITICAL)



TYP.7 (CONTROL VALVES - NOT CRITICAL)



INSTRUMENT SYMBOLOGY DEFINITION

MEANINGS OF IDENTIFICATION LETTERS
THIS TABLE APPLIES TO THE FUNCTIONAL IDENTIFICATION OF INSTRUMENTS

	FIRST- LETTER		SUCCEEDING-LETTER		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
C				CONTROL	
E			SENSOR (PRIMARY ELEMENT) ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G			GLASS VIEWING DEVICE		
H	HAND				HIGH
I			INDICATE		
L	LEVEL				LOW
O			ORIFICE, OPEN		
P	PRESSURE, VACUUM				
R		RELIEF			
S		SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
V				VALVE, DAMPER, LOUVER	
X	UNCLASSIFIED				
Y				AUXILIARY DEVICES	
Z	POSITION DIMENSION				

NOTE: FOR FURTHER EXPLANATORY NOTES, REFER TO ANSI/ISA-5.1

NOTES

1. FOR GENERAL NOTES AND PIPING SYMBOLOGY SEE DRAWINGS: 123A90-DDL-PR-PID-80009 AND 123A90-DDL-PR-PID-80010.
2. DELETED.

HOLDS

1 DELETED 02

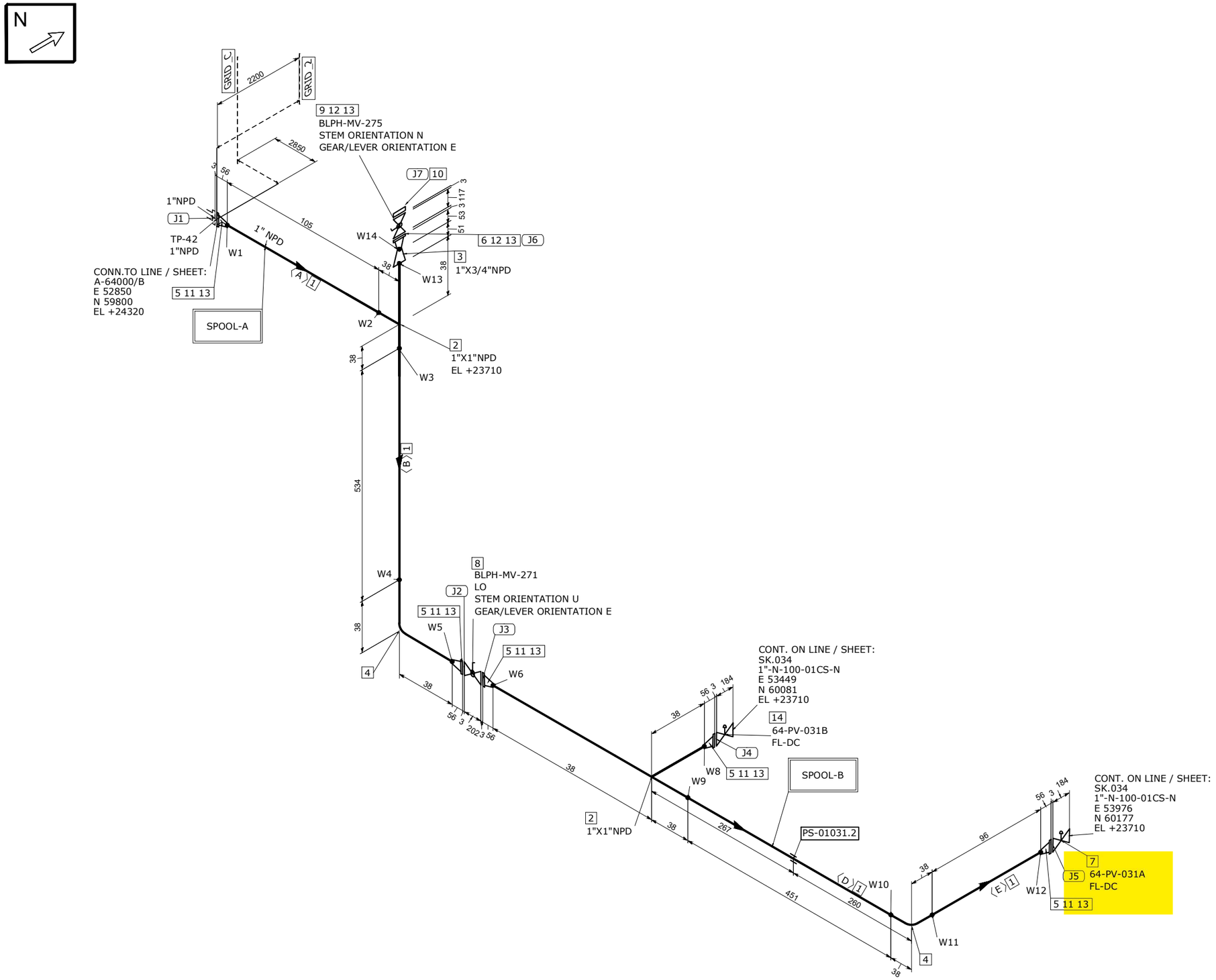
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND | ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENTATION SYMBOLOGY

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-80042	SHEET 001	REV. 02

File Name :



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.2M	3.8
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1		Control Valve - FLG 150 #RF	1	48.0
8	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
9	3/4	VBC0NN24703Q00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	5.3
10	3/4	FLB0CS07333Q00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	5	0.3
12	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
13	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
14	1		Control Valve - FLG 150 #RF	1	48.0

FABRICATION WEIGHT [kg]	13.2
ERECTION WEIGHT [kg]	118.5
OVERALL WEIGHT [kg]	131.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	105	BEVEL	BEVEL
B	1	534	BEVEL	BEVEL
D	1	451	BEVEL	BEVEL
E	1	96	BEVEL	BEVEL

SUPPORT LIST

PS-01031.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6.75	6.5
B	6	6.7
MONT	0	118.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-158-01CS-N

SK.066

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

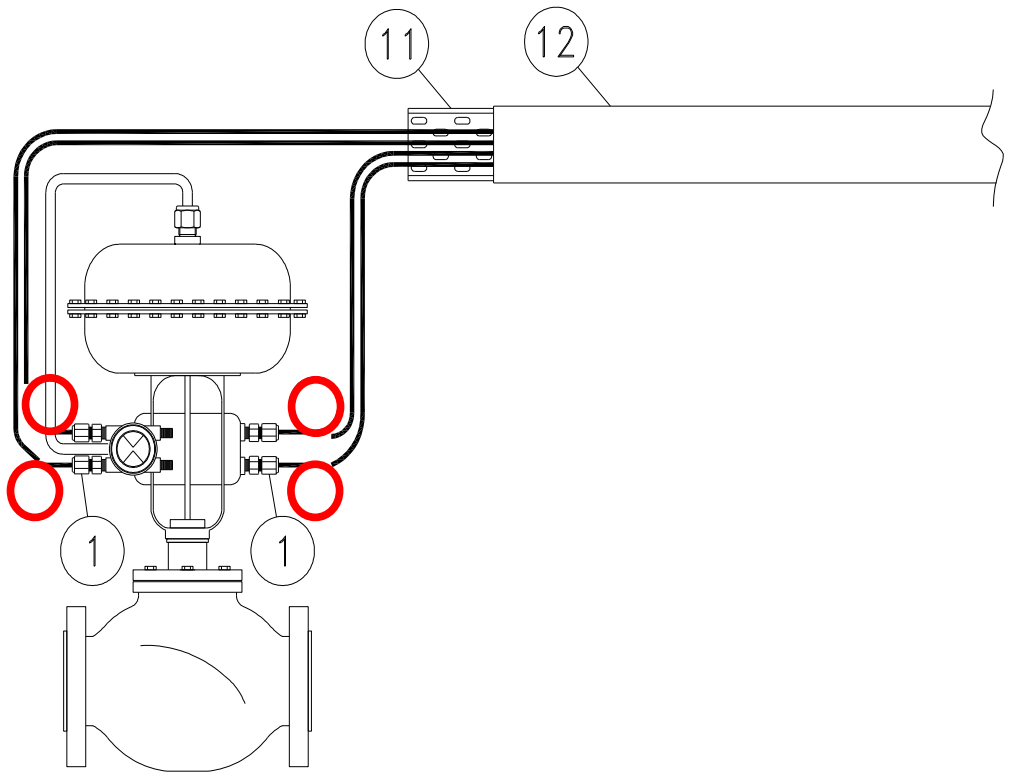
P&ID	123A90-DDL-PR-PID-80027
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

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 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00066		SHEET / OF 1/1	REV. 00

ELECTRICAL HOOK-UP FOR CONTROL VALVE (N.1 ELECTROPOS. + N.1 POSITION TRASM.+ 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-036
6	25-FV-038
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
18	
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23	
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25	
26	
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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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	4

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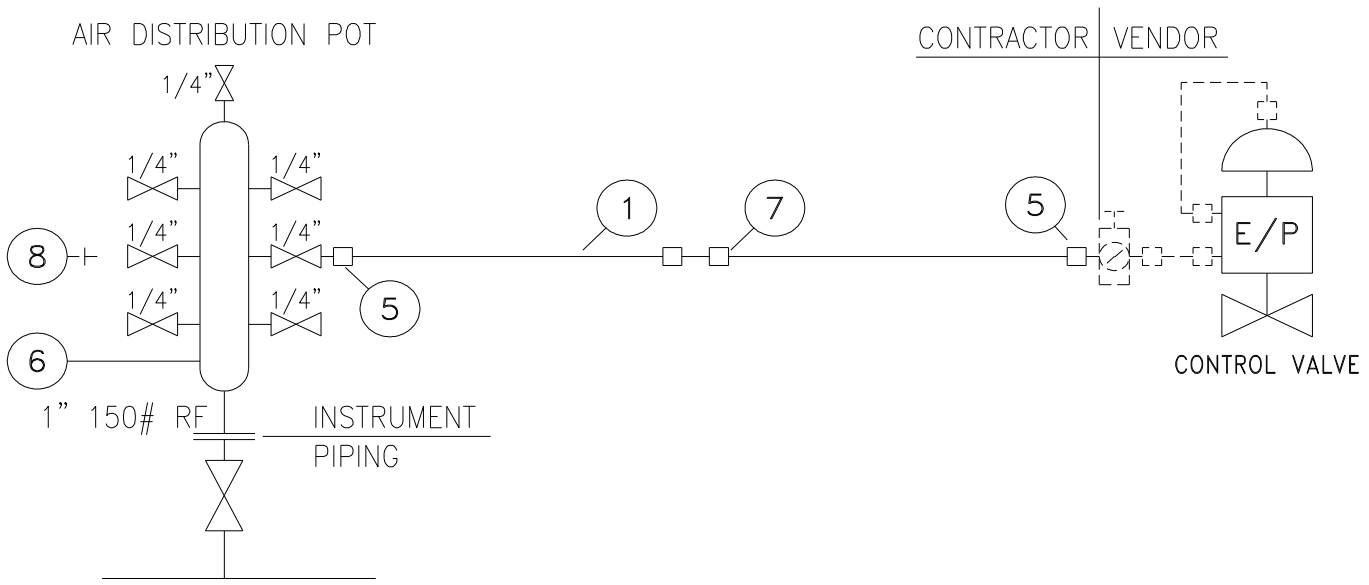
CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Pneumatic Hook-Ups	Sh. 5 of 6 Date: 08/07/2024 Rev. 01

PNEUMATIC HOOK-UP FOR CONTROL VALVES

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

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

ROSETTI MARINO SpA

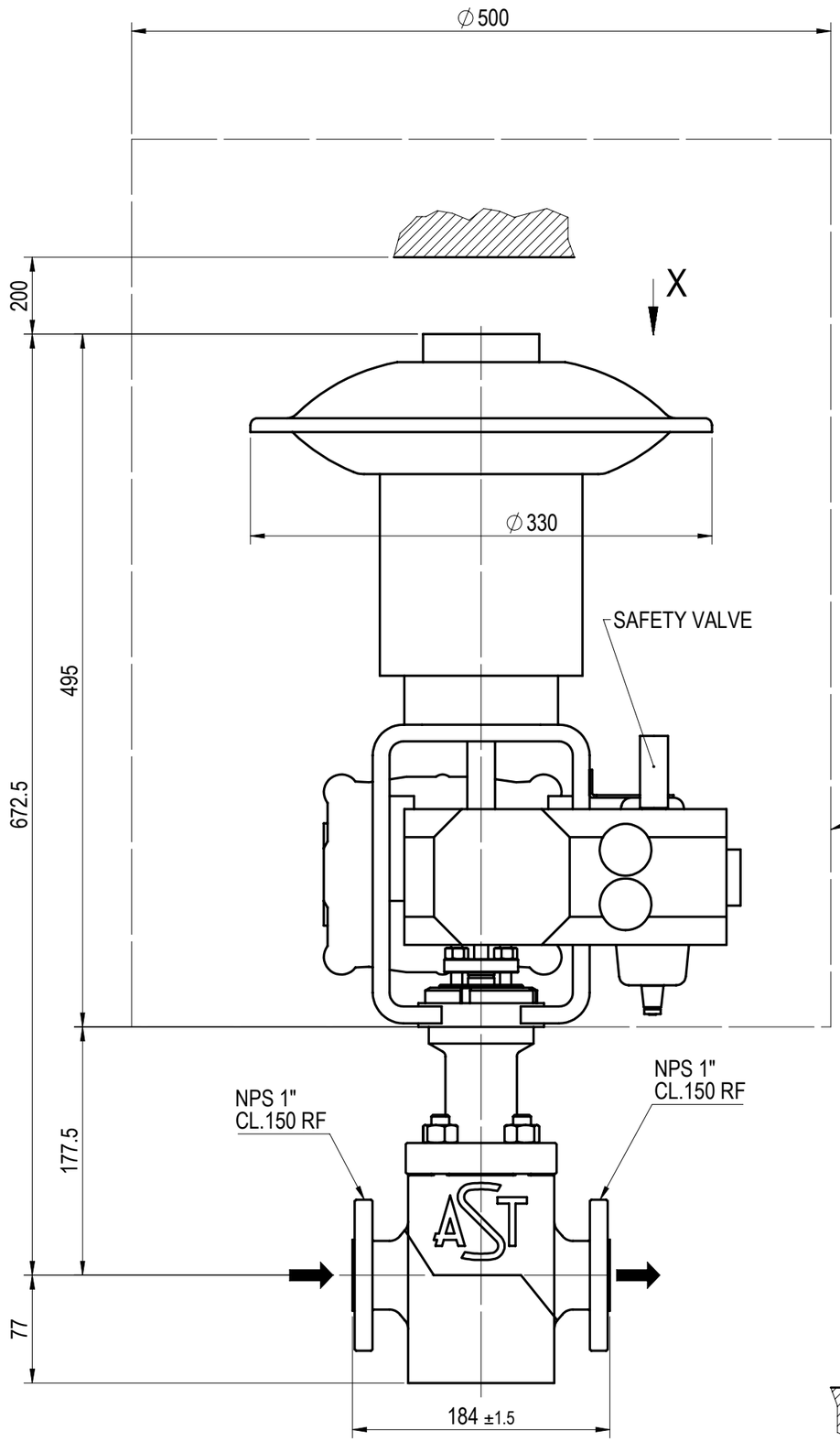


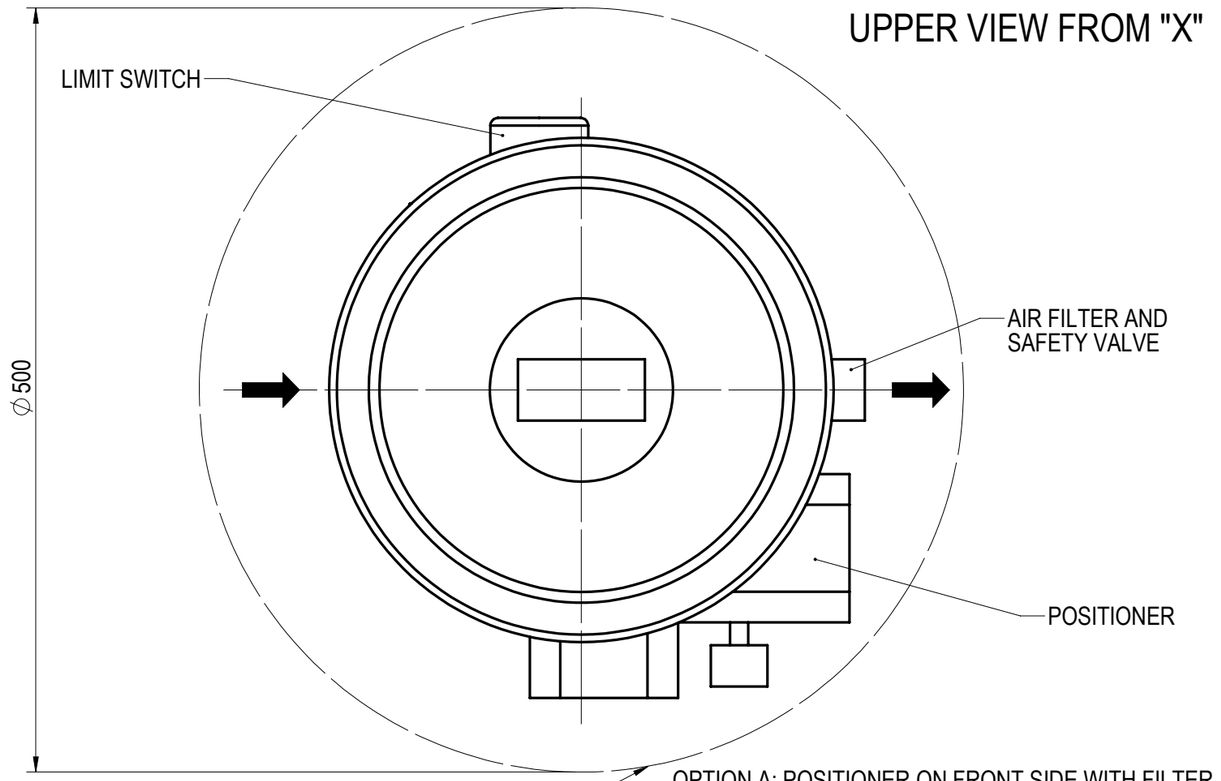
INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-038
6	25-FV-036
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

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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MAXIMUM ACCESSORIES
OVERALL DIMENSION

OPTION A: POSITIONER ON FRONT SIDE WITH FILTER ON RIGHT SIDE (AS REPRESENTED)

OPTION B: POSITIONER ON BACK SIDE WITH FILTER ON LEFT SIDE

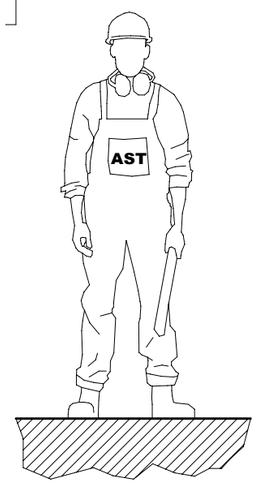
TAG	SN	OPTION
64-PV-031A	2400597	A
64-PV-031B	2400598	B

MASS:
VALVE= ~ 20 kg
ACTUATOR= ~ 28 kg
TOTAL= ~ 48 kg

General tolerances

For main components:
- up to 500mm ± 25
- over 500mm ± 50

For installed equipments / instrument / tubing:
- all dim. ± 100



Cliente / Customer	ROSETTI MARINO S.P.A.
Ordine AST / AST job	CV2400221
Sigle / Tags	64-PV-031A, 64-PV-031B
Matricole / Serials	2400597, 2400598

Revision Description
ADDED ACCESSORIES AS PER CUSTOMER COMMENTS

Drawn	ABD ELSALAM	Checked	PINI	Approval	PEREGO	Date	29-05-24

PROPERTY AND REPRODUCTION ARE SUBJECTED TO THE LAW

Scale | Mass kg | CR 00304 | NOTE:

Description
CV-8407 OVERALL DIMENSION
NPS 1" PORT 3/8" CL. 150 RF

Dwg No
240221-0400OD

Rev. 2 | Sheet 1 of 1

A3 - AST S.p.A. Via R. Merendi, 40 - 20010 Cornaredo (Mi) - Tel.02 934848.1 - Control valve division

GENERAL	1	Tag Number	P&ID Number			64-PV-031A		123A90-DDL-PR-PID-80027	
	2	Service				NITROGEN FROM NITROGEN SYSTEM (U-64000) TO HEADER			
	3	Area Classification	Certification			ATEX ZONE 2		Ex-d IIC (or IIB+H2) T1	
	4	Ambient Temperature:	Min.	Max.		°C		-8.4	+25
	5	Allowable Sound Pressure Level dBA				Max 85 dBA			
	6	Ingress Protection	Power Failure Position			IP-66		-	CLOSE
	7	Air Supply Pressure:	Min.	Norm.	Max.	barg	4	9	10
PIPELINE	8	Line Number	Pipe Insulation			1"-N-158-01CS-N			NOT INSULATED (PAINTED)
	9	Line Size and Schedule	Inlet	Outlet		1" / 4.55 mm		1" / 4.55 mm	
	10	Line Spec	Line Material			01CS		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITION	11	Process Fluid	Fluid Phase			NITROGEN		GAS	
	12	Upstream Condition							
	13	Des. Press. / Full Vac.	Des. Temperature Min / Max			10 barg		100 °C	
	14	Critical Pressure	Critical Temperature						
	15	Differential Pressure - Maximum Shut Off				10 bar			
	16					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	17	Flow Rate (Gas)				Nm^3/h	60	10	7
	18	Flow Rate (Liquid)							
	19	Inlet Pressure				barg	8	8	8
	20	Pressure Drop				bar	0.5	1	1
	21	Inlet Temperature				°C	15	15	15
	22	Inlet Density / Specific Gravity				kg/m^3	10.6	10.6	10.6
	23	Inlet Compressibility Factor				-	0.99	0.99	0.99
	24	Inlet Viscosity				cP	0.017	0.017	0.017
	25	Inlet Specific Heats Ratio (Cp/Cv)				-	1.4	1.4	1.4
	26	Inlet Vapour Pressure							
	27	Molecular Weight				-	28	28	28
CALCULATED RESULTS	28	Flow Coefficient Cv					1.22	0.1474	0.1032
	29	Travel				33.9%			
	30	Sound Pressure Level				<75 dBA (20)			
BODY AND TRIM	31	MFR	Model			AST		CV-8407	
	32	Body Type				GLOBE VALVE (HS01A02RF)			
	33	Body Size	Trim Size			1"		3/8"	
	34	Rated Cv	Characteristics.			1.9		(11) Equal%	
	35	End Connec. & Rating				FLANGED ASME B16.5 / #150			
	36	Body Material				ASTM A350 LF2			
	37	Bonnet Type	Material			Bolted (21)		ASTM A350 LF2	
	38	Bolting				A193 B8M Cl. 2 / A194 8M			
	39	Packing Material				PTFE			
	40	Flow Action To				OPEN			
	41	Lubricator	Isolat. Valve			-		By Contractor	
	42	Guiding	No. of Ports			Top Guided		1	
	43	Trim Type				Contoured Plug (12, 13)			
	44	Rated Travel				13mm			
	45	Plug/ Ball/ Disk Material				A479 316L+CoCr-A (12)			
	46	Seat Material				A479 316L+CoCr-A (12)			
	47	Cage	Stem Material			-		A479 316L	
	48	Gasket Material				By Contractor (in line)			
	49	Flange Finish				RF			

						INSTRUMENT DATASHEET	CROSSWIND	
						Control Valve (Sheet 1 of 2)	ROSETTI MARINO	
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO		Sheet 34 of 37	
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			
No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No 123A90-DDL-IN-DS-40036	Rev. 01

ACTUATOR	50	MFR	Model	AST	SD11R
	51	Type		PNUEMATIC / DIAPHRAGM (*)	
	52	Size	Area	SD11R	(*)
	53	Handwheel		NOT REQUIRED	
	54	Bench Range		15-30 psi	
	55	Volume Tank		NOT REQUIRED	
TESTS	56	Hydro. Pressure		REQUIRED	
	57	Leakage		REQUIRED (37)	
	58				
POSITIONER	59	MFR	Model	TISSIN	TS900 (15, 16)
	60	Signal: Inlet	Outlet	4-20 mA	3 to 15 psi
	61	Increase Signal Valve:		OPEN VALE	
	62	Cam Characteristic		(*)	
	63	Bypass	Gauges	NOT REQ.	YES
	64	Signal Transmission		REQUIRED VALVE POSITION 4-20 mA to PCS (22) (25-ZT-025A)	
COMM. & SOFTWARE	65	Comm Type	Signal Type	-	-
	66	D D Rev.	CFF Rev.	-	-
	67	Device Tag	Hart Tag	-	-
	68	Diagnostics	Capac	-	-
	69	Segment	Device Addr.	-	-
	70	Device Class	Simulate	-	-
	71	Nom. Current	Oper Volt	-	-
SOLENOID	72	MFR	Model	-	-
	73	Type		-	
	74	When De-Enegr.Valve:		-	
	75	Schematic Detail		-	
SWITCHES	76	MFR	Model	EISENBAU	GDSN0LIS2MS290
	77	Type	Quantity	Magnetic	2
	78	Contacts / Rating		No. 1 DPDT / 1A	
	79	Switching Position		ON STEAM	
	80				
AIR SET	81	MFR	Model	SITECNA	FR04411S00SSNB2
	82	Set Pressure		Operation Pressure of valve	
	83	Filter	Gauge	YES	YES
ELECT.	84	Connection	Class	No. (*) / M20	-
PURCHASE	85	Manufacturer		AST	
	86	Model		CV-8407	
	87	Purchase Order No.		1724000740	

Notes:

No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No	Rev.
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO			
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			

INSTRUMENT DATASHEET

Control Valve (Sheet 2 of 2)

CROSSWIND

ROSETTI MARINO

Sheet 35 of 37

123A90-DDL-IN-DS-40036 | Rev. 01

ITEM	Tag	64-PV-031B	: Control Valve - Nitrogen Pressure Control to Distribution Header		Dwg	123A90-DDL-PR-PID-80027	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10001194	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity CCK	Discipline Instrumental	Form	CJX27	Control Valve-Pneumatic/Hydraulic Type

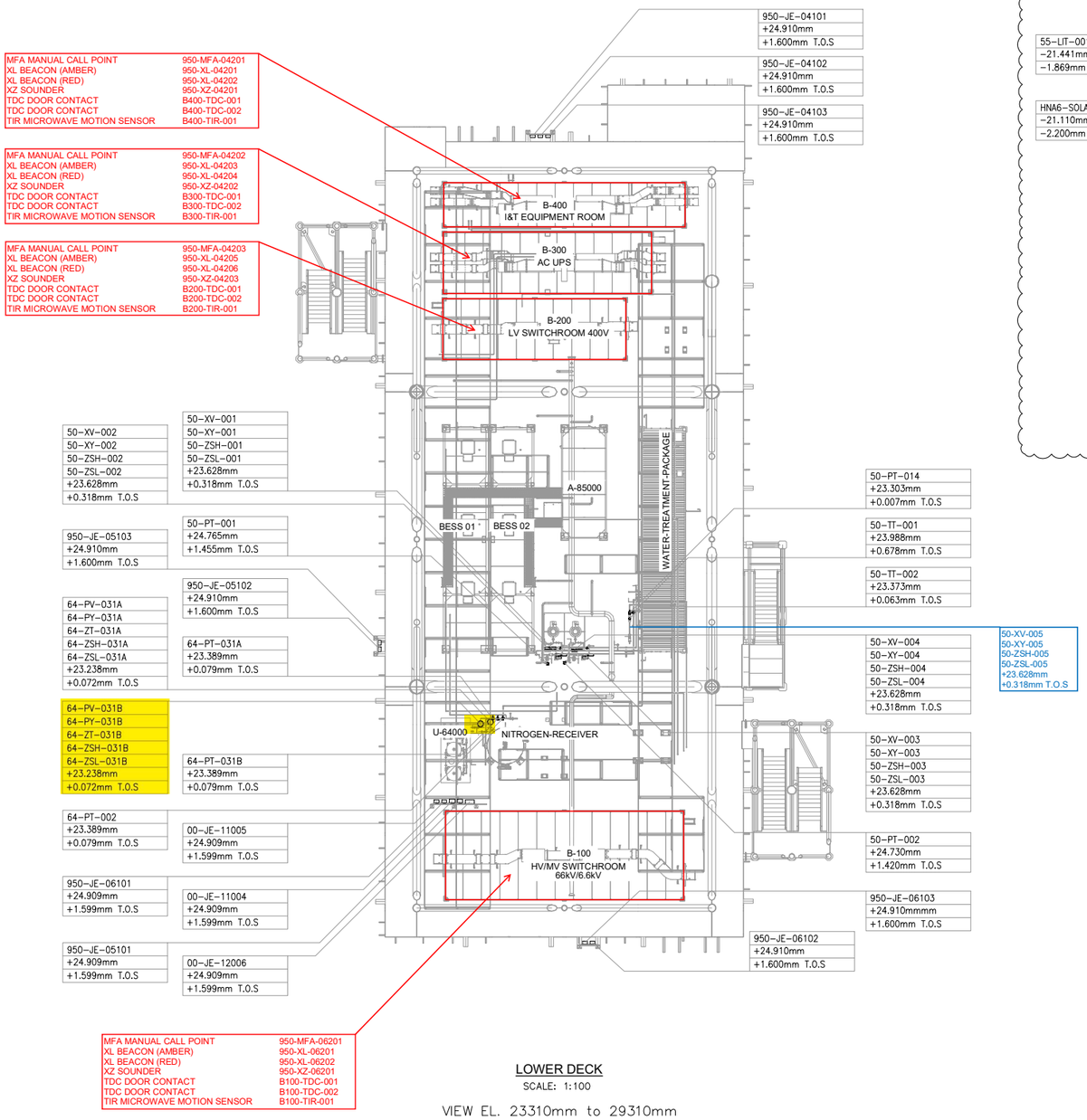
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	PL
3	Check installation conforms to P&ID, typical and hook-up drawing.	OK
4	Check valve is installed in accordance with flow direction.	OK
5	Check identification (tag number, tag plates).	OK
6	Check supporting and protection against vibrations.	OK
7	Check accessibility conforms to specifications, with platforming where necessary.	OK
8	Check connections between actuator and electro-positioner.	OK
9	If required produce Red Line Mark Up for "AS BUILT"	

Comments

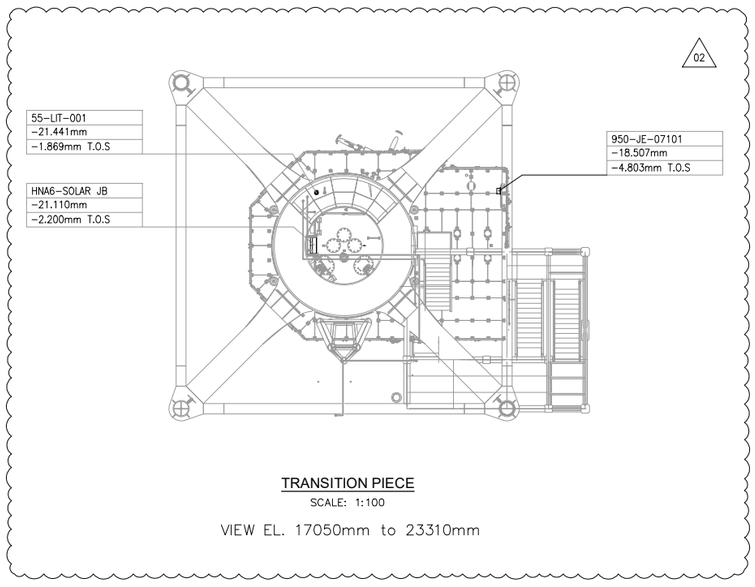
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-28	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:42:19.917Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-28T12:40:22.463Z	

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

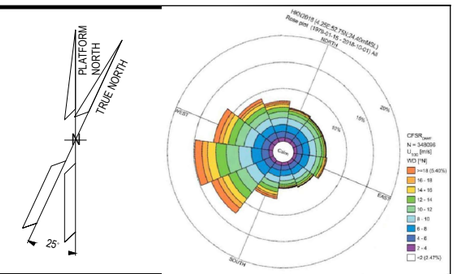
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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

03 → **V-63001**
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019
63 TP 040 | 2" | 3"x1.1/2"

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

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

63 PI 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | ESD I

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N

03 → 3/4" LC | BLPH-MV-275 NOTE 16 | 03 → 64 TP 044 | 1"-N-262-01CS-N

ESD I → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN ESD I
NOTE 14

NOTE 15: 64 PI 002 L LL | 64 PSV 001 | NOTE 1, 12 SET @ 10 barg 1D2 | NOTE 10 TO ATM | 2"-AV-160-01CS-N

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 | INSTR. PIPING | 3/4" FLG x 1/2" NPTF | BLPH-MV-386 | BLPH-MV-166 | BLPH-MV-167 3/4" FLG x 1/2" NPTF | 1"-N-100-01CS-N

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

FL-DC TYP.6 1" | 64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

1" N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL

64 SDV 001 | IA | 64 SDV 001 | NOTE 13 | NC-FC TYP.2

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-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

03 → 64 TP 046 | **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

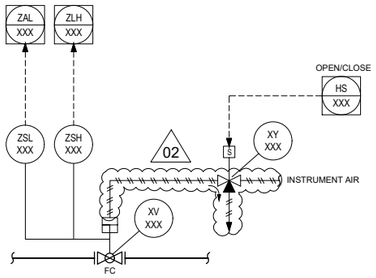
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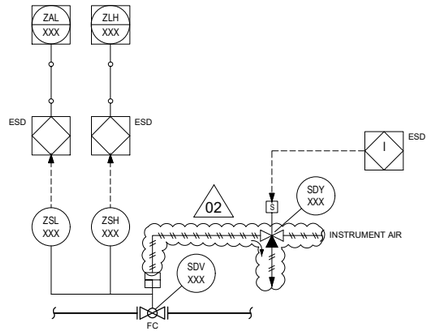
REV. 00

TYPICAL INSTRUMENTATION VALVE

TYP.1 (XV - ON OFF VALVES)

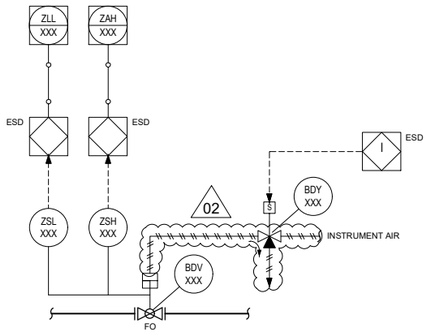


TYP.2 (SDV - SAFETY NO CRITICAL VALVES)



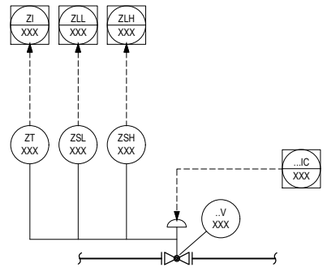
02

TYP.4 (BDV - SAFETY NO CRITICAL VALVES)

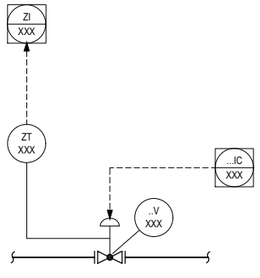


02

TYP.6 (CONTROL VALVES - CRITICAL)



TYP.7 (CONTROL VALVES - NOT CRITICAL)



INSTRUMENT SYMBOLOGY DEFINITION

MEANINGS OF IDENTIFICATION LETTERS
THIS TABLE APPLIES TO THE FUNCTIONAL IDENTIFICATION OF INSTRUMENTS

	FIRST- LETTER		SUCCEEDING-LETTER		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
C				CONTROL	
E			SENSOR (PRIMARY ELEMENT) ELEMENT		
F	FLOW RATE	RATIO (FRACTION)			
G			GLASS VIEWING DEVICE		
H	HAND				HIGH
I			INDICATE		
L	LEVEL				LOW
O			ORIFICE, OPEN		
P	PRESSURE, VACUUM				
R		RELIEF			
S		SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
V				VALVE, DAMPER, LOUVER	
X	UNCLASSIFIED				
Y				AUXILIARY DEVICES	
Z	POSITION DIMENSION				

NOTE: FOR FURTHER EXPLANATORY NOTES, REFER TO ANSI/ISA-5.1

NOTES

1. FOR GENERAL NOTES AND PIPING SYMBOLOGY SEE DRAWINGS: 123A90-DDL-PR-PID-80009 AND 123A90-DDL-PR-PID-80010.
2. DELETED.

HOLDS

1 DELETED 02

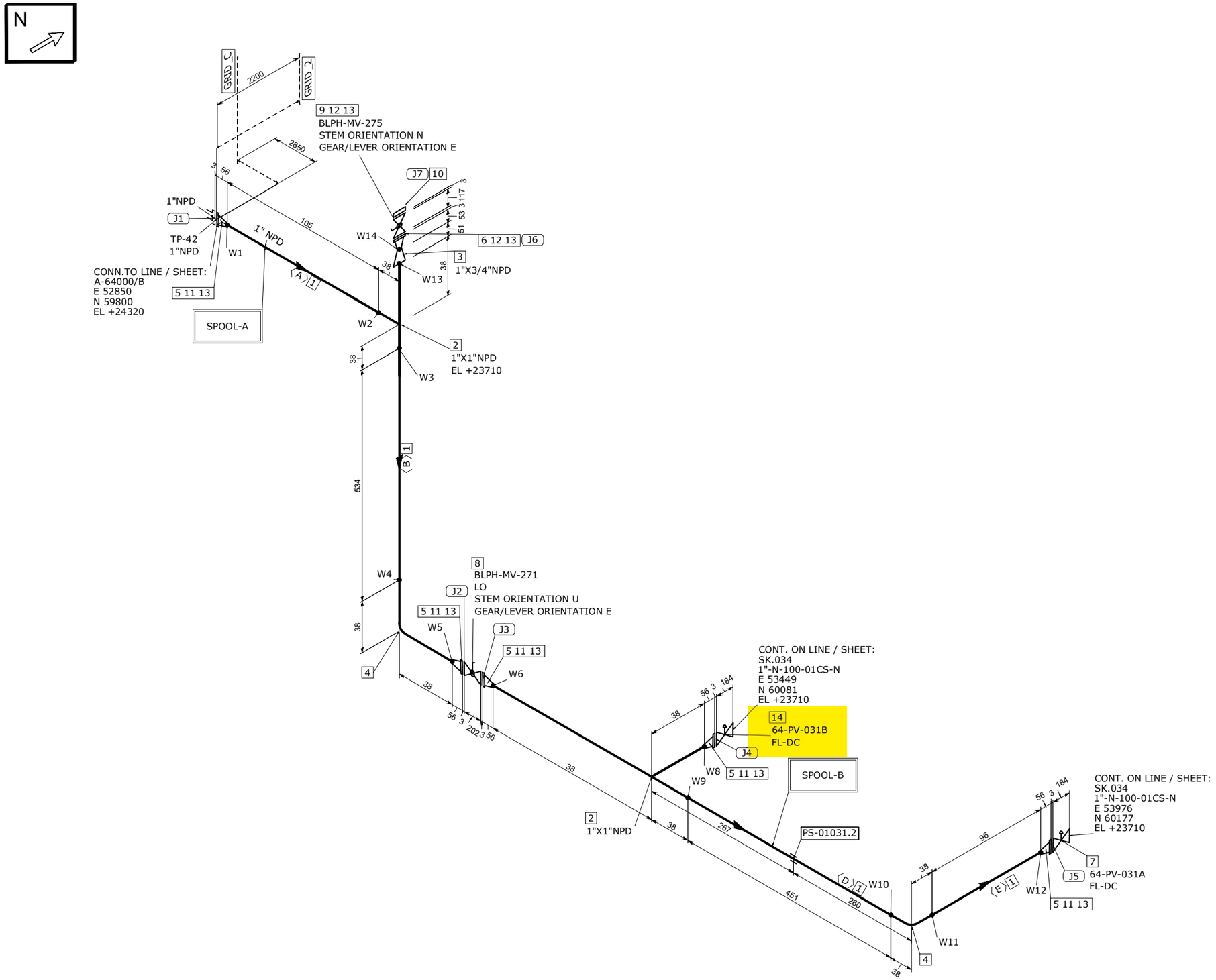
REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND | ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENTATION SYMBOLOGY

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-80042	SHEET 001	REV. 02

File Name :



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.2M	3.8
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1		Control Valve - FLG 150 #RF	1	48.0
8	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
9	3/4	VBC0NN24703Q00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	5.3
10	3/4	FLB0CS07333Q00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	5	0.3
12	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
13	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
14	1		Control Valve - FLG 150 #RF	1	48.0

FABRICATION WEIGHT [kg]	13.2
ERECTION WEIGHT [kg]	118.5
OVERALL WEIGHT [kg]	131.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	105	BEVEL	BEVEL
B	1	534	BEVEL	BEVEL
D	1	451	BEVEL	BEVEL
E	1	96	BEVEL	BEVEL

SUPPORT LIST

PS-01031.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6.75	6.5
B	6	6.7
MONT	0	118.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-158-01CS-N

SK.066

LINE DATA								
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water		

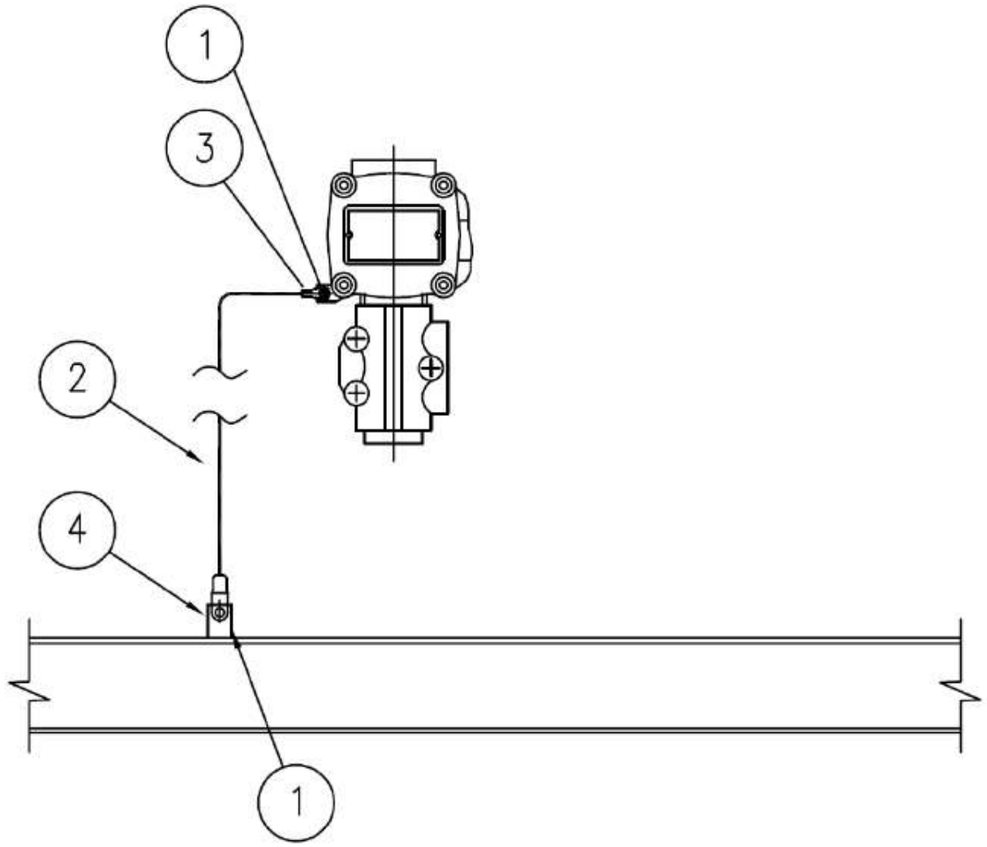
REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80027
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

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 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00066		SHEET / OF 1/1	REV. 00

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

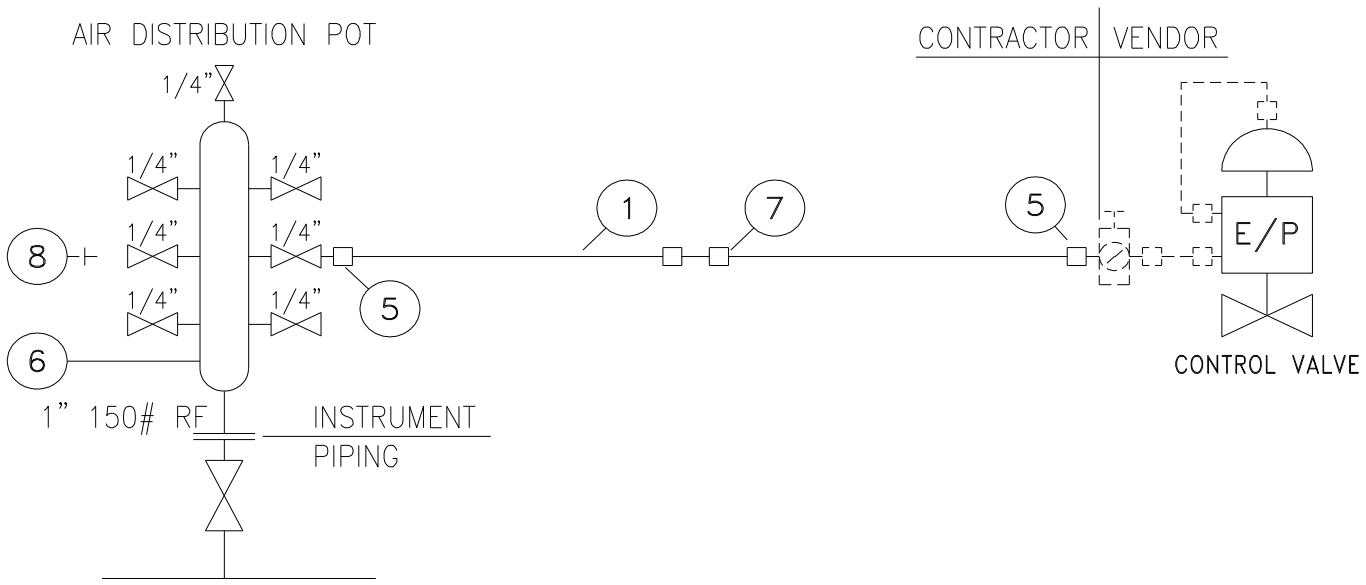
CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Pneumatic Hook-Ups	Sh. 5 of 6 Date: 08/07/2024 Rev. 01

PNEUMATIC HOOK-UP FOR CONTROL VALVES

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

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

ROSETTI MARINO SpA



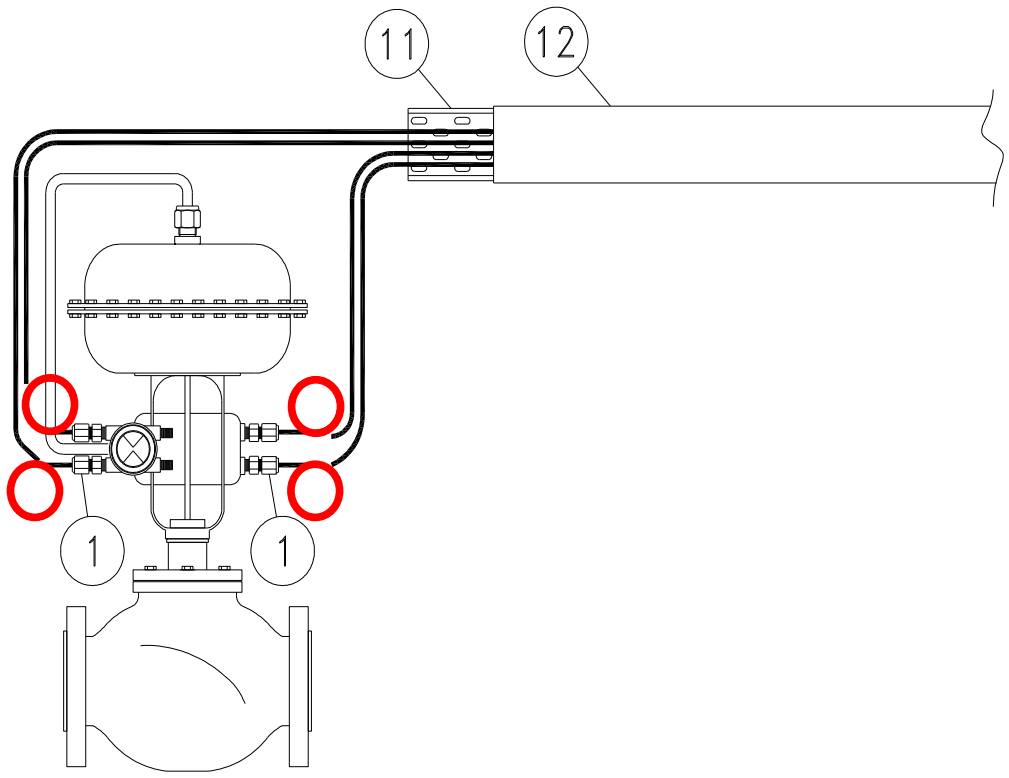
INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-038
6	25-FV-036
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
18	
19	
20	
21	
22	
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24	
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29	
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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ELECTRICAL HOOK-UP FOR CONTROL VALVE (N.1 ELECTROPOS. + N.1 POSITION TRASM.+ 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-036
6	25-FV-038
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
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NOTE:

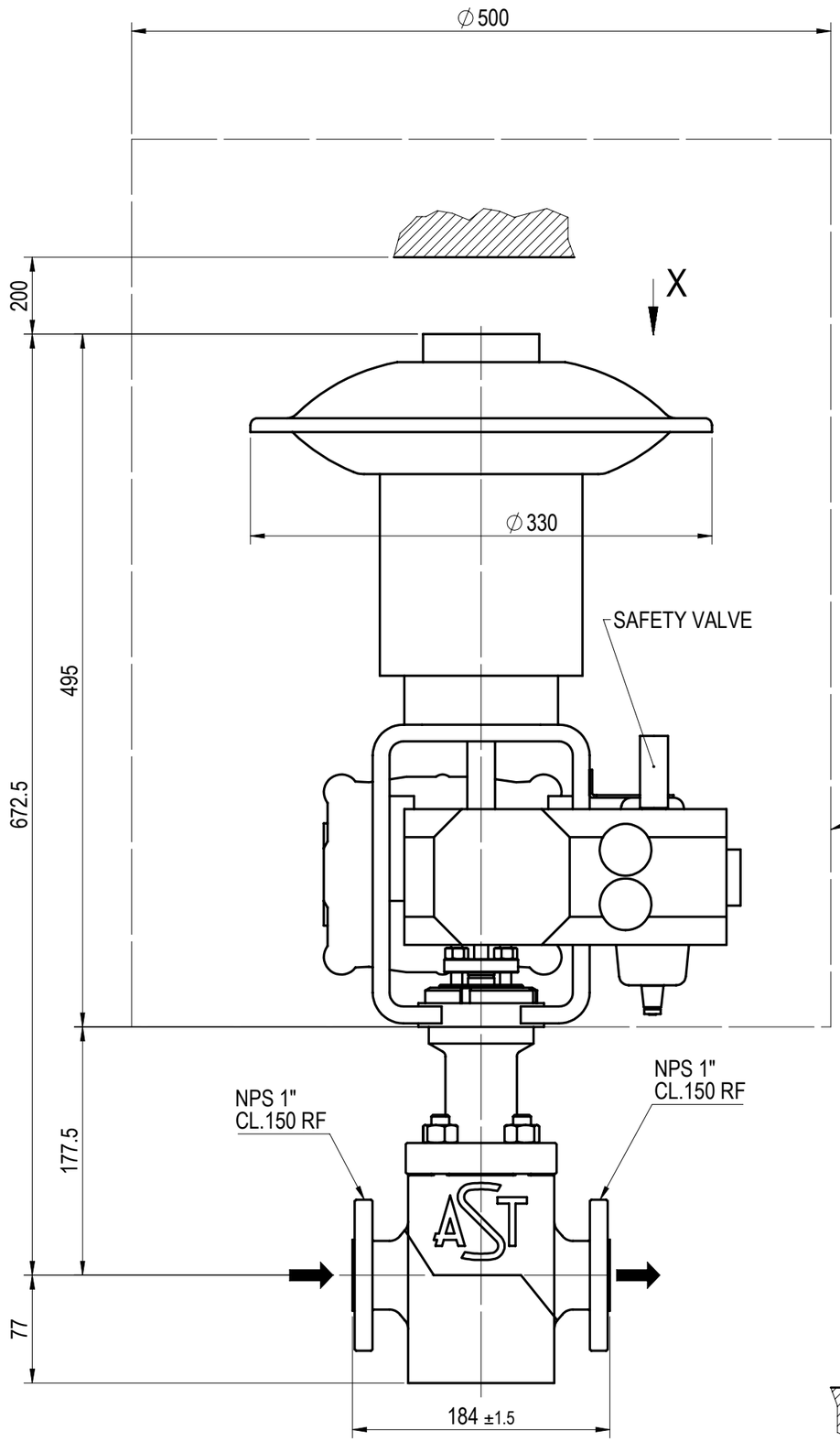
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

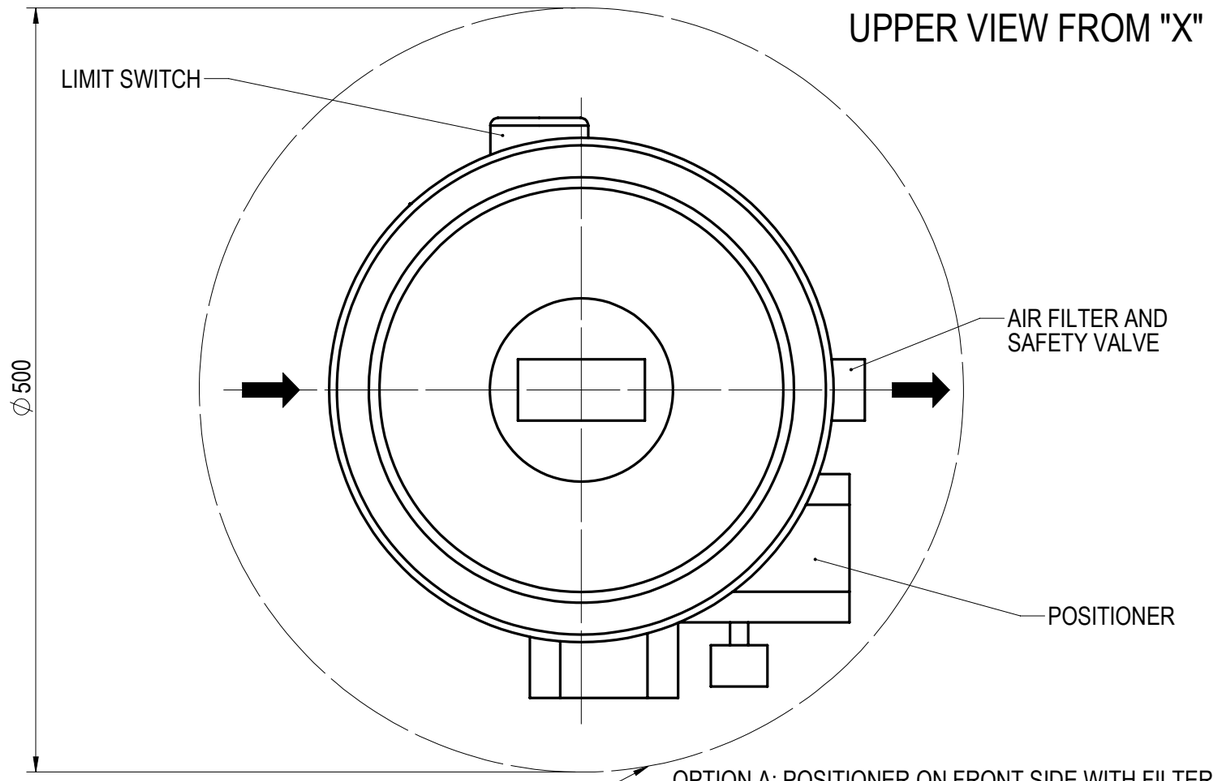
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	4

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MAXIMUM ACCESSORIES
OVERALL DIMENSION

OPTION A: POSITIONER ON FRONT SIDE WITH FILTER ON RIGHT SIDE (AS REPRESENTED)

OPTION B: POSITIONER ON BACK SIDE WITH FILTER ON LEFT SIDE

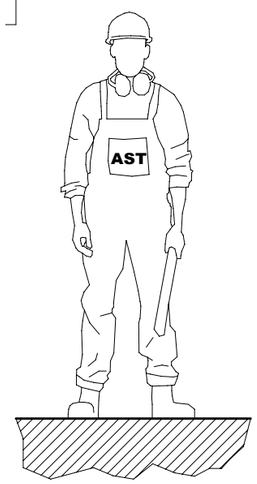
TAG	SN	OPTION
64-PV-031A	2400597	A
64-PV-031B	2400598	B

MASS:
VALVE= ~ 20 kg
ACTUATOR= ~ 28 kg
TOTAL= ~ 48 kg

General tolerances

For main components:
- up to 500mm ± 25
- over 500mm ± 50

For installed equipments / instrument / tubing:
- all dim. ± 100



Cliente / Customer	ROSETTI MARINO S.P.A.
Ordine AST / AST job	CV2400221
Sigle / Tags	64-PV-031A, 64-PV-031B
Matricole / Serials	2400597, 2400598

Revision Description
ADDED ACCESSORIES AS PER CUSTOMER COMMENTS

Drawn	ABD ELSALAM	Checked	PINI	Approval	PEREGO	Date	29-05-24

PROPERTY AND REPRODUCTION ARE SUBJECTED TO THE LAW

Scale | Mass kg | CR 00304 | NOTE:

Description
CV-8407 OVERALL DIMENSION
NPS 1" PORT 3/8" CL. 150 RF

Dwg No
240221-0400OD

Rev. 2 | Sheet 1 of 1

A3 - AST S.p.A. Via R. Merendi, 40 - 20010 Cornaredo (Mi) - Tel.02 934848.1 - Control valve division

GENERAL	1	Tag Number	P&ID Number			64-PV-031B		123A90-DDL-PR-PID-80027	
	2	Service				NITROGEN FROM NITROGEN SYSTEM (U-64000) TO HEADER			
	3	Area Classification	Certification			ATEX ZONE 2		Ex-d IIC (or IIB+H2) T1	
	4	Ambient Temperature:	Min.	Max.		°C		-8.4	+25
	5	Allowable Sound Pressure Level dBA				Max 85 dBA			
	6	Ingress Protection	Power Failure Position			IP-66		-	CLOSE
	7	Air Supply Pressure:	Min.	Norm.	Max.	barg	4	9	10
PIPELINE	8	Line Number	Pipe Insulation			1"-N-158-01CS-N			NOT INSULATED (PAINTED)
	9	Line Size and Schedule	Inlet	Outlet		1" / 4.55 mm		1" / 4.55 mm	
	10	Line Spec	Line Material			01CS		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITION	11	Process Fluid	Fluid Phase			NITROGEN		GAS	
	12	Upstream Condition							
	13	Des. Press. / Full Vac.	Des. Temperature Min / Max			10 barg		100 °C	
	14	Critical Pressure	Critical Temperature						
	15	Differential Pressure - Maximum Shut Off				10 bar			
	16					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	17	Flow Rate (Gas)				Nm^3/h	60	10	7
	18	Flow Rate (Liquid)							
	19	Inlet Pressure				barg	8	8	8
	20	Pressure Drop				bar	0.5	1	1
	21	Inlet Temperature				°C	15	15	15
	22	Inlet Density / Specific Gravity				kg/m^3	10.6	10.6	10.6
	23	Inlet Compressibility Factor				-	0.99	0.99	0.99
	24	Inlet Viscosity				cP	0.017	0.017	0.017
	25	Inlet Specific Heats Ratio (Cp/Cv)				-	1.4	1.4	1.4
	26	Inlet Vapour Pressure							
	27	Molecular Weight				-	28	28	28
CALCULATED RESULTS	28	Flow Coefficient Cv					1.22	0.1474	0.1032
	29	Travel				33.9%			
	30	Sound Pressure Level				<75 dBA (20)			
BODY AND TRIM	31	MFR	Model			AST		CV-8407	
	32	Body Type				GLOBE VALVE (HS01A02RF)			
	33	Body Size	Trim Size			1"		3/8"	
	34	Rated Cv	Characteristics.			1.9		(11) Equal%	
	35	End Connec. & Rating				FLANGED ASME B16.5 / #150			
	36	Body Material				ASTM A350 LF2			
	37	Bonnet Type	Material			Bolted (21)		ASTM A350 LF2	
	38	Bolting				A193 B8M Cl. 2 / A194 8M			
	39	Packing Material				PTFE			
	40	Flow Action To				OPEN			
	41	Lubricator	Isolat. Valve			-		By Contractor	
	42	Guiding	No. of Ports			Top Guided		1	
	43	Trim Type				Contoured Plug (12, 13)			
	44	Rated Travel				13mm			
	45	Plug/ Ball/ Disk Material				A479 316L+CoCr-A (12)			
	46	Seat Material				A479 316L+CoCr-A (12)			
	47	Cage	Stem Material			-		A479 316L	
	48	Gasket Material				By Contractor (in line)			
	49	Flange Finish				RF			

						INSTRUMENT DATASHEET	CROSSWIND	
						Control Valve (Sheet 1 of 2)	ROSETTI MARINO	
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO		Sheet 36 of 37	
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			
No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No 123A90-DDL-IN-DS-40036	Rev. 01

ACTUATOR	50	MFR	Model	AST	SD11R
	51	Type		PNUEMATIC / DIAPHRAGM (*)	
	52	Size	Area	SD11R	(*)
	53	Handwheel		NOT REQUIRED	
	54	Bench Range		15-30 psi	
	55	Volume Tank		NOT REQUIRED	
TESTS	56	Hydro. Pressure		REQUIRED	
	57	Leakage		REQUIRED (37)	
	58				
POSITIONER	59	MFR	Model	TISSIN	TS900 (15, 16)
	60	Signal: Inlet	Outlet	4-20 mA	3 to 15 psi
	61	Increase Signal Valve:		OPEN VALE	
	62	Cam Characteristic		(*)	
	63	Bypass	Gauges	NOT REQ.	YES
	64	Signal Transmission		REQUIRED VALVE POSITION 4-20 mA to PCS (22) (25-ZT-025A)	
COMM. & SOFTWARE	65	Comm Type	Signal Type	-	-
	66	D D Rev.	CFF Rev.	-	-
	67	Device Tag	Hart Tag	-	-
	68	Diagnostics	Capac	-	-
	69	Segment	Device Addr.	-	-
	70	Device Class	Simulate	-	-
	71	Nom. Current	Oper Volt	-	-
SOLENOID	72	MFR	Model	-	-
	73	Type		-	
	74	When De-Enegr.Valve:		-	
	75	Schematic Detail		-	
SWITCHES	76	MFR	Model	EISENBAU	GDSN0LIS2MS290
	77	Type	Quantity	Magnetic	2
	78	Contacts / Rating		No. 1 DPDT / 1A	
	79	Switching Position		ON STEAM	
	80				
AIR SET	81	MFR	Model	SITECNA	FR04411S00SSNB2
	82	Set Pressure		Operation Pressure of valve	
	83	Filter	Gauge	YES	YES
ELECT.	84	Connection	Class	No. (*) / M20	-
PURCHASE	85	Manufacturer		AST	
	86	Model		CV-8407	
	87	Purchase Order No.		1724000740	

Notes:
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 6 Barg.
(2) Hydrogen service - Packing ISO 15848-1

No.	Date	Description	By	Chkd	Appr
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO

INSTRUMENT DATASHEET

Control Valve (Sheet 2 of 2)

CROSSWIND

ROSETTI MARINO

Sheet 37 of 37

Code: | Dwg.No 123A90-DDL-IN-DS-40036 | Rev. 01

ROSETTI MARINO — CROSSWIND

ITEM	Tag	C-64-SDY-001/00-JE-23002	: SOLENOID VALVE / MARSHALLING PCS	Dwg	123A90-DDL-IN-LIS-40091		
	S/Sys	64-10	: Nitrogen Distribution Network	Module	UD		
TASK	code	C10001839	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-MICA-XLPE-OS-LSZH-SWB-LSZH — Cores/Size mm²: 2X2,5 mm2 — Color: ORANGE

From: 64-SDY-001 — To: 00-JE-23002

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

INSULATION	CORE to EARTH		>999	MΩ
	CORE to CORE		>999	MΩ
	CORE to SCREEN		>999	MΩ
	CORE to ARMr		>999	MΩ
	SCREEN to EARTH		>999	MΩ
	SCREEN to ARMr		>999	MΩ
CONTINUITY	CORES		0,34	Ω
	SCREEN		0,34	Ω
	EARTH		NA	Ω
	ARMr		0,34	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

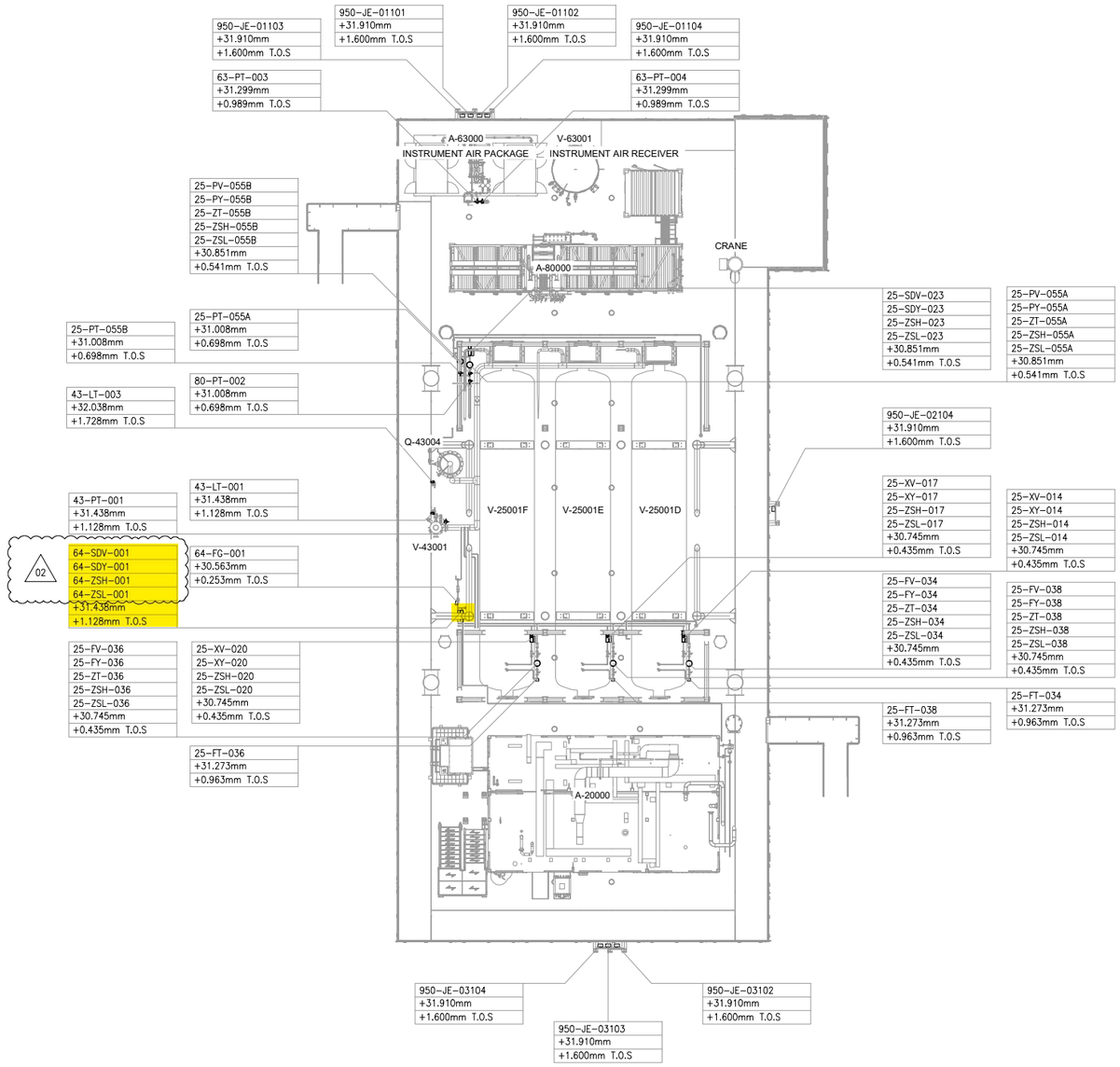
TYPE / SERIAL N°: VOLCRAFT 1000V - ET-200 S/N:H240103023 — Calibration date: N°LAT 042 00768/24 12/10/2024

Comments: Nota 5: refer to PL C30000682

Page 1/1	Performed by	☉ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-31	2025-02-05	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-31T09:35:38.314Z	PROVERLIS Digitaly signed by Alessio Polo 2025-02-05T17:11:00.781Z	

DRAWING NO. 123A90-DDL-IN-DL-40081

REV. 01

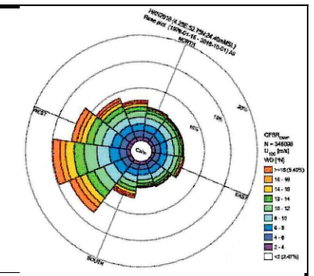


UPPER DECK

SCALE: 1:100

VIEW EL. 29310mm to 33740mm





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	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-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

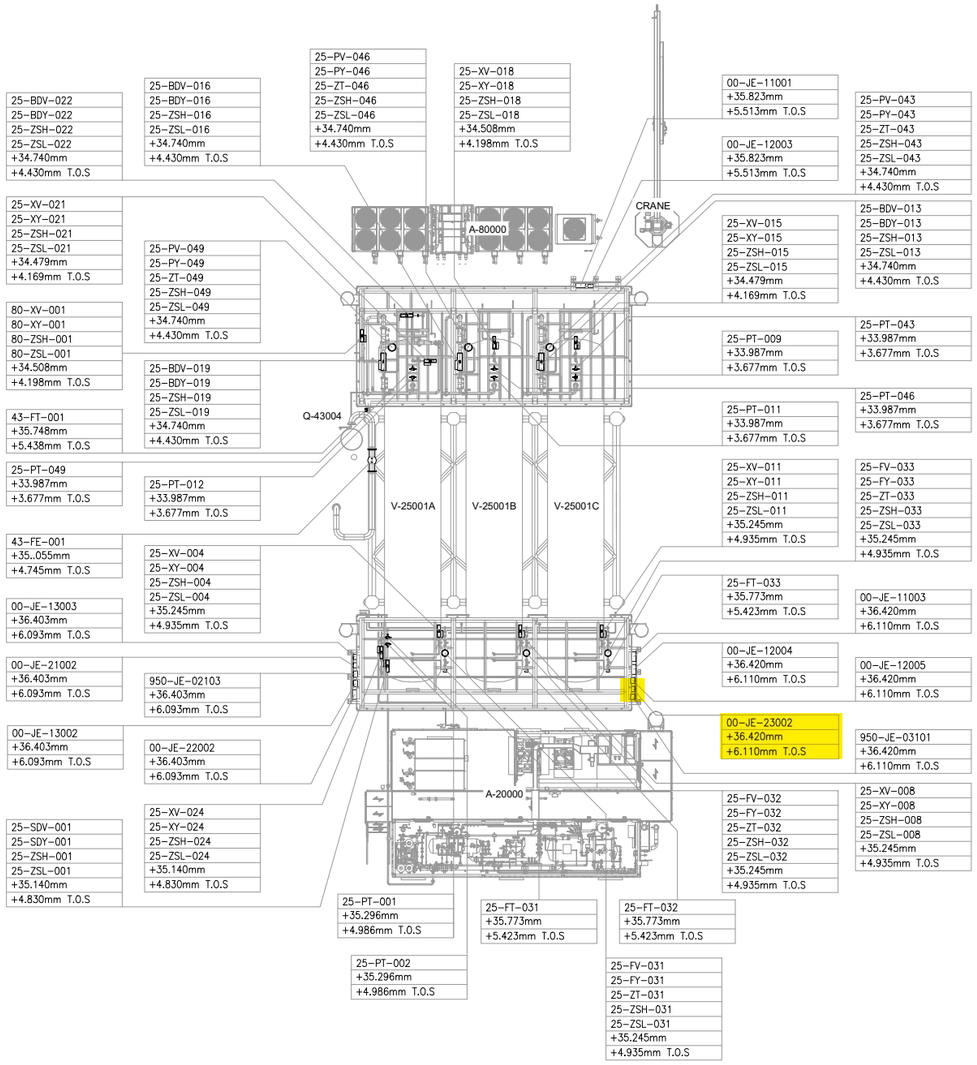
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE 1:150
DRAWN VBA	CHECKED LCA	APPROVED DLO	DATE 04/10/24

A1	DRAWING NO. 123A90-DDL-IN-DL-40081	SHEET 001	REV. 02

File Name : 123A90-DDL-IN-DL-40081 REV01.dwg

DRAWING NO. 123A90-DDL-IN-DL-40081

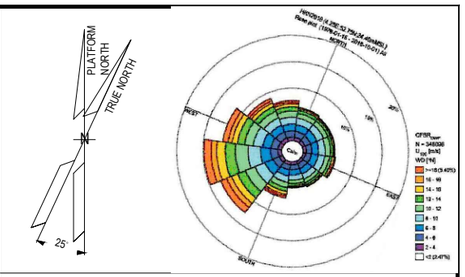
REV. 02



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)

CROSSWIND

ROSETTI MARINO

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DL-40081
REV.: 2_A | DATE: 07/10/24 | SIGNATURE: G.Randi
ROSETTI MARINO SpA

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-40016

REV. 01

FIELD		MULTICABLE	I&T EQUIPMENT ROOM (ITER)
INSTRUMENTS	JUNCTION BOX 00-JE-23002	No.	MARSHALLING CABINET B400-SIS-001

<01>

25-SDY-001 (+ 1BK, - 2BK) — NOTE-2 — C-25-SDY-001/00-JE-23002 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

25-BDY-022 (+ 1BK, - 2BK) — NOTE-2 — C-25-BDY-022/00-JE-23002 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

25-SDY-023 (+ 1BK, - 2BK) — NOTE-2 — C-25-SDY-023/00-JE-23002 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

64-SDY-001 (+ 1BK, - 2BK) — NOTE-2 — C-64-SDY-001/00-JE-23002 2x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-1

1BK / 2BK	1	1BK / 2BK
	2	
	SH	
SPARE	3	3BK / 4BK
	4	
	SH	
5BK / 6BK	5	5BK / 6BK
	6	
	SH	
7BK / 8BK	7	7BK / 8BK
	8	
	SH	
9BK / 10BK	9	9BK / 10BK
	10	
	SH	
SPARE	11	11BK / 12BK
	12	
	SH	
	OS	

00-JE-23002/B400-SIS-001

12x2.5mm2,ShT+ARM,F.Res,ORANGE,NIS

TB-00-JE-23002

1BK	1	25-SDY-001
2BK	2	
3BK	3	SPARE
4BK	4	
5BK	5	25-BDY-022
6BK	6	
7BK	7	25-SDY-023
8BK	8	
9BK	9	64-SDY-001
10BK	10	
11BK	11	SPARE
12BK	12	

Shield Bar — I.E.

<01>

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DG-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
I INSTRUMENT– SAFETY SYSTEM WIRING DIAGRAMS
00–JE–23002

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

A3	DRAWING NO. 123A90–DDL–IN–DG–40016	SHEET 019	REV. 01

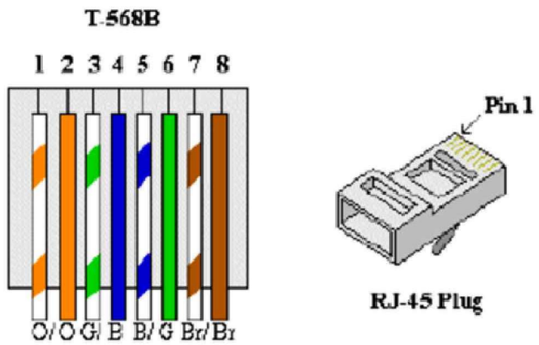
File Name : 123A90-DDL-IN-DG-40016_Rev.01

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:



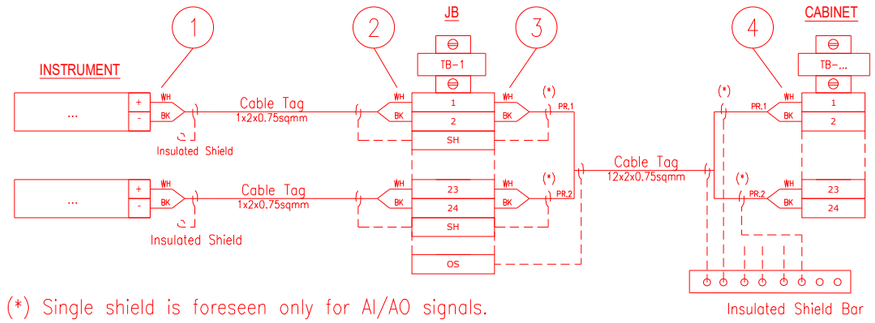
8. FOR INTRISICALLY SAFE CIRCUIT USE LIGHT BLUE CABLE OR ALTERNATIVELY ORANGE CABLE WITH HEAT SHRINKABLE SLEEVE BLUE AT BOTH END (SEE DOC. 123A90-FDL-IN-DD-40017).

LEGENDS & SYMBOLS:

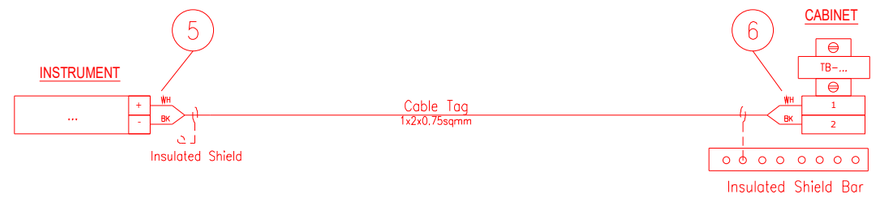
I.E.	- GREEN ⟶ INSTRUMENT SIGNAL EARTH
P.E.	- GREEN / YELLOW ⟶ P.E. EARTH / BONDING
	- TERMINAL BLOCK (TB)
WH	- WHITE
BK	- BLACK
RD	- RED
S	- SHIELD TERMINAL
OS	- OVERALL SHIELD TERMINAL
O/A Shld	- OVERALL SHIELD
I&O/A Shld	- INDIVIDUAL & OVERALL SHIELD
NIS	- NON INTRINSICALLY SAFE
IS	- INTRINSICALLY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

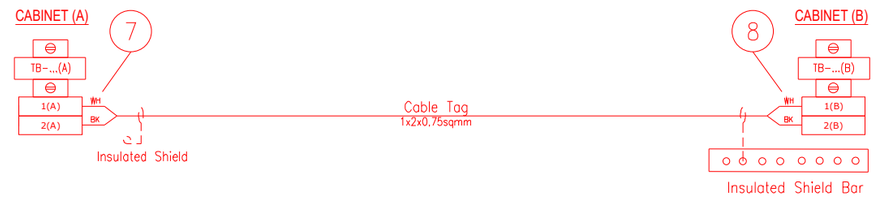
INSTRUMENT CONNECTION THROUGH MARSHALLING JB TO CABINET



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-40016**

REV.:	DATE:	SIGNATURE:
1_Q	29/01/25	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

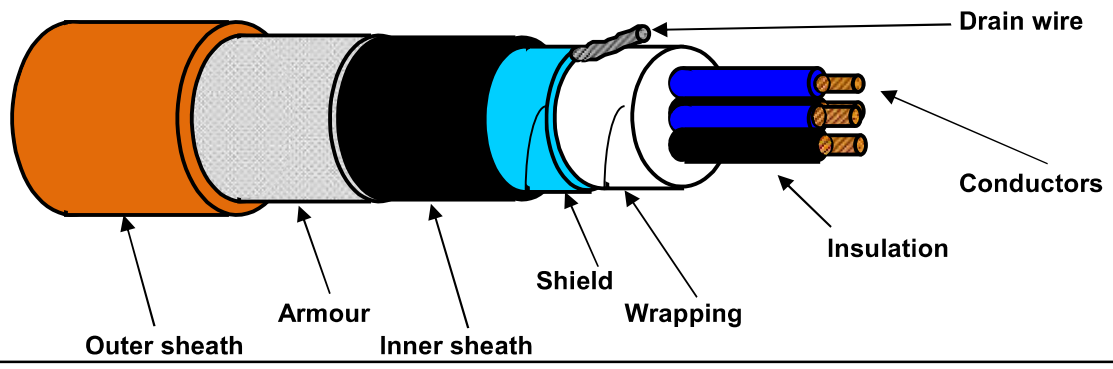
A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	003	01

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

Tag Number	Category	Discipline	Eng Status	NativeDoc	Layout	Parent Tag	Main Function	Secondary Functio	Area	From Tag	From Main Function	From Area	To Tag	To Main Function	To Area	Material ID	Material Desc.	Gland Standa	From Glan	From Entry	From Fittir	To Gland	To Entry	To Fitting	Routing	Routing Manual
C-64-SDY-001/00-JE-23002	Cable	IN	VFC	123A90-DDL-IN-LIS-40091						64-SDY-001	Solenoid Valve	Upper Deck	00-JE-23002	DO JB to SIS	Upper Deck	SMICV12-2X2,5	Cable Cu Cl.2/MGT/XLPE/OS/LSZH/SWB/LSZH 150/250V (300V) 2x2,5mm² - Orange	M20	T2_M20_ Double			T2_M20_Do uble				U-SEC-16 / U-SEC-14C / U-SEC-14D / U-SEC-14E / U-SEC-14F

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

2X2,5 - INSTRUMENT CABLE - Fire Resistant - Not I.S.



TECHNICAL FEATURES

Conductors :	**7-STRANDED** plain/bare soft annealed copper wires	**IEC 60228 Class 2**
Insulation :	Mica/Glass Tape (MGT) plus 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 :	8/1mt	
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 1,3 mm	
Outer sheath color code:	**Orange**	
Outer printing (INKJET) :	**FLEI - 2X2,5 SQMM - MGT/XLPE/OS/LSZH/SWB/LSZH - 150/250 V - IEC 60331.21 -**	
(every 1000 mm)	**IEC 60332.1.2 - IEC 60332.3.22 - Year of Manufacture - CE + Meter Marking**	
Under armour diameter :	(10,3 ± 10%) mm	
Over armour diameter :	(11,5 ± 10%) mm	
Outer diameter :	(14,1 ± 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		
Fire Resistant test :	**IEC 60331.21**	
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	AV-63005/64-PV-031A	: Pneumatic Connection Air Supply - 64-PV-031A			Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10001957		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

ITEM	Tag	AV-63005/64-PV-031A	: Pneumatic Connection Air Supply - 64-PV-031A			Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10001957		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: 9.4 TEST DURATION : 10 min

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-63005	64-PV-031A	●					●	1/2" OD x Thk. 0,049"

TESTED LABEL AFFIXED DATA SHEET ATTACHED

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-24	2025-01-29	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-24T13:10:11.179Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-29T13:21:01.368Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	AV-63005/64-PV-031A

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)*	00:11:09
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	09:28:24 pm

Logger protocol

Protocollo di acquisizione elenco dati

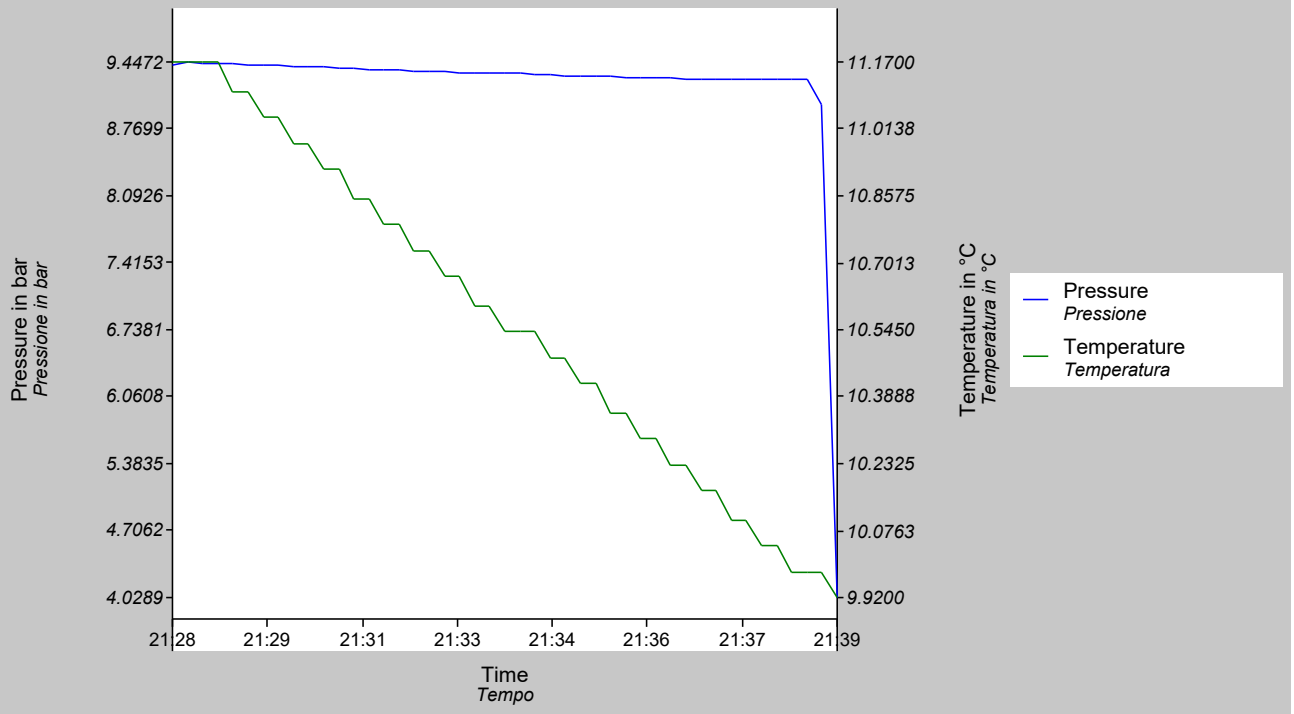
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-Tubing_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
01/24/2025 21:28:24.000	9.4192	11.1700
01/24/2025 21:28:39.000	9.4472	11.1700
01/24/2025 21:28:54.000	9.4390	11.1700
01/24/2025 21:29:09.000	9.4318	11.1700
01/24/2025 21:29:24.000	9.4239	11.1000
01/24/2025 21:29:39.000	9.4152	11.1000
01/24/2025 21:29:54.000	9.4124	11.0400
01/24/2025 21:30:09.000	9.4079	11.0400
01/24/2025 21:30:24.000	9.4024	10.9800
01/24/2025 21:30:39.000	9.3923	10.9800
01/24/2025 21:30:54.000	9.3943	10.9200
01/24/2025 21:31:09.000	9.3873	10.9200
01/24/2025 21:31:24.000	9.3806	10.8500
01/24/2025 21:31:39.000	9.3688	10.8500
01/24/2025 21:31:54.000	9.3619	10.7900
01/24/2025 21:32:09.000	9.3621	10.7900
01/24/2025 21:32:24.000	9.3590	10.7300

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-Tubing_1

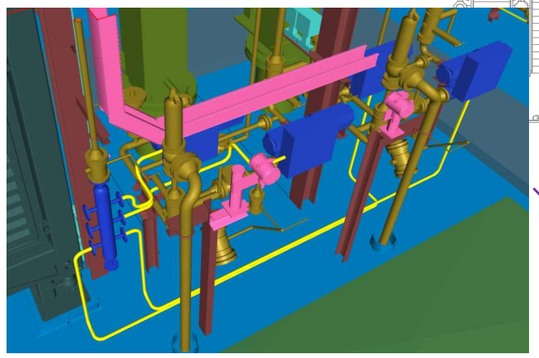
Measurement results

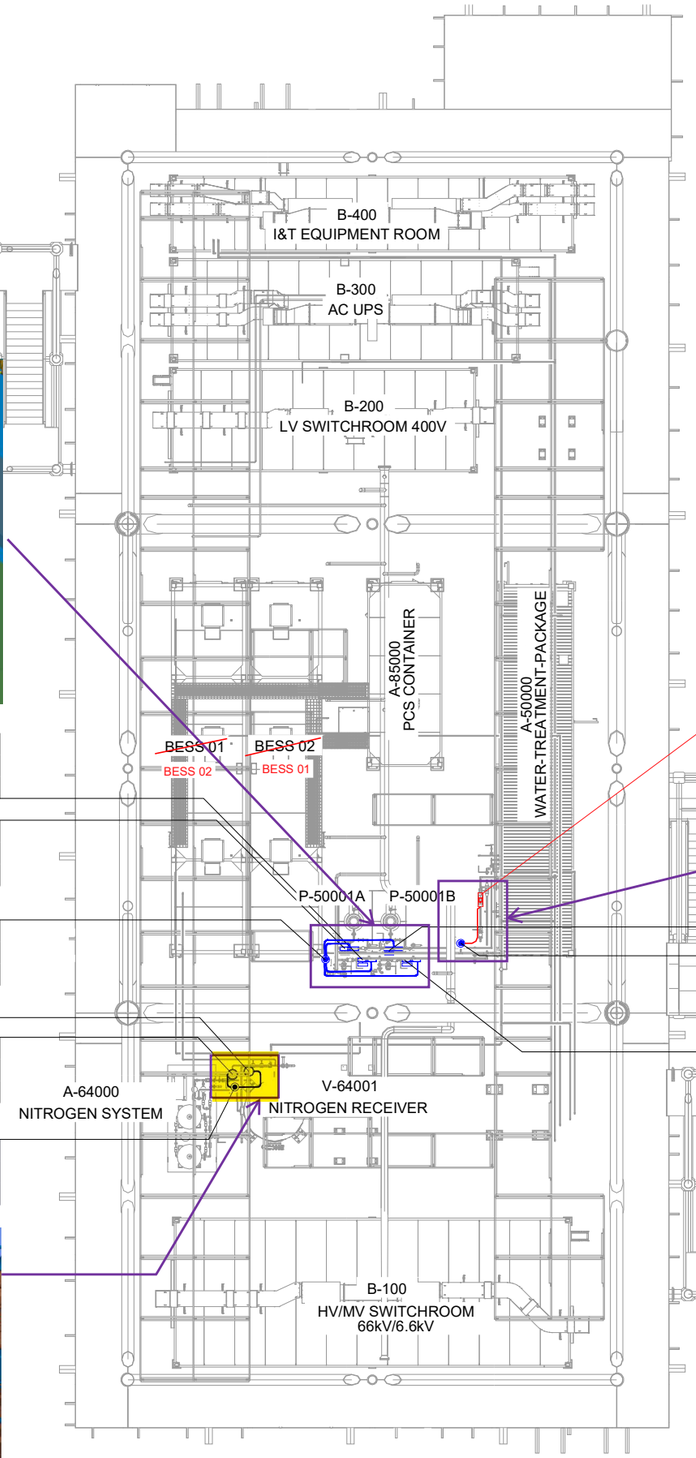
Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/24/2025 21:32:39.000	9.3539	10.7300
01/24/2025 21:32:54.000	9.3491	10.6700
01/24/2025 21:33:09.000	9.3413	10.6700
01/24/2025 21:33:24.000	9.3369	10.6000
01/24/2025 21:33:39.000	9.3328	10.6000
01/24/2025 21:33:54.000	9.3284	10.5400
01/24/2025 21:34:09.000	9.3283	10.5400
01/24/2025 21:34:24.000	9.3218	10.5400
01/24/2025 21:34:39.000	9.3174	10.4800
01/24/2025 21:34:54.000	9.3071	10.4800
01/24/2025 21:35:09.000	9.3076	10.4200
01/24/2025 21:35:24.000	9.3004	10.4200
01/24/2025 21:35:39.000	9.3001	10.3500
01/24/2025 21:35:54.000	9.2917	10.3500
01/24/2025 21:36:09.000	9.2871	10.2900
01/24/2025 21:36:24.000	9.2845	10.2900
01/24/2025 21:36:39.000	9.2815	10.2300
01/24/2025 21:36:54.000	9.2785	10.2300
01/24/2025 21:37:09.000	9.2723	10.1700
01/24/2025 21:37:24.000	9.2685	10.1700
01/24/2025 21:37:39.000	9.2674	10.1000
01/24/2025 21:37:54.000	9.2681	10.1000
01/24/2025 21:38:09.000	9.2711	10.0400
01/24/2025 21:38:24.000	9.2707	10.0400
01/24/2025 21:38:39.000	9.2720	9.9800
01/24/2025 21:38:54.000	9.2666	9.9800
01/24/2025 21:39:09.000	9.0104	9.9800
01/24/2025 21:39:24.000	4.0289	9.9200

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

REV. 01





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

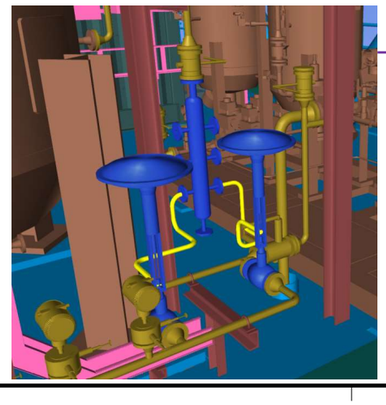
50-XV-002
+23.628mm
+0.318mm T.O.S

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

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

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

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



50-XV-005
+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

AV-63005

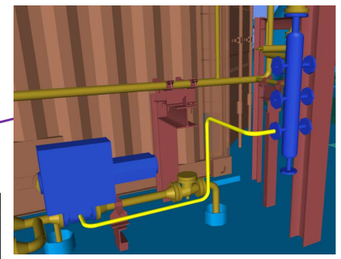
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64-PV-031B		SPARE
SPARE		SPARE

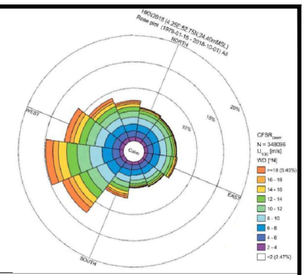
AV-63008

50-XV-001		50-XV-004
50-XV-002		SPARE
50-XV-003		SPARE

AV-63009

50-XV-005		SPARE
SPARE		SPARE
SPARE		SPARE





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

LOWER DECK
SCALE: 1:1

VIEW EL. 23310mm to 29310mm

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

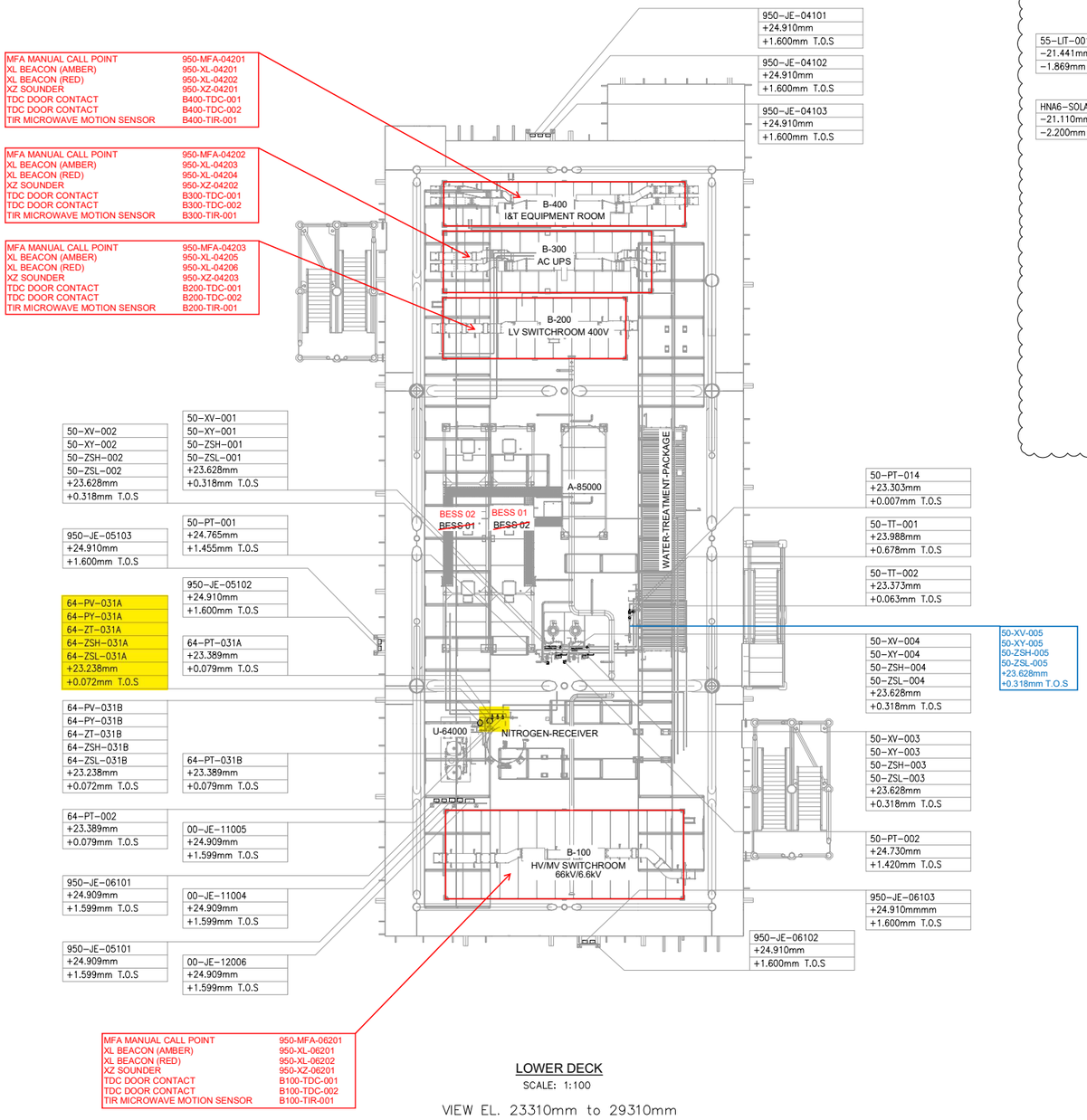
DRAWN DRAWN_BY | CHECKED CHECKED_BY | APPROVED APPROVED_BY | DATE DD/MM/YY

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

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

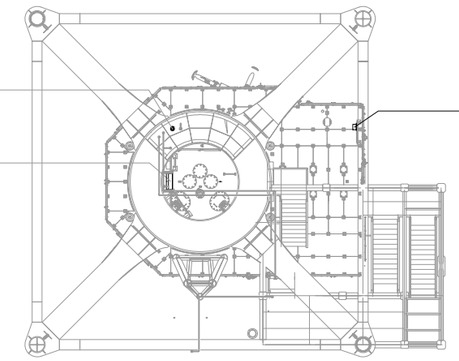
DRAWING NO. 123A90-DDL-IN-DL-40080

REV. 02

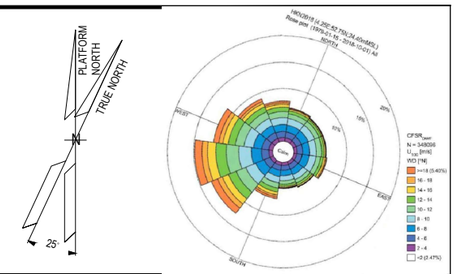


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



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

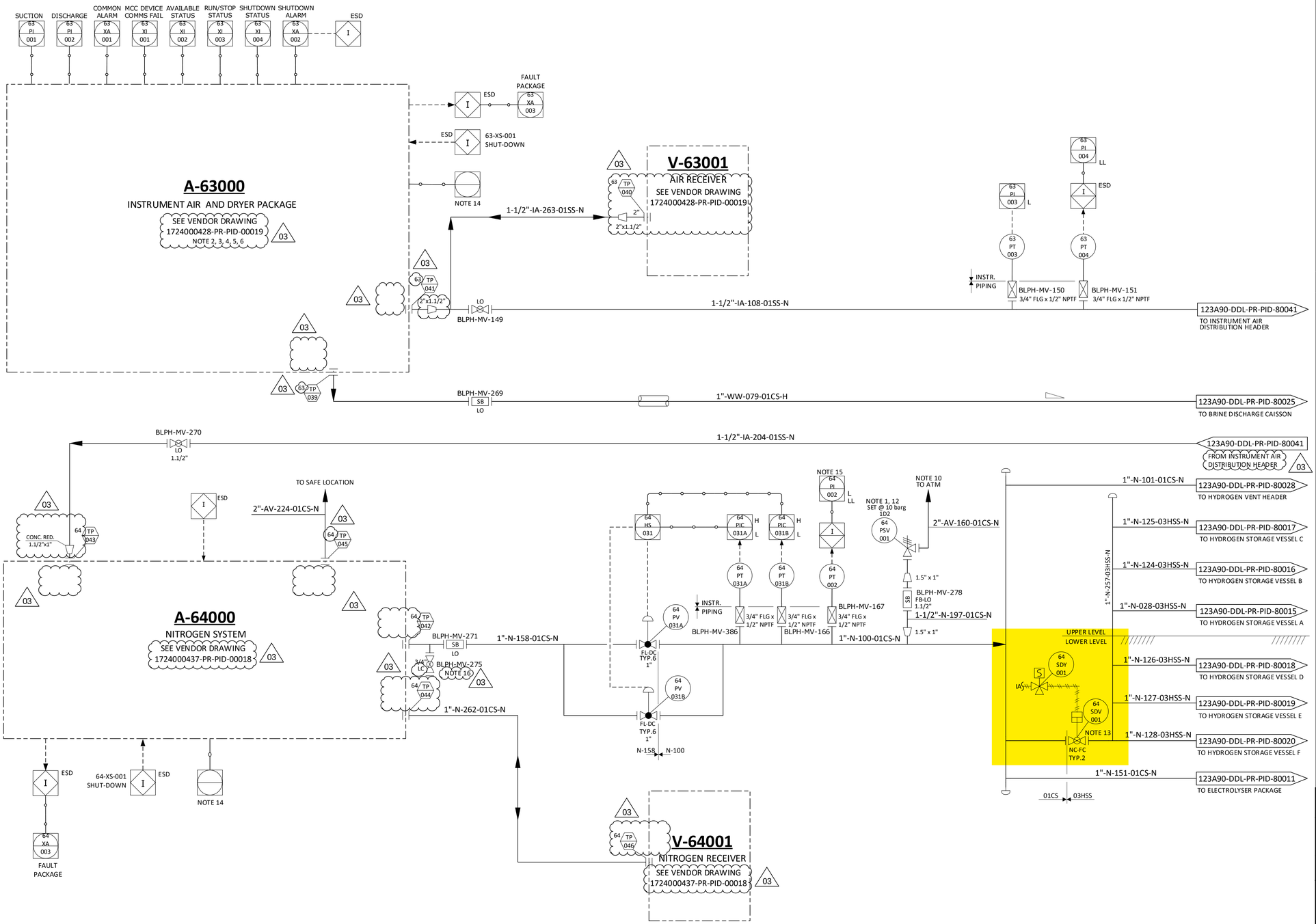
File Name : 123A90-DDL-IN-DL-40080 REV02.dwg

DRAWING NO. DRAWING_NO.

REV. REV

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

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



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

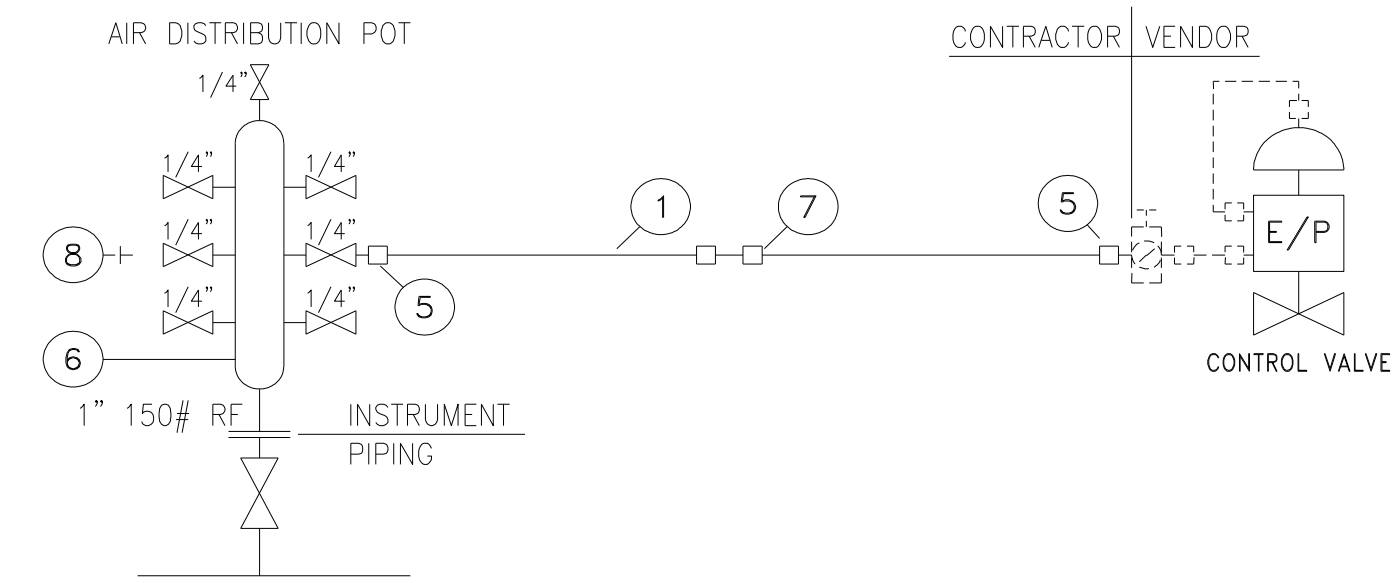
File Name : FILE_NAME

PNEUMATIC HOOK-UP FOR CONTROL VALVES

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

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

ROSETTI MARINO SpA

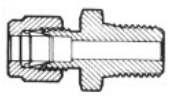
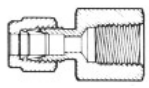
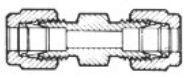


INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-038
6	25-FV-036
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
18	
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30	

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										
20										
21										
22										
23										
24										
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28										
29										
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28										
29										
30										
31										
32										
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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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 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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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

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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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*	(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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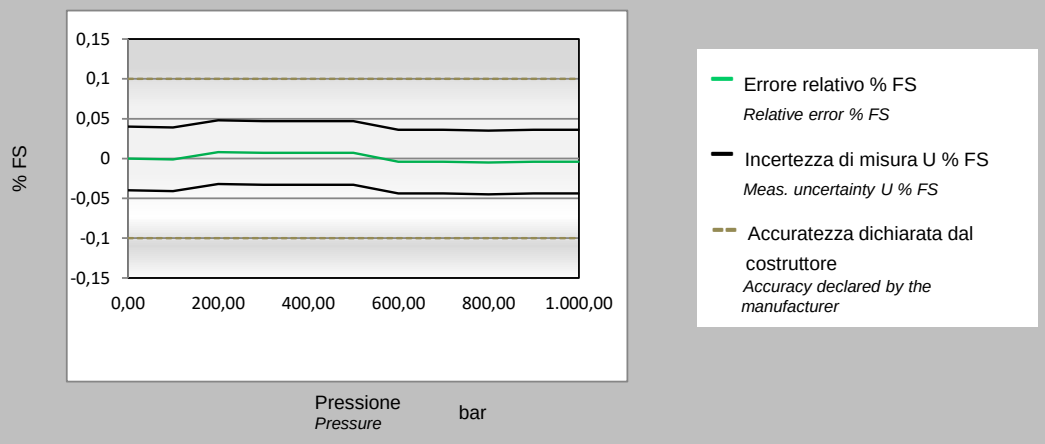
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Incertezza di misura
Uncertainty of measurement

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

CROSSWIND

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

INSTRUMENT TUBING LIST

ROSETTI MARINO

Sh. 4 of 4 | 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~~	~~N2~~	~~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~~	~~N2~~	~~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-026/25 PT-055A**~~	~~123A90-DDL-PR-PID-80014~~	~~Process Connection~~	~~Hydrogen~~	~~100~~	~~17,7~~	~~19~~	~~17,7~~	~~N2~~	~~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-026~~	~~123A90-DDL-PR-PID-80014~~	~~Manual Valve~~	~~BLPH~~	~~Upper Deck~~	~~26 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~~	~~N2~~	~~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~~	~~26 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~~	~~N2~~	~~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~~	~~N2~~	~~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~~	~~N2~~	~~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~~	~~N2~~	~~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-

ITEM	Tag	AV-63005/64-PV-031B	: Pneumatic Connection Air Supply - 64-PV-031B		Dwg	123A90-DDL-IN-LIS-40092	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10001958	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.	OK
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

ITEM	Tag	AV-63005/64-PV-031B	: Pneumatic Connection Air Supply - 64-PV-031B			Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10001958		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: 9,4 TEST DURATION : 11 min

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-630005	64-PV-031B						●	1/2" OD x Thk. 0,049"

TESTED LABEL AFFIXED DATA SHEET ATTACHED

Comments:

	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-24	2025-01-29	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-24T13:10:42.988Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-01-29T13:31:11.344Z	

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	AV-63005/64-PV-031B

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)*	00:11:09
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	09:28:24 pm

Logger protocol

Protocollo di acquisizione elenco dati

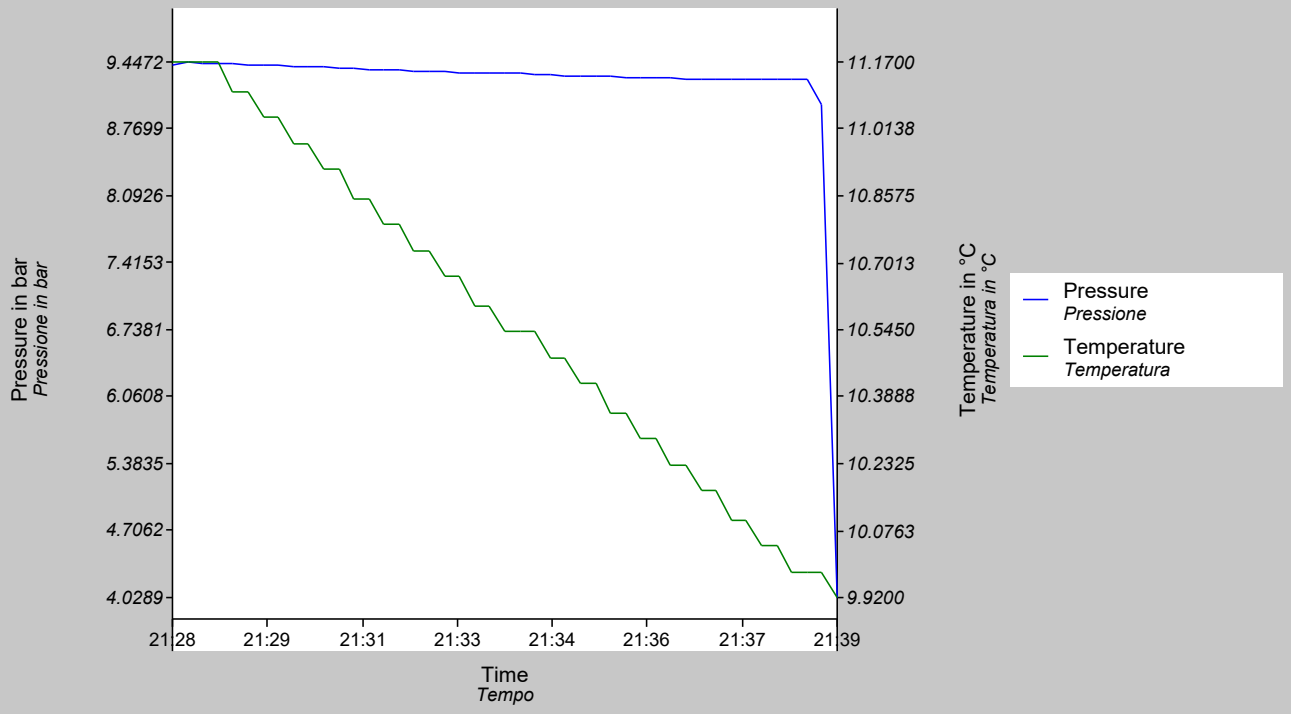
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-Tubing_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
01/24/2025 21:28:24.000	9.4192	11.1700
01/24/2025 21:28:39.000	9.4472	11.1700
01/24/2025 21:28:54.000	9.4390	11.1700
01/24/2025 21:29:09.000	9.4318	11.1700
01/24/2025 21:29:24.000	9.4239	11.1000
01/24/2025 21:29:39.000	9.4152	11.1000
01/24/2025 21:29:54.000	9.4124	11.0400
01/24/2025 21:30:09.000	9.4079	11.0400
01/24/2025 21:30:24.000	9.4024	10.9800
01/24/2025 21:30:39.000	9.3923	10.9800
01/24/2025 21:30:54.000	9.3943	10.9200
01/24/2025 21:31:09.000	9.3873	10.9200
01/24/2025 21:31:24.000	9.3806	10.8500
01/24/2025 21:31:39.000	9.3688	10.8500
01/24/2025 21:31:54.000	9.3619	10.7900
01/24/2025 21:32:09.000	9.3621	10.7900
01/24/2025 21:32:24.000	9.3590	10.7300

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-Tubing_1

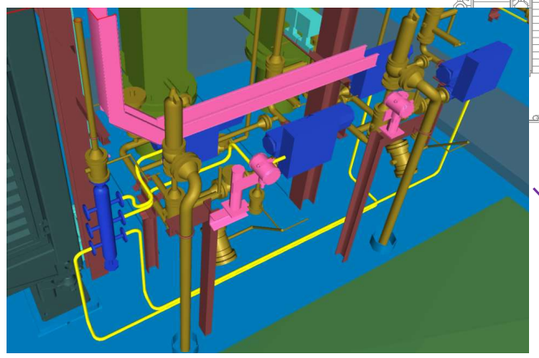
Measurement results

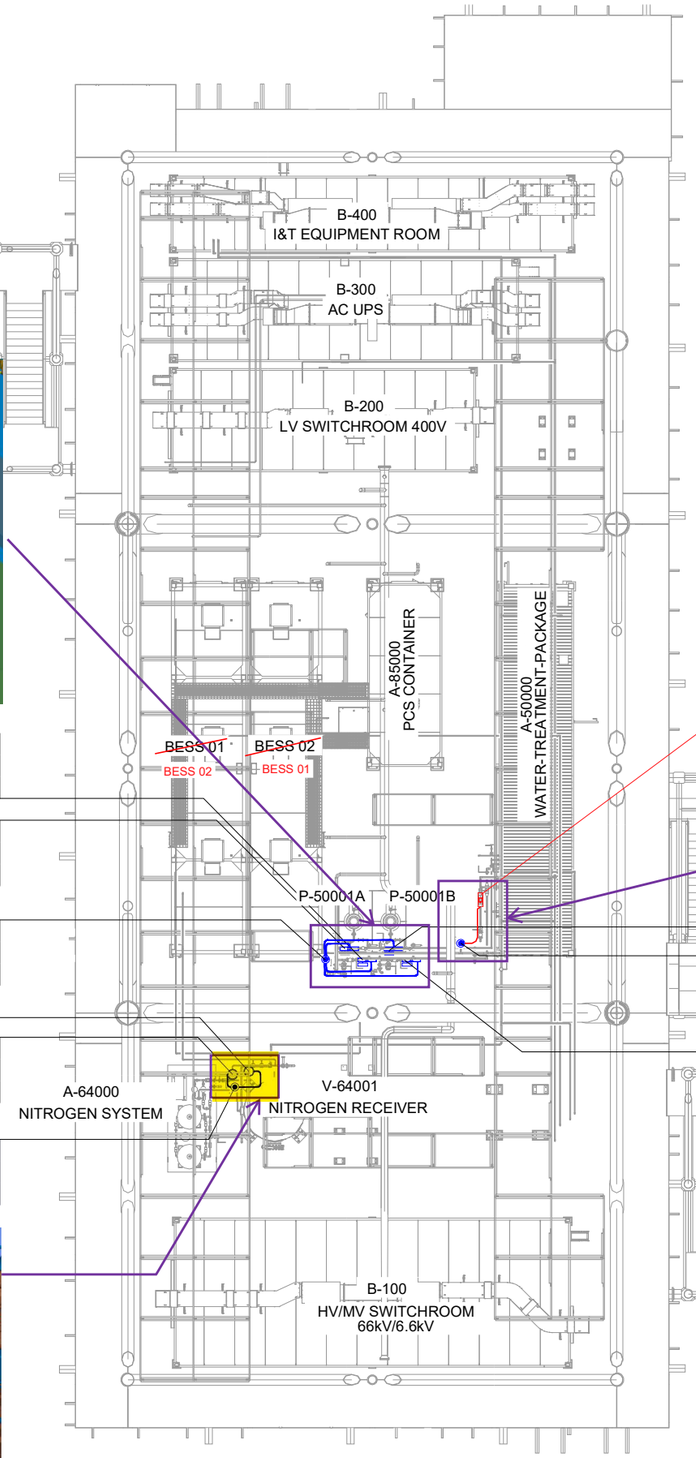
Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/24/2025 21:32:39.000	9.3539	10.7300
01/24/2025 21:32:54.000	9.3491	10.6700
01/24/2025 21:33:09.000	9.3413	10.6700
01/24/2025 21:33:24.000	9.3369	10.6000
01/24/2025 21:33:39.000	9.3328	10.6000
01/24/2025 21:33:54.000	9.3284	10.5400
01/24/2025 21:34:09.000	9.3283	10.5400
01/24/2025 21:34:24.000	9.3218	10.5400
01/24/2025 21:34:39.000	9.3174	10.4800
01/24/2025 21:34:54.000	9.3071	10.4800
01/24/2025 21:35:09.000	9.3076	10.4200
01/24/2025 21:35:24.000	9.3004	10.4200
01/24/2025 21:35:39.000	9.3001	10.3500
01/24/2025 21:35:54.000	9.2917	10.3500
01/24/2025 21:36:09.000	9.2871	10.2900
01/24/2025 21:36:24.000	9.2845	10.2900
01/24/2025 21:36:39.000	9.2815	10.2300
01/24/2025 21:36:54.000	9.2785	10.2300
01/24/2025 21:37:09.000	9.2723	10.1700
01/24/2025 21:37:24.000	9.2685	10.1700
01/24/2025 21:37:39.000	9.2674	10.1000
01/24/2025 21:37:54.000	9.2681	10.1000
01/24/2025 21:38:09.000	9.2711	10.0400
01/24/2025 21:38:24.000	9.2707	10.0400
01/24/2025 21:38:39.000	9.2720	9.9800
01/24/2025 21:38:54.000	9.2666	9.9800
01/24/2025 21:39:09.000	9.0104	9.9800
01/24/2025 21:39:24.000	4.0289	9.9200

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

REV. 01





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

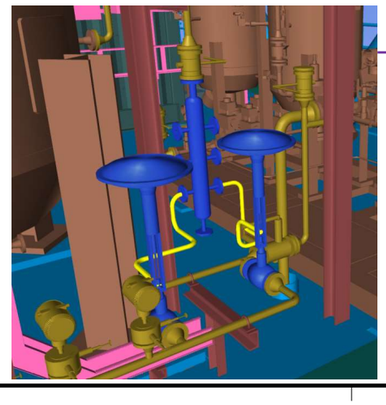
50-XV-002
+23.628mm
+0.318mm T.O.S

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

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

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

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



50-XV-005
+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

AV-63005

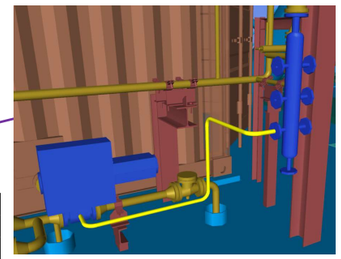
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64-PV-031B		SPARE
SPARE		SPARE

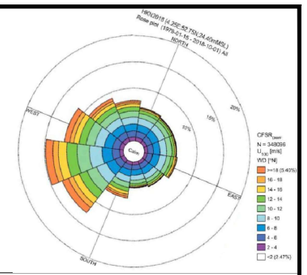
AV-63008

50-XV-001		50-XV-004
50-XV-002		SPARE
50-XV-003		SPARE

AV-63009

50-XV-005		SPARE
SPARE		SPARE
SPARE		SPARE





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

LOWER DECK
SCALE: 1:1

VIEW EL. 23310mm to 29310mm

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

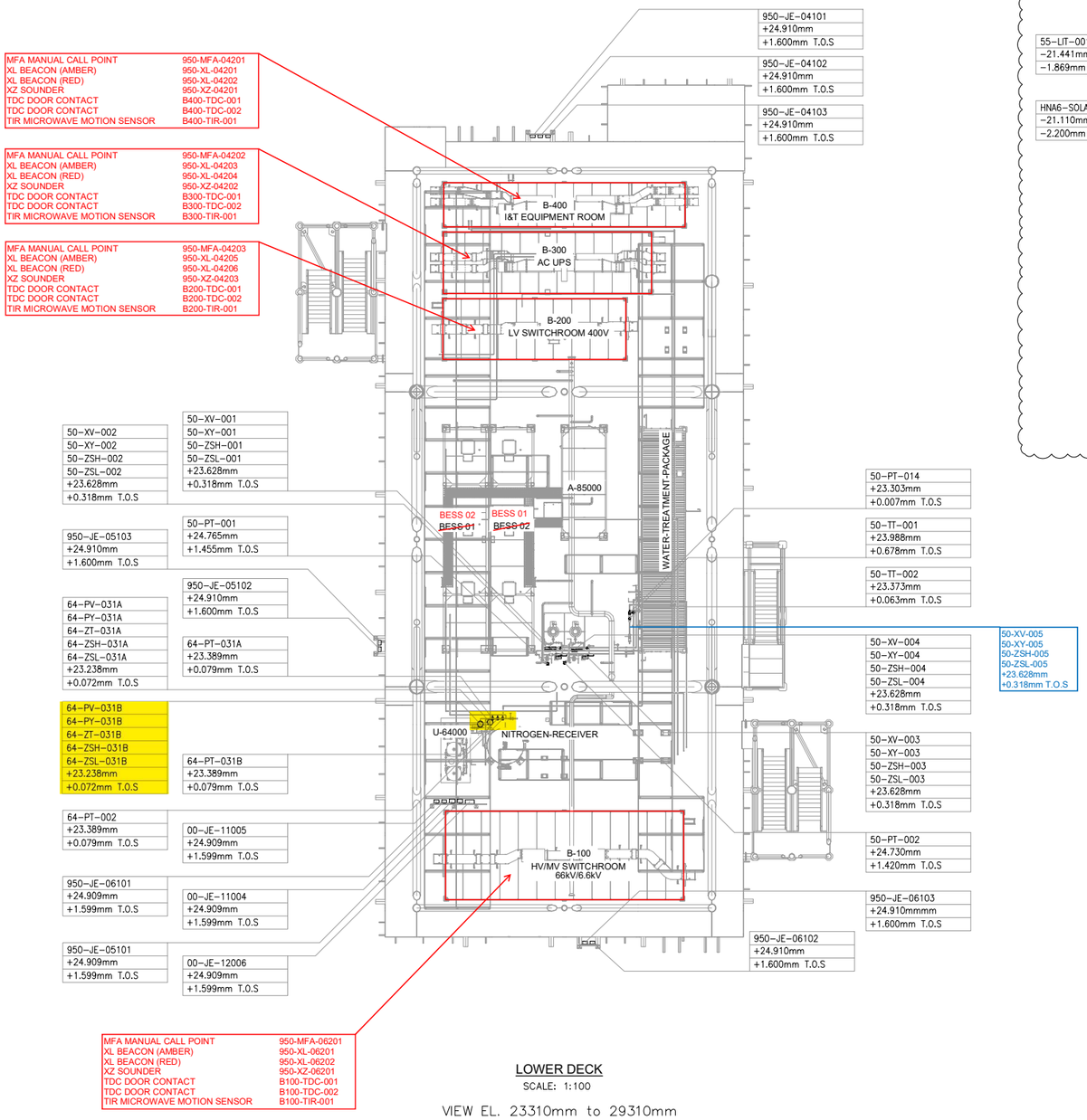
DRAWN DRAWN_BY | CHECKED CHECKED_BY | APPROVED APPROVED_BY | DATE DD/MM/YY

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

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

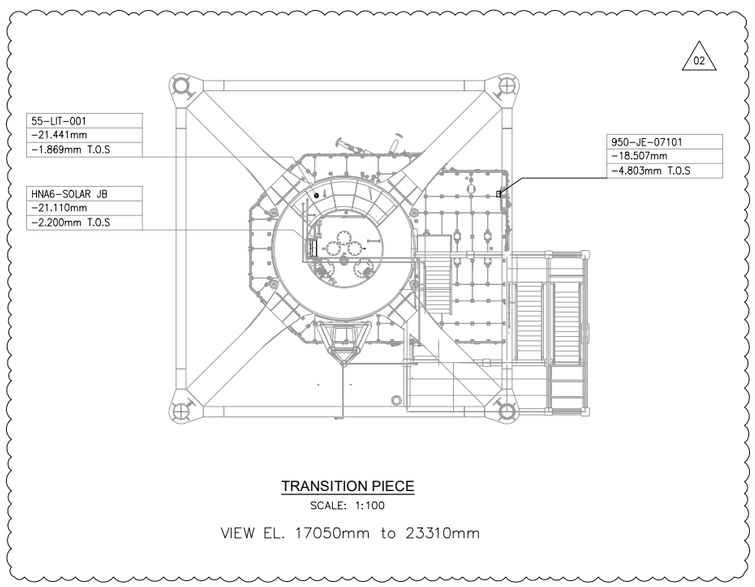
DRAWING NO. 123A90-DDL-IN-DL-40080

REV. 02

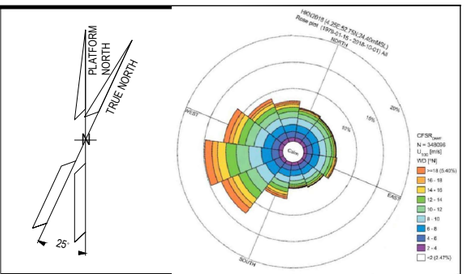


LOWER DECK
SCALE: 1:100
VIEW EL. 23310mm to 29310mm

02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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

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

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

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

63 PI 004 LL | 63 PI 003 L | I ESD | 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 | 64 HS 031 | 64 PIC 031A H L | 64 PIC 031B H L | 64 PT 031A | 64 PT 031B | 64 PT 002 | I ESD

NOTE 1, 12 SET @ 10 barg 1D2 | 64 PSV 001 | NOTE 10 TO ATM | 2"-AV-160-01CS-N

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

INSTR. PIPING
64 PV 031A | 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

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-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

1" -N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDV 001 | NOTE 13 | NC-FC TYP.2
01CS | 03HSS

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N
3/4" LC | BLPH-MV-275 NOTE 16
64 TP 044 | 1"-N-262-01CS-N

FL-DC TYP.6 1" | 64 PV 031B | FL-DC TYP.6 1"
N-158 N-100

ESD I → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN ESD I
NOTE 14

03 → **V-64001** NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
64 TP 046

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 03 64-PV-031 CV FAILURE.
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

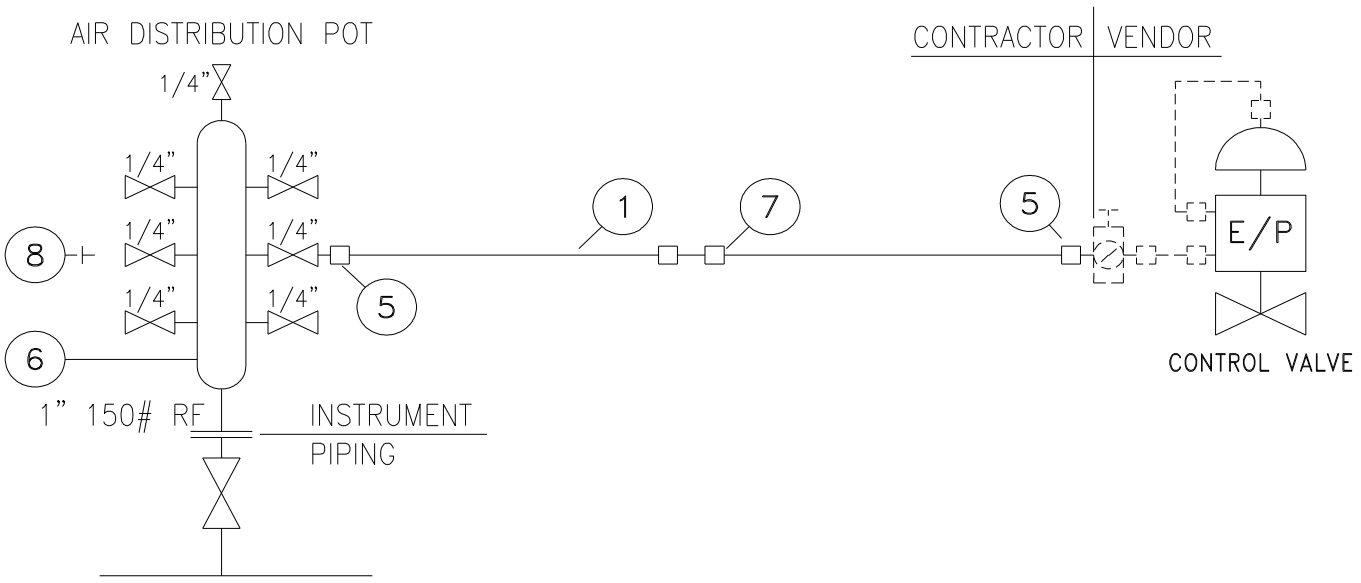
CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Pneumatic Hook-Ups	Sh. 5 of 6 Date: 08/07/2024 Rev. 01

PNEUMATIC HOOK-UP FOR CONTROL VALVES

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

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

ROSETTI MARINO SpA

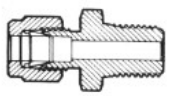
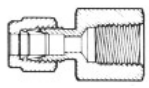
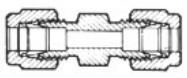


INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-038
6	25-FV-036
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

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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31										
32										
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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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 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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Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

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

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*	(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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70026 - Modugno (BA) • Italy
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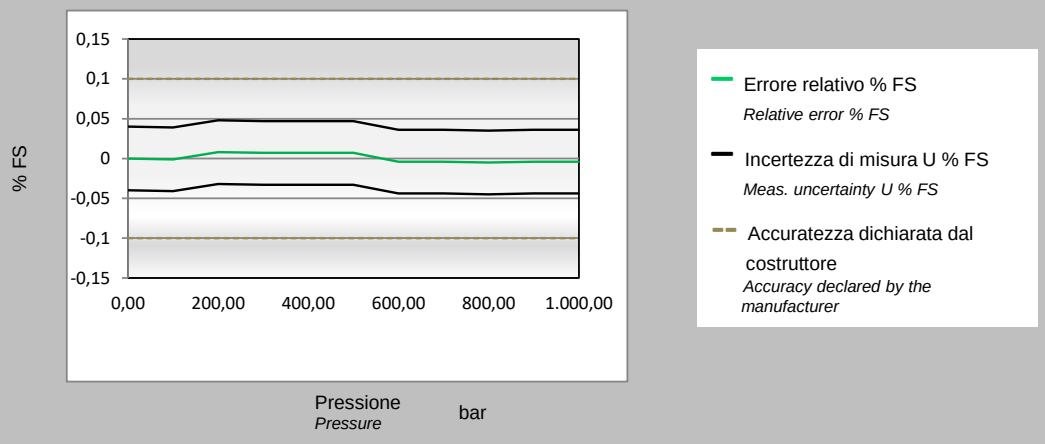
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LAT N° 114

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

CROSSWIND

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

INSTRUMENT TUBING LIST

ROSETTI MARINO

Sh. 4 of 4 | 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	N_2 / 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-026/25 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-026~~	~~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

ITEM	Tag	AV-63010/64-SDV-001	: Pneumatic Connection Air Supply - 64-SDV-001			Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10001977		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-63010/64-SDV-001	: Pneumatic Connection Air Supply - 64-SDV-001		Dwg	123A90-DDL-IN-LIS-40092	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10001977	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 MIN

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-63010	64-SDV-001	●					●	1/2" OD x Thk. 0,049"

TESTED LABEL AFFIXED DATA SHEET ATTACHED

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Paolo Schintu	
Date	2025-01-24	2025-02-04	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-24T13:12:29.214Z	PROVERLIS Digitaly signed by Paolo Schintu 2025-02-04T11:45:50.778Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	AV-63010/64-SDV-001

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)*	00:10:46
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	05:51:57 pm

Logger protocol

Protocollo di acquisizione elenco dati

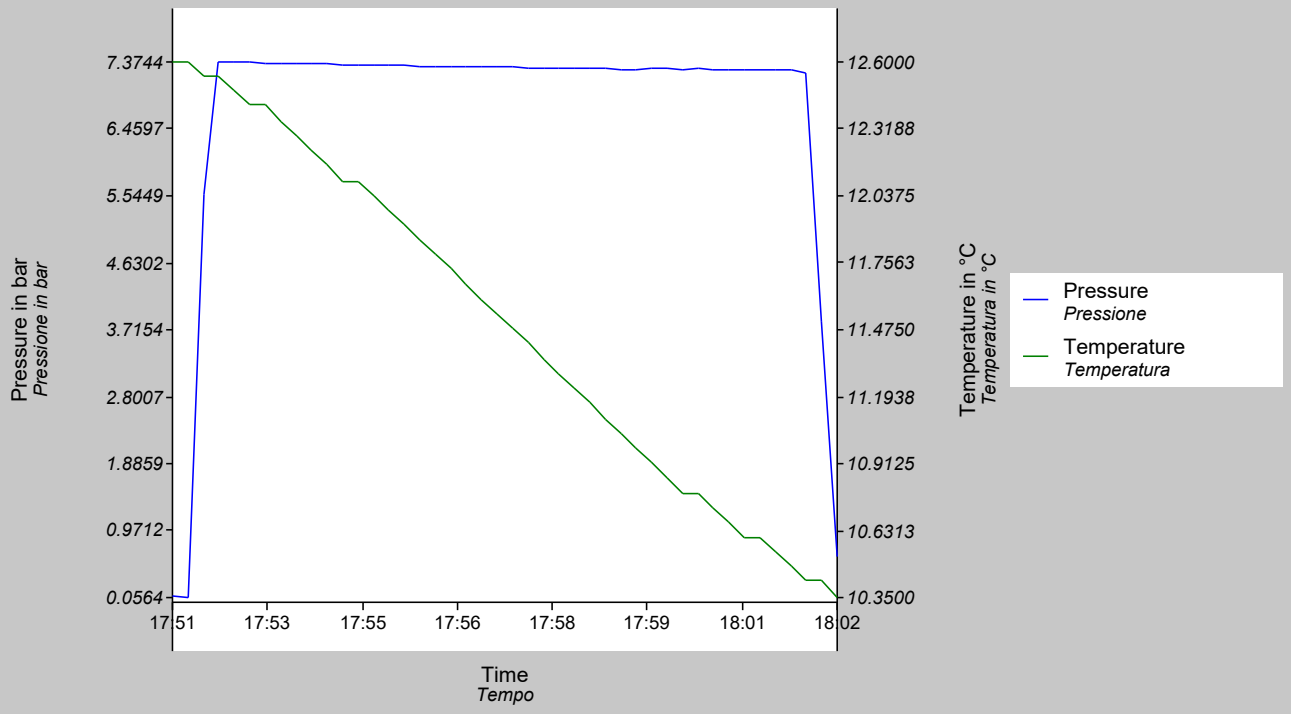
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	AV-63010/64-SDV-001

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 17:51:57.000	0.0691	12.6000
01/31/2025 17:52:12.000	0.0564	12.6000
01/31/2025 17:52:27.000	5.5614	12.5400
01/31/2025 17:52:42.000	7.3744	12.5400
01/31/2025 17:52:57.000	7.3709	12.4800
01/31/2025 17:53:12.000	7.3689	12.4200
01/31/2025 17:53:27.000	7.3613	12.4200
01/31/2025 17:53:42.000	7.3570	12.3500
01/31/2025 17:53:57.000	7.3562	12.2900
01/31/2025 17:54:12.000	7.3436	12.2300
01/31/2025 17:54:27.000	7.3422	12.1700
01/31/2025 17:54:42.000	7.3354	12.1000
01/31/2025 17:54:57.000	7.3378	12.1000
01/31/2025 17:55:12.000	7.3366	12.0400
01/31/2025 17:55:27.000	7.3308	11.9800
01/31/2025 17:55:42.000	7.3210	11.9200
01/31/2025 17:55:57.000	7.3175	11.8500

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	AV-63010/64-SDV-001

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/31/2025 17:56:12.000	7.3155	11.7900
01/31/2025 17:56:27.000	7.3104	11.7300
01/31/2025 17:56:42.000	7.3093	11.6700
01/31/2025 17:56:57.000	7.3055	11.6000
01/31/2025 17:57:12.000	7.3011	11.5400
01/31/2025 17:57:27.000	7.2994	11.4800
01/31/2025 17:57:42.000	7.2931	11.4200
01/31/2025 17:57:57.000	7.2947	11.3500
01/31/2025 17:58:12.000	7.2809	11.2900
01/31/2025 17:58:27.000	7.2866	11.2300
01/31/2025 17:58:42.000	7.2881	11.1700
01/31/2025 17:58:57.000	7.2826	11.1000
01/31/2025 17:59:12.000	7.2755	11.0400
01/31/2025 17:59:27.000	7.2768	10.9800
01/31/2025 17:59:42.000	7.2777	10.9200
01/31/2025 17:59:57.000	7.2794	10.8500
01/31/2025 18:00:12.000	7.2727	10.7900
01/31/2025 18:00:27.000	7.2776	10.7900
01/31/2025 18:00:42.000	7.2733	10.7300
01/31/2025 18:00:57.000	7.2733	10.6700
01/31/2025 18:01:12.000	7.2735	10.6000
01/31/2025 18:01:27.000	7.2652	10.6000
01/31/2025 18:01:42.000	7.2691	10.5400
01/31/2025 18:01:57.000	7.2660	10.4800
01/31/2025 18:02:12.000	7.2276	10.4200
01/31/2025 18:02:27.000	3.8172	10.4200
01/31/2025 18:02:42.000	0.6093	10.3500

CROSSWIND

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

INSTRUMENT TUBING LIST

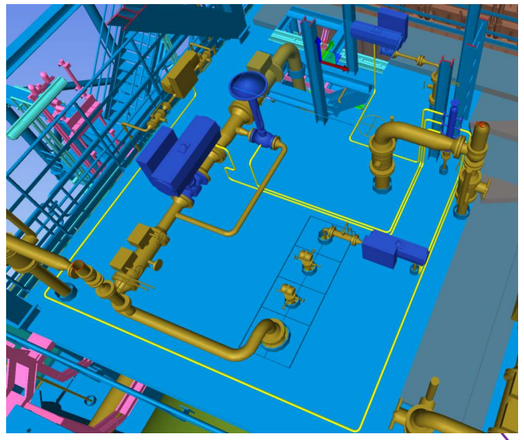
ROSETTI MARINO

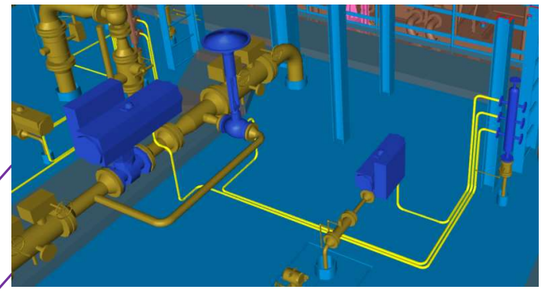
Sh. 4 of 4 REV. 00 01 02 03 04 — X X X X X

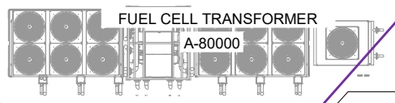
				DATA TUBING													FROM AREA						TO AREA						
POS.	REV	SUPPLY SCOPE	LAINING SCOPE	TAG Tubing	P&ID	MAIN FUNCTION	SERVICE	DESIGN TEMPERATURE(C°)	OPERATING PRESSURE (Barg)	DESIGN PRESSURE (Barg)	TEST PRESSURE (Barg)	FLUID TEST	DIMENSIONS	MATERIAL	REF. DOC.	Q.TY (m)	FIRE PROOFING	HEAT TRACING	MODULE	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-014/26-PT-001**~~	~~123A90-DDL-PR-PID-80013~~	~~Process Connection~~	~~Hydrogen~~	~~80~~	~~7,5 / 30~~	~~40~~	~~7,5 / 30~~	~~N2~~	~~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~~	~~N2~~	~~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-025/26-PT-055A**~~	~~123A90-DDL-PR-PID-80014~~	~~Process Connection~~	~~Hydrogen~~	~~100~~	~~17,7~~	~~10~~	~~17,7~~	~~N2~~	~~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~~	~~26-PT-055A~~	~~123A90-DDL-IN-DL-40081~~	~~Pressure Transmitter~~	
~~48~~	03	DELETED	DELETED	~~**BLPH-MV-213/26-PT-055B**~~	~~123A90-DDL-PR-PID-80014~~	~~Process Connection~~	~~Hydrogen~~	~~100~~	~~3,5 / 6,5~~	~~10~~	~~3,5 / 6,5~~	~~N2~~	~~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~~	~~N2~~	~~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-80026~~	~~Process Connection~~	~~Waste Water~~	~~100~~	~~ATM~~	~~17,7~~	~~ATM~~	~~N2~~	~~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-80026~~	~~Manual Valve~~	~~BLPH~~	~~Lower Deck~~	~~60-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~~	~~N2~~	~~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~~	~~N2~~	~~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

DRAWING NO. 12390-DDL-IN-DL-40085

REV. 01







CRANE
X-99001

AV-63012
+35.085mm
+4.775mm T.O.S

AV-63004
+35.085mm
+4.775mm T.O.S

25-XV-015
+34.479mm
+4.169mm T.O.S

25-PV-043
+34.740mm
+4.430mm T.O.S

25-BDV-013
+34.740mm
+4.430mm T.O.S

25-XV-018
+34.508mm
+4.198mm T.O.S

25-PV-046
+34.740mm
+4.430mm T.O.S

25-XV-008
+35.245mm
+4.935mm T.O.S

AV-63001
+35.834mm
+5.524mm T.O.S

25-XV-011
+35.245mm
+4.935mm T.O.S

25-FV-033
+35.245mm
+4.935mm T.O.S

25-FV-032
+35.245mm
+4.935mm T.O.S

25-BDV-022
+34.740mm
+4.430mm T.O.S

AV-63006
+35.085mm
+4.775mm T.O.S

80-XV-001
+34.508mm
+4.198mm T.O.S

25-PV-049
+34.740mm
+4.430mm T.O.S

25-BDV-019
+34.740mm
+4.430mm T.O.S

Q-43004
HYDROGEN VENT

25-XV-021
+34.479mm
+4.169mm T.O.S

25-BDV-016
+34.740mm
+4.430mm T.O.S

V-25001A V-25001B V-25001C

HYDROGEN STORAGE VESSELS

REFER SHEET-001

AV-63010
+35.834mm
+5.524mm T.O.S

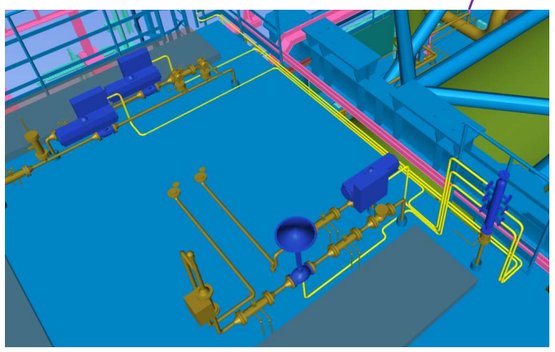
25-XV-024
+35.140mm
+4.830mm T.O.S

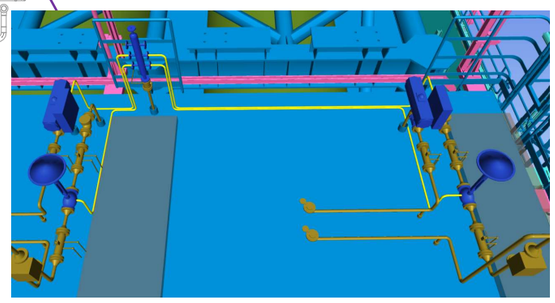
25-SDV-001
+35.140mm
+4.830mm T.O.S

25-XV-004
+35.245mm
+4.935mm T.O.S

25-FV-031
+35.245mm
+4.935mm T.O.S

A-20000
ELECTROLYSER



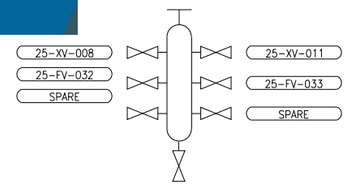


UPPER DECK

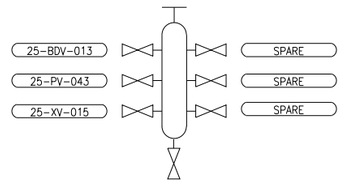
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VIEW EL. 33740mm to 36500mm

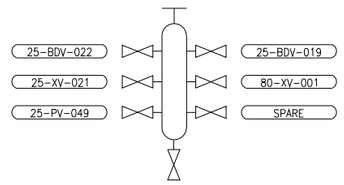
AV-63001



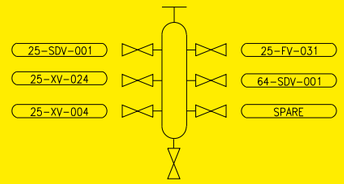
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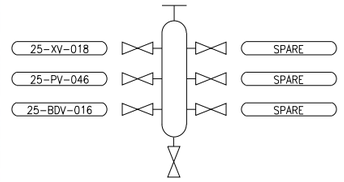
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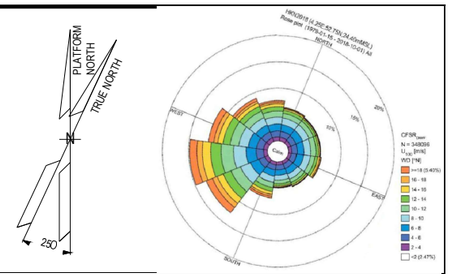


AV-63010



AV-63012





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
- TUBING GOING UP
- TUBING GOING DOWN

HOLDS

REFERENCE DOCUMENTS

INSERT SUBCONTRACTOR / VENDOR LOGO HERE

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

CROSSWIND | ROSETTI MARINO

TITLE :
BASE LOAD POWER HUB (BLPH)
INSTRUMENT TUBING LAYOUT
ELEVATION 30.310 m

VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-DL-40085**

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

ROSETTI MARINO SpA

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-40085	SHEET 002	REV. 01

File Name : 12390-DDL-IN-DL-40085_Rev.01

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | ESD I

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 | 64 TP 045

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N | 3/4" LC | BLPH-MV-275 NOTE 16 | 64 TP 044 | 1"-N-262-01CS-N

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

64 XA 003 → FAULT PACKAGE

NOTE 15 → 64 PI 002 L LL | 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 | 64 PV 031B | FL-DC TYP.6 1" | N-158 N-100

INSTR. PIPING | 3/4" FLG x 1/2" NPTF | BLPH-MV-386 | BLPH-MV-166 | BLPH-MV-167 3/4" FLG x 1/2" NPTF

NOTE 1, 12 SET @ 10 barg 1D2 | 64 PSV 001 | NOTE 10 TO ATM | 2"-AV-160-01CS-N | 1.5" x 1" | SB BLPH-MV-278 FB-LO 1.1/2" | 1-1/2"-N-197-01CS-N | 1.5" x 1" | 1"-N-100-01CS-N

03 → 64 TP 046 | **V-64001** NITROGEN RECEIVER | SEE VENDOR DRAWING 1724000437-PR-PID-00018 | 03

1"-N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL

64 SDV 001 S | IA | 64 SDV 001 | NOTE 13 | NC-FC TYP.2

01CS | 03HSS

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-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

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

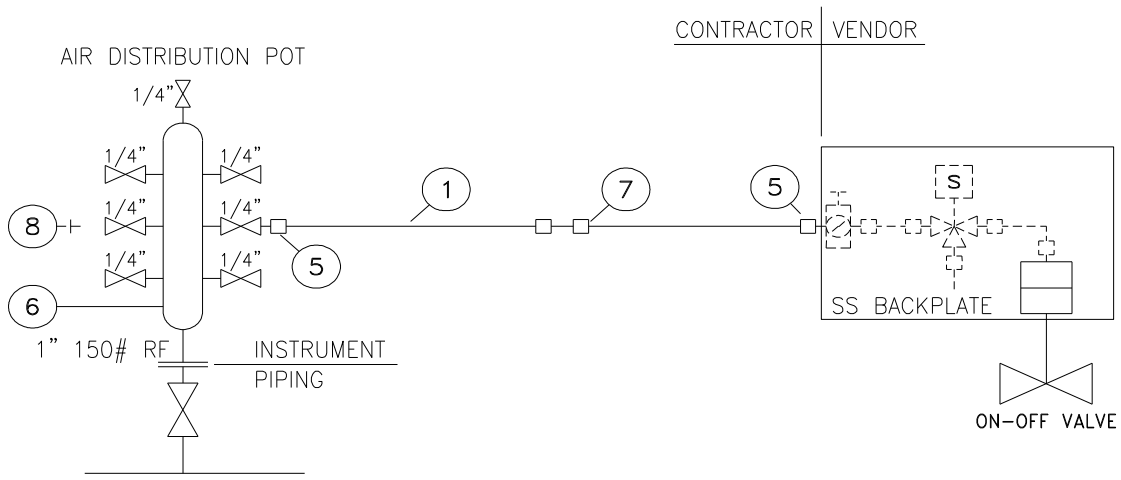
CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Pneumatic Hook-Ups	Sh. 6 of 6 Date: 08/07/2024 Rev. 01

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

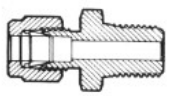
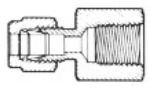
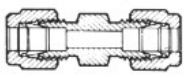


INSTRUMENT TAG	
1	25-BDV-022
2	25-BDV-005
3	25-BDV-007
4	25-BDV-010
5	25-BDV-013
6	25-BDV-016
7	25-BDV-019
8	25-SDV-001
9	25-SDV-023
10	25-XV-004
11	25-XV-006
12	25-XV-008
13	25-XV-009
14	25-XV-011
15	25-XV-012
16	25-XV-014
17	25-XV-015
18	25-XV-017
19	25-XV-018
20	25-XV-020
21	25-XV-021
22	25-XV-024
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										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
27										
28										
29										
30										
31										
32										
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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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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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*	(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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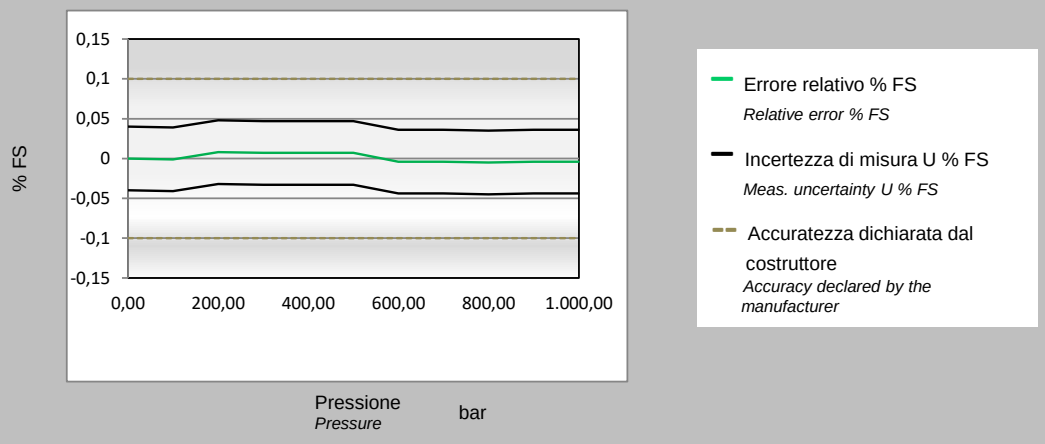
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LAT N° 114

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

ITEM	Tag	BLPH-MV-386/64-PT-031A	: Process Connection Nitrogen Gas - 64-PT-031A			Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10001992		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.	OK
10	Hose according to specifications and tightened	NA
11	Flanges - nuts and bolts tightened.	NA
12	Fittings are mounted and tightened.	NA
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	BLPH-MV-386/64-PT-031A : Process Connection Nitrogen Gas - 64-PT-031A				Dwg	123A90-DDL-IN-LIS-40092
	S/Sys	64-10 : Nitrogen Distribution Network				Module	LD
TASK	code	C10001992		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: 8 TEST DURATION : 10 min

TEST EQUIPMENT: CPG1500 SERIAL N°: 1A014ILJJIM

HOOK UP DIAGRAM Number: 123A90-DDL-IN-HD-40077

Line FROM	Line TO	Tubing cleaned			Tubing flushed			Diam ID/OD
		Yes	No	N/A	Yes	No	N/A	
BLPH-MV-386	64-PT-031A	●					●	1/2" OD x Thk. 0,049"

TESTED LABEL AFFIXED DATA SHEET ATTACHED

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM (ROSETTI MARINO)	
Name	Michele Tartaglia	Giovanni Tangianu	
Date	2025-02-12	2025-02-12	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-02-12T14:47:37.319Z	PROVERLIS Digitaly signed by Giovanni Tangianu 2025-02-12T15:54:41.009Z	

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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).
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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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Accredited Calibration Laboratory

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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Calibration Centre
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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*	(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

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

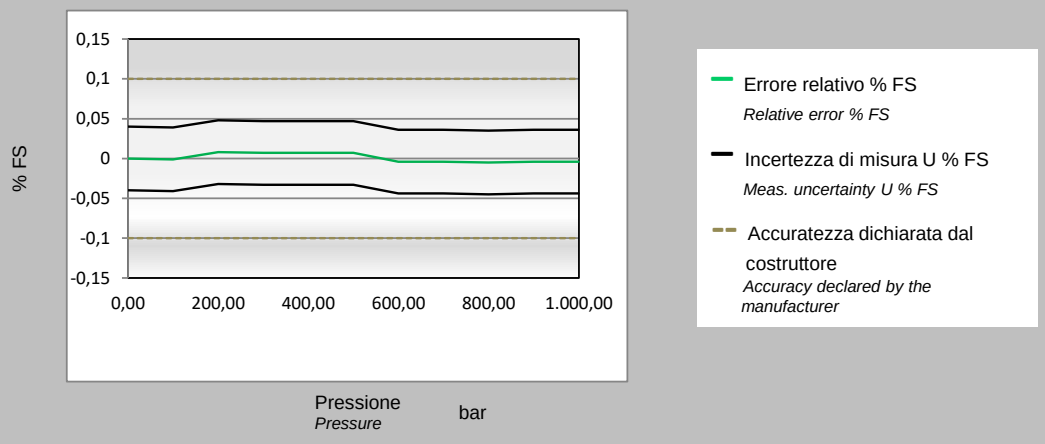
Centro di Taratura LAT N°114
Calibration Centre
Laboratorio Accreditato di Taratura
Accredited Calibration Laboratory

LAT N° 114

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*	BLPH-MV-386/64-PT-031A

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)*	00:10:11
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	03:20:54 pm

Logger protocol

Protocollo di acquisizione elenco dati

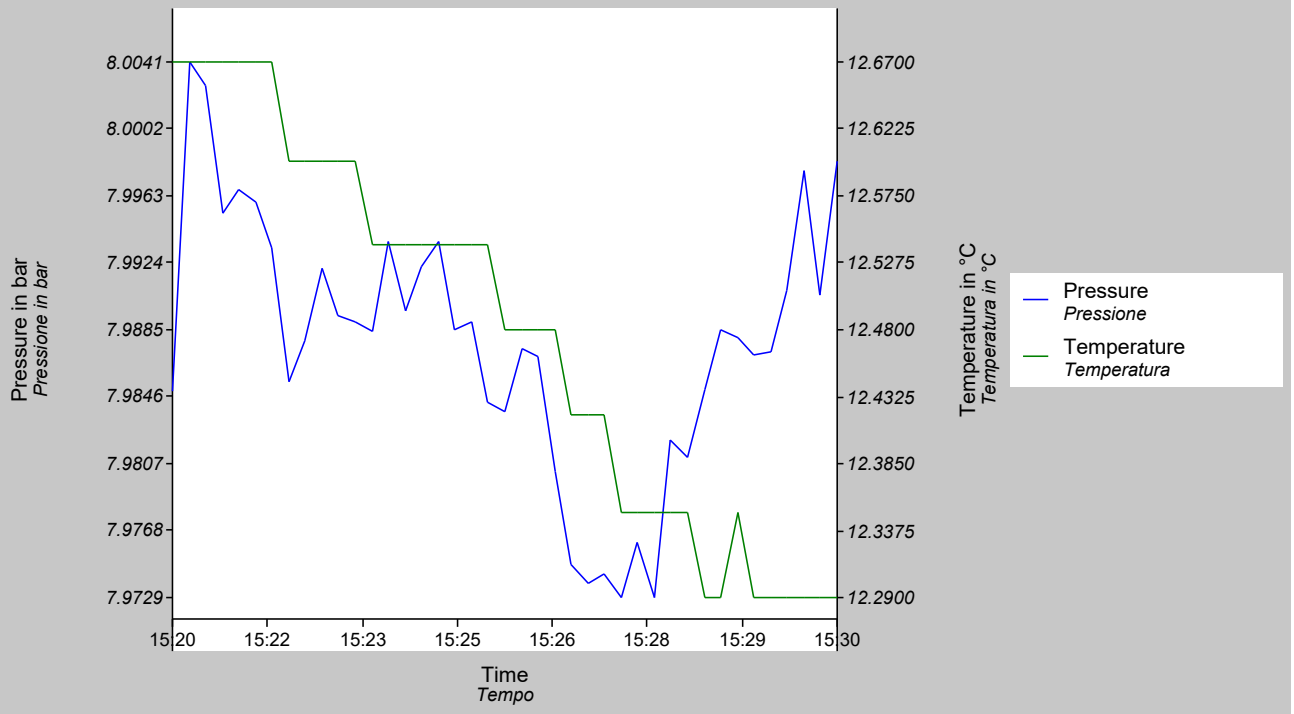
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	BLPH-MV-386/64-PT-031A

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/11/2025 15:20:54.000	7.9849	12.6700
02/11/2025 15:21:09.000	8.0041	12.6700
02/11/2025 15:21:24.000	8.0027	12.6700
02/11/2025 15:21:39.000	7.9953	12.6700
02/11/2025 15:21:54.000	7.9967	12.6700
02/11/2025 15:22:09.000	7.9959	12.6700
02/11/2025 15:22:24.000	7.9933	12.6700
02/11/2025 15:22:39.000	7.9855	12.6000
02/11/2025 15:22:54.000	7.9879	12.6000
02/11/2025 15:23:09.000	7.9921	12.6000
02/11/2025 15:23:24.000	7.9893	12.6000
02/11/2025 15:23:39.000	7.9890	12.6000
02/11/2025 15:23:54.000	7.9884	12.5400
02/11/2025 15:24:09.000	7.9936	12.5400
02/11/2025 15:24:24.000	7.9896	12.5400
02/11/2025 15:24:39.000	7.9922	12.5400
02/11/2025 15:24:54.000	7.9936	12.5400

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	BLPH-MV-386/64-PT-031A

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/11/2025 15:25:09.000	7.9885	12.5400
02/11/2025 15:25:24.000	7.9890	12.5400
02/11/2025 15:25:39.000	7.9843	12.5400
02/11/2025 15:25:54.000	7.9837	12.4800
02/11/2025 15:26:09.000	7.9874	12.4800
02/11/2025 15:26:24.000	7.9869	12.4800
02/11/2025 15:26:39.000	7.9802	12.4800
02/11/2025 15:26:54.000	7.9748	12.4200
02/11/2025 15:27:09.000	7.9737	12.4200
02/11/2025 15:27:24.000	7.9743	12.4200
02/11/2025 15:27:39.000	7.9729	12.3500
02/11/2025 15:27:54.000	7.9761	12.3500
02/11/2025 15:28:09.000	7.9729	12.3500
02/11/2025 15:28:24.000	7.9821	12.3500
02/11/2025 15:28:39.000	7.9811	12.3500
02/11/2025 15:28:54.000	7.9850	12.2900
02/11/2025 15:29:09.000	7.9885	12.2900
02/11/2025 15:29:24.000	7.9880	12.3500
02/11/2025 15:29:39.000	7.9870	12.2900
02/11/2025 15:29:54.000	7.9872	12.2900
02/11/2025 15:30:09.000	7.9908	12.2900
02/11/2025 15:30:24.000	7.9978	12.2900
02/11/2025 15:30:39.000	7.9905	12.2900
02/11/2025 15:30:54.000	7.9983	12.2900

CROSSWIND

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

INSTRUMENT TUBING LIST

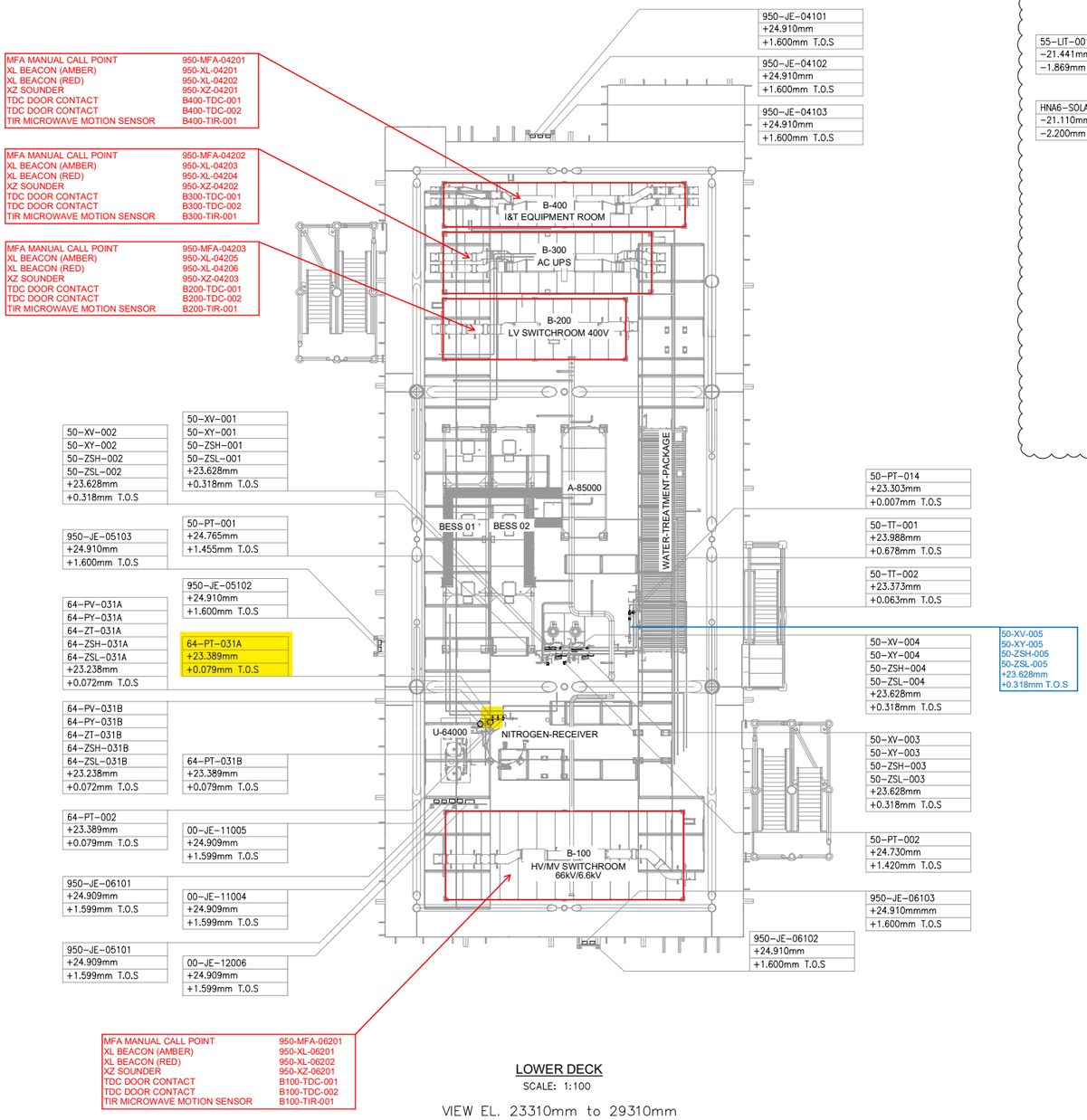
ROSETTI MARINO

Sh. 4 of 4 REV. 00 01 02 03 04 — X X X X X

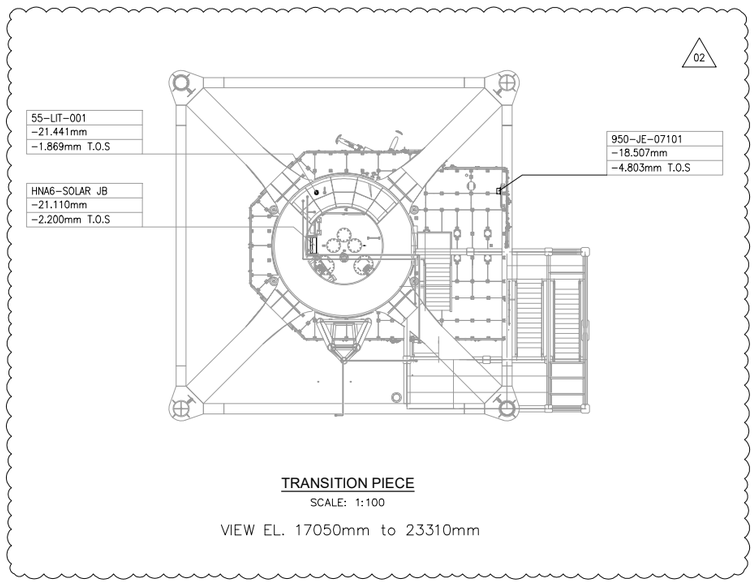
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POS.	REV	SUPPLY SCOPE	LAINING SCOPE	TAG Tubing	P&ID	MAIN FUNCTION	SERVICE	DESIGN TEMPERATURE(C°)	OPERATING PRESSURE (Barg)	DESIGN PRESSURE (Barg)	TEST PRESSURE (Barg)	FLUID TEST	DIMENSIONS	MATERIAL	REF. DOC.	Q.TY (m)	FIRE PROOFING	HEAT TRACING	MODULE	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-SDV-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-014/26-PT-001**~~	~~123A90-DDL-PR-PID-80013~~	~~Process Connection~~	~~Hydrogen~~	~~80~~	~~7,5 / 30~~	~~40~~	~~7,5 / 30~~	~~N2~~	~~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~~	~~N2~~	~~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-025/26-PT-055A**~~	~~123A90-DDL-PR-PID-80014~~	~~Process Connection~~	~~Hydrogen~~	~~100~~	~~17,7~~	~~10~~	~~17,7~~	~~N2~~	~~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~~	~~26-PT-055A~~	~~123A90-DDL-IN-DL-40081~~	~~Pressure Transmitter~~	
~~48~~	03	DELETED	DELETED	~~**BLPH-MV-213/26-PT-055B**~~	~~123A90-DDL-PR-PID-80014~~	~~Process Connection~~	~~Hydrogen~~	~~100~~	~~3,5 / 6,5~~	~~10~~	~~3,5 / 6,5~~	~~N2~~	~~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~~	~~N2~~	~~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-80026~~	~~Process Connection~~	~~Waste Water~~	~~100~~	~~ATM~~	~~17,7~~	~~ATM~~	~~N2~~	~~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-80026~~	~~Manual Valve~~	~~BLPH~~	~~Lower Deck~~	~~60-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~~	~~N2~~	~~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~~	~~N2~~	~~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-H

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

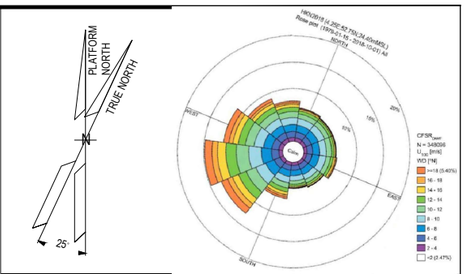
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | ESD I

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N

03 → 3/4" LC | BLPH-MV-275 | NOTE 16 | 03 → 64 TP 044 | 1"-N-262-01CS-N

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

ESD I → 64 XA 003 FAULT PACKAGE

NOTE 15: 64 PI 002 L LL | 64 HS 031 | 64 PIC 031A H L | 64 PIC 031B H L | 64 PT 031A | 64 PT 031B | 64 PT 002 | I

NOTE 1, 12 SET @ 10 barg: 64 PSV 001 | NOTE 10 TO ATM | 2"-AV-160-01CS-N

64 PV 031A | 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 | 1"-N-100-01CS-N

64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

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

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 SDV 001 | IA

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

64 SDV 001 | NOTE 13 | NC-FC TYP.2

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

03 → 64 TP 046 → **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

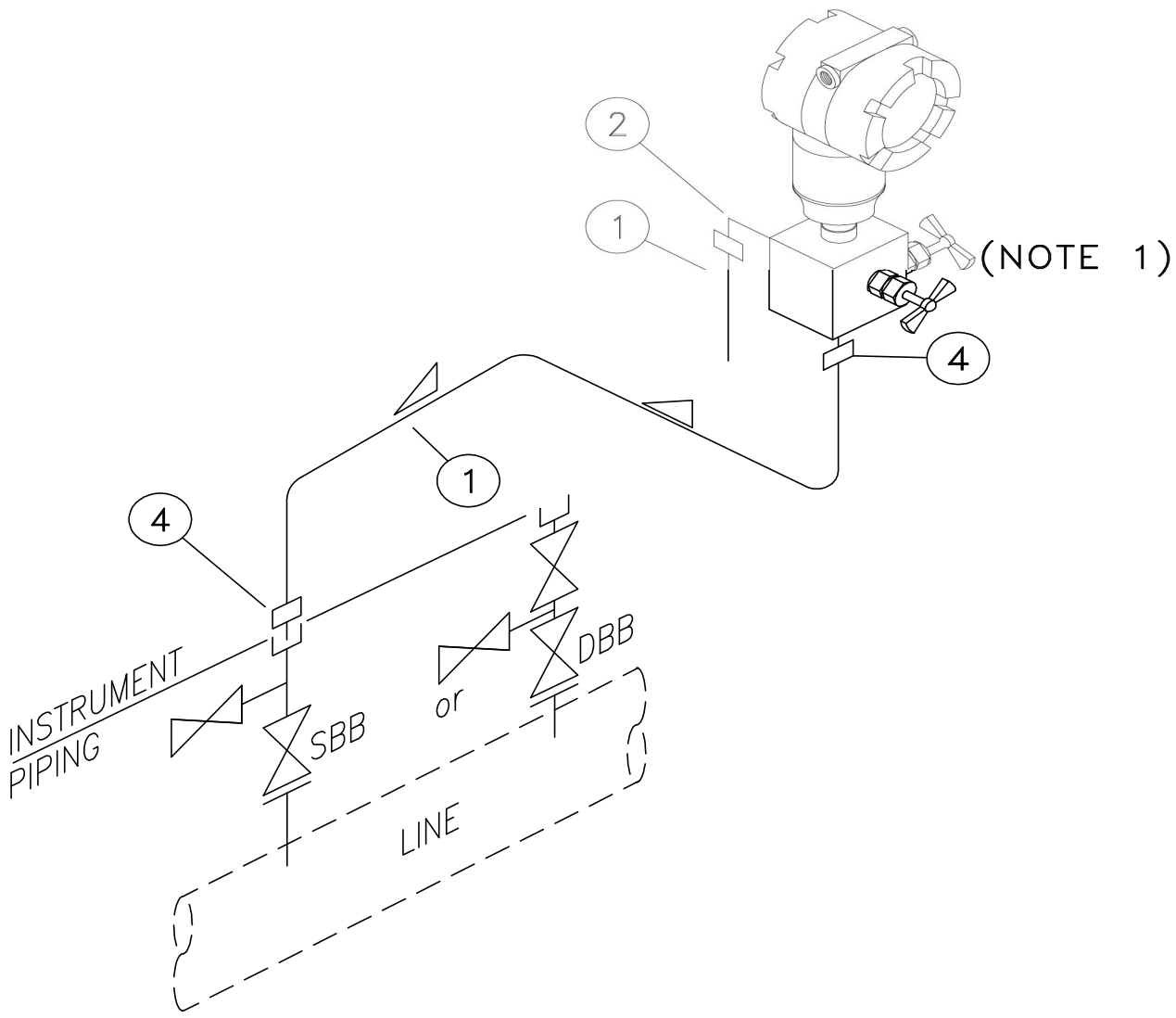
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

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

CROSSWIND	HOLLANDSE KUST NOORD WIND PARK Project Contract No. CW-I-WP4-2023-05	ROSETTI MARINO
Document Title:	Instrument Process Hook-Ups	Sh. 9 of 8 Date: 05/02/2024 Rev. 00

PRESSURE TRANSMITTERS - Installation for Gas Service



INSTRUMENT TAG	
1	64-PT-031A
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NOTES:
(1) MANIFOLD IS SUPPLIED WITH INSTRUMENT.
(2) VENDOR SHALL GUARANTEE THE MATERIAL COUPLING BETWEEN TUBING AND FITTINGS.

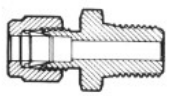
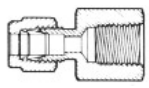
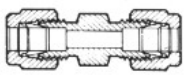
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40077**

REV.:	DATE:	SIGNATURE:
2_C	11/02/25	G.Randi

ROSETTI MARINO SpA

POS.	NORM/STD CODE	DESCRIPTION	SIZE/ CONNECTION TYPE	Q.TY
4		SS316 MALE CONNECTOR	1/2" NPT x 1/2" O.D.	N. 2
2		SS316 90° ELBOW	1/4" NPT x 1/2" O.D.	N. 1
1		SS 316L TUBING (NOTE 2)	1/2" x 0,049"Thk	4 m

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

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.					
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34										

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

MATERIAL :

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

SPECIAL REQUIREMENTS :

- ☐ ...

REMARKS :

This document undergoes an issuance cycle within EDMS "Fusionlive".
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:	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										
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12										
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16										
17										
18										
19										
20										

VENDOR / ORDER : AF SYSTEM / 1724001332

MATERIAL :

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

SPECIAL REQUIREMENTS :

- ☐ ...

REMARKS :

This document undergoes an issuance cycle within EDMS "Fusionlive".
Its distribution is electronically controlled. Once printed shall be considered as "NOT CONTROLLED" copy

ITEM	Tag	64-PY-031A	: Electropositioner - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10002027		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

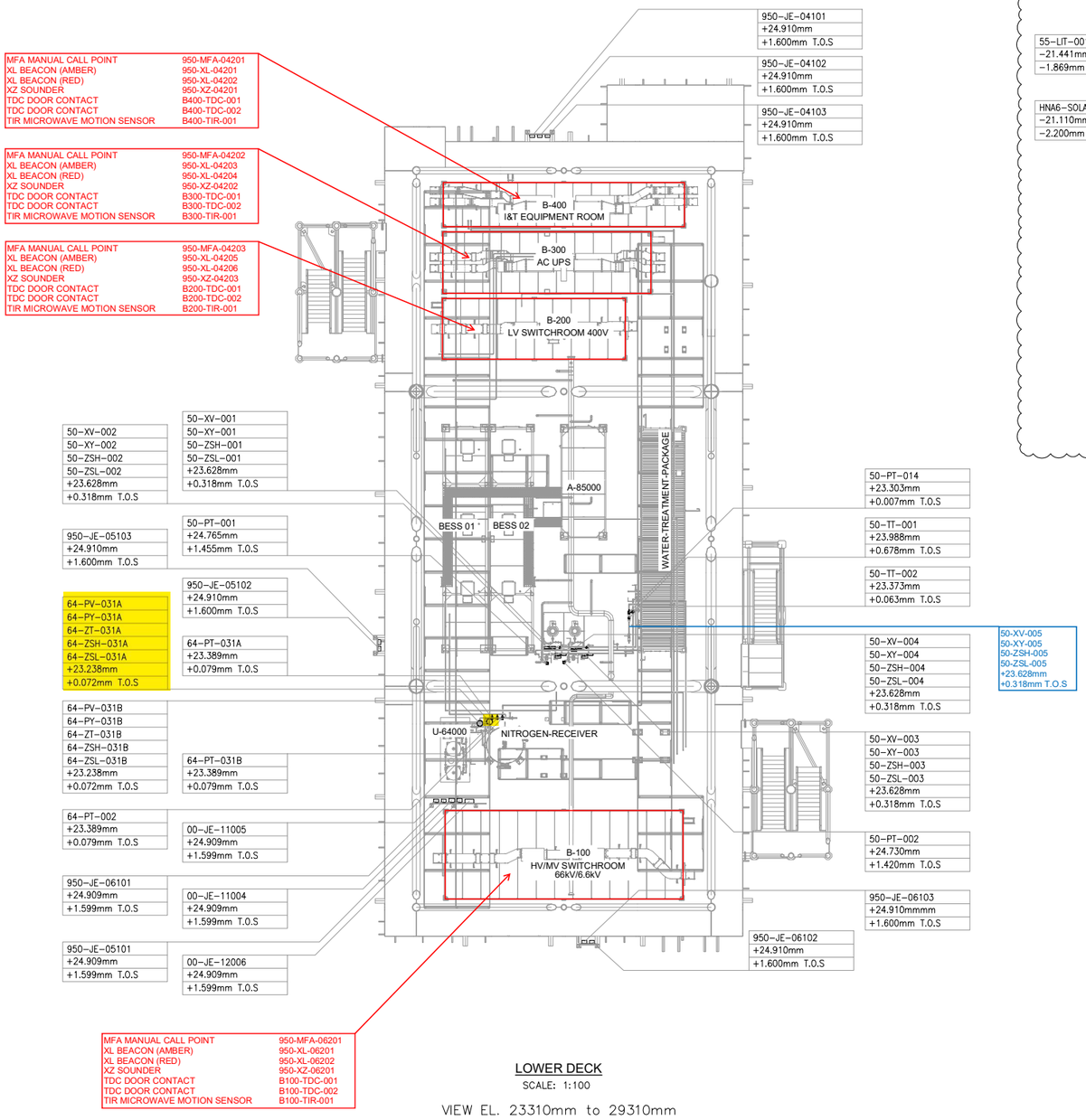
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
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:

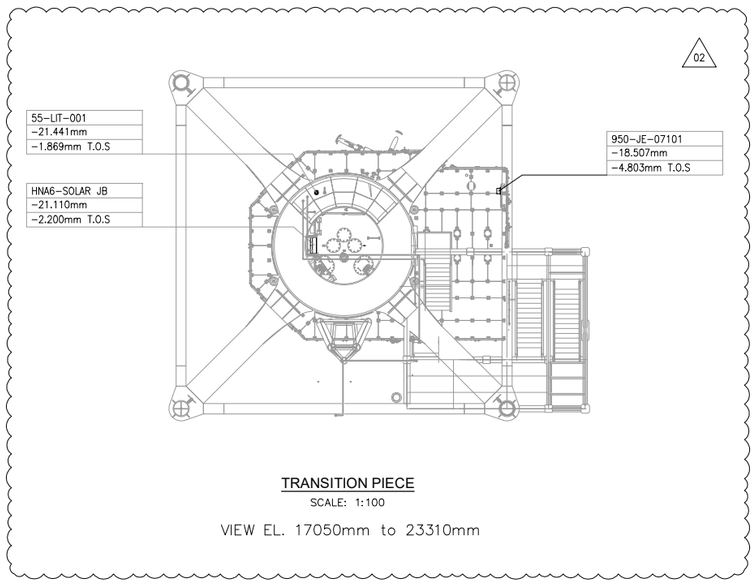
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:58:51.833Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T17:16:31.893Z	

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

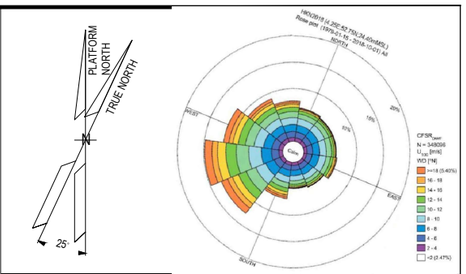
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | I ESD

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

03 → 3/4" LC — BLPH-MV-275 NOTE 16 — 03 → 64 TP 044 — 1"-N-262-01CS-N

I ESD → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN I ESD
NOTE 14

NOTE 15: 64 PI 002 L LL | I ESD

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

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

INSTR. PIPING | 64 PV 031A | FL-DC TYP.6 1" | 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 | 1"-N-100-01CS-N

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

64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

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-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

1" N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDV 001 S — IA
64 SDV 001 — NOTE 13 — NC-FC TYP.2
01CS | 03HSS

03 → 64 TP 046 — **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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 03 64-PV-031 CV FAILURE.
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

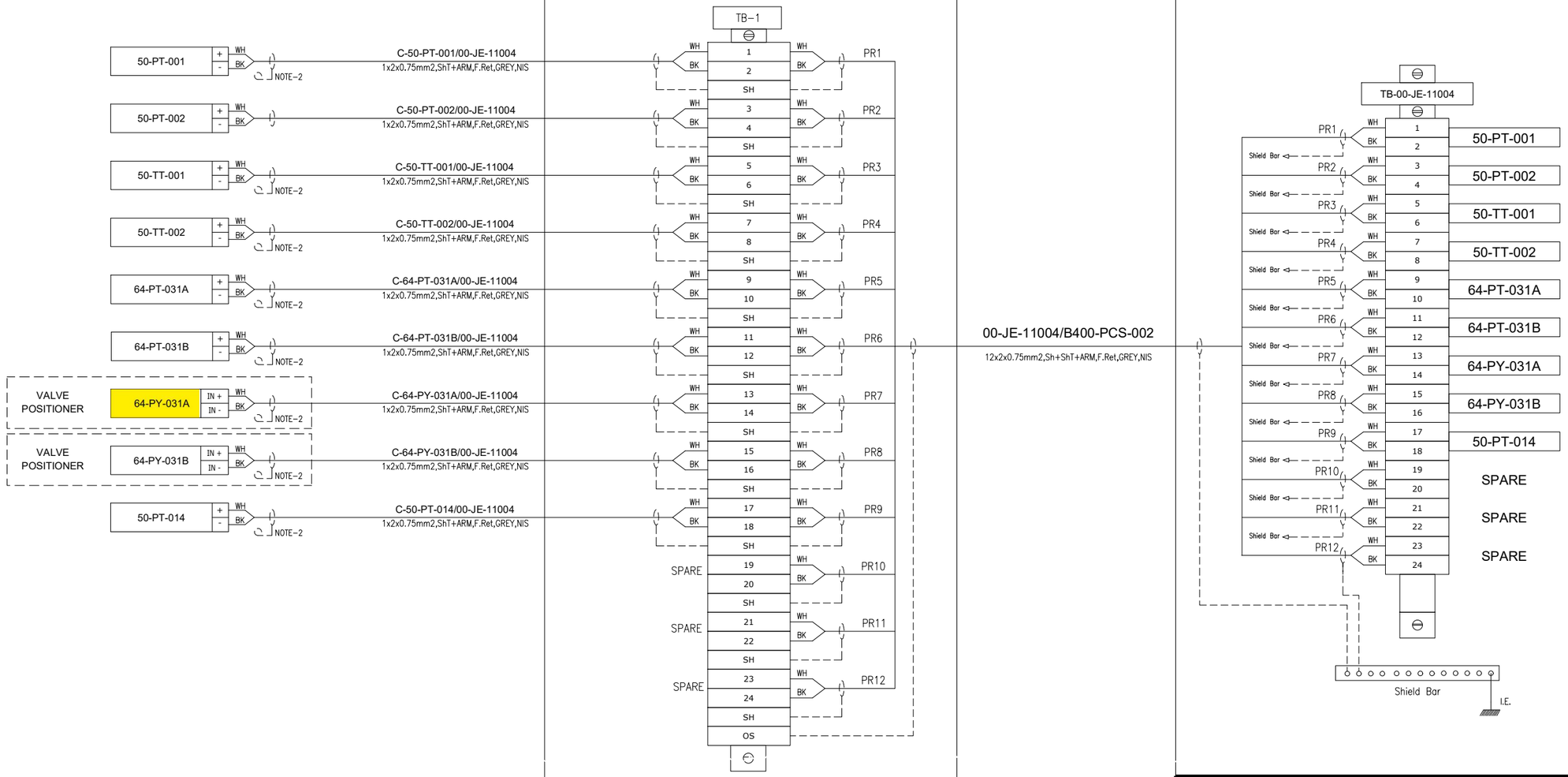
File Name : FILE_NAME

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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

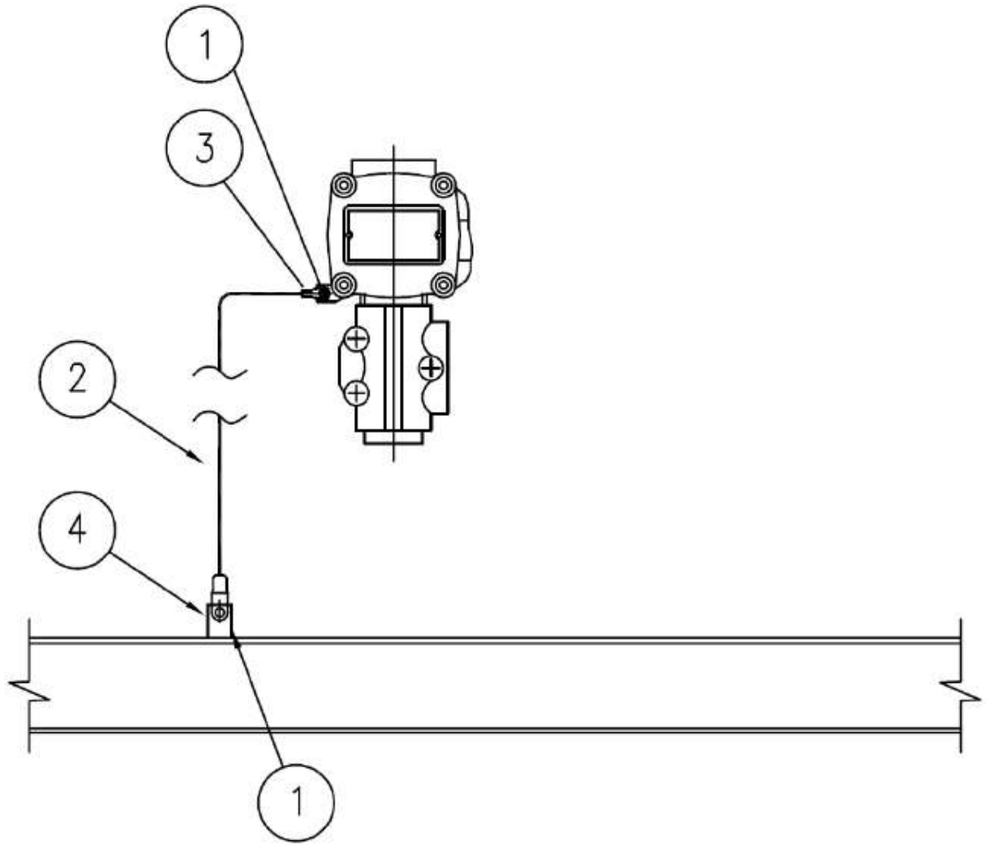
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-11004-SH.1 OF 2

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

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	009	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

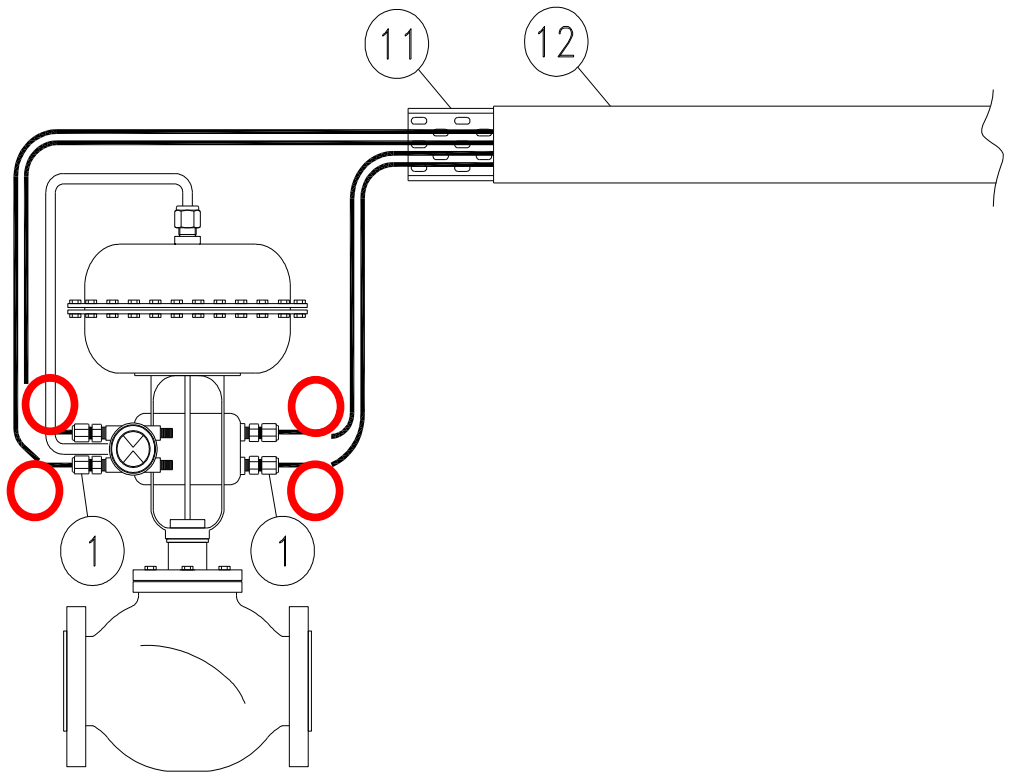
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

ELECTRICAL HOOK-UP FOR CONTROL VALVE (N.1 ELECTROPOS. + N.1 POSITION TRASM.+ 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-036
6	25-FV-038
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
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29	
30	

NOTE:

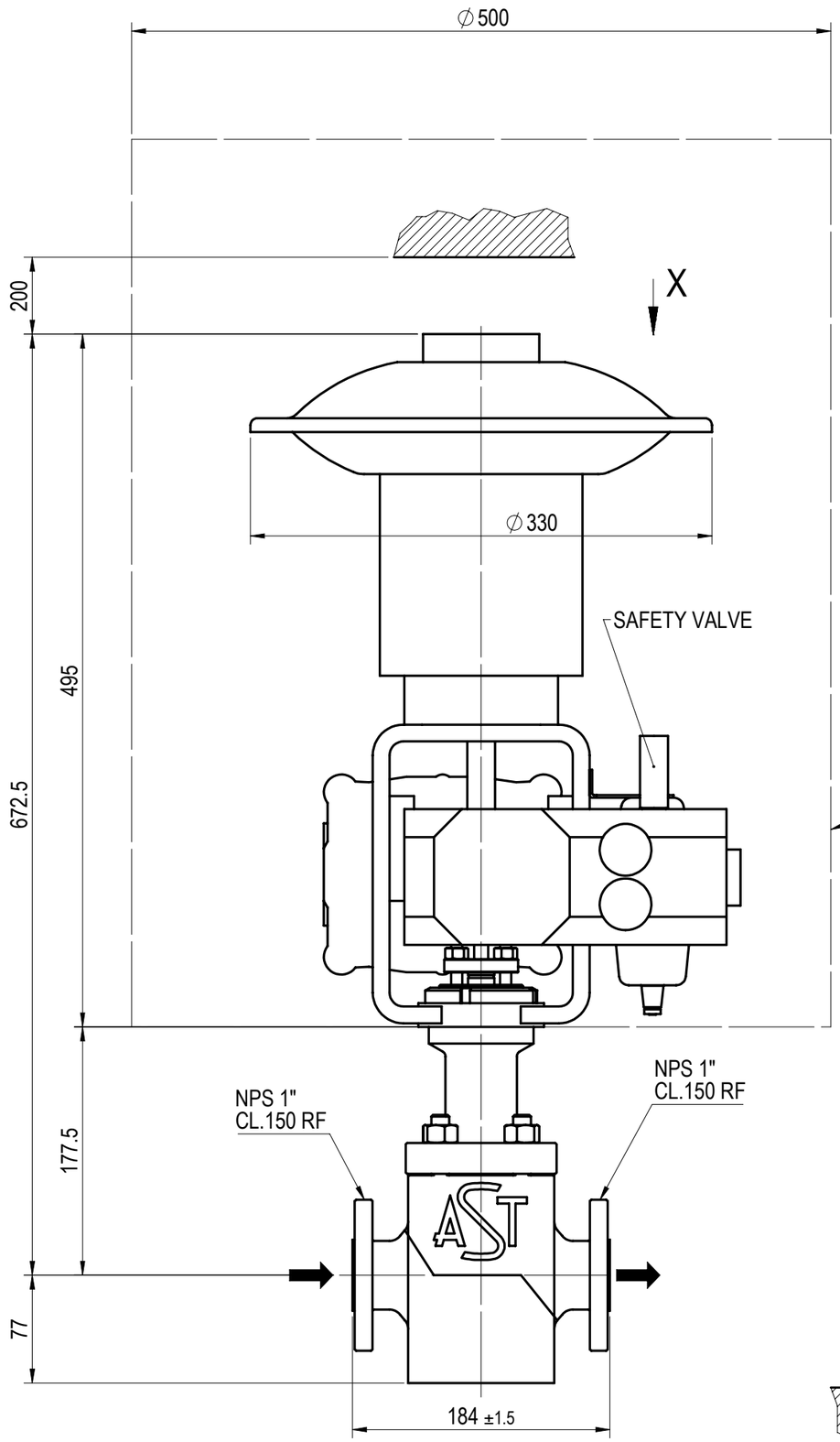
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

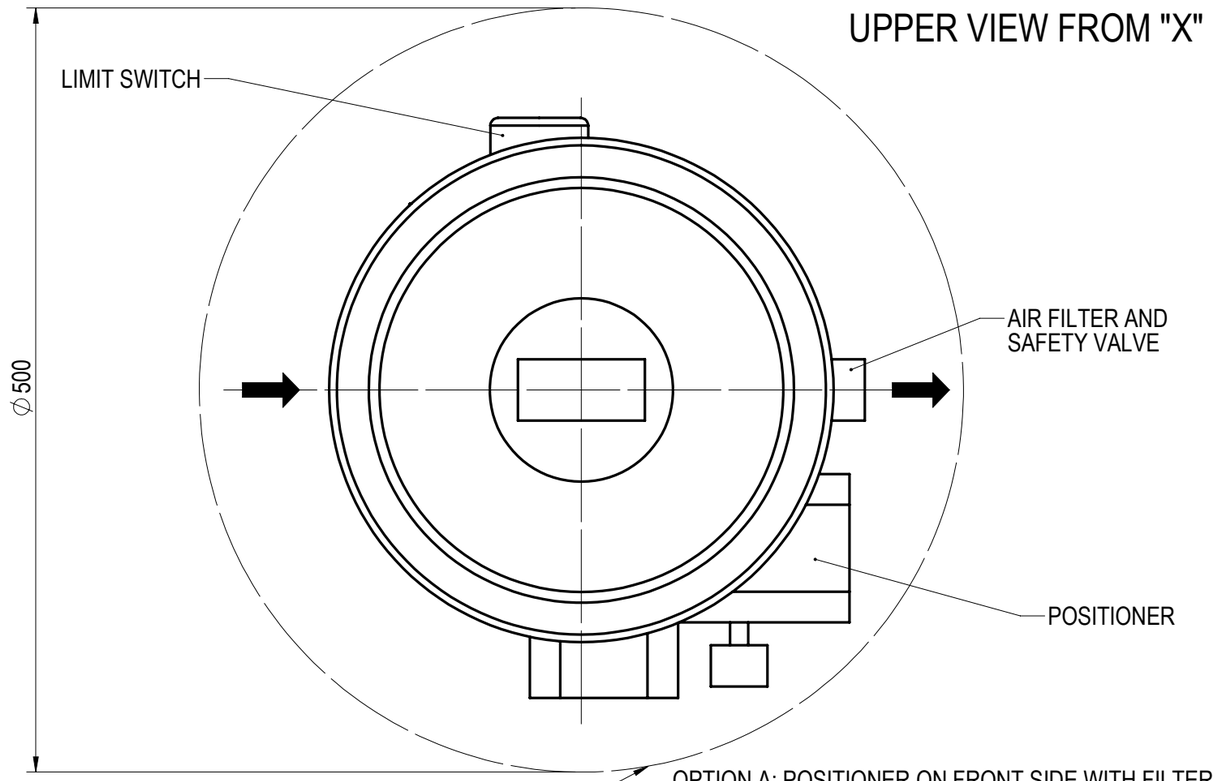
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	4

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MAXIMUM ACCESSORIES
OVERALL DIMENSION

OPTION A: POSITIONER ON FRONT SIDE WITH FILTER ON RIGHT SIDE (AS REPRESENTED)

OPTION B: POSITIONER ON BACK SIDE WITH FILTER ON LEFT SIDE

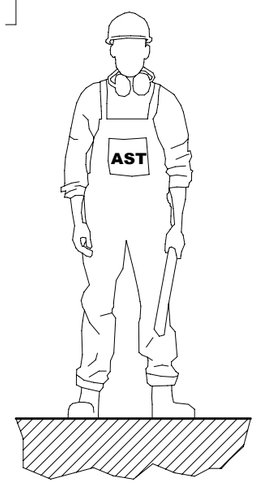
TAG	SN	OPTION
64-PV-031A	2400597	A
64-PV-031B	2400598	B

MASS:
VALVE= ~ 20 kg
ACTUATOR= ~ 28 kg
TOTAL= ~ 48 kg

General tolerances

For main components:
- up to 500mm ± 25
- over 500mm ± 50

For installed equipments / instrument / tubing:
- all dim. ± 100



Cliente / Customer	ROSETTI MARINO S.P.A.
Ordine AST / AST job	CV2400221
Sigle / Tags	64-PV-031A, 64-PV-031B
Matricole / Serials	2400597, 2400598

Revision Description
ADDED ACCESSORIES AS PER CUSTOMER COMMENTS

Drawn	ABD ELSALAM	Checked	PINI	Approval	PEREGO	Date	29-05-24

PROPERTY AND REPRODUCTION ARE SUBJECTED TO THE LAW

Scale | Mass kg | CR 00304 | NOTE:

Description
CV-8407 OVERALL DIMENSION
NPS 1" PORT 3/8" CL. 150 RF

Dwg No
240221-0400OD

Rev. 2 | Sheet 1 of 1

A3 - AST S.p.A. Via R. Merendi, 40 - 20010 Cornaredo (Mi) - Tel.02 934848.1 - Control valve division

GENERAL	1	Tag Number	P&ID Number			64-PV-031A		123A90-DDL-PR-PID-80027	
	2	Service				NITROGEN FROM NITROGEN SYSTEM (U-64000) TO HEADER			
	3	Area Classification	Certification			ATEX ZONE 2		Ex-d IIC (or IIB+H2) T1	
	4	Ambient Temperature:	Min.	Max.		°C		-8.4	+25
	5	Allowable Sound Pressure Level dBA				Max 85 dBA			
	6	Ingress Protection	Power Failure Position			IP-66		-	CLOSE
	7	Air Supply Pressure:	Min.	Norm.	Max.	barg	4	9	10
PIPELINE	8	Line Number	Pipe Insulation			1"-N-158-01CS-N			NOT INSULATED (PAINTED)
	9	Line Size and Schedule	Inlet	Outlet		1" / 4.55 mm		1" / 4.55 mm	
	10	Line Spec	Line Material			01CS		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITION	11	Process Fluid	Fluid Phase			NITROGEN		GAS	
	12	Upstream Condition							
	13	Des. Press. / Full Vac.	Des. Temperature Min / Max			10 barg		100 °C	
	14	Critical Pressure	Critical Temperature						
	15	Differential Pressure - Maximum Shut Off				10 bar			
	16					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	17	Flow Rate (Gas)				Nm^3/h	60	10	7
	18	Flow Rate (Liquid)							
	19	Inlet Pressure				barg	8	8	8
	20	Pressure Drop				bar	0.5	1	1
	21	Inlet Temperature				°C	15	15	15
	22	Inlet Density / Specific Gravity				kg/m^3	10.6	10.6	10.6
	23	Inlet Compressibility Factor				-	0.99	0.99	0.99
	24	Inlet Viscosity				cP	0.017	0.017	0.017
	25	Inlet Specific Heats Ratio (Cp/Cv)				-	1.4	1.4	1.4
	26	Inlet Vapour Pressure							
	27	Molecular Weight				-	28	28	28
CALCULATED RESULTS	28	Flow Coefficient Cv					1.22	0.1474	0.1032
	29	Travel				33.9%			
	30	Sound Pressure Level				<75 dBA (20)			
BODY AND TRIM	31	MFR	Model			AST		CV-8407	
	32	Body Type				GLOBE VALVE (HS01A02RF)			
	33	Body Size	Trim Size			1"		3/8"	
	34	Rated Cv	Characteristics.			1.9		(11) Equal%	
	35	End Connec. & Rating				FLANGED ASME B16.5 / #150			
	36	Body Material				ASTM A350 LF2			
	37	Bonnet Type	Material			Bolted (21)		ASTM A350 LF2	
	38	Bolting				A193 B8M Cl. 2 / A194 8M			
	39	Packing Material				PTFE			
	40	Flow Action To				OPEN			
	41	Lubricator	Isolat. Valve			-		By Contractor	
	42	Guiding	No. of Ports			Top Guided		1	
	43	Trim Type				Contoured Plug (12, 13)			
	44	Rated Travel				13mm			
	45	Plug/ Ball/ Disk Material				A479 316L+CoCr-A (12)			
	46	Seat Material				A479 316L+CoCr-A (12)			
	47	Cage	Stem Material			-		A479 316L	
	48	Gasket Material				By Contractor (in line)			
	49	Flange Finish				RF			

						INSTRUMENT DATASHEET	CROSSWIND	
						Control Valve (Sheet 1 of 2)	ROSETTI MARINO	
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO		Sheet 34 of 37	
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			
No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No 123A90-DDL-IN-DS-40036	Rev. 01

ACTUATOR	50	MFR	Model	AST	SD11R
	51	Type		PNUEMATIC / DIAPHRAGM (*)	
	52	Size	Area	SD11R	(*)
	53	Handwheel		NOT REQUIRED	
	54	Bench Range		15-30 psi	
	55	Volume Tank		NOT REQUIRED	
TESTS	56	Hydro. Pressure		REQUIRED	
	57	Leakage		REQUIRED (37)	
	58				
POSITIONER	59	MFR	Model	TISSIN	TS900 (15, 16)
	60	Signal: Inlet	Outlet	4-20 mA	3 to 15 psi
	61	Increase Signal Valve:		OPEN VALE	
	62	Cam Characteristic		(*)	
	63	Bypass	Gauges	NOT REQ.	YES
	64	Signal Transmission		REQUIRED VALVE POSITION 4-20 mA to PCS (22) (25-ZT-025A)	
COMM. & SOFTWARE	65	Comm Type	Signal Type	-	-
	66	D D Rev.	CFF Rev.	-	-
	67	Device Tag	Hart Tag	-	-
	68	Diagnostics	Capac	-	-
	69	Segment	Device Addr.	-	-
	70	Device Class	Simulate	-	-
	71	Nom. Current	Oper Volt	-	-
SOLENOID	72	MFR	Model	-	-
	73	Type		-	
	74	When De-Enegr.Valve:		-	
	75	Schematic Detail		-	
SWITCHES	76	MFR	Model	EISENBAU	GDSN0LIS2MS290
	77	Type	Quantity	Magnetic	2
	78	Contacts / Rating		No. 1 DPDT / 1A	
	79	Switching Position		ON STEAM	
	80				
AIR SET	81	MFR	Model	SITECNA	FR04411S00SSNB2
	82	Set Pressure		Operation Pressure of valve	
	83	Filter	Gauge	YES	YES
ELECT.	84	Connection	Class	No. (*) / M20	-
PURCHASE	85	Manufacturer		AST	
	86	Model		CV-8407	
	87	Purchase Order No.		1724000740	

Notes:

No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No	Rev.
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO			
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			

INSTRUMENT DATASHEET

Control Valve (Sheet 2 of 2)

CROSSWIND

ROSETTI MARINO

Sheet 35 of 37

123A90-DDL-IN-DS-40036 | Rev. 01

ITEM	Tag	64-PY-031B	: Electropositioner - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10002028		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental Form CJX00		Miscellaneous

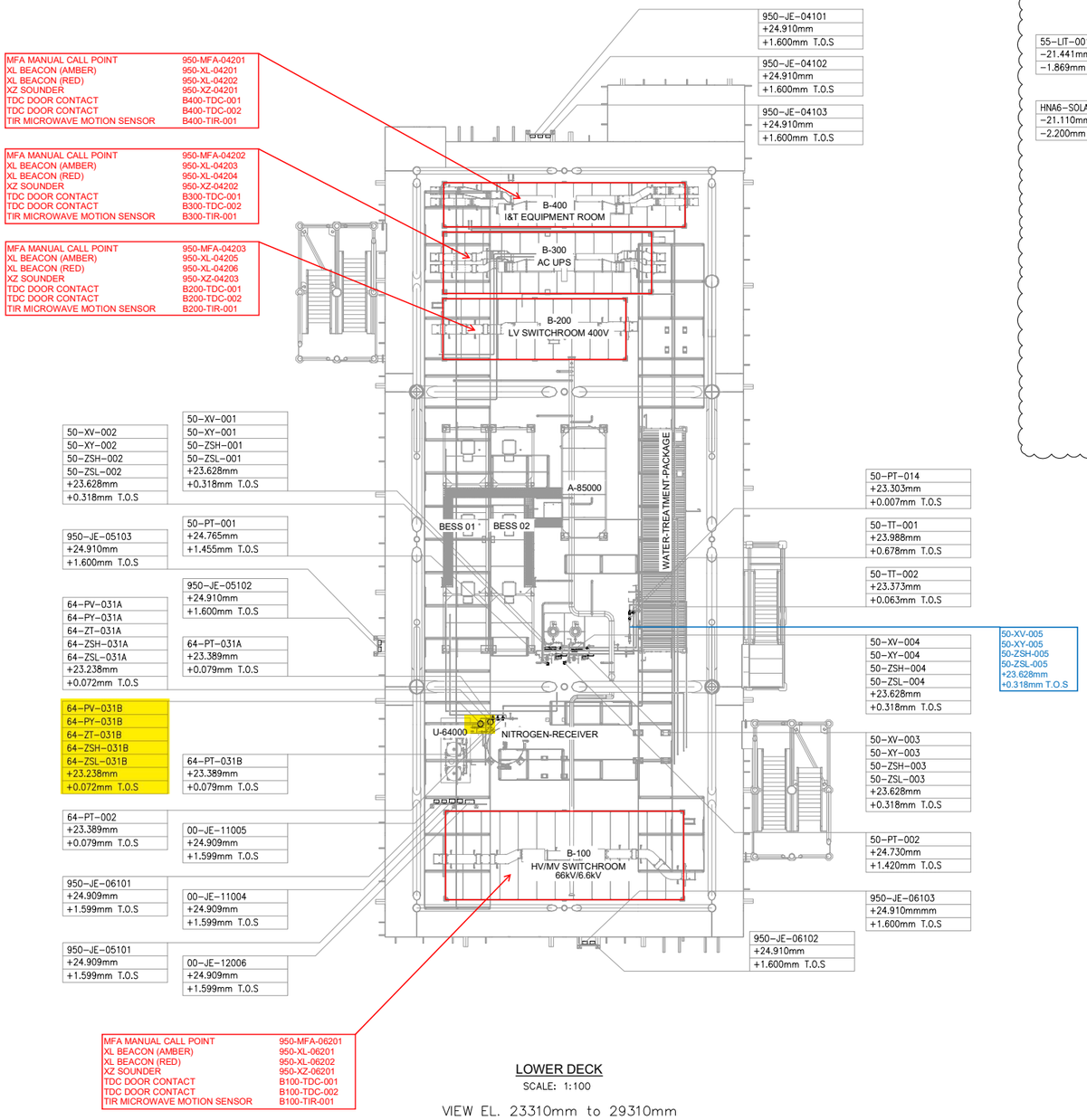
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	OK
5	Check that piping connections provide the block & bleed facility (if required).	OK
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
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:

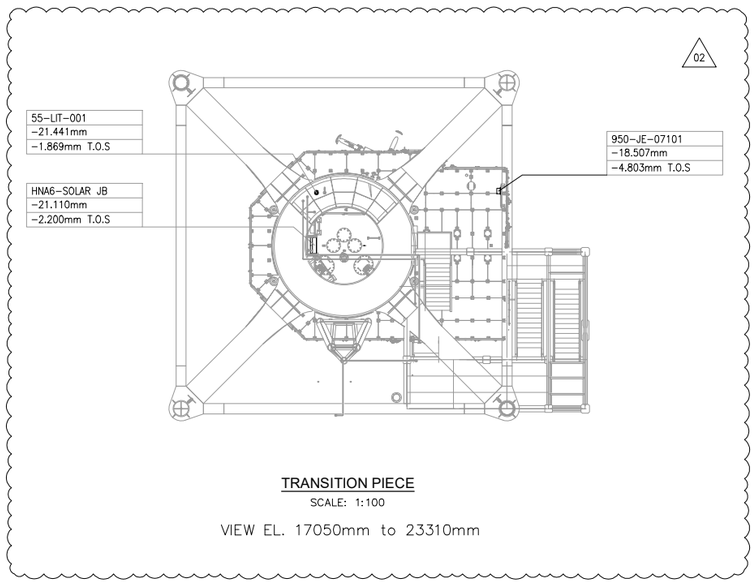
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-25	2025-01-27	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-25T13:59:07.236Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-27T17:15:23.482Z	

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

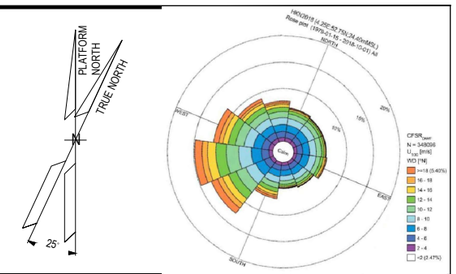
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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

03 → **V-63001**
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019
63 TP 040 | 2" | 3"x1.1/2"

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

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

63 PI 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | ESD I

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N

03 → 3/4" LC | BLPH-MV-275 NOTE 16 | 03 → 64 TP 044 | 1"-N-262-01CS-N

ESD I → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN ESD I
NOTE 14

NOTE 15: 64 PI 002 L LL | 64 PSV 001 | NOTE 1, 12 SET @ 10 barg 1D2 | NOTE 10 TO ATM | 2"-AV-160-01CS-N

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 | INSTR. PIPING | 3/4" FLG x 1/2" NPTF | BLPH-MV-386 | BLPH-MV-166 | BLPH-MV-167 3/4" FLG x 1/2" NPTF | 1"-N-100-01CS-N

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

FL-DC TYP.6 1" | 64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

1" N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL

64 SDV 001 | IA | 64 SDV 001 | NOTE 13 | NC-FC TYP.2

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-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

03 → 64 TP 046 | **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

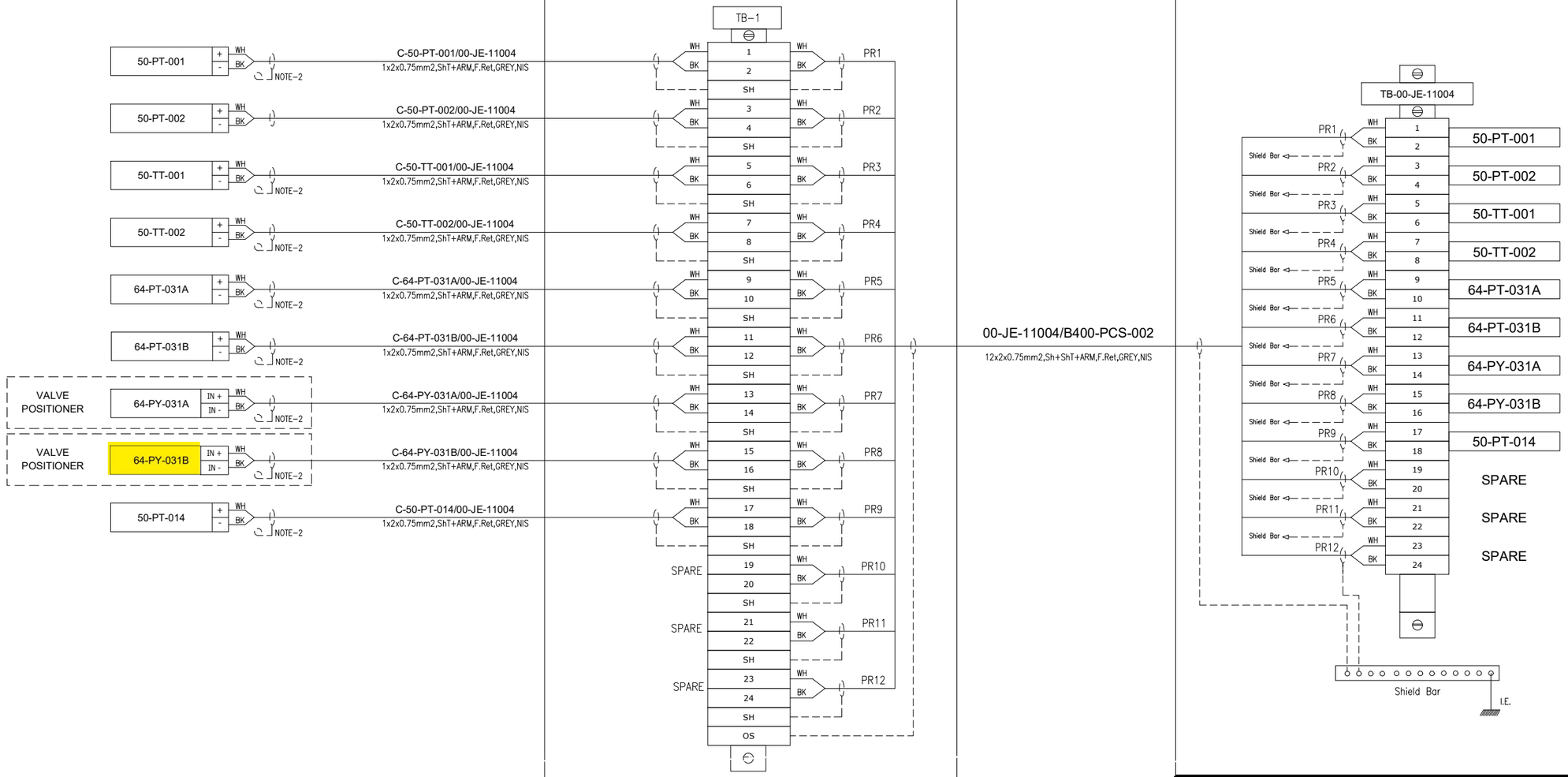
File Name : FILE_NAME

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_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

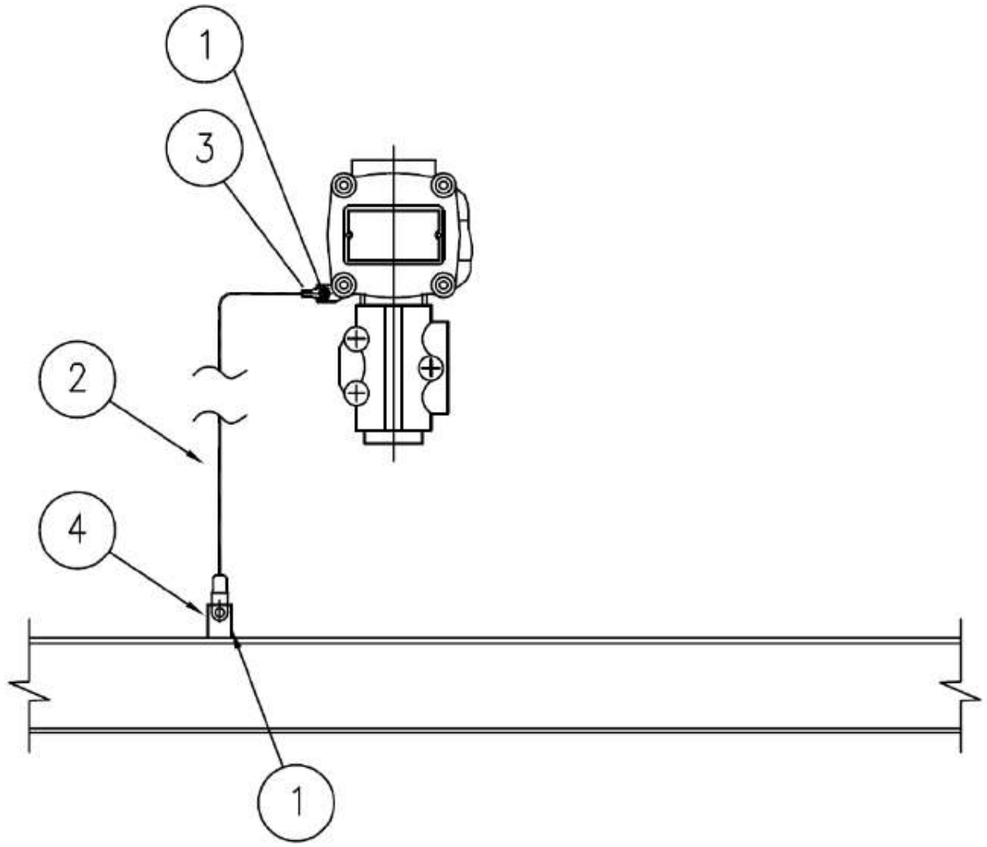
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-11004-SH.1 OF 2

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

A3	DRAWING NO.	SHEET	REV.
	123A90-DDL-IN-DG-40015	009	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

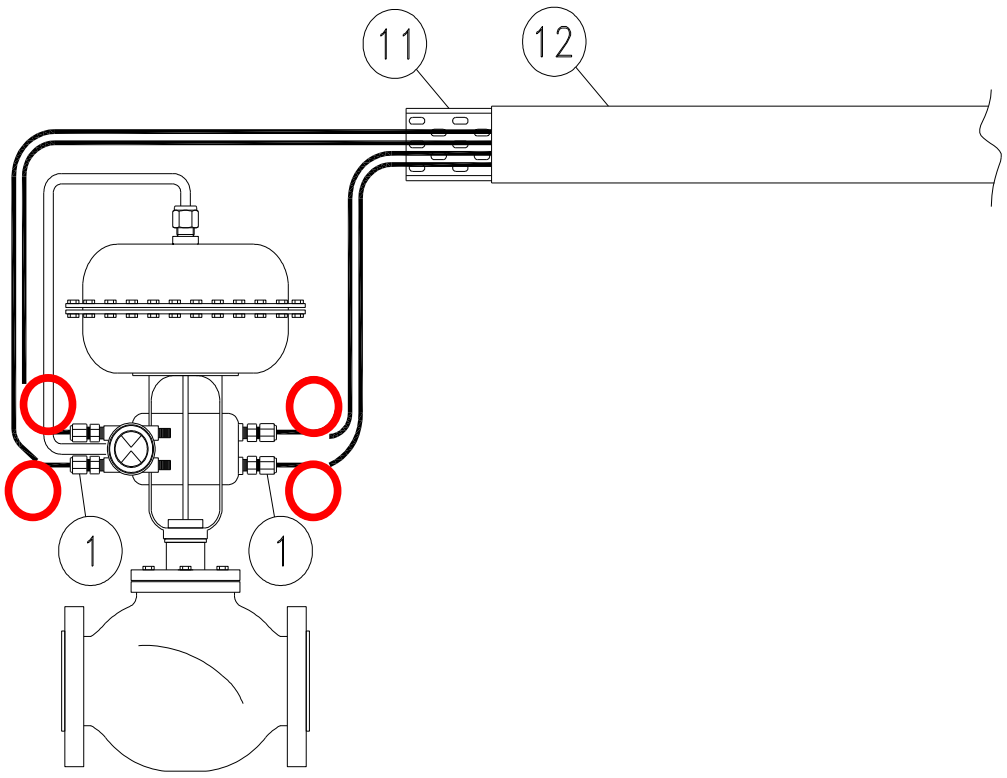
A3 | DRAWING NO. 123A90-DDL-EL-DD-20090 | SHEET 027 | REV. 02

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. 17 of 37 Date: 27/09/2024 Rev. 02

ELECTRICAL HOOK-UP FOR CONTROL VALVE (N.1 ELECTROPOS. + N.1 POSITION TRASM.+ 2 LIMIT SWITCH)



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

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

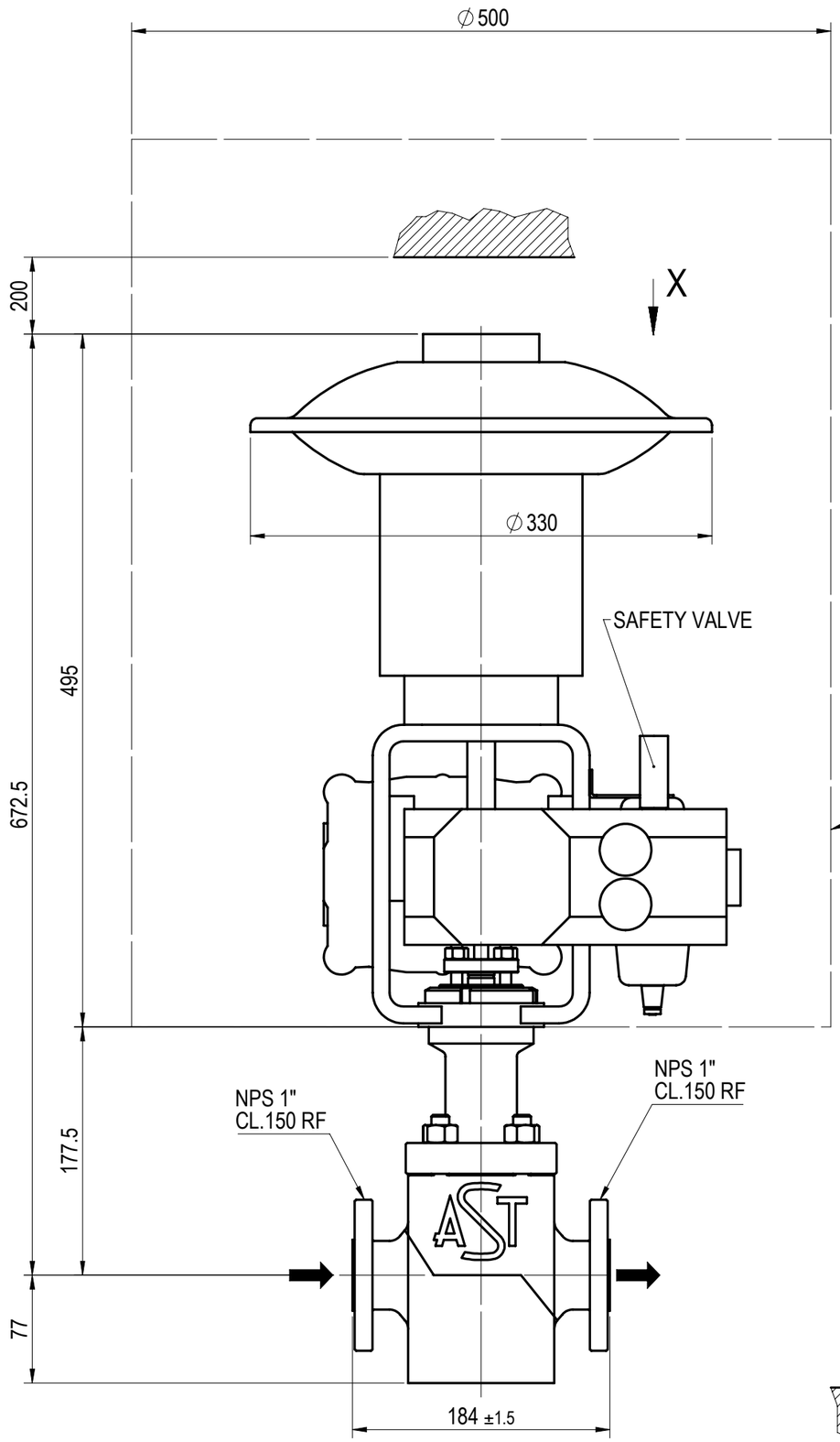
ROSETTI MARINO SpA

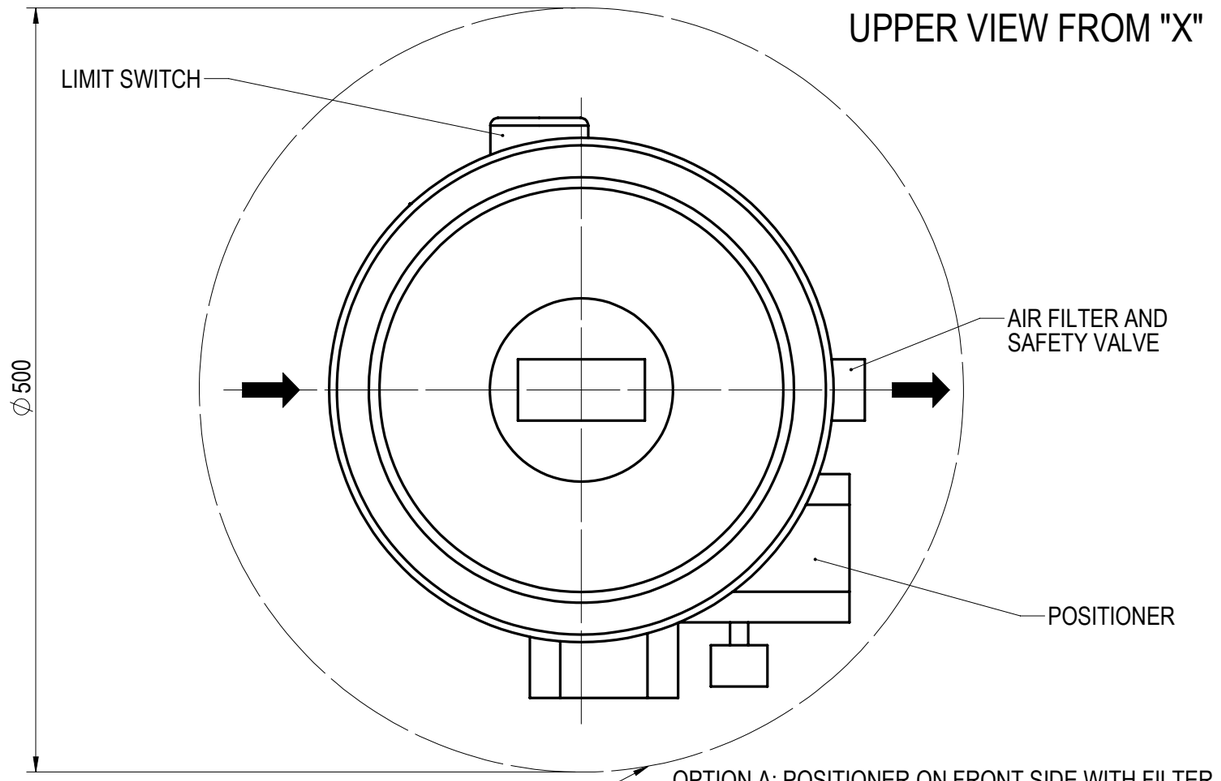
INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-036
6	25-FV-038
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
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NOTE:

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	4

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MAXIMUM ACCESSORIES
OVERALL DIMENSION

OPTION A: POSITIONER ON FRONT SIDE WITH FILTER ON RIGHT SIDE (AS REPRESENTED)

OPTION B: POSITIONER ON BACK SIDE WITH FILTER ON LEFT SIDE

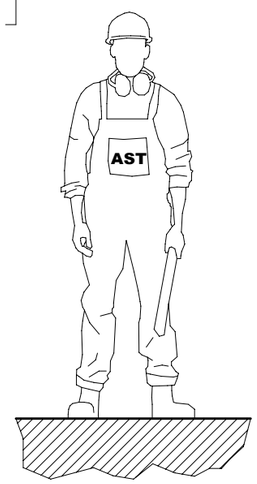
TAG	SN	OPTION
64-PV-031A	2400597	A
64-PV-031B	2400598	B

MASS:
VALVE= ~ 20 kg
ACTUATOR= ~ 28 kg
TOTAL= ~ 48 kg

General tolerances

For main components:
- up to 500mm ± 25
- over 500mm ± 50

For installed equipments / instrument / tubing:
- all dim. ± 100



Cliente / Customer	ROSETTI MARINO S.P.A.
Ordine AST / AST job	CV2400221
Sigle / Tags	64-PV-031A, 64-PV-031B
Matricole / Serials	2400597, 2400598

Revision Description
ADDED ACCESSORIES AS PER CUSTOMER COMMENTS

Drawn	ABD ELSALAM	Checked	PINI	Approval	PEREGO	Date	29-05-24

PROPERTY AND REPRODUCTION ARE SUBJECTED TO THE LAW

Scale | Mass kg | CR 00304 | NOTE:

Description
CV-8407 OVERALL DIMENSION
NPS 1" PORT 3/8" CL. 150 RF

Dwg No
240221-0400OD

Rev. 2 | Sheet 1 of 1

A3 - AST S.p.A. Via R. Merendi, 40 - 20010 Cornaredo (Mi) - Tel.02 934848.1 - Control valve division

GENERAL	1	Tag Number	P&ID Number			64-PV-031B		123A90-DDL-PR-PID-80027	
	2	Service				NITROGEN FROM NITROGEN SYSTEM (U-64000) TO HEADER			
	3	Area Classification	Certification			ATEX ZONE 2		Ex-d IIC (or IIB+H2) T1	
	4	Ambient Temperature:	Min.	Max.		°C		-8.4	+25
	5	Allowable Sound Pressure Level dBA				Max 85 dBA			
	6	Ingress Protection	Power Failure Position			IP-66		-	CLOSE
	7	Air Supply Pressure:	Min.	Norm.	Max.	barg	4	9	10
PIPELINE	8	Line Number	Pipe Insulation			1"-N-158-01CS-N			NOT INSULATED (PAINTED)
	9	Line Size and Schedule	Inlet	Outlet		1" / 4.55 mm		1" / 4.55 mm	
	10	Line Spec	Line Material			01CS		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITION	11	Process Fluid	Fluid Phase			NITROGEN		GAS	
	12	Upstream Condition							
	13	Des. Press. / Full Vac.	Des. Temperature Min / Max			10 barg		100 °C	
	14	Critical Pressure	Critical Temperature						
	15	Differential Pressure - Maximum Shut Off				10 bar			
	16					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	17	Flow Rate (Gas)				Nm^3/h	60	10	7
	18	Flow Rate (Liquid)							
	19	Inlet Pressure				barg	8	8	8
	20	Pressure Drop				bar	0.5	1	1
	21	Inlet Temperature				°C	15	15	15
	22	Inlet Density / Specific Gravity				kg/m^3	10.6	10.6	10.6
	23	Inlet Compressibility Factor				-	0.99	0.99	0.99
	24	Inlet Viscosity				cP	0.017	0.017	0.017
	25	Inlet Specific Heats Ratio (Cp/Cv)				-	1.4	1.4	1.4
	26	Inlet Vapour Pressure							
	27	Molecular Weight				-	28	28	28
CALCULATED RESULTS	28	Flow Coefficient Cv					1.22	0.1474	0.1032
	29	Travel				33.9%			
	30	Sound Pressure Level				<75 dBA (20)			
BODY AND TRIM	31	MFR	Model			AST		CV-8407	
	32	Body Type				GLOBE VALVE (HS01A02RF)			
	33	Body Size	Trim Size			1"		3/8"	
	34	Rated Cv	Characteristics.			1.9		(11) Equal%	
	35	End Connec. & Rating				FLANGED ASME B16.5 / #150			
	36	Body Material				ASTM A350 LF2			
	37	Bonnet Type	Material			Bolted (21)		ASTM A350 LF2	
	38	Bolting				A193 B8M Cl. 2 / A194 8M			
	39	Packing Material				PTFE			
	40	Flow Action To				OPEN			
	41	Lubricator	Isolat. Valve			-		By Contractor	
	42	Guiding	No. of Ports			Top Guided		1	
	43	Trim Type				Contoured Plug (12, 13)			
	44	Rated Travel				13mm			
	45	Plug/ Ball/ Disk Material				A479 316L+CoCr-A (12)			
	46	Seat Material				A479 316L+CoCr-A (12)			
	47	Cage	Stem Material			-		A479 316L	
	48	Gasket Material				By Contractor (in line)			
	49	Flange Finish				RF			

						INSTRUMENT DATASHEET	CROSSWIND	
						Control Valve (Sheet 1 of 2)	ROSETTI MARINO	
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO		Sheet 36 of 37	
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			
No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No 123A90-DDL-IN-DS-40036	Rev. 01

ACTUATOR	50	MFR	Model	AST	SD11R
	51	Type		PNUEMATIC / DIAPHRAGM (*)	
	52	Size	Area	SD11R	(*)
	53	Handwheel		NOT REQUIRED	
	54	Bench Range		15-30 psi	
	55	Volume Tank		NOT REQUIRED	
TESTS	56	Hydro. Pressure		REQUIRED	
	57	Leakage		REQUIRED (37)	
	58				
POSITIONER	59	MFR	Model	TISSIN	TS900 (15, 16)
	60	Signal: Inlet	Outlet	4-20 mA	3 to 15 psi
	61	Increase Signal Valve:		OPEN VALE	
	62	Cam Characteristic		(*)	
	63	Bypass	Gauges	NOT REQ.	YES
	64	Signal Transmission		REQUIRED VALVE POSITION 4-20 mA to PCS (22) (25-ZT-025A)	
COMM. & SOFTWARE	65	Comm Type	Signal Type	-	-
	66	D D Rev.	CFF Rev.	-	-
	67	Device Tag	Hart Tag	-	-
	68	Diagnostics	Capac	-	-
	69	Segment	Device Addr.	-	-
	70	Device Class	Simulate	-	-
	71	Nom. Current	Oper Volt	-	-
SOLENOID	72	MFR	Model	-	-
	73	Type		-	
	74	When De-Enegr.Valve:		-	
	75	Schematic Detail		-	
SWITCHES	76	MFR	Model	EISENBAU	GDSN0LIS2MS290
	77	Type	Quantity	Magnetic	2
	78	Contacts / Rating		No. 1 DPDT / 1A	
	79	Switching Position		ON STEAM	
	80				
AIR SET	81	MFR	Model	SITECNA	FR04411S00SSNB2
	82	Set Pressure		Operation Pressure of valve	
	83	Filter	Gauge	YES	YES
ELECT.	84	Connection	Class	No. (*) / M20	-
PURCHASE	85	Manufacturer		AST	
	86	Model		CV-8407	
	87	Purchase Order No.		1724000740	

Notes:
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 6 Barg.
(2) Hydrogen service - Packing ISO 15848-1

No.	Date	Description	By	Chkd	Appr
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO

INSTRUMENT DATASHEET

Control Valve (Sheet 2 of 2)

CROSSWIND

ROSETTI MARINO

Sheet 37 of 37

Code: | Dwg.No 123A90-DDL-IN-DS-40036 | Rev. 01

ITEM	Tag	64-ZSHL-031A	: Limit Switch - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10002029		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

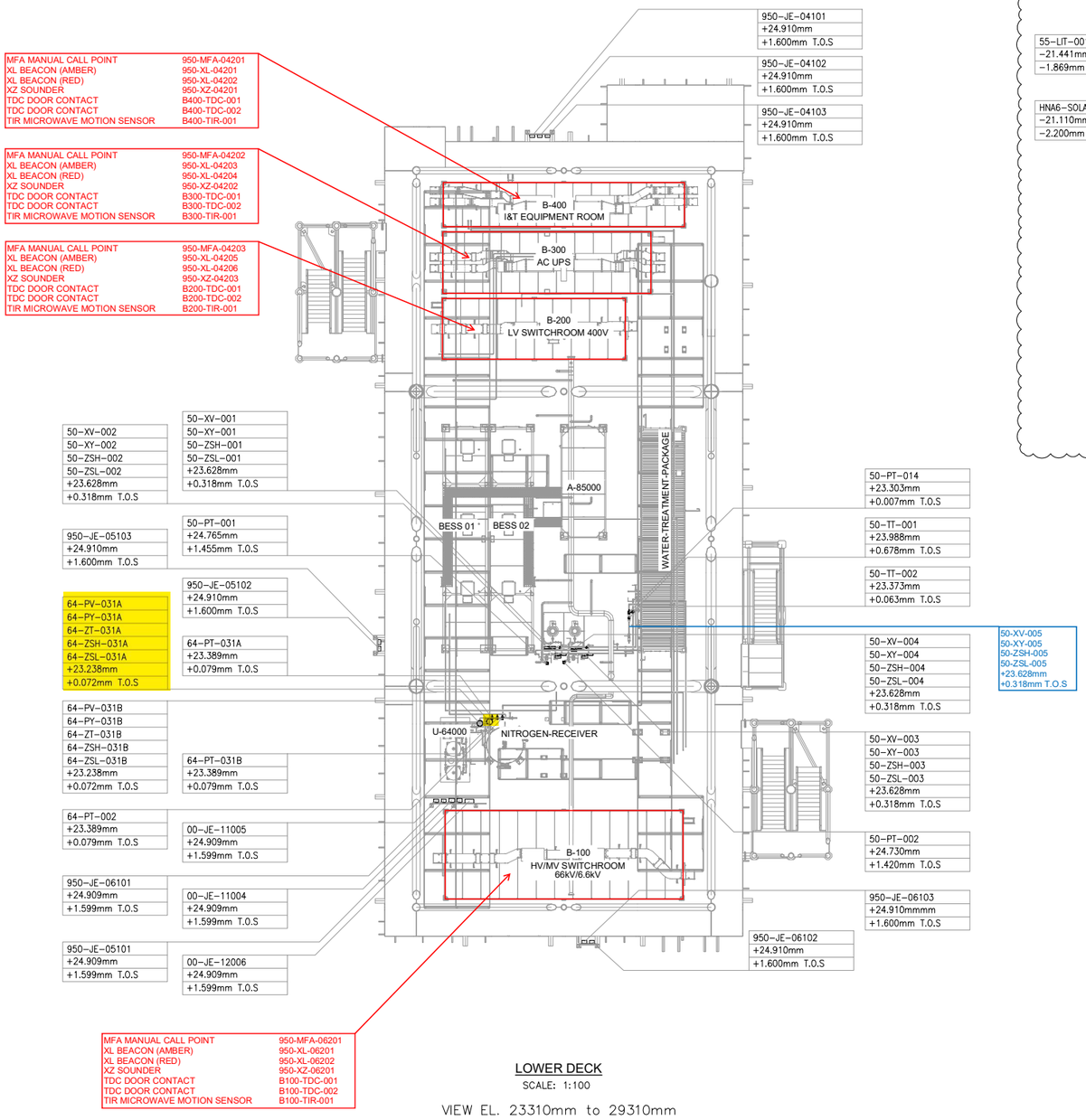
1	Check for mechanical damage.	OK
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
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:

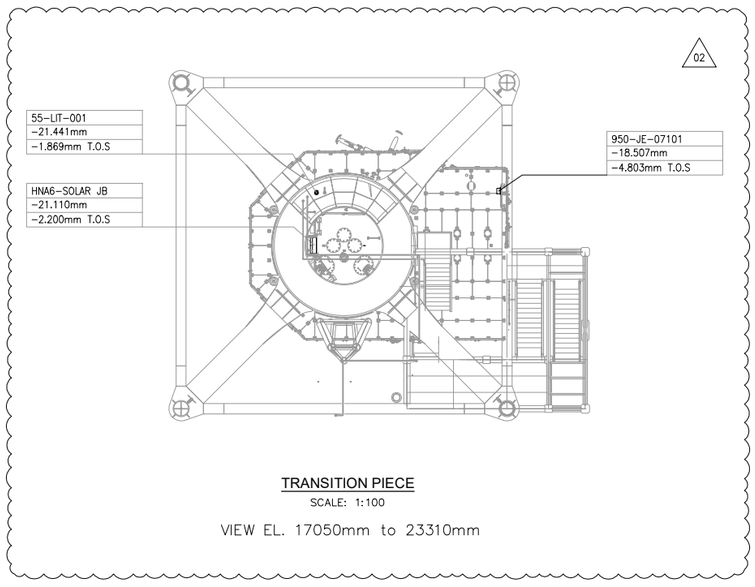
	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-28	2025-01-28	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-28T07:50:58.112Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-28T09:41:39.307Z	

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

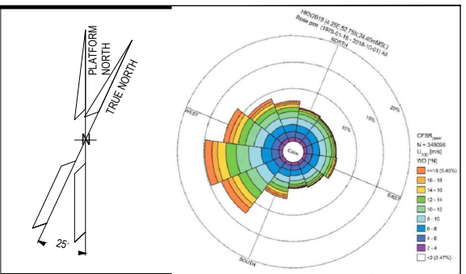
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | I ESD

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N

03 → 3/4" LC — BLPH-MV-275 NOTE 16 — 03 → 64 TP 044 — 1"-N-262-01CS-N

I ESD → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN I ESD
NOTE 14

NOTE 15: 64 PI 002 L LL | I ESD

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

NOTE 1, 12 SET @ 10 barg 1D2 — 64 PSV 001 — NOTE 10 TO ATM — 2"-AV-160-01CS-N

INSTR. PIPING | 64 PV 031A | FL-DC TYP.6 1" | 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 | 1"-N-100-01CS-N

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

64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

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-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

1" N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDV 001 S — IA
64 SDV 001 — NOTE 13 — NC-FC TYP.2
01CS | 03HSS

03 → 64 TP 046 — **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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 03 64-PV-031 CV FAILURE.
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

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>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2 WH, 3 BK) NOTE-2

64-ZSH-031A (5 WH, 6 BK) NOTE-2

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2 WH, 3 BK) NOTE-2

64-ZSH-031B (5 WH, 6 BK) NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

	25	PR1
	26	
	SH	
	27	PR2
	28	
	SH	
	29	PR3
	30	
	SH	
	31	PR4
	32	
	SH	
SPARE	33	PR5
	34	
	SH	
SPARE	35	PR6
	36	
	SH	
SPARE	37	PR7
	38	
	SH	
SPARE	39	PR8
	40	
	SH	
SPARE	41	PR9
	42	
	SH	
SPARE	43	PR10
	44	
	SH	
SPARE	45	PR11
	46	
	SH	
SPARE	47	PR12
	48	
	SH	
	OS	

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1	25	64-ZSL-031A
	26	
PR2	27	64-ZSH-031A
	28	
PR3	29	64-ZSL-031B
	30	
PR4	31	64-ZSH-031B
	32	
PR5	33	SPARE
	34	
PR6	35	SPARE
	36	
PR7	37	SPARE
	38	
PR8	39	SPARE
	40	
PR9	41	SPARE
	42	
PR10	43	SPARE
	44	
PR11	45	SPARE
	46	
PR12	47	SPARE
	48	

Shield Bar

I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

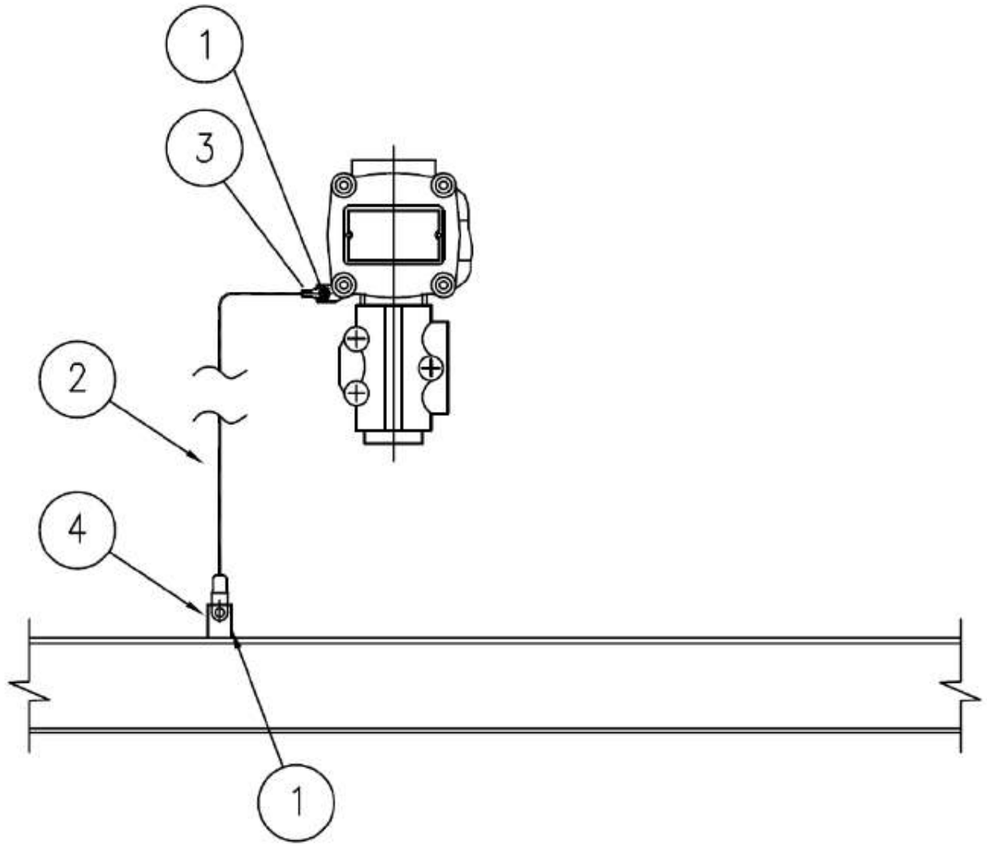
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-12006-SH.2 OF 2

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 023	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

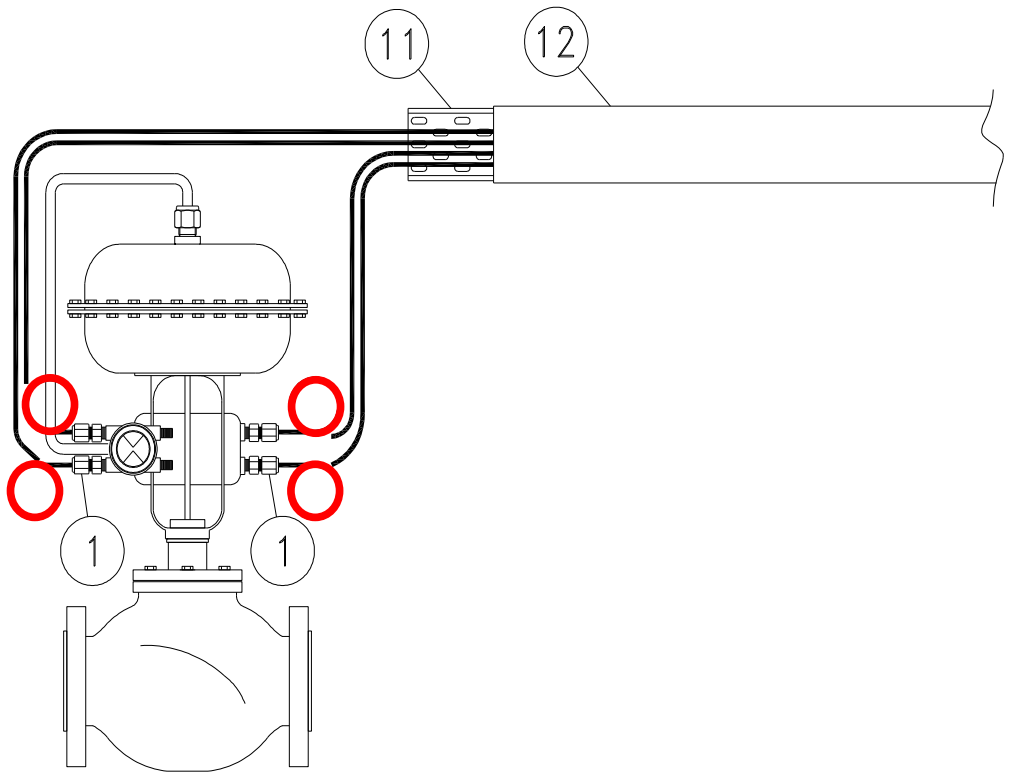
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

ELECTRICAL HOOK-UP FOR CONTROL VALVE (N.1 ELECTROPOS. + N.1 POSITION TRASM.+ 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-036
6	25-FV-038
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
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29	
30	

NOTE:

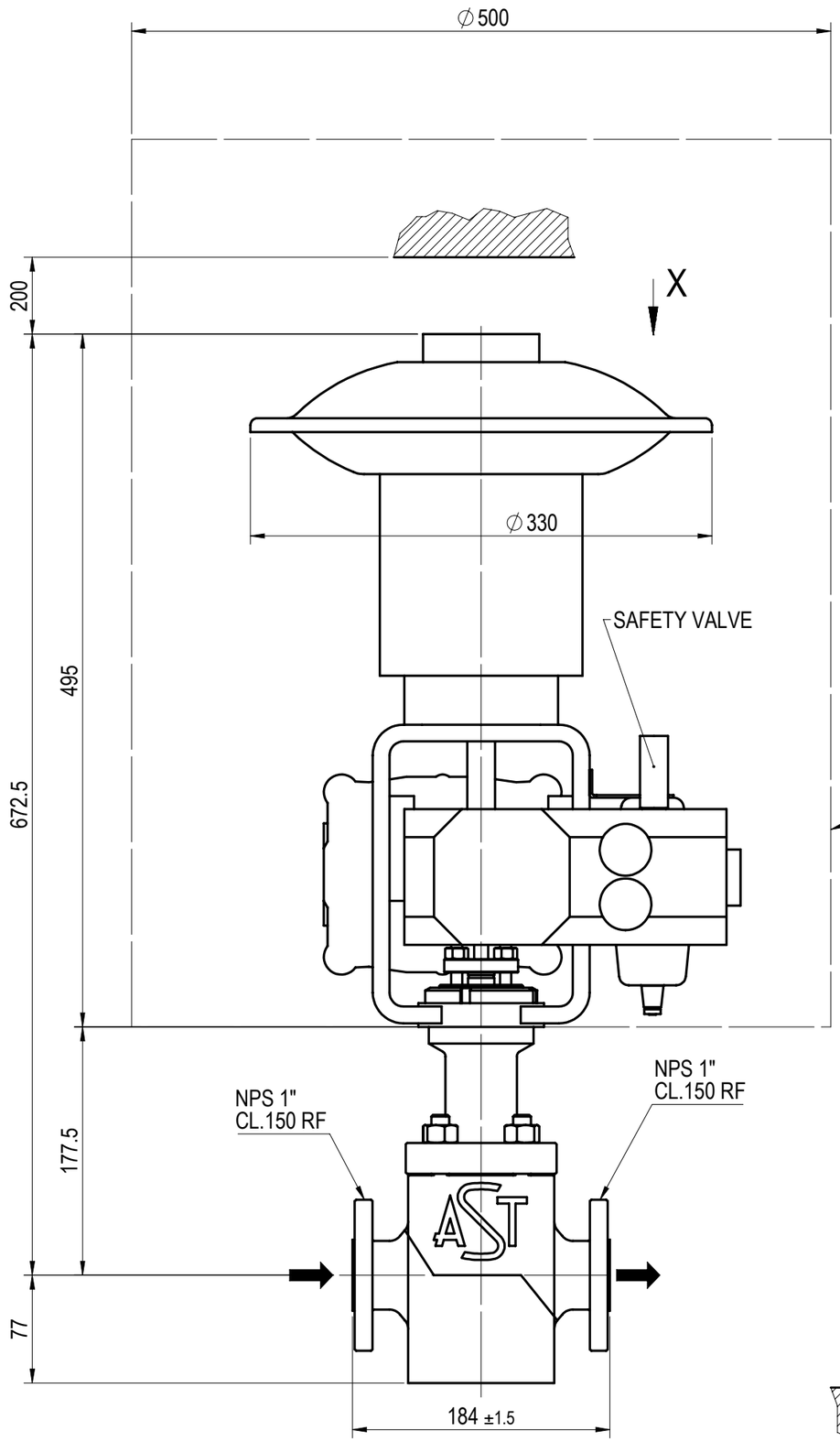
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

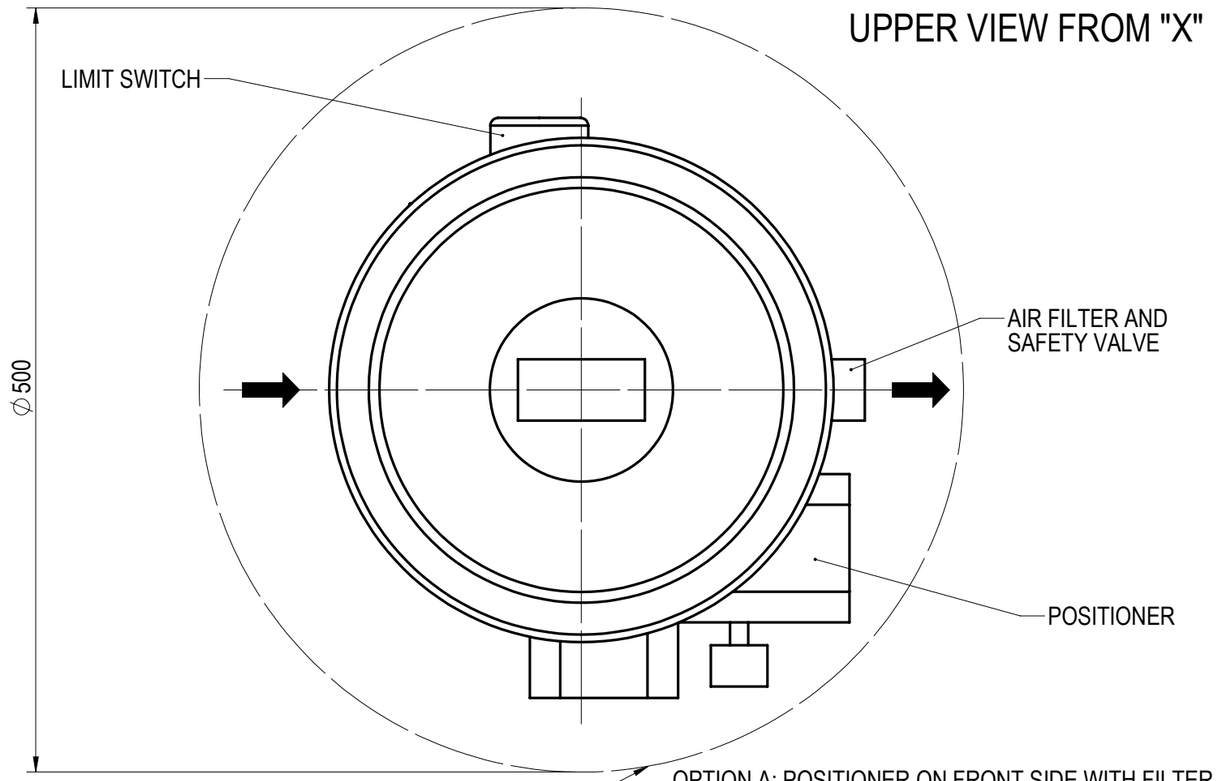
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	4

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MAXIMUM ACCESSORIES
OVERALL DIMENSION

OPTION A: POSITIONER ON FRONT SIDE WITH FILTER ON RIGHT SIDE (AS REPRESENTED)

OPTION B: POSITIONER ON BACK SIDE WITH FILTER ON LEFT SIDE

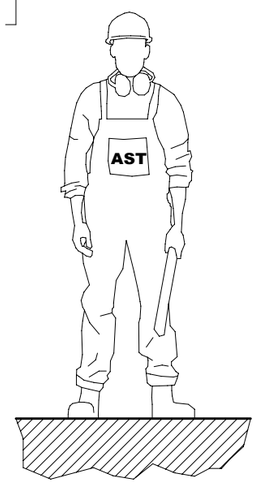
TAG	SN	OPTION
64-PV-031A	2400597	A
64-PV-031B	2400598	B

MASS:
VALVE= ~ 20 kg
ACTUATOR= ~ 28 kg
TOTAL= ~ 48 kg

General tolerances

For main components:
- up to 500mm ± 25
- over 500mm ± 50

For installed equipments / instrument / tubing:
- all dim. ± 100



Cliente / Customer	ROSETTI MARINO S.P.A.
Ordine AST / AST job	CV2400221
Sigle / Tags	64-PV-031A, 64-PV-031B
Matricole / Serials	2400597, 2400598

Revision Description
ADDED ACCESSORIES AS PER CUSTOMER COMMENTS

Drawn	ABD ELSALAM	Checked	PINI	Approval	PEREGO	Date	29-05-24

PROPERTY AND REPRODUCTION ARE SUBJECTED TO THE LAW

Scale | Mass kg | CR 00304 | NOTE:

Description
CV-8407 OVERALL DIMENSION
NPS 1" PORT 3/8" CL. 150 RF

Dwg No
240221-0400OD

Rev. 2 | Sheet 1 of 1

A3 - AST S.p.A. Via R. Merendi, 40 - 20010 Cornaredo (Mi) - Tel.02 934848.1 - Control valve division

GENERAL	1	Tag Number	P&ID Number			64-PV-031A		123A90-DDL-PR-PID-80027	
	2	Service				NITROGEN FROM NITROGEN SYSTEM (U-64000) TO HEADER			
	3	Area Classification	Certification			ATEX ZONE 2		Ex-d IIC (or IIB+H2) T1	
	4	Ambient Temperature:	Min.	Max.		°C		-8.4	+25
	5	Allowable Sound Pressure Level dBA				Max 85 dBA			
	6	Ingress Protection	Power Failure Position			IP-66		-	CLOSE
	7	Air Supply Pressure:	Min.	Norm.	Max.	barg	4	9	10
PIPELINE	8	Line Number	Pipe Insulation			1"-N-158-01CS-N			NOT INSULATED (PAINTED)
	9	Line Size and Schedule	Inlet	Outlet		1" / 4.55 mm		1" / 4.55 mm	
	10	Line Spec	Line Material			01CS		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITION	11	Process Fluid	Fluid Phase			NITROGEN		GAS	
	12	Upstream Condition							
	13	Des. Press. / Full Vac.	Des. Temperature Min / Max			10 barg		100 °C	
	14	Critical Pressure	Critical Temperature						
	15	Differential Pressure - Maximum Shut Off				10 bar			
	16					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	17	Flow Rate (Gas)				Nm^3/h	60	10	7
	18	Flow Rate (Liquid)							
	19	Inlet Pressure				barg	8	8	8
	20	Pressure Drop				bar	0.5	1	1
	21	Inlet Temperature				°C	15	15	15
	22	Inlet Density / Specific Gravity				kg/m^3	10.6	10.6	10.6
	23	Inlet Compressibility Factor				-	0.99	0.99	0.99
	24	Inlet Viscosity				cP	0.017	0.017	0.017
	25	Inlet Specific Heats Ratio (Cp/Cv)				-	1.4	1.4	1.4
	26	Inlet Vapour Pressure							
	27	Molecular Weight				-	28	28	28
CALCULATED RESULTS	28	Flow Coefficient Cv					1.22	0.1474	0.1032
	29	Travel				33.9%			
	30	Sound Pressure Level				<75 dBA (20)			
BODY AND TRIM	31	MFR	Model			AST		CV-8407	
	32	Body Type				GLOBE VALVE (HS01A02RF)			
	33	Body Size	Trim Size			1"		3/8"	
	34	Rated Cv	Characteristics.			1.9		(11) Equal%	
	35	End Connec. & Rating				FLANGED ASME B16.5 / #150			
	36	Body Material				ASTM A350 LF2			
	37	Bonnet Type	Material			Bolted (21)		ASTM A350 LF2	
	38	Bolting				A193 B8M Cl. 2 / A194 8M			
	39	Packing Material				PTFE			
	40	Flow Action To				OPEN			
	41	Lubricator	Isolat. Valve			-		By Contractor	
	42	Guiding	No. of Ports			Top Guided		1	
	43	Trim Type				Contoured Plug (12, 13)			
	44	Rated Travel				13mm			
	45	Plug/ Ball/ Disk Material				A479 316L+CoCr-A (12)			
	46	Seat Material				A479 316L+CoCr-A (12)			
	47	Cage	Stem Material			-		A479 316L	
	48	Gasket Material				By Contractor (in line)			
	49	Flange Finish				RF			

						INSTRUMENT DATASHEET	CROSSWIND	
						Control Valve (Sheet 1 of 2)	ROSETTI MARINO	
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO		Sheet 34 of 37	
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			
No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No 123A90-DDL-IN-DS-40036	Rev. 01

ACTUATOR	50	MFR	Model	AST	SD11R
	51	Type		PNUEMATIC / DIAPHRAGM (*)	
	52	Size	Area	SD11R	(*)
	53	Handwheel		NOT REQUIRED	
	54	Bench Range		15-30 psi	
	55	Volume Tank		NOT REQUIRED	
TESTS	56	Hydro. Pressure		REQUIRED	
	57	Leakage		REQUIRED (37)	
	58				
POSITIONER	59	MFR	Model	TISSIN	TS900 (15, 16)
	60	Signal: Inlet	Outlet	4-20 mA	3 to 15 psi
	61	Increase Signal Valve:		OPEN VALE	
	62	Cam Characteristic		(*)	
	63	Bypass	Gauges	NOT REQ.	YES
	64	Signal Transmission		REQUIRED VALVE POSITION 4-20 mA to PCS (22) (25-ZT-025A)	
COMM. & SOFTWARE	65	Comm Type	Signal Type	-	-
	66	D D Rev.	CFF Rev.	-	-
	67	Device Tag	Hart Tag	-	-
	68	Diagnostics	Capac	-	-
	69	Segment	Device Addr.	-	-
	70	Device Class	Simulate	-	-
	71	Nom. Current	Oper Volt	-	-
SOLENOID	72	MFR	Model	-	-
	73	Type		-	
	74	When De-Enegr.Valve:		-	
	75	Schematic Detail		-	
SWITCHES	76	MFR	Model	EISENBAU	GDSN0LIS2MS290
	77	Type	Quantity	Magnetic	2
	78	Contacts / Rating		No. 1 DPDT / 1A	
	79	Switching Position		ON STEAM	
	80				
AIR SET	81	MFR	Model	SITECNA	FR04411S00SSNB2
	82	Set Pressure		Operation Pressure of valve	
	83	Filter	Gauge	YES	YES
ELECT.	84	Connection	Class	No. (*) / M20	-
PURCHASE	85	Manufacturer		AST	
	86	Model		CV-8407	
	87	Purchase Order No.		1724000740	

Notes:

No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No	Rev.
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO			
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			

INSTRUMENT DATASHEET

Control Valve (Sheet 2 of 2)

CROSSWIND

ROSETTI MARINO

Sheet 35 of 37

123A90-DDL-IN-DS-40036 | Rev. 01

ITEM	Tag	64-ZSHL-031B	: Limit Switch - Nitrogen Pressure Control to Distribution Header			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10002030		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Instrumental	Form	CJX00 Miscellaneous

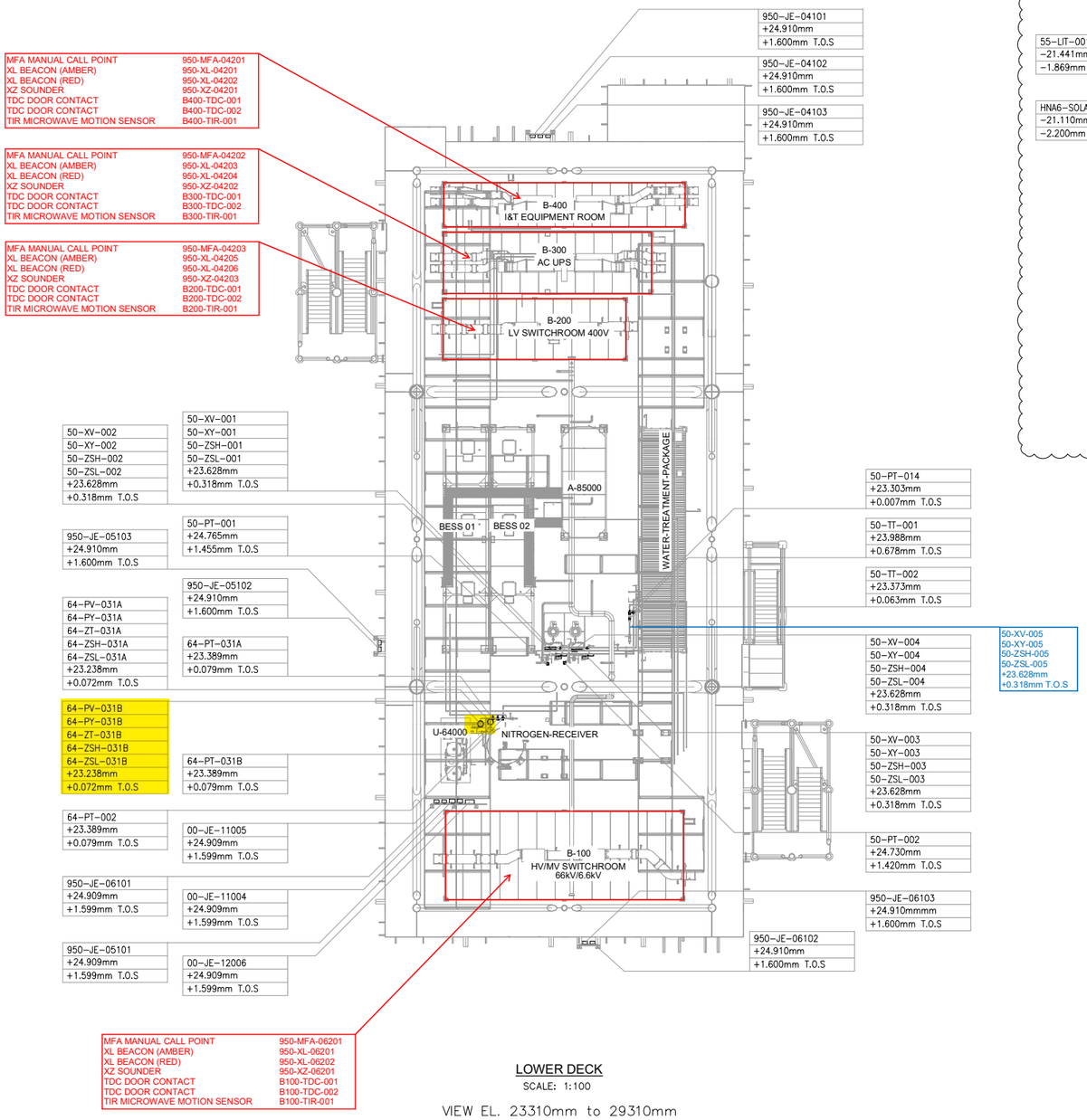
1	Check for mechanical damage.	PL
2	Check installed equipment is suitable and conforms to specification.	OK
3	Check installation conforms to P&ID and hook-up drawing.	OK
4	Check tube fittings manufacturer is the one chosen for the plant.	NA
5	Check that piping connections provide the block & bleed facility (if required).	NA
6	Check that all stop plugs are properly installed	OK
7	Check identification (tag number, tag plates).	OK
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:

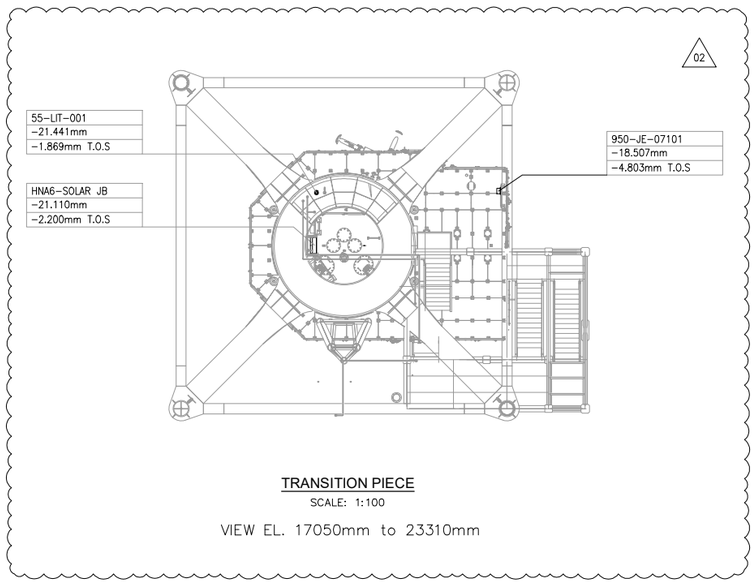
	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	ICS IMPIANTI	RM(ROSETTI MARINO)	
Name	Michele Tartaglia	Alessio Polo	
Date	2025-01-28	2025-01-28	
Signature	PROVERLIS Digitaly signed by Michele Tartaglia 2025-01-28T07:51:09.092Z	PROVERLIS Digitaly signed by Alessio Polo 2025-01-28T09:52:52.306Z	

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

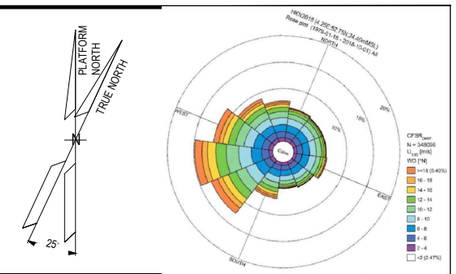
REV. 02



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

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

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

ESD I → FAULT PACKAGE 63 XA 003
ESD I → 63-XS-001 SHUT-DOWN
NOTE 14

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

03 → **V-63001**
AIR RECEIVER
SEE VENDOR DRAWING 1724000428-PR-PID-00019
63 TP 040 | 2" | 3"x1.1/2"

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

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

63 PI 003 L | 63 PT 003 | INSTR. PIPING | BLPH-MV-150 3/4" FLG x 1/2" NPTF | BLPH-MV-151 3/4" FLG x 1/2" NPTF | 63 PT 004 | 63 PI 004 LL | ESD I

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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

03 → 64 TP 042 | BLPH-MV-271 SB LO | 1"-N-158-01CS-N

03 → 3/4" LC | BLPH-MV-275 NOTE 16 | 03 → 64 TP 044 | 1"-N-262-01CS-N

ESD I → FAULT PACKAGE 64 XA 003
64-XS-001 SHUT-DOWN ESD I
NOTE 14

NOTE 15: 64 PI 002 L LL | 64 PSV 001 | NOTE 1, 12 SET @ 10 barg 1D2 | NOTE 10 TO ATM | 2"-AV-160-01CS-N

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 | INSTR. PIPING | 3/4" FLG x 1/2" NPTF | BLPH-MV-386 | BLPH-MV-166 | BLPH-MV-167 3/4" FLG x 1/2" NPTF | 1"-N-100-01CS-N

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

FL-DC TYP.6 1" | 64 PV 031B | FL-DC TYP.6 1" | N-158 | N-100

1" N-257-03HSS-N

UPPER LEVEL
LOWER LEVEL

64 SDV 001 | IA | 64 SDV 001 | NOTE 13 | NC-FC TYP.2

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-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

03 → 64 TP 046 | **V-64001**
NITROGEN RECEIVER
SEE VENDOR DRAWING 1724000437-PR-PID-00018
03

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

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>

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031A (2, 3) WH, BK — NOTE-2

64-ZSH-031A (5, 6) WH, BK — NOTE-2

CONTROL VALVE LIMIT SWITCHES BOX (EISENBAU)

64-ZSL-031B (2, 3) WH, BK — NOTE-2

64-ZSH-031B (5, 6) WH, BK — NOTE-2

C-64-ZSL-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031A/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSL-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

C-64-ZSH-031B/00-JE-12006
1x2x0.75mm2,ShT+ARM,F.Ret,GREY,NIS

TB-2

WH, BK	25	WH, BK	PR1
	26		
	SH		
WH, BK	27	WH, BK	PR2
	28		
	SH		
WH, BK	29	WH, BK	PR3
	30		
	SH		
WH, BK	31	WH, BK	PR4
	32		
	SH		
SPARE	33	WH, BK	PR5
	34		
	SH		
SPARE	35	WH, BK	PR6
	36		
	SH		
SPARE	37	WH, BK	PR7
	38		
	SH		
SPARE	39	WH, BK	PR8
	40		
	SH		
SPARE	41	WH, BK	PR9
	42		
	SH		
SPARE	43	WH, BK	PR10
	44		
	SH		
SPARE	45	WH, BK	PR11
	46		
	SH		
SPARE	47	WH, BK	PR12
	48		
	SH		
	OS		

00-JE-12006_2/B400-PCS-002
12x2x0.75mm2,Sh+ShT+ARM,F.Ret,GREY,NIS

TB-00-JE-12006

PR1 WH, BK	25	64-ZSL-031A
Shield Bar	26	
PR2 WH, BK	27	64-ZSH-031A
Shield Bar	28	
PR3 WH, BK	29	64-ZSL-031B
Shield Bar	30	
PR4 WH, BK	31	64-ZSH-031B
Shield Bar	32	
PR5 WH, BK	33	SPARE
Shield Bar	34	
PR6 WH, BK	35	SPARE
Shield Bar	36	
PR7 WH, BK	37	SPARE
Shield Bar	38	
PR8 WH, BK	39	SPARE
Shield Bar	40	
PR9 WH, BK	41	SPARE
Shield Bar	42	
PR10 WH, BK	43	SPARE
Shield Bar	44	
PR11 WH, BK	45	SPARE
Shield Bar	46	
PR12 WH, BK	47	SPARE
	48	

Shield Bar — I.E.

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

REV.:	DATE:	SIGNATURE:
1_H	24/01/25	G.Randi

ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE :

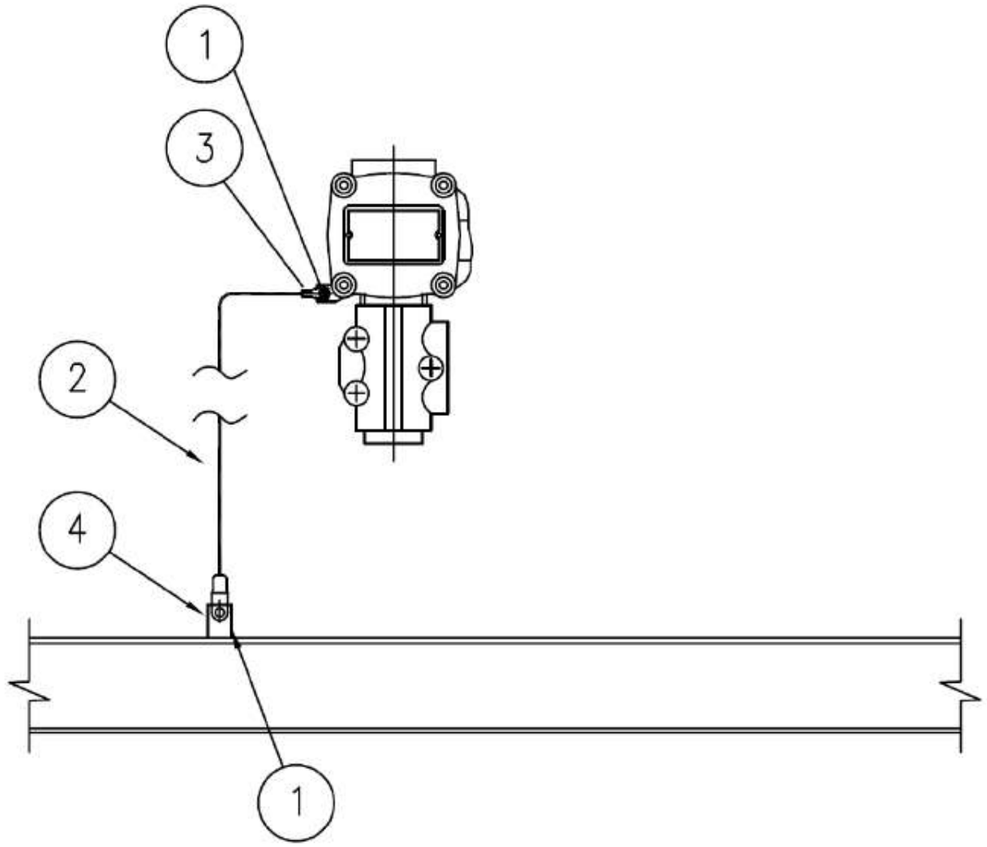
BASE LOAD POWER HUB (BLPH)
INSTRUMENT – PCS WIRING DIAGRAMS
00-JE-12006-SH.2 OF 2

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 023	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

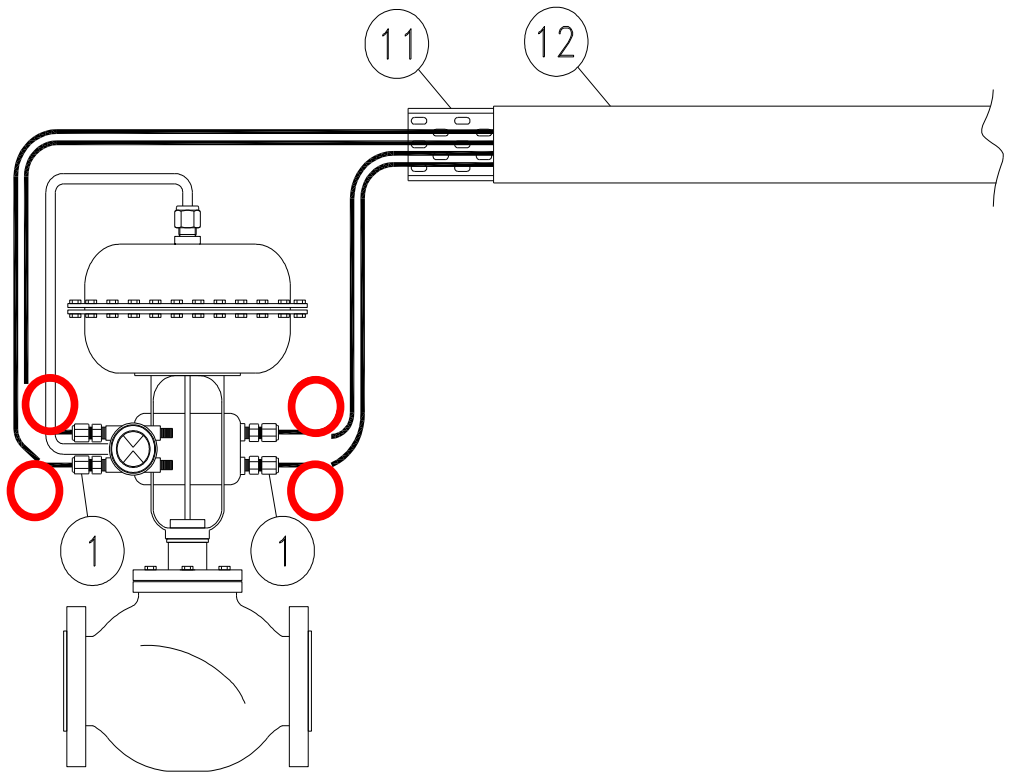
CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK | SCALE : NTS

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

ELECTRICAL HOOK-UP FOR CONTROL VALVE (N.1 ELECTROPOS. + N.1 POSITION TRASM.+ 2 LIMIT SWITCH)



INSTRUMENT TAG	
1	25-FV-031
2	25-FV-032
3	25-FV-033
4	25-FV-034
5	25-FV-036
6	25-FV-038
7	25-PV-035
8	25-PV-037
9	25-PV-040
10	25-PV-043
11	25-PV-046
12	25-PV-049
13	25-PV-055A
14	25-PV-055B
15	64-PV-031A
16	64-PV-031B
17	
18	
19	
20	
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24	
25	
26	
27	
28	
29	
30	

NOTE:

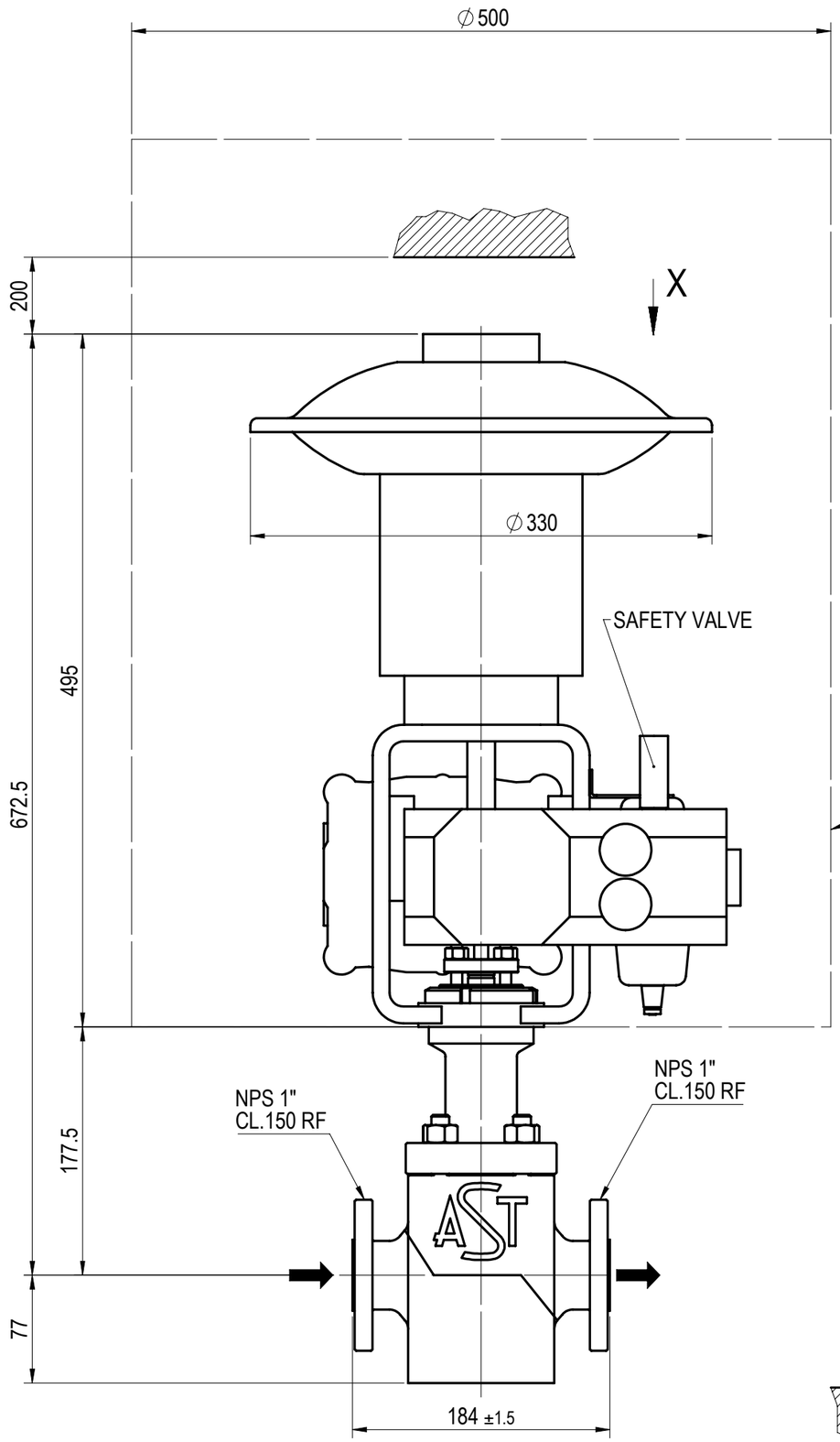
VALID FOR CONSTRUCTION
FDL DWG: **123A90-FDL-IN-HD-40079**

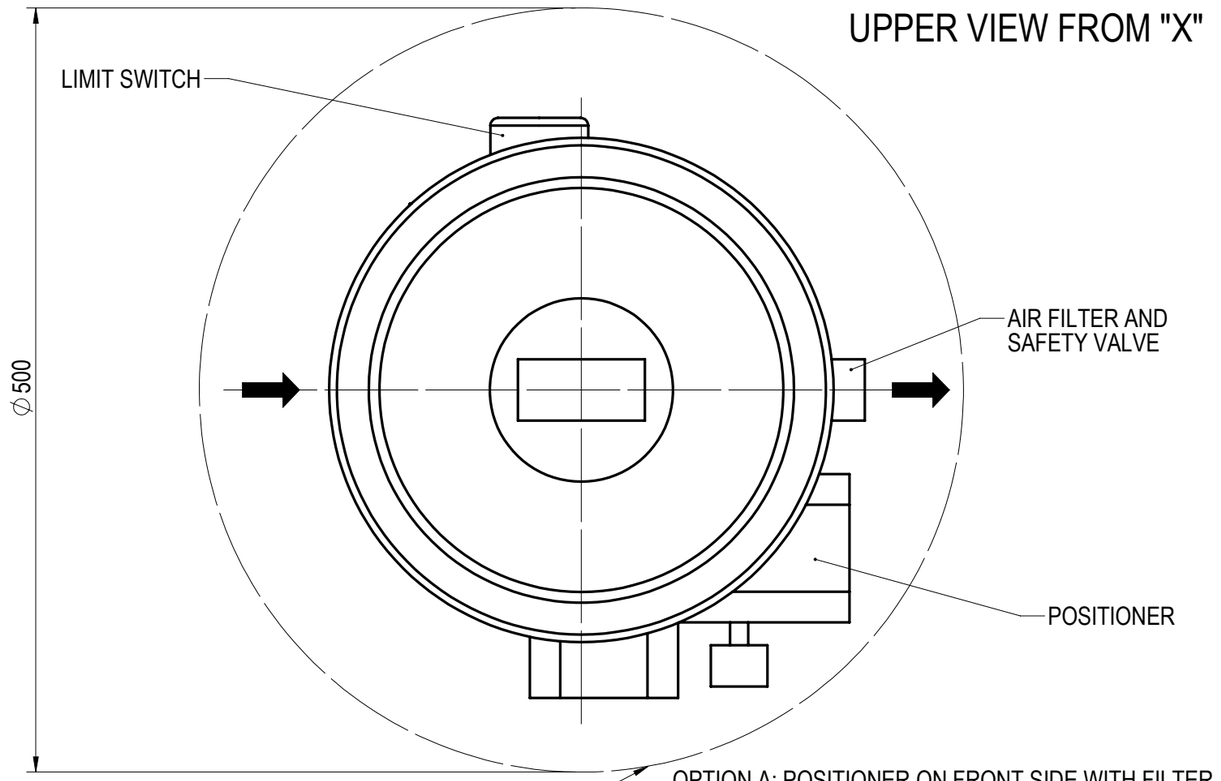
REV.:	DATE:	SIGNATURE:
2_G	20/12/24	V.Ramponi

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
1		Nickel Plated Brass Double Compression Cable Gland Ex-d/e IIC (or IIB + H2) T1	M20S	4

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MAXIMUM ACCESSORIES
OVERALL DIMENSION

OPTION A: POSITIONER ON FRONT SIDE WITH FILTER ON RIGHT SIDE (AS REPRESENTED)

OPTION B: POSITIONER ON BACK SIDE WITH FILTER ON LEFT SIDE

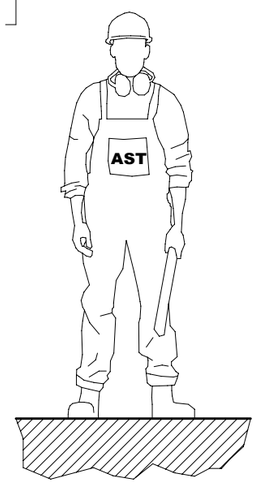
TAG	SN	OPTION
64-PV-031A	2400597	A
64-PV-031B	2400598	B

MASS:
VALVE= ~ 20 kg
ACTUATOR= ~ 28 kg
TOTAL= ~ 48 kg

General tolerances

For main components:
- up to 500mm ± 25
- over 500mm ± 50

For installed equipments / instrument / tubing:
- all dim. ± 100



Cliente / Customer	ROSETTI MARINO S.P.A.
Ordine AST / AST job	CV2400221
Sigle / Tags	64-PV-031A, 64-PV-031B
Matricole / Serials	2400597, 2400598

Revision Description
ADDED ACCESSORIES AS PER CUSTOMER COMMENTS

Drawn	ABD ELSALAM	Checked	PINI	Approval	PEREGO	Date	29-05-24

PROPERTY AND REPRODUCTION ARE SUBJECTED TO THE LAW

Scale | Mass kg | CR 00304 | NOTE:

Description
CV-8407 OVERALL DIMENSION
NPS 1" PORT 3/8" CL. 150 RF

Dwg No
240221-0400OD

Rev. 2 | Sheet 1 of 1

A3 - AST S.p.A. Via R. Merendi, 40 - 20010 Cornaredo (Mi) - Tel.02 934848.1 - Control valve division

GENERAL	1	Tag Number	P&ID Number			64-PV-031B		123A90-DDL-PR-PID-80027	
	2	Service				NITROGEN FROM NITROGEN SYSTEM (U-64000) TO HEADER			
	3	Area Classification	Certification			ATEX ZONE 2		Ex-d IIC (or IIB+H2) T1	
	4	Ambient Temperature:	Min.	Max.		°C		-8.4	+25
	5	Allowable Sound Pressure Level dBA				Max 85 dBA			
	6	Ingress Protection	Power Failure Position			IP-66		-	CLOSE
	7	Air Supply Pressure:	Min.	Norm.	Max.	barg	4	9	10
PIPELINE	8	Line Number	Pipe Insulation			1"-N-158-01CS-N			NOT INSULATED (PAINTED)
	9	Line Size and Schedule	Inlet	Outlet		1" / 4.55 mm		1" / 4.55 mm	
	10	Line Spec	Line Material			01CS		ASTM/ASME A/SA333 Gr.6	
PROCESS CONDITION	11	Process Fluid	Fluid Phase			NITROGEN		GAS	
	12	Upstream Condition							
	13	Des. Press. / Full Vac.	Des. Temperature Min / Max			10 barg		100 °C	
	14	Critical Pressure	Critical Temperature						
	15	Differential Pressure - Maximum Shut Off				10 bar			
	16					Units	@ Max. Flow	@ Norm. Flow	@ Min. Flow
	17	Flow Rate (Gas)				Nm^3/h	60	10	7
	18	Flow Rate (Liquid)							
	19	Inlet Pressure				barg	8	8	8
	20	Pressure Drop				bar	0.5	1	1
	21	Inlet Temperature				°C	15	15	15
	22	Inlet Density / Specific Gravity				kg/m^3	10.6	10.6	10.6
	23	Inlet Compressibility Factor				-	0.99	0.99	0.99
	24	Inlet Viscosity				cP	0.017	0.017	0.017
	25	Inlet Specific Heats Ratio (Cp/Cv)				-	1.4	1.4	1.4
	26	Inlet Vapour Pressure							
	27	Molecular Weight				-	28	28	28
CALCULATED RESULTS	28	Flow Coefficient Cv					1.22	0.1474	0.1032
	29	Travel				33.9%			
	30	Sound Pressure Level				<75 dBA (20)			
BODY AND TRIM	31	MFR	Model			AST		CV-8407	
	32	Body Type				GLOBE VALVE (HS01A02RF)			
	33	Body Size	Trim Size			1"		3/8"	
	34	Rated Cv	Characteristics.			1.9		(11) Equal%	
	35	End Connec. & Rating				FLANGED ASME B16.5 / #150			
	36	Body Material				ASTM A350 LF2			
	37	Bonnet Type	Material			Bolted (21)		ASTM A350 LF2	
	38	Bolting				A193 B8M Cl. 2 / A194 8M			
	39	Packing Material				PTFE			
	40	Flow Action To				OPEN			
	41	Lubricator	Isolat. Valve			-		By Contractor	
	42	Guiding	No. of Ports			Top Guided		1	
	43	Trim Type				Contoured Plug (12, 13)			
	44	Rated Travel				13mm			
	45	Plug/ Ball/ Disk Material				A479 316L+CoCr-A (12)			
	46	Seat Material				A479 316L+CoCr-A (12)			
	47	Cage	Stem Material			-		A479 316L	
	48	Gasket Material				By Contractor (in line)			
	49	Flange Finish				RF			

						INSTRUMENT DATASHEET	CROSSWIND	
						Control Valve (Sheet 1 of 2)	ROSETTI MARINO	
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO		Sheet 36 of 37	
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO			
No.	Date	Description	By	Chkd	Appr	Code:	Dwg.No 123A90-DDL-IN-DS-40036	Rev. 01

ACTUATOR	50	MFR	Model	AST	SD11R
	51	Type		PNUEMATIC / DIAPHRAGM (*)	
	52	Size	Area	SD11R	(*)
	53	Handwheel		NOT REQUIRED	
	54	Bench Range		15-30 psi	
	55	Volume Tank		NOT REQUIRED	
TESTS	56	Hydro. Pressure		REQUIRED	
	57	Leakage		REQUIRED (37)	
	58				
POSITIONER	59	MFR	Model	TISSIN	TS900 (15, 16)
	60	Signal: Inlet	Outlet	4-20 mA	3 to 15 psi
	61	Increase Signal Valve:		OPEN VALE	
	62	Cam Characteristic		(*)	
	63	Bypass	Gauges	NOT REQ.	YES
	64	Signal Transmission		REQUIRED VALVE POSITION 4-20 mA to PCS (22) (25-ZT-025A)	
COMM. & SOFTWARE	65	Comm Type	Signal Type	-	-
	66	D D Rev.	CFF Rev.	-	-
	67	Device Tag	Hart Tag	-	-
	68	Diagnostics	Capac	-	-
	69	Segment	Device Addr.	-	-
	70	Device Class	Simulate	-	-
	71	Nom. Current	Oper Volt	-	-
SOLENOID	72	MFR	Model	-	-
	73	Type		-	
	74	When De-Enegr.Valve:		-	
	75	Schematic Detail		-	
SWITCHES	76	MFR	Model	EISENBAU	GDSN0LIS2MS290
	77	Type	Quantity	Magnetic	2
	78	Contacts / Rating		No. 1 DPDT / 1A	
	79	Switching Position		ON STEAM	
	80				
AIR SET	81	MFR	Model	SITECNA	FR04411S00SSNB2
	82	Set Pressure		Operation Pressure of valve	
	83	Filter	Gauge	YES	YES
ELECT.	84	Connection	Class	No. (*) / M20	-
PURCHASE	85	Manufacturer		AST	
	86	Model		CV-8407	
	87	Purchase Order No.		1724000740	

Notes:
(1) N.1 PSV INSTALLED DOWNSTREAM THE AIR FILTER REGULATOR, SIZE 1/4", SS, set 6 Barg.
(2) Hydrogen service - Packing ISO 15848-1

No.	Date	Description	By	Chkd	Appr
01	28/08/24	Accepted for Construction (AFC)	VBA	LCA	DLO
00	14/11/23	Issued for Review (IFR)	VBA	LCA	DLO

INSTRUMENT DATASHEET

Control Valve (Sheet 2 of 2)

CROSSWIND

ROSETTI MARINO

Sheet 37 of 37

Code: | Dwg.No 123A90-DDL-IN-DS-40036 | Rev. 01

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: 64-10 & process: MC & discipline : P

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
020-1-J1	Joint 020-1-J1	ONSHORE	C10004081	TMX27	100	2025-01-14	RFC 2
020-1-J2	Joint 020-1-J2	ONSHORE	C10004082	TMX27	100	2025-01-14	RFC 2
034-1-J1	Joint 034-1-J1	ONSHORE	C10004083	TMX27	100	2025-01-17	RFC 2
034-1-J2	Joint 034-1-J2	ONSHORE	C10004084	TMX27	100	2025-01-16	RFC 2
034-1-J3	Joint 034-1-J3	ONSHORE	C10004085	TMX27	100	2025-02-03	RFC 2
034-1-J4	Joint 034-1-J4	ONSHORE	C10004086	TMX27	100	2025-02-03	RFC 2
034-1-J5	Joint 034-1-J5	ONSHORE	C10004087	TMX27	100	2025-02-19	RFC 2
035-1-J1	Joint 035-1-J1	ONSHORE	C10004226	TMX27	100	2025-01-23	RFC 2
035-1-J2	Joint 035-1-J2	ONSHORE	C10004227	TMX27	100	2025-01-23	RFC 2
035-1-J3	Joint 035-1-J3	ONSHORE	C10004228	TMX27	100	2025-01-15	RFC 2
035-1-J4	Joint 035-1-J4	ONSHORE	C10004229	TMX27	100	2025-01-15	RFC 2
035-1-J5	Joint 035-1-J5	ONSHORE	C10004230	TMX27	100	2025-02-03	RFC 2
045-1-J1	Joint 045-1-J1	ONSHORE	C10004108	TMX27	100	2025-01-14	RFC 2
045-1-J2	Joint 045-1-J2	ONSHORE	C10004109	TMX27	100	2025-01-14	RFC 2
046-1-J1	Joint 046-1-J1	ONSHORE	C10004110	TMX27	100	2025-01-14	RFC 2
046-1-J2	Joint 046-1-J2	ONSHORE	C10004111	TMX27	100	2025-01-14	RFC 2
047-1-J1	Joint 047-1-J1	ONSHORE	C10004112	TMX27	100	2025-01-14	RFC 2
047-1-J2	Joint 047-1-J2	ONSHORE	C10004113	TMX27	100	2025-01-14	RFC 2
048-1-J1	Joint 048-1-J1	ONSHORE	C10004114	TMX27	100	2025-01-14	RFC 2
048-1-J2	Joint 048-1-J2	ONSHORE	C10004115	TMX27	100	2025-01-14	RFC 2
049-1-J1	Joint 049-1-J1	ONSHORE	C10004116	TMX27	100	2025-01-15	RFC 2
049-1-J2	Joint 049-1-J2	ONSHORE	C10004117	TMX27	100	2025-01-15	RFC 2
062-2-J1	Joint 062-2-J1	ONSHORE	C10004118	TMX27	100	2025-01-18	RFC 2
062-2-J2	Joint 062-2-J2	ONSHORE	C10004119	TMX27	100	2025-01-18	RFC 2
062-2-J3	Joint 062-2-J3	ONSHORE	C10004120	TMX27	100	2025-01-16	RFC 2
064-1-J1	Joint 064-1-J1	ONSHORE	C10003927	TMX27	100	2025-01-15	RFC 2
064-1-J2	Joint 064-1-J2	ONSHORE	C10003928	TMX27	100	2025-01-15	RFC 2
064-1-J3	Joint 064-1-J3	ONSHORE	C10003929	TMX27	100	2025-01-20	RFC 2
064-1-J4	Joint 064-1-J4	ONSHORE	C10003930	TMX27	100	2025-01-20	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC & discipline : P

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
064-1-J5	Joint 064-1-J5	ONSHORE	C10003931	TMX27	100	2025-01-20	RFC 2
065-1-J1	Joint 065-1-J1	ONSHORE	C10004121	TMX27	100	2025-02-03	RFC 2
065-1-J2	Joint 065-1-J2	ONSHORE	C10004122	TMX27	100	2025-02-03	RFC 2
065-1-J3	Joint 065-1-J3	ONSHORE	C10004123	TMX27	100	2025-01-30	RFC 2
066-1-J3	Joint 066-1-J3	ONSHORE	C10004127	TMX27	100	2025-01-13	RFC 2
066-1-J4	Joint 066-1-J4	ONSHORE	C10004128	TMX27	100	2025-01-16	RFC 2
066-1-J5	Joint 066-1-J5	ONSHORE	C10004129	TMX27	100	2025-01-16	RFC 2
067-1-J1	Joint 067-1-J1	ONSHORE	C10004242	TMX27	100	2025-01-16	RFC 2
090-1-J1	Joint 090-1-J1	ONSHORE	C10004012	TMX27	100	2025-01-14	RFC 2
090-1-J2	Joint 090-1-J2	ONSHORE	C10004013	TMX27	100	2025-01-14	RFC 2
090-1-J3	Joint 090-1-J3	ONSHORE	C10004014	TMX27	100	2025-01-20	RFC 2
090-1-J4	Joint 090-1-J4	ONSHORE	C10004015	TMX27	100	2025-01-20	RFC 2
090-1-J5	Joint 090-1-J5	ONSHORE	C10004016	TMX27	100	2025-01-20	RFC 2
091-1-J1	Joint 091-1-J1	ONSHORE	C10004021	TMX27	100	2025-01-14	RFC 2
091-1-J2	Joint 091-1-J2	ONSHORE	C10004022	TMX27	100	2025-01-14	RFC 2
091-1-J3	Joint 091-1-J3	ONSHORE	C10004023	TMX27	100	2025-01-20	RFC 2
091-1-J4	Joint 091-1-J4	ONSHORE	C10004024	TMX27	100	2025-01-20	RFC 2
091-1-J5	Joint 091-1-J5	ONSHORE	C10004025	TMX27	100	2025-01-20	RFC 2
092-1-J1	Joint 092-1-J1	ONSHORE	C10004030	TMX27	100	2025-01-14	RFC 2
092-1-J2	Joint 092-1-J2	ONSHORE	C10004031	TMX27	100	2025-01-14	RFC 2
092-1-J3	Joint 092-1-J3	ONSHORE	C10004032	TMX27	100	2025-01-20	RFC 2
092-1-J4	Joint 092-1-J4	ONSHORE	C10004033	TMX27	100	2025-01-20	RFC 2
092-1-J5	Joint 092-1-J5	ONSHORE	C10004034	TMX27	100	2025-01-20	RFC 2
093-1-J1	Joint 093-1-J1	ONSHORE	C10004039	TMX27	100	2025-01-14	RFC 2
093-1-J2	Joint 093-1-J2	ONSHORE	C10004040	TMX27	100	2025-01-14	RFC 2
093-1-J3	Joint 093-1-J3	ONSHORE	C10004041	TMX27	100	2025-01-20	RFC 2
093-1-J4	Joint 093-1-J4	ONSHORE	C10004042	TMX27	100	2025-01-20	RFC 2
093-1-J5	Joint 093-1-J5	ONSHORE	C10004043	TMX27	100	2025-01-20	RFC 2
094-1-J1	Joint 094-1-J1	ONSHORE	C10004048	TMX27	100	2025-01-15	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC & discipline : P

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
094-1-J2	Joint 094-1-J2	ONSHORE	C10004049	TMX27	100	2025-01-15	RFC 2
094-1-J3	Joint 094-1-J3	ONSHORE	C10004050	TMX27	100	2025-01-20	RFC 2
094-1-J4	Joint 094-1-J4	ONSHORE	C10004051	TMX27	100	2025-01-20	RFC 2
094-1-J5	Joint 094-1-J5	ONSHORE	C10004052	TMX27	100	2025-01-20	RFC 2
097-1-J1	Joint 097-1-J1	ONSHORE	C10004135	TMX27	100	2025-01-15	RFC 2
097-1-J2	Joint 097-1-J2	ONSHORE	C10004136	TMX27	100	2025-01-15	RFC 2
097-1-J3	Joint 097-1-J3	ONSHORE	C10004137	TMX27	100	2025-01-16	RFC 2
122-1-J1	Joint 122-1-J1	ONSHORE	C10004167	TMX27	100	2025-01-27	RFC 2
122-1-J2	Joint 122-1-J2	ONSHORE	C10004168	TMX27	100	2025-01-27	RFC 2
64-10-TP-020	Test Pack 64-10-TP-020	ONSHORE	C10003381	CLX02A	100	2024-12-13	RFC 2
		ONSHORE	C10003382	CLX02B	100	2025-02-07	RFC 2
		ONSHORE	C10003383	CXX02	100	2025-02-11	RFC 2
		ONSHORE	C10003384	TMX03	100	2024-12-13	RFC 2
		ONSHORE	C10003385	TMX05	100	2024-12-13	RFC 2
		ONSHORE	C10003388	TPLX05	100	2024-12-13	RFC 2
64-10-TP-023	Test Pack 64-10-TP-023	ONSHORE	C10003406	CLX02A	100	2024-12-24	RFC 2
		ONSHORE	C10003407	CLX02B	100	2025-02-06	RFC 2
		ONSHORE	C10003408	CXX02	100	2025-02-05	RFC 2
		ONSHORE	C10003409	TMX03	100	2024-12-24	RFC 2
		ONSHORE	C10003410	TMX05	100	2024-12-24	RFC 2
		ONSHORE	C10003412	TPLX05	100	2024-12-31	RFC 2
64-10-TP-047	Test Pack 64-10-TP-047	ONSHORE	C10003589	CLX02A	100	2025-01-03	RFC 2
		ONSHORE	C10003590	CLX02B	100	2025-02-11	RFC 2
		ONSHORE	C10003591	CXX02	100	2025-02-11	RFC 2
		ONSHORE	C10003592	TMX03	100	2025-01-03	RFC 2
		ONSHORE	C10003593	TMX05	100	2025-01-03	RFC 2
		ONSHORE	C10003595	TPLX05	100	2025-01-03	RFC 2

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 64-10 & process: MC & discipline : P

Piping	64-10 Nitrogen Distribution Network						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
64-10-TP-051	Test Pack 64-10-TP-051	ONSHORE	C10003609	CLX02A	100	2024-12-10	RFC 2
		ONSHORE	C10003610	CLX02B	100	2025-02-03	RFC 2
		ONSHORE	C10003611	CXX02	100	2025-02-05	RFC 2

ITEM	Tag	64-10-TP-020	: Test Pack 64-10-TP-020		Dwg	123A90-DDL-PR-PID-80015-20/27	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10003381	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	CLX02A	Pipework Before Test

1	Check for each line of the Test Pack the NDT clearance.	OK
2	Confirm that materials conforms to the line specifications (ref. to the last issued revision of the isometric material table)	OK
3	Check the installation of all pipe – supports are in accordance with the specifications and drawings.	PL
4	Check that pipework at pump and vessel nozzles are free from spring.	NA
5	Check that the pipe flanges have been mounted square to each other. Also that the bolting and gaskets are correct (all TMX27 are complete, if necessary).	OK
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).	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.	NA
10	Check the Blind list.	OK
11	Check that all the temporary material to perform the task are conforms to the procedure & suitable pressure rating.	OK
12	If required produce Red Line Mark Up for "AS BUILT".	

Comments: Note 7: Valves were been removed before testing.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2024-12-11	2024-12-13	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-11T15:44:35.315Z	PROVERLIS Digitaly signed by Massimo Bruschi 2024-12-13T13:39:37.690Z	

ITEM	Tag	64-10-TP-020	: Test Pack 64-10-TP-020			Dwg	123A90-DDL-PR-PID-80015-20/27
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003382		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-31	2025-02-07	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-31T14:24:59.772Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-07T13:38:34.356Z	

ITEM	Tag	64-10-TP-020	: Test Pack 64-10-TP-020			Dwg	123A90-DDL-PR-PID-80015-20/27
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003383		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	PL
3	Check that the fluid direction is correct.	PL
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	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.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (ROSETTI MARINO)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-01-31	2025-02-11	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-01-31T13:57:20.542Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-11T16:37:52.658Z	

ITEM	Tag	64-10-TP-020	: Test Pack 64-10-TP-020		Dwg	123A90-DDL-PR-PID-80015-20/27	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10003384	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	NA	NA	Filtration	No	Screen size	NA

EQUIPMENTS

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

TEST RESULTS

Test date	12-12-24	Start time	15:20	End time	15:35
Flow rate	N/A	Duration	15 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

All contaminants are expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2024-12-11	2024-12-13	
Signature	Digitaly signed by Emanuele Delfino 2024-12-11T15:44:52.229Z	Digitaly signed by Massimo Bruschi 2024-12-13T13:03:08.754Z	

ROSETTI MARINO

CROSSWIND

ITEM	Tag	64-10-TP-020	: Test Pack 64-10-TP-020			Dwg	123A90-DDL-PR-PID-80015-20/27
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003385		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	40 barg	Max test pressure	60 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	2024-12-11	2024-12-13	
Signature	Digitaly signed by Emanuele Delfino 2024-12-11T15:45:10.197Z	Digitaly signed by Massimo Bruschi 2024-12-13T13:04:25.342Z	

Logger protocol
Protocollo di acquisizione elenco dati

Log no. *N. elenco dati*	123A90-T64-10-TP020 (2)

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)*	60000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	01:22:27
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	03:38:58 pm

Logger protocol

Protocollo di acquisizione elenco dati

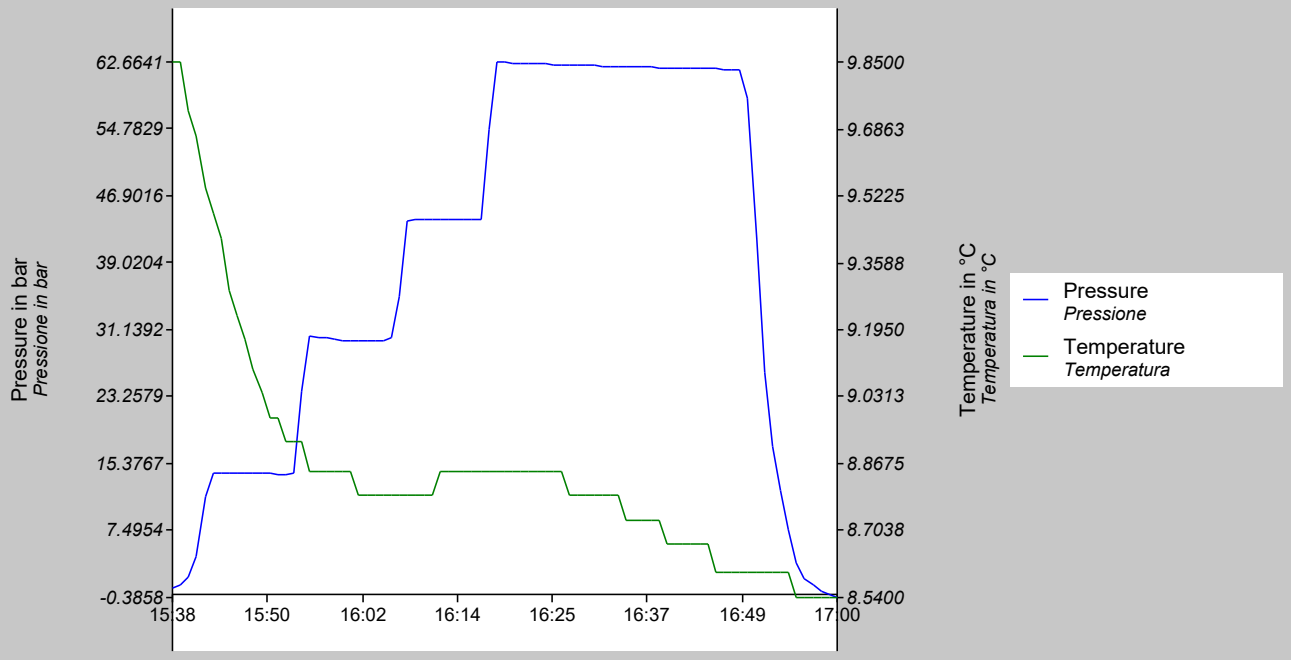
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-T64-10-TP020 (2)

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
12/12/2024 15:38:58.000	0.6630	9.8500
12/12/2024 15:39:58.000	1.0144	9.8500
12/12/2024 15:40:58.000	2.0359	9.7300
12/12/2024 15:41:58.000	4.3974	9.6700
12/12/2024 15:42:58.000	11.4691	9.5400
12/12/2024 15:43:58.000	14.3248	9.4800
12/12/2024 15:44:58.000	14.2973	9.4200
12/12/2024 15:45:58.000	14.2729	9.2900
12/12/2024 15:46:58.000	14.2519	9.2300
12/12/2024 15:47:58.000	14.2297	9.1700
12/12/2024 15:48:58.000	14.2148	9.1000
12/12/2024 15:49:58.000	14.1972	9.0400
12/12/2024 15:50:58.000	14.1787	8.9800
12/12/2024 15:51:58.000	14.1626	8.9800
12/12/2024 15:52:58.000	14.1459	8.9200
12/12/2024 15:53:58.000	14.2637	8.9200
12/12/2024 15:54:58.000	23.8764	8.9200

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-T64-10-TP020 (2)

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
12/12/2024 15:55:58.000	30.3834	8.8500
12/12/2024 15:56:58.000	30.2568	8.8500
12/12/2024 15:57:58.000	30.1424	8.8500
12/12/2024 15:58:58.000	30.0333	8.8500
12/12/2024 15:59:58.000	29.9181	8.8500
12/12/2024 16:00:58.000	29.8441	8.8500
12/12/2024 16:01:58.000	29.8671	8.7900
12/12/2024 16:02:58.000	29.8478	8.7900
12/12/2024 16:03:58.000	29.8297	8.7900
12/12/2024 16:04:58.000	29.8159	8.7900
12/12/2024 16:05:58.000	30.2492	8.7900
12/12/2024 16:06:58.000	35.1104	8.7900
12/12/2024 16:07:58.000	43.9033	8.7900
12/12/2024 16:08:58.000	44.2095	8.7900
12/12/2024 16:09:58.000	44.1823	8.7900
12/12/2024 16:10:58.000	44.1587	8.7900
12/12/2024 16:11:58.000	44.1371	8.8500
12/12/2024 16:12:58.000	44.1157	8.8500
12/12/2024 16:13:58.000	44.0941	8.8500
12/12/2024 16:14:58.000	44.0745	8.8500
12/12/2024 16:15:58.000	44.0521	8.8500
12/12/2024 16:16:58.000	44.0296	8.8500
12/12/2024 16:17:58.000	54.6378	8.8500
12/12/2024 16:18:58.000	62.6641	8.8500
12/12/2024 16:19:58.000	62.6137	8.8500
12/12/2024 16:20:58.000	62.5689	8.8500
12/12/2024 16:21:58.000	62.5264	8.8500
12/12/2024 16:22:58.000	62.4899	8.8500
12/12/2024 16:23:58.000	62.4556	8.8500
12/12/2024 16:24:58.000	62.4205	8.8500
12/12/2024 16:25:58.000	62.3823	8.8500
12/12/2024 16:26:58.000	62.3519	8.8500
12/12/2024 16:27:58.000	62.3188	8.7900
12/12/2024 16:28:58.000	62.2908	8.7900
12/12/2024 16:29:58.000	62.2568	8.7900
12/12/2024 16:30:58.000	62.2300	8.7900
12/12/2024 16:31:58.000	62.1950	8.7900
12/12/2024 16:32:58.000	62.1683	8.7900
12/12/2024 16:33:58.000	62.1365	8.7900
12/12/2024 16:34:58.000	62.1148	8.7300
12/12/2024 16:35:58.000	62.0879	8.7300
12/12/2024 16:36:58.000	62.0631	8.7300
12/12/2024 16:37:58.000	62.0383	8.7300
12/12/2024 16:38:58.000	62.0133	8.7300
12/12/2024 16:39:58.000	61.9886	8.6700
12/12/2024 16:40:58.000	61.9634	8.6700
12/12/2024 16:41:58.000	61.9391	8.6700
12/12/2024 16:42:58.000	61.9161	8.6700
12/12/2024 16:43:58.000	61.8939	8.6700

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-T64-10-TP020 (2)

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
12/12/2024 16:44:58.000	61.8669	8.6700
12/12/2024 16:45:58.000	61.8425	8.6000
12/12/2024 16:46:58.000	61.8211	8.6000
12/12/2024 16:47:58.000	61.7999	8.6000
12/12/2024 16:48:58.000	61.7783	8.6000
12/12/2024 16:49:58.000	58.3283	8.6000
12/12/2024 16:50:58.000	41.7706	8.6000
12/12/2024 16:51:58.000	26.1410	8.6000
12/12/2024 16:52:58.000	17.4118	8.6000
12/12/2024 16:53:58.000	12.3067	8.6000
12/12/2024 16:54:58.000	7.5939	8.6000
12/12/2024 16:55:58.000	3.7445	8.5400
12/12/2024 16:56:58.000	1.8885	8.5400
12/12/2024 16:57:58.000	1.0259	8.5400
12/12/2024 16:58:58.000	0.3989	8.5400
12/12/2024 16:59:58.000	-0.0725	8.5400
12/12/2024 17:00:58.000	-0.3858	8.5400

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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

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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Viale dell'Artigianato,
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Centro di Taratura LAT N°114
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Accredited Calibration Laboratory

LAT N° 114

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

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

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

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

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

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

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

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

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

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

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

Campione di lavoro
Working Standard

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

Operatore
Technichian

Francesco Donatelli

WIKA Italia S.r.l. & C. s.a.s.
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	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

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

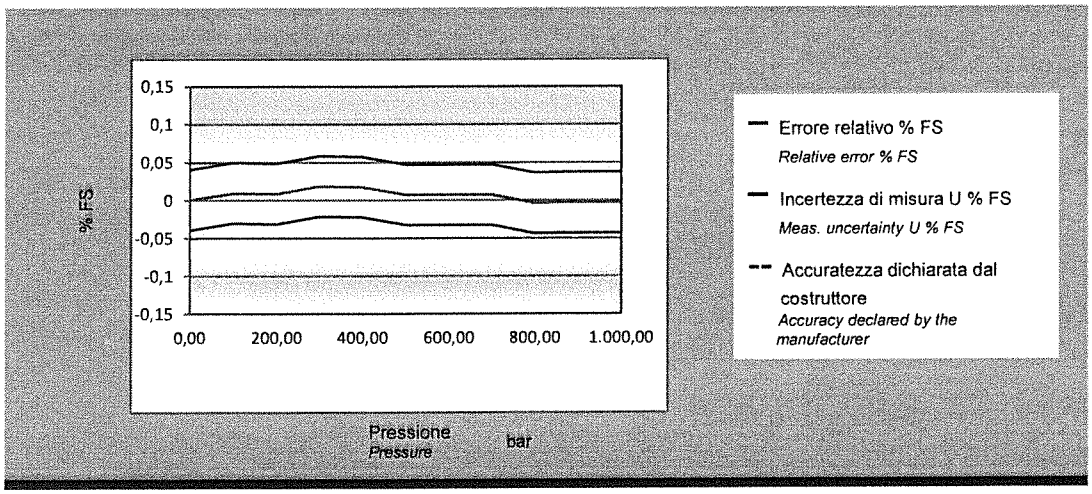
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Calibration Centre
Laboratorio Accreditato di Taratura
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LAT N° 114

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°64-10-TP-020
SUB-SYSTEM N° 64-10

System	64
Sub-System	64-10
Test Pressure	60 barg
Test Fluid	WATER
Test Duration	30 min

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

List of Contents

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

1. COLOURED MARKED P&IDs

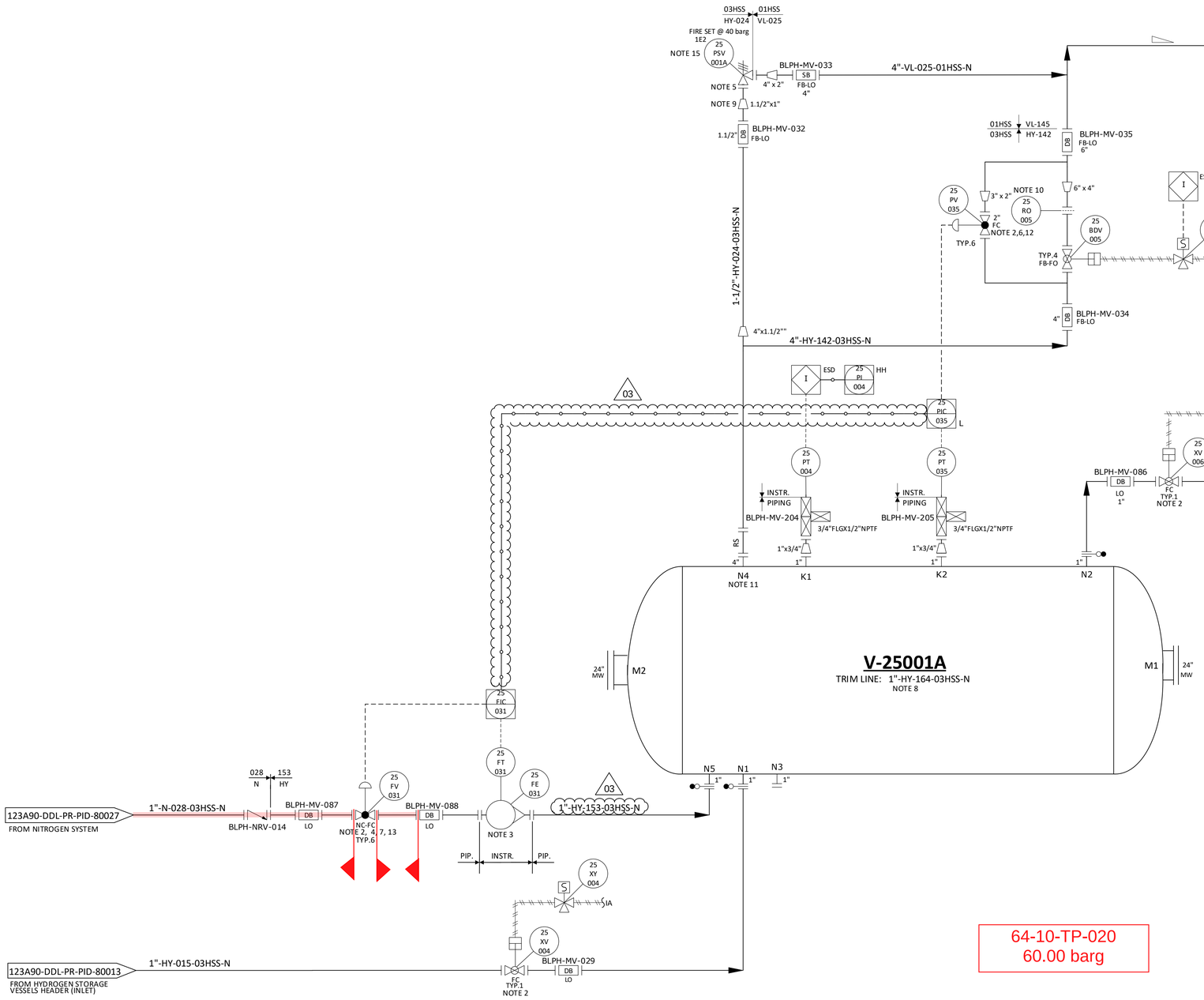
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 A

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg /AMB



64-10-TP-020
60.00 barg

NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-031) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT "DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-035 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-035 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-031 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-035 HAS FAILED TO CLOSE.
15. 25-PSV-001A SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL A

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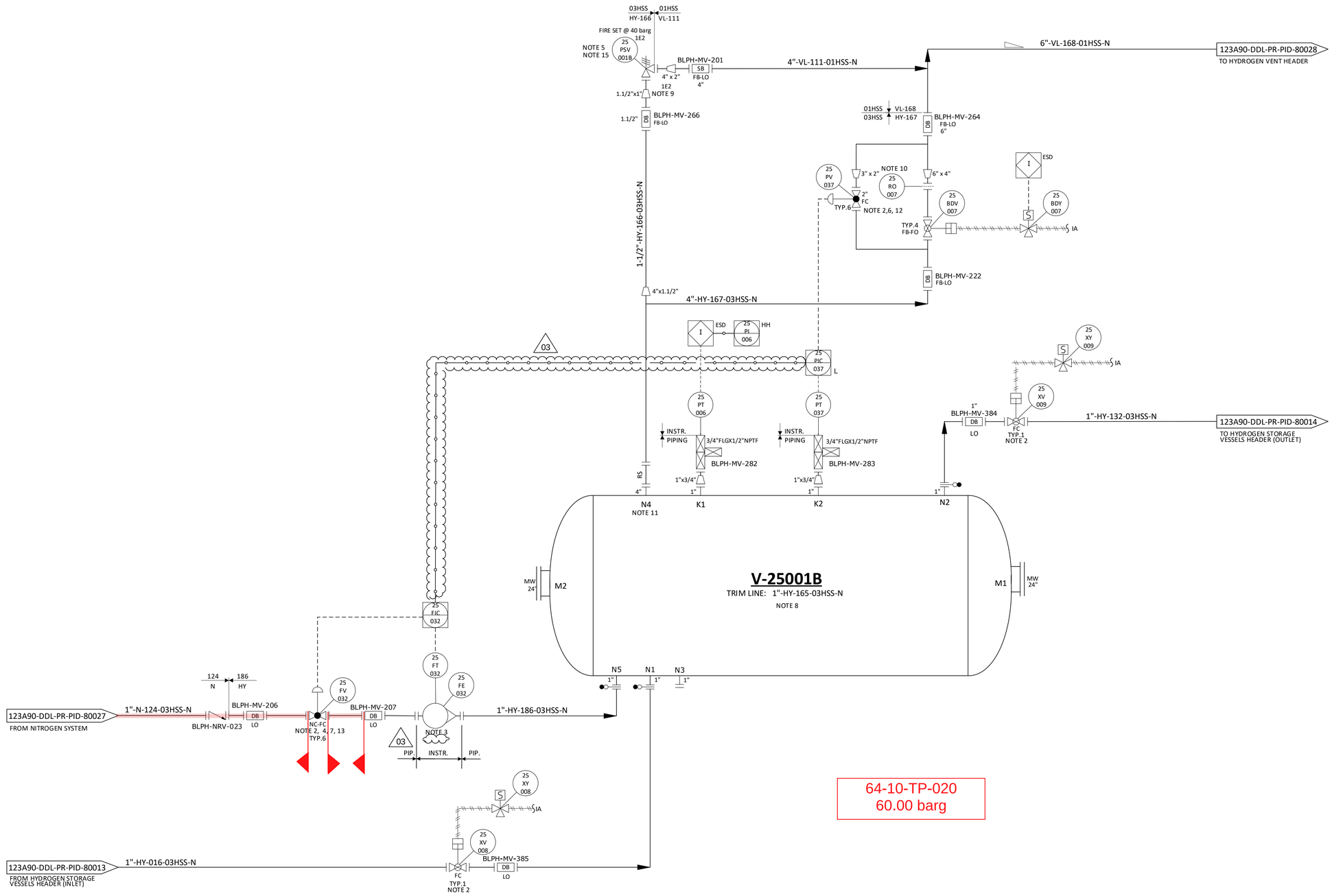
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 B

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



64-10-TP-020
60.00 barg

NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-032) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. (03)
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT "DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-037 BEING OPENED OUTSIDE OR A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC."PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-037 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. (03)
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-032 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-037 HAS FAILED TO CLOSE.
15. 25-PSV-001B SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL B

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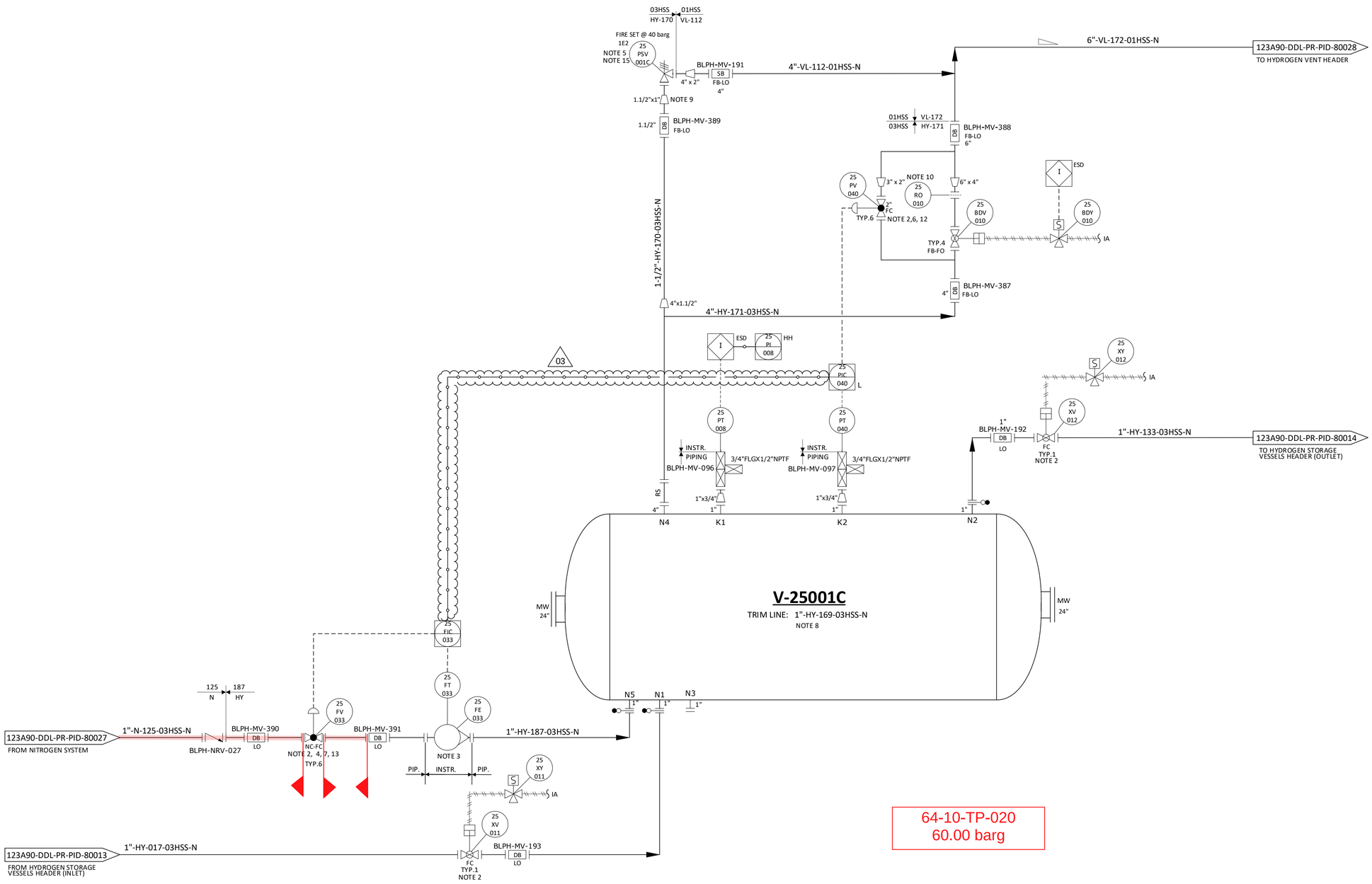
DRAWING_NO.

REV.

V-25001_C

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



64-10-TP-020
60.00 barg

NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-033) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-040 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-040 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-033 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-040 HAS FAILED TO CLOSE.
15. 25-PS-V001C SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL C

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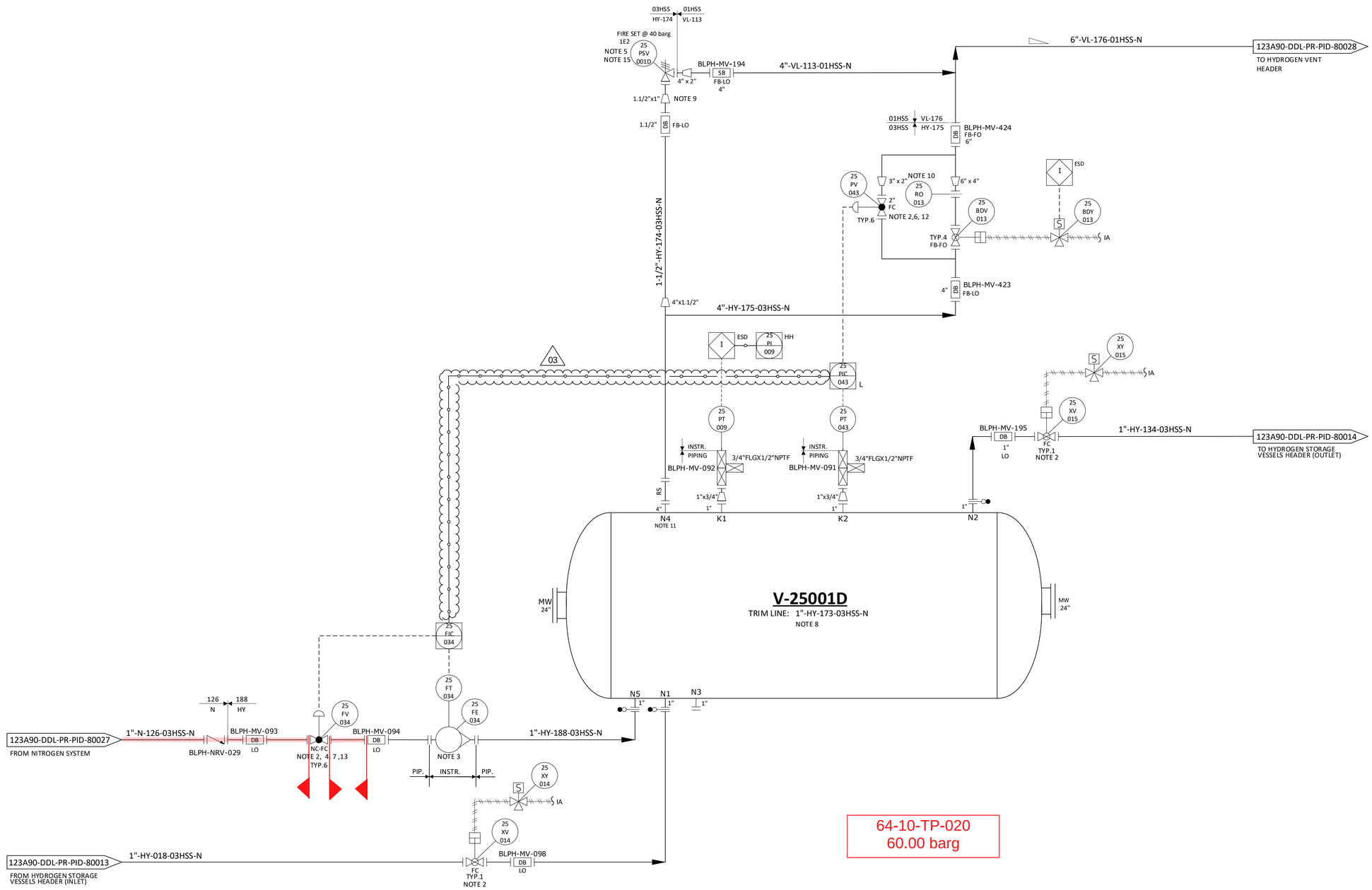
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REV. REV

V-25001_D

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



64-10-TP-020
60.00 barg

NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS. 03
4. NITROGEN CONTROL VALVE (25-FV-034) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE.
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-043 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-043 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-034 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-043 HAS FAILED TO CLOSE.
15. 25-PSV-001D SIZED FOR FIRE.

HOLDS

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

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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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 STORAGE VESSEL D

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

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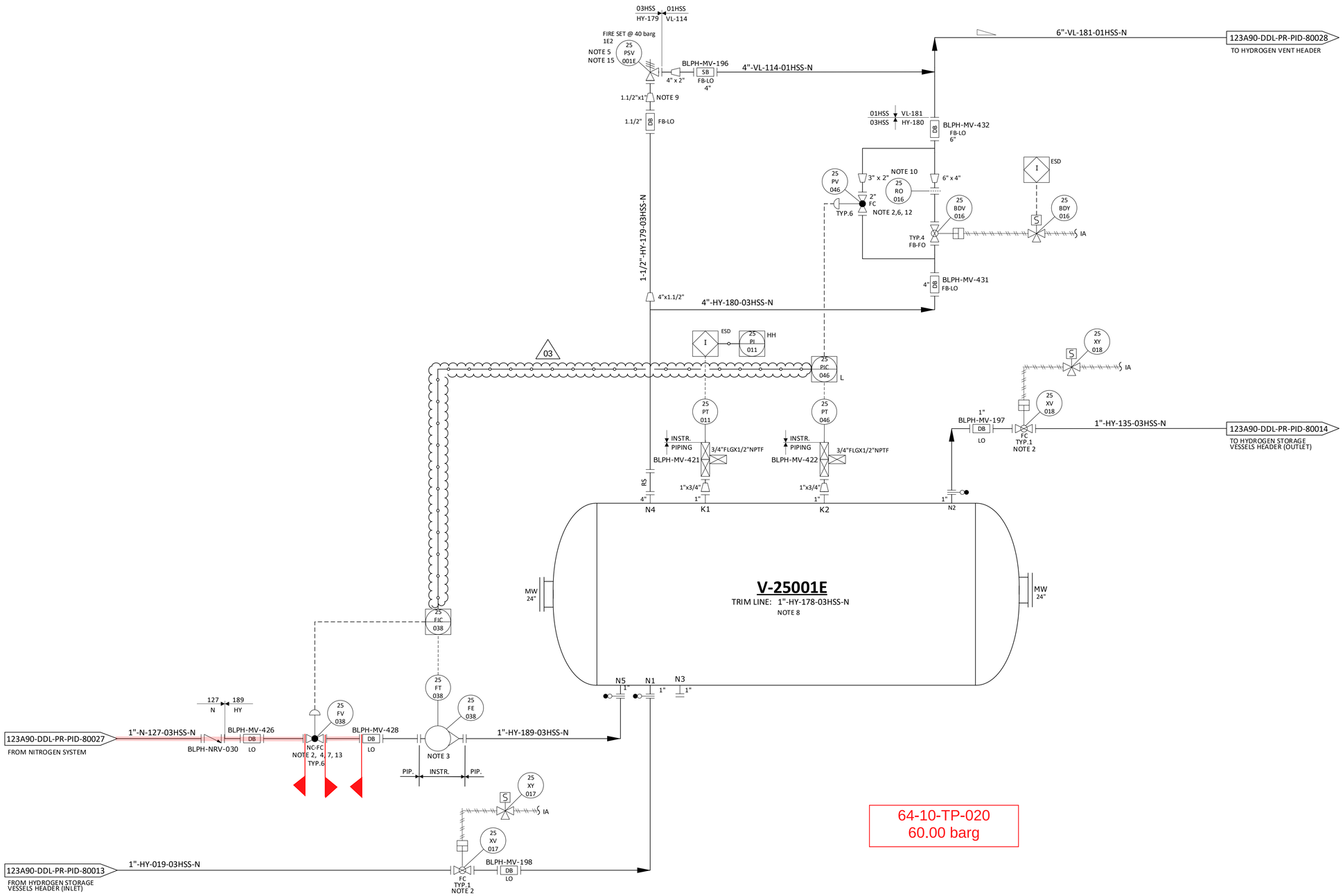
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 E

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



64-10-TP-020
60.00 barg

NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-038) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-046 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-046 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25-FV-038 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-046 HAS FAILED TO CLOSE.
15. 25-PSV-001E SIZED FOR FIRE.

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
HYDROGEN STORAGE VESSEL E

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-80019		SHEET 001	REV. 03

File Name = FILE_NAME

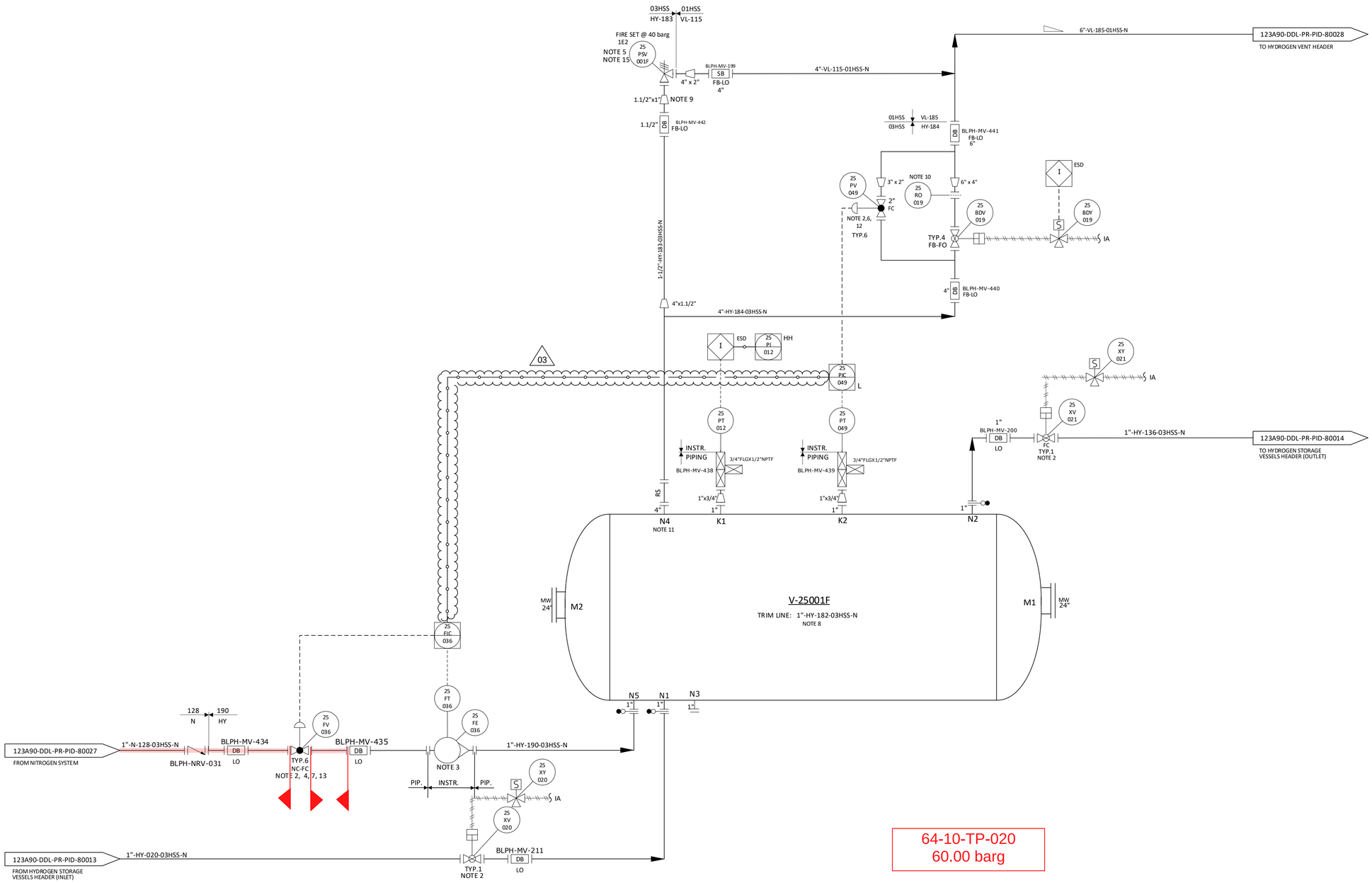
DRAWING NO. DRAWING_NO.

REV. REV

V-25001_F

HYDROGEN STORAGE VESSEL

SIZE : 2800 mm (ID) X 15500 mm (L T/T)
DESIGN P/T : 40 barg / -10 / 80 °C
MATERIAL : CARBON STEEL
OPERATING P/T : 30 barg / AMB



64-10-TP-020
60.00 barg

NOTES

1. DELETED.
2. TIGHT SHUT OFF VALVE.
3. VARIABLE AREA FLOWMETER TO BE INSTALLED VERTICALLY WITH DIRECTION OF FLOW UPWARDS.
4. NITROGEN CONTROL VALVE (25-FV-036) CAN NOT OPEN UNTIL THE PRESSURE WITHIN THE VESSEL IS BELOW THE NITROGEN SUPPLY PRESSURE. 03
5. ONE COMMON UNINSTALLED SPARE PSV FOR ALL VESSELS.
6. FOR PULSE PRESSURE PURGING OF VESSEL WITH HYDROGEN.
7. FOR FLOW PURGING OF VESSEL WITH NITROGEN.
8. FOR DESCRIPTION AND SPECIFICATION OF VESSEL NOZZLE, REFERENCE SHALL BE MADE TO THE TECHNICAL DATA SHEET FOR H2 STORAGE, DOC. N. "123A90-DDL-MAC-DS-50027".
9. REDUCERS TO BE INSTALLED AS CLOSE TO PSV AS POSSIBLE.
10. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
11. NOZZLE N4 TO BE INSTALLED AT MINIMUM DISTANCE FROM TANGENT LINE OF THE VESSEL (ON THE OPPOSITE SIDE OF N5 NOZZLE).
12. SOFTWARE INTERLOCK TO PREVENT 25-PV-049 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION AND PROCESS START-UP CHARGING MODE (SEE DOC. "PROCESS CONTROL LOGICS DESCRIPTION" N. 123A90-DDL-IN-RE-40095). CONTROL VALVE 25-PV-049 IS USED ONLY IN CASE OF VESSEL PURGING OR PROCESS START-UP CHARGING MODES. 03
13. SOFTWARE INTERLOCK TO PREVENT 25FV036 BEING OPENED OUTSIDE OF A PURGE CYCLE OPERATION.
14. A TIMER ALARM ON THE H2 PRESSURIZATION SECTION OF THE PURGE CYCLE IN THE CONTROL LOGIC IS PROVIDED TO DETERMINE IF THE PURGE VALVE 25-PV-049 HAS FAILED TO CLOSE.
15. 25-PSV-001F SIZED FOR FIRE.

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 HAZOP (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL F

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-80020	001	03

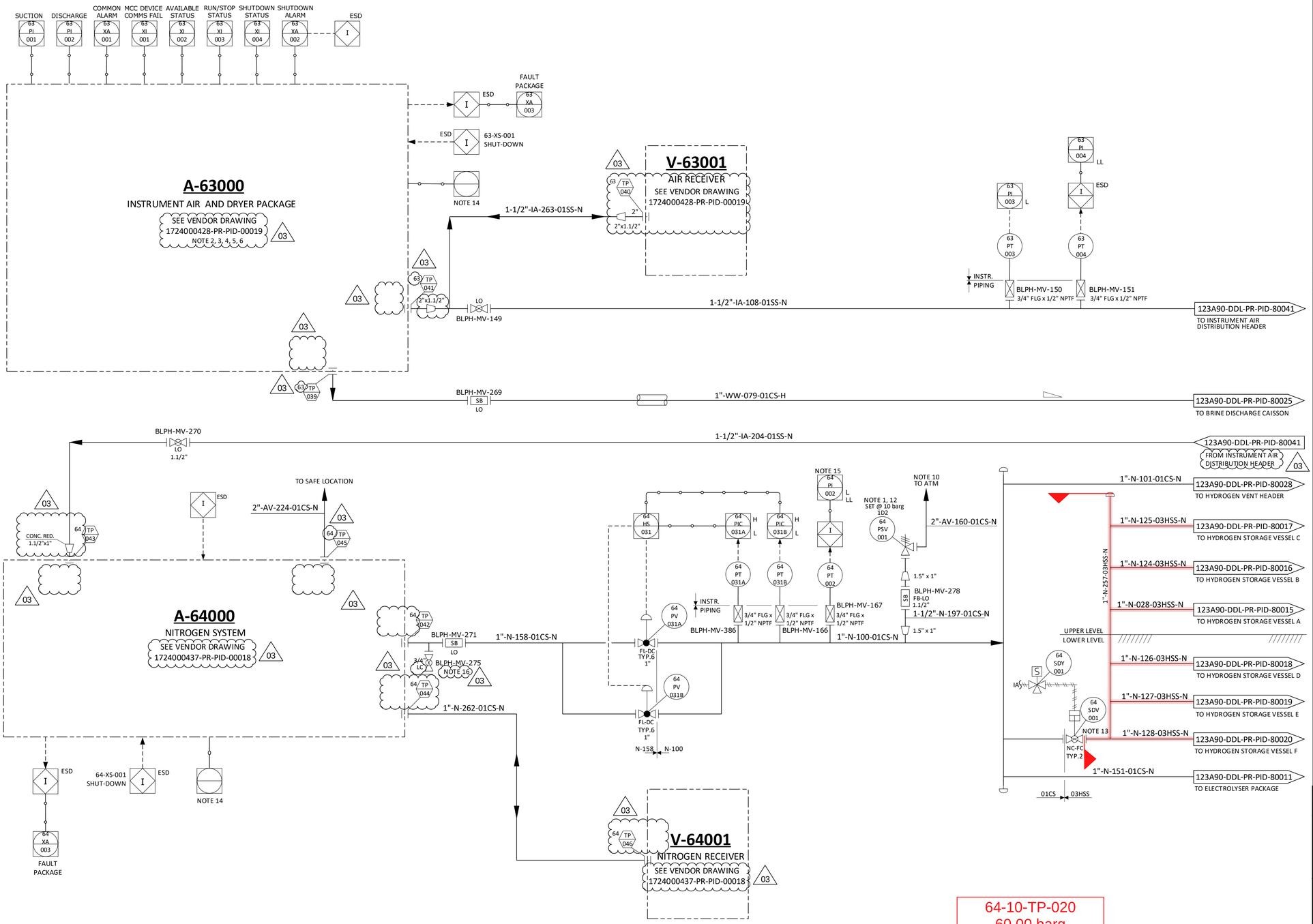
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DRAWING NO. DRAWING_NO.

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)



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.
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.

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

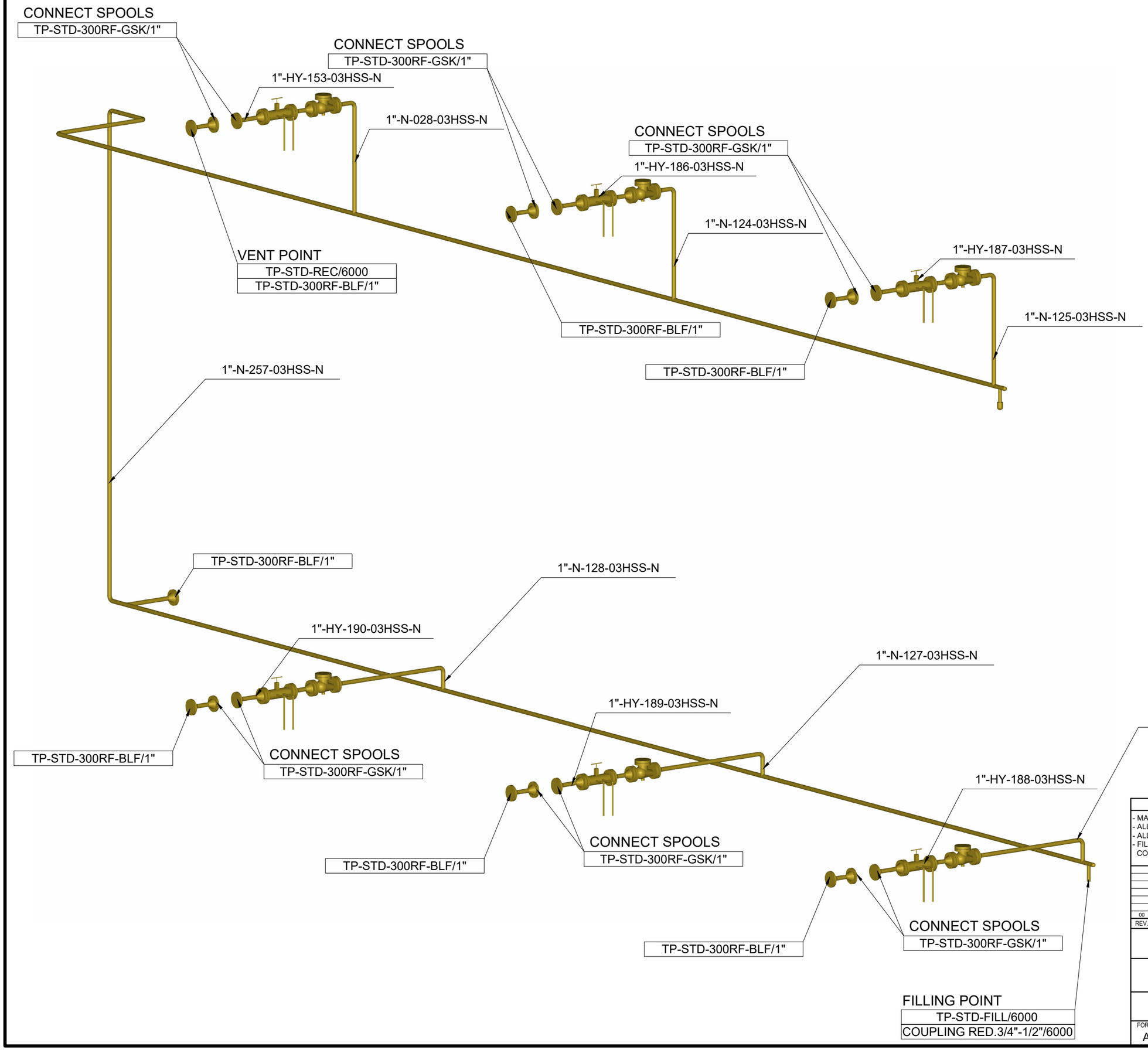
ROSETTI MARINO

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



64-10-TP-020

60 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
64-10-TP-020

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

3. MATERIAL LIST FOR TEST

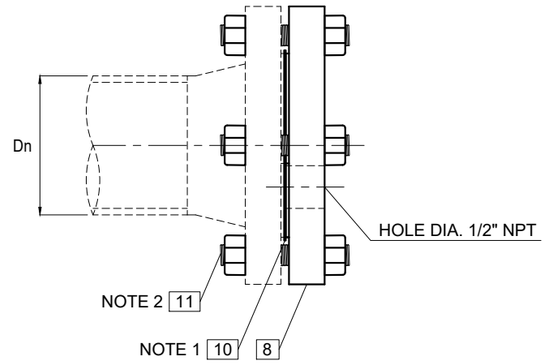
CROSSWIND / ROSETTI MARINO	CONTRACTOR: Rosetti Marino SpA	JOB :	123A90
	PROJECT: Base Load Power Hub (BLPH)	DATE :	20/09/2024
	TITLE: MATERIAL LIST FOR HYDROSTATIC TEST	REV. :	00

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-020	/	CPLRSS00233Q0H	Coupling Reducing ASME B16.11 THRD-F NPT 6000# FRG ASTM A182 Gr.F316/316L	-	-	1	
TP-020	TP-STD-300RF-BLF/1"	FLBHCS0018010H	Flange Blind c/w NPT Hole ø1"x1/2" 300LB RF ASTM/ASME A/SA105	1	7	7	
TP-020	TP-STD-300RF-BLF/1"	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ø1" 300LB RF AISI 316 + GRAPHITE c/w INNER RING	1	7	7	
TP-020	TP-STD-300RF-BLF/1"	SB20BO00680300	Stud Bolt + 2 Heavy Nuts 5/8" L=100MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	7	28	
TP-020	TP-STD-300RF-GSK/1"	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ø1" 300LB RF AISI 316 + GRAPHITE c/w INNER RING	1	6	6	
TP-020	TP-STD-300RF-GSK/1"	SB20BO00680300	Stud Bolt + 2 Heavy Nuts 5/8" L=100MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	6	24	

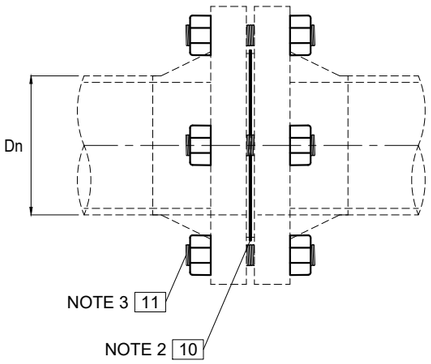
TP-STD-300RF | 300 RF | STANDARD FOR BLIND POINT

TP-STD-300RF-BLF/Dn
TP-STD-300RF-GSK/Dn

MATERIAL LIST			
STD	**POS.**	**DESCRIPTION**	**Q.TY**
TP-STD-300RF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-300RF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=75 MM	4
TP-STD-300RF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=80 MM	4
TP-STD-300RF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-300RF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=95 MM	4
TP-STD-300RF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-300RF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-300RF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-300RF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø4" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=115 MM	8
TP-STD-300RF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø6" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=125 MM	12
TP-STD-300RF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø8" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=145 MM	12
TP-STD-300RF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø10" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=160 MM	16
TP-STD-300RF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø12" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=175 MM	16
TP-STD-300RF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø14" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=180 MM	20
TP-STD-300RF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø16" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=195 MM	20
TP-STD-300RF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø18" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=200 MM	24
TP-STD-300RF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø20" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=210 MM	24
TP-STD-300RF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø24" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/2" L=235 MM	24



TP-STD-300RF-BLF/Dn
BLIND FLANGE



TP-STD-300RF-GSK/Dn
GASKET ONLY

NOTES

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

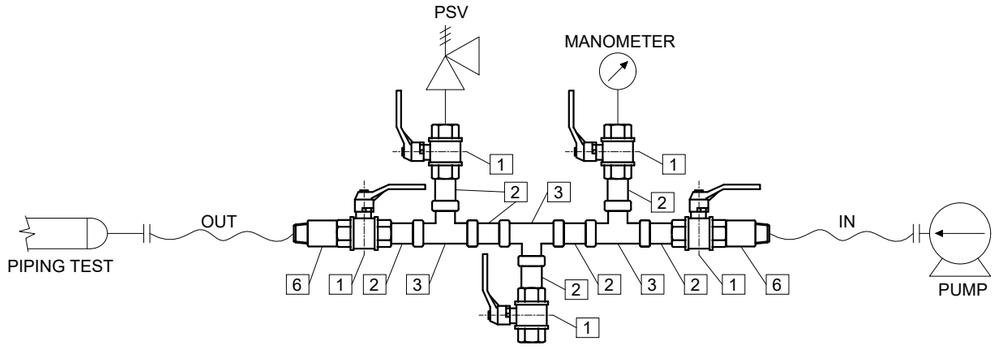
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-300RF
TP-STD-300RF-BLF/Dn
TP-STD-300RF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_300RF	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

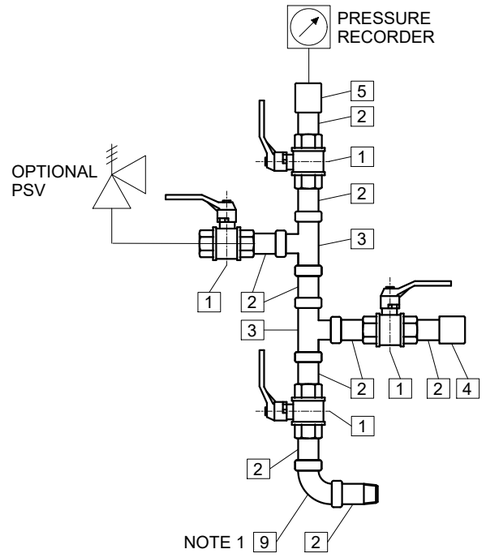
TP-STD-FILL

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
20	N-028	028	1	03HSS	N	3,38	40S	N/A	1"-N-028-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002
45	N-124	124	1	03HSS	N	3,38	40S	N/A	1"-N-124-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002
46	N-125	125	1	03HSS	N	3,38	40S	N/A	1"-N-125-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002
47	N-126	126	1	03HSS	N	3,38	40S	N/A	1"-N-126-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002
48	N-127	127	1	03HSS	N	3,38	40S	N/A	1"-N-127-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002
49	N-128	128	1	03HSS	N	3,38	40S	N/A	1"-N-128-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002
64	HY-153	153	1	03HSS	N	3,38	40S	N/A	1"-HY-153-03HSS-N	123A90-DDL-PR-PID-80015	40,00	25 / 64	25-01 / 64-10	TP-014/TP-020	Water	60.00	Hydrogen	Stainless Steel	INF	II	6A	RAL 9002
90	HY-186	186	1	03HSS	N	3,38	40S	N/A	1"-HY-186-03HSS-N	123A90-DDL-PR-PID-80016	40,00	25 / 64	25-02 / 64-10	TP-015/TP-020	Water	60.00	Hydrogen	Stainless Steel	INF	II	6A	RAL 9002
91	HY-187	187	1	03HSS	N	3,38	40S	N/A	1"-HY-187-03HSS-N	123A90-DDL-PR-PID-80017	40,00	25 / 64	25-03 / 64-10	TP-016/TP-020	Water	60.00	Hydrogen	Stainless Steel	INF	II	6A	RAL 9002
92	HY-188	188	1	03HSS	N	3,38	40S	N/A	1"-HY-188-03HSS-N	123A90-DDL-PR-PID-80018	40,00	25 / 64	25-04 / 64-10	TP-017/TP-020	Water	60.00	Hydrogen	Stainless Steel	INF	II	6A	RAL 9002
93	HY-189	189	1	03HSS	N	3,38	40S	N/A	1"-HY-189-03HSS-N	123A90-DDL-PR-PID-80019	40,00	25 / 64	25-05 / 64-10	TP-018/TP-020	Water	60.00	Hydrogen	Stainless Steel	INF	II	6A	RAL 9002
94	HY-190	190	1	03HSS	N	3,38	40S	N/A	1"-HY-190-03HSS-N	123A90-DDL-PR-PID-80020	40,00	25 / 64	25-06 / 64-10	TP-019/TP-020	Water	60.00	Hydrogen	Stainless Steel	INF	II	6A	RAL 9002
122	N-257	257	1	03HSS	N	3,38	40S	N/A	1"-N-257-03HSS-N	123A90-DDL-PR-PID-80027	40,00	64	64-10	TP-020	Water	60.00	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

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

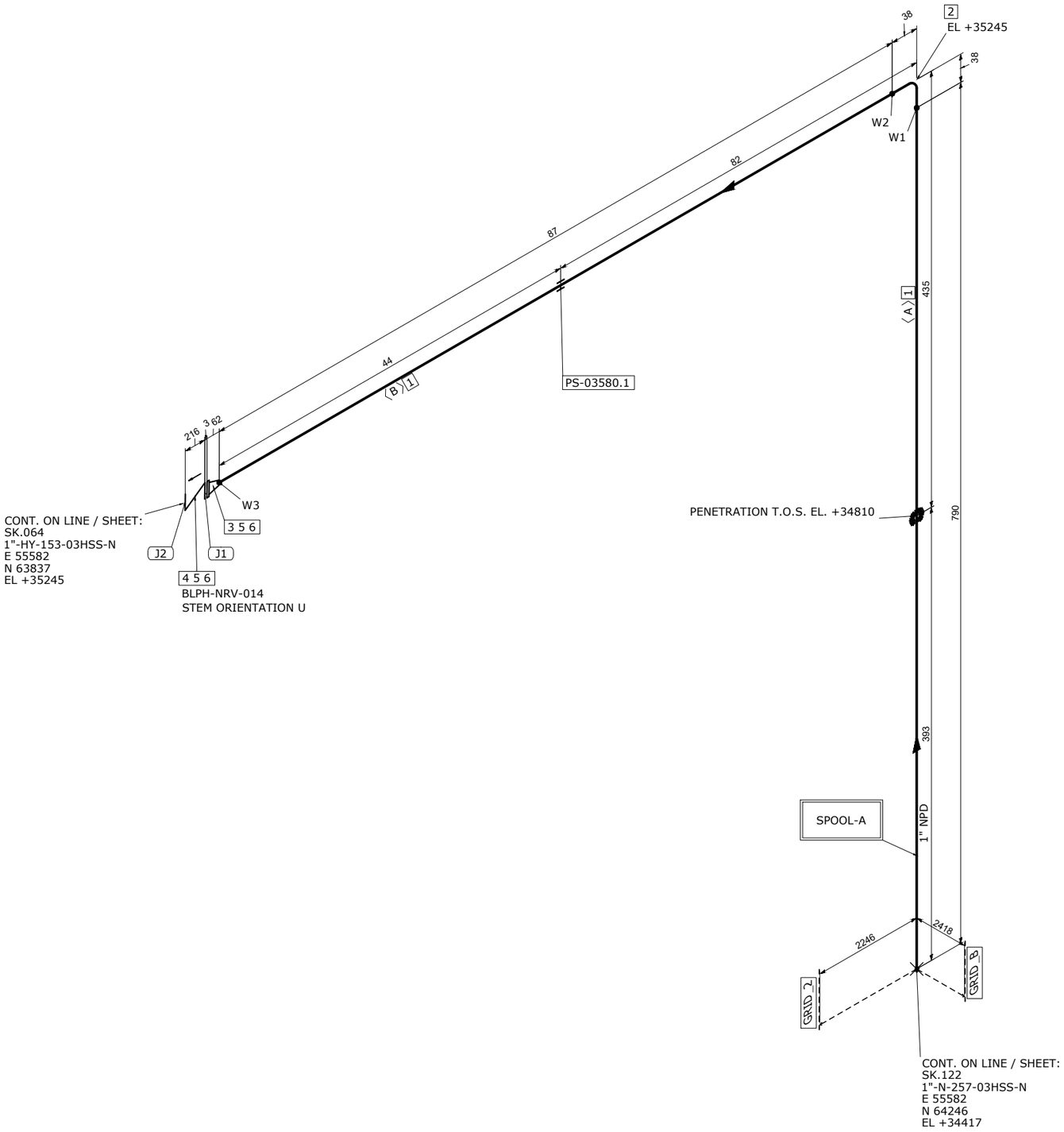
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
25	123A90-FDL-PP-DI-00020-01	**020**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-028-03HSS-N	20/08/2024													**00**	**02**		**TP-020**
66	123A90-FDL-PP-DI-00045-01	**045**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-124-03HSS-N	20/08/2024													**00**	**02**		**TP-020**
67	123A90-FDL-PP-DI-00046-01	**046**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-125-03HSS-N	20/08/2024													**00**	**02**		**TP-020**
68	123A90-FDL-PP-DI-00047-01	**047**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-126-03HSS-N	20/08/2024													**00**	**02**		**TP-020**
69	123A90-FDL-PP-DI-00048-01	**048**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-127-03HSS-N	20/08/2024													**00**	**02**		**TP-020**
70	123A90-FDL-PP-DI-00049-01	**049**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-128-03HSS-N	20/08/2024													**00**	**02**		**TP-020**
88	123A90-FDL-PP-DI-00064-01	**064**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-HY-153-03HSS-N	30/07/2024	03/09/2024	17/09/2024											**02**	**05**		**TP-014/TP-020**
121	123A90-FDL-PP-DI-00090-01	**090**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-HY-186-03HSS-N	30/07/2024	03/09/2024	17/09/2024											**02**	**05**		**TP-015/TP-020**
122	123A90-FDL-PP-DI-00091-01	**091**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-HY-187-03HSS-N	30/07/2024	03/09/2024	17/09/2024											**02**	**05**		**TP-016/TP-020**
123	123A90-FDL-PP-DI-00092-01	**092**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-HY-188-03HSS-N	30/07/2024	03/09/2024	17/09/2024											**02**	**05**		**TP-017/TP-020**
124	123A90-FDL-PP-DI-00093-01	**093**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-HY-189-03HSS-N	30/07/2024	03/09/2024	17/09/2024											**02**	**05**		**TP-018/TP-020**
125	123A90-FDL-PP-DI-00094-01	**094**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-HY-190-03HSS-N	30/07/2024	03/09/2024	17/09/2024											**02**	**05**		**TP-019/TP-020**
155	123A90-FDL-PP-DI-00122-01	**122**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-257-03HSS-N	20/08/2024	17/09/2024												**01**	**05**		**TP-020**
156	123A90-FDL-PP-DI-00122-02	**122**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-257-03HSS-N	20/08/2024	17/09/2024												**01**	**05**		**TP-020**



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03580.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

64-10-TP-020

MASTER

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-028-03HSS-N

SK.020

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00020 | SHEET / OF: 1/1 | REV.: 00

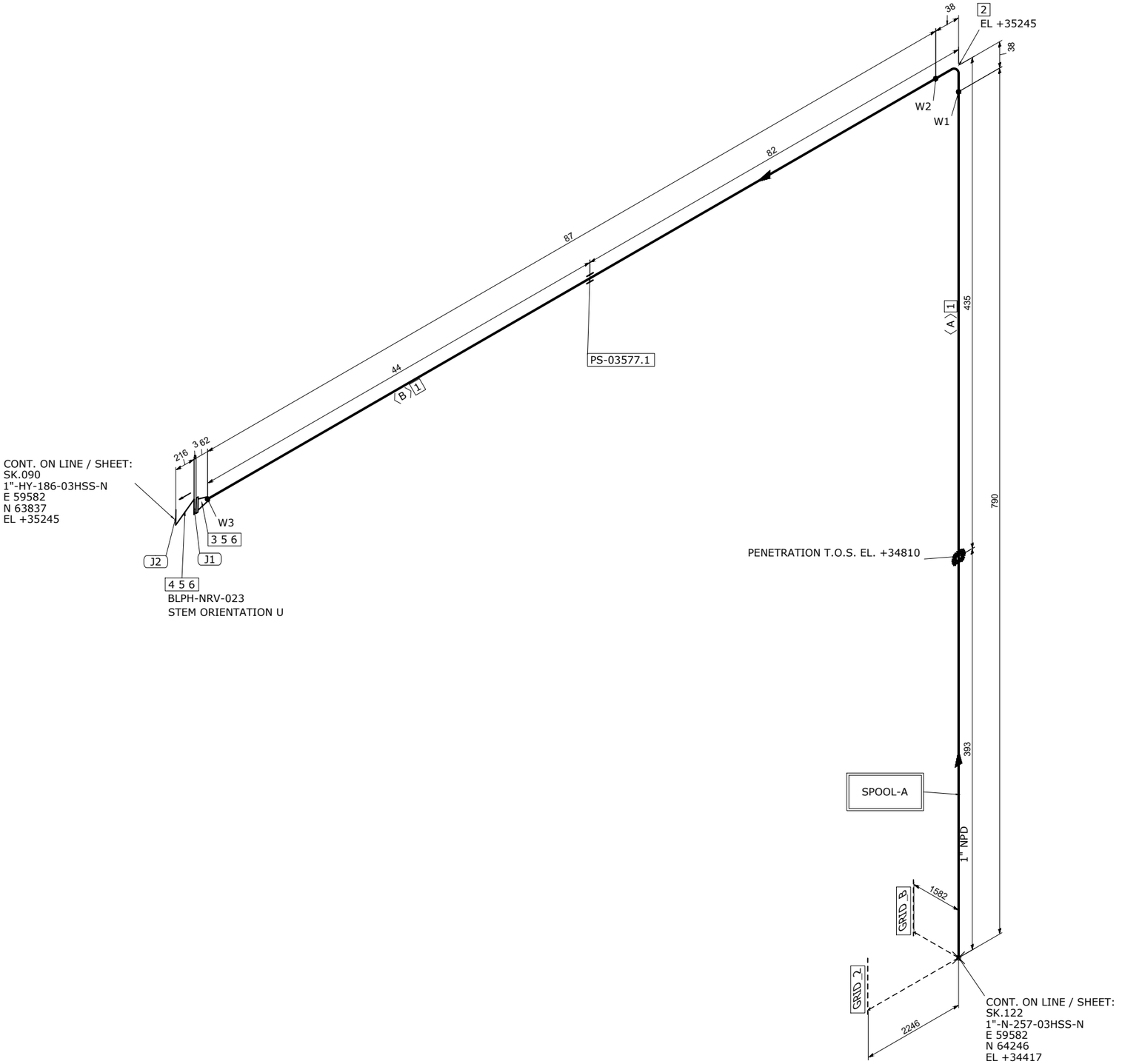
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03577.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

64-10-TP-020

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80016
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

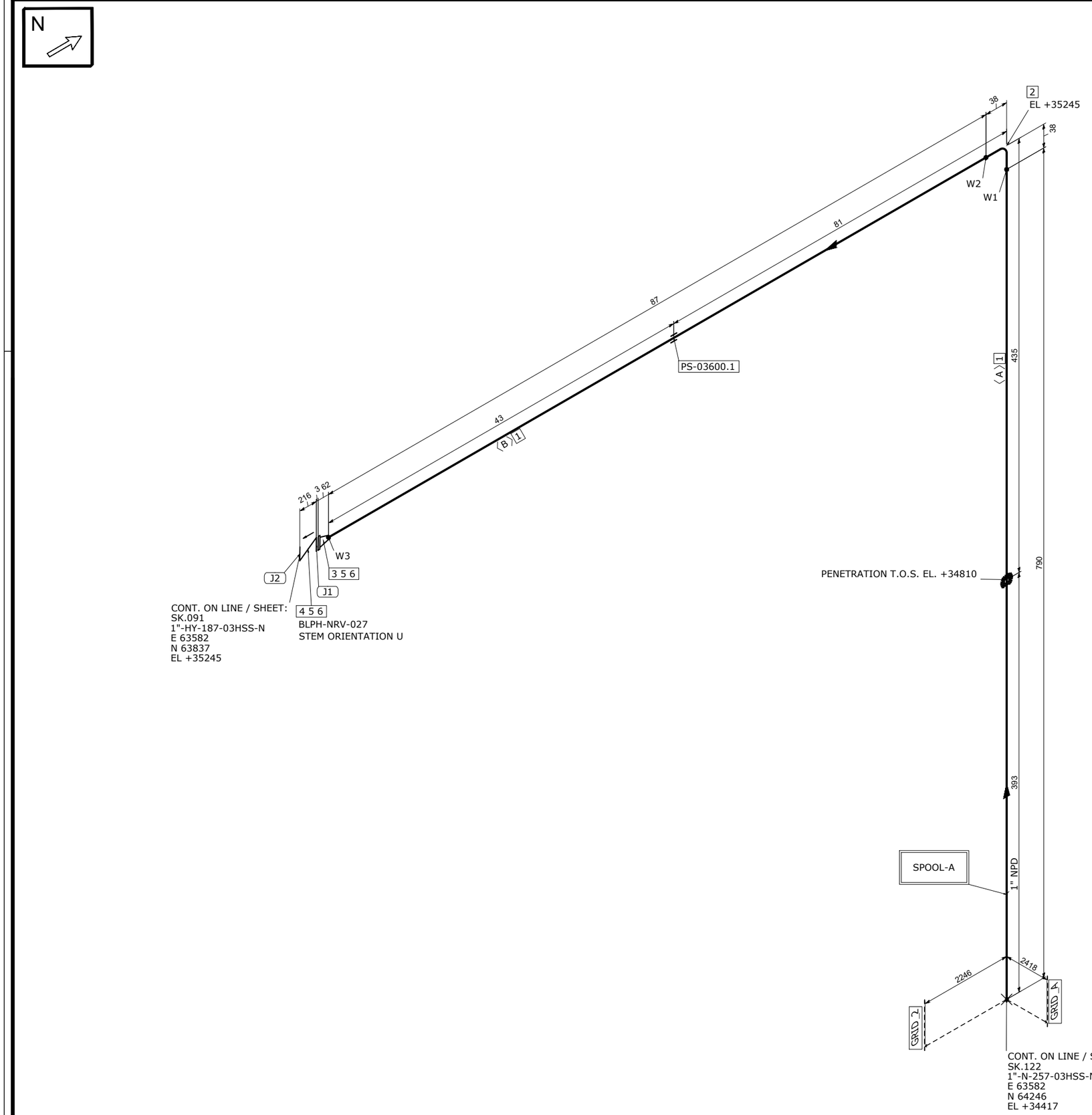
CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-124-03HSS-N

SK.045

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-00045	SHEET / OF	1/1
				DATE	20-08-2024
				REV.	00



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03600.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-125-03HSS-N

SK.046

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00046 | SHEET / OF: 1/1 | REV.: 00

64-10-TP-020

MASTER

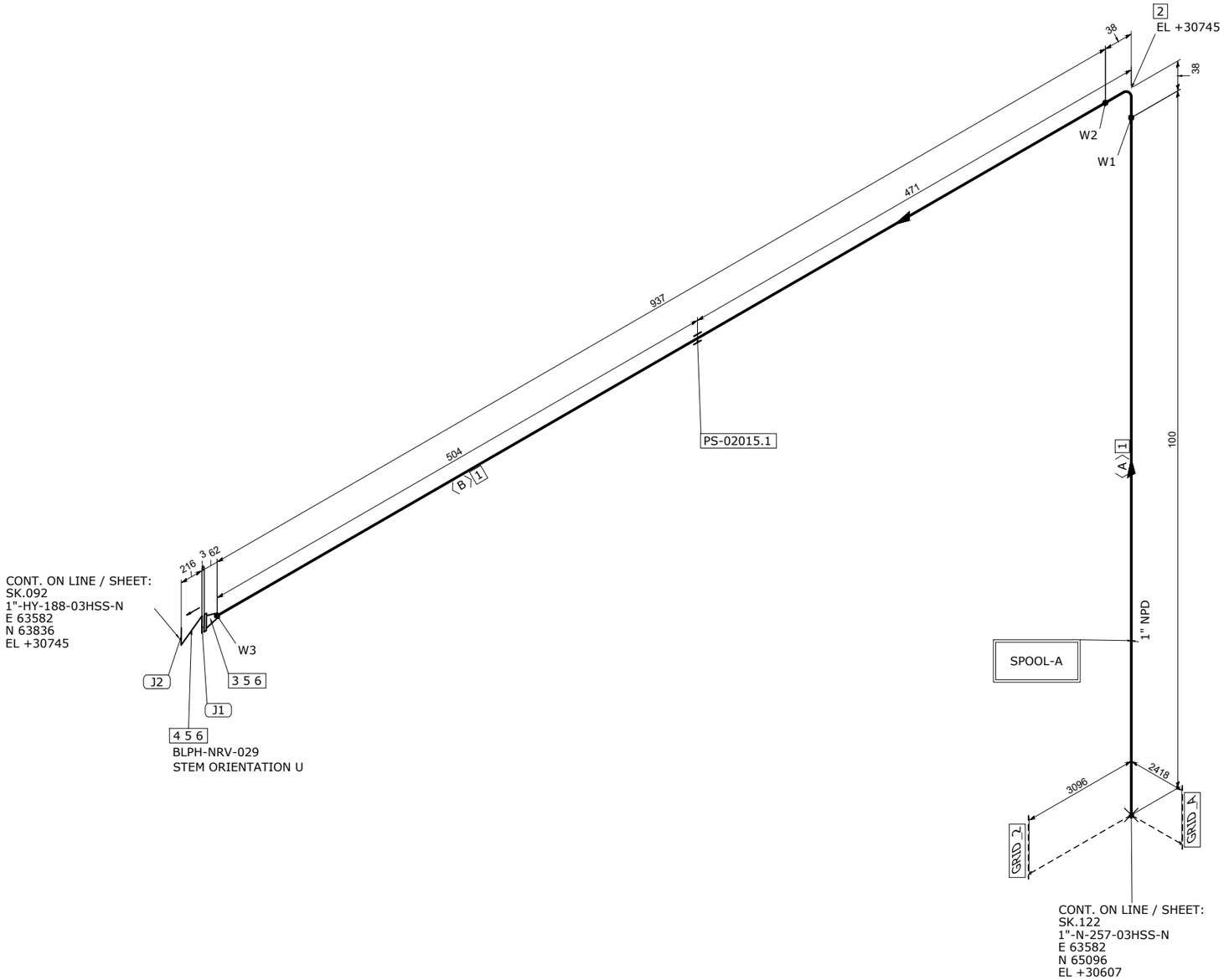
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 60	[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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02015.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

64-10-TP-020

MASTER

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-126-03HSS-N

SK.047

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00047 | SHEET / OF: 1/1 | REV.: 00

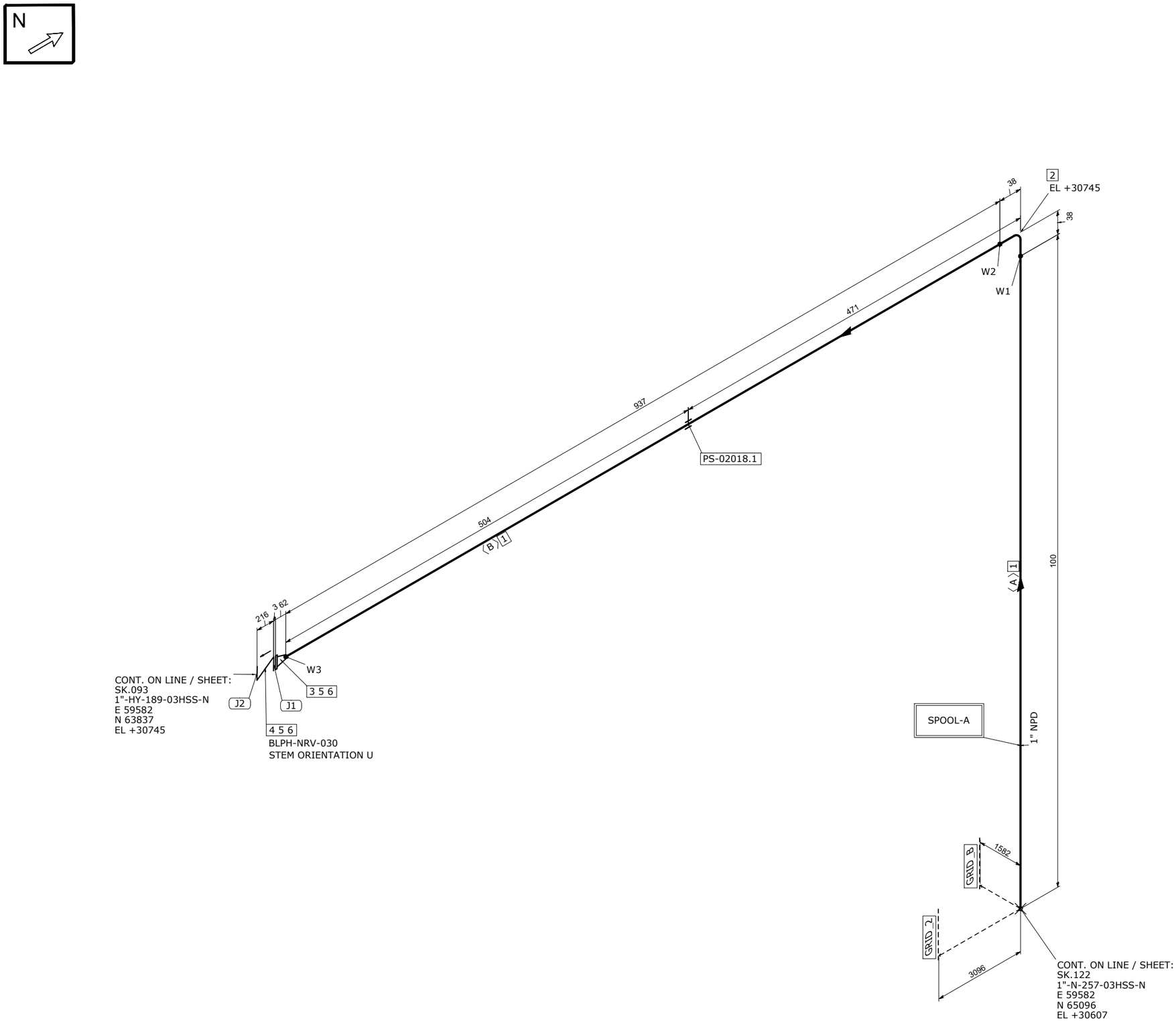
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02018.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-127-03HSS-N

SK.048

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00048 | SHEET / OF: 1/1 | REV.: 00

64-10-TP-020

MASTER

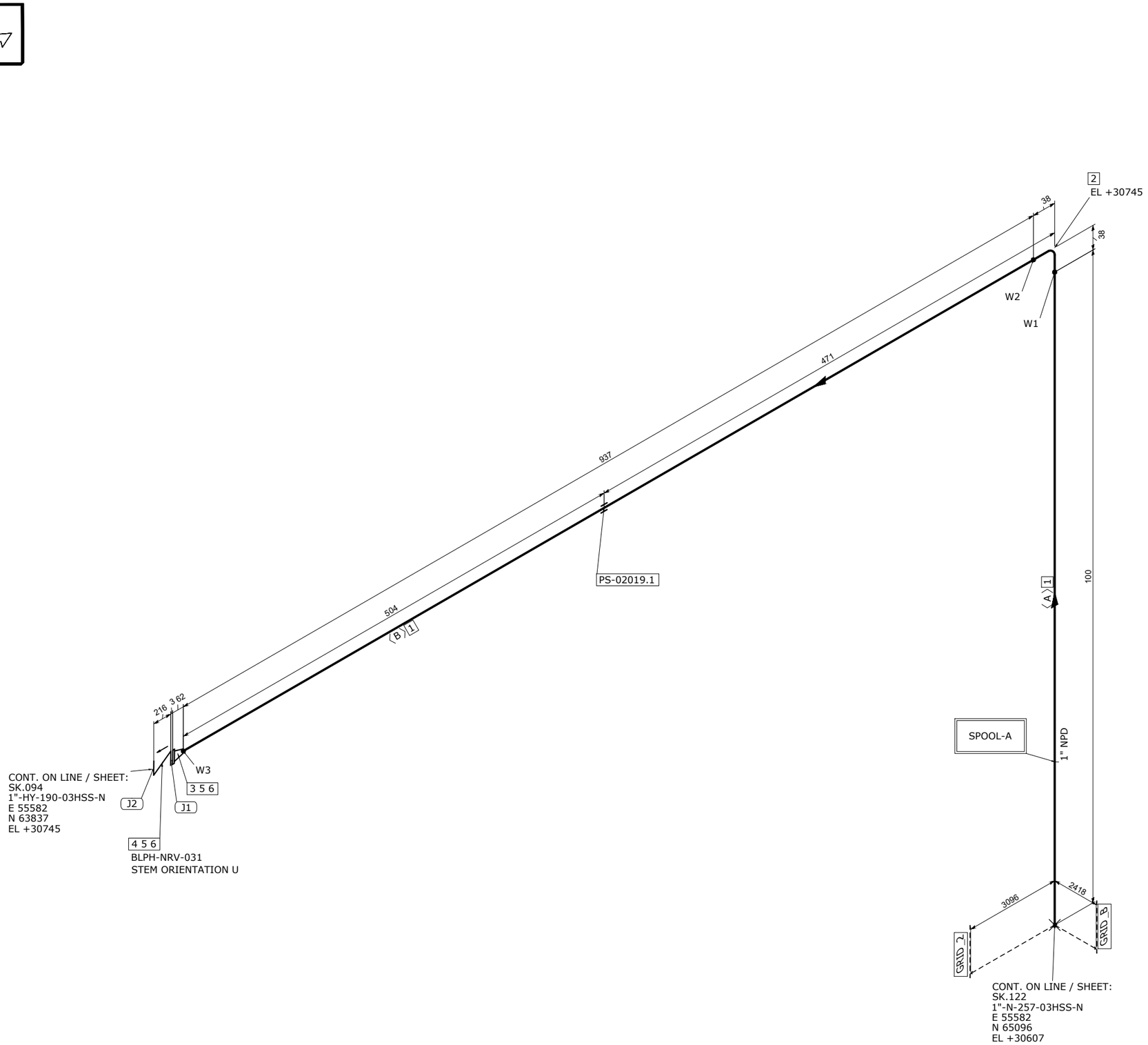
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 60	[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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02019.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-128-03HSS-N

SK.049

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00049 | SHEET / OF: 1/1 | REV.: 00

64-10-TP-020

MASTER

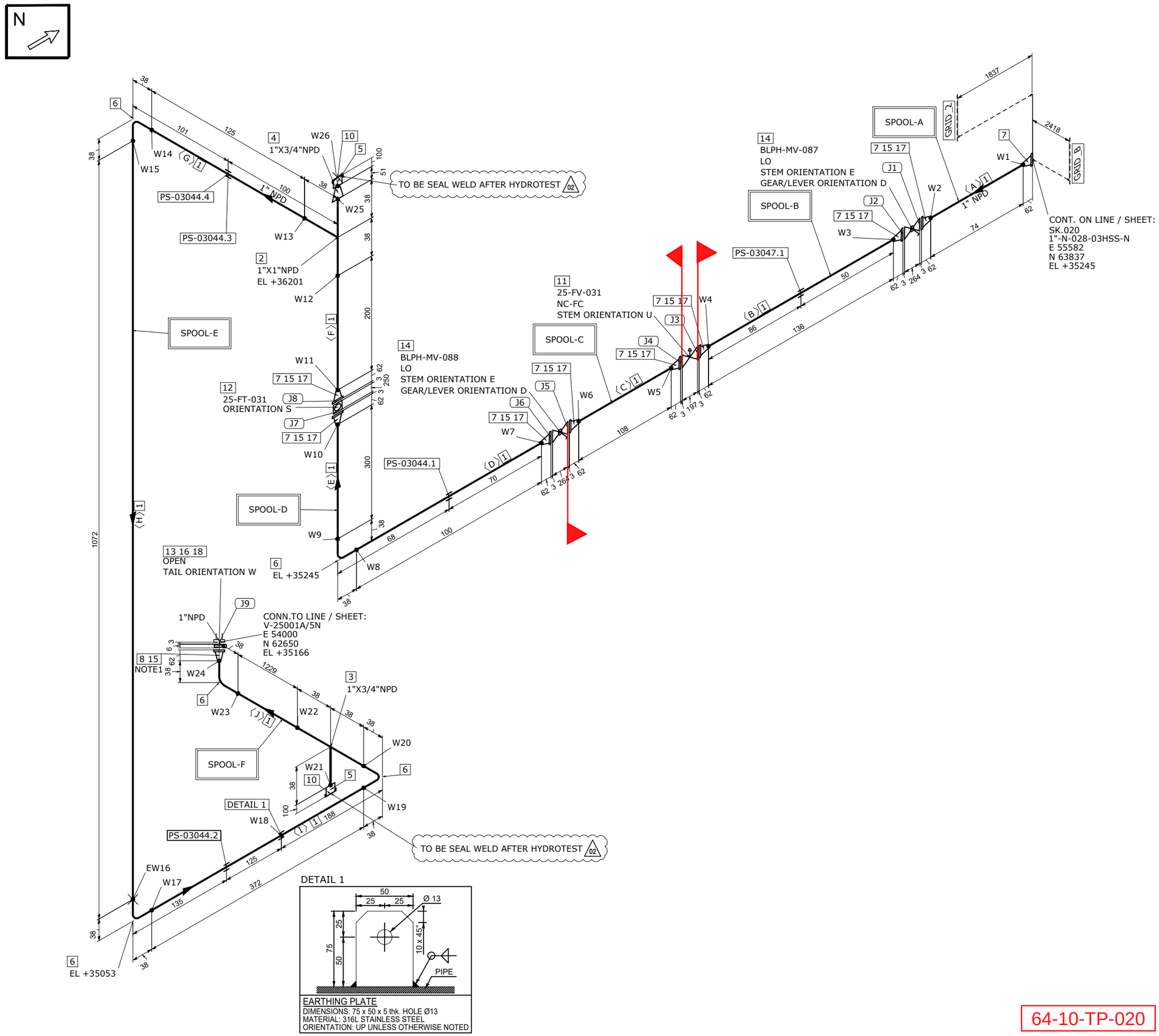
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	20.4
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	82.4
OVERALL WEIGHT [kg]	111.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03047.1
PS-03044.1
PS-03044.3
PS-03044.4
PS-03044.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	82.4

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-153-03HSS-N

SK.064

64-10-TP-020

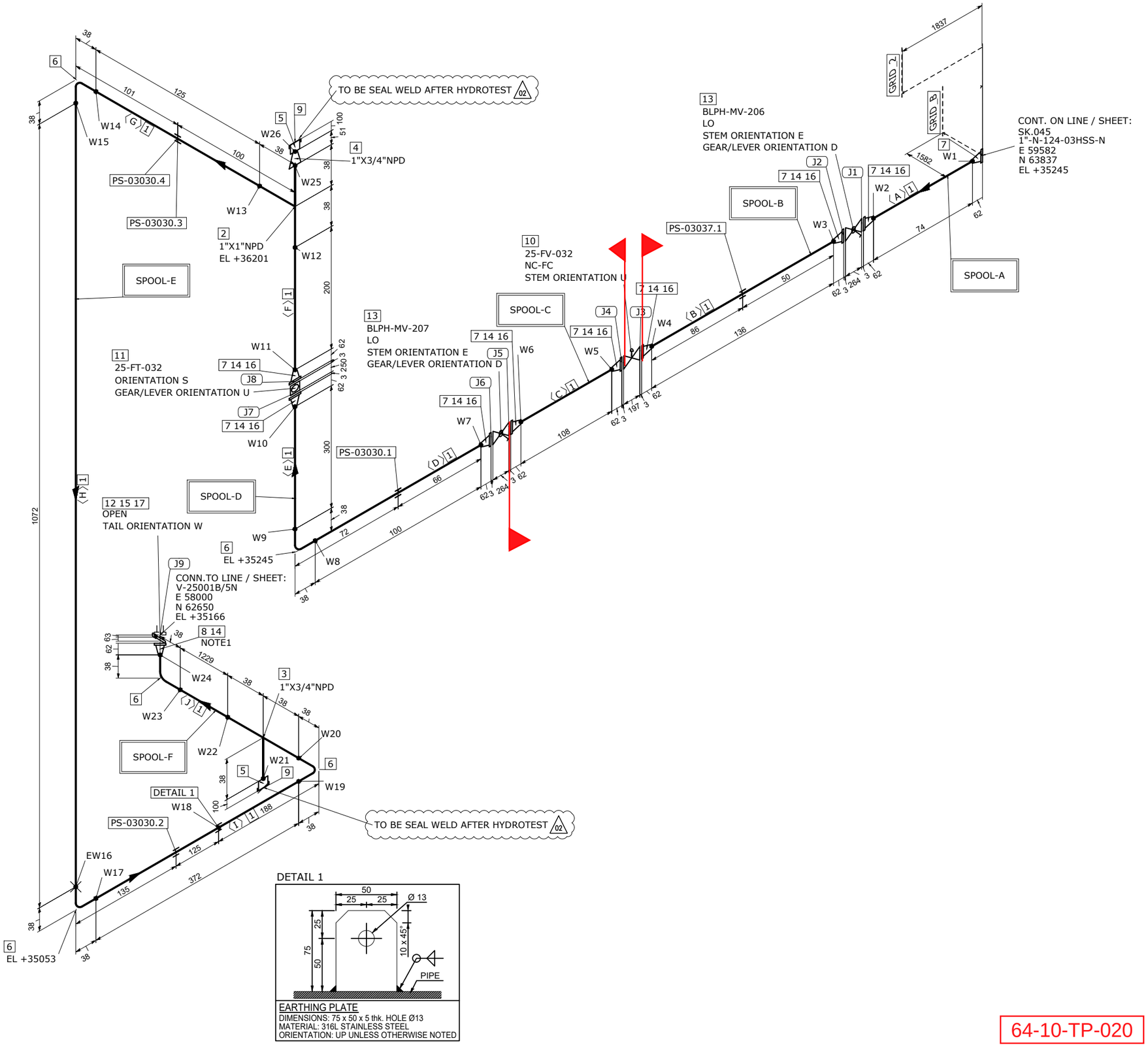
MASTER

LINE DATA								
NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80015
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00064	SHEET / OF 1/1	REV. 02



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03037.1
PS-03030.1
PS-03030.3
PS-03030.4
PS-03030.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-186-03HSS-N

SK.090

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80016
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

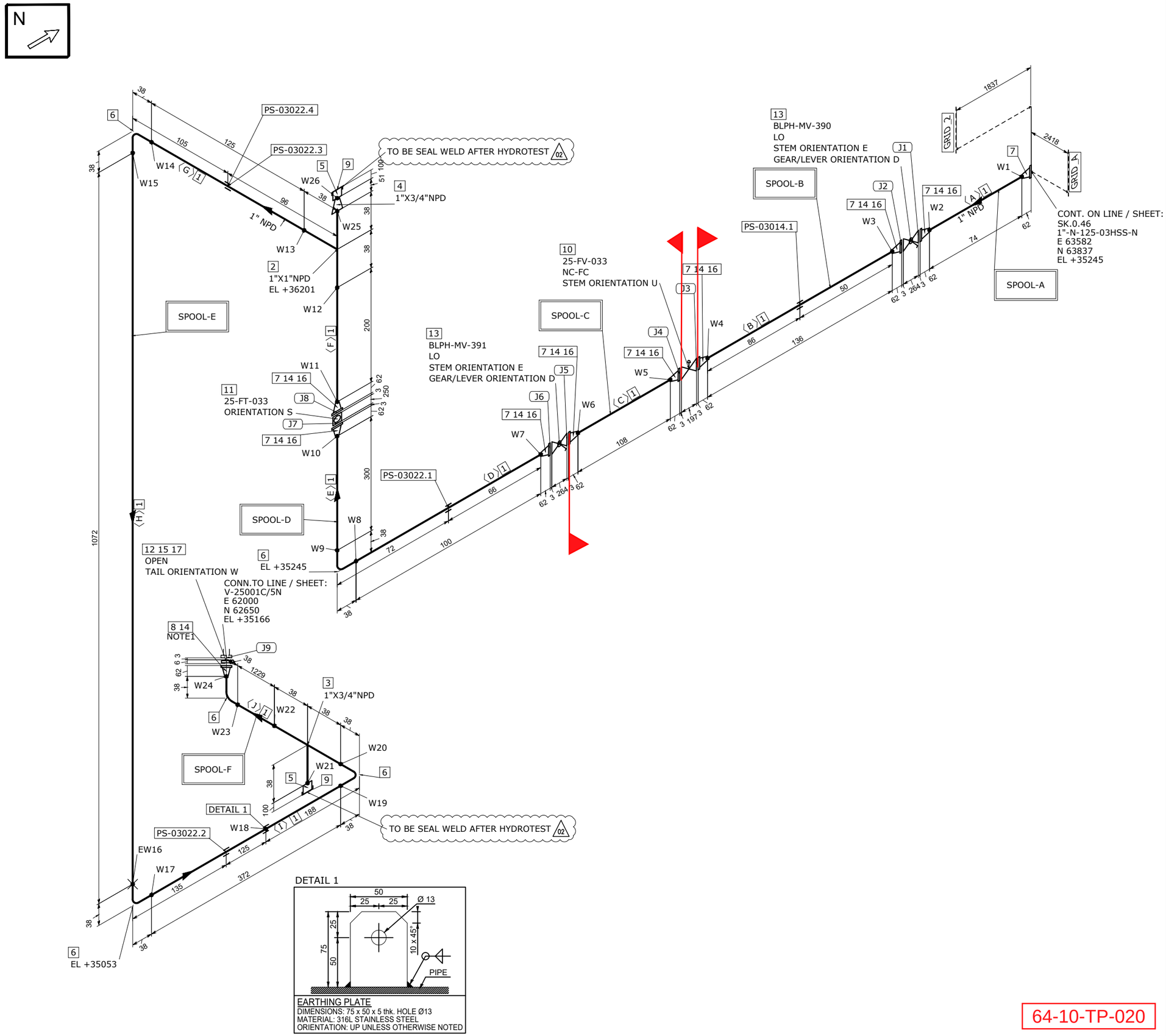
NOTES

1.JACKSCREWS POSITION N/S

64-10-TP-020

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	17-09-2024
FORMAT	A3
DRAWING NO.	123A90-FDL-PP-DI-00090
SHEET / OF	1/1
REV.	02



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03014.1
PS-03022.1
PS-03022.3
PS-03022.4
PS-03022.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-187-03HSS-N

SK.091

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00091
SHEET / OF	1/1	REV.	02

64-10-TP-020

MASTER

LINE DATA

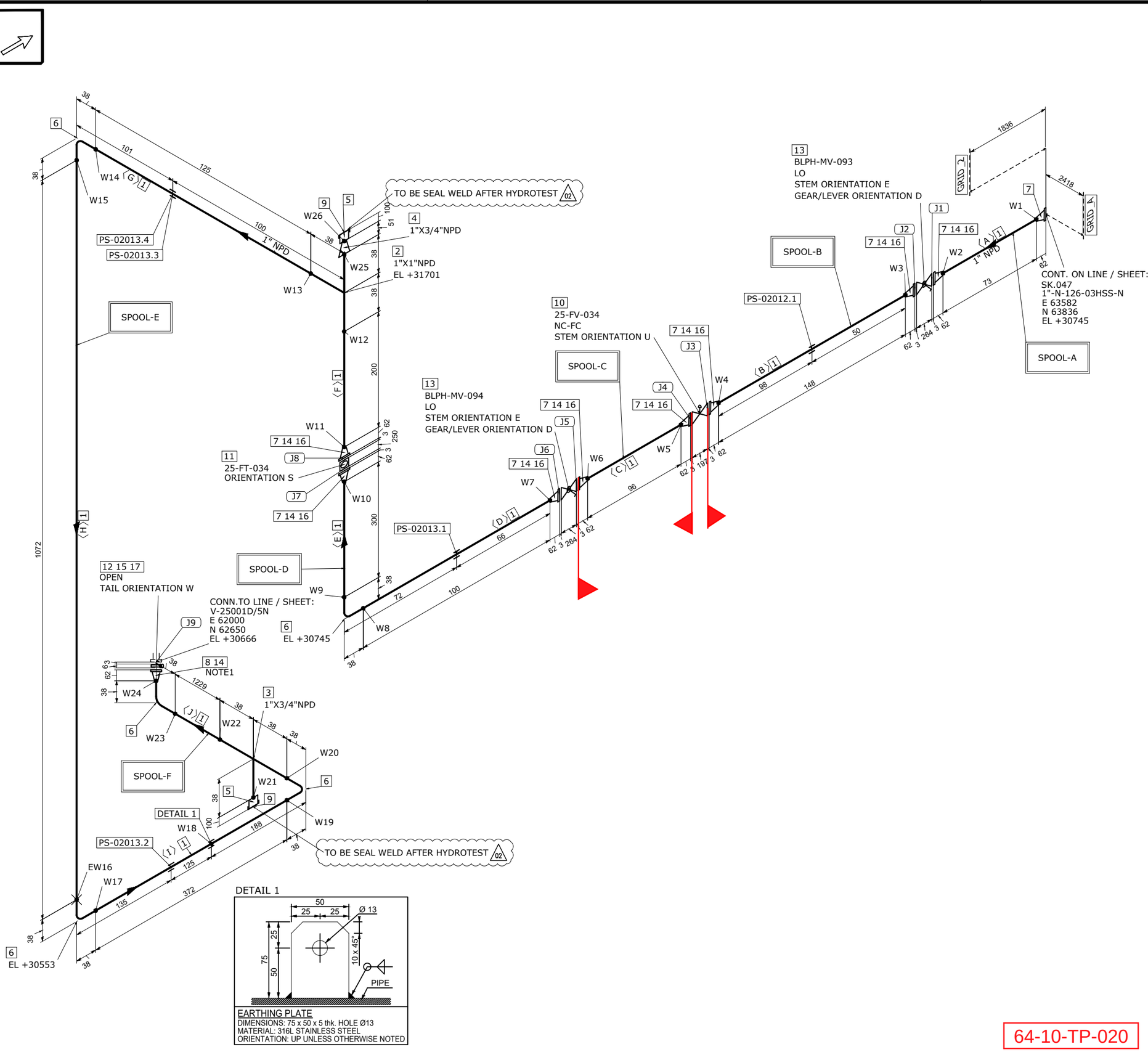
NDT INSPECTION CATEGORY	1		PED CATEGORY	II			
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80017
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	73	BEVEL	BEVEL
B	1	148	BEVEL	BEVEL
C	1	96	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02012.1
PS-02013.1
PS-02013.3
PS-02013.4
PS-02013.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-188-03HSS-N
SK.092

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00092
SHEET / OF: 1/1
REV.: 02

64-10-TP-020

MASTER

LINE DATA

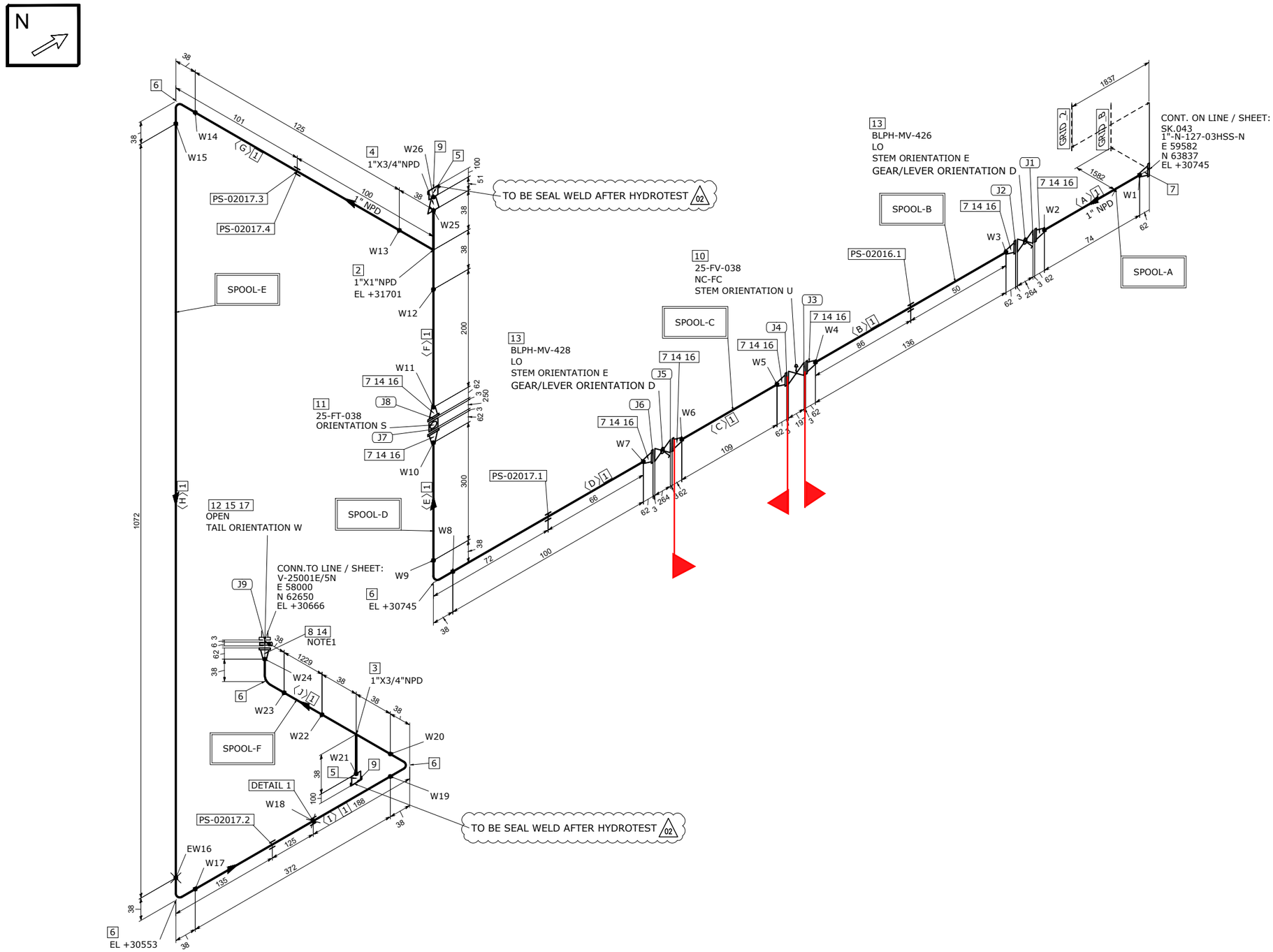
NDT INSPECTION CATEGORY	1		PED CATEGORY	II			
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

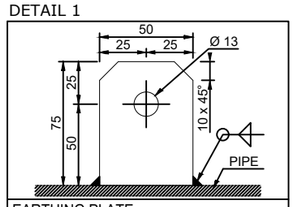
P&ID	123A90-DDL-PR-PID-80018
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02016.1
PS-02017.1
PS-02017.3
PS-02017.4
PS-02017.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-189-03HSS-N
SK.093

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00093 | SHEET / OF: 1/1 | REV.: 02

64-10-TP-020

MASTER

LINE DATA

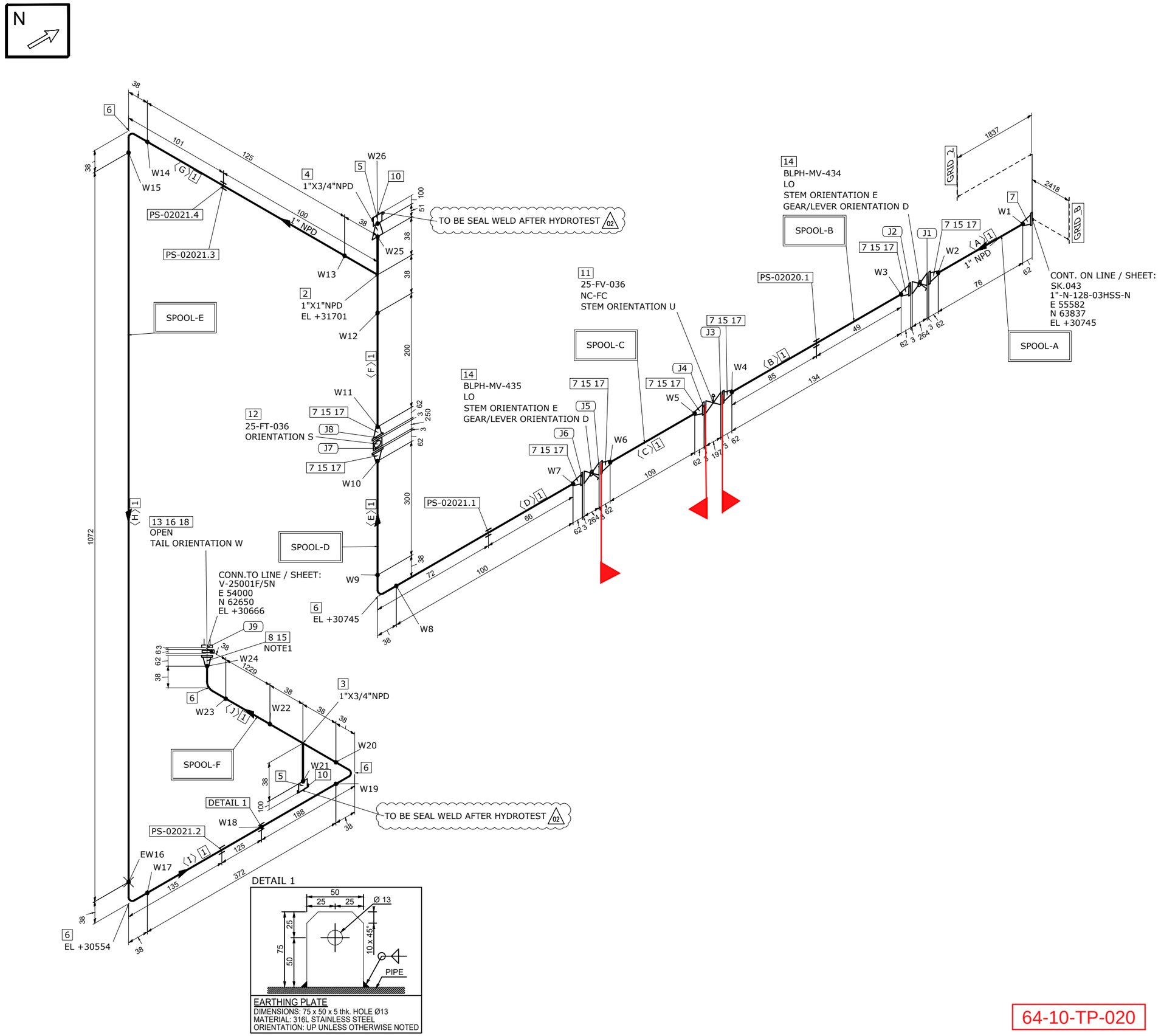
NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80019
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	76	BEVEL	BEVEL
B	1	134	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02020.1
PS-02021.1
PS-02021.3
PS-02021.4
PS-02021.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.9
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-190-03HSS-N

SK.094

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00094
SHEET / OF	1/1	REV.	02

64-10-TP-020

MASTER

LINE DATA

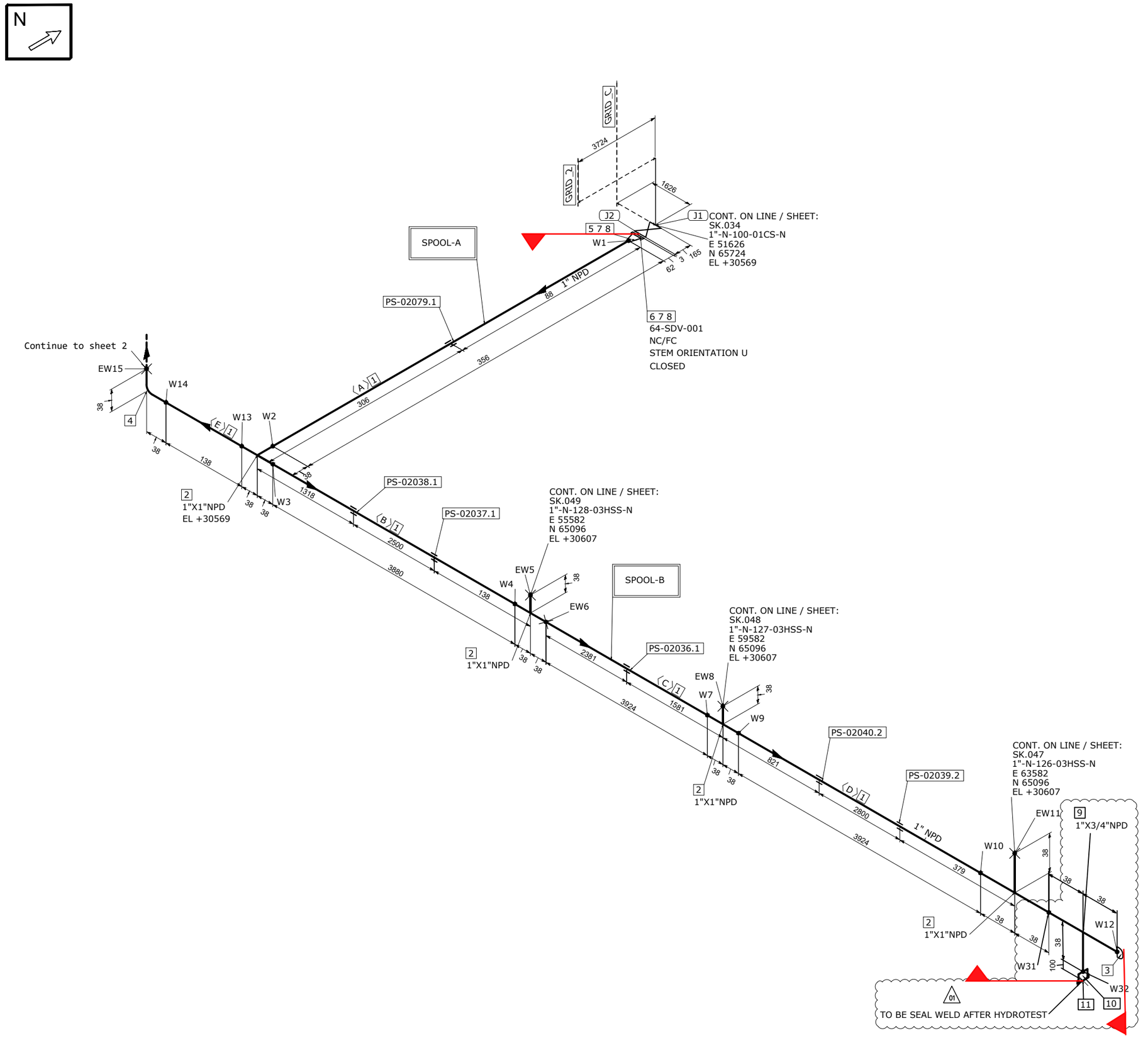
NDT INSPECTION CATEGORY	1		PED CATEGORY	II			
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80020
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	12.2M	31.0
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	1.4
3	1	CAP0SS01030100	Cap ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8
9	1X3/4	TER0SS01171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.4
10	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1		ON/OFF Ball Actuator Valve - 300#RF Flanged	1	41.0
7	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
8	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8
11	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2

FABRICATION WEIGHT [kg]	35.0
ERECTION WEIGHT [kg]	43.1
OVERALL WEIGHT [kg]	78.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
EW5	1	BW
EW6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
EW11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
EW15	1	BW
W31	1	BW
W32	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	356	BEVEL	BEVEL
B	1	3880	BEVEL	BEVEL
C	1	3924	BEVEL	BEVEL
D	1	3924	BEVEL	BEVEL
E	1	138	BEVEL	BEVEL

SUPPORT LIST

PS-02079.1
PS-02038.1
PS-02037.1
PS-02036.1
PS-02040.2
PS-02039.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	13.8
B	5.75	21.2
MONT	5	43.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-257-03HSS-N
SK.122

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00122
SHEET / OF: 1/2
REV.: 01

64-10-TP-020

MASTER

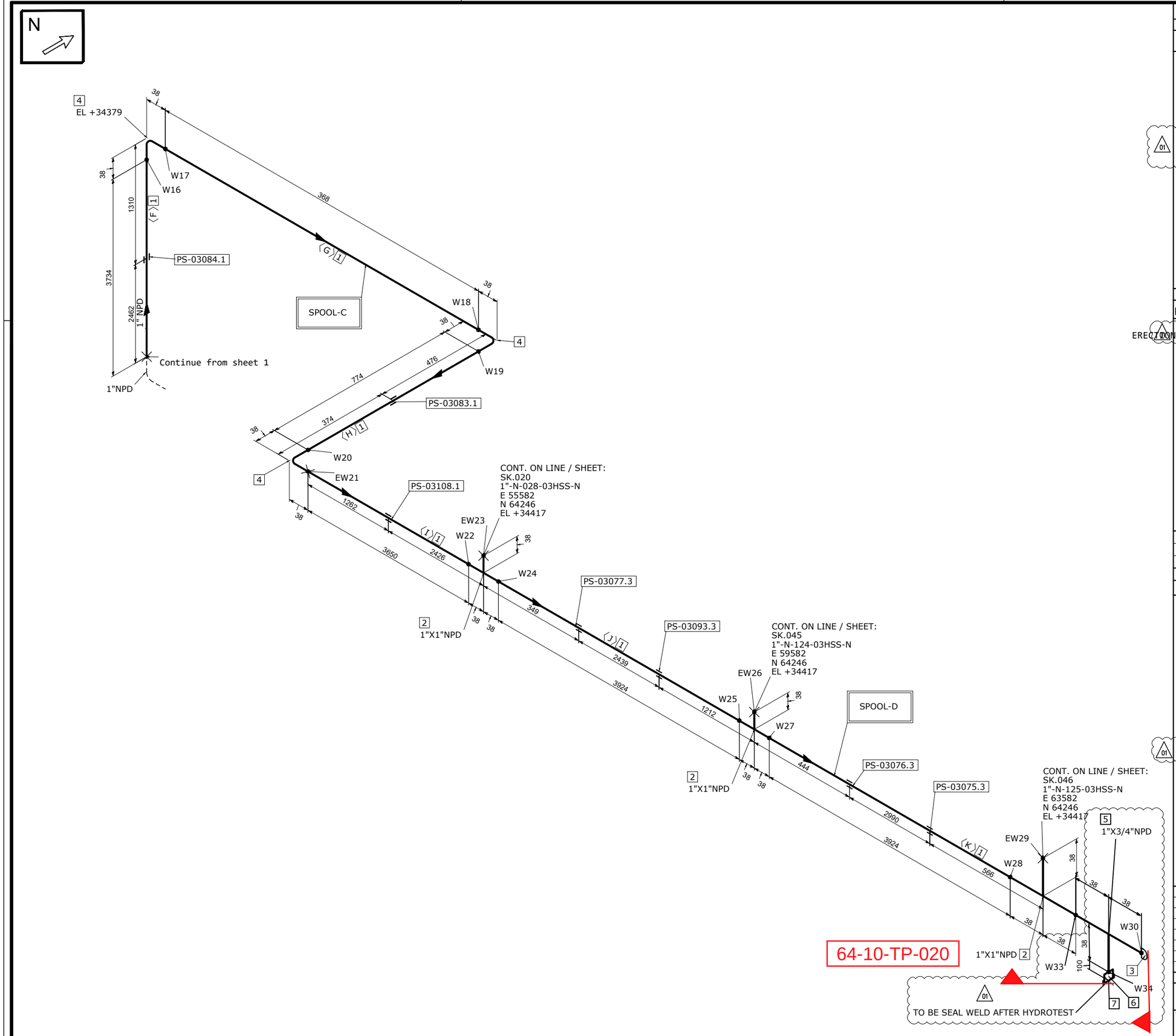
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 60	[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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	16.4M	41.6
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	3	1.0
3	1	CAP0SS01030100	Cap ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	3	0.4
5	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.4
01 6	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2
		FLW0SS03270100			

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
ERECTION 01 7	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2

FABRICATION WEIGHT [kg]	43.7
ERECTION WEIGHT [kg] 01	0.2
OVERALL WEIGHT [kg]	43.9

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W16	1	BW
W17	1	BW
W18	1	BW
W19	1	BW
W20	1	BW
EW21	1	BW
W22	1	BW
EW23	1	BW
W24	1	BW
W25	1	BW
EW26	1	BW
W27	1	BW
W28	1	BW
EW29	1	BW
W30	1	BW
01 W33	1	BW
W34	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
F	1	3734	BEVEL	BEVEL
G	1	368	BEVEL	BEVEL
H	1	774	BEVEL	BEVEL
I	1	3650	BEVEL	BEVEL
J	1	3924	BEVEL	BEVEL
K	1	3924	BEVEL	BEVEL

SUPPORT LIST

PS-03084.1
PS-03083.1
PS-03108.1
PS-03077.3
PS-03093.3
PS-03076.3
PS-03075.3

SPOOL	WELD [inches]	WEIGHT [kg]
C	5	12.8
D	7.75	30.9
01		
MONT	4	0.2

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-257-03HSS-N

SK.122

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00122 | SHEET / OF: 2/2 | REV.: 01

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 60 [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

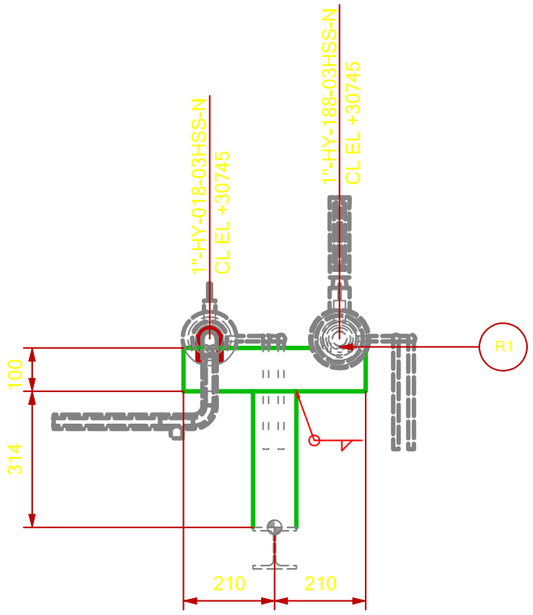
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MASTER

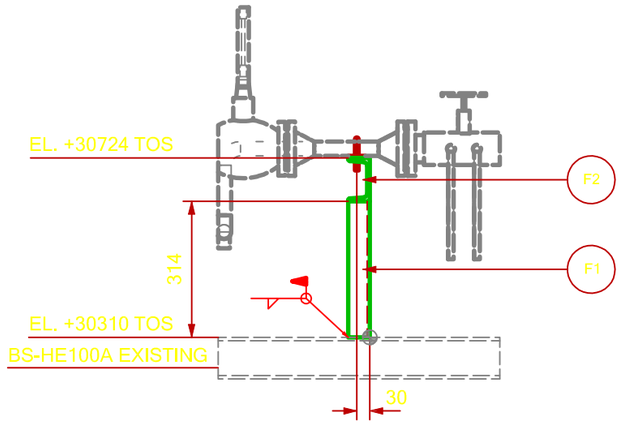
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

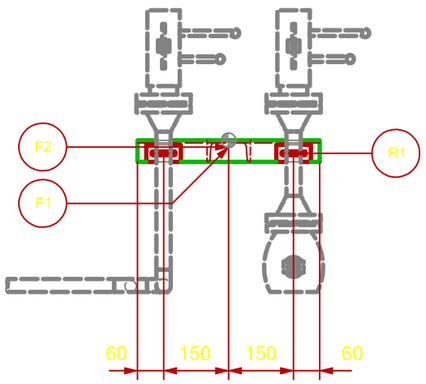
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-02012	B1	PIP	UPPER DECK		1"-HY-188-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02015	B1	PIP	UPPER DECK		1"-N-126-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02016	B1	PIP	UPPER DECK		1"-HY-189-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02018	B1	PIP	UPPER DECK		1"-N-127-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02019	B1	PIP	UPPER DECK		1"-N-128-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02020	B1	PIP	UPPER DECK		1"-HY-190-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02036	B1	PIP	UPPER DECK		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02037	B1	PIP	UPPER DECK		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02038	B1	PIP	UPPER DECK		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02039	B2	PIP	UPPER DECK		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02040	B2	PIP	UPPER DECK		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-02079	B1	PIP	UPPER DECK		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03014	B1	PIP	PAU		1"-HY-187-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03037	B1	PIP	PAU		1"-HY-186-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03047	B1	PIP	PAU		1"-HY-153-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03075	B3	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03076	B3	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03077	B3	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03083	B1	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03084	B1	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03093	B3	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03108	B1	PIP	PAU		1"-N-257-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03577	B1	PIP	PAU		1"-N-124-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03580	B1	PIP	PAU		1"-N-028-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020
PS-03600	B1	PIP	PAU		1"-N-125-03HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-020



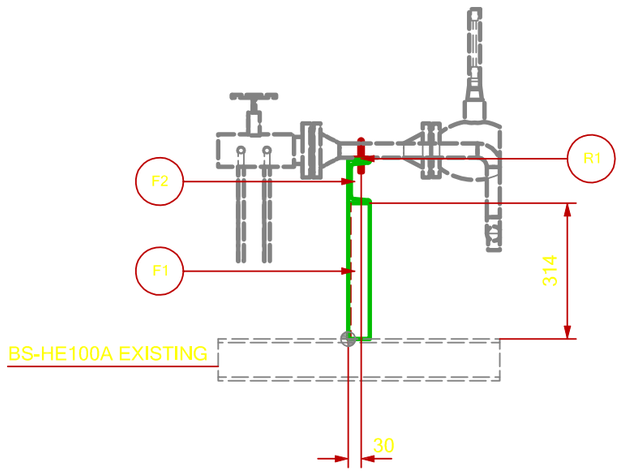
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VIEW LOOKING WEST



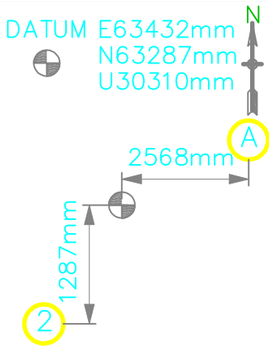
PLAN VIEW

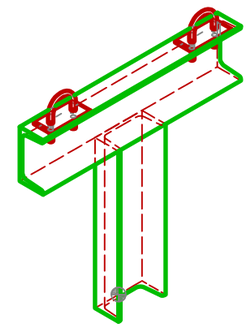


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1"	-	-	2	-	0,29	-
F1	BEAM	UPN100	Carbon Steel	314	1	10,57	3,31	0,119
F2	BEAM	UPN100	Carbon Steel	420	1	10,57	4,44	0,159
						TOTAL	8,3	0,28





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

CROSSWIND

ROSETTI MARINO

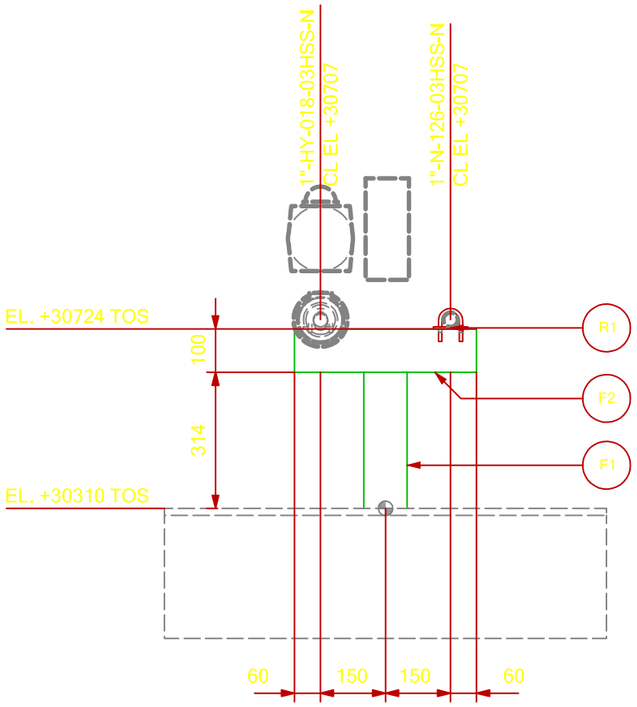
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

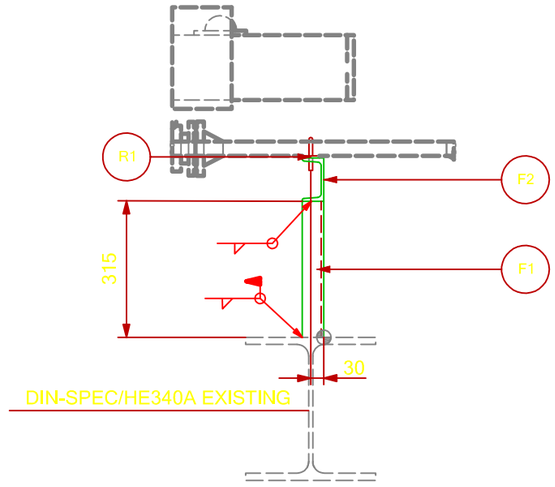
PS-02012

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

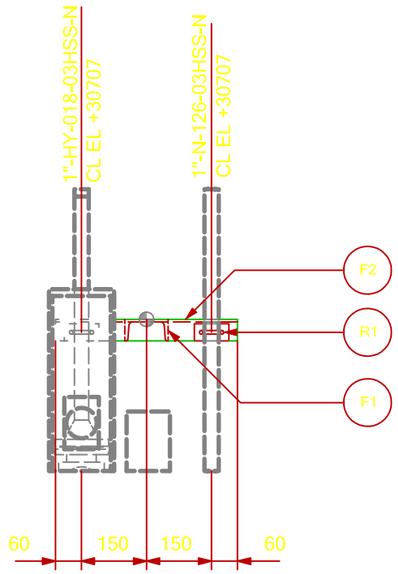
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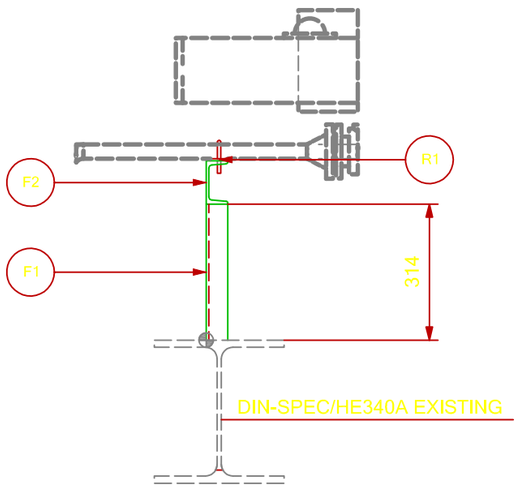
VIEW LOOKING NORTH



VIEW LOOKING WEST



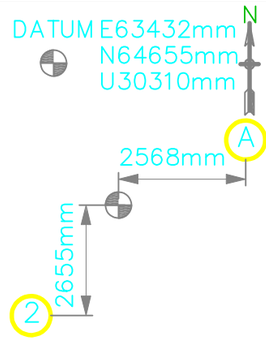
PLAN VIEW

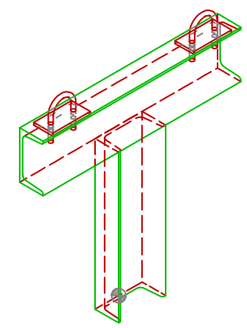


VIEW LOOKING EAST

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"	-	-	2	-	0,29	-
F1	BEAM	UPN100	Carbon Steel	313	1	10,57	3,31	0,119
F2	BEAM	UPN100	Carbon Steel	420	1	10,57	4,44	0,159
						TOTAL	8,3	0,28





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

CROSSWIND

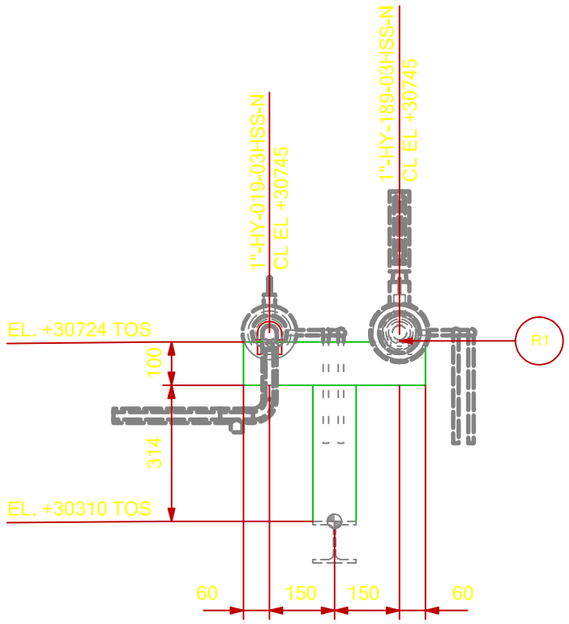
ROSETTI MARINO

TITLE :

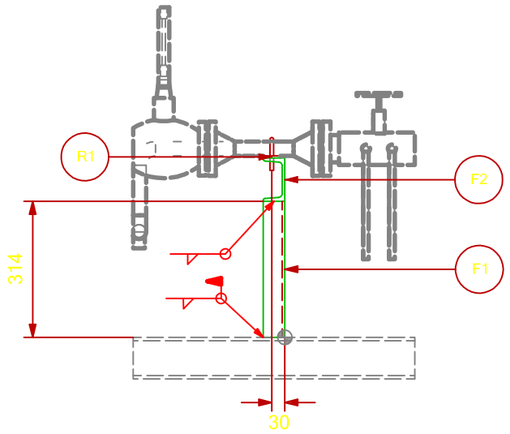
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02015

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

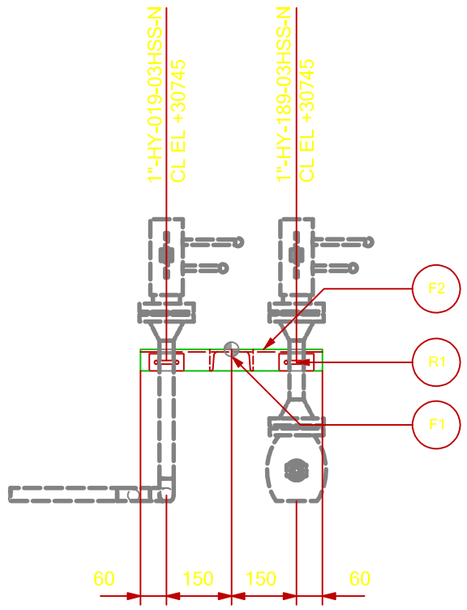
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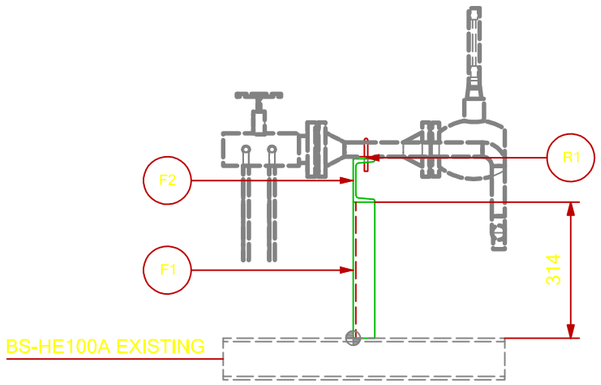
VIEW LOOKING NORTH



VIEW LOOKING WEST



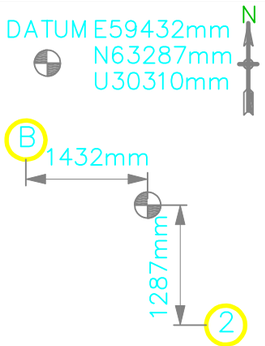
PLAN VIEW

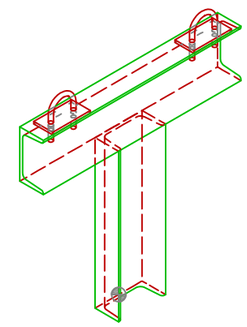


VIEW LOOKING EAST

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"	-	-	2	-	0,29	-
F1	BEAM	UPN100	Carbon Steel	314	1	10,57	3,31	0,119
F2	BEAM	UPN100	Carbon Steel	420	1	10,57	4,44	0,159
						TOTAL	8,3	0,28





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

CROSSWIND

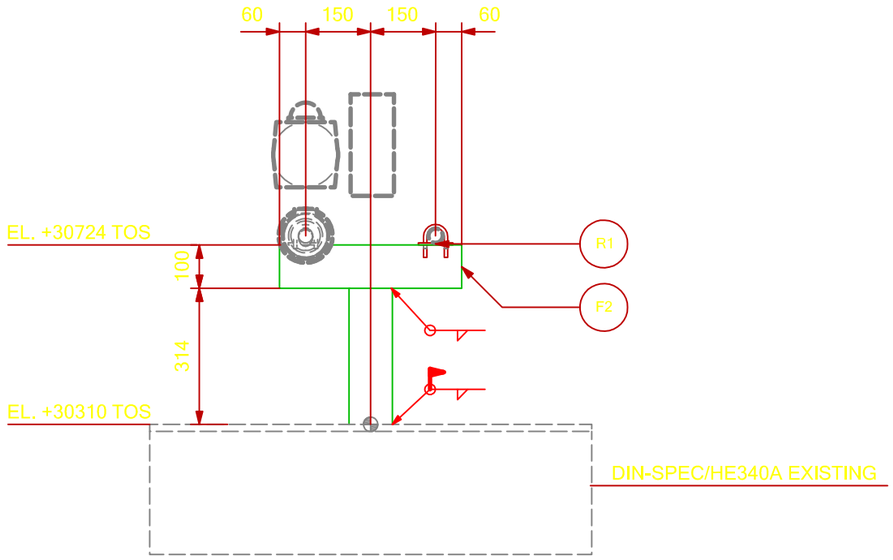
ROSETTI MARINO

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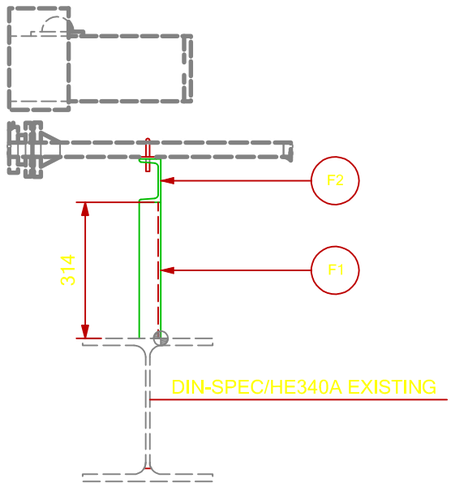
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02016

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

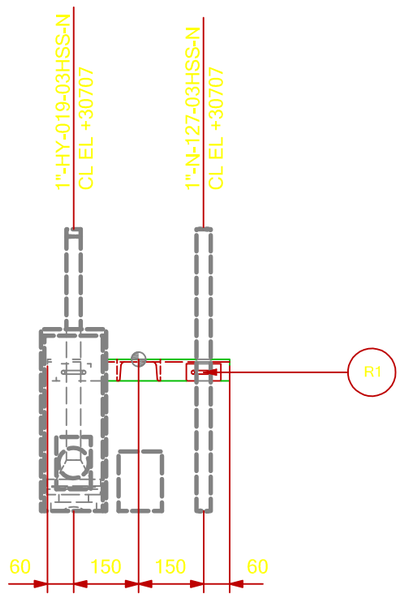
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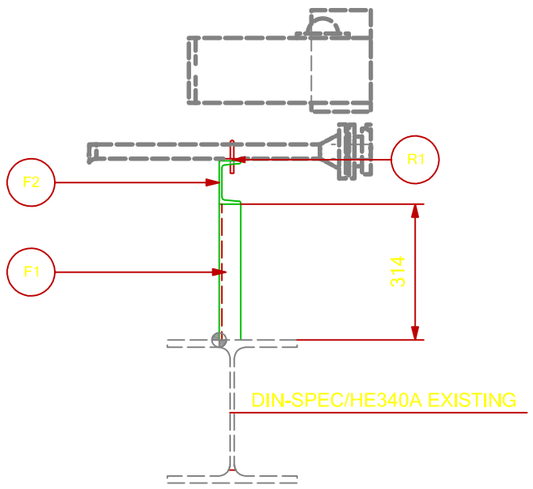
VIEW LOOKING NORTH



VIEW LOOKING WEST



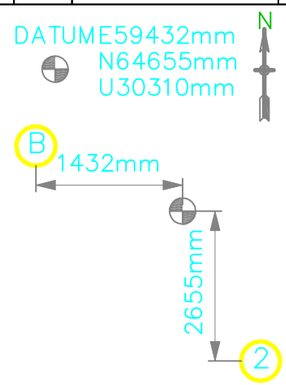
PLAN VIEW

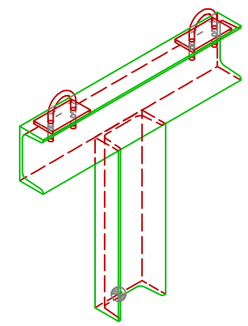


VIEW LOOKING EAST

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"	-	-	2	-	0,29	-
F1	BEAM	UPN100	Carbon Steel	314	1	10,57	3,31	0,119
F2	BEAM	UPN100	Carbon Steel	420	1	10,57	4,44	0,159
						TOTAL	8,3	0,28





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

CROSSWIND

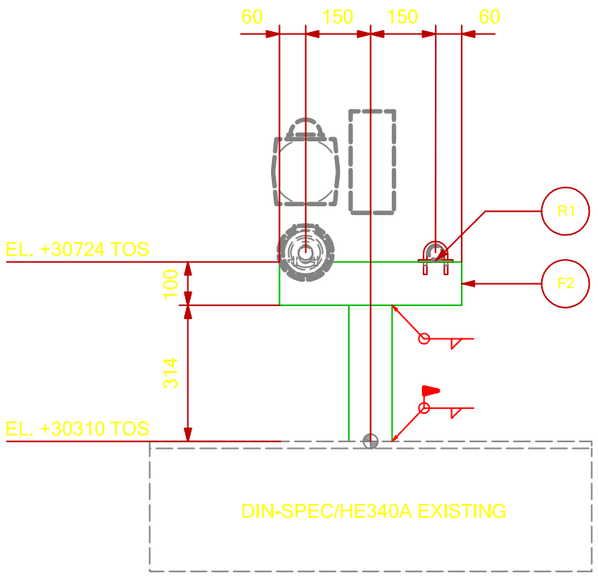
ROSETTI MARINO

TITLE :

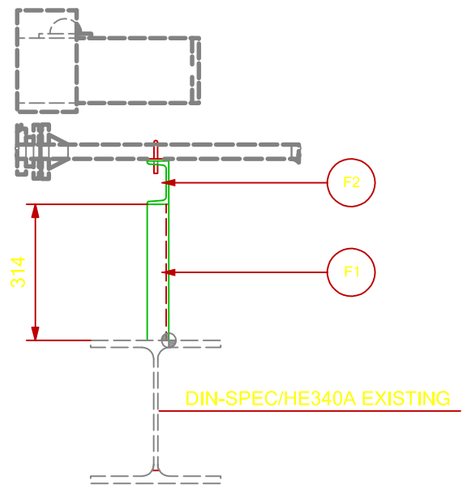
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02018

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

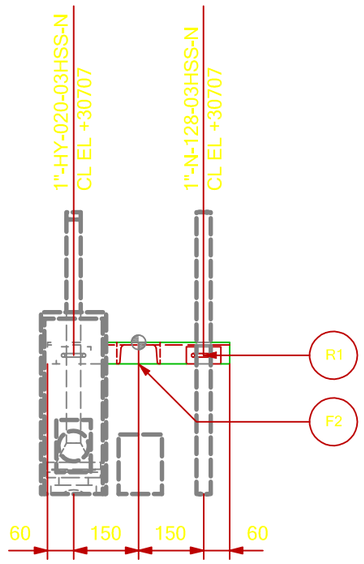
File Name :



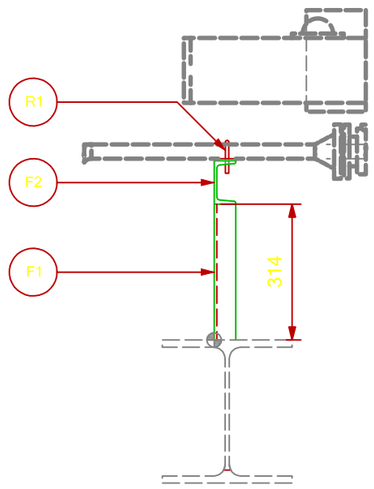
VIEW LOOKING NORTH



VIEW LOOKING WEST



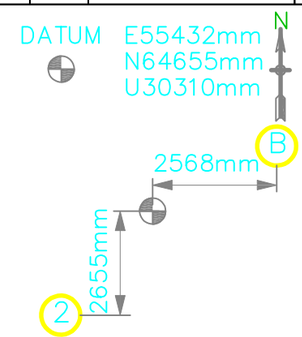
PLAN VIEW

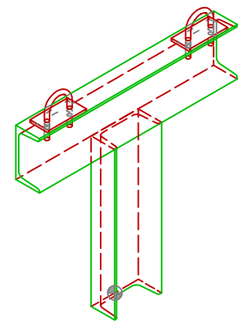


VIEW LOOKING EAST

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"	-	-	2	-	0,29	-
F1	BEAM	UPN100	Carbon Steel	314	1	10,57	3,31	0,119
F2	BEAM	UPN100	Carbon Steel	420	1	10,57	4,44	0,159
						TOTAL	8,3	0,28





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

CROSSWIND

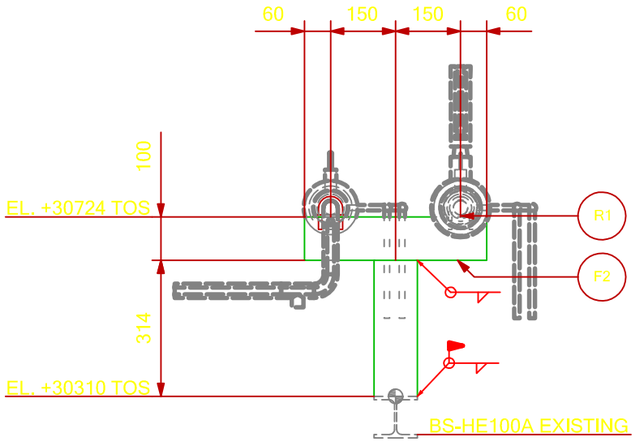
ROSETTI MARINO

TITLE :

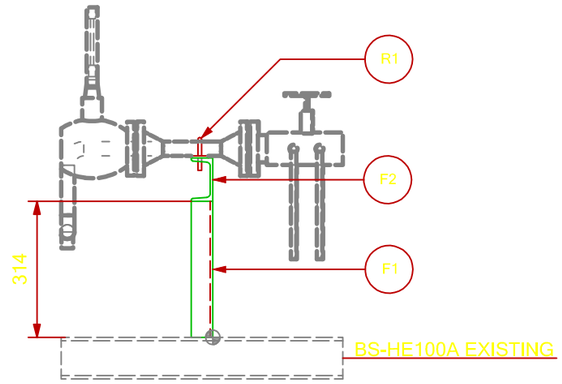
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02019

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

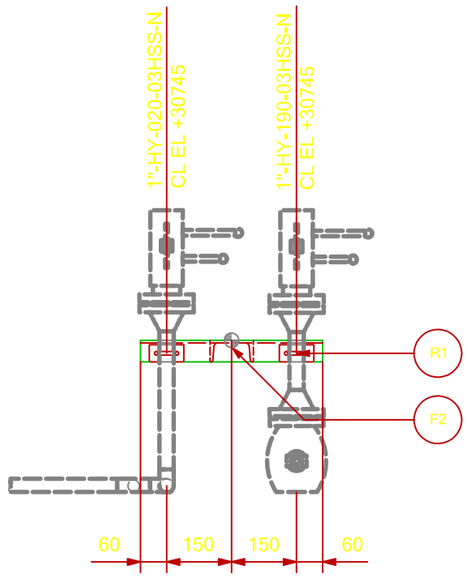
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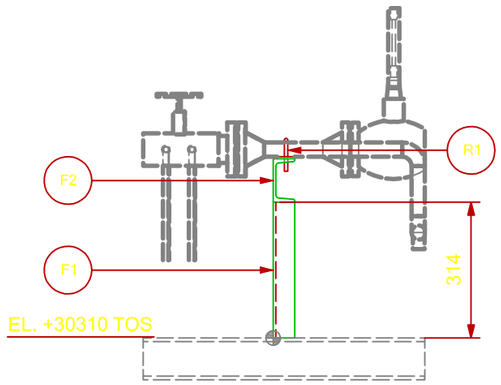
VIEW LOOKING NORTH



VIEW LOOKING WEST



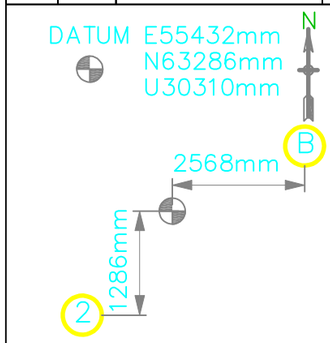
PLAN VIEW

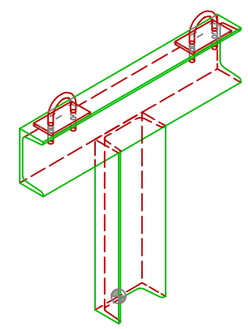


VIEW LOOKING EAST

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"	-	-	2	-	0,29	-
F1	BEAM	UPN100	Carbon Steel	314	1	10,57	3,31	0,119
F2	BEAM	UPN100	Carbon Steel	420	1	10,57	4,44	0,159
						TOTAL	8,3	0,28





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

CROSSWIND

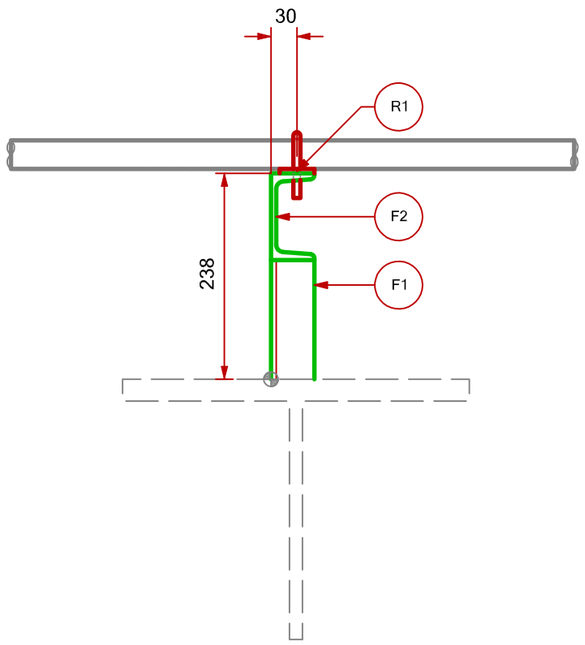
ROSETTI MARINO

TITLE :

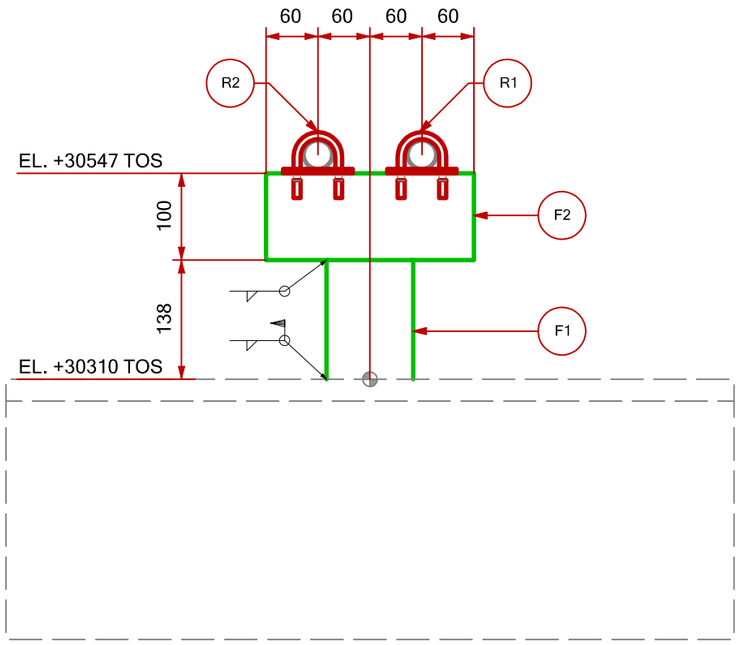
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02020

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 :



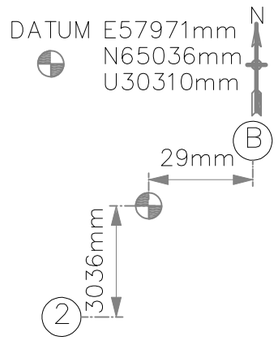
VIEW LOOKING NORTH

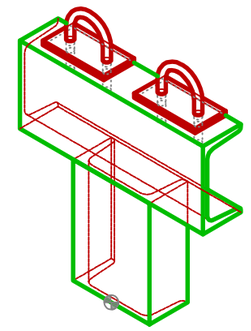


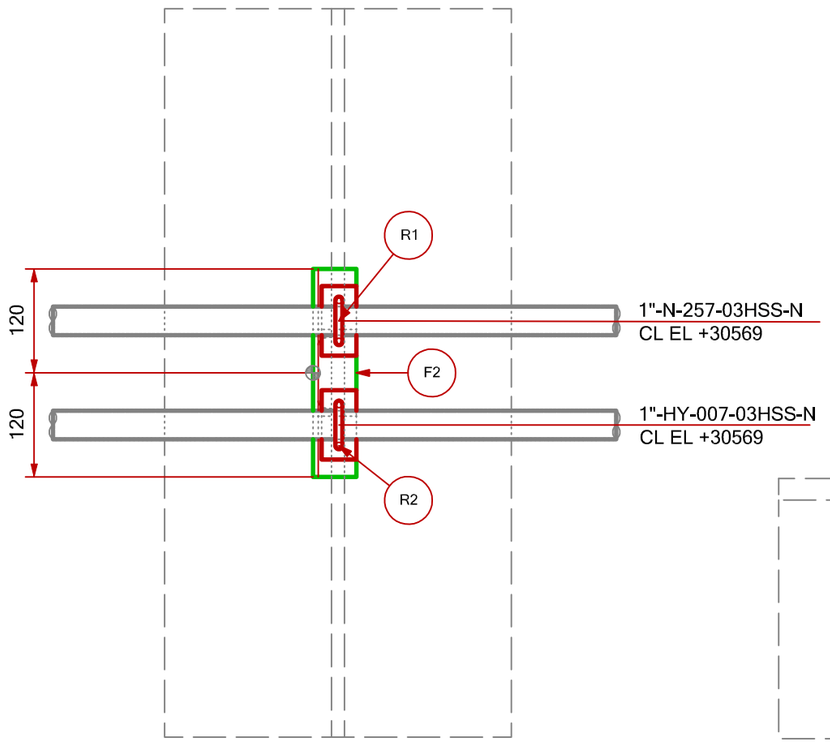
VIEW LOOKING WEST

SUPPORT MATERIAL LIST

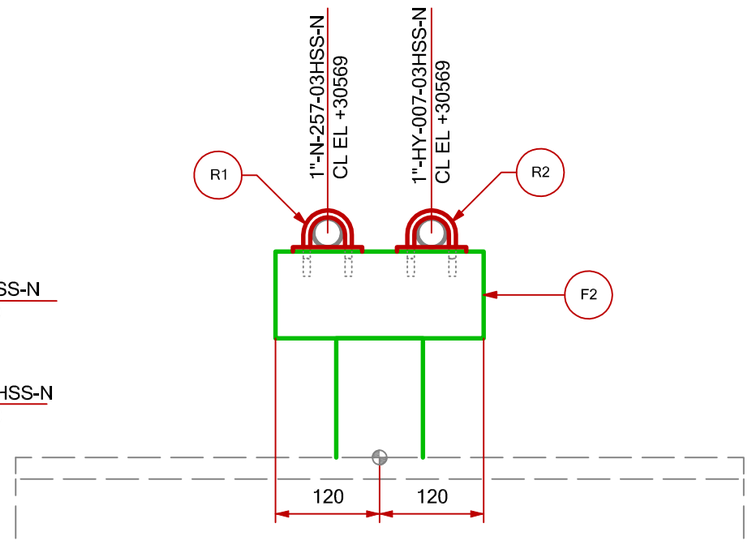
POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	138	1	10.57	1.45	0.054
F2	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
						TOTAL	4.6	0.15







PLAN VIEW



VIEW LOOKING EAST

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

CROSSWIND

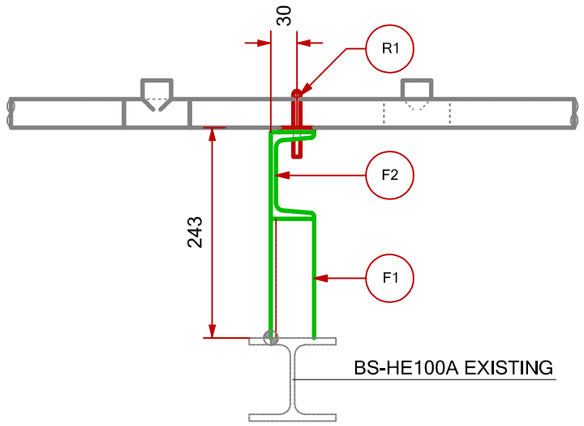
ROSETTI MARINO

TITLE :

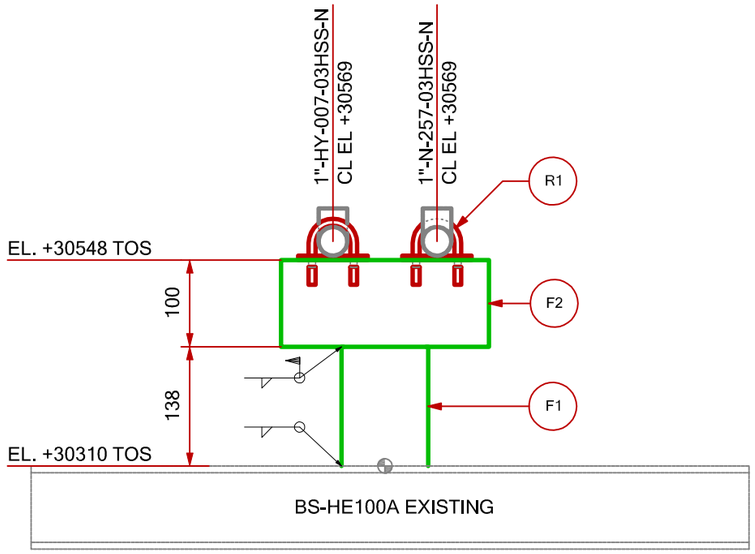
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02036

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

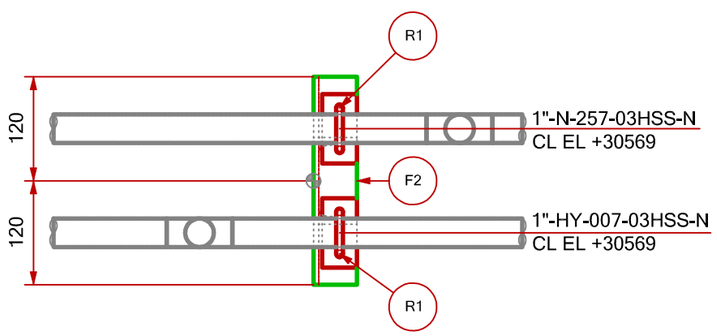
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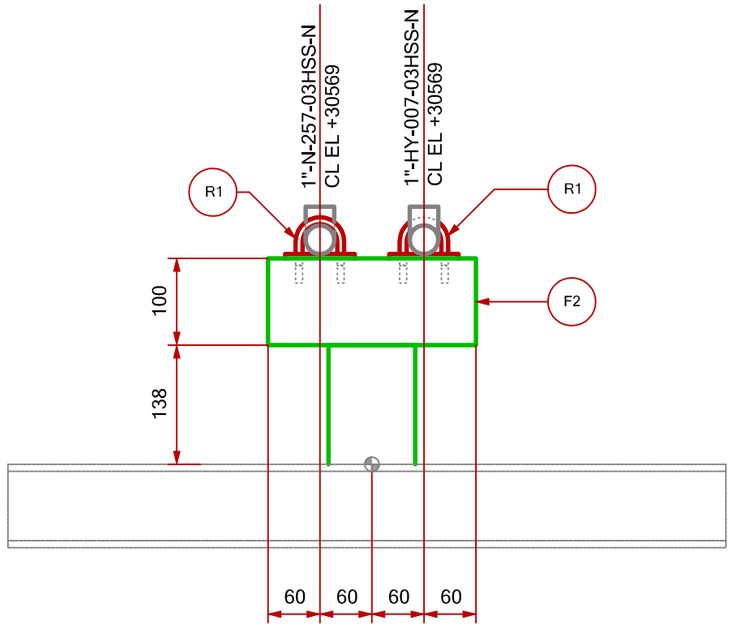
VIEW LOOKING NORTH



VIEW LOOKING WEST



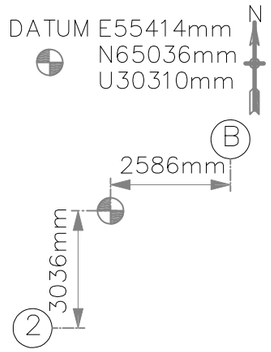
PLAN VIEW

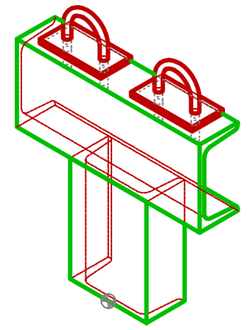


VIEW LOOKING EAST

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-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	138	1	10.57	1.45	0.054
F2	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
						TOTAL	4.6	0.15





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

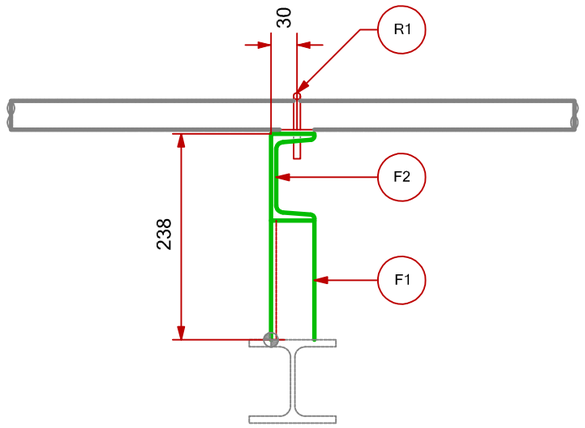
PS-02037

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

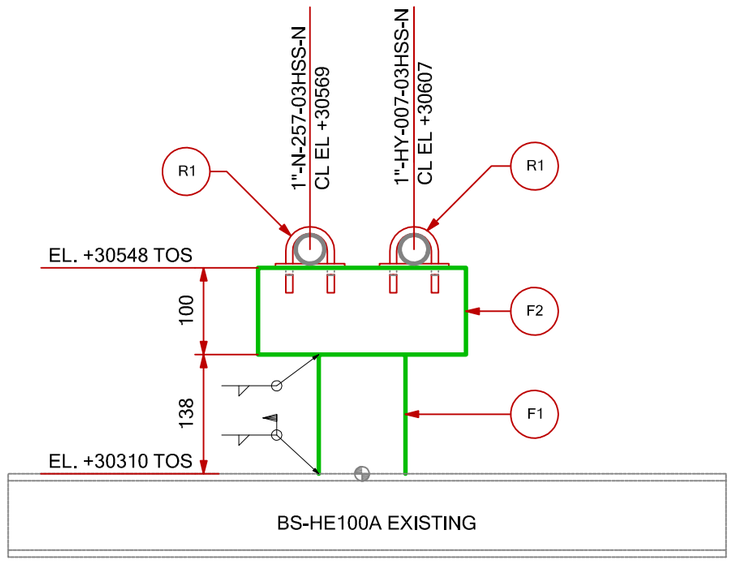
File Name :

SUPPORT MATERIAL LIST

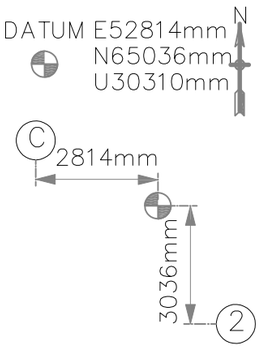
POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	138	1	10.57	1.45	0.054
F2	BEAM	UPN100	Carbon Steel	240	1	10.57	2.54	0.092
						TOTAL	4.6	0.15

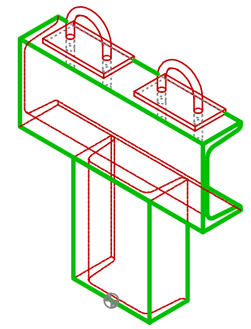


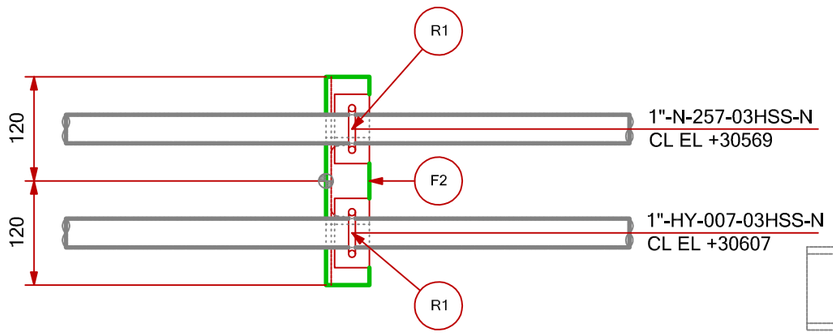
VIEW LOOKING NORTH



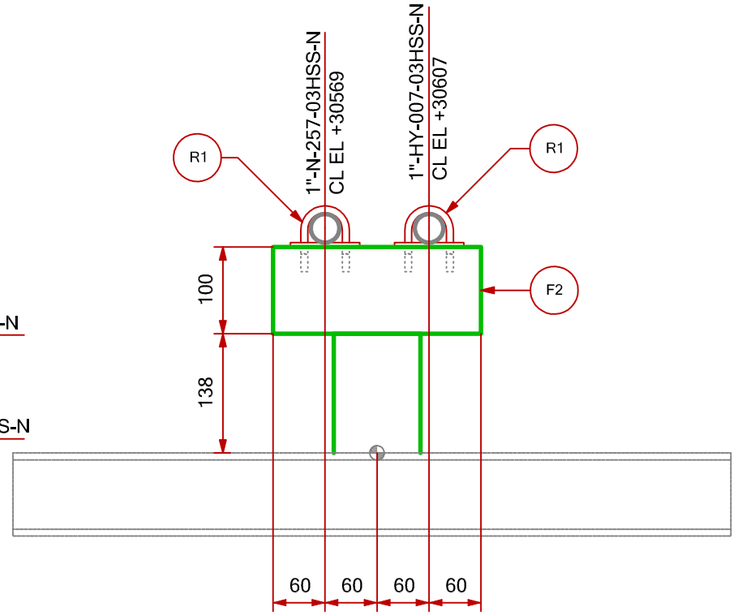
VIEW LOOKING WEST







PLAN VIEW



VIEW LOOKING EAST

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

CROSSWIND

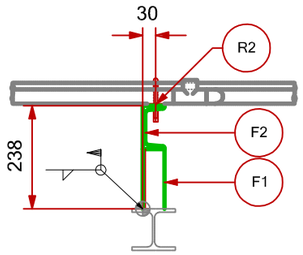
ROSETTI MARINO

TITLE :

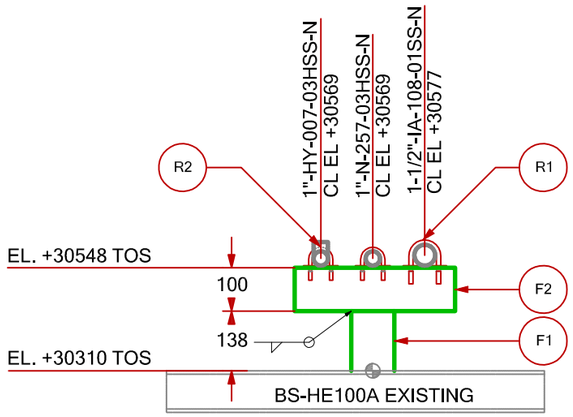
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02038

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

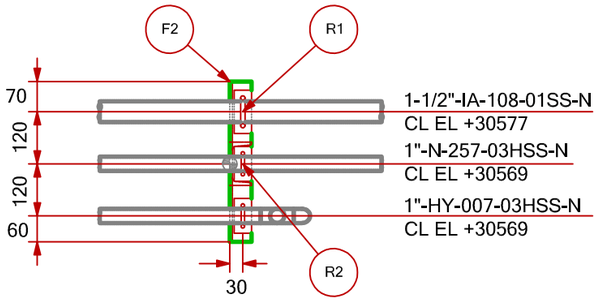
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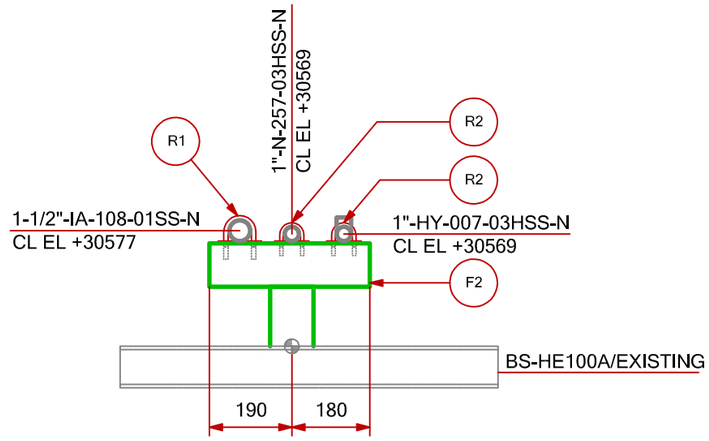
VIEW LOOKING NORTH



VIEW LOOKING WEST



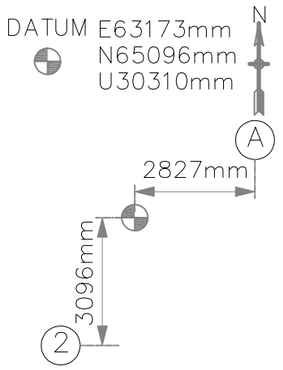
PLAN VIEW

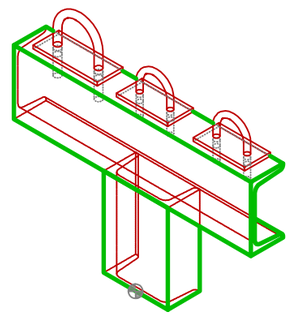


VIEW LOOKING EAST

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-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	138	1	10.57	1.45	0.054
F2	BEAM	UPN100	Carbon Steel	370	1	10.57	3.91	0.140
						TOTAL	6.4	0.19





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

CROSSWIND

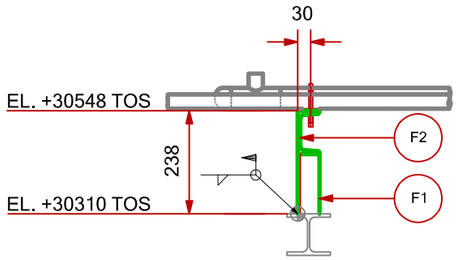
ROSETTI MARINO

TITLE :

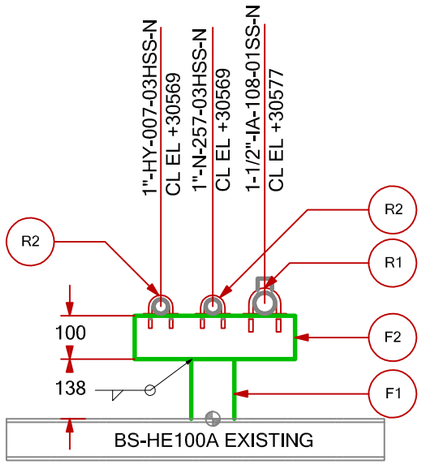
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02039

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 :



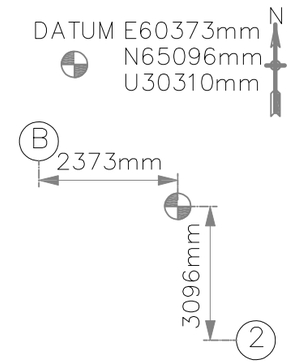
VIEW LOOKING NORTH

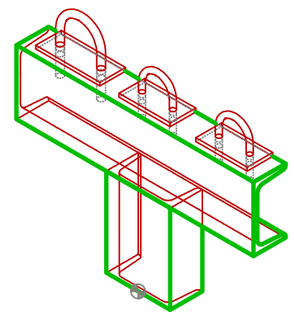


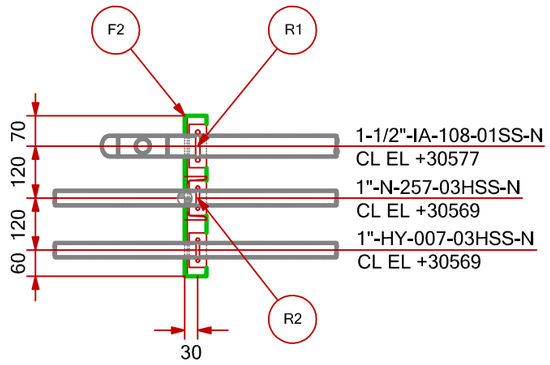
VIEW LOOKING WEST

SUPPORT MATERIAL LIST

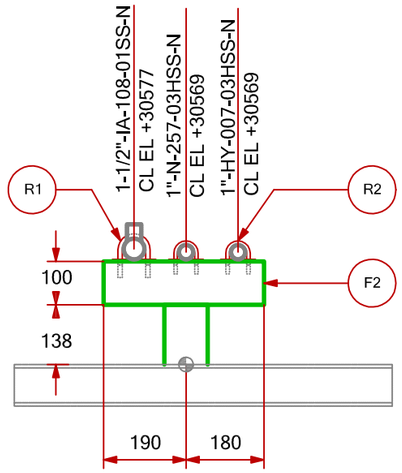
POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1 1/2"	-	-	1	-	0.49	-
R2	STD	S-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	138	1	10.57	1.45	0.054
F2	BEAM	UPN100	Carbon Steel	370	1	10.57	3.91	0.140
						TOTAL	6.4	0.19







PLAN VIEW



VIEW LOOKING EAST

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

CROSSWIND

ROSETTI MARINO

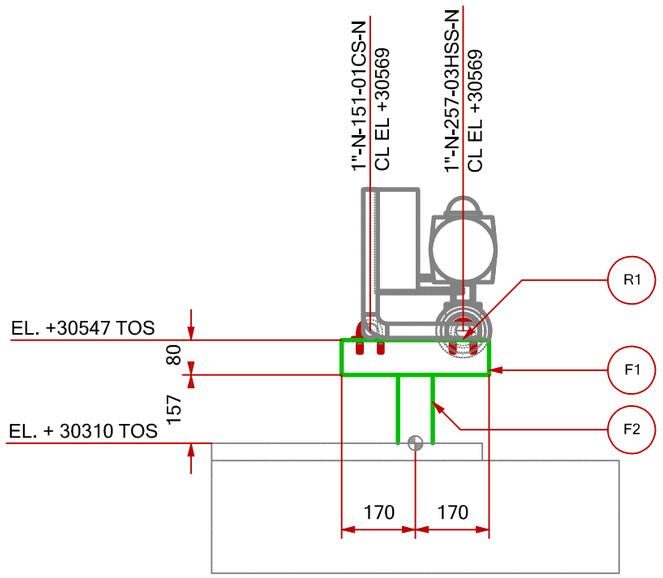
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

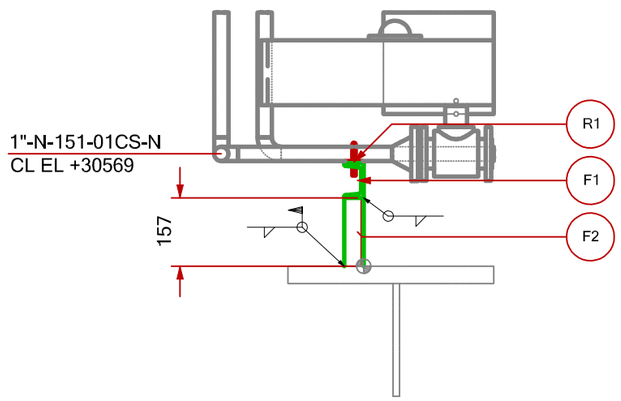
PS-02040

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

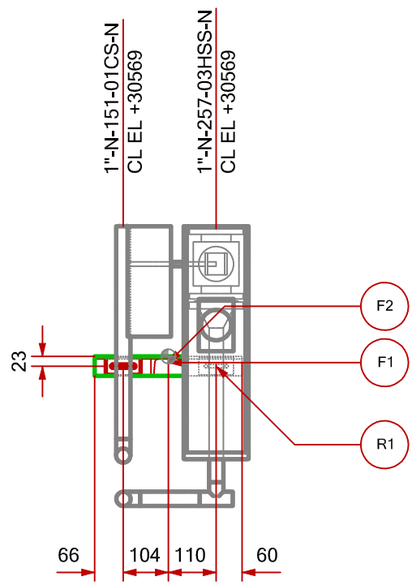
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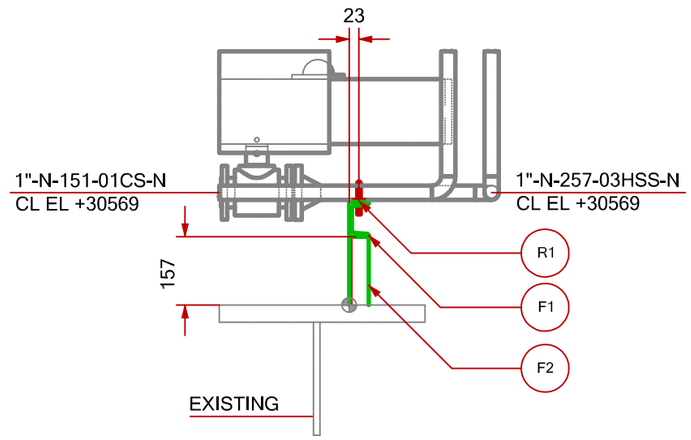
VIEW LOOKING NORTH



VIEW LOOKING WEST



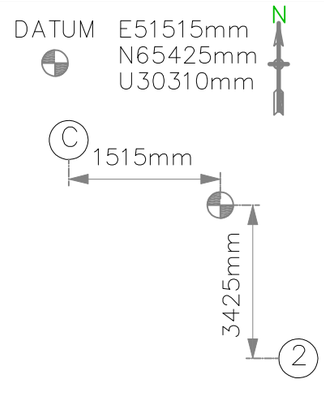
PLAN VIEW

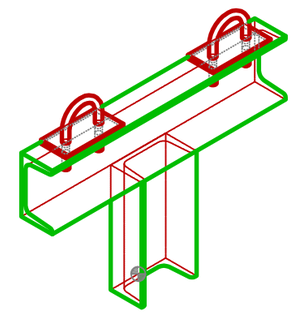


VIEW LOOKING EAST

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"	-	-	2	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	340	1	8.66	2.95	0.109
F2	BEAM	UPN80	Carbon Steel	157	1	8.66	1.36	0.052
						TOTAL	4.9	0.16





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

CROSSWIND

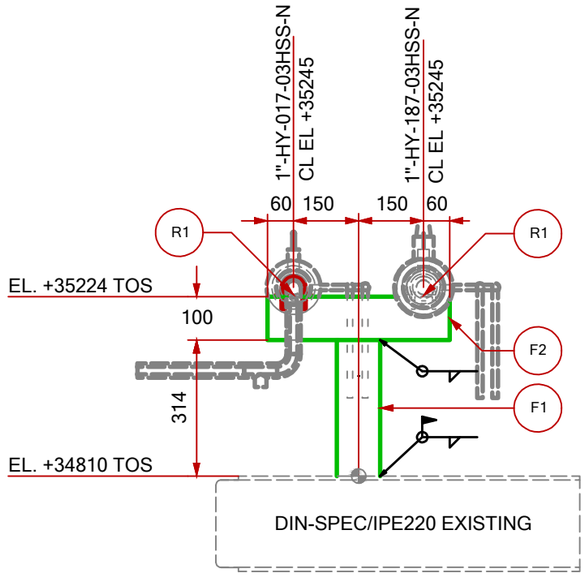
ROSETTI MARINO

TITLE :

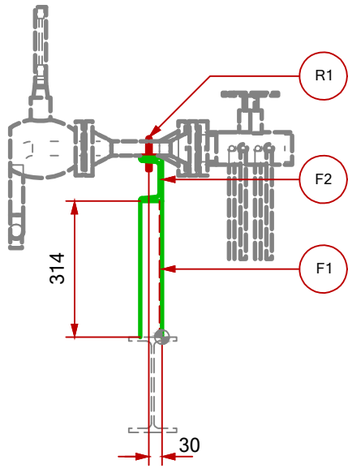
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02079

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

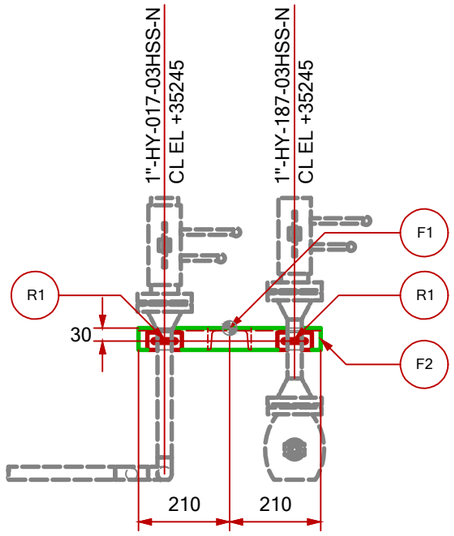
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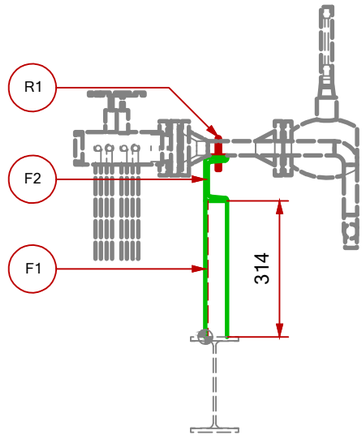
VIEW LOOKING NORTH



VIEW LOOKING WEST



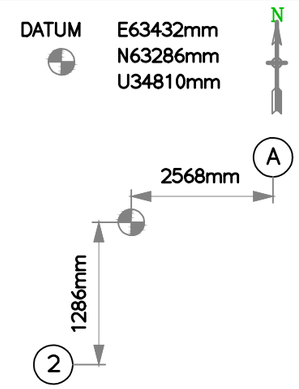
PLAN VIEW

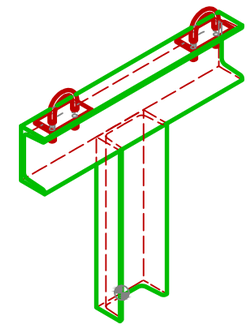


VIEW LOOKING EAST

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"	-	-	2	-	0.28	-
F1	BEAM	UPN100	Carbon Steel	314	1	10.57	3.31	0.119
F2	BEAM	UPN100	Carbon Steel	420	1	10.57	4.44	0.159
						TOTAL	8.3	0.28





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

CROSSWIND

ROSETTI MARINO

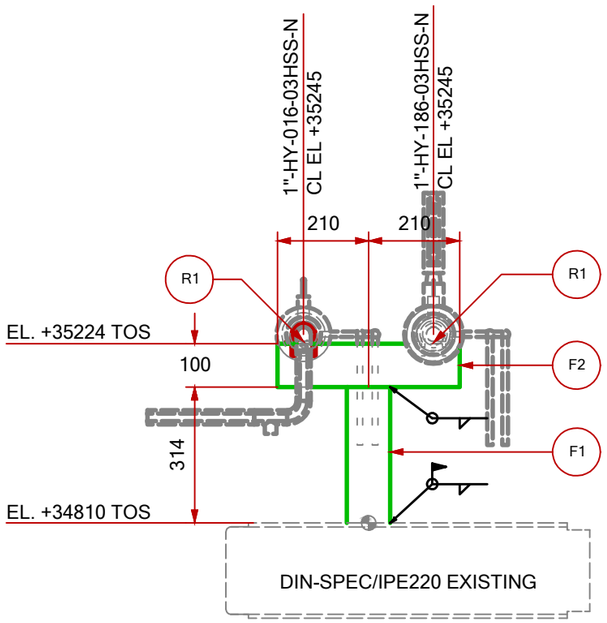
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

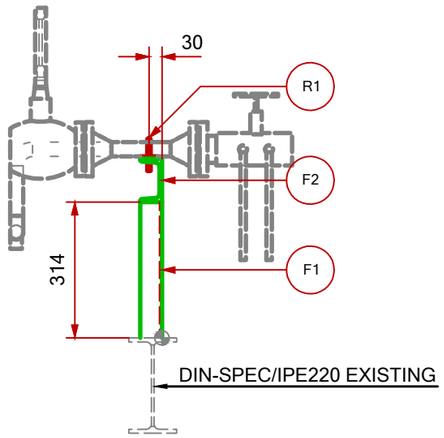
PS-03014

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

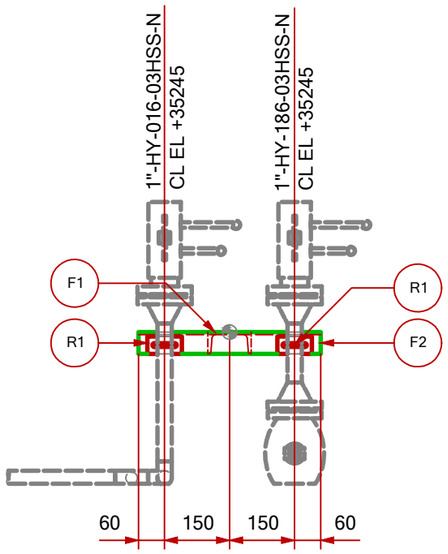
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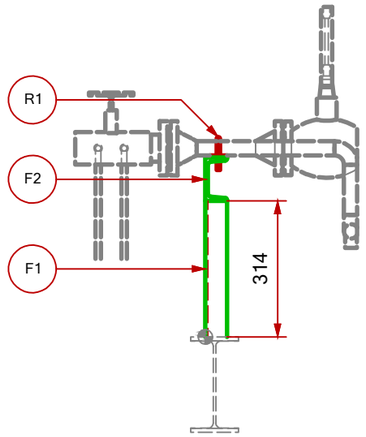
VIEW LOOKING NORTH



VIEW LOOKING WEST



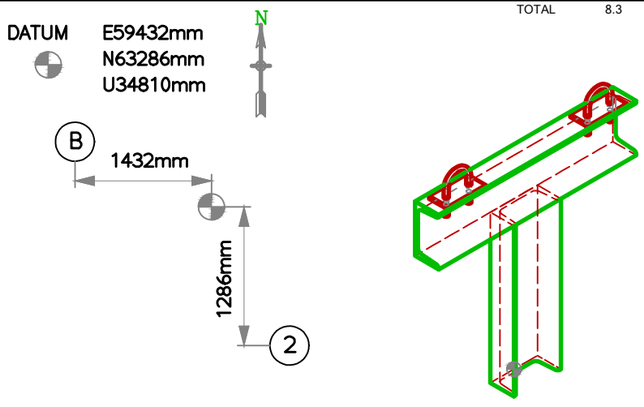
PLAN VIEW



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"	-	-	2	-	0.28	-
F1	BEAM	UPN100	Carbon Steel	314	1	10.57	3.31	0.119
F2	BEAM	UPN100	Carbon Steel	420	1	10.57	4.44	0.159
						TOTAL	8.3	0.28



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

CROSSWIND

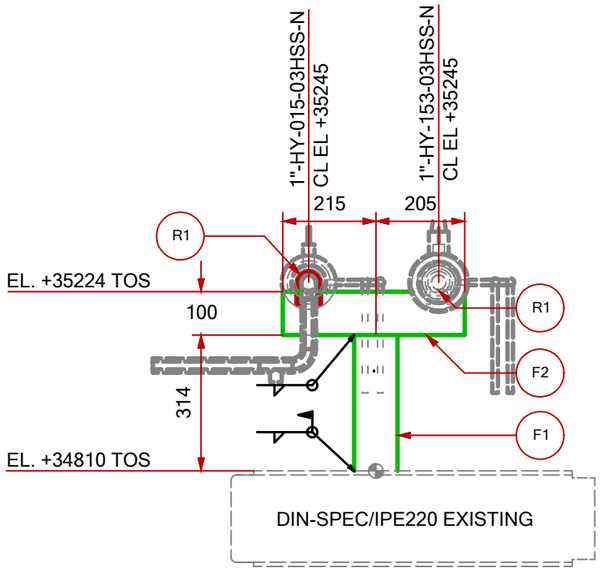
ROSETTI MARINO

TITLE :

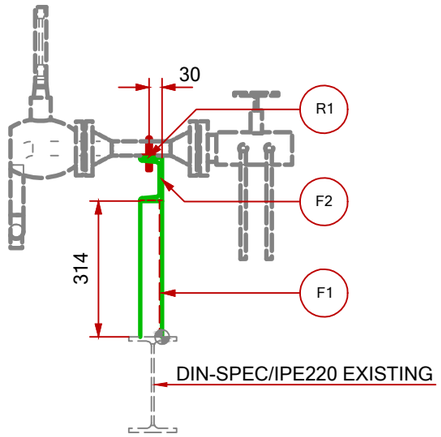
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03037

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

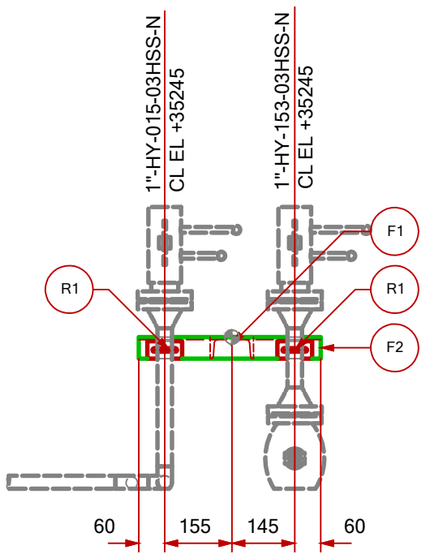
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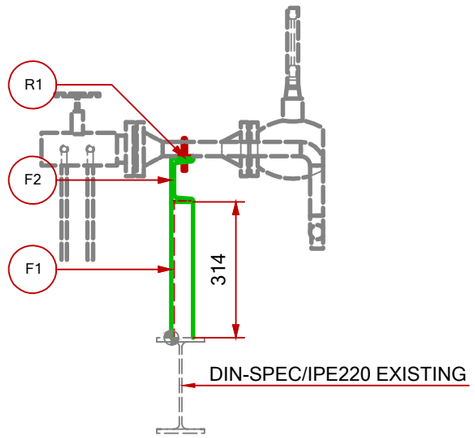
VIEW LOOKING NORTH



VIEW LOOKING WEST



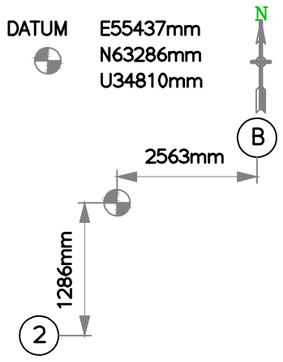
PLAN VIEW

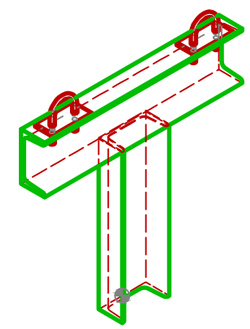


VIEW LOOKING EAST

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"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	316	1	10.57	3.34	0.120
F2	BEAM	UPN100	Carbon Steel	420	1	10.57	4.44	0.159
						TOTAL	8.3	0.28





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

CROSSWIND

ROSETTI MARINO

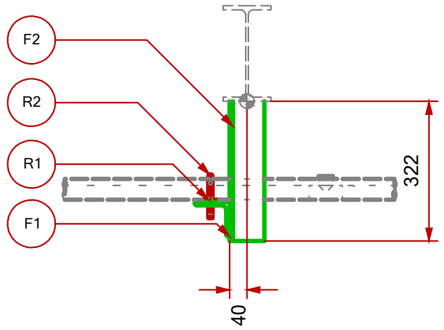
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

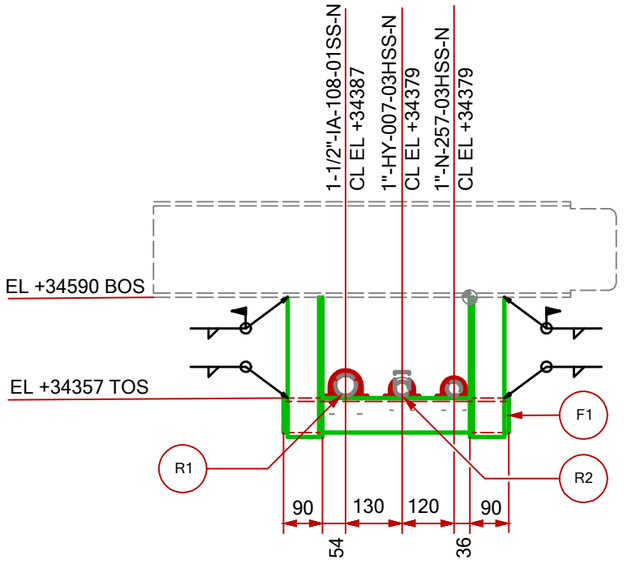
PS-03047

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

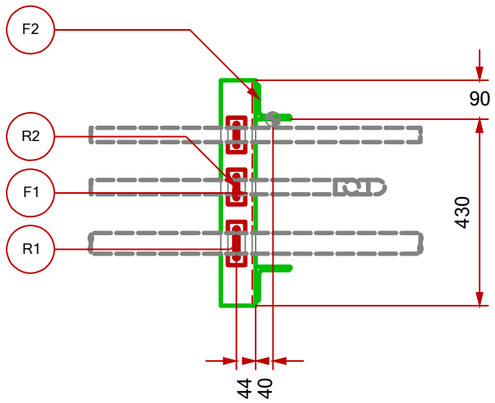
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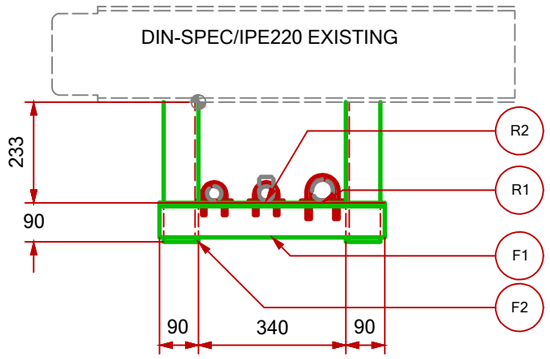
VIEW LOOKING NORTH



VIEW LOOKING WEST



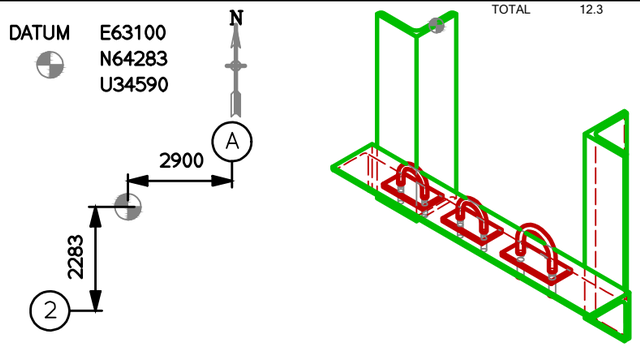
PLAN VIEW



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-211-1"	-	-	2	-	0.29	-
F1	BEAM	L80x80x8	Carbon Steel	520	1	9.63	5.01	0.164
F2	BEAM	L80x80x8	Carbon Steel	322	2	9.63	6.22	0.206
						TOTAL	12.3	0.37



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

CROSSWIND

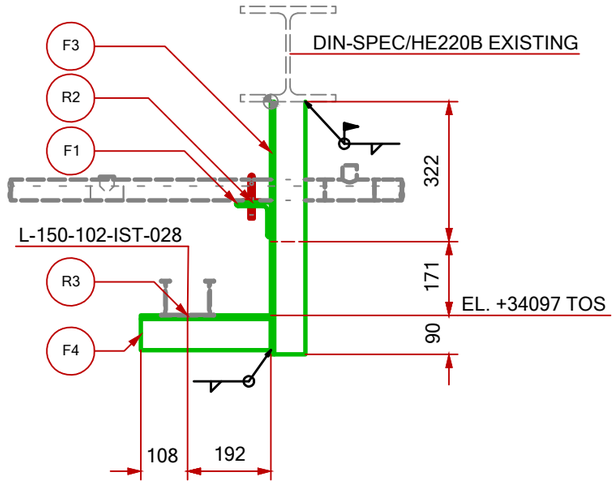
ROSETTI MARINO

TITLE :

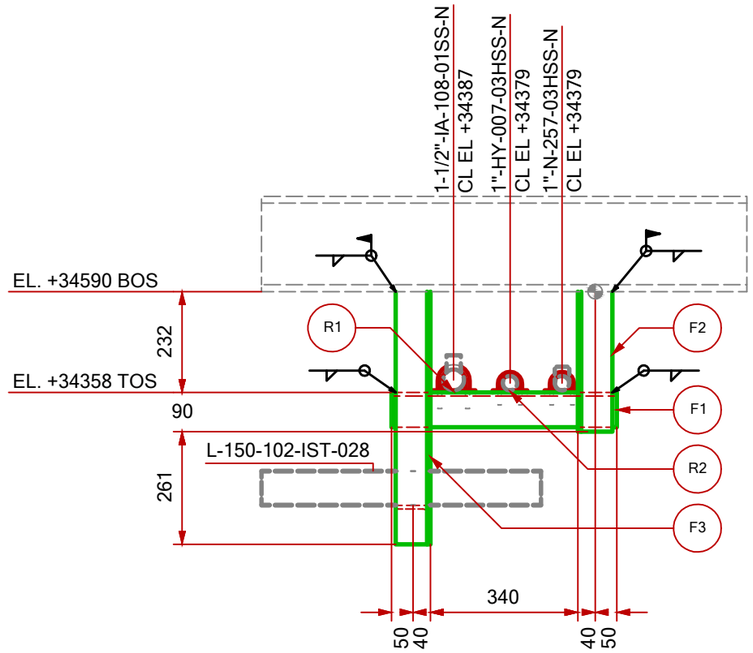
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03075

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

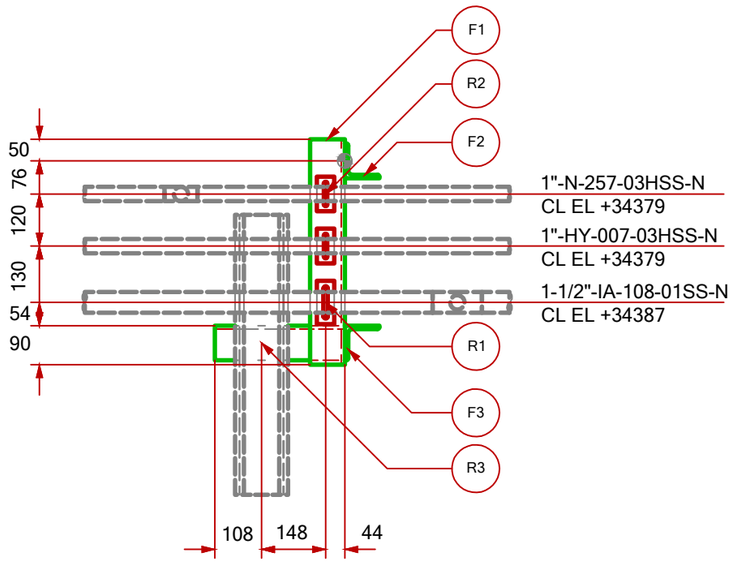
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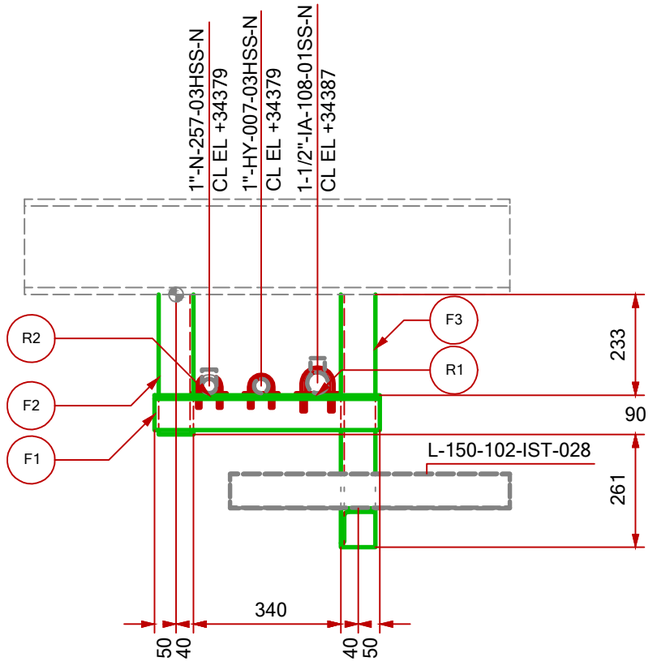
VIEW LOOKING NORTH



VIEW LOOKING WEST



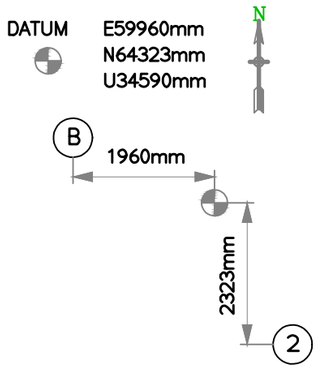
PLAN VIEW

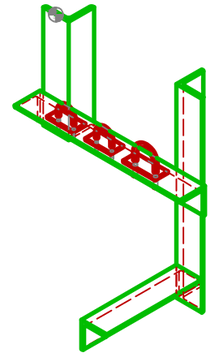


VIEW LOOKING EAST

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-211-1"	-	-	2	-	0.29	-
R3	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	L80x80x8	Carbon Steel	520	1	9.63	5.01	0.164
F2	BEAM	L80x80x8	Carbon Steel	322	1	9.63	3.11	0.103
F3	BEAM	L80x80x8	Carbon Steel	583	1	9.63	5.62	0.184
F4	BEAM	L80x80x8	Carbon Steel	300	1	9.63	2.89	0.096
						TOTAL	17.7	0.55





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

CROSSWIND

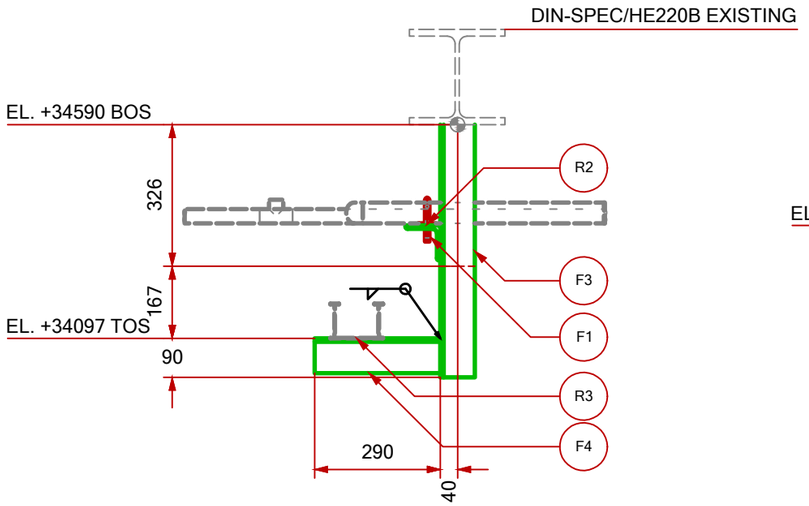
ROSETTI MARINO

TITLE :

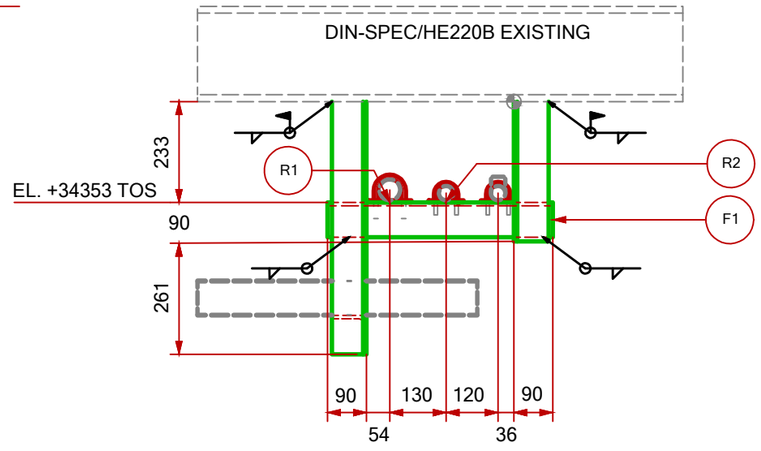
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03076

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

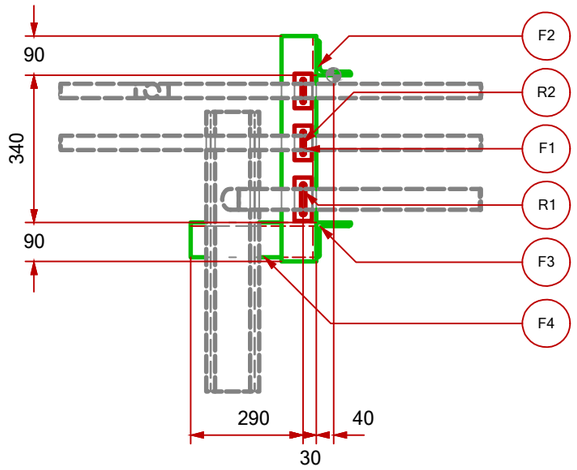
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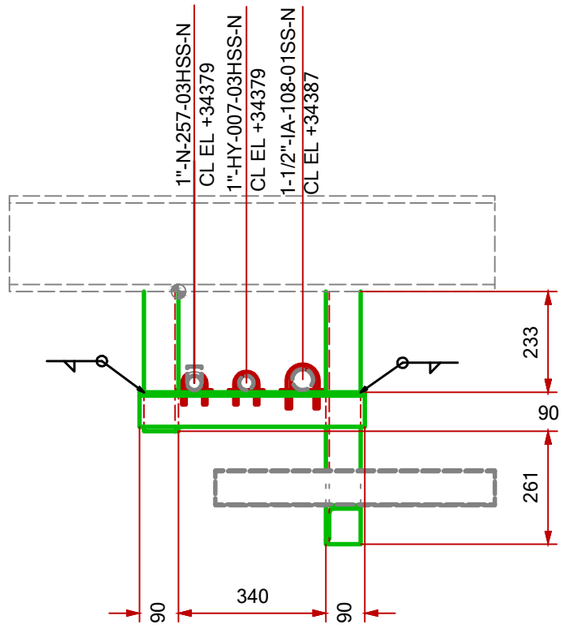
VIEW LOOKING NORTH



VIEW LOOKING WEST



PLAN VIEW

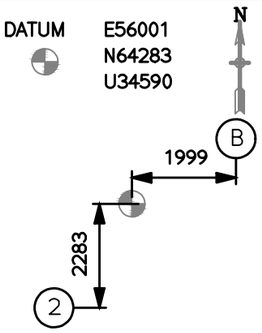


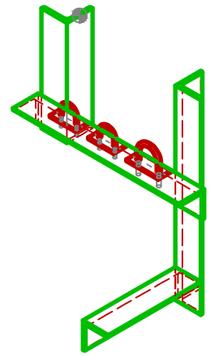
VIEW LOOKING EAST

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-211-1"	-	-	2	-	0.29	-
R3	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	L80x80x8	Carbon Steel	520	1	9.63	5.01	0.164
F2	BEAM	L80x80x8	Carbon Steel	326	1	9.63	3.14	0.104
F3	BEAM	L80x80x8	Carbon Steel	583	1	9.63	5.62	0.184
F4	BEAM	L80x80x8	Carbon Steel	290	1	9.63	2.79	0.093
						TOTAL	17.6	0.54

DATUM
E56001
N64283
U34590





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

CROSSWIND

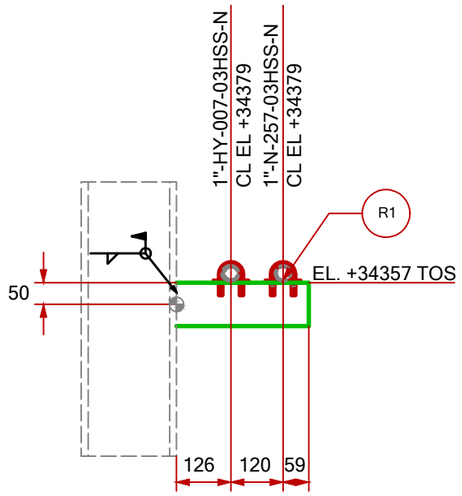
ROSETTI MARINO

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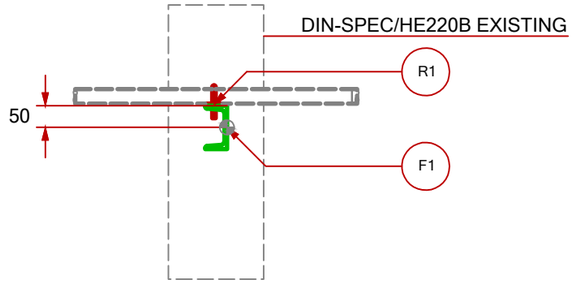
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03077

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

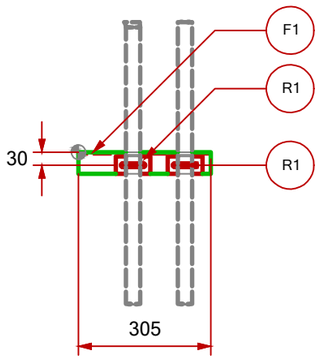
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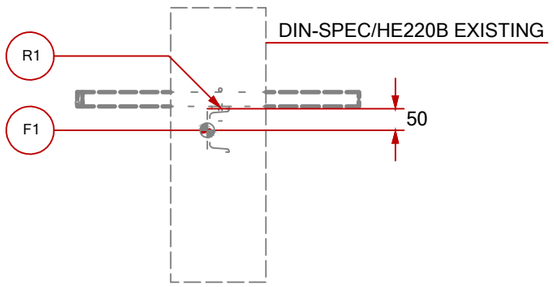
VIEW LOOKING NORTH



VIEW LOOKING WEST



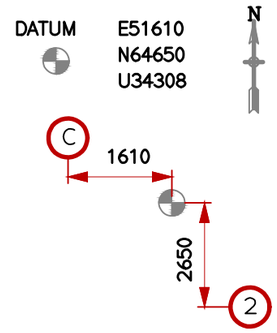
PLAN VIEW

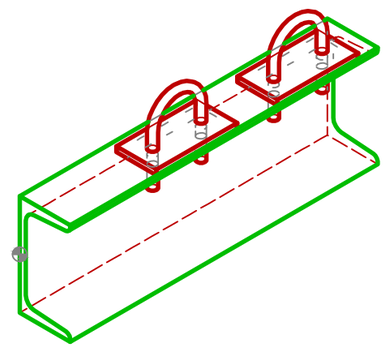


VIEW LOOKING EAST

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"	-	-	2	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	305	1	10.57	3.22	0.116
						TOTAL	3.8	0.12





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

CROSSWIND

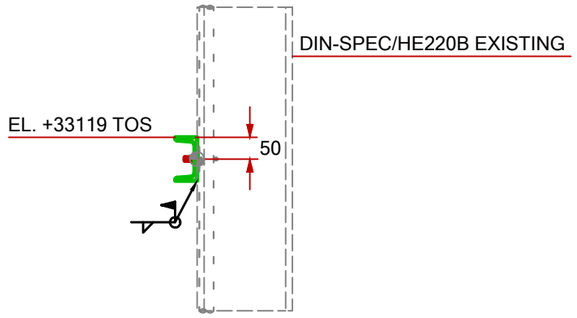
ROSETTI MARINO

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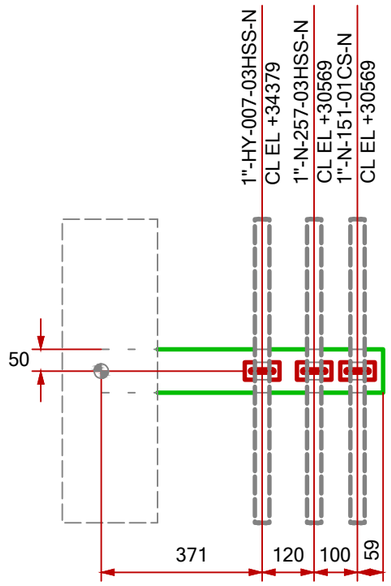
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03083

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

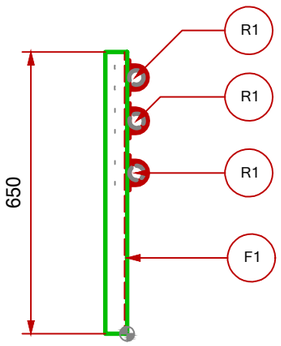
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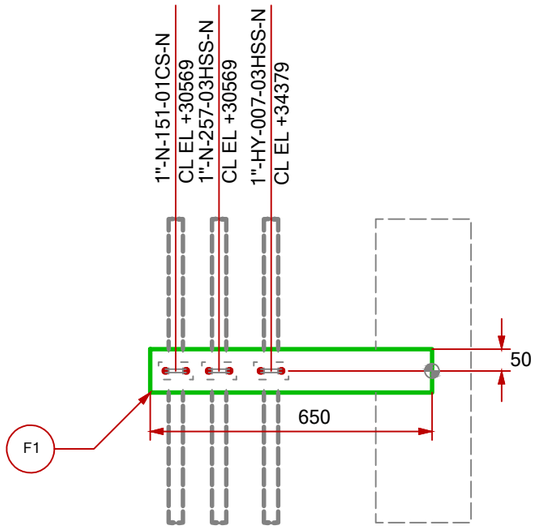
VIEW LOOKING NORTH



VIEW LOOKING WEST



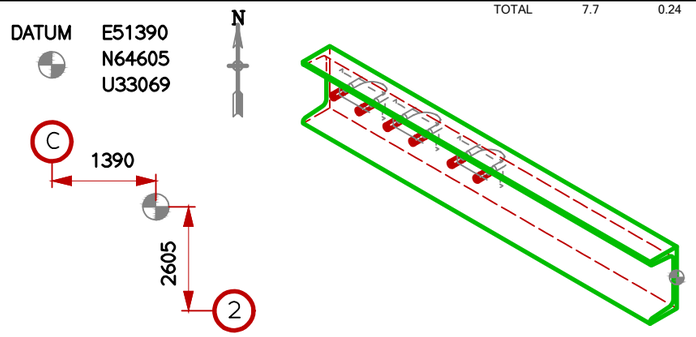
PLAN VIEW



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"	-	-	3	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	650	1	10.57	6.87	0.244
						TOTAL	7.7	0.24



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

CROSSWIND

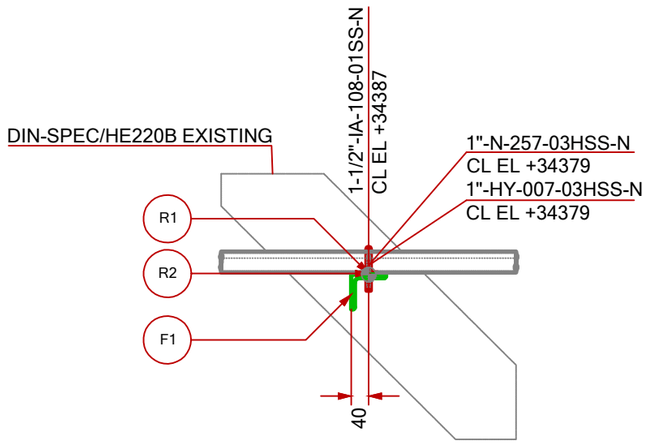
ROSETTI MARINO

TITLE :

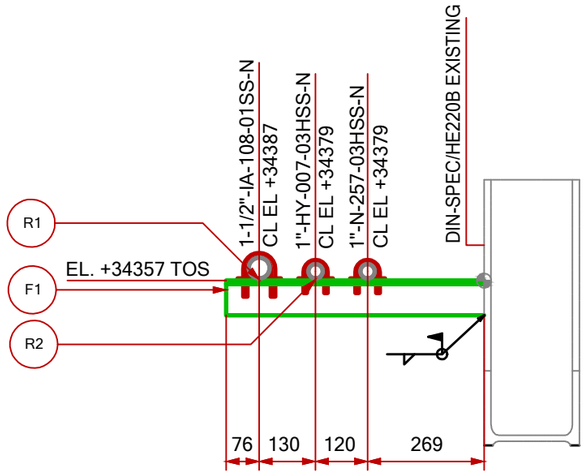
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03084

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

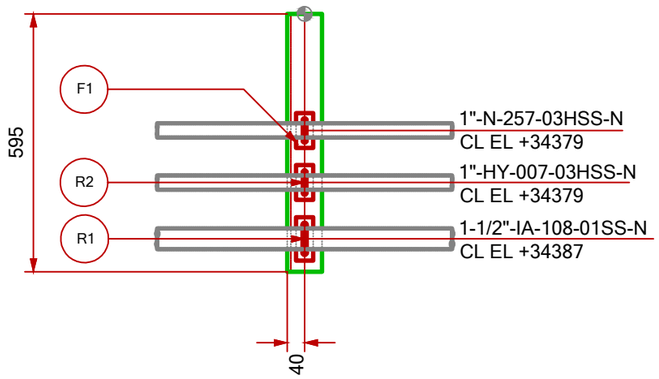
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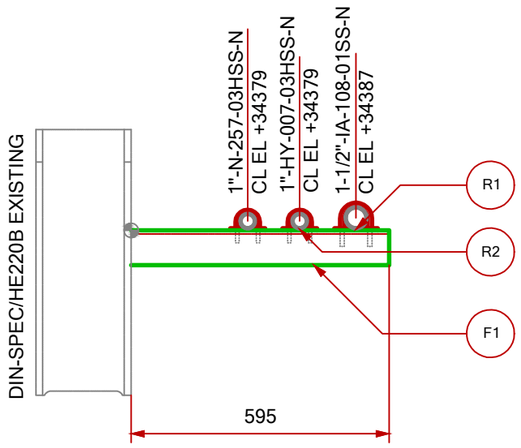
VIEW LOOKING NORTH



VIEW LOOKING WEST



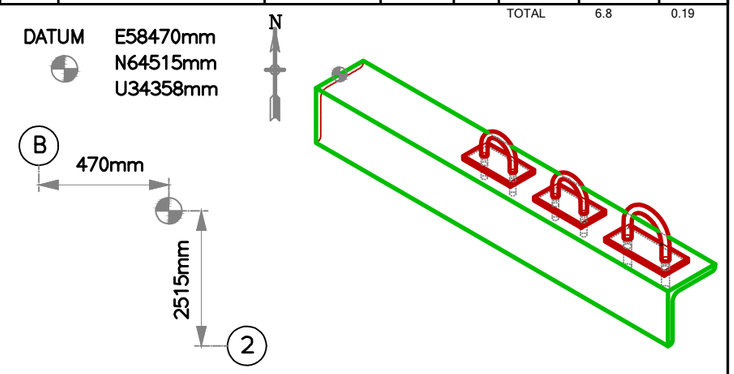
PLAN VIEW



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-211-1"	-	-	2	-	0.29	-
F1	BEAM	L80x80x8	Carbon Steel	595	1	9.63	5.73	0.188
						TOTAL	6.8	0.19



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

CROSSWIND

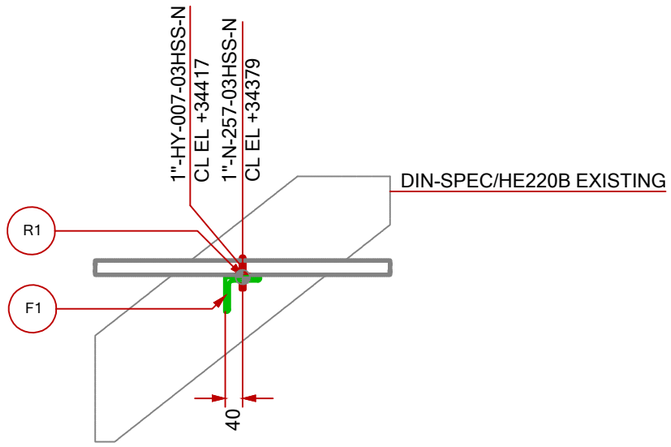
ROSETTI MARINO

TITLE :

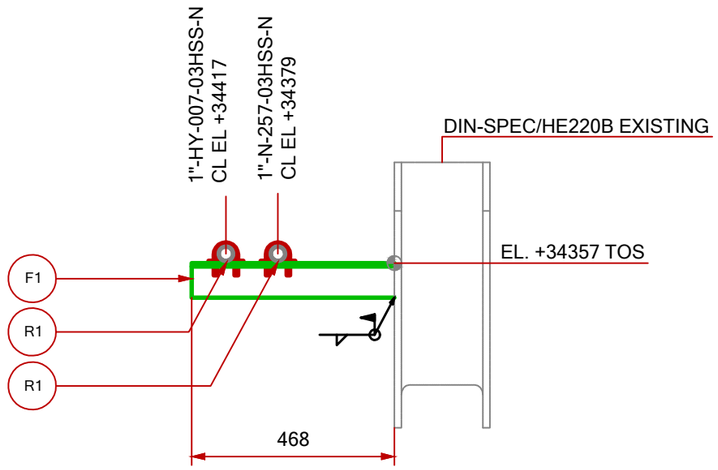
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03093

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

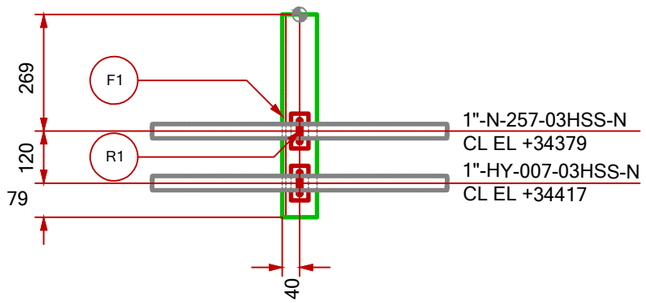
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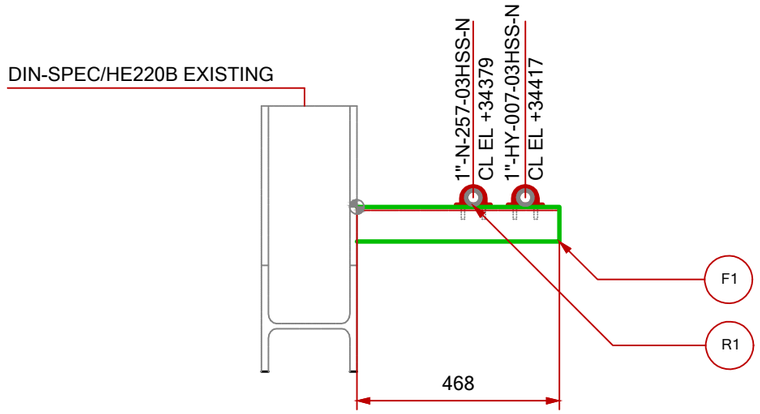
VIEW LOOKING NORTH



VIEW LOOKING WEST



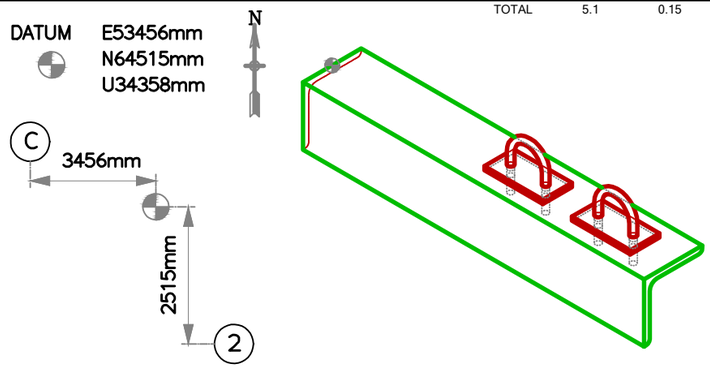
PLAN VIEW



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"	-	-	2	-	0.29	-
F1	BEAM	L80x80x8	Carbon Steel	468	1	9.63	4.50	0.148
						TOTAL	5.1	0.15



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

CROSSWIND

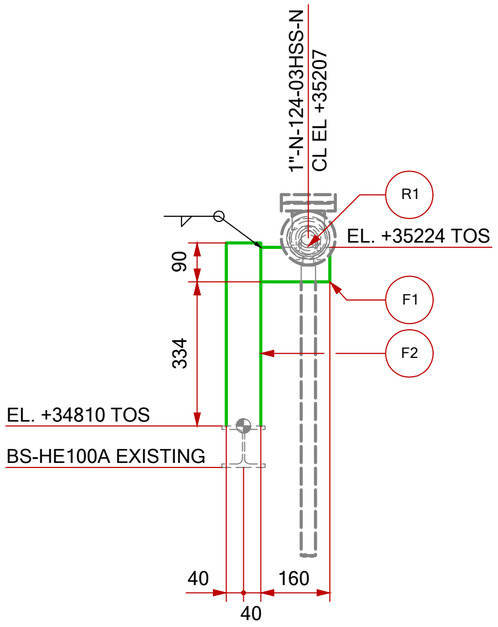
ROSETTI MARINO

TITLE :

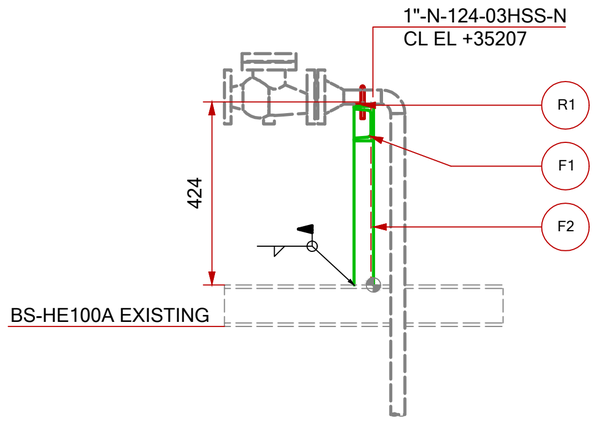
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03108

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

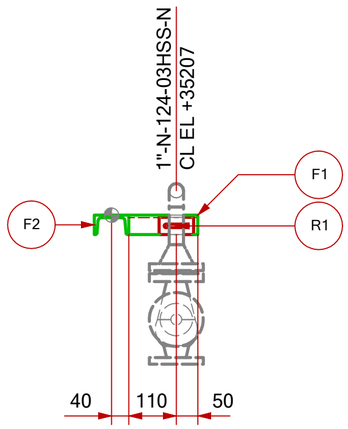
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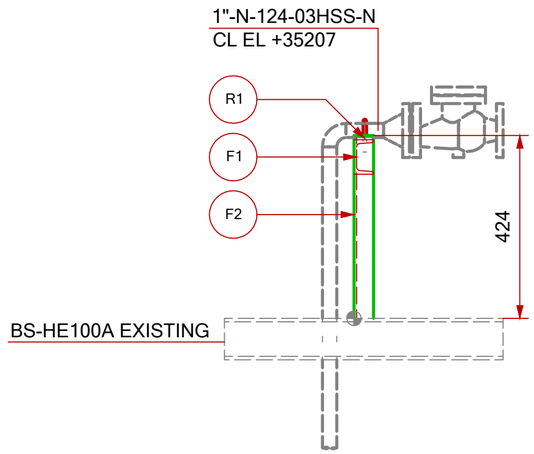
VIEW LOOKING NORTH



VIEW LOOKING WEST



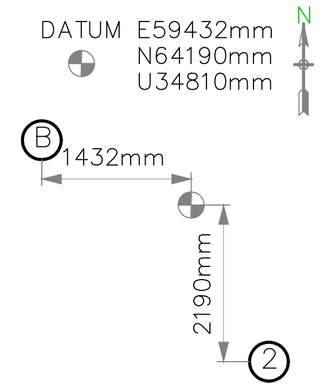
PLAN VIEW

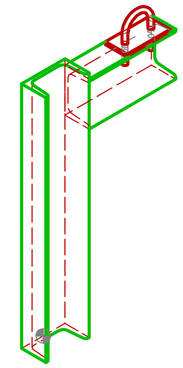


VIEW LOOKING EAST

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	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	160	1	8.66	1.39	0.052
F2	BEAM	UPN80	Carbon Steel	424	1	8.66	3.67	0.135
						TOTAL	5.3	0.19





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

CROSSWIND

ROSETTI MARINO

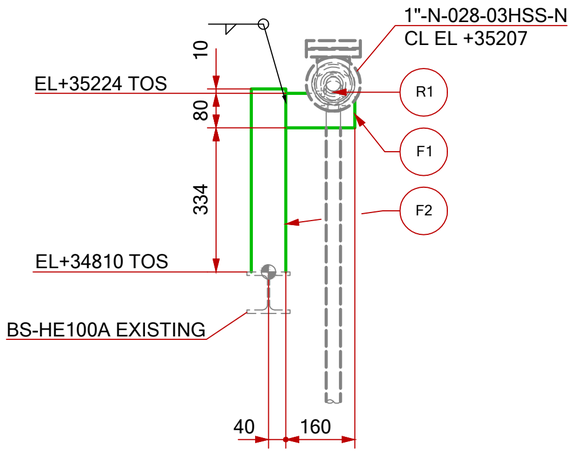
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

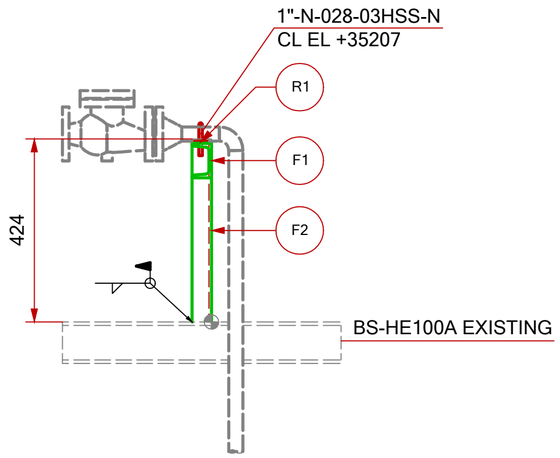
PS-03577

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

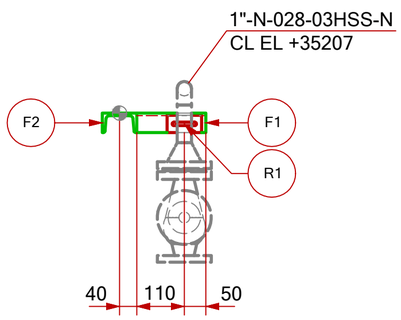
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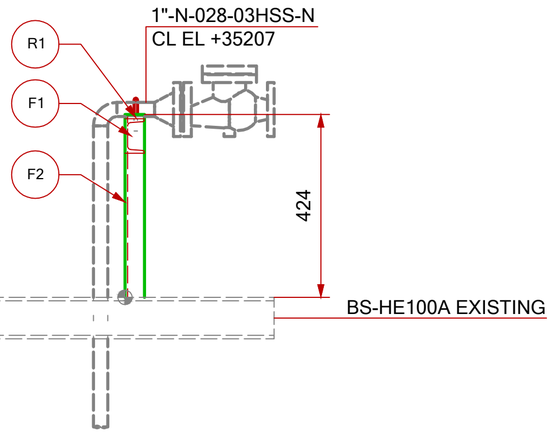
VIEW LOOKING NORTH



VIEW LOOKING WEST



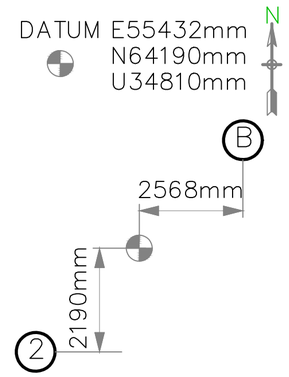
PLAN VIEW

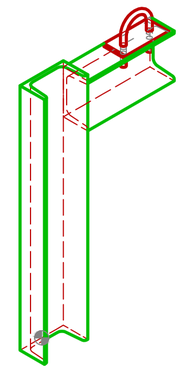


VIEW LOOKING EAST

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	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	160	1	8.66	1.39	0.052
F2	BEAM	UPN80	Carbon Steel	424	1	8.66	3.67	0.135
						TOTAL	5.3	0.19





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

CROSSWIND

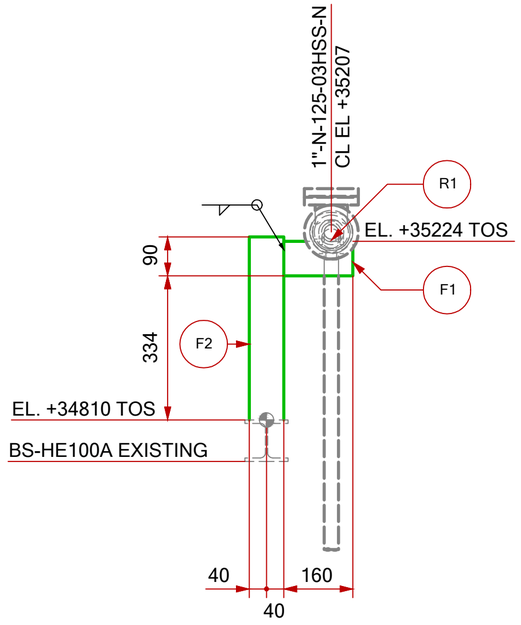
ROSETTI MARINO

TITLE :

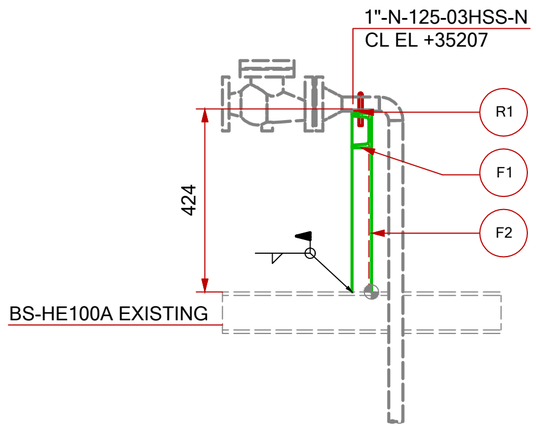
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03580

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

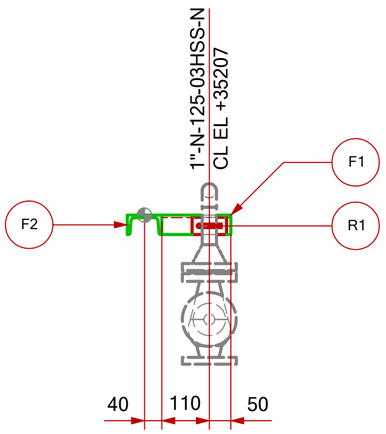
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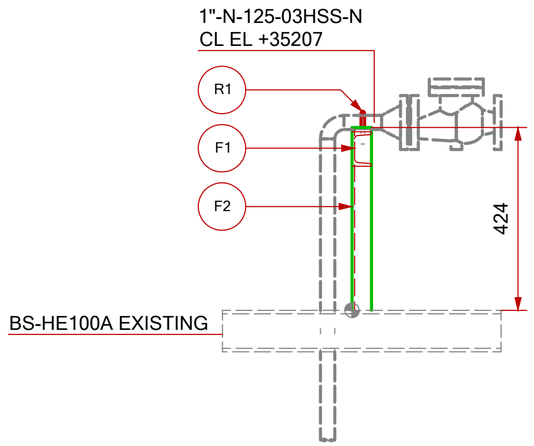
VIEW LOOKING NORTH



VIEW LOOKING WEST



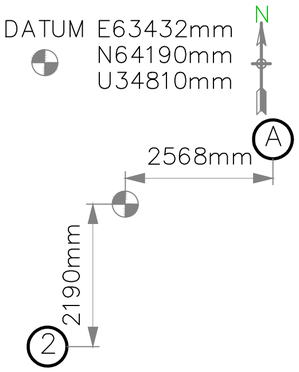
PLAN VIEW

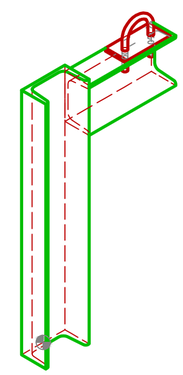


VIEW LOOKING EAST

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	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	160	1	8.66	1.39	0.052
F2	BEAM	UPN80	Carbon Steel	424	1	8.66	3.67	0.135
						TOTAL	5.3	0.19





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-03600

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

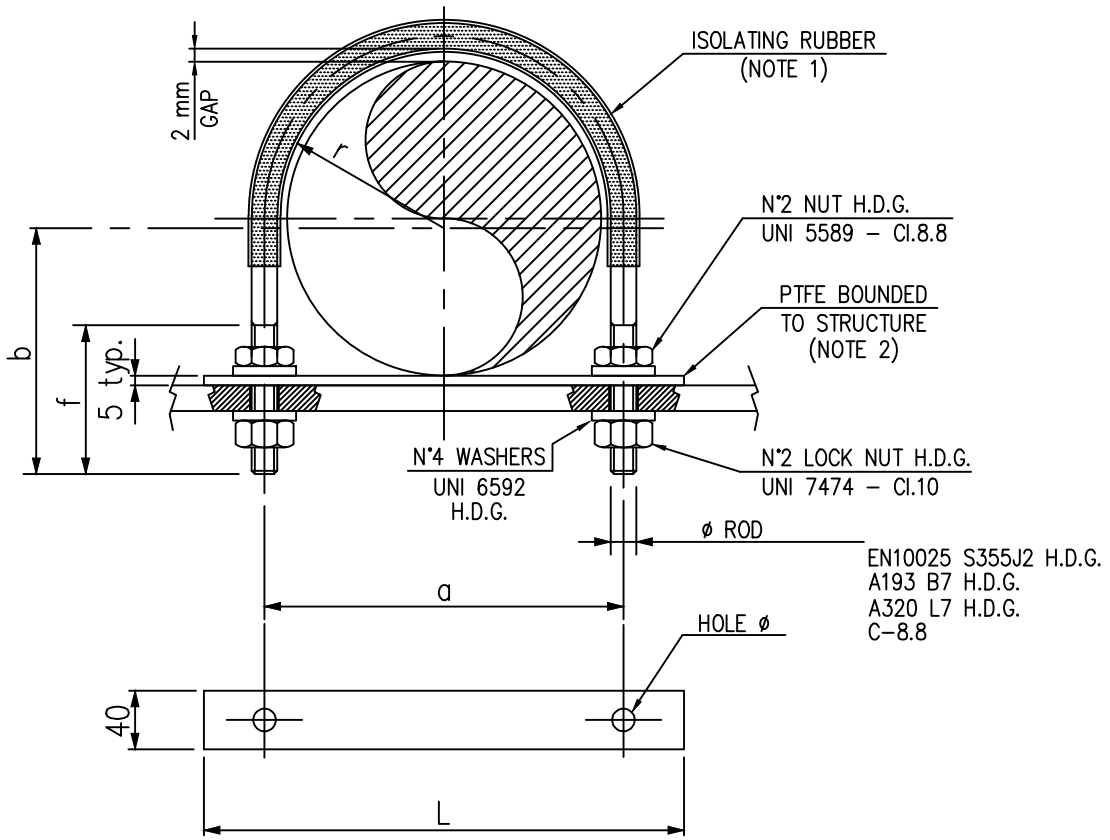
Revision: 0

Date: –

CAVALLOTTI GALVANIZZATI DI GUIDA PER TUBAZIONI IN C.S S.S. E ALLOY
GALVANIZED U–BOLTS GUIDE FOR C.S. S.S. AND ALLOY PIPES (NON GRIP)

S–211

Example of designation : STD – PIPE ND"
(S–211 – 10")



SIZE ND	ROD DIA	r	a	b	f	L	HOLE ø	DEV	DEV. RUBBER	WEIGHT Kg
½"	M8	14	36	55	52	65	10	167	62	0.16
3/4"	M8	17	42	55	52	70	10	176	75	0.16
1"	M8	20	48	60	55	80	10	196	90	0.18
1½"	M10	27	64	70	65	100	12	240	120	0.32
2"	M10	33	76	80	70	110	12	280	150	0.35
3"	M12	48	108	100	80	150	14	370	210	0.60
4"	M12	60	132	110	80	180	14	430	260	0.67
6"	M16	87	190	150	100	250	18	600	380	1.39
8"	M16	113	242	170	100	300	18	720	500	1.60
10"	M16	140	296	200	100	350	18	865	650	1.86
12"	M20	165	350	240	120	420	22	1030	750	3.31
14"	M20	181	382	260	120	450	22	1120	840	3.55
16"	M24	207	438	290	130	520	26	1270	1000	5.76
18"	M24	232	488	320	130	570	26	1410	1100	6.28
20"	M30	257	544	360	160	640	32	1570	1200	11.02
24"	M30	308	646	410	160	750	32	1830	1450	12.52

NOTES:

1) HEAT SHRINK TUBE TYPE FLAME RETARDANT, WITH RATIO 2:1
2) MULTIPLE SHEETS OF PTFE CAN BE ADDED IN ORDER TO ENSURE THE CORRECT ELEVATION AND SLOPE OF THE LINES.

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

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.

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**	20	**To**	20
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
1/20/1/_		**00**	**12-09-2024**	**8**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/20/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/20/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**18-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000060	4	Acceptable				18-09-2024				

Totals per DWG	**20**	**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 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: 12/12/2024
	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
20	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
20	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
20	00	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
20	00	1	A	03HSS	1B	0,087	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	45	**To**	45
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
1/45/1/_		**00**	**12-09-2024**	**8**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/45/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/45/1/_		**00**	**25-09-2024**	**18**	**AZ53**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-10-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				28-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000292	4	Acceptable				10-10-2024				

Totals per DWG	**45**	**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024
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
45	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
45	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
45	00	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
45	00	1	A	03HSS	1B	0,087	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	46	**To**	46
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 Cons.	Accept. Date	Spool
1/46/1/_		**00**	**12-09-2024**	**8**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/46/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/46/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**46**	**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 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: 12/12/2024
	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
46	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
46	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
46	00	1	A	03HSS	1A	0,79	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
46	00	1	A	03HSS	1B	0,087	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	47	**To**	47
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 Cons.	Accept. Date	Spool
1/47/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**18-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable					11-09-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000059	4	Acceptable					18-09-2024			
2/47/1/_		**00**	**11-09-2024**	**7**	**AZ35**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					13-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
3/47/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable					11-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**47**	**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 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: 12/12/2024
	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
47	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
47	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
47	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
47	00	1	A	03HSS	1B	0,937	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	48	**To**	48
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
1/48/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/48/1/_		**00**	**11-09-2024**	**7**	**AZ35**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/48/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**48**	**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024
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
48	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
48	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
48	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
48	00	1	A	03HSS	1B	0,937	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	49	**To**	49
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
1/49/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/49/1/_		**00**	**11-09-2024**	**7**	**AZ35**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/49/1/_		**00**	**10-09-2024**	**6**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**18-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000058	4	Acceptable				18-09-2024				

Totals per DWG	**49**	**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,30 m**	**3 Nr. Welds**	**3,00 inch**
		Accepted	**0,30 m**	**3 Nr. Welds**	**3,00 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: 12/12/2024
	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
49	00	1	A	03HSS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W1-W2	
49	00	1	A	03HSS	3	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
49	00	1	A	03HSS	1A	0,1	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
49	00	1	A	03HSS	1B	0,937	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	64	**To**	64
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	A	**To**	C
		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
1/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
03HSS	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000911	4	Acceptable				10-11-2024				
2/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000912	4	Acceptable				10-11-2024				
3/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000869	4	Acceptable				09-11-2024				
4/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000870	4	Acceptable				09-11-2024				
5/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000913	4	Acceptable				10-11-2024				
6/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000914	4	Acceptable				10-11-2024				

Totals per DWG	**64**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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		
6/64/1/_		**02**	**30-10-2024**	**59**	**AZ39**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**

Totals by Project			
Prefabrication	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by	
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:	
Progetto/Project	**Hollandse Kust Noord Wind Park Project**				
Commessa/Job	**123A90 - Piping**				
Disciplina/Discipline	**PIPING**				
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024	
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
64	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W1	
64	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W2	
64	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
64	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W3	
64	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W4	
64	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
64	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W5	
64	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W6	
64	02	1	C	03HSS	1C	0,108	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	90	**To**	90
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	A	**To**	C
		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
1/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
03HSS	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000919	4	Acceptable				10-11-2024				
2/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000920	4	Acceptable				10-11-2024				
3/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000871	4	Acceptable				09-11-2024				
4/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000872	4	Acceptable				09-11-2024				
5/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000921	4	Acceptable				10-11-2024				
6/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000922	4	Acceptable				10-11-2024				

Totals per DWG	**90**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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 Cont.	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		
6/90/1/_		**02**	**30-10-2024**	**59**	**AZ39**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**

Totals by Project				
Prefabrication	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by	
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:	
Progetto/Project	**Hollandse Kust Noord Wind Park Project**				
Commessa/Job	**123A90 - Piping**				
Disciplina/Discipline	**PIPING**				
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024	
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
90	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W1	
90	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W2	
90	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
90	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W3	
90	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W4	
90	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
90	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W5	
90	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W6	
90	02	1	C	03HSS	1C	0,108	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	91	**To**	91
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	A	**To**	C
		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 Cons	Accept. Date	Spool
1/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
03HSS	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000924	4	Acceptable				10-11-2024				
2/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000925	4	Acceptable				10-11-2024				
3/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000873	4	Acceptable				09-11-2024				
4/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000874	4	Acceptable				09-11-2024				
5/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000926	4	Acceptable				10-11-2024				
6/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000927	4	Acceptable				10-11-2024				

Totals per DWG	**91**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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 Cont.	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		
6/91/1/_		**02**	**30-10-2024**	**59**	**AZ39**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**		**C1A**	**GTAW**	**BW**	**10-11-2024**	**C**

Totals by Project				
Prefabrication	**0,60 m**	**6 Nr. Welds**	**6,00 inch**	
Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**	
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**	
Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**	
Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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: 12/12/2024
	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
91	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W1	
91	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W2	
91	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
91	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W3	
91	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W4	
91	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
91	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W5	
91	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W6	
91	02	1	C	03HSS	1C	0,108	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	92	**To**	92
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	A	**To**	C
		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
1/92/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
03HSS	1	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI		100 %	OK		Acceptable				30-10-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA		100 %	000947	4	Acceptable				10-11-2024				
2/92/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
	1	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI		100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA		100 %	000948	4	Acceptable				10-11-2024				
3/92/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI		100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA		100 %	000875	4	Acceptable				09-11-2024				
4/92/1/_		**02**	**28-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**30-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI		100 %	OK		Acceptable				30-11-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	PR		100 %	000735	4	Acceptable				30-10-2024				
5/92/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI		100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA		100 %	000876	4	Acceptable				09-11-2024				
6/92/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI		100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA		100 %	000877	4	Acceptable				09-11-2024				

Totals per DWG	**92**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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 Cons	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase		Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.		Defect length	CND date	NOTE		
6/92/1/_		**02**	**30-10-2024**	**59**	**AZ39**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**

Totals by Project			
Prefabrication	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024
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
92	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W1	
92	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W2	
92	02	1	A	03HSS	1A	0,073	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
92	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W3	
92	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W4	
92	02	1	B	03HSS	1B	0,148	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
92	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W5	
92	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W6	
92	02	1	C	03HSS	1C	0,096	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	93	**To**	93
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	A	**To**	C
		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 Cons.	Accept. Date	Spool
1/93/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
03HSS	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				30-10-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000937	4	Acceptable				10-11-2024				
2/93/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-11-2024**	**A**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000938	4	Acceptable				10-11-2024				
3/93/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000878	4	Acceptable				09-11-2024				
4/93/1/_		**02**	**28-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**30-10-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				30-10-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	PR	100 %	000736	4	Acceptable				30-10-2024				
5/93/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000879	4	Acceptable				09-11-2024				
6/93/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000880	4	Acceptable				09-11-2024				

Totals per DWG	**93**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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		
6/93/1/_		**02**	**30-10-2024**	**59**	**AZ39**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**

Totals by Project			
Prefabrication	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024
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
93	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W1	
93	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W2	
93	02	1	A	03HSS	1A	0,074	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
93	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W3	
93	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W4	
93	02	1	B	03HSS	1B	0,136	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
93	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W5	
93	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W6	
93	02	1	C	03HSS	1C	0,109	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	94	**To**	94
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	A	**To**	C
		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
1/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**A**
03HSS	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000881	4	Acceptable				09-11-2024				
2/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**A**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000882	4	Acceptable				09-11-2024				
3/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000883	4	Acceptable				09-11-2024				
4/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**B**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000884	4	Acceptable				09-11-2024				
5/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000885	4	Acceptable				09-11-2024				
6/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**
	1	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	100 %	000886	4	Acceptable				09-11-2024				

Totals per DWG	**94**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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		
6/94/1/_		**02**	**30-10-2024**	**59**	**AZ39**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**		**C1A**	**GTAW**	**BW**	**09-11-2024**	**C**

Totals by Project			
Prefabrication	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 12/12/2024
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
94	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W1	
94	02	1	A	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W2	
94	02	1	A	03HSS	1A	0,076	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
94	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W3	
94	02	1	B	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W4	
94	02	1	B	03HSS	1B	0,134	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
94	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W5	
94	02	1	C	03HSS	7	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DL364	1724000839	01010	12/230044598/27/REV-00	W6	
94	02	1	C	03HSS	1C	0,109	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	122	**To**	122
Sheet		**From**	0	**To**	0
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Cont.	Accept. Date	Spool
1/122/1/_		**01**	**10-09-2024**	**6**	**AZ39**			**FWN**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
03HSS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/122/1/_		**01**	**10-09-2024**	**6**	**AZ39**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
3/122/1/_		**01**	**12-09-2024**	**8**	**AZ35**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/122/1/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
5/122/1/_		**01**	**26-11-2024**	**52**	**AX410**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**06-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				27-11-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	001041		4	Acceptable				06-12-2024				
6/122/1/_		**01**	**26-11-2024**	**51**	**AX410**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**27-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				27-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
7/122/1/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/122/1/_		**01**	**27-11-2024**	**53**	**AX410**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**28-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
9/122/1/_		**01**	**17-09-2024**	**13**	**AZ35**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**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								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
9/122/1/_		**01**	**17-09-2024**	**13**	**AZ35**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**18-09-2024**	**B**
10/122/1/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					13-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
11/122/1/_		**01**	**27-11-2024**	**53**	**AX410**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**06-12-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					28-11-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	001042		4	Acceptable					06-12-2024			
12/122/1/_		**01**	**11-09-2024**	**7**	**AZ35**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					13-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
13/122/1/_		**01**	**12-09-2024**	**8**	**AZ35**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					13-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
14/122/1/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					13-09-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
15/122/1/_		**01**	**26-11-2024**	**51**	**AX410**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**27-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					27-11-2024			
		RT	FIN	Weld Completion				10 %				Acceptable								
31/122/1/_		**01**	**28-09-2024**	**20**	**AZ39**			**TEE**		**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1B**	**GTAW+SMAW**	**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								
32/122/1/_		**01**	**28-09-2024**	**20**	**AZ39**			**TEE**		**0,75 in**	**2,87 mm**	**V**	**0,083 m**	**P**	**S.S.**	**C1A**	**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 Cons	Accept. Date	Spool
16/122/2/_		**01**	**16-09-2024**	**13**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**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		IDL-QCI-RT 0036 00	AA	10 %	000071	4	Acceptable				18-09-2024				
17/122/2/_		**01**	**11-09-2024**	**7**	**AZ35**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
18/122/2/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**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				13-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000063	4	Acceptable				18-09-2024				
19/122/2/_		**01**	**12-09-2024**	**8**	**AZ35**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
20/122/2/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
21/122/2/_		**01**	**26-11-2024**	**51**	**AX410**			**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**27-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				27-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
22/122/2/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
23/122/2/_		**01**	**27-11-2024**	**53**	**AX410**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**28-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
24/122/2/_		**01**	**12-09-2024**	**8**	**AZ35**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		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 Conn.	Accept. Date	Spool
24/122/2/_		**01**	**12-09-2024**	**8**	**AZ35**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
25/122/2/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
26/122/2/_		**01**	**28-11-2024**	**54**	**AX416**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**28-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
27/122/2/_		**01**	**12-09-2024**	**8**	**AZ35**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
28/122/2/_		**01**	**11-09-2024**	**7**	**AZ35**			**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
29/122/2/_		**01**	**28-11-2024**	**54**	**AX416**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**M**	**S.S.**	**D1A**	**GTAW**	**BW**	**28-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				28-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
30/122/2/_		**01**	**11-09-2024**	**7-24**	**AZ35**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**02-10-2024**	**D**
					AZ39	**After Cutting**													
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000100	4	Acceptable				26-09-2024				
Cut 30-09-2024		VIS	C 1 FTP	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable C1B		GTAW+SMAW		02-10-2024				
		RT	C 1 DTA	After Cutting				10 %			Acceptable								
33/122/2/_		**01**	**28-09-2024**	**20**	**AZ39**			**TEE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1B**	**GTAW+SMAW**	**BW**	**30-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				30-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
34/122/2/_		**01**	**28-09-2024**	**20**	**AZ39**			**TEE**	**0,75 in**	**2,87 mm**	**V**	**0,083 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-10-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				30-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000284	4	Acceptable				10-10-2024				

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		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		
34/122/2/_		**01**	**28-09-2024**	**20**	**AZ39**		**TEE**	**0,75 in**	**2,87 mm**	**V**	**0,083 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**10-10-2024**	**D**

Totals per DWG	**122**	**Prefabrication**	**2,46 m**	**25 Nr. Welds**	**24,50 inch**
		Erection	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,36 m**	**34 Nr. Welds**	**33,50 inch**
		Accepted	**3,36 m**	**34 Nr. Welds**	**33,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**2,46 m**	**25 Nr. Welds**	**24,50 inch**
		Erection	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,36 m**	**34 Nr. Welds**	**33,50 inch**
		Accepted	**3,36 m**	**34 Nr. Welds**	**33,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**2,46 m**	**25 Nr. Welds**	**24,50 inch**
		Erection	**0,90 m**	**9 Nr. Welds**	**9,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,36 m**	**34 Nr. Welds**	**33,50 inch**
		Accepted	**3,36 m**	**34 Nr. Welds**	**33,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by	
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: 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: 12/12/2024	
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
122	01	1	A	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W2-W3-W13	
122	01	1	A	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W4	
122	01	1	A	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W14	
122	01	1	A	03HSS	5	1	Flange WN ›1" Thk.3.38mm 300LB RF ASTM A182 Gr.F316/316L	DJ346	1724000839	01010	12/230039622/57/REV-00	W1	
122	01	1	A	03HSS	1A	0,356	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	1	A	03HSS	1B	3,88	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	1	A	03HSS	1E	0,138	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	1	B	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W7-W9	
122	01	1	B	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W10-W31	
122	01	1	B	03HSS	3	1	Cap BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	519724	1724000839	00190	519724	W12	
122	01	1	B	03HSS	9	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	W12-W31-W32	
122	01	1	B	03HSS	10	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	W32	
122	01	1	B	03HSS	1C	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	1	B	03HSS	1D	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	1	MONT	03HSS	6	1	Shut Down Valve 64-SDV-001	0	#N/D	#N/D	#N/D		
122	01	1	MONT	03HSS	7	2	Gasket Spiral Wound Thk. 3.2 mm ›1" 300LB RF AISI 316 + GRAPHITE c/w INNER RING	0	#N/D	#N/D	#N/D		
122	01	1	MONT	03HSS	8	8	Stud Bolt + 2 Heavy Nuts 5/8" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	0	#N/D	#N/D	#N/D		
122	01	1	MONT	03HSS	11	1	Cap Forged THRD-F NPT ›3/4" 3000# ASTM A182 Gr.F316/316L	0	#N/D	#N/D	#N/D		
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W16-W17	
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W18-W19	
122	01	2	C	03HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W20	
122	01	2	C	03HSS	1F	3,734	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	2	C	03HSS	1G	0,368	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	2	C	03HSS	1H	0,774	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	2	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W22-W24	
122	01	2	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W25-W27	
122	01	2	D	03HSS	2	1	Tee BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	66A-SWJ011	1724000839	00480	T202318000110	W28-W33	
122	01	2	D	03HSS	3	1	Cap BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	519724	1724000839	00190	519724	W30	
122	01	2	D	03HSS	5	1	Tee Reducing BW ›1"x3/4" Thk.3.38mmx2.87mm ASTM A403 Gr.WP316/316L	1067621	1724000839	00560	1067621	W30-W33-W34	
122	01	2	D	03HSS	6	1	Nipple L=100mm TOE ›3/4" Thk.2,87mm ASTM A312 Gr.TP316/316L	SZ8	1724001267	00260	002978	W34	
122	01	2	D	03HSS	1I	3,65	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	2	D	03HSS	1J	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	2	D	03HSS	1K	3,924	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
122	01	2	MONT	03HSS	7	1	Cap Forged THRD-F NPT ›3/4" 3000# ASTM A182 Gr.F316/316L	0	#N/D	#N/D	#N/D		

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

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation – NOT APPLICABLE

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	64-10-TP-020	: Test Pack 64-10-TP-020			Dwg	123A90-DDL-PR-PID-80015-20/27
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003388		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 :	Cups to isolate inlet and outlet points.
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:	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	2024-12-11	2024-12-13	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-11T15:45:25.485Z	PROVERLIS Digitaly signed by Massimo Bruschi 2024-12-13T13:05:20.667Z	

ITEM	Tag	64-10-TP-023	: Test Pack 64-10-TP-023			Dwg	123A90-DDL-PR-PID-80011-27-28
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10003406		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.	Note
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: Bleed Valve BLPH-MV-278 has not been installed in the line (differently as marked in P&I and isometric battery limit) before the pressure test.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-16	2024-12-24	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-16T15:13:06.623Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-24T10:50:20.833Z	

ITEM	Tag	64-10-TP-023	: Test Pack 64-10-TP-023		Dwg	123A90-DDL-PR-PID-80011-27-28	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10003407	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.	PL
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	Andrea Mancini	
Date	2025-02-04	2025-02-06	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-04T15:09:02.324Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-02-06T14:40:15.291Z	

ITEM	Tag	64-10-TP-023	: Test Pack 64-10-TP-023			Dwg	123A90-DDL-PR-PID-80011-27-28
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10003408		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

1	Check that the completed painting is in accordance with the specifications covering quality and thickness.	OK
2	Check that the color coding conforms to the specifications.	PL
3	Check that the fluid direction is correct.	PL
4	Check that line marking is correct.	NA
5	Check that the painting of piping systems and of the equipment is "touched-up" and conforms to the specifications.	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.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (ROSETTI MARINO)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-02-05	2025-02-05	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-05T06:49:12.215Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-05T12:37:30.914Z	

ITEM	Tag	64-10-TP-023	: Test Pack 64-10-TP-023		Dwg	123A90-DDL-PR-PID-80011-27-28	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10003409	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	23/12/2024	Start time	14:25	End time	14:40
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 debris. All contaminants have been expelled.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-16	2024-12-24	
Signature	Digitaly signed by Emanuele Delfino 2024-12-16T15:13:24.024Z	Digitaly signed by Kangi Albonetti 2024-12-24T11:12:37.363Z	

ITEM	Tag	64-10-TP-023	: Test Pack 64-10-TP-023		Dwg	123A90-DDL-PR-PID-80011-27-28	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	LD	
TASK	code	C10003410	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	12 barg	Max test pressure	18 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	NA
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	2024-12-16	2024-12-24	
Signature	Digitaly signed by Emanuele Delfino 2024-12-16T15:13:40.303Z	Digitaly signed by Kangi Albonetti 2024-12-24T11:14:35.691Z	

Logger protocol
Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-64-10-TP-023 (2)

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)*	00:57:42
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	02:56:02 pm

Logger protocol

Protocollo di acquisizione elenco dati

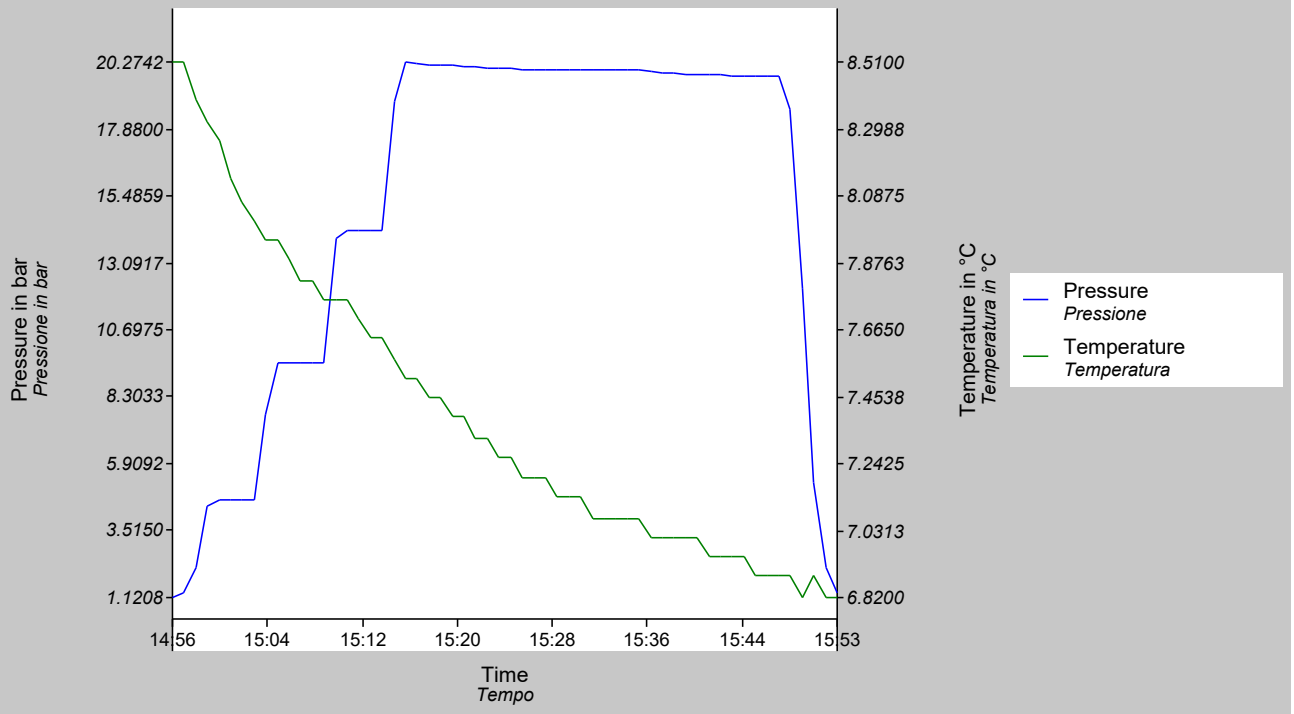
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-64-10-TP-023 (2)

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
12/23/2024 14:56:02.000	1.1208	8.5100
12/23/2024 14:57:02.000	1.2837	8.5100
12/23/2024 14:58:02.000	2.2141	8.3900
12/23/2024 14:59:02.000	4.3712	8.3200
12/23/2024 15:00:02.000	4.6104	8.2600
12/23/2024 15:01:02.000	4.6053	8.1400
12/23/2024 15:02:02.000	4.6021	8.0700
12/23/2024 15:03:02.000	4.6016	8.0100
12/23/2024 15:04:02.000	7.6656	7.9500
12/23/2024 15:05:02.000	9.5112	7.9500
12/23/2024 15:06:02.000	9.4988	7.8900
12/23/2024 15:07:02.000	9.5014	7.8200
12/23/2024 15:08:02.000	9.5037	7.8200
12/23/2024 15:09:02.000	9.5087	7.7600
12/23/2024 15:10:02.000	13.9756	7.7600
12/23/2024 15:11:02.000	14.2556	7.7600
12/23/2024 15:12:02.000	14.2560	7.7000

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-64-10-TP-023 (2)

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
12/23/2024 15:13:02.000	14.2503	7.6400
12/23/2024 15:14:02.000	14.2279	7.6400
12/23/2024 15:15:02.000	18.8559	7.5700
12/23/2024 15:16:02.000	20.2742	7.5100
12/23/2024 15:17:02.000	20.2205	7.5100
12/23/2024 15:18:02.000	20.1866	7.4500
12/23/2024 15:19:02.000	20.1616	7.4500
12/23/2024 15:20:02.000	20.1355	7.3900
12/23/2024 15:21:02.000	20.1181	7.3900
12/23/2024 15:22:02.000	20.0979	7.3200
12/23/2024 15:23:02.000	20.0770	7.3200
12/23/2024 15:24:02.000	20.0562	7.2600
12/23/2024 15:25:02.000	20.0387	7.2600
12/23/2024 15:26:02.000	20.0196	7.2000
12/23/2024 15:27:02.000	20.0023	7.2000
12/23/2024 15:28:02.000	19.9985	7.2000
12/23/2024 15:29:02.000	19.9949	7.1400
12/23/2024 15:30:02.000	19.9951	7.1400
12/23/2024 15:31:02.000	19.9973	7.1400
12/23/2024 15:32:02.000	19.9887	7.0700
12/23/2024 15:33:02.000	19.9855	7.0700
12/23/2024 15:34:02.000	19.9837	7.0700
12/23/2024 15:35:02.000	19.9801	7.0700
12/23/2024 15:36:02.000	19.9782	7.0700
12/23/2024 15:37:02.000	19.9424	7.0100
12/23/2024 15:38:02.000	19.8686	7.0100
12/23/2024 15:39:02.000	19.8517	7.0100
12/23/2024 15:40:02.000	19.8320	7.0100
12/23/2024 15:41:02.000	19.8225	7.0100
12/23/2024 15:42:02.000	19.8150	6.9500
12/23/2024 15:43:02.000	19.8045	6.9500
12/23/2024 15:44:02.000	19.7902	6.9500
12/23/2024 15:45:02.000	19.7818	6.9500
12/23/2024 15:46:02.000	19.7696	6.8900
12/23/2024 15:47:02.000	19.7571	6.8900
12/23/2024 15:48:02.000	19.7479	6.8900
12/23/2024 15:49:02.000	18.5894	6.8900
12/23/2024 15:50:02.000	12.1410	6.8200
12/23/2024 15:51:02.000	5.2219	6.8900
12/23/2024 15:52:02.000	2.2175	6.8200
12/23/2024 15:53:02.000	1.3055	6.8200

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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 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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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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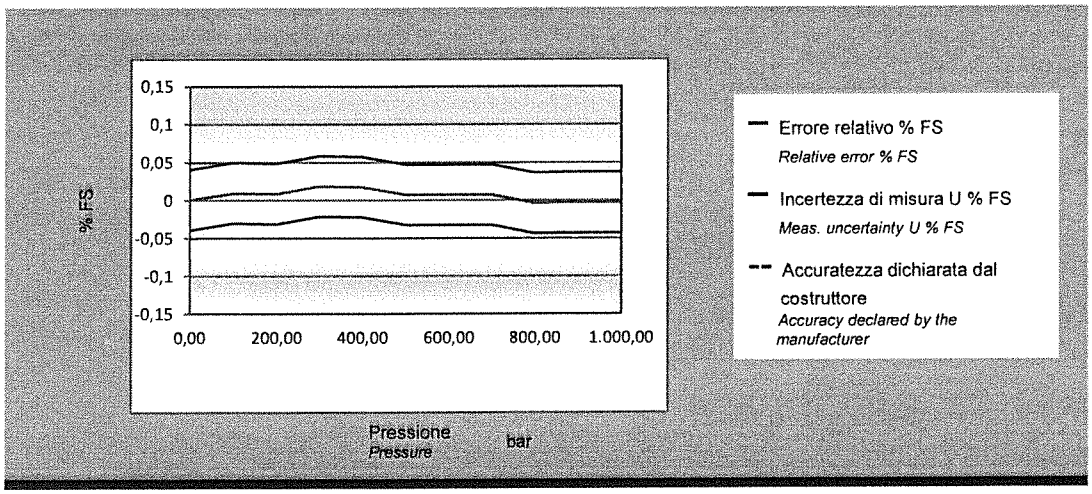
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Incertezza di misura
Uncertainty of measurement

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°64-10-TP-023
SUB-SYSTEM N° 64-10

System	64
Sub-System	64-10
Test Pressure	18 barg
Test Fluid	WATER
Test Duration	30 min

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

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
8. PIPING & VESSEL PRE-COMMISSIONING CONFORMITY CHECKS & TESTS:
   - 8.1 CLX02A - Pipework Before test
   - 8.2 CLX02B - Pipework After Test
   - 8.3 CXX01 - Thermal insulation – NOT APPLICABLE
   - 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

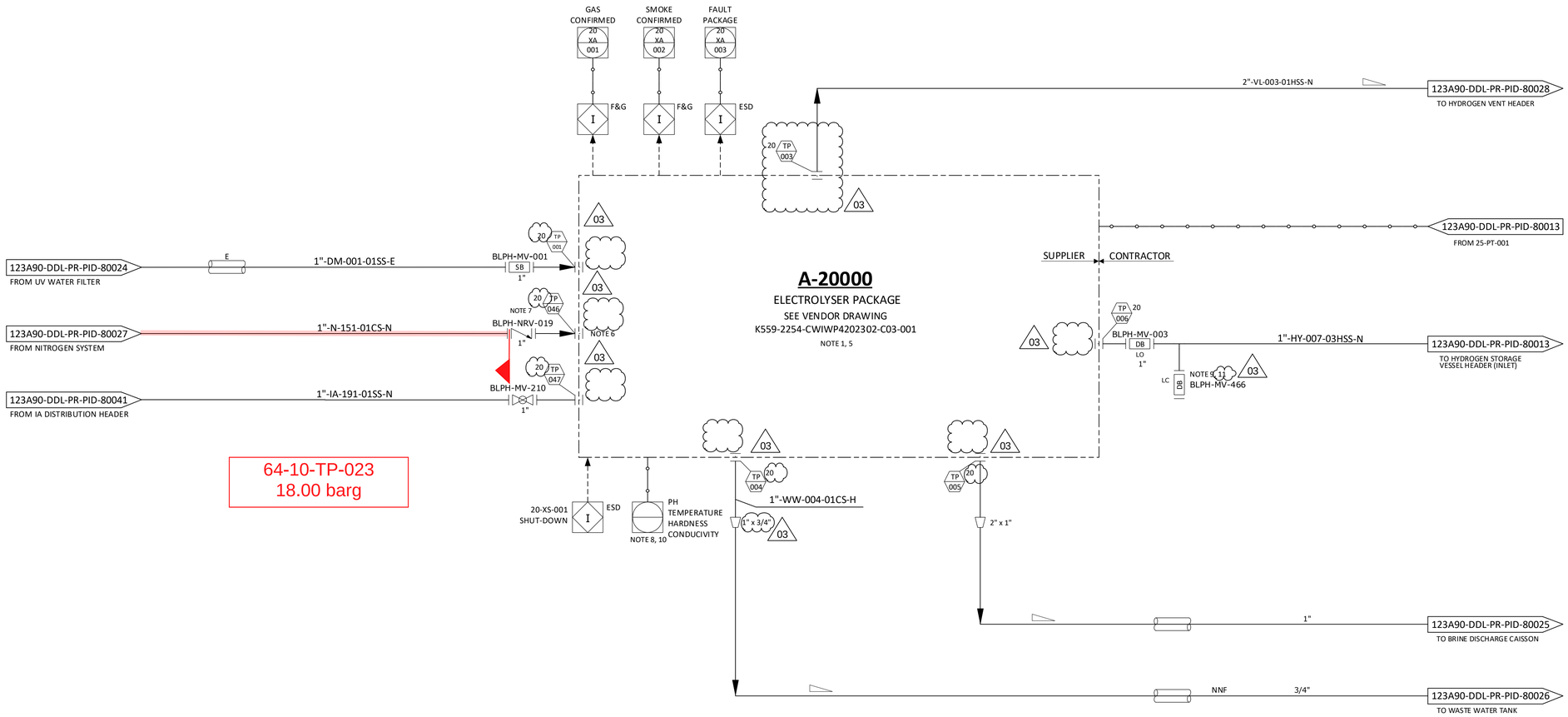
DRAWING NO. DRAWING_NO.

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

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

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

ESD I — FAULT PACKAGE 63 XA 003
ESD I — 63-XS-001 SHUT-DOWN
NOTE 14

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
1-1/2"-IA-108-01SS-N → 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

A-64000
NITROGEN SYSTEM
SEE VENDOR DRAWING 1724000437-PR-PID-00018 — 03

64 TP 042 — BLPH-MV-271 SB LO — 1"-N-158-01CS-N
3/4" LC — BLPH-MV-275 NOTE 16
64 TP 044 — 1"-N-262-01CS-N

NOTE 15
64 PI 002 — L — LL
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
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
FL-DC TYP.6 1"
N-158 — N-100

NOTE 10 TO ATM
NOTE 1, 12 SET @ 10 barg 1D2
64 PSV 001
2"-AV-160-01CS-N
1.5" x 1"
BLPH-MV-278 FB-LO 1.1/2"
1-1/2"-N-197-01CS-N
1.5" x 1"
1"-N-100-01CS-N

1"-N-257-03HSS-N
UPPER LEVEL
LOWER LEVEL
64 SDY 001 — IA
64 SDV 001 — NOTE 13 — NC-FC TYP.2

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-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

ESD I — 64-XS-001 SHUT-DOWN — ESD I — NOTE 14
64 XA 003 — FAULT PACKAGE

03 — 64 TP 046 — **V-64001** NITROGEN RECEIVER — SEE VENDOR DRAWING 1724000437-PR-PID-00018 — 03

64-10-TP-023
18.00 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

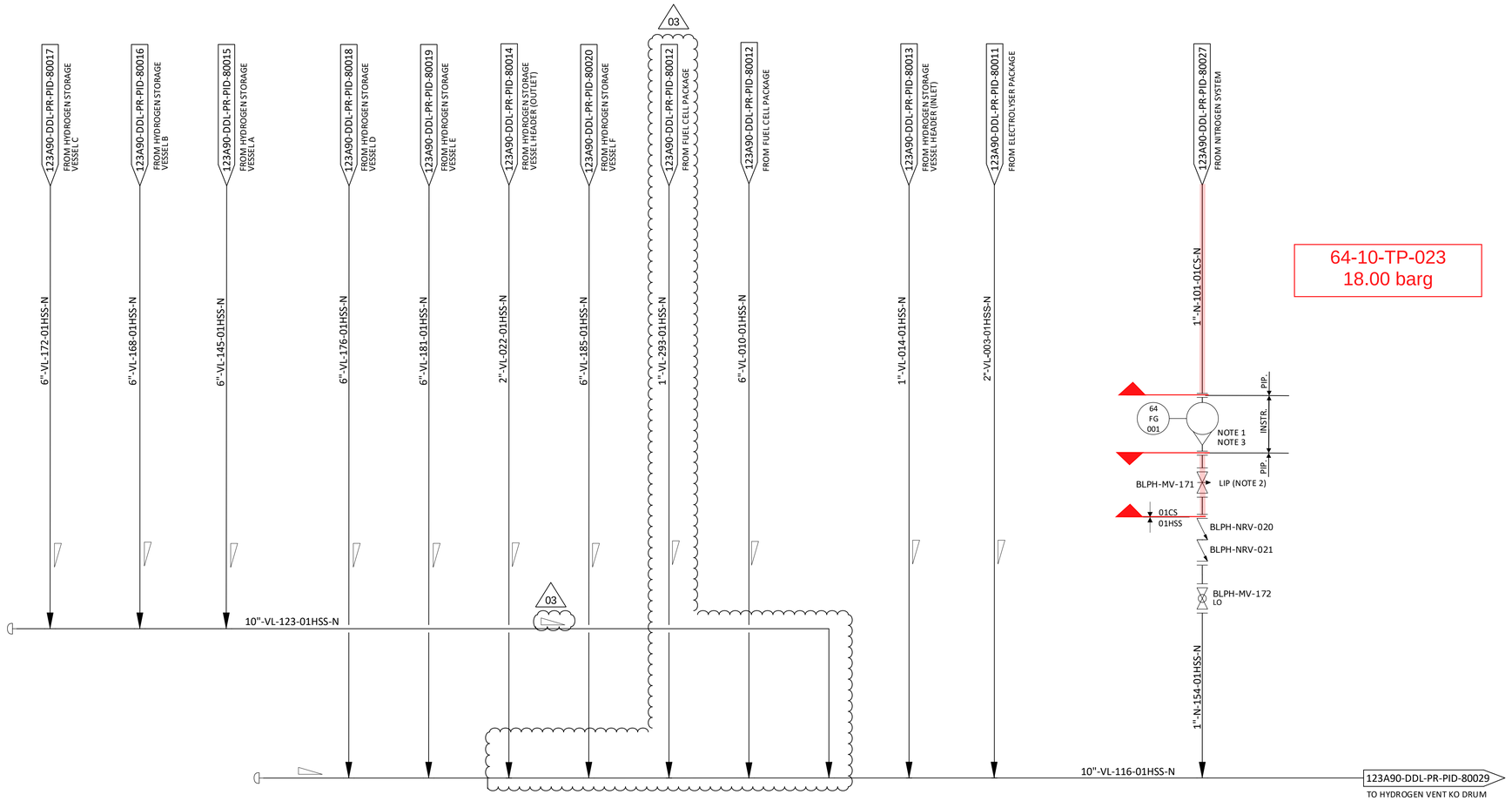
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
INSTRUMENT AIR PACKAGE

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

DRAWING NO. DRAWING_NO.

REV. REV



NOTES

1. FLOW METER 64-FG-001 SHALL BE READABLE FROM MANUAL VALVE MV-171.
2. VALVE BLPH-MV-171 TO BE LOCKED IN PLACE.
3. VERTICAL INSTALLATION.

HOLDS

1. DELETED.
2. 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 :

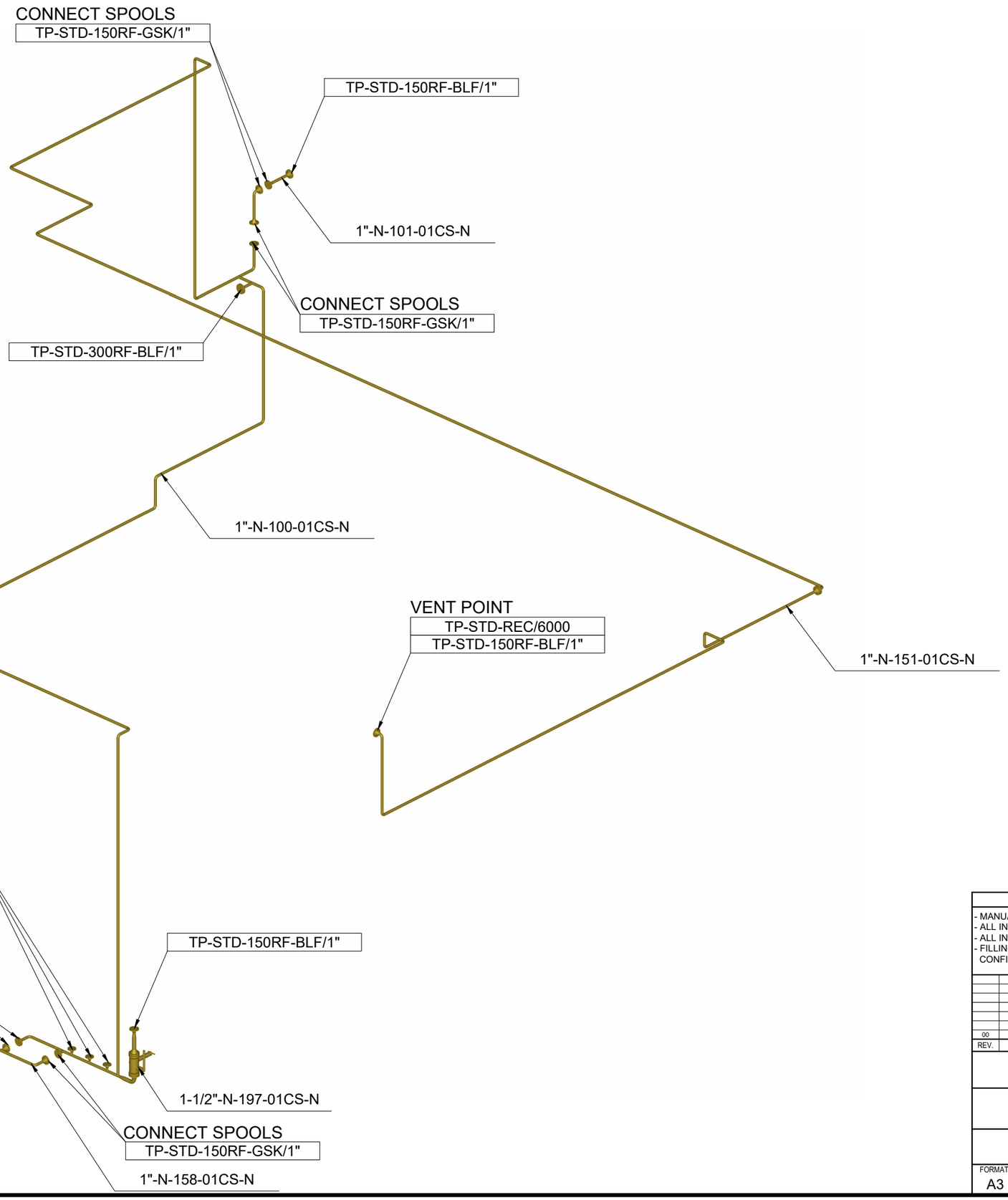
BLPH PIPING AND INSTRUMENTATION DIAGRAM HYDROGEN VENT HEADER

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-80028	SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



64-10-TP-023

18 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
64-10-TP-023

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

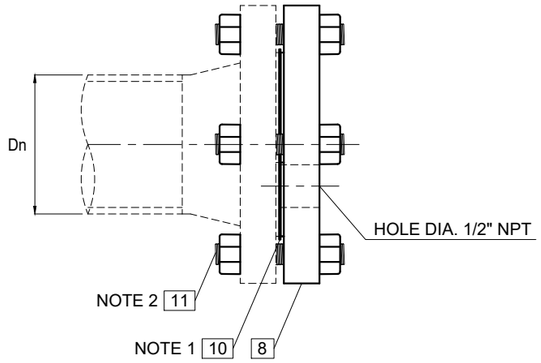
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-023	TP-STD-150RF-BLF/3/4"	FLBHCS01363Q0H	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB RF ASTM/ASME A/SA105	1	3	3	
TP-023	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	3	3	
TP-023	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	3	12	
TP-023	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	4	4	
TP-023	TP-STD-150RF-BLF/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	4	4	
TP-023	TP-STD-150RF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	4	16	
TP-023	TP-STD-150RF-GSK/1"	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ø1" 150LB RF AISI 316 + GRAPHITE c/w INNER RING	1	4	4	
TP-023	TP-STD-150RF-GSK/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	4	16	
TP-023	TP-STD-300RF-BLF/1"	FLBHCS0018010H	Flange Blind c/w NPT Hole ø1"x1/2" 300LB RF ASTM/ASME A/SA105	1	1	1	
TP-023	TP-STD-300RF-BLF/1"	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ø1" 300LB RF AISI 316 + GRAPHITE c/w INNER RING	1	1	1	
TP-023	TP-STD-300RF-BLF/1"	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

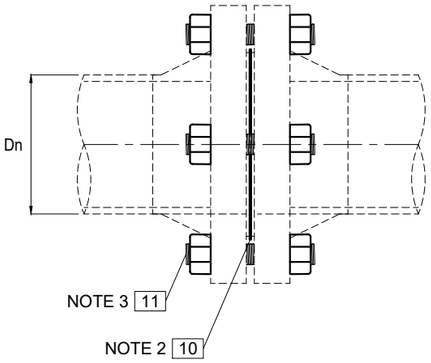
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

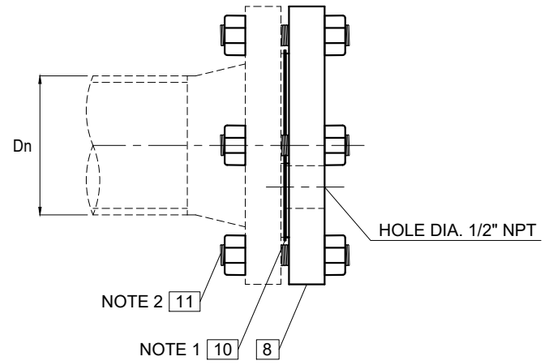
PIPING TEST STANDARD DRAWING
TP-STD-150RF
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

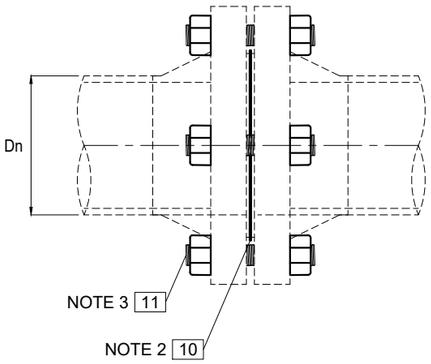
TP-STD-300RF | 300 RF | STANDARD FOR BLIND POINT

TP-STD-300RF-BLF/Dn
TP-STD-300RF-GSK/Dn

MATERIAL LIST			
STD	**POS.**	**DESCRIPTION**	**Q.TY**
TP-STD-300RF-___/1/2"	8	Flange Blind c/w NPT Hole ø1/2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1/2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1/2" L=65 MM	4
TP-STD-300RF-___/3/4"	8	Flange Blind c/w NPT Hole ø3/4"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3/4" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=75 MM	4
TP-STD-300RF-___/1"	8	Flange Blind c/w NPT Hole ø1"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=80 MM	4
TP-STD-300RF-___/1.1/4"	8	Flange Blind c/w NPT Hole ø1.1/4"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/4" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	4
TP-STD-300RF-___/1.1/2"	8	Flange Blind c/w NPT Hole ø1.1/2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø1.1/2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=95 MM	4
TP-STD-300RF-___/2"	8	Flange Blind c/w NPT Hole ø2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 5/8" L=90 MM	8
TP-STD-300RF-___/2.1/2"	8	Flange Blind c/w NPT Hole ø2.1/2"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø2.1/2" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=105 MM	8
TP-STD-300RF-___/3"	8	Flange Blind c/w NPT Hole ø3"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø3" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=110 MM	8
TP-STD-300RF-___/4"	8	Flange Blind c/w NPT Hole ø4"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø4" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=115 MM	8
TP-STD-300RF-___/6"	8	Flange Blind c/w NPT Hole ø6"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø6" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 3/4" L=125 MM	12
TP-STD-300RF-___/8"	8	Flange Blind c/w NPT Hole ø8"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø8" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 7/8" L=145 MM	12
TP-STD-300RF-___/10"	8	Flange Blind c/w NPT Hole ø10"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø10" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1" L=160 MM	16
TP-STD-300RF-___/12"	8	Flange Blind c/w NPT Hole ø12"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø12" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=175 MM	16
TP-STD-300RF-___/14"	8	Flange Blind c/w NPT Hole ø14"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø14" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/8" L=180 MM	20
TP-STD-300RF-___/16"	8	Flange Blind c/w NPT Hole ø16"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø16" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=195 MM	20
TP-STD-300RF-___/18"	8	Flange Blind c/w NPT Hole ø18"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø18" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=200 MM	24
TP-STD-300RF-___/20"	8	Flange Blind c/w NPT Hole ø20"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø20" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/4" L=210 MM	24
TP-STD-300RF-___/24"	8	Flange Blind c/w NPT Hole ø24"x1/2" 300LB RF ASTM/ASME A/SA105	1
	10	Gasket ø24" 300LB RF	1
	11	Stud Bolt + 2 Heavy Nuts 1.1/2" L=235 MM	24



TP-STD-300RF-BLF/Dn
BLIND FLANGE



TP-STD-300RF-GSK/Dn
GASKET ONLY

NOTES

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

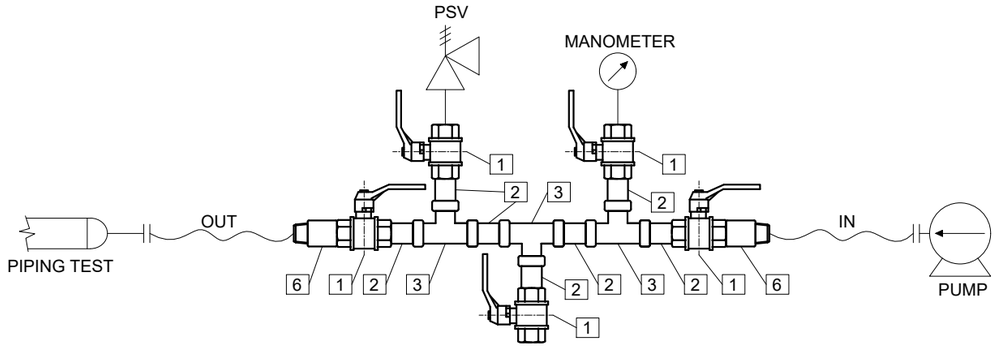
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

PIPING TEST STANDARD DRAWING
TP-STD-300RF
TP-STD-300RF-BLF/Dn
TP-STD-300RF-GSK/Dn

FORMAT	SCALE	DRAWING N.	REV.	SHEET
A3	NTS	TP_STD_300RF	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

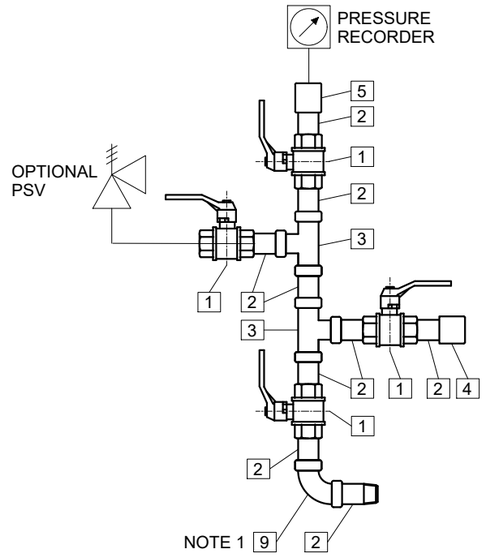
TP-STD-FILL

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
34	N-100	100	1	01CS	N	4,55	80	N/A	1"-N-100-01CS-N	123A90-DDL-PR-PID-80027	12,00	64	64-10	TP-023	Water	18.00	Nitrogen Gas	Carbon Steel	INF	Art. 4, par. 3	1	RAL 9002
35	N-101	101	1	01CS	N	4,55	80	N/A	1"-N-101-01CS-N	123A90-DDL-PR-PID-80027	12,00	64	64-10	TP-023	Water	18.00	Nitrogen Gas	Carbon Steel	INF	Art. 4, par. 3	1	RAL 9002
62	N-151	151	1	01CS	N	4,55	80	N/A	1"-N-151-01CS-N	123A90-DDL-PR-PID-80027	12,00	64	64-10	TP-023	Water	18.00	Nitrogen Gas	Carbon Steel	INF	Art. 4, par. 3	1	RAL 9002
66	N-158	158	1	01CS	N	4,55	80	N/A	1"-N-158-01CS-N	123A90-DDL-PR-PID-80027	12,00	64	64-00 / 64-10	TP-023/TP-029	Water	18.00	Nitrogen Gas	Carbon Steel	INF	Art. 4, par. 3	1	RAL 9002
97	N-197	197	1.1/2	01CS	N	5,08	80	N/A	1-1/2"-N-197-01CS-N	123A90-DDL-PR-PID-80027	12,00	64	64-10	TP-023	Water	18.00	Nitrogen Gas	Carbon Steel	INF	Art. 4, par. 3	1	RAL 9002

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB: **123A90**

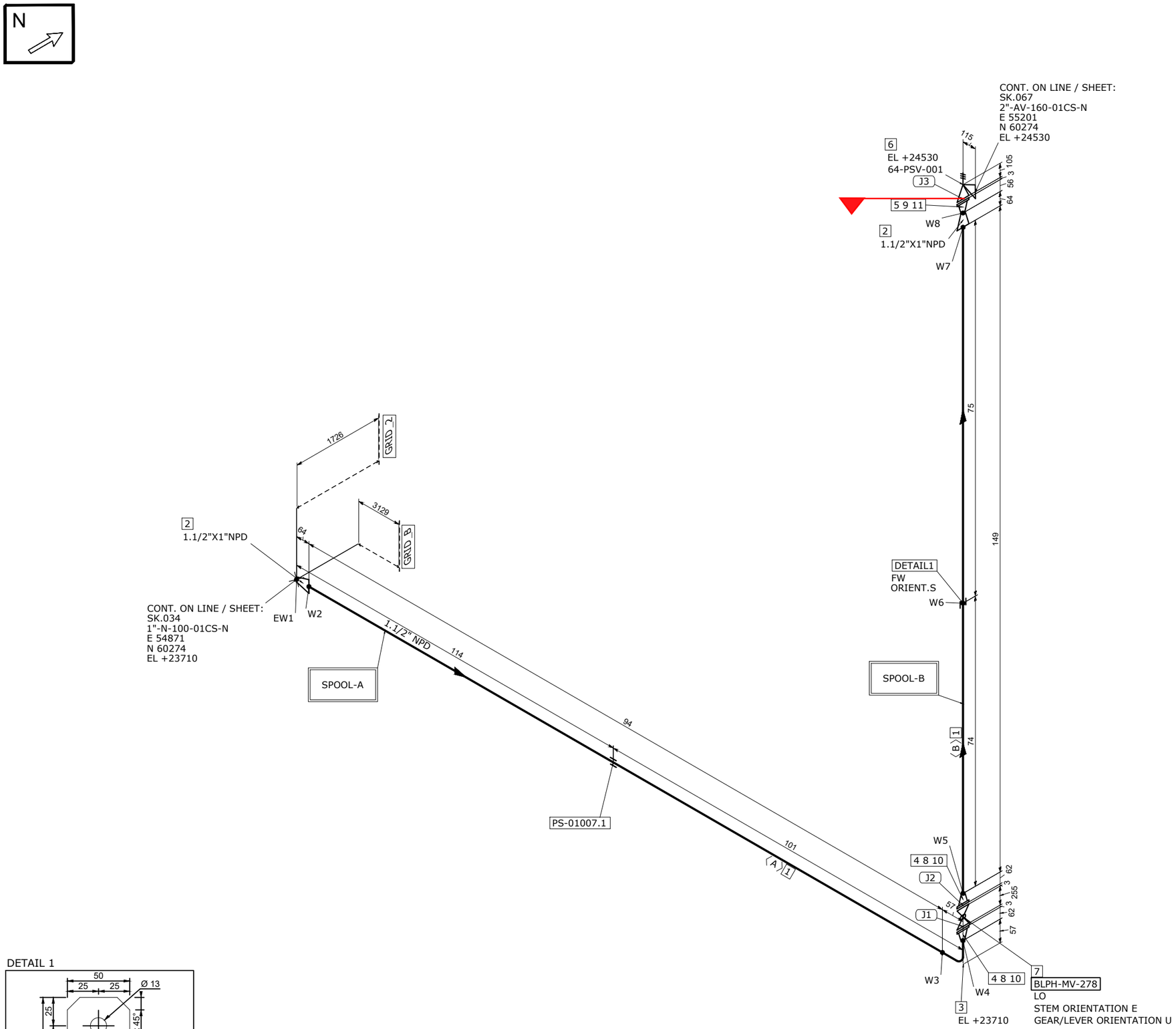
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TITLE

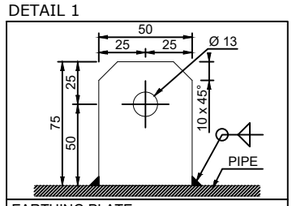
SHOP DRAWING ISOMETRIC LIST

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
46	123A90-FDL-PP-DI-00034-01	**034**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-100-01CS-N	20/08/2024													**00**	**02**		**TP-023**
47	123A90-FDL-PP-DI-00034-02	**034**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-100-01CS-N	20/08/2024													**00**	**02**		**TP-023**
48	123A90-FDL-PP-DI-00035-01	**035**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-101-01CS-N	27/08/2024													**00**	**03**		**TP-023**
85	123A90-FDL-PP-DI-00062-01	**062**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-151-01CS-N	20/08/2024													**00**	**02**		**TP-023**
86	123A90-FDL-PP-DI-00062-02	**062**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-151-01CS-N	20/08/2024	17/09/2024												**01**	**05**		**TP-023**
90	123A90-FDL-PP-DI-00066-01	**066**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-158-01CS-N	20/08/2024													**00**	**02**		**TP-023/TP-029**
127	123A90-FDL-PP-DI-00097-01	**097**	01	SHOP DRAWING ISOMETRIC - LINE NR 1-1/2"-N-197-01CS-N	20/08/2024													**00**	**02**		**TP-023**



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	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	0.2M	1.3
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.7
3	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.5
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	2	3.6
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2X1		SAFETY VALVE FLG.150/150#	1	15.0
7	1.1/2	VLBLNN01291H00	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	26.4
8	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
9	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
10	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
11	1/2	SB20BO34450200	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.7

FABRICATION WEIGHT [kg]	7.5
ERECTION WEIGHT [kg]	43.3
OVERALL WEIGHT [kg]	50.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW1	1	BW
W2	1.1/2	BW
W3	1.1/2	BW
W4	1.1/2	BW
W5	1.1/2	BW
W6		FW
W7	1.1/2	BW
W8	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	94	BEVEL	BEVEL
B	1.1/2	149	BEVEL	BEVEL

SUPPORT LIST

PS-01007.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	4.5	3.2
B	4	4.4
MONT	1	43.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

64-10-TP-023

MASTER

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-N-197-01CS-N

SK.097

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00097 | SHEET / OF: 1/1 | REV.: 00

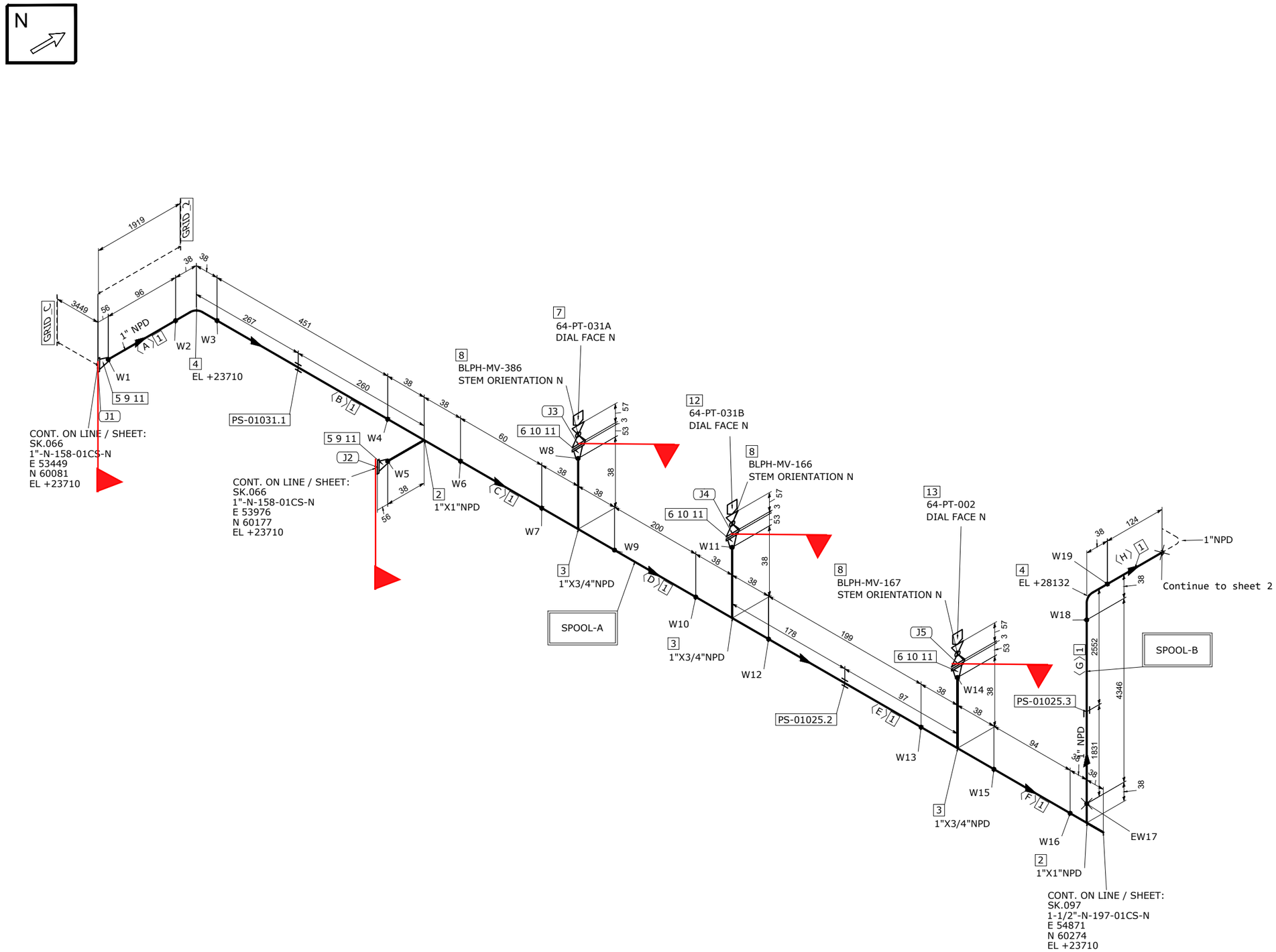
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	TER0CS2607013Q	Tee Reducing ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.4
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	3	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1/2		Pressure Transmitter - Online	1	0.0
8	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	3	15.0
9	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
10	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.2
11	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	20	2.4
12	1/2		Pressure Transmitter - Online	1	0.0
13	1/2		Pressure Transmitter - Online	1	0.0

FABRICATION WEIGHT [kg]	26.2
ERECTION WEIGHT [kg]	17.6
OVERALL WEIGHT [kg]	43.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	3/4	BW
W9	1	BW
W10	1	BW
W11	3/4	BW
W12	1	BW
W13	1	BW
W14	3/4	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	96	BEVEL	BEVEL
B	1	451	BEVEL	BEVEL
C	1	60	BEVEL	BEVEL
D	1	200	BEVEL	BEVEL
E	1	199	BEVEL	BEVEL
F	1	94	BEVEL	BEVEL
G	1	4346	BEVEL	BEVEL
H	1	124	BEVEL	BEVEL

SUPPORT LIST

PS-01031.1
PS-01025.2
PS-01025.3

SPOOL	WELD [inches]	WEIGHT [kg]
A	15.25	11.5
B	2	14.7
MONT	1	17.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N

SK.034

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00034 | SHEET / OF: 1/2 | REV.: 00

64-10-TP-023

MASTER

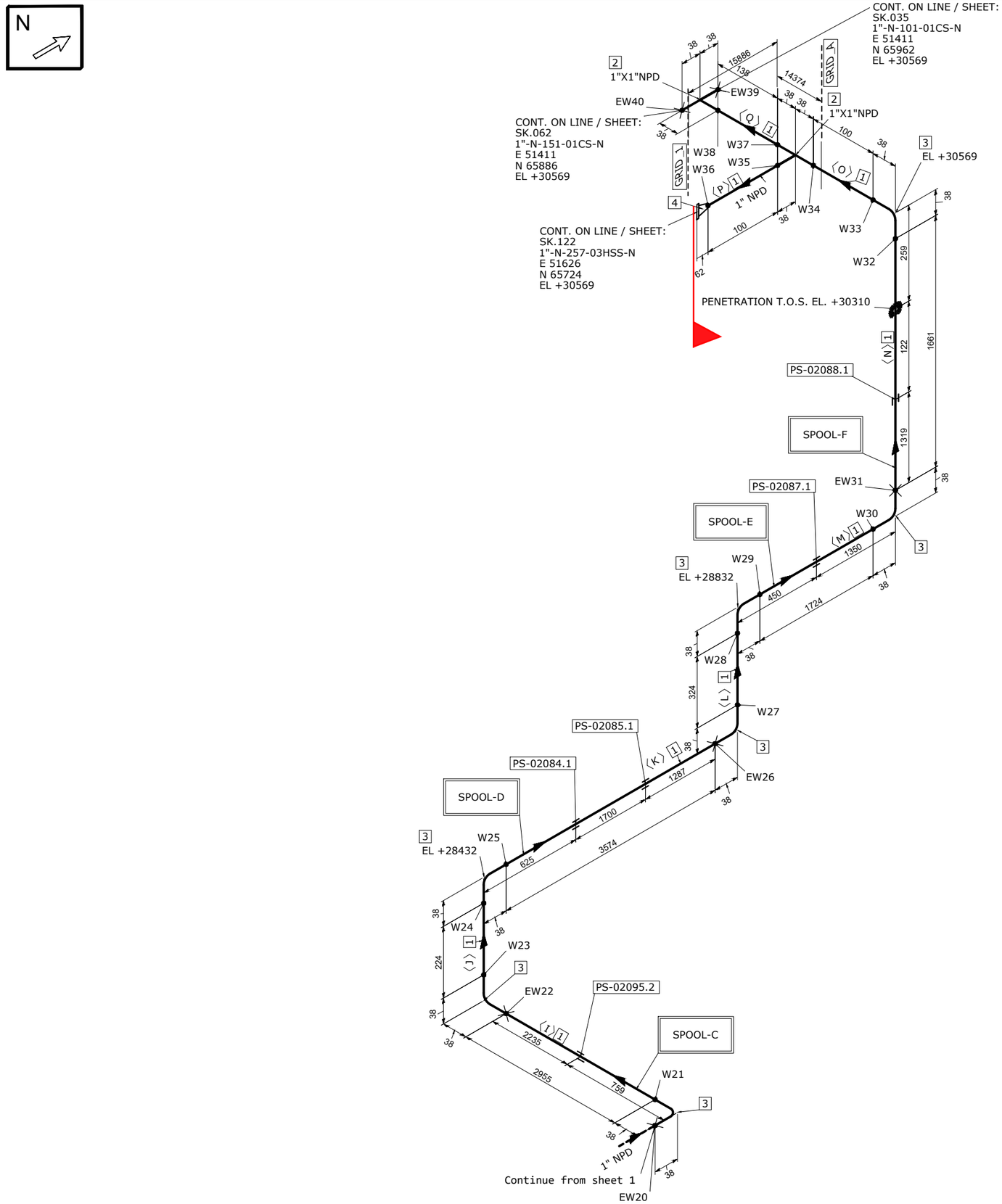
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [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



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	10.8M	35.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	7	1.3
4	1	FLW0CS16640100	Flange WN ASME B16.5 300LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.8

ERECTION

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

FABRICATION WEIGHT [kg]	39.0
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	39.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW20	1	BW
W21	1	BW
EW22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
EW26	1	BW
W27	1	BW
W28	1	BW
W29	1	BW
W30	1	BW
EW31	1	BW
W32	1	BW
W33	1	BW
W34	1	BW
W35	1	BW
W36	1	BW
W37	1	BW
W38	1	BW
EW39	1	BW
EW40	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1	2955	BEVEL	BEVEL
J	1	224	BEVEL	BEVEL
K	1	3574	BEVEL	BEVEL
L	1	324	BEVEL	BEVEL
M	1	1724	BEVEL	BEVEL
N	1	1662	BEVEL	BEVEL
O	1	100	BEVEL	BEVEL
P	1	100	BEVEL	BEVEL
Q	1	138	BEVEL	BEVEL

SUPPORT LIST

PS-02095.2
PS-02084.1
PS-02085.1
PS-02087.1
PS-02088.1

SPOOL	WELD [inches]	WEIGHT [kg]
C	1	9.8
D	3	12.7
E	4	7.2
F	7	9.4
MONT	6	0.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N
SK.034

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00034 | SHEET / OF: 2/2 | REV.: 00

64-10-TP-023

MASTER

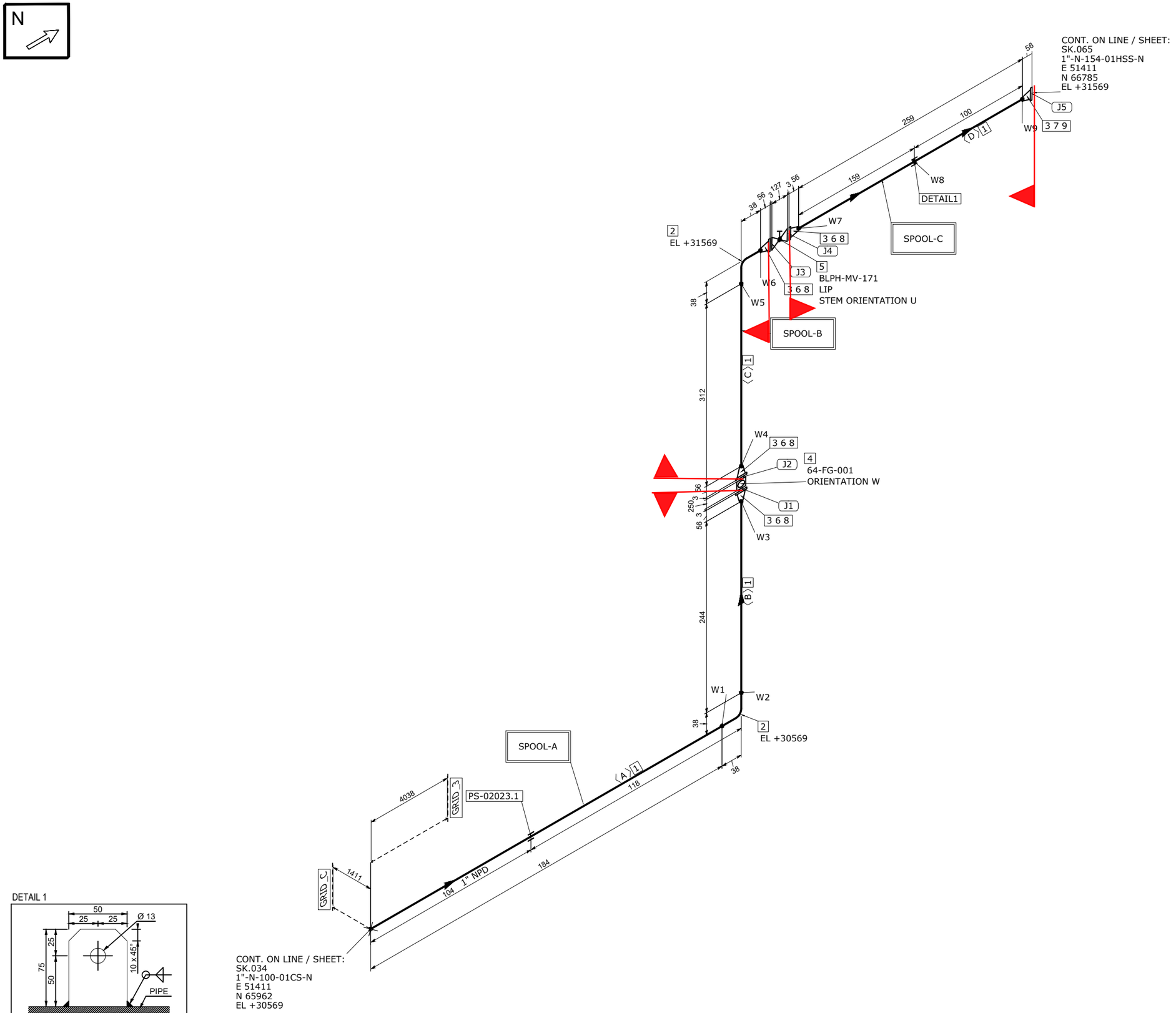
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 18 [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



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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

CROSSWIND

ROSETTI MARINO

64-10-TP-023

MASTER

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-101-01CS-N

SK.035

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-00035 | SHEET / OF: 1/1 | REV.: 00

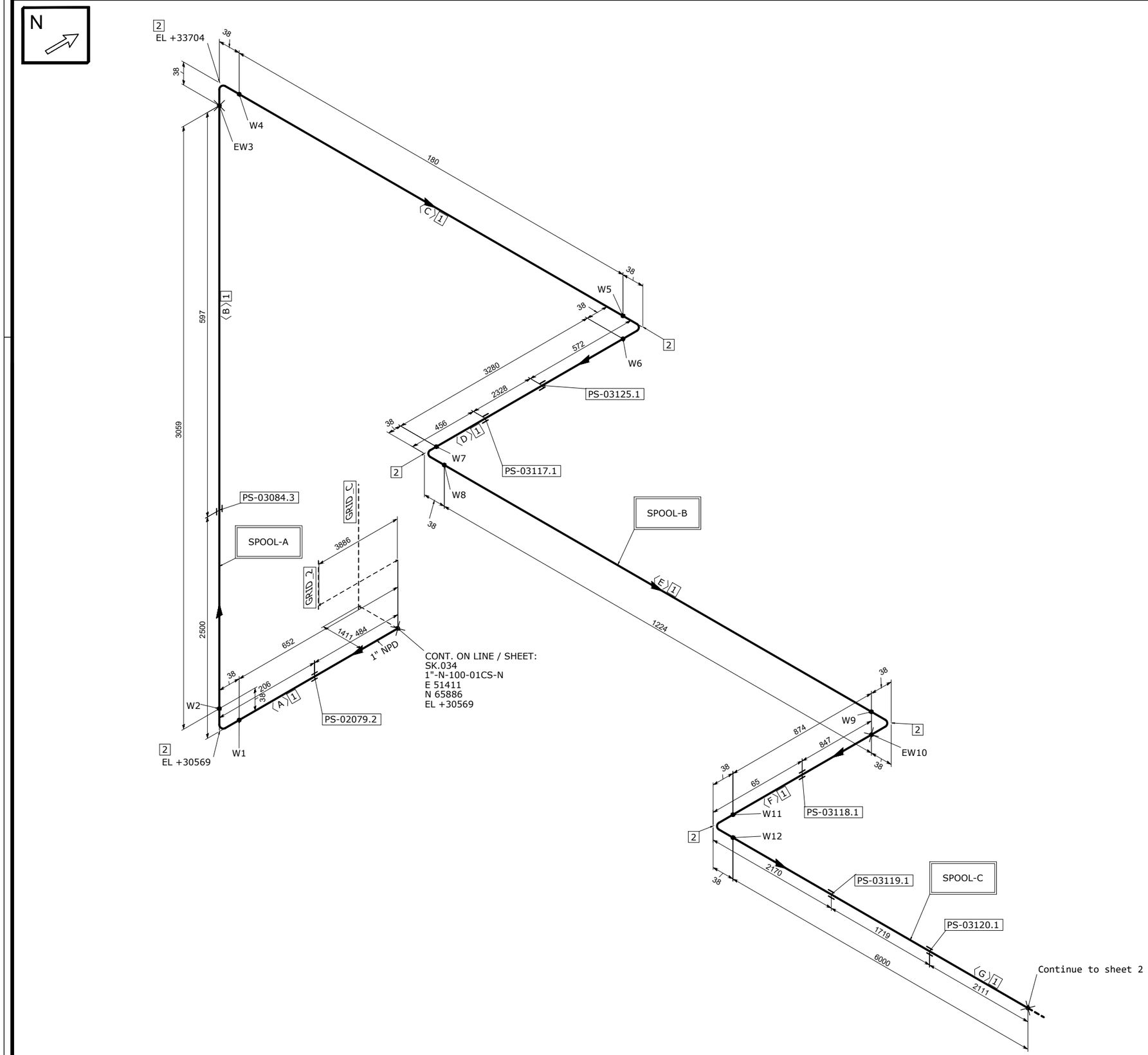
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[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



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	15.3M	49.6
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	6	1.1

ERECTION

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

FABRICATION WEIGHT [kg]	50.7
ERECTION WEIGHT [kg]	0.0
OVERALL WEIGHT [kg]	50.7

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
W9	1	BW
EW10	1	BW
W11	1	BW
W12	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	652	BEVEL	BEVEL
B	1	3059	BEVEL	BEVEL
C	1	181	BEVEL	BEVEL
D	1	3280	BEVEL	BEVEL
E	1	1224	BEVEL	BEVEL
F	1	874	BEVEL	BEVEL
G	1	6000	BEVEL	BEVEL

SUPPORT LIST

PS-02079.2
PS-03084.3
PS-03125.1
PS-03117.1
PS-03118.1
PS-03119.1
PS-03120.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	12.2
B	6	16.0
C	2	22.5
MONT	2	0.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-151-01CS-N

SK.062

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00062 | SHEET / OF: 1/2 | REV.: 00

64-10-TP-023

MASTER

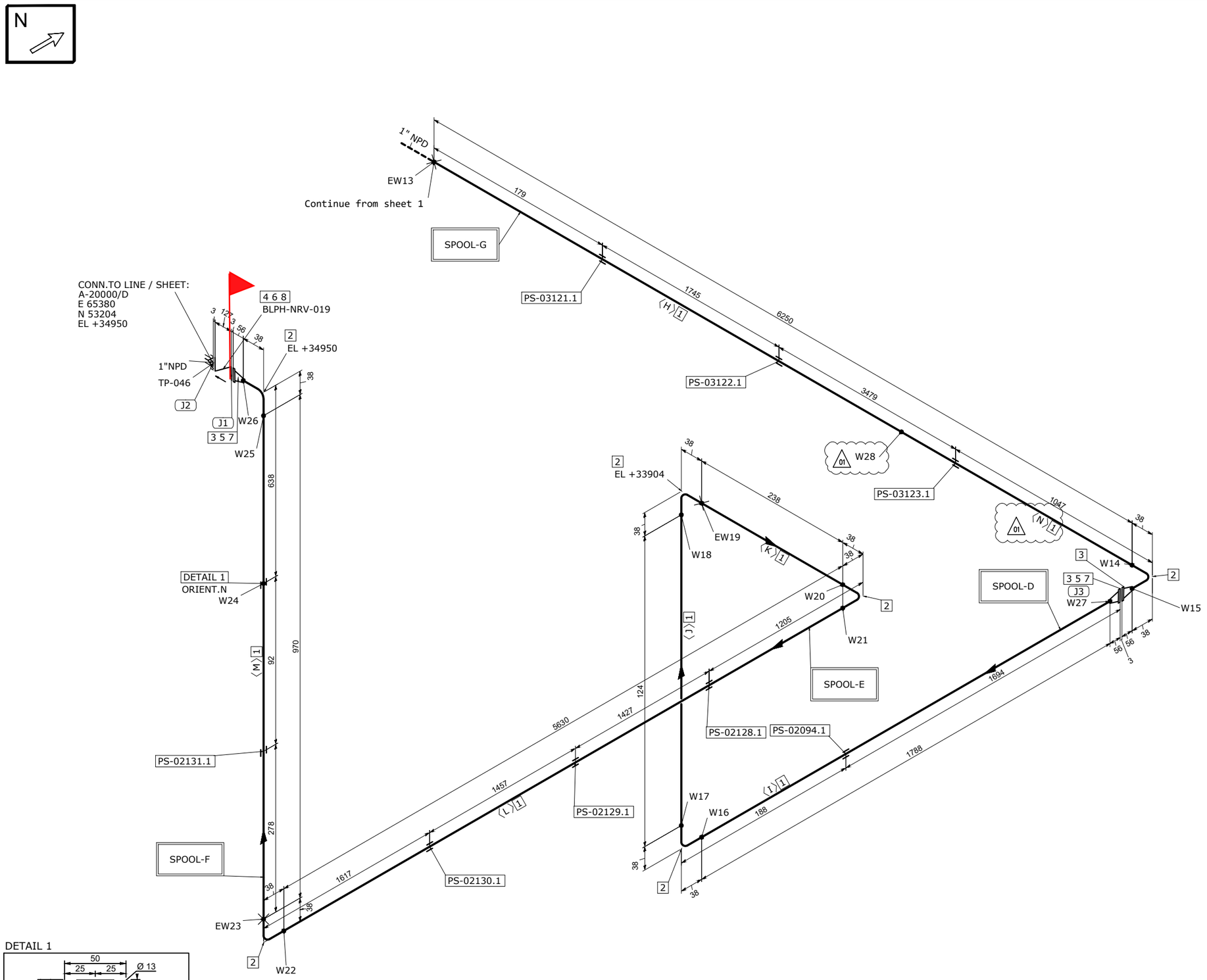
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water	

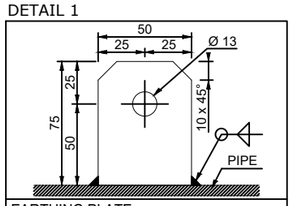
REFERENCE DOCUMENTS

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



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	15.0M	48.6
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	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02580100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.2
6	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
8	1/2	SB20BO00650200	85 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6

FABRICATION WEIGHT [kg]	53.9
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	55.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW
EW19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
EW23	1	BW
W24		FW
W25	1	BW
W26	1	BW
W27	1	BW
W28	1 (01)	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
H	1	5000 (01)	BEVEL	BEVEL
I	1	1788	BEVEL	BEVEL
J	1	124	BEVEL	BEVEL
K	1	238	BEVEL	BEVEL
L	1	5630	BEVEL	BEVEL
M	1	970	BEVEL	BEVEL
N	1	1250 (01)	BEVEL	BEVEL

SUPPORT LIST

PS-03121.1
PS-03122.1
PS-03123.1
PS-02094.1
PS-02128.1
PS-02129.1
PS-02130.1
PS-02131.1

SPOOL	WELD [inches]	WEIGHT [kg]
D	4	8.2
E	3	19.1
F	2	4.7
G	3 (01)	21.9
MONT	3	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

64-10-TP-023

MASTER

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-151-01CS-N
SK.062

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00062
SHEET / OF: 2/2
REV.: 01

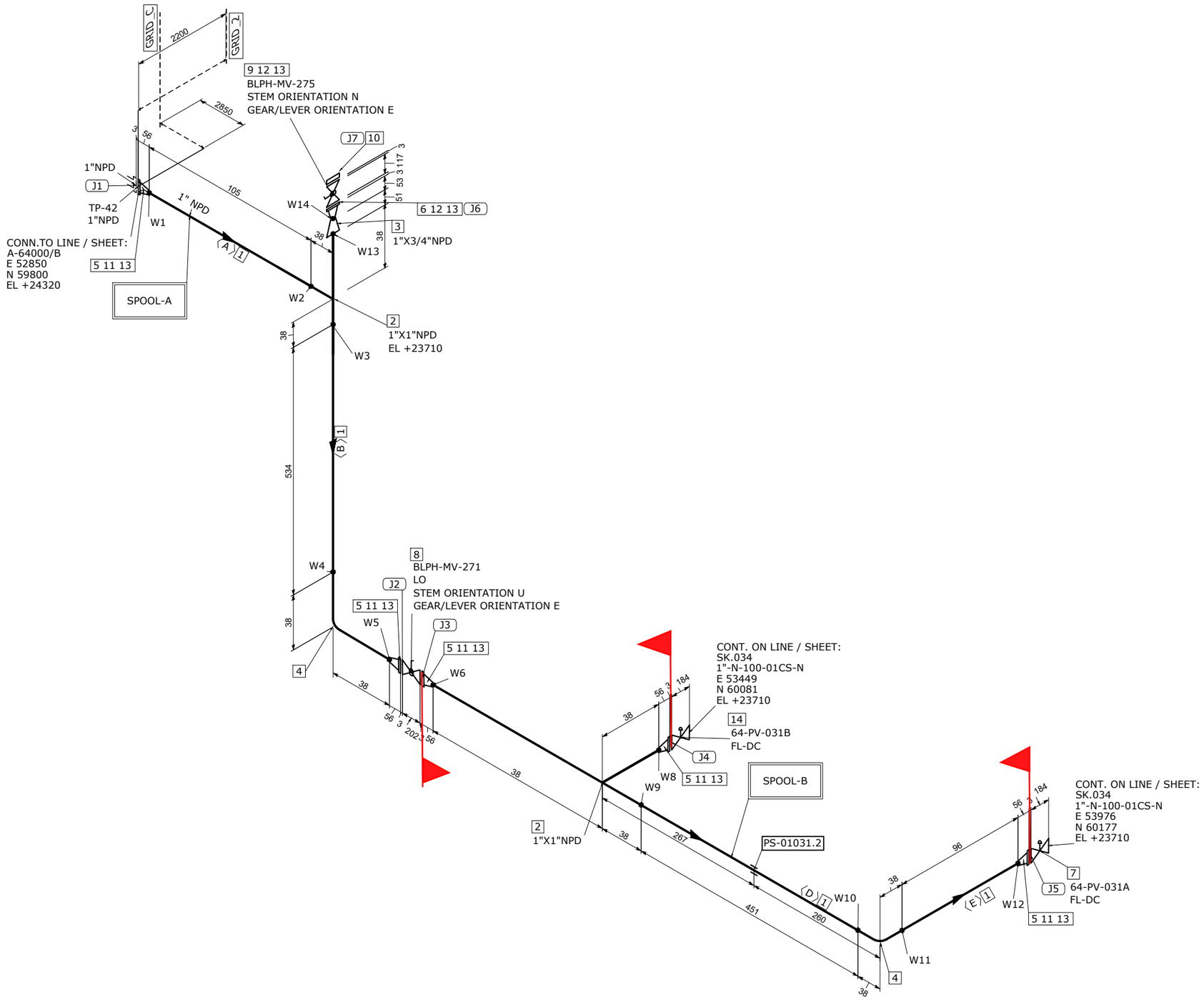
LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 18 [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



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.2M	3.8
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1		Control Valve - FLG 150 #RF	1	48.0
8	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
9	3/4	VBC0NN24703Q00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	5.3
10	3/4	FLB0CS07333Q00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	5	0.3
12	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
13	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
14	1		Control Valve - FLG 150 #RF	1	48.0

FABRICATION WEIGHT [kg]	13.2
ERECTION WEIGHT [kg]	118.5
OVERALL WEIGHT [kg]	131.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	105	BEVEL	BEVEL
B	1	534	BEVEL	BEVEL
D	1	451	BEVEL	BEVEL
E	1	96	BEVEL	BEVEL

SUPPORT LIST

PS-01031.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6.75	6.5
B	6	6.7
MONT	0	118.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-158-01CS-N

SK.066

64-10-TP-023

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 18 [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

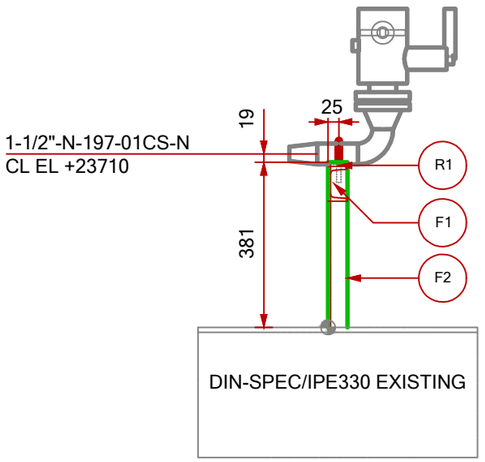
NOTES

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN	STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00066		SHEET / OF 1/1	REV. 00

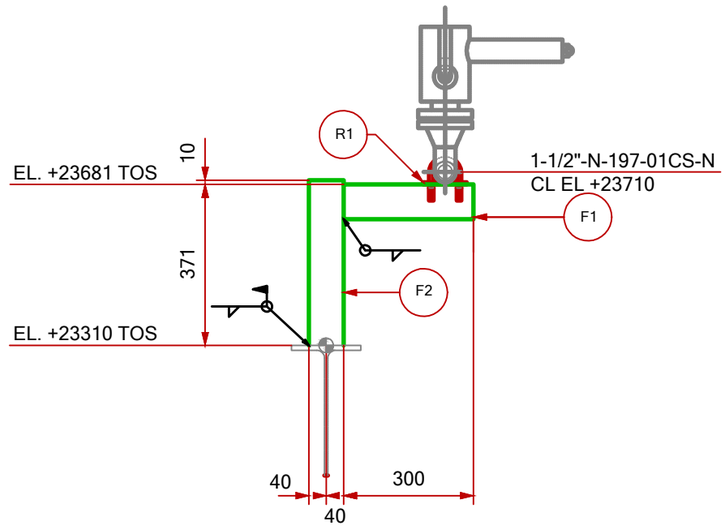
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

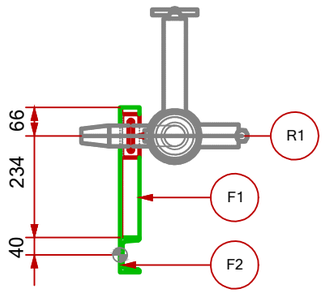
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01007	B1	PIP	LOWER DECK		1-1/2"-N-197-01CS-N	S-211 - 1 1/2"		1	0,486	0,000	00	19/08/2024	IFR		TP-023
PS-01025	B2	PIP	LOWER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-01025	B3	PIP	LOWER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-01031	B1	PIP	LOWER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-01031	B2	PIP	LOWER DECK		1"-N-158-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02023	B1	PIP	UPPER DECK		1"-N-101-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02079	B2	PIP	UPPER DECK		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02084	B1	PIP	UPPER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02085	B1	PIP	UPPER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02087	B1	PIP	UPPER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02088	B1	PIP	UPPER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02094	B1	PIP	UPPER DECK		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02095	B2	PIP	UPPER DECK		1"-N-100-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02128	B1	PIP	UPPER DECK		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02129	B1	PIP	UPPER DECK		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02130	B1	PIP	UPPER DECK		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-02131	B1	PIP	UPPER DECK		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03084	B3	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03117	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03118	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03119	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03120	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03121	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03122	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03123	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023
PS-03125	B1	PIP	PAU		1"-N-151-01CS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-023



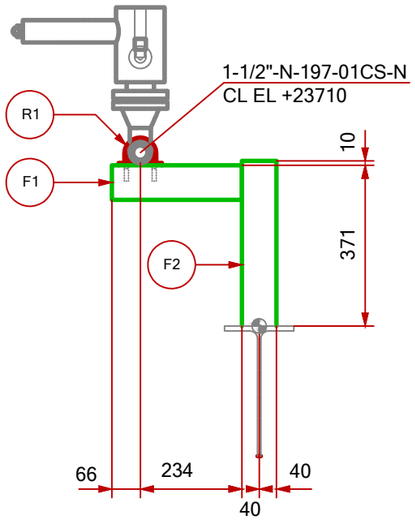
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VIEW LOOKING WEST



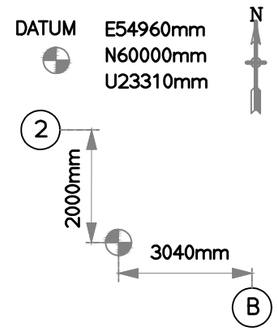
PLAN VIEW

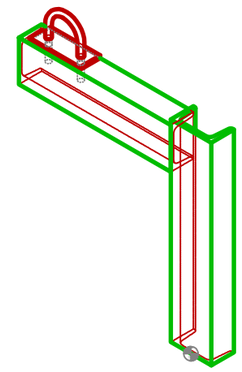


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1 1/2"	-	-	1	-	0.49	-
F1	BEAM	UPN80	Carbon Steel	300	1	8.66	2.60	0.096
F2	BEAM	UPN80	Carbon Steel	381	1	8.66	3.30	0.122
						TOTAL	6.4	0.22





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

CROSSWIND

ROSETTI MARINO

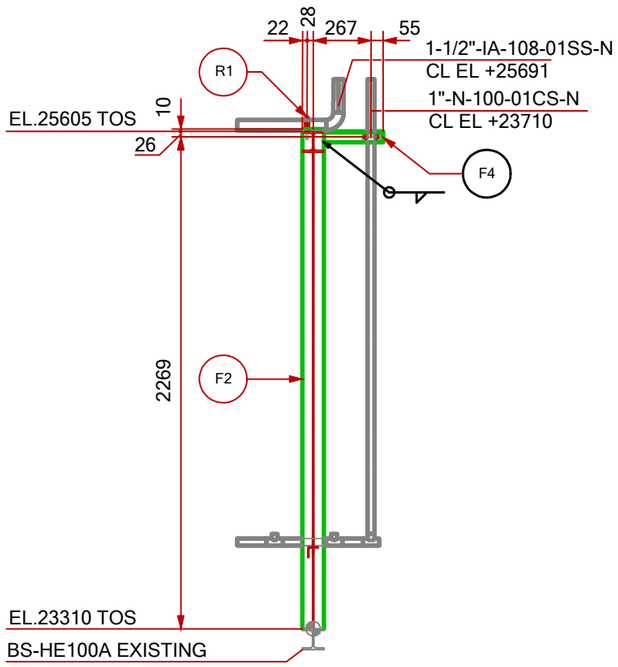
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

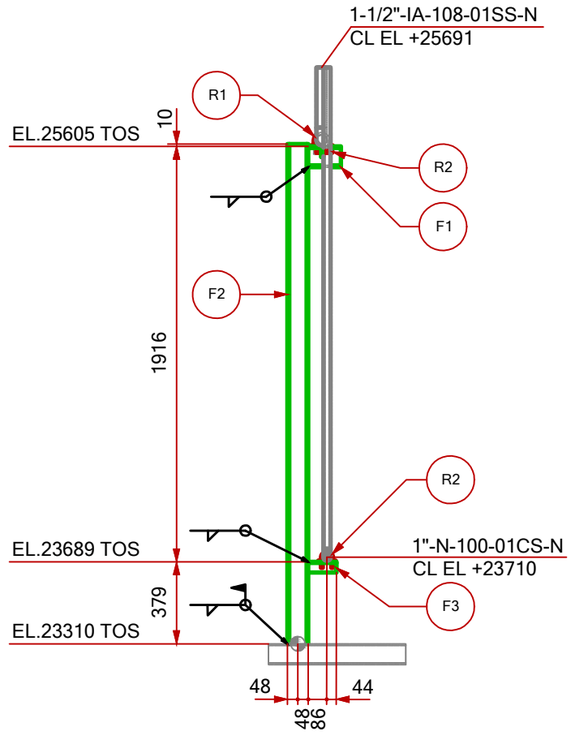
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CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	1 : 10
DRAWN	CHECKED / APPROVED	DATE	19/08/24
DRAWING NO.	123A90-DDL-PP-DD-72000	SHEET	1 of 1
		REV.	00

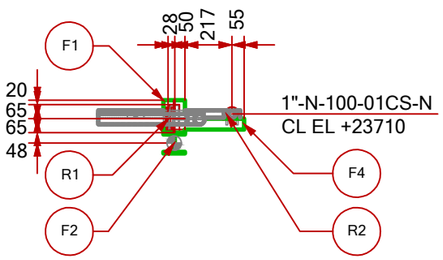
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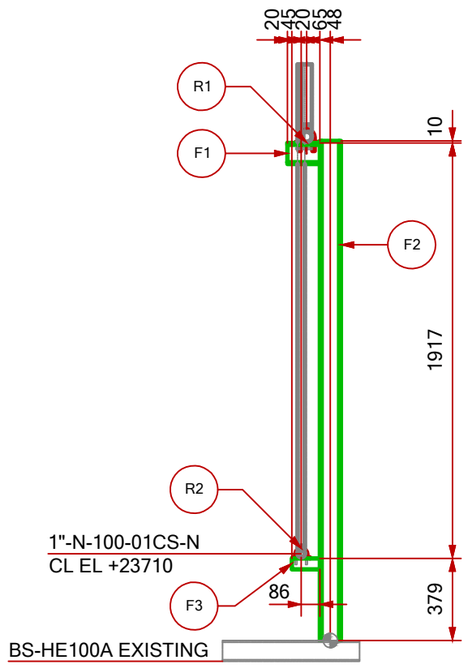
VIEW LOOKING NORTH



VIEW LOOKING WEST



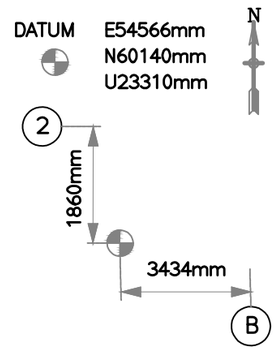
PLAN VIEW

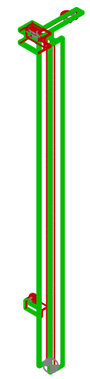


VIEW LOOKING EAST

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-211-1"	-	-	2	-	0.29	-
F1	BEAM	HEA100	Carbon Steel	150	1	16.76	2.51	0.088
F2	BEAM	HEA100	Carbon Steel	2305	1	16.76	38.63	1.297
F3	BEAM	L50x50x5	Carbon Steel	130	1	3.78	0.49	0.026
F4	BEAM	L50x50x5	Carbon Steel	320	1	3.78	1.21	0.063
						TOTAL	43.9	1.47





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

CROSSWIND

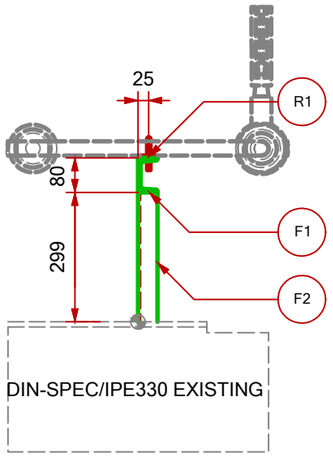
ROSETTI MARINO

TITLE :

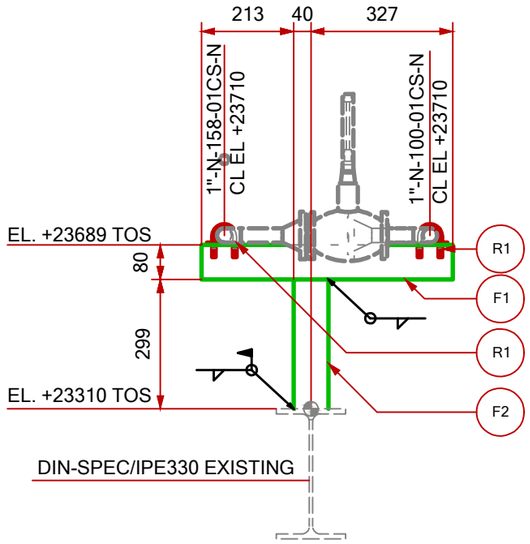
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01025

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 :



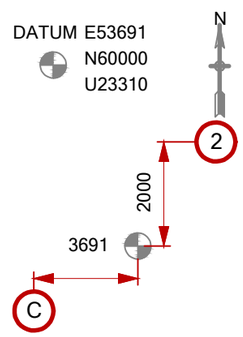
VIEW LOOKING NORTH

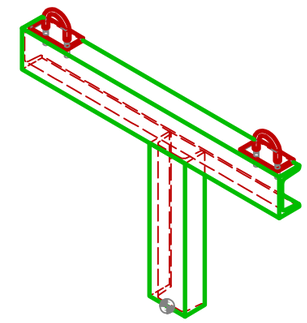


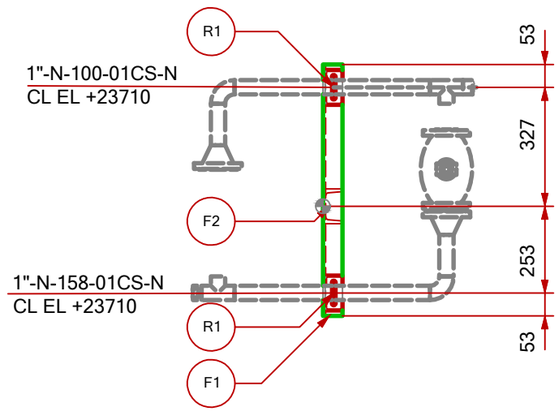
VIEW LOOKING WEST

SUPPORT MATERIAL LIST

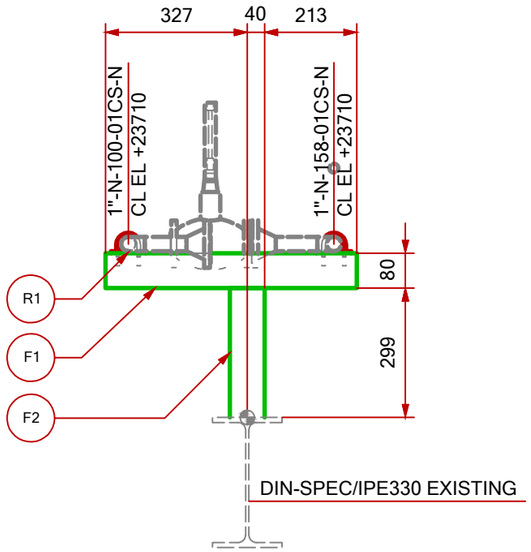
POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	580	1	8.66	5.02	0.184
F2	BEAM	UPN80	Carbon Steel	299	1	8.66	2.59	0.096
						TOTAL	8.2	0.28







PLAN VIEW



VIEW LOOKING EAST

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

CROSSWIND

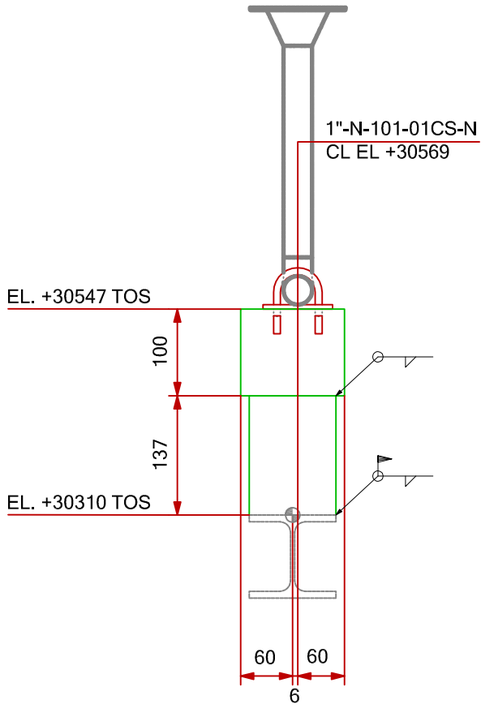
ROSETTI MARINO

TITLE :

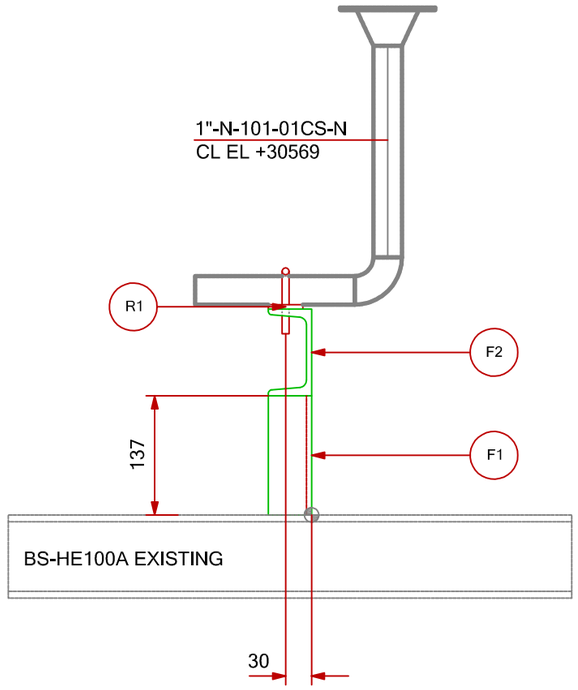
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01031

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

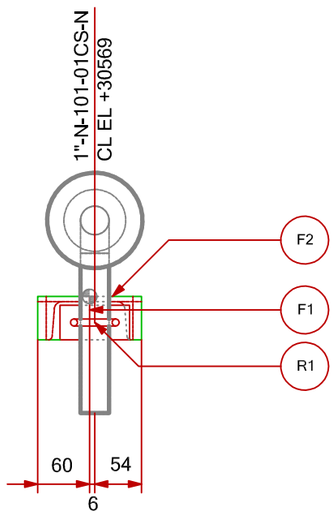
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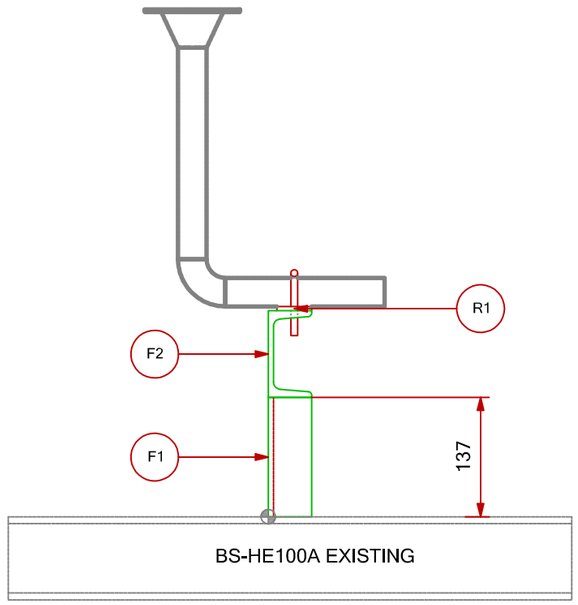
VIEW LOOKING NORTH



VIEW LOOKING WEST



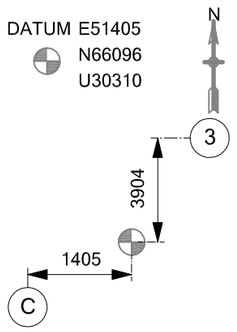
PLAN VIEW

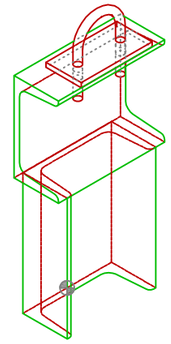


VIEW LOOKING EAST

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	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	137	1	10.57	1.45	0.054
F2	BEAM	UPN100	Carbon Steel	120	1	10.57	1.27	0.047
						TOTAL	3.0	0.10





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

CROSSWIND

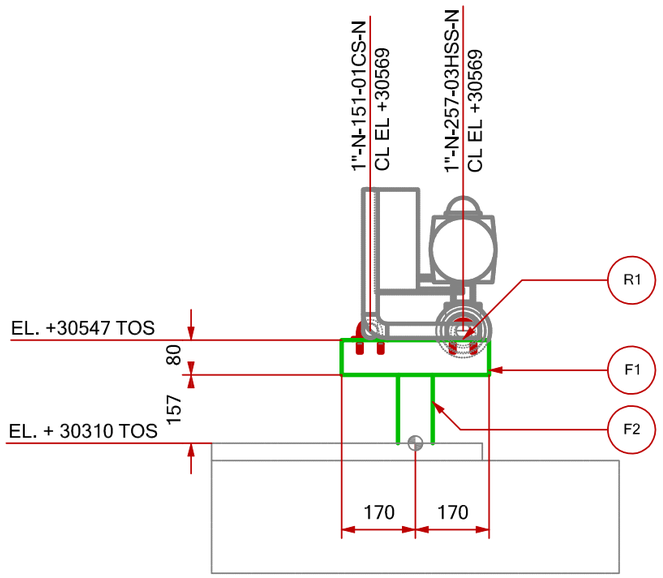
ROSETTI MARINO

TITLE :

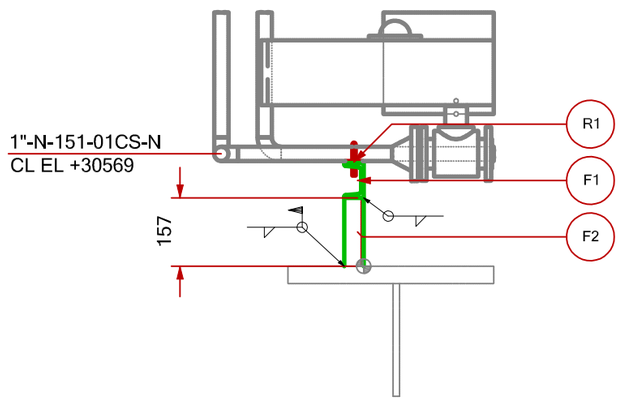
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02023

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

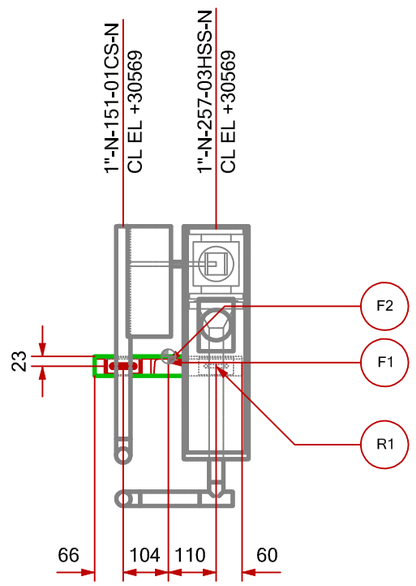
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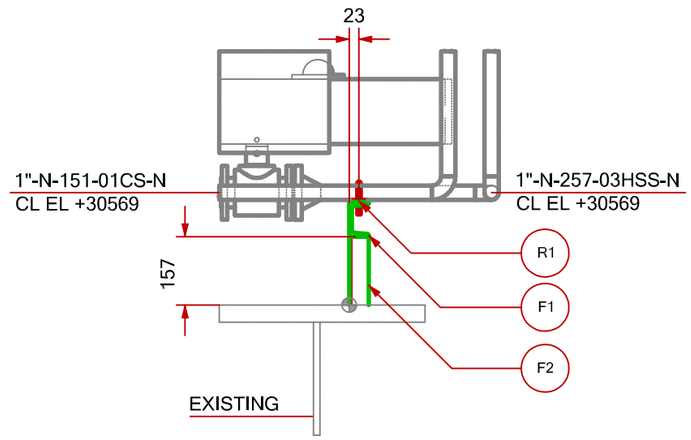
VIEW LOOKING NORTH



VIEW LOOKING WEST



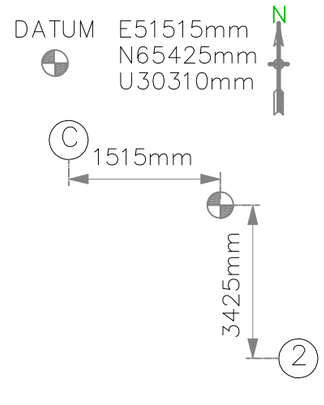
PLAN VIEW

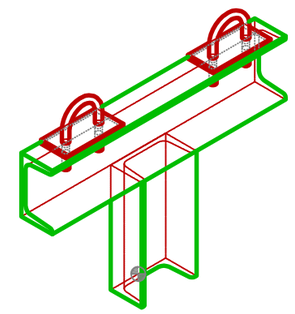


VIEW LOOKING EAST

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-211-1"	-	-	2	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	340	1	8.66	2.95	0.109
F2	BEAM	UPN80	Carbon Steel	157	1	8.66	1.36	0.052
						TOTAL	4.9	0.16





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

CROSSWIND

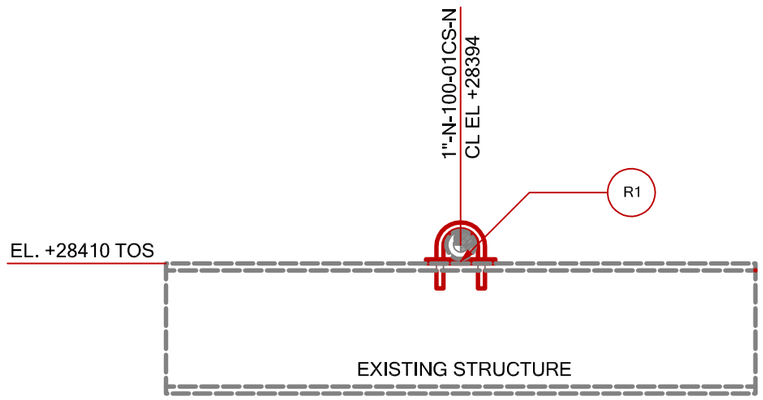
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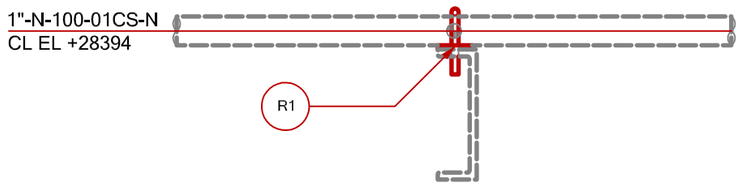
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02079

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

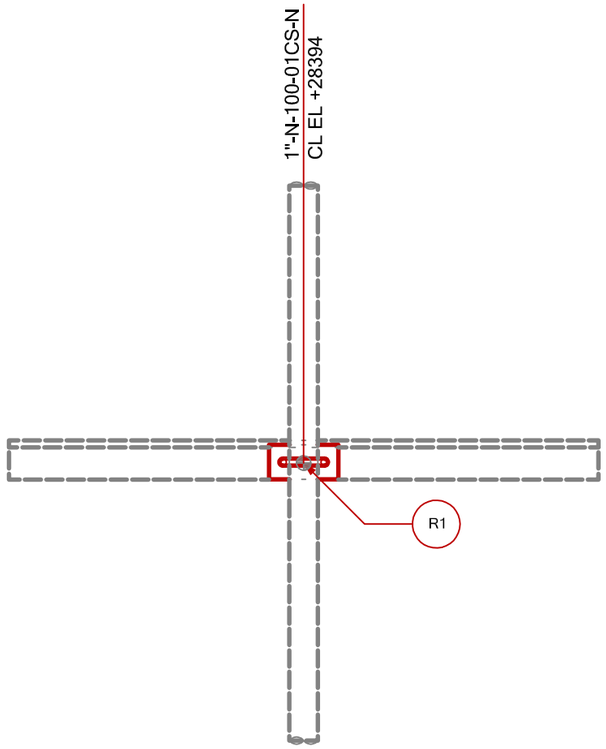
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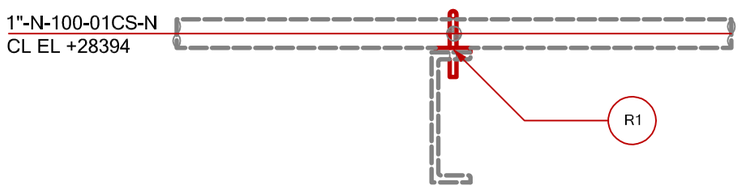
VIEW LOOKING NORTH



VIEW LOOKING WEST



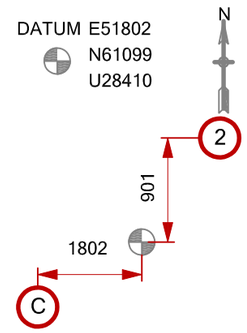
PLAN VIEW

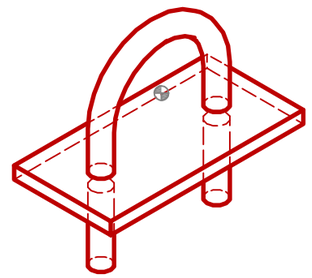


VIEW LOOKING EAST

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	-	0,29	-
						TOTAL	0.3	0.00





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

CROSSWIND

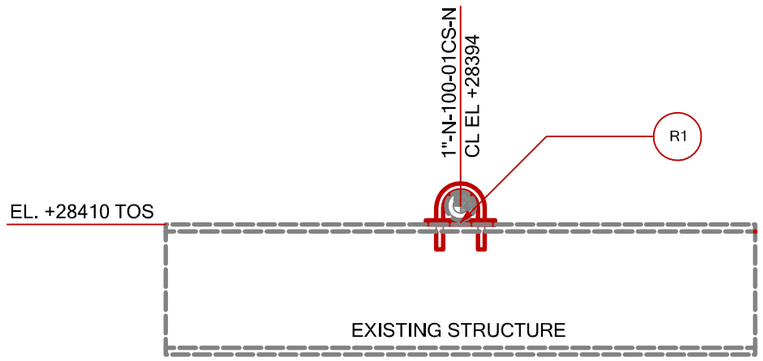
ROSETTI MARINO

TITLE :

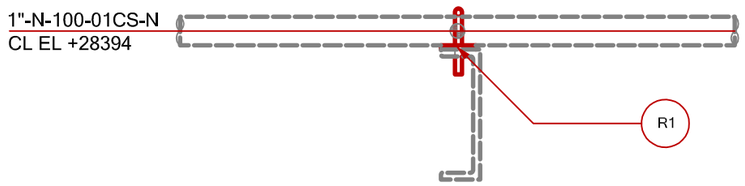
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02084

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

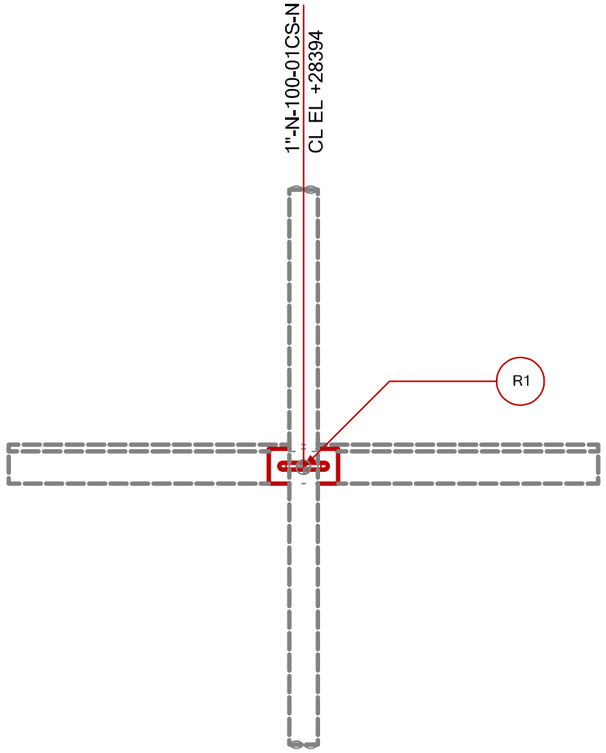
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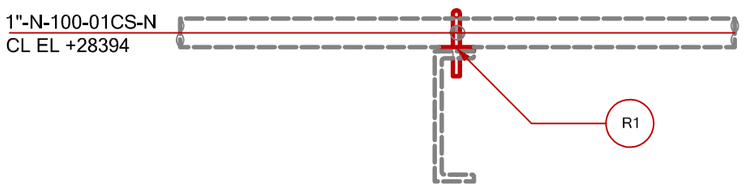
VIEW LOOKING NORTH



VIEW LOOKING WEST



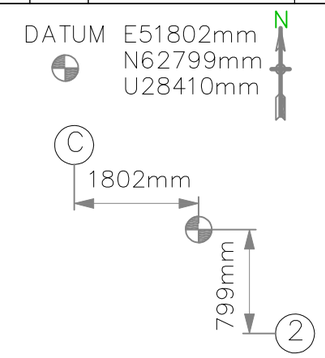
PLAN VIEW

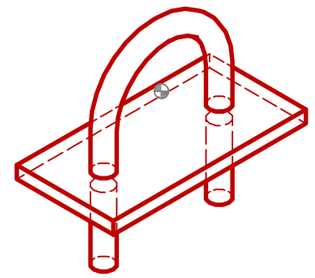


VIEW LOOKING EAST

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-211-1"	-	-	1	-	0.29	-
						TOTAL	0.3	0.00





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

CROSSWIND

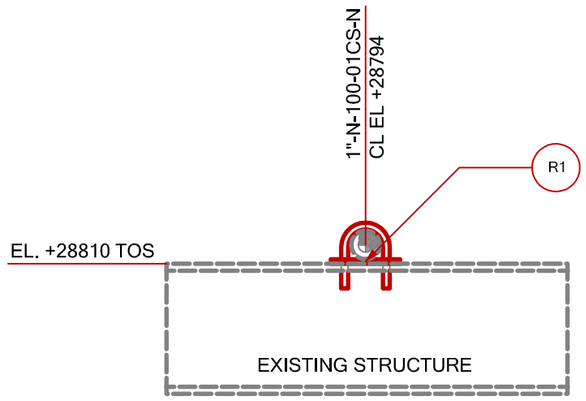
ROSETTI MARINO

TITLE :

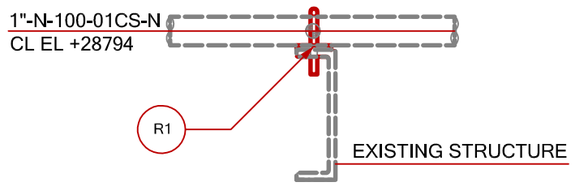
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02085

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

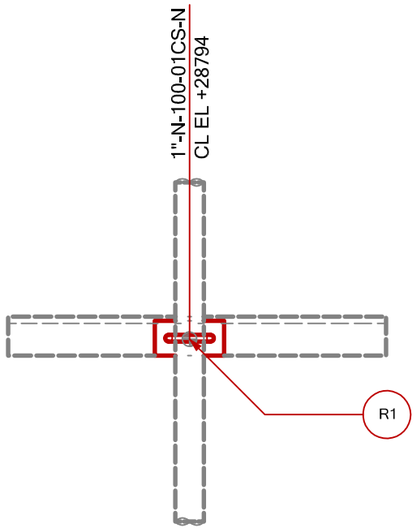
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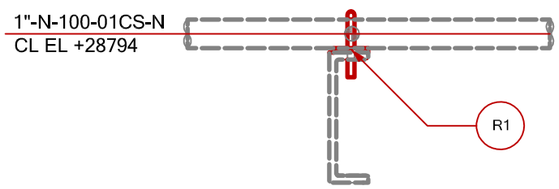
VIEW LOOKING NORTH



VIEW LOOKING WEST



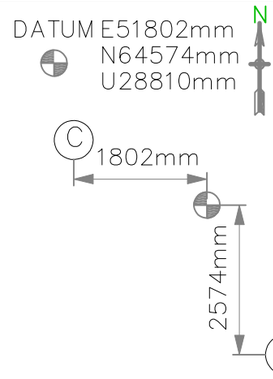
PLAN VIEW

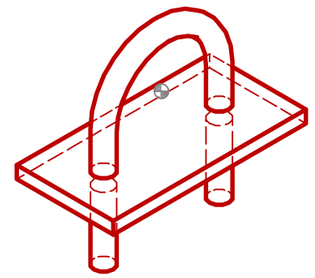


VIEW LOOKING EAST

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-211-1"	-	-	1	-	0.29	-
						TOTAL	0.3	0.00





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

CROSSWIND

ROSETTI MARINO

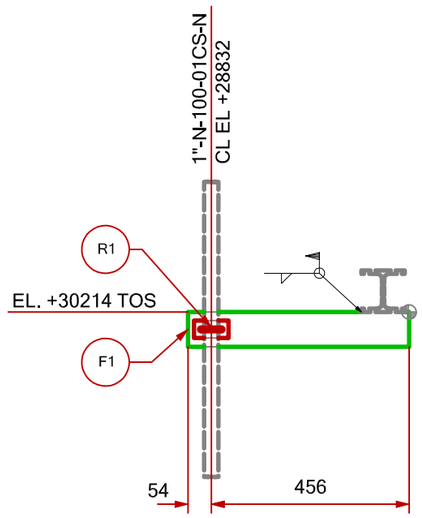
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

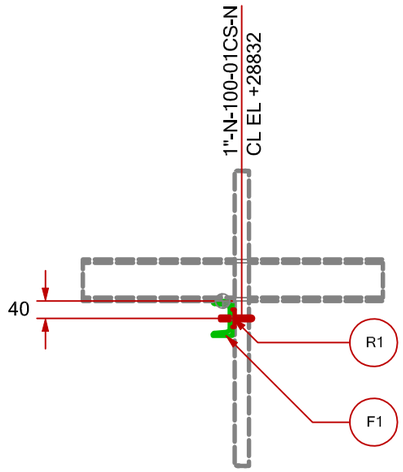
PS-02087

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

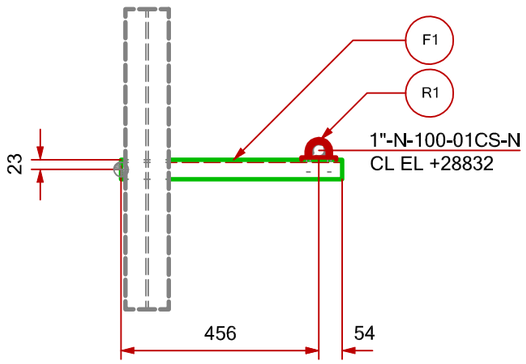
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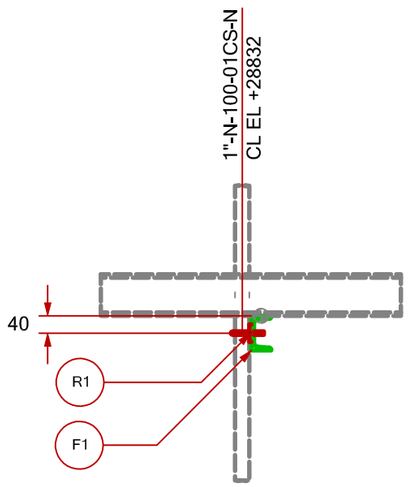
VIEW LOOKING SOUTH



VIEW LOOKING WEST



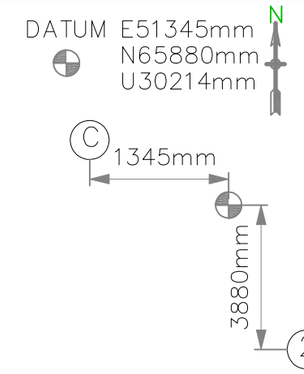
PLAN VIEW

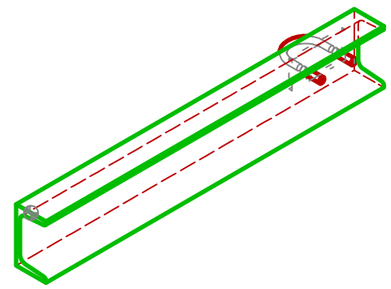


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-1"	-	-	1	-	0.29	-
F1	BEAM	UPN80	Carbon Steel	510	1	8.66	4.42	0.162
						TOTAL	4.7	0.16





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

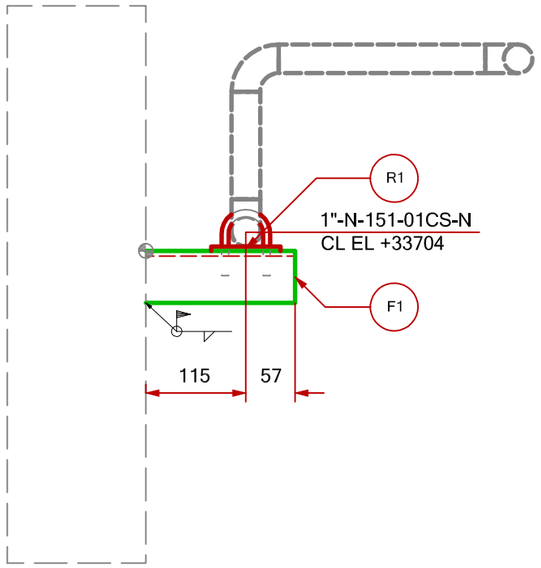
ROSETTI MARINO

TITLE :

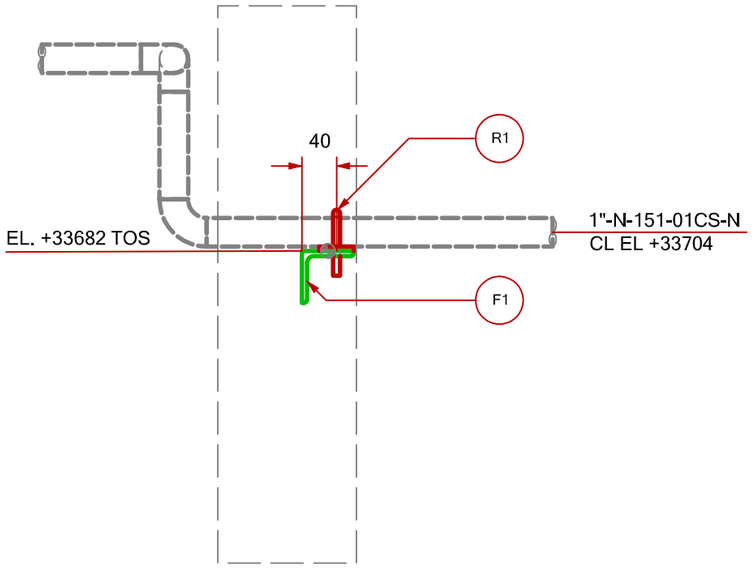
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02088

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

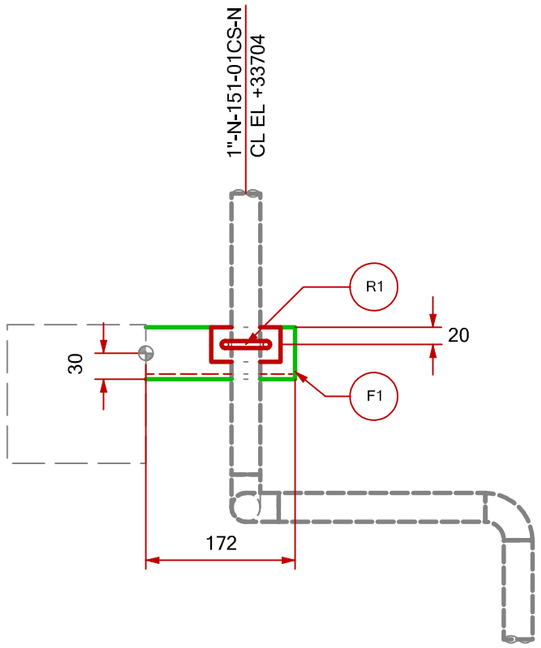
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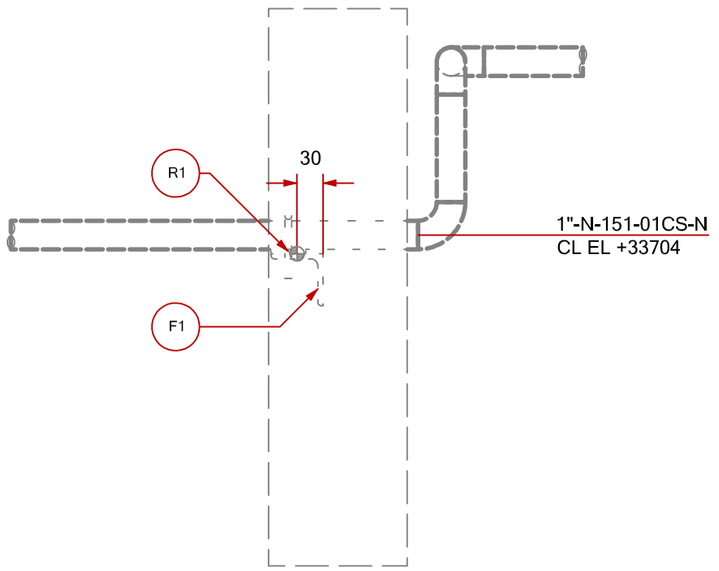
VIEW LOOKING NORTH



VIEW LOOKING WEST



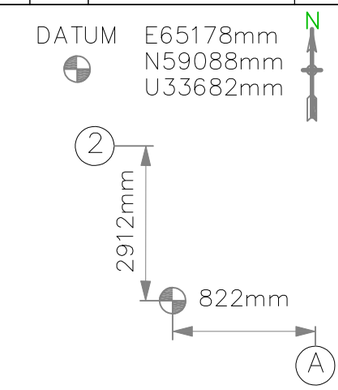
PLAN VIEW

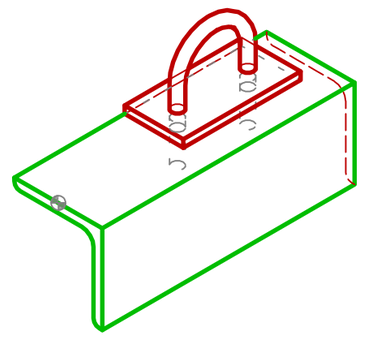


VIEW LOOKING EAST

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	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	172	1	5.42	0.93	0.041
						TOTAL	1.2	0.04





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

CROSSWIND

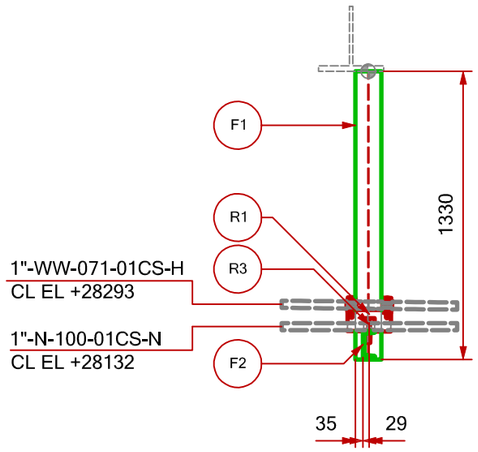
ROSETTI MARINO

TITLE :

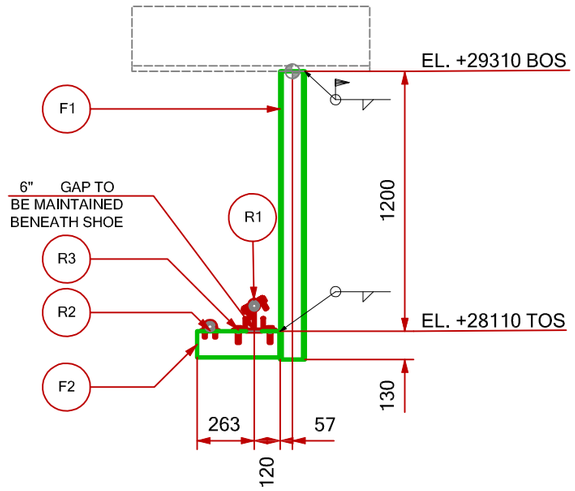
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02094

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

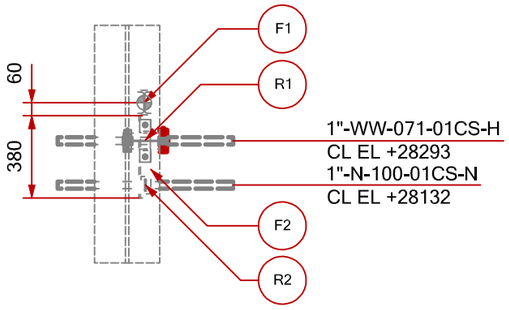
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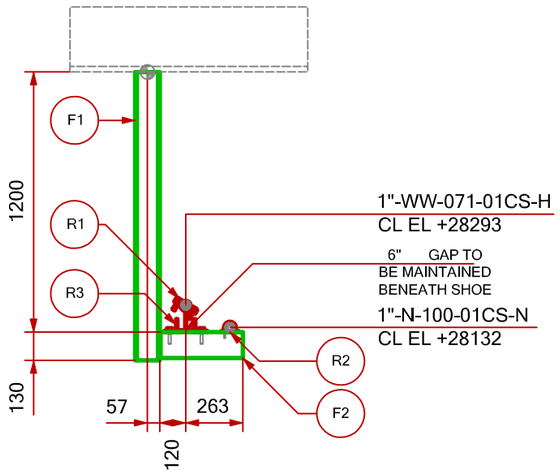
VIEW LOOKING NORTH



VIEW LOOKING WEST



PLAN VIEW

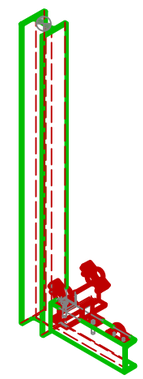


VIEW LOOKING EAST

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
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

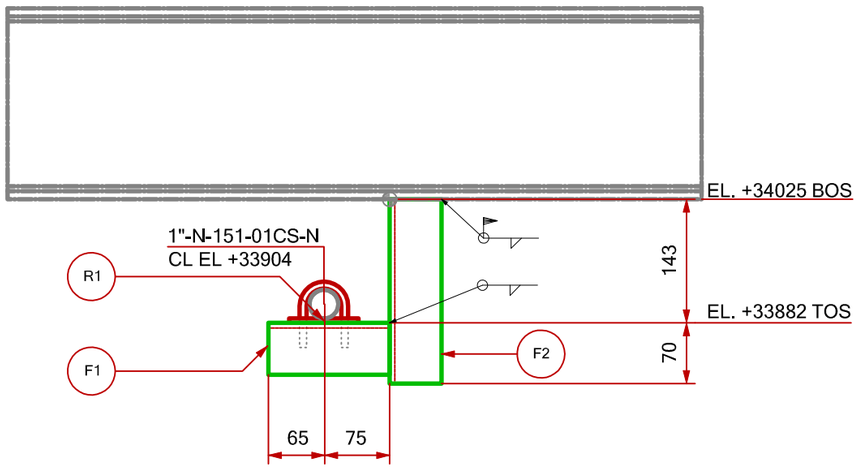
ROSETTI MARINO

TITLE :

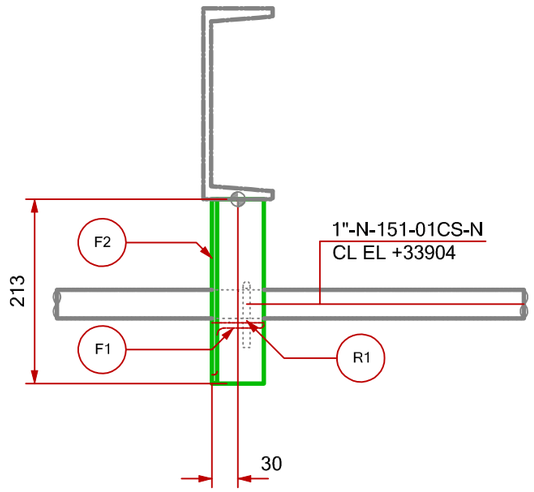
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02095

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

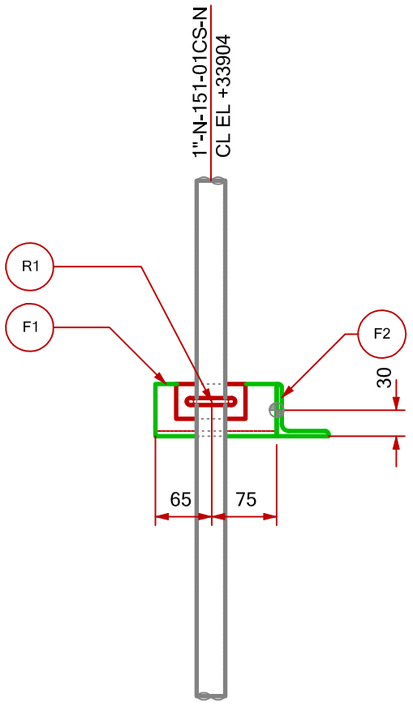
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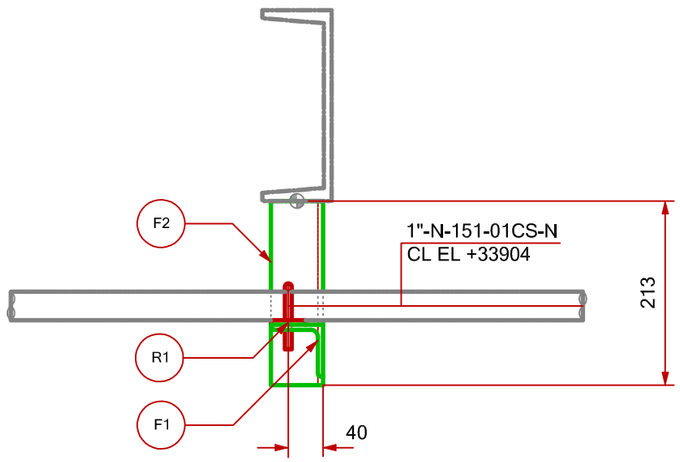
VIEW LOOKING NORTH



VIEW LOOKING WEST



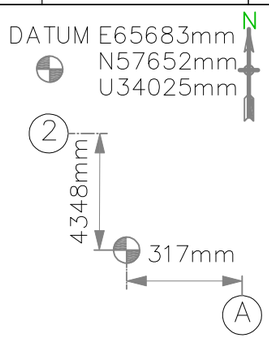
PLAN VIEW

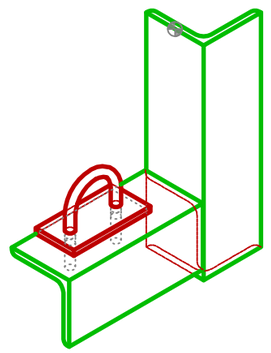


VIEW LOOKING EAST

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	L60x60x6	Carbon Steel	140	1	5.42	0.76	0.034
F2	BEAM	L60x60x6	Carbon Steel	213	1	5.42	1.15	0.051
						TOTAL	2.2	0.08





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

CROSSWIND

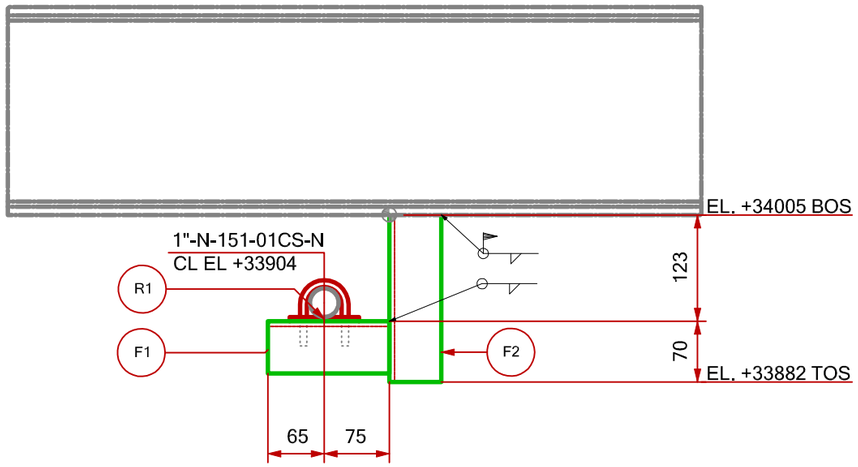
ROSETTI MARINO

TITLE :

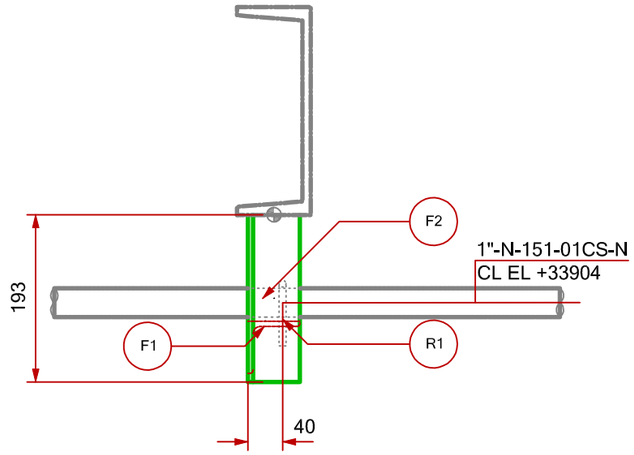
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02128

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

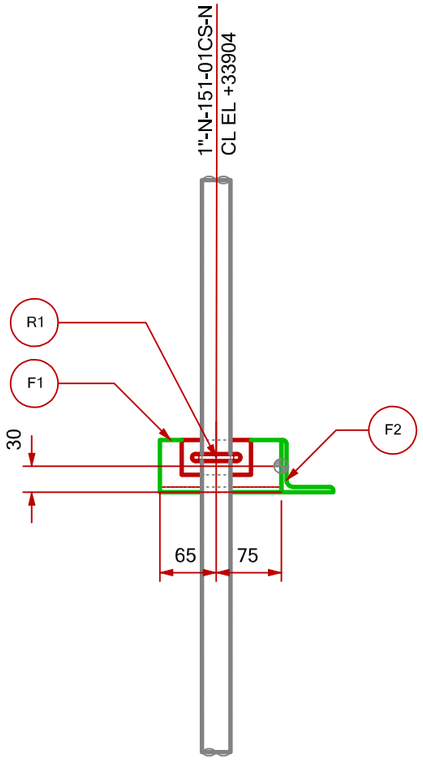
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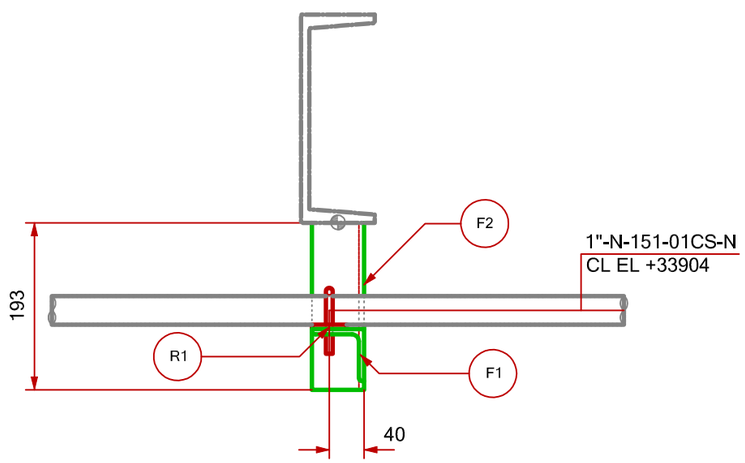
VIEW LOOKING NORTH



VIEW LOOKING WEST



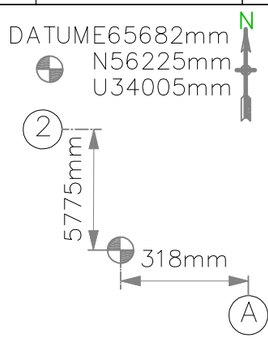
PLAN VIEW

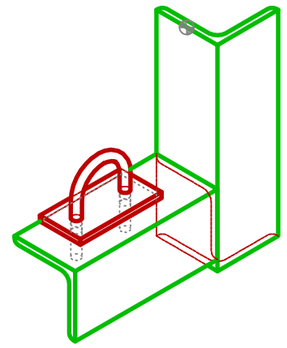


VIEW LOOKING EAST

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-211-1"	-	-	1	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	140	1	5.42	0.76	0.034
F2	BEAM	L60x60x6	Carbon Steel	193	1	5.42	1.05	0.046
						TOTAL	2.1	0.08





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

CROSSWIND

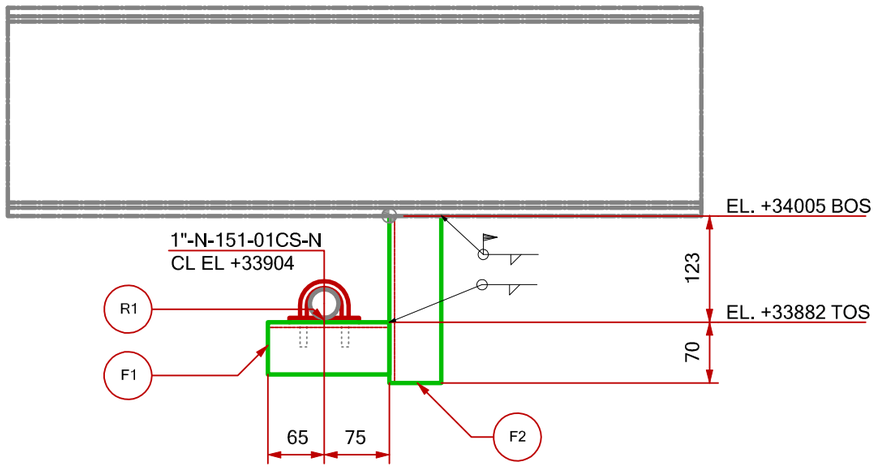
ROSETTI MARINO

TITLE :

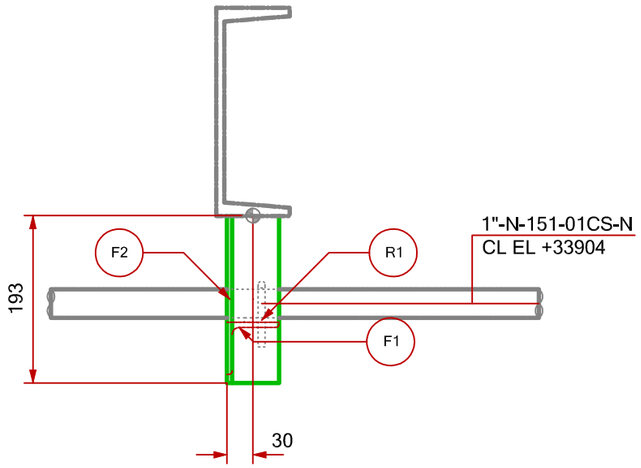
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02129

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

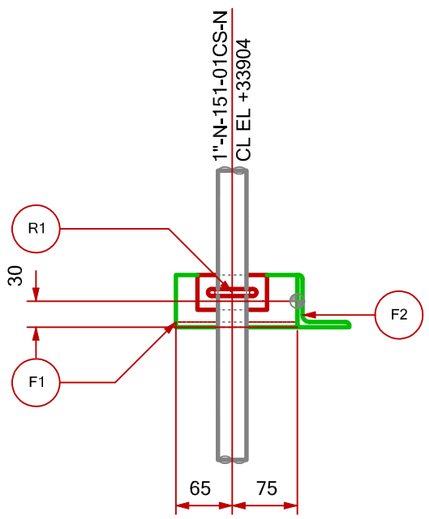
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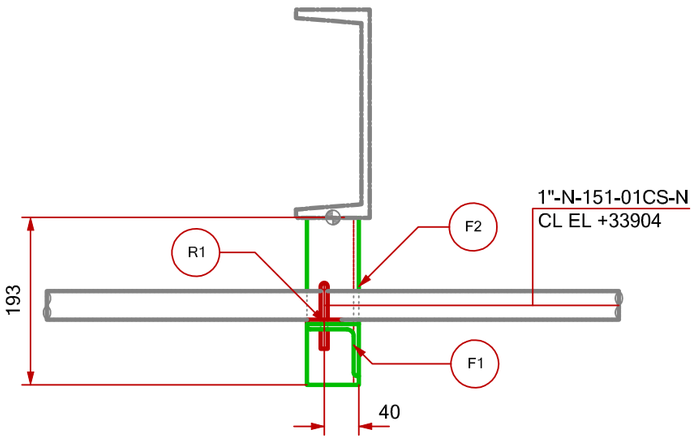
VIEW LOOKING NORTH



VIEW LOOKING WEST



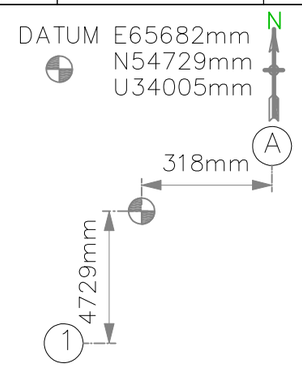
PLAN VIEW

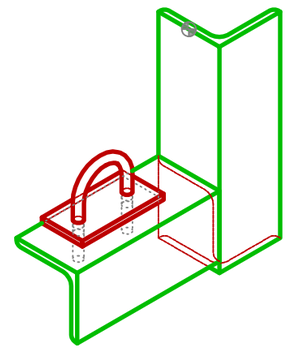


VIEW LOOKING EAST

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-211-1"	-	-	1	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	140	1	5.42	0.76	0.034
F2	BEAM	L60x60x6	Carbon Steel	193	1	5.42	1.05	0.046
						TOTAL	2.1	0.08





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

CROSSWIND

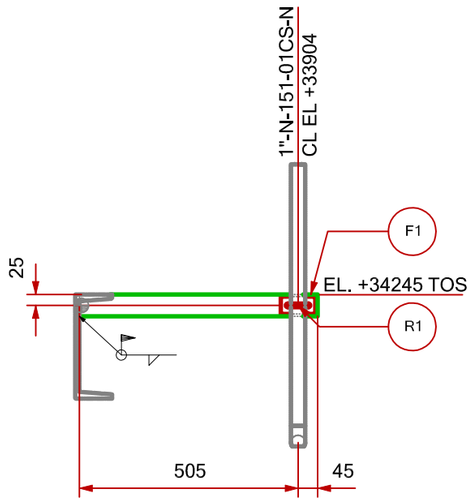
ROSETTI MARINO

TITLE :

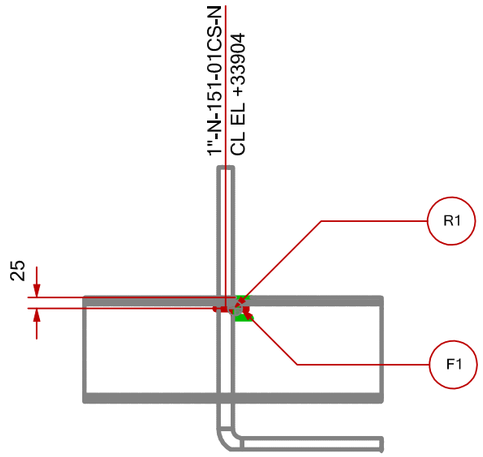
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02130

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

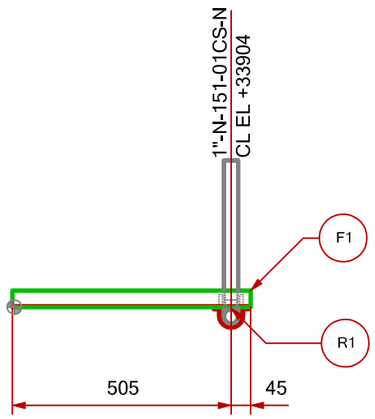
File Name :



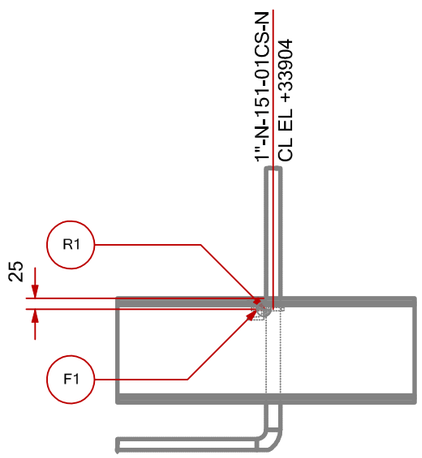
VIEW LOOKING NORTH



VIEW LOOKING WEST



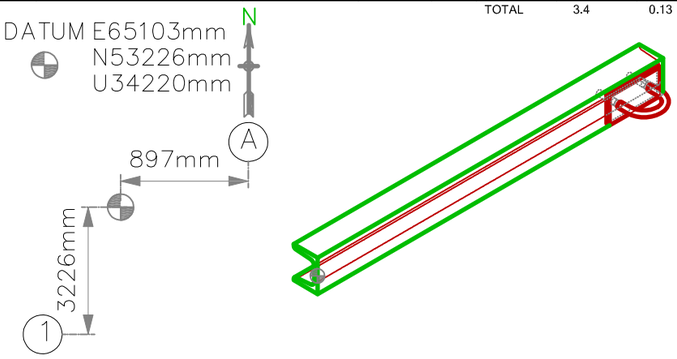
PLAN VIEW



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-211-1"	-	-	1	-	0.29	-
F1	BEAM	UPN50	Carbon Steel	550	1	5.61	3.08	0.127
						TOTAL	3.4	0.13



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

CROSSWIND

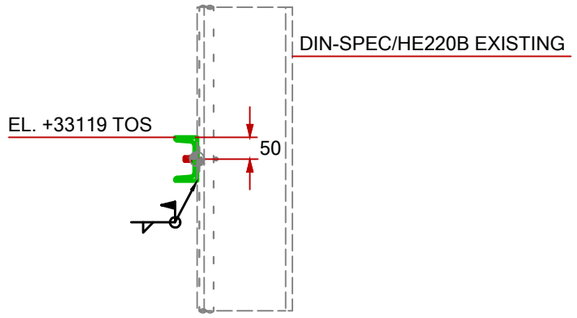
ROSETTI MARINO

TITLE :

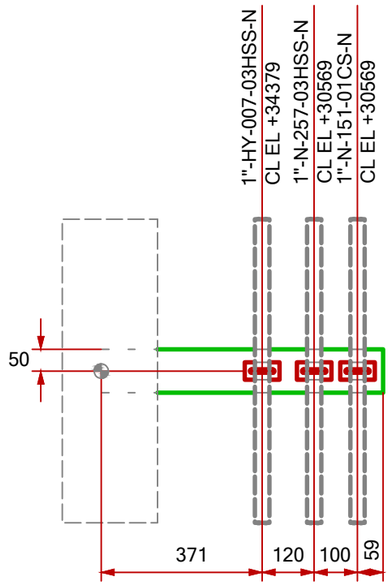
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-02131

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

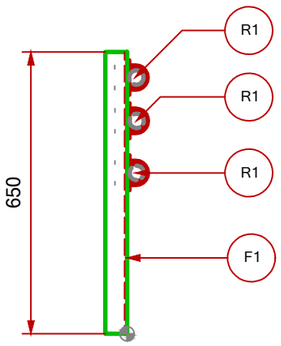
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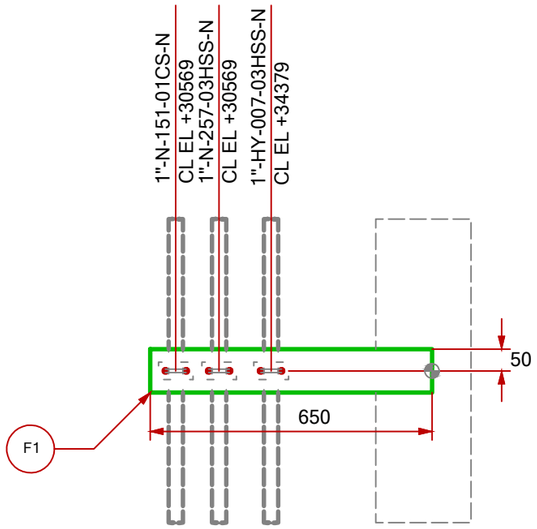
VIEW LOOKING NORTH



VIEW LOOKING WEST



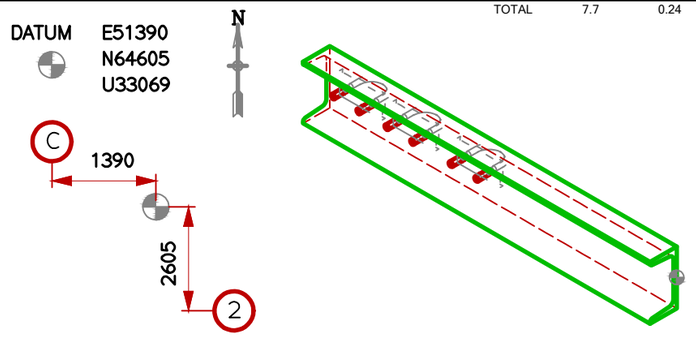
PLAN VIEW



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"	-	-	3	-	0.29	-
F1	BEAM	UPN100	Carbon Steel	650	1	10.57	6.87	0.244
						TOTAL	7.7	0.24



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

CROSSWIND

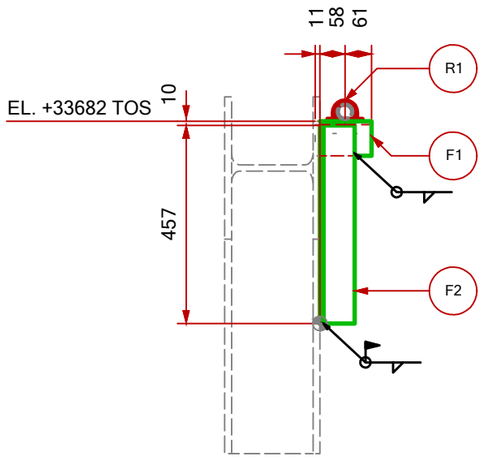
ROSETTI MARINO

TITLE :

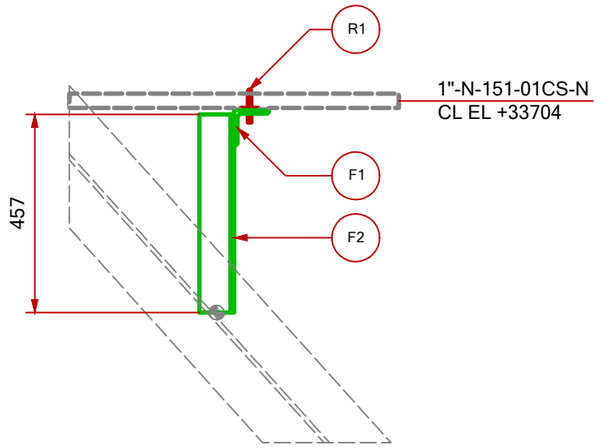
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03084

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

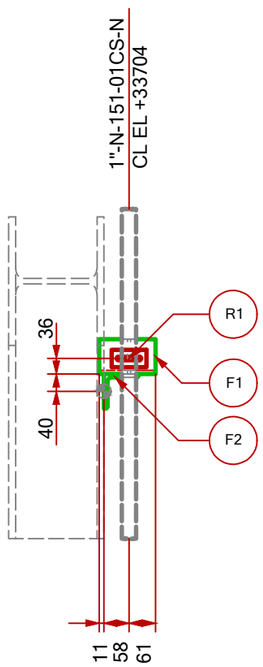
File Name :



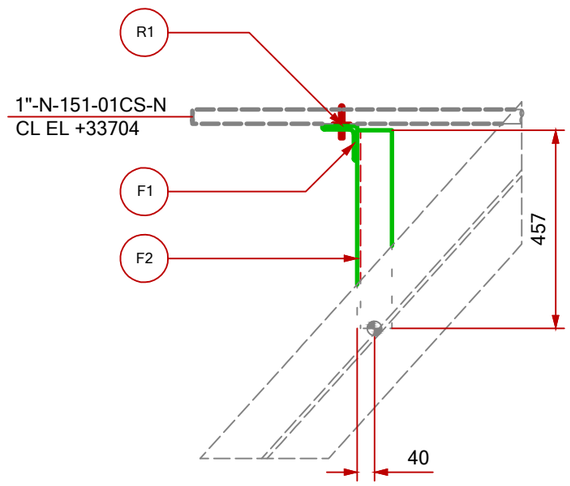
VIEW LOOKING NORTH



VIEW LOOKING WEST



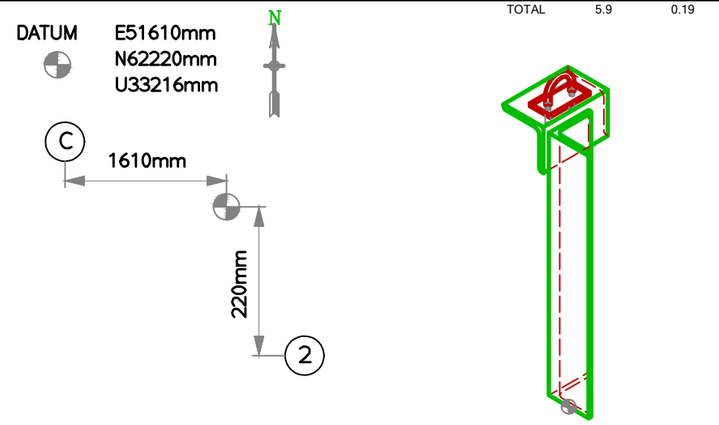
PLAN VIEW



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	L80x80x8	Carbon Steel	130	1	9.63	1.25	0.043
F2	BEAM	L80x80x8	Carbon Steel	457	1	9.63	4.40	0.145
						TOTAL	5.9	0.19



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

CROSSWIND

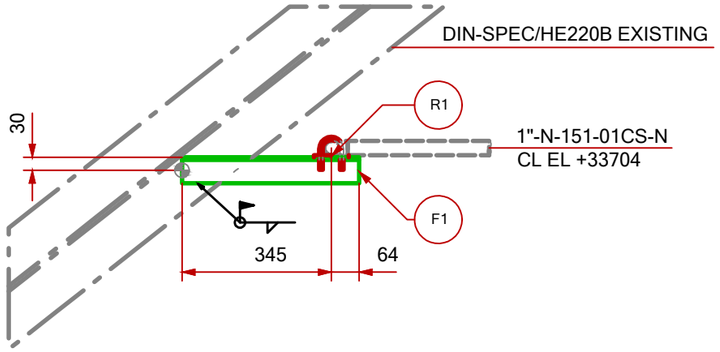
ROSETTI MARINO

TITLE :

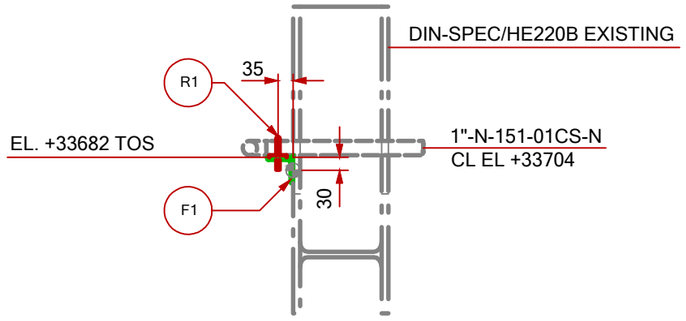
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03117

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

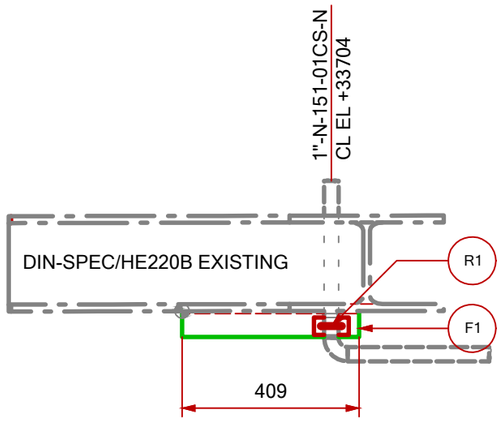
File Name :



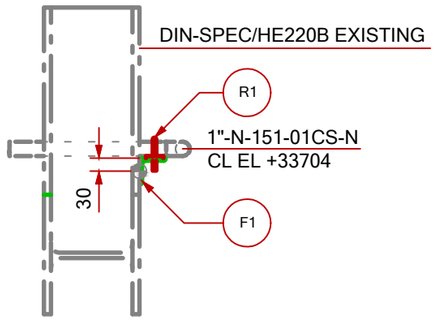
VIEW LOOKING NORTH



VIEW LOOKING WEST



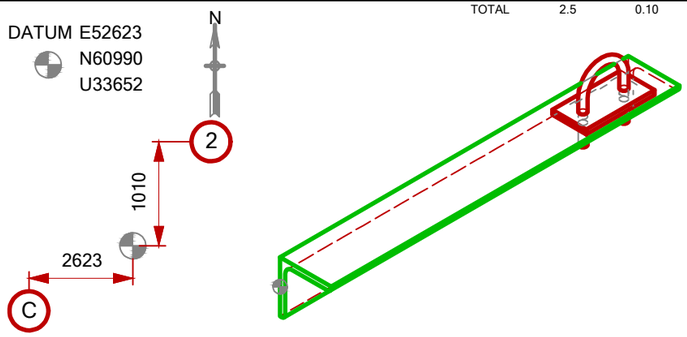
PLAN VIEW



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	L60x60x6	Carbon Steel	409	1	5.42	2.22	0.097
						TOTAL	2.5	0.10



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

CROSSWIND

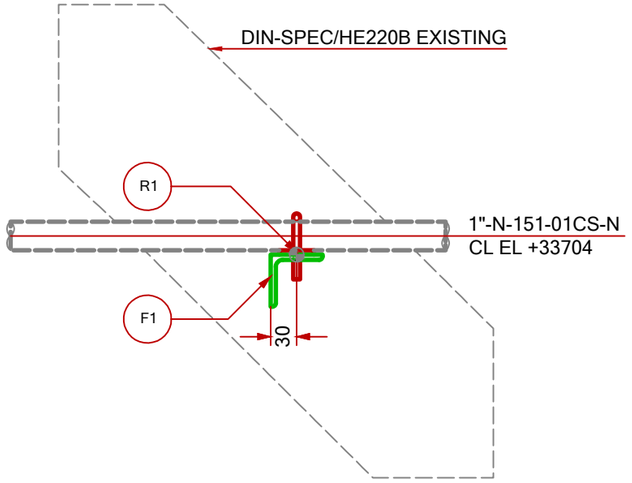
ROSETTI MARINO

TITLE :

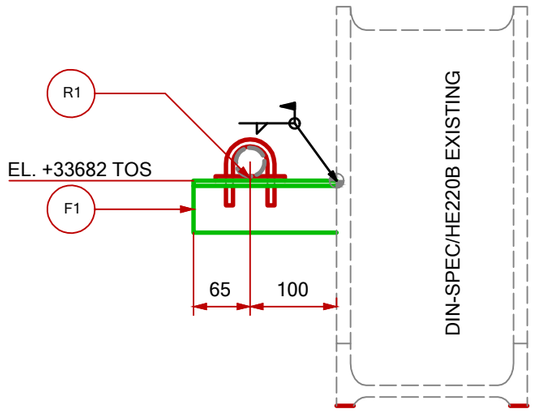
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03118

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

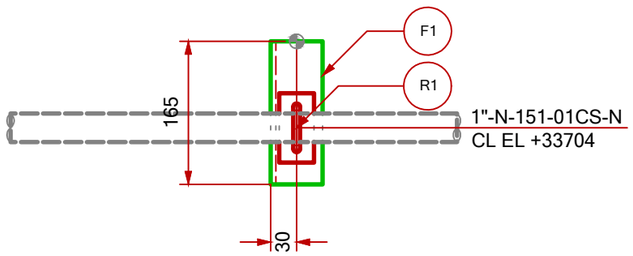
File Name :



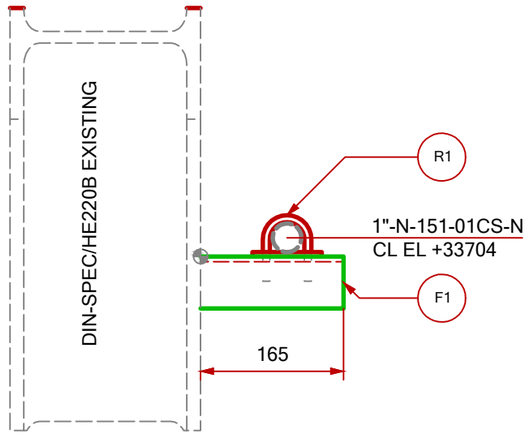
VIEW LOOKING NORTH



VIEW LOOKING WEST



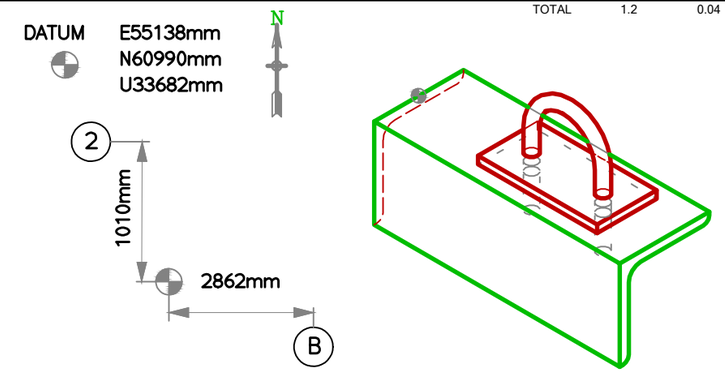
PLAN VIEW



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	L60x60x6	Carbon Steel	165	1	5.42	0.90	0.040
						TOTAL	1.2	0.04



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

CROSSWIND

ROSETTI MARINO

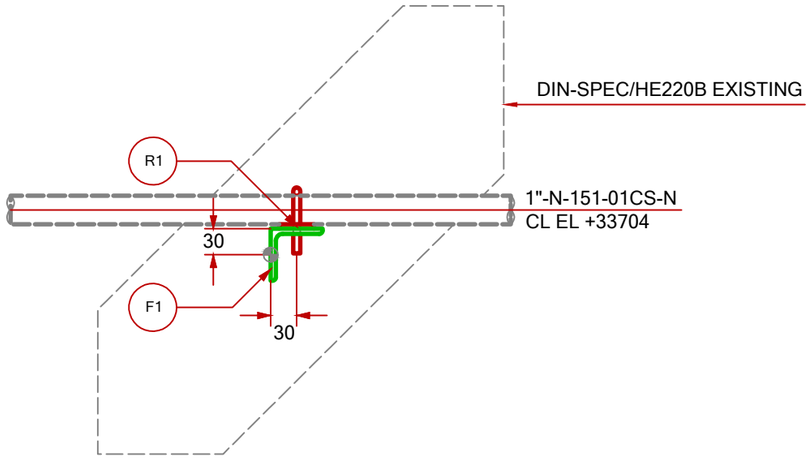
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

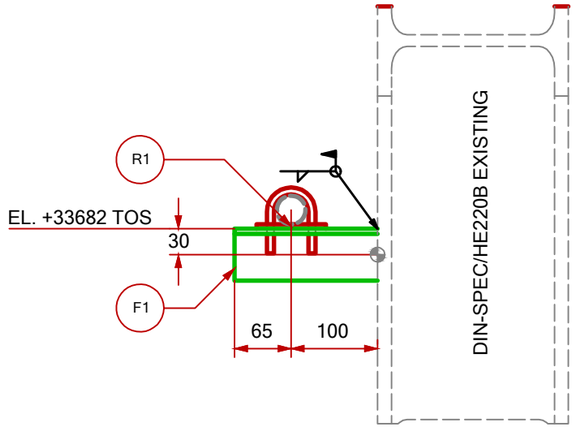
PS-03119

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

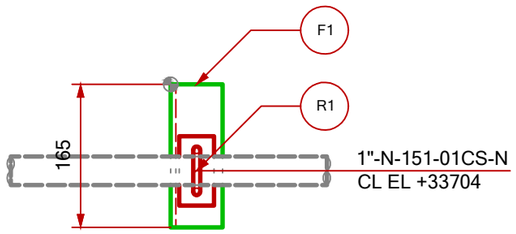
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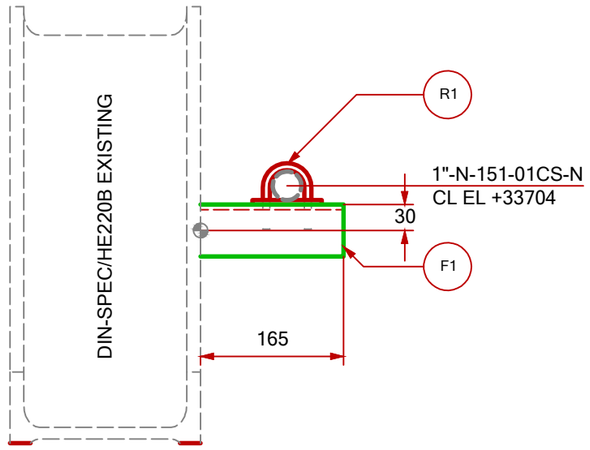
VIEW LOOKING NORTH



VIEW LOOKING WEST



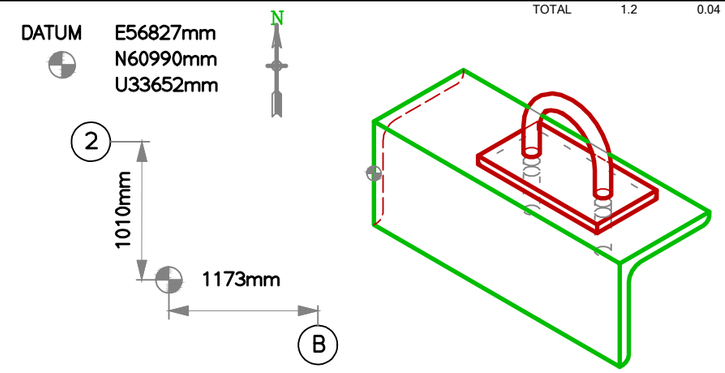
PLAN VIEW



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-211-1"	-	-	1	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	165	1	5.42	0.90	0.040
						TOTAL	1.2	0.04



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

CROSSWIND

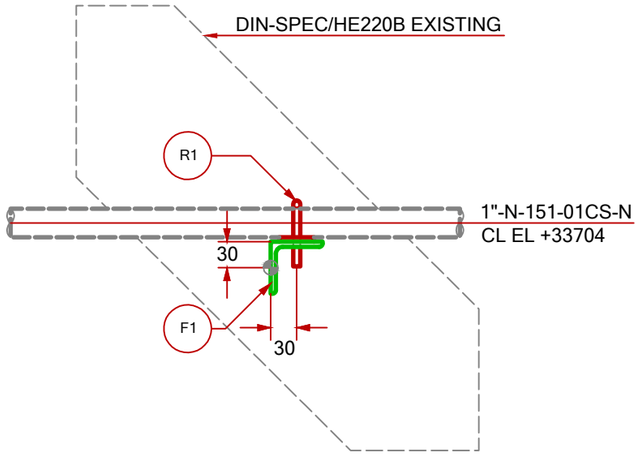
ROSETTI MARINO

TITLE :

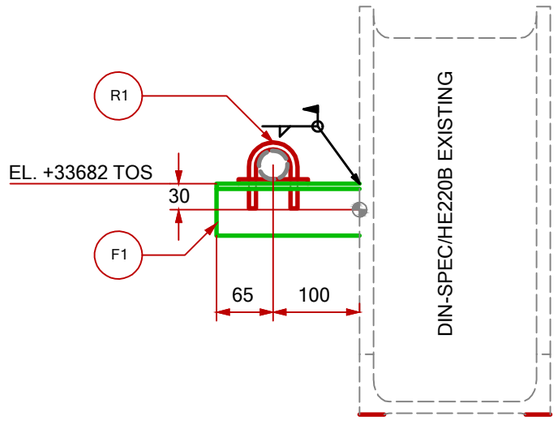
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03120

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

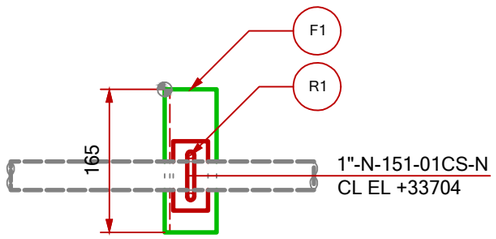
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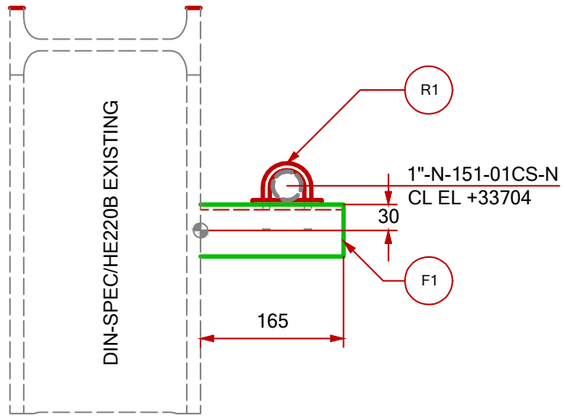
VIEW LOOKING NORTH



VIEW LOOKING WEST



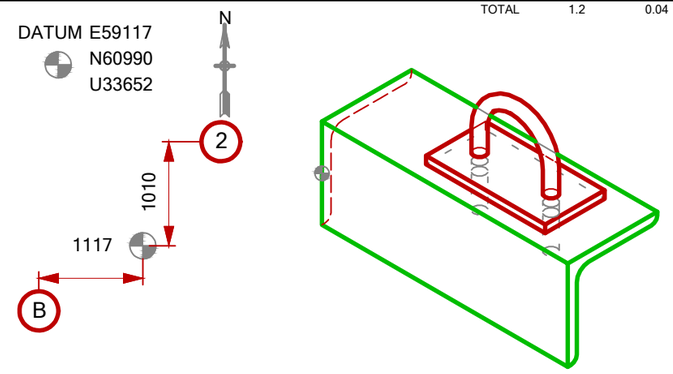
PLAN VIEW



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-211-1"	-	-	1	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	165	1	5.42	0.90	0.040
						TOTAL	1.2	0.04



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

CROSSWIND

ROSETTI MARINO

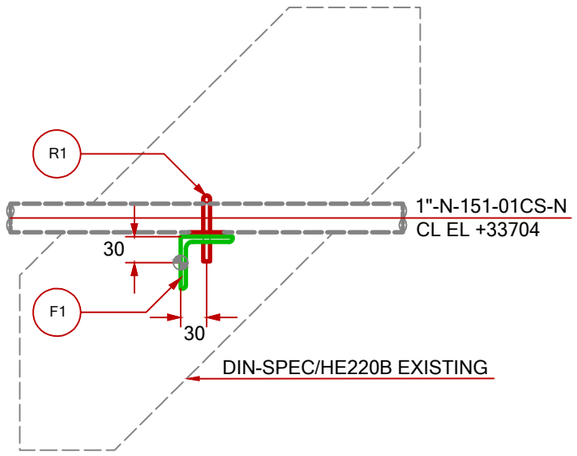
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

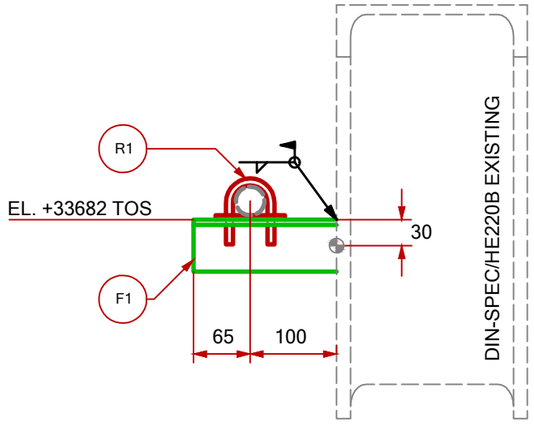
PS-03121

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

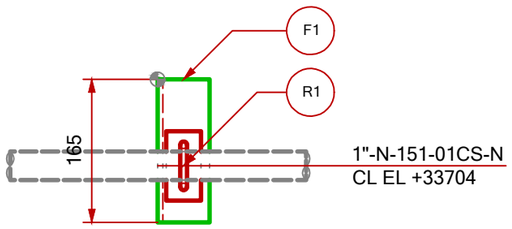
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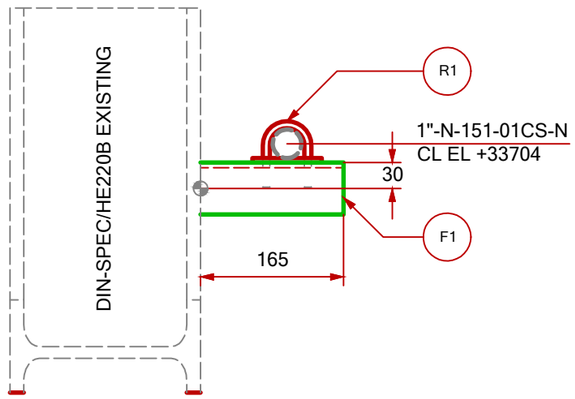
VIEW LOOKING NORTH



VIEW LOOKING WEST



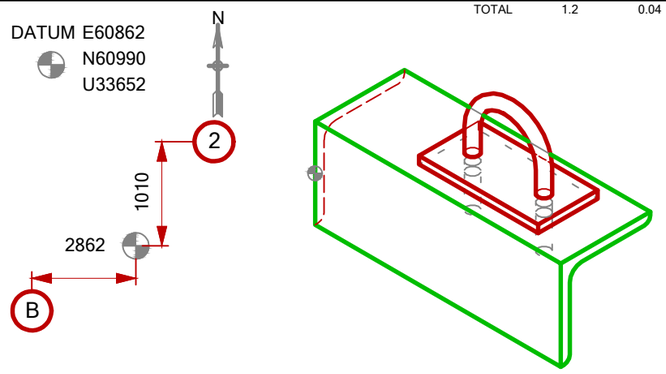
PLAN VIEW



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-211-1"	-	-	1	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	165	1	5.42	0.90	0.040
						TOTAL	1.2	0.04



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

CROSSWIND

ROSETTI MARINO

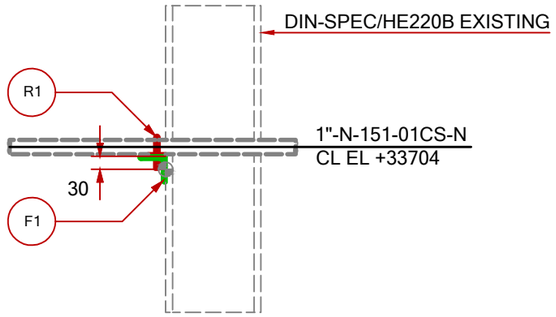
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

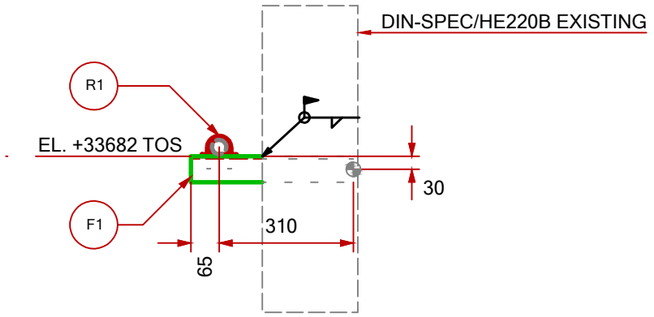
PS-03122

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

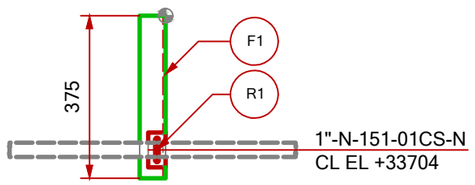
File Name :



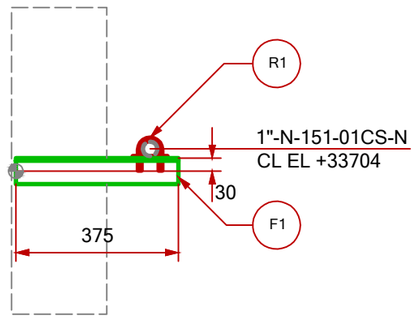
VIEW LOOKING NORTH



VIEW LOOKING WEST



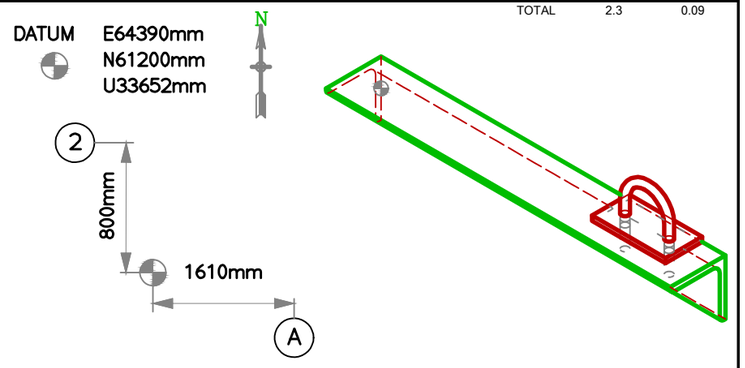
PLAN VIEW



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-211-1"	-	-	1	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	375	1	5.42	2.03	0.089
						TOTAL	2.3	0.09



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

CROSSWIND

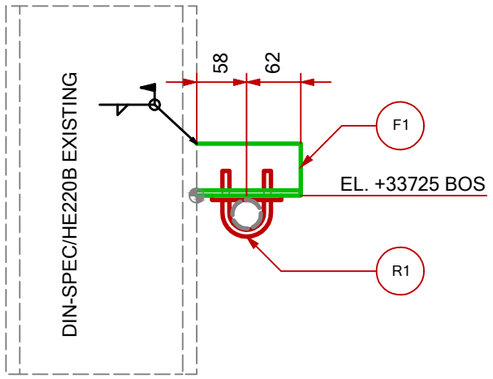
ROSETTI MARINO

TITLE :

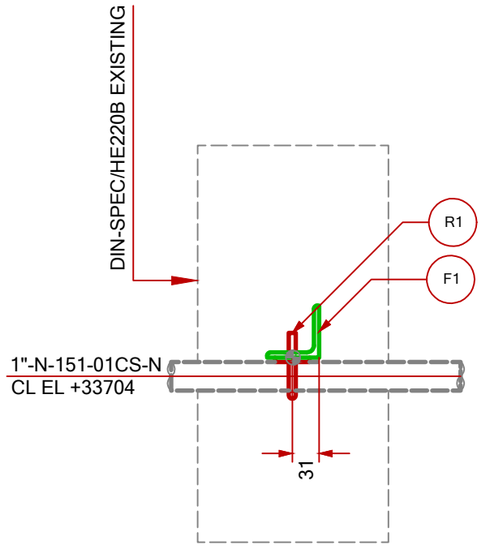
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-03123

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

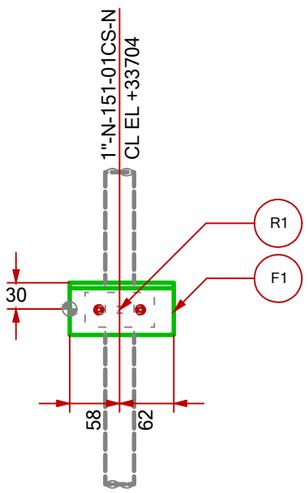
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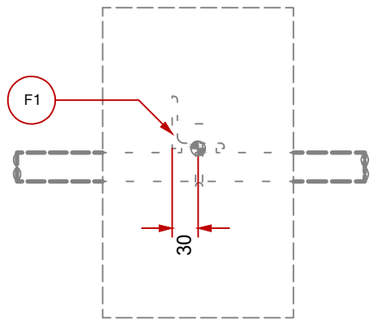
VIEW LOOKING NORTH



VIEW LOOKING WEST



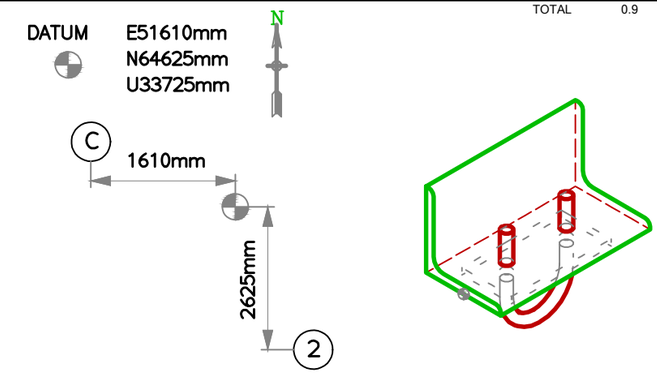
PLAN VIEW



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	-	0.29	-
F1	BEAM	L60x60x6	Carbon Steel	120	1	5.42	0.65	0.029
						TOTAL	0.9	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-03125

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

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

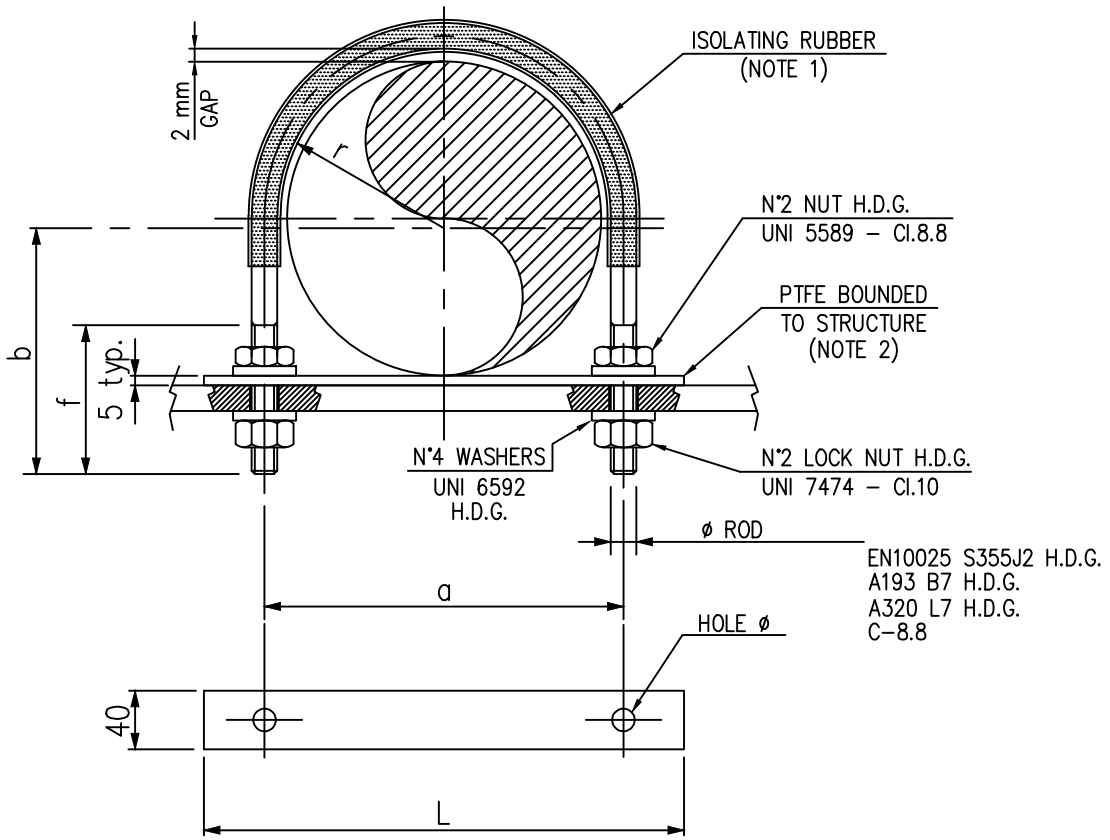
Revision: 0

Date: –

CAVALLOTTI GALVANIZZATI DI GUIDA PER TUBAZIONI IN C.S S.S. E ALLOY
GALVANIZED U–BOLTS GUIDE FOR C.S. S.S. AND ALLOY PIPES (NON GRIP)

S–211

Example of designation : STD – PIPE ND"
(S–211 – 10")



SIZE ND	ROD DIA	r	a	b	f	L	HOLE ø	DEV	DEV. RUBBER	WEIGHT Kg
½"	M8	14	36	55	52	65	10	167	62	0.16
3/4"	M8	17	42	55	52	70	10	176	75	0.16
1"	M8	20	48	60	55	80	10	196	90	0.18
1½"	M10	27	64	70	65	100	12	240	120	0.32
2"	M10	33	76	80	70	110	12	280	150	0.35
3"	M12	48	108	100	80	150	14	370	210	0.60
4"	M12	60	132	110	80	180	14	430	260	0.67
6"	M16	87	190	150	100	250	18	600	380	1.39
8"	M16	113	242	170	100	300	18	720	500	1.60
10"	M16	140	296	200	100	350	18	865	650	1.86
12"	M20	165	350	240	120	420	22	1030	750	3.31
14"	M20	181	382	260	120	450	22	1120	840	3.55
16"	M24	207	438	290	130	520	26	1270	1000	5.76
18"	M24	232	488	320	130	570	26	1410	1100	6.28
20"	M30	257	544	360	160	640	32	1570	1200	11.02
24"	M30	308	646	410	160	750	32	1830	1450	12.52

NOTES:

1) HEAT SHRINK TUBE TYPE FLAME RETARDANT, WITH RATIO 2:1
2) MULTIPLE SHEETS OF PTFE CAN BE ADDED IN ORDER TO ENSURE THE CORRECT ELEVATION AND SLOPE OF THE LINES.

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

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.

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**	34	**To**	34
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 Conn / NOTE	Accept. Date	Spool
1/34/1/_		**00**	**30-08-2024**	**1-22**	**AZ52**		**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-12-2024**	**A**
					AX416 **After Cutting**														
01CS	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
Cut 20-12-2024		VIS	C 1 DTA	After Cutting	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable	A1A		GTAW			20-12-2024		
		RT	C 1 DTA	After Cutting			10 %				Acceptable								
2/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
3/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
4/34/1/_		**00**	**02-09-2024**	**3**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
5/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
6/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	000023		4	Acceptable						11-09-2024		
7/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
8/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**		**TEE**		**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable						03-09-2024		
		RT	FIN	Weld Completion			10 %				Acceptable								
9/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**		**TEE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**

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
9/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
10/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
11/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**			**TEE**	**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
12/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
13/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
14/34/1/_		**00**	**30-08-2024**	**1**	**AZ52**			**TEE**	**0,75 in**	**3,91 mm**	**V**	**0,083 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
15/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
16/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
17/34/1/_		**00**	**04-11-2024**	**22**	**AX416**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					05-11-2024			
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	PR	10 %	001004	4	Acceptable					15-11-2024			

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 Conn / NOTE	Accept. Date	Spool
17/34/1/_		**00**	**04-11-2024**	**22**	**AX416**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	
18/34/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							04-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
19/34/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000024	4	Acceptable							11-09-2024	
20/34/2/_		**00**	**04-11-2024**	**22**	**AX416**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**15-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable							05-11-2024	
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	PR	10 %	001005	4	Acceptable							15-11-2024	
21/34/2/_		**00**	**09-09-2024**	**5**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable							11-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
22/34/2/_		**00**	**05-11-2024**	**23**	**AX416**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**05-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable							05-11-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
23/34/2/_		**00**	**31-08-2024**	**2**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
24/34/2/_		**00**	**30-08-2024**	**1**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
25/34/2/_		**00**	**07-09-2024**	**6**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable							11-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
26/34/2/_		**00**	**04-11-2024**	**22**	**AX416**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**05-11-2024**	

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	WPS / Defect length	Techn. Weld. / CND date	Type Conn / NOTE	Accept. Date	Spool
26/34/2/_		**00**	**04-11-2024**	**22**	**AX416**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**05-11-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					05-11-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
27/34/2/_		**00**	**30-08-2024**	**1**	**AZ52**		**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
28/34/2/_		**00**	**09-09-2024**	**5**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable					11-09-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
29/34/2/_		**00**	**31-08-2024**	**2**	**AZ52**		**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
30/34/2/_		**00**	**31-08-2024**	**2**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
31/34/2/_		**00**	**22-11-2024**	**44**	**AX410**		**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**23-11-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable					23-11-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
32/34/2/_		**00**	**07-09-2024**	**6**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable					11-09-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
33/34/2/_		**00**	**03-09-2024**	**4**	**AZ52**		**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					04-09-2024			
		RT	FIN	Weld Completion			10 %				Acceptable								
34/34/2/_		**00**	**03-09-2024**	**4**	**AZ52**		**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable					04-09-2024			
		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 Conn.	Accept. Date	Spool
34/34/2/_		**00**	**03-09-2024**	**4**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**F**
35/34/2/_		**00**	**30-08-2024**	**1**	**AZ52**		**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								
36/34/2/_		**00**	**30-08-2024**	**1-19**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-12-2024**	**F**
					AX416	**After Cutting**												
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								
Cut 18-12-2024		VIS	C1 DTA	After Cutting	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable A1A			GTAW		18-12-2024			
		RT	C1 DTA	After Cutting			10 %			Acceptable								
37/34/2/_		**00**	**31-08-2024**	**2**	**AZ52**		**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								
38/34/2/_		**00**	**31-08-2024**	**2**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								
39/34/2/_		**00**	**22-11-2024**	**43**	**AX410**		**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**22-11-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					22-11-2024			
		RT	FIN	Weld Completion			10 %			Acceptable								
40/34/2/_		**00**	**22-11-2024**	**44**	**AX410**		**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable					23-11-2024			
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	001022	4	Acceptable					25-11-2024			

Totals per DWG	**34**	**Prefabrication**	**3,24 m**	**33 Nr. Welds**	**32,25 inch**
		Erection	**0,70 m**	**7 Nr. Welds**	**7,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**3,94 m**	**40 Nr. Welds**	**39,25 inch**
		Accepted	**3,94 m**	**40 Nr. Welds**	**39,25 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		
40/34/2/_		00	22-11-2024	44	AX410		TEE	1,00 in	4,55 mm	V	0,104 m	M	C.S.	A1A	GTAW	BW	25-11-2024	

Totals by Discipline	**Prefabrication**	**3,24 m**	**33 Nr. Welds**	**32,25 inch**
	Erection	**0,70 m**	**7 Nr. Welds**	**7,00 inch**
	Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
	Performed	**3,94 m**	**40 Nr. Welds**	**39,25 inch**
	Accepted	**3,94 m**	**40 Nr. Welds**	**39,25 inch**
	Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project	**Prefabrication**	**3,24 m**	**33 Nr. Welds**	**32,25 inch**
	Erection	**0,70 m**	**7 Nr. Welds**	**7,00 inch**
	Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
	Performed	**3,94 m**	**40 Nr. Welds**	**39,25 inch**
	Accepted	**3,94 m**	**40 Nr. Welds**	**39,25 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: 19/12/2024	
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
34	00	1	A	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W4-W5-W6	
34	00	1	A	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W16	
34	00	1	A	01CS	3	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	W7-W8-W9	
34	00	1	A	01CS	3	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	W10-W11-W12	
34	00	1	A	01CS	3	1	Tee Reducing BW ›1"x3/4" Thk.4.55mmx3.91mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00800	4527-P15	W13-W14-W15	
34	00	1	A	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W2-W3	
34	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	W1	
34	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	W5	
34	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	W8	
34	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	W11	
34	00	1	A	01CS	6	1	Flange WN ›3/4" Thk.3.91mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01210	2024-C_MFF-01243	W14	
34	00	1	A	01CS	1A	0,096	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	A	01CS	1B	0,451	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	A	01CS	1C	0,06	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	A	01CS	1D	0,2	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	A	01CS	1E	0,199	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	A	01CS	1F	0,094	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W18-W19	
34	00	1	B	01CS	1G	4,346	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	1	B	01CS	1H	0,124	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	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	W21	
34	00	2	C	01CS	1I	2,955	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W23	
34	00	2	D	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W24-W25	
34	00	2	D	01CS	1J	0,224	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	D	01CS	1K	3,574	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W27	
34	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W28-W29	
34	00	2	E	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W30	
34	00	2	E	01CS	1L	0,324	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	E	01CS	1M	1,724	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W34-W35-W37	
34	00	2	F	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W38	
34	00	2	F	01CS	3	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W32-W33	
34	00	2	F	01CS	4	1	Flange WN ›1" Thk.4.55mm 300LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01240	2024-C_MFF-01243	W36	
34	00	2	F	01CS	1N	1,662	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	F	01CS	1O	0,1	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	F	01CS	1P	0,1	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
34	00	2	F	01CS	1Q	0,138	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**	35	**To**	35
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
1/35/1/_		**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**
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								
2/35/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-09-2024**	**A**
	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								
3/35/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/35/1/_		**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								
5/35/1/_		**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**	**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								
6/35/1/_		**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**	**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		IDL-QCI-RT 0036 00	AA	10 %	000085		4	Acceptable				26-09-2024				
7/35/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 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								
8/35/1/_		**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**	**C**
	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								
9/35/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 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								

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		
9/35/1/_		00	19-09-2024	11	AZ52		PIPE	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	20-09-2024	C

Totals per DWG	**35**	**Prefabrication**	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Accepted	**0,85 m**	**9 Nr. Welds**	**8,00 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	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Accepted	**0,85 m**	**9 Nr. Welds**	**8,00 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	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Accepted	**0,85 m**	**9 Nr. Welds**	**8,00 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: 19/12/2024
	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
35	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	
35	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	W3	
35	00	1	A	01CS	1A	0,184	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	00	1	A	01CS	1B	0,244	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	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	
35	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	W4	
35	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	
35	00	1	B	01CS	1C	0,312	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	00	1	C	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	W7	
35	00	1	C	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	W9	
35	00	1	C	01CS	1D	0,259	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	00	1	C	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W8	

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	62	**To**	62
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. %	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
1/62/1/_		**00**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000025	4	Acceptable				11-09-2024				
2/62/1/_		**00**	**09-09-2024**	**5**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/62/1/_		**00**	**22-11-2024**	**48**	**AX410**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				25-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
4/62/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
5/62/1/_		**00**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
6/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
7/62/1/_		**00**	**09-09-2024**	**5**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
8/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
9/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		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.	Type Conn / NOTE	Accept. Date	Spool
9/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
10/62/1/_		**00**	**25-11-2024**	**47**	**AX410**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				25-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
11/62/1/_		**00**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
12/62/1/_		**00**	**09-09-2024**	**7**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
13/62/2/_		**01**	**25-11-2024**	**47**	**AX410**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				25-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
14/62/2/_		**01**	**09-09-2024**	**5**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
15/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
16/62/2/_		**01**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
17/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
18/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**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 Conn.	Accept. Date	Spool
18/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	000026	4	Acceptable				11-09-2024				
19/62/2/_		**01**	**13-12-2024**	**83**	**AX410**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**14-12-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK		Acceptable				14-12-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
20/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
21/62/2/_		**01**	**09-09-2024**	**5**	**AZ52**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	000048	4	Acceptable				18-09-2024				
22/62/2/_		**01**	**09-09-2024**	**5-12-13-17**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**17-12-2024**	**E**
					AX410	**After Cutting**												
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
Cut 16-12-2024		VIS	C 1 DTA	After Cutting	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable	A1A	GTAW		17-12-2024				
		RT	C 1 DTA	After Cutting			10 %			Acceptable								
23/62/2/_		**01**	**16-12-2024**	**88**	**AX410**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**16-12-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				16-12-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
24/62/2/_		**01**	**03-09-2024**	**4**	**AZ52**		**PL**	**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**04-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		LP	FIN	Weld Completion			10 %			Acceptable								
25/62/2/_		**01**	**09-09-2024**	**5**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
26/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**

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		
26/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
27/62/2/_		**01**	**09-09-2024**	**7**	**AZ52**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable					11-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
28/62/2/_		**01**	**09-09-2024**	**1**	**AZ52**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable					11-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**62**	**Prefabrication**	**2,25 m**	**23 Nr. Welds**	**22,00 inch**
		Erection	**0,50 m**	**5 Nr. Welds**	**5,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Accepted	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**2,25 m**	**23 Nr. Welds**	**22,00 inch**
		Erection	**0,50 m**	**5 Nr. Welds**	**5,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Accepted	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**2,25 m**	**23 Nr. Welds**	**22,00 inch**
		Erection	**0,50 m**	**5 Nr. Welds**	**5,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Accepted	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 19/12/2024
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
62	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	
62	00	1	A	01CS	1A	0,652	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	A	01CS	1B	3,059	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	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	
62	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	
62	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	
62	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	W9	
62	00	1	B	01CS	1C	0,181	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	B	01CS	1D	3,28	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	B	01CS	1E	1,224	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	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-W12	
62	00	1	C	01CS	1F	0,874	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	C	01CS	1G	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	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	W16-W17	
62	01	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	W18	
62	01	2	D	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	W27	
62	01	2	D	01CS	1I	1,788	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	D	01CS	1J	0,124	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W20-W21	
62	01	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W22	
62	01	2	E	01CS	1K	0,238	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	E	01CS	1L	5,63	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	F	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W25-W26	
62	01	2	F	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	W26	
62	01	2	F	01CS	1M	0,97	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	F	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W24	
62	01	2	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W14-W15	
62	01	2	G	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	W15	
62	01	2	G	01CS	1H	5	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	G	01CS	1N	1,25	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**	66	**To**	66
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	B	**To**	B
		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 Conn / NOTE	Accept. Date	Spool
6/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**FWN**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
8/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
9/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000027	4	Acceptable							11-09-2024	
10/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
11/66/1/_		**00**	**07-09-2024**	**6**	**AZ52**			**ELB**	**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	RGARDINIT	100 %	OK		Acceptable							11-09-2024	
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000049	4	Acceptable							18-09-2024	
12/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**66**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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		
12/66/1/_		00	31-08-2024	2	AZ52		PIPE	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	03-09-2024	B

Totals by Project			
Prefabrication	0,60 m	6 Nr. Welds	6,00 inch
Erection	0,00 m	0 Nr. Welds	0,00 inch
Offshore	0,00 m	0 Nr. Welds	0,00 inch
Performed	0,60 m	6 Nr. Welds	6,00 inch
Accepted	0,60 m	6 Nr. Welds	6,00 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: 19/12/2024
	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
66	00	1	B	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W6-W8-W9	
66	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W10-W11	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W6	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W8	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W12	
66	00	1	B	01CS	1D	0,451	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
66	00	1	B	01CS	1E	0,096	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**	97	**To**	97
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

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

Client CRWIND CROSSWIND

Discipline PP Piping ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
1/97/1/_		**00**	**13-11-2024**	**82**	**AX410**			**RED**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**13-12-2024**	
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK			Acceptable				13-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**RED**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
	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								
3/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
	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								
4/97/1/_		**00**	**03-09-2024**	**4-12-14**	**AZ52**			**ELB**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**17-12-2024**	**A**
					AX410	**After Cutting**														
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				04-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000028		3	Acceptable				11-09-2024				
Cut 16-12-2024		VIS	C1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable	A1A	GTAW		17-12-2024				
		RT	C1 DTA	After Cutting				10 %				Acceptable								
5/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**FWN**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				19-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
6/97/1/_		**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**	**B**
	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								
7/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				19-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/97/1/_		**00**	**07-09-2024**	**6**	**AZ52**			**RED**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number		Rev.	Prod. Date	Prod. Sheet	Welders		Item type	Dimension	Thickness	Bevel	Weld Length	P/M	Material	WPS	Techn. Weld.	Type Conn	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase		Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.		Defect length	CND date	NOTE		
8/97/1/_		00	07-09-2024	6	AZ52		RED	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	11-09-2024	B

Totals per DWG	**97**	**Prefabrication**	**0,90 m**	**7 Nr. Welds**	**8,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Accepted	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,90 m**	**7 Nr. Welds**	**8,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Accepted	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,90 m**	**7 Nr. Welds**	**8,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Accepted	**1,00 m**	**8 Nr. Welds**	**9,50 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: 19/12/2024
	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
97	00	1	A	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32-J9K6232	1724000839	00740	4527-P9	W2	
97	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W3-W4	
97	00	1	A	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	W4	
97	00	1	A	01CS	1A	0,094	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
97	00	1	B	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32	1724001267	00310	5924-P3	W7-W8	
97	00	1	B	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	W5	
97	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W8	
97	00	1	B	01CS	1B	0,149	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		

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

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation - NOT APPLICABLE

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test - NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld.	Type Conn / NOTE	Accept. Date	Spool
1/35/1/_		**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**
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								
2/35/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**20-09-2024**	**A**
	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								
3/35/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				18-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
4/35/1/_		**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								
5/35/1/_		**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**	**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								
6/35/1/_		**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**	**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		IDL-QCI-RT 0036 00	AA	10 %	000085		4	Acceptable				26-09-2024				
7/35/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 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								
8/35/1/_		**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**	**C**
	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								
9/35/1/_		**00**	**19-09-2024**	**11**	**AZ52**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 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								

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		
9/35/1/_		00	19-09-2024	11	AZ52		PIPE	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	20-09-2024	C

Totals per DWG	**35**	**Prefabrication**	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Accepted	**0,85 m**	**9 Nr. Welds**	**8,00 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	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Accepted	**0,85 m**	**9 Nr. Welds**	**8,00 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	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,85 m**	**9 Nr. Welds**	**8,00 inch**
		Accepted	**0,85 m**	**9 Nr. Welds**	**8,00 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: 19/12/2024
	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
35	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	
35	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	W3	
35	00	1	A	01CS	1A	0,184	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	00	1	A	01CS	1B	0,244	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	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	
35	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	W4	
35	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	
35	00	1	B	01CS	1C	0,312	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	00	1	C	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	W7	
35	00	1	C	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	W9	
35	00	1	C	01CS	1D	0,259	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
35	00	1	C	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W8	

Rosetti Marino S.p.A.

Welding Register

Job	123A90	BASE LOAD POWER HUB (BLPH)			
From Discipline	PP	Piping			
To Discipline	PP	Piping			
Drawings		**From**	62	**To**	62
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. %	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
1/62/1/_		**00**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000025	4	Acceptable				11-09-2024				
2/62/1/_		**00**	**09-09-2024**	**5**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
3/62/1/_		**00**	**22-11-2024**	**48**	**AX410**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				25-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
4/62/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
5/62/1/_		**00**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
6/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
7/62/1/_		**00**	**09-09-2024**	**5**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
8/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
9/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		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.	Type Conn / NOTE	Accept. Date	Spool
9/62/1/_		**00**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**B**
10/62/1/_		**00**	**25-11-2024**	**47**	**AX410**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				25-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
11/62/1/_		**00**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
12/62/1/_		**00**	**09-09-2024**	**7**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**C**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
13/62/2/_		**01**	**25-11-2024**	**47**	**AX410**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**25-11-2024**	
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				25-11-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
14/62/2/_		**01**	**09-09-2024**	**5**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
15/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
16/62/2/_		**01**	**03-09-2024**	**4**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**04-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
17/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
18/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**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 Conn.	Accept. Date	Spool
18/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	000026	4	Acceptable				11-09-2024				
19/62/2/_		**01**	**13-12-2024**	**83**	**AX410**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**14-12-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK		Acceptable				14-12-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
20/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				03-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
21/62/2/_		**01**	**09-09-2024**	**5**	**AZ52**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**18-09-2024**	**E**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	000048	4	Acceptable				18-09-2024				
22/62/2/_		**01**	**09-09-2024**	**5-12-13-17**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**17-12-2024**	**E**
					AX410	**After Cutting**												
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
Cut 16-12-2024		VIS	C 1 DTA	After Cutting	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable	A1A	GTAW		17-12-2024				
		RT	C 1 DTA	After Cutting			10 %			Acceptable								
23/62/2/_		**01**	**16-12-2024**	**88**	**AX410**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**16-12-2024**	
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable				16-12-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
24/62/2/_		**01**	**03-09-2024**	**4**	**AZ52**		**PL**	**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**04-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				04-09-2024				
		LP	FIN	Weld Completion			10 %			Acceptable								
25/62/2/_		**01**	**09-09-2024**	**5**	**AZ52**		**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
26/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**		**ELB**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**

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		
26/62/2/_		**01**	**02-09-2024**	**3**	**AZ52**			**ELB**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**F**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable					03-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
27/62/2/_		**01**	**09-09-2024**	**7**	**AZ52**			**FWN**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**D**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable					11-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								
28/62/2/_		**01**	**09-09-2024**	**1**	**AZ52**			**PIPE**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**G**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable					11-09-2024			
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**62**	**Prefabrication**	**2,25 m**	**23 Nr. Welds**	**22,00 inch**
		Erection	**0,50 m**	**5 Nr. Welds**	**5,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Accepted	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**2,25 m**	**23 Nr. Welds**	**22,00 inch**
		Erection	**0,50 m**	**5 Nr. Welds**	**5,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Accepted	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**2,25 m**	**23 Nr. Welds**	**22,00 inch**
		Erection	**0,50 m**	**5 Nr. Welds**	**5,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Accepted	**2,75 m**	**28 Nr. Welds**	**27,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**

Cliente/Contractor	**CROSSWIND**	Preparato da/Prepared by	Controllato da/Checked by	Approvato da/Approved by
SubContrattista/SubContractor	**ROSETTIMARINO/GROUPOFCOMPANY**	Nome/Name: Antonio Galesi	Nome/Name:	Nome/Name:
Progetto/Project	**Hollandse Kust Noord Wind Park Project**			
Commessa/Job	**123A90 - Piping**			
Disciplina/Discipline	**PIPING**			
TitoloDocumento/DocumentTitle	**Material Traceability Report**	StatoDocumento/Document Status:		Data/Date: 19/12/2024
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
62	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	
62	00	1	A	01CS	1A	0,652	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	A	01CS	1B	3,059	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	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	
62	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	
62	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	
62	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	W9	
62	00	1	B	01CS	1C	0,181	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	B	01CS	1D	3,28	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	B	01CS	1E	1,224	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	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-W12	
62	00	1	C	01CS	1F	0,874	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	00	1	C	01CS	1G	6	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	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	W16-W17	
62	01	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	W18	
62	01	2	D	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	W27	
62	01	2	D	01CS	1I	1,788	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	D	01CS	1J	0,124	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W20-W21	
62	01	2	E	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W22	
62	01	2	E	01CS	1K	0,238	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	E	01CS	1L	5,63	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	F	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W25-W26	
62	01	2	F	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	W26	
62	01	2	F	01CS	1M	0,97	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	F	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W24	
62	01	2	G	01CS	2	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W14-W15	
62	01	2	G	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	W15	
62	01	2	G	01CS	1H	5	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
62	01	2	G	01CS	1N	1,25	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**	66	**To**	66
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**	B	**To**	B
		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 Conn / NOTE	Accept. Date	Spool
6/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**FWN**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
8/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
9/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**TEE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000027	4	Acceptable							11-09-2024	
10/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								
11/66/1/_		**00**	**07-09-2024**	**6**	**AZ52**			**ELB**	**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	RGARDINIT	100 %	OK		Acceptable							11-09-2024	
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000049	4	Acceptable							18-09-2024	
12/66/1/_		**00**	**31-08-2024**	**2**	**AZ52**			**PIPE**	**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**03-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable							03-09-2024	
		RT	FIN	Weld Completion				10 %			Acceptable								

Totals per DWG	**66**	**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,60 m**	**6 Nr. Welds**	**6,00 inch**
		Accepted	**0,60 m**	**6 Nr. Welds**	**6,00 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		
12/66/1/_		00	31-08-2024	2	AZ52		PIPE	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	03-09-2024	B

Totals by Project			
Prefabrication	0,60 m	6 Nr. Welds	6,00 inch
Erection	0,00 m	0 Nr. Welds	0,00 inch
Offshore	0,00 m	0 Nr. Welds	0,00 inch
Performed	0,60 m	6 Nr. Welds	6,00 inch
Accepted	0,60 m	6 Nr. Welds	6,00 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: 19/12/2024
	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
66	00	1	B	01CS	2	1	Tee BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	02-J6L8102	1724000839	00780	4527-P13	W6-W8-W9	
66	00	1	B	01CS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.4,55mm ASTM/ASME A/SA420 Gr.WPL6	402212	1724000839	00690	4527-P4	W10-W11	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W6	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W8	
66	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W12	
66	00	1	B	01CS	1D	0,451	Pipe 33,4mm(1") thk.4.55mm ASTM/ASME A/SA333 Gr.6	1234196	1724000838	00050	24A2938		
66	00	1	B	01CS	1E	0,096	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**	97	**To**	97
Sheet		**From**	1	**To**	1
Marks		**From**		**To**	
Location		**From**		**To**	
Material		**From**		**To**	
Welds Execution		**From**		**To**	
Welds Acceptance		**From**		**To**	
Report Date		**From**		**To**	
Prefabrication	All				
Welding Status	All				
ITEM					
ADDITIONAL PARAMETERS	**LINE**	**From**		**To**	
	SPOOL	**From**		**To**	
		From		**To**	

Rosetti Marino S.p.A.

Welding Register

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

Client CRWIND CROSSWIND

Discipline PP Piping ITEM

Weld Number / Class	Insp. Category	Rev. / Cont.	Prod. Date / Examination phase	Prod. Sheet	Welders	Work Instructions	Oper.	Item type / Exam. %	N. Rep	Dimension	Thickness / Films n.	Bevel / Result	Weld Length / WPS Rip.	P/M / Techn. Weld.	Material / Defect length	WPS / CND date	Techn. Weld. / NOTE	Type Conn	Accept. Date	Spool
1/97/1/_		**00**	**13-11-2024**	**82**	**AX410**			**RED**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**M**	**C.S.**	**A1A**	**GTAW**	**BW**	**13-12-2024**	
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	ACRISPINO	100 %	OK			Acceptable				13-12-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
2/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**RED**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
	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								
3/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
	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								
4/97/1/_		**00**	**03-09-2024**	**4-12-14**	**AZ52**			**ELB**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**17-12-2024**	**A**
					AX410	**After Cutting**														
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				04-09-2024				
		RT	FIN	Weld Completion		IDL-QCI-RT 0036 00	AA	10 %	000028		3	Acceptable				11-09-2024				
Cut 16-12-2024		VIS	C1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK			Acceptable	A1A	GTAW		17-12-2024				
		RT	C1 DTA	After Cutting				10 %				Acceptable								
5/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**FWN**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				19-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
6/97/1/_		**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**	**B**
	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								
7/97/1/_		**00**	**17-09-2024**	**9**	**AZ53**			**PIPE**		**1,50 in**	**5,08 mm**	**V**	**0,151 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK			Acceptable				19-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								
8/97/1/_		**00**	**07-09-2024**	**6**	**AZ52**			**RED**		**1,00 in**	**4,55 mm**	**V**	**0,104 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**11-09-2024**	**B**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK			Acceptable				11-09-2024				
		RT	FIN	Weld Completion				10 %				Acceptable								

Rosetti Marino S.p.A.

Welding Register

Job 123A90 BASE LOAD POWER HUB (BLPH)
Client CRWIND CROSSWIND
Discipline PP Piping

Order Number CW-I-WP4-2023-05
ITEM

Weld Number		Rev.	Prod. Date	Prod. Sheet	Welders		Item type	Dimension	Thickness	Bevel	Weld Length	P/M	Material	WPS	Techn. Weld.	Type Conn	Accept. Date	Spool
Class	Insp. Category	Cont.	Examination phase		Work Instructions	Oper.	Exam. %	N. Rep	Films n.	Result	WPS Rip.	Techn. Weld.		Defect length	CND date	NOTE		
8/97/1/_		00	07-09-2024	6	AZ52		RED	1,00 in	4,55 mm	V	0,104 m	P	C.S.	A1A	GTAW	BW	11-09-2024	B

Totals per DWG	**97**	**Prefabrication**	**0,90 m**	**7 Nr. Welds**	**8,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Accepted	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,90 m**	**7 Nr. Welds**	**8,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Accepted	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,90 m**	**7 Nr. Welds**	**8,50 inch**
		Erection	**0,10 m**	**1 Nr. Welds**	**1,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**1,00 m**	**8 Nr. Welds**	**9,50 inch**
		Accepted	**1,00 m**	**8 Nr. Welds**	**9,50 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: 19/12/2024
	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
97	00	1	A	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32-J9K6232	1724000839	00740	4527-P9	W2	
97	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›1.1/2" Thk.5.08mm ASTM/ASME A/SA420 Gr.WPL6	413640	1724000839	00700	4527-P5	W3-W4	
97	00	1	A	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	W4	
97	00	1	A	01CS	1A	0,094	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		
97	00	1	B	01CS	2	1	Reducer Concentric BW ›1.1/2"x1" Thk.5.08mmx4.55mm ASTM/ASME A/SA420 Gr.WPL6	32	1724001267	00310	5924-P3	W7-W8	
97	00	1	B	01CS	4	1	Flange WN ›1.1/2" Thk.5.08mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	22/76569	1724000839	01230	2024-C_MFF-01243	W5	
97	00	1	B	01CS	5	1	Flange WN ›1" Thk.4.55mm 150LB RF ASTM/ASME A/SA350 Gr.LF2	23/70335	1724000839	01220	2024-C_MFF-01243	W8	
97	00	1	B	01CS	1B	0,149	Pipe 48,3mm(1.1/2") thk.5.08mm ASTM/ASME A/SA333 Gr.6	732804	1724000838	00010	02-23-22535		

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

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation - NOT APPLICABLE

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

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	64-10-TP-023	: Test Pack 64-10-TP-023			Dwg	123A90-DDL-PR-PID-80011-27-28
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10003412		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	2024-12-16	2024-12-31	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-16T15:13:54.854Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-31T10:25:07.827Z	

ITEM	Tag	64-10-TP-047	: Test Pack 64-10-TP-047			Dwg	123A90-DDL-PR-PID-80028
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003589		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-18	2025-01-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-18T05:21:43.269Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-03T16:34:11.726Z	

ITEM	Tag	64-10-TP-047	: Test Pack 64-10-TP-047			Dwg	123A90-DDL-PR-PID-80028
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003590		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.	NA
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.	NA
11	Check that the valves have been correctly lubricated and that they have the correct spindle packing.	NA
12	Check that all the bolts and fasteners are suitably lubricated inline with the flange management procedure.	OK
13	Check that the bolts have been tightned at opened joints.	Note
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: 13. Yes, there were no opened joints.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-02-07	2025-02-11	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:17:58.461Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-11T17:13:52.499Z	

ITEM	Tag	64-10-TP-047	: Test Pack 64-10-TP-047			Dwg	123A90-DDL-PR-PID-80028
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003591		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (Rosetti Marino)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-02-11	2025-02-11	
Signature	PROVERLIS Digitaly signed by Alex Sanna 2025-02-11T07:37:43.391Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-11T16:53:20.630Z	

ITEM	Tag	64-10-TP-047	: Test Pack 64-10-TP-047		Dwg	123A90-DDL-PR-PID-80028	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10003592	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	02/01/2025	Start time	14:00	End time	14:05
Flow rate	NA	Duration	5 min	Medium T°	NA

Operation Description

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

Safety Precautions

Restricting access to the area.

Result and comments

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

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2025-01-02	2025-01-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-02T08:26:03.825Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-03T16:42:00.616Z	

ITEM	Tag	64-10-TP-047	: Test Pack 64-10-TP-047		Dwg	123A90-DDL-PR-PID-80028	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10003593	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	2025-01-02	2025-01-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-02T08:26:16.930Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-03T17:09:49.490Z	

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-43-00-TP22A+64-10-TP47

Instrument

Strumento

Electrical pressure gauge *Misuratore di pressione elettronico*	
Model *Modello*	CPG1500
Serial number *Numero di serie*	1A037FOOB2N
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 (00:13:43:0E:DE: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)*	00:48:48
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	04:09:38 pm

Logger protocol

Protocollo di acquisizione elenco dati

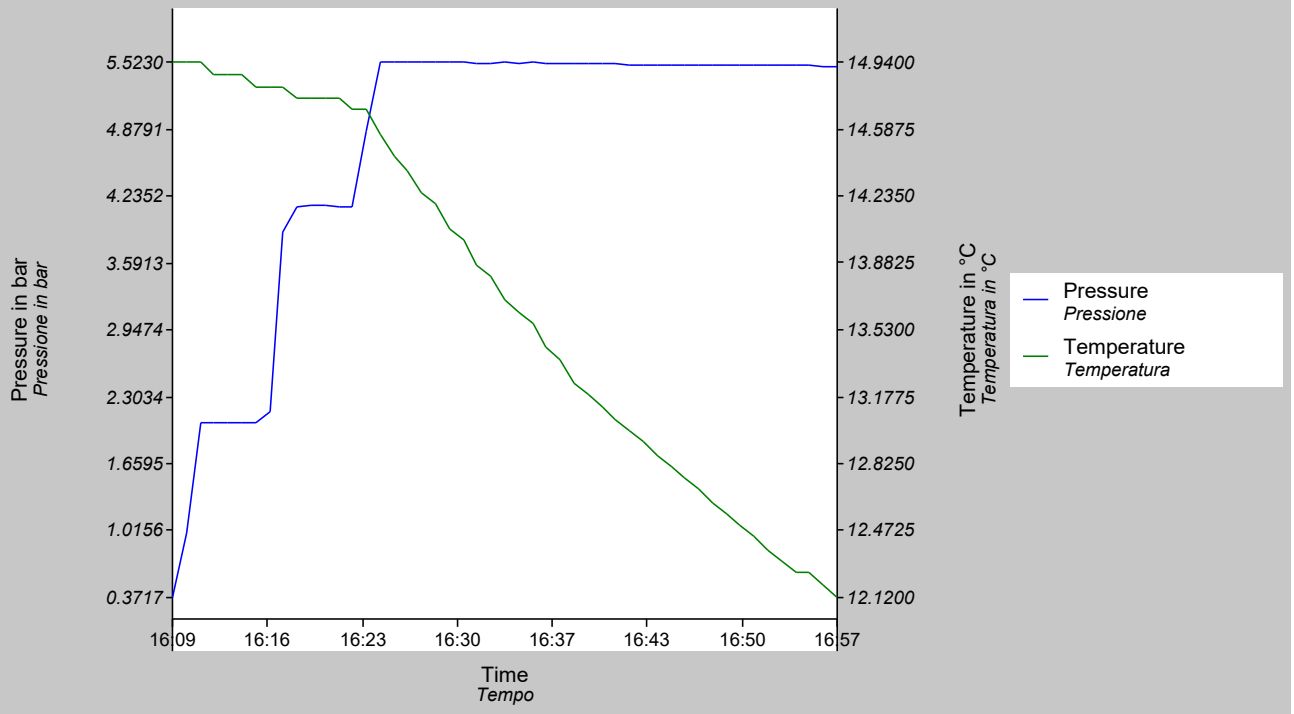
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-43-00-TP22A+64-10-TP47

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
01/02/2025 16:09:38.000	0.3717	14.9400
01/02/2025 16:10:38.000	0.9888	14.9400
01/02/2025 16:11:38.000	2.0535	14.9400
01/02/2025 16:12:38.000	2.0499	14.8700
01/02/2025 16:13:38.000	2.0517	14.8700
01/02/2025 16:14:38.000	2.0540	14.8700
01/02/2025 16:15:38.000	2.0560	14.8100
01/02/2025 16:16:38.000	2.1665	14.8100
01/02/2025 16:17:38.000	3.8889	14.8100
01/02/2025 16:18:38.000	4.1314	14.7500
01/02/2025 16:19:38.000	4.1382	14.7500
01/02/2025 16:20:38.000	4.1380	14.7500
01/02/2025 16:21:38.000	4.1323	14.7500
01/02/2025 16:22:38.000	4.1362	14.6900
01/02/2025 16:23:38.000	4.8594	14.6900
01/02/2025 16:24:38.000	5.5221	14.5600
01/02/2025 16:25:38.000	5.5190	14.4400

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. 123A90-43-00-TP22A+64-10-TP47
N. elenco dati

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
01/02/2025 16:26:38.000	5.5230	14.3700
01/02/2025 16:27:38.000	5.5207	14.2500
01/02/2025 16:28:38.000	5.5228	14.1900
01/02/2025 16:29:38.000	5.5224	14.0600
01/02/2025 16:30:38.000	5.5162	14.0000
01/02/2025 16:31:38.000	5.5152	13.8700
01/02/2025 16:32:38.000	5.5130	13.8100
01/02/2025 16:33:38.000	5.5197	13.6900
01/02/2025 16:34:38.000	5.5149	13.6200
01/02/2025 16:35:38.000	5.5165	13.5600
01/02/2025 16:36:38.000	5.5106	13.4400
01/02/2025 16:37:38.000	5.5042	13.3700
01/02/2025 16:38:38.000	5.5041	13.2500
01/02/2025 16:39:38.000	5.5062	13.1900
01/02/2025 16:40:38.000	5.5035	13.1200
01/02/2025 16:41:38.000	5.5011	13.0600
01/02/2025 16:42:38.000	5.5000	13.0000
01/02/2025 16:43:38.000	5.4978	12.9400
01/02/2025 16:44:38.000	5.4985	12.8700
01/02/2025 16:45:38.000	5.4987	12.8100
01/02/2025 16:46:38.000	5.4953	12.7500
01/02/2025 16:47:38.000	5.4965	12.6900
01/02/2025 16:48:38.000	5.4951	12.6200
01/02/2025 16:49:38.000	5.4923	12.5600
01/02/2025 16:50:38.000	5.4931	12.5000
01/02/2025 16:51:38.000	5.4901	12.4400
01/02/2025 16:52:38.000	5.4894	12.3700
01/02/2025 16:53:38.000	5.4896	12.3100
01/02/2025 16:54:38.000	5.4880	12.2500
01/02/2025 16:55:38.000	5.4870	12.2500
01/02/2025 16:56:38.000	5.4838	12.1900
01/02/2025 16:57:38.000	5.4759	12.1200

Kalibrierschein / Calibration Certificate

gem. DIN EN ISO/IEC 17025:2018 / acc. DIN EN ISO/IEC 17025:2018

erstellt durch das Kalibrierlaboratorium
issued by the calibration laboratory

WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg

DAkkS Deutsche Akkreditierungsstelle D-K-15105-01-00

Mitglied im Deutschen Kalibrierdienst
Member of the Deutscher Kalibrierdienst

Kalibrierzeichen
Calibration mark

C01107773144
D-K-15105-01-00
2024-06

Gegenstand *Object*	Elektrisches Druckmessgerät Electrical pressure gauge
Hersteller *Manufacturer*	WIKA Alexander-Wiegand-Straße 30 DE-63911 Klingenberg
Typ *Type*	CPG1500
Fabrikat/Serien-Nr. *Serial number*	1A037FOOB2N
Auftraggeber *Customer*	ROSETTI MARINO SPA Via Del Marchesato, 37 Marina di Ravenna (RA) IT 48122 Ravenna
Auftragsnummer *Order No.*	S000343115/1
Anzahl der Seiten des Kalibrierscheines *Number of pages of the certificate*	4
Datum der Kalibrierung *Date of calibration*	18.06.2024

Dieser Kalibrierschein dokumentiert die metrologische Rückführbarkeit auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI).
Die DAkkS ist Unterzeichner der multilateralen Übereinkommen der European co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine.
Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

This calibration certificate documents the metrological traceability to national standards, which realize the units of measurement according to the International System of Units (SI).
The DAkkS is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates.
The user is obliged to have the object recalibrated at appropriate intervals.

Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung des ausstellenden Kalibrierlaboratoriums. Kalibrierscheine ohne Unterschrift haben keine Gültigkeit.

This calibration certificate may not be reproduced other than in full except with the permission of the issuing laboratory. Calibration certificates without signature are not valid.

Datum *Date*	Stellv. Leiter des Kalibrierlaboratoriums *Ass. head of calibration laboratory*	Bearbeiter *Person in charge*
18.06.2024	Roland Schüßler	Christian Wunder

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CTserviceteam@wika.com

WIKA Alexander Wiegand SE & Co. KG

C01107773144
D-K-15105-01-00
2024-06

Kalibriergegenstand (KG)
Device under test (DUT)

Elektrisches Druckmessgerät *Electrical pressure gauge*	
Typ *Model*	CPG1500
Seriennummer *Serial number*	1A037FOOB2N
Anzeigebereich *Scale range*	(0 ... 1000) bar g
Genauigkeit *Accuracy*	0,1 % FS
Auflösung (Skalenwert) *Resolution (scale division)*	0,1 bar
Messstellen-Nr. *Tag number*	

Kalibrierverfahren
Calibration procedure

Die Kalibrierung erfolgte nach der Richtlinie DKD-R 6-1 "Kalibrierung von Druckmessgeräten" (Ausgabe 03/2014) Ablauf B, durch direkten Vergleich der Messwerte des Kalibriergegenstandes mit denen des Bezugs- oder Gebrauchsnormales. Der Kalibrierschein wurde mit WIKA-Cal Version 2.11.0.213 erstellt.
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. The calibration certificate has been created with WIKA-Cal version 2.11.0.213.

Ort der Kalibrierung
Place of calibration

Klingenberg Kalibrierlabor 2 *Klingenberg calibration laboratory 2*	g = (9,8100531 ± 0,00002) m/s²

Messbedingungen
Measurement conditions

Gebrauchsnormal (GN) Druckcontroller *Working standard (WS) Pressure controller*	
Typ *Model*	CPC8000
Kalibrierzeichen *Calibration mark*	07072415
Anzeigebereich *Scale range*	(0 ... 1000) bar g
Genauigkeit *Accuracy*	0,01 % FS

WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Str. 30
63911 Klingenberg
Germany

Tel. +49 9372 132-5049
Fax +49 9372 132-8005049
www.wika.de
CTserviceteam@wika.com

WIKA Alexander Wiegand SE & Co. KG

C01107773144
D-K-15105-01-00
2024-06

Aufbau *Assembly*	
Druckübertragungsmedium *Pressure transmission medium*	Wasser *water*
Bezugsebene (für Referenzwert) *Reference height (for reference value)*	Dichtfläche KG *Sealing face DUT*
Lage bei der Kalibrierung *Position during calibration*	senkrecht *vertical*

Umgebungsbedingungen
Ambient conditions

Temperatur *Temperature*	(23,6 ± 0,5) °C
Atmosphärischer Luftdruck *Atmospheric pressure*	(997,7 ± 0,1) hPa
rel. Luftfeuchte *rel. humidity*	(40 ± 5) %

Messergebnisse
Measurement results

Referenzwert GN *Reference value WS* bar	Ablesung KG *Reading DUT* bar		
	↑	↓	↑
0,00	0,0	0,0	0,0
125,00	125,0	125,1	125,0
250,00	250,1	250,1	250,1
375,00	375,0	375,2	375,0
500,00	500,1	500,1	500,0
625,00	625,0	625,0	625,0
750,00	749,9	750,0	749,9
875,00	874,9	874,8	874,9
1000,00	999,9	999,9	999,9

Messunsicherheit
Measurement uncertainty

Referenzwert GN *Reference value WS* bar	Mittelwert *Mean value* bar	Messabweichung *Deviation* bar	Wiederholbarkeit *Repeatability* bar	Hysterese *Hysteresis* bar	Messunsicherheit *Meas. uncertainty* bar
0,00	0,0	0,0	0,0	0,0	0,40
125,00	125,1	0,1	0,0	0,1	0,40
250,00	250,1	0,1	0,0	0,0	0,40
375,00	375,1	0,1	0,0	0,2	0,40
500,00	500,1	0,1	0,1	0,0	0,40
625,00	625,0	0,0	0,0	0,0	0,40
750,00	750,0	0,0	0,0	0,1	0,40
875,00	874,9	-0,1	0,0	0,1	0,40
1000,00	999,9	-0,1	0,0	0,0	0,40

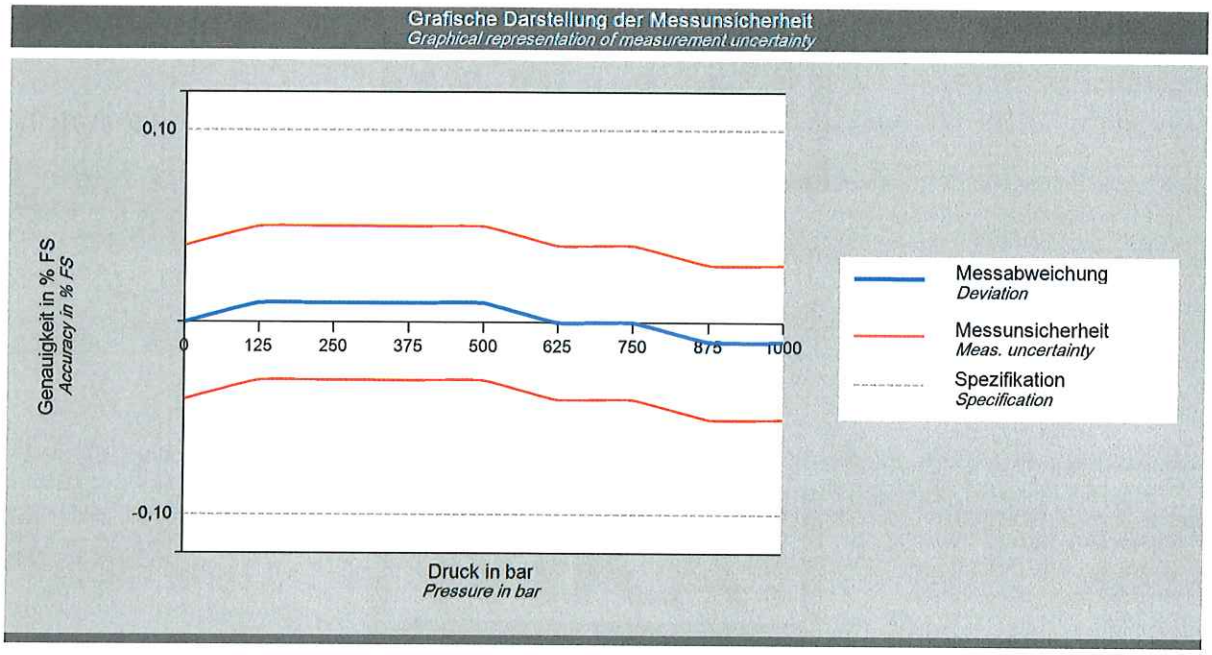
WIKA Alexander Wiegand SE & Co. KG
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Germany

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CTserviceteam@wika.com

WIKA Alexander Wiegand SE & Co. KG

C01107773144
D-K-15105-01-00
2024-06

Angegeben ist die erweiterte Messunsicherheit, die sich aus der Standardmessunsicherheit durch Multiplikation mit dem Erweiterungsfaktor k = 2 ergibt. Sie wurde gemäß EA-4/02 M ermittelt. Der Wert der Messgröße liegt mit einer Wahrscheinlichkeit von etwa 95 % im zugeordneten Werteintervall.
The uncertainty stated is the expanded uncertainty obtained by multiplying the standard uncertainty by the coverage factor k = 2. It has been determined in accordance with EA-4/02 M. The value of the measurand lies within the assigned range of values with a probability of approx. 95 %.



Die Genauigkeit des KG beträgt 0,50 bar
The accuracy of the DUT is 0.50 bar

Konformitätsaussage
Statement of compliance

Der Kalibriergegenstand hält die geforderte Spezifikation ein!
The calibration item keeps the required specification!

WIKA Alexander Wiegand SE & Co. KG
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63911 Klingenberg
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CTserviceteam@wika.com

Base Load Power Hub (BLPH)

TEST PACK

N°64-10-TP-047
SUB-SYSTEM N° 64-10

System	64
Sub-System	64-10
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.

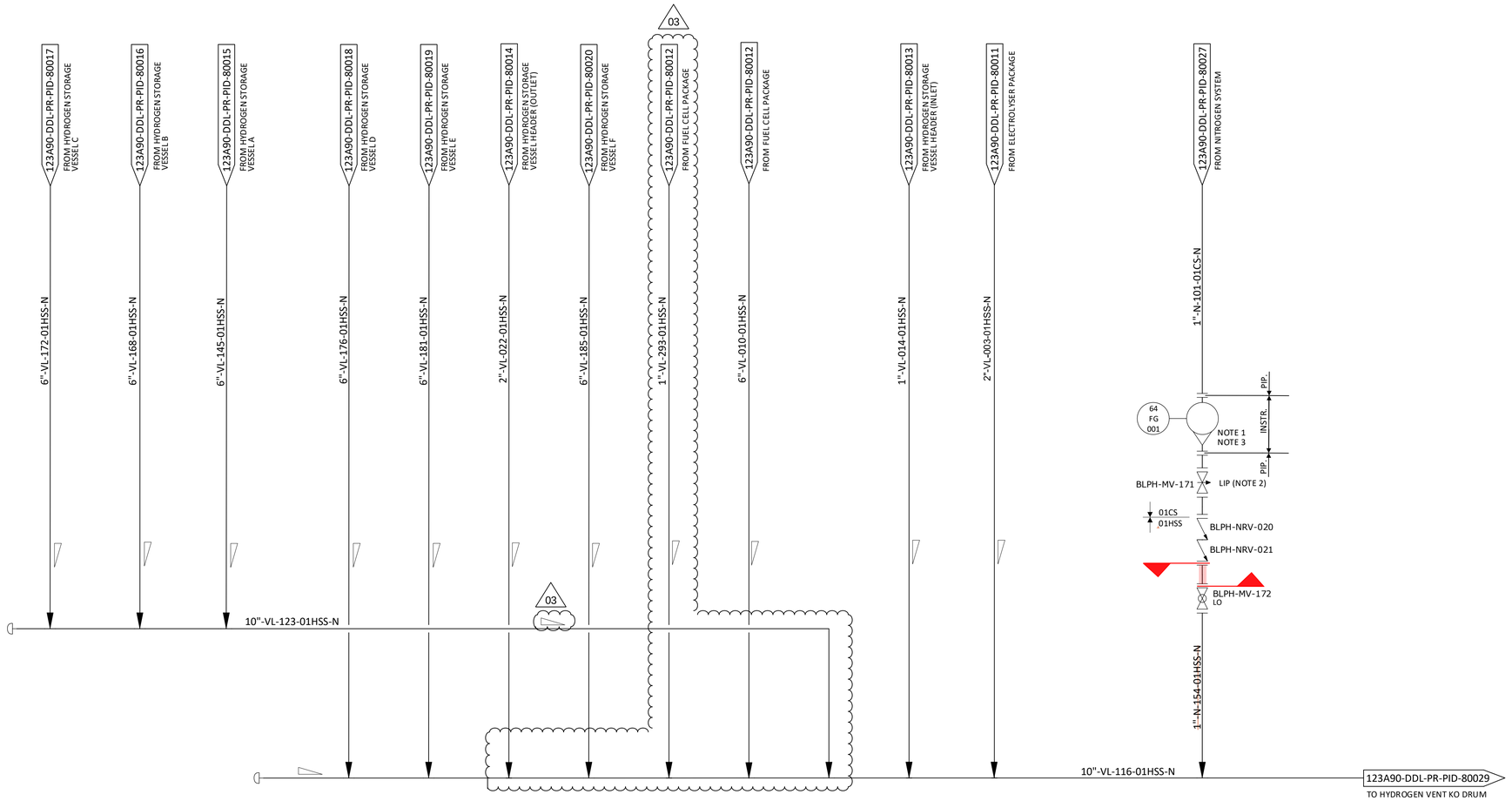
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4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD
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   - 8.3 CXX01 - Thermal insulation – NOT APPLICABLE
   - 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



64-10-TP-047
5.25 barg

NOTES

1. FLOW METER 64-FG-001 SHALL BE READABLE FROM MANUAL VALVE MV-171.
2. VALVE BLPH-MV-171 TO BE LOCKED IN PLACE.
3. VERTICAL INSTALLATION.

HOLDS

1. DELETED.
2. 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

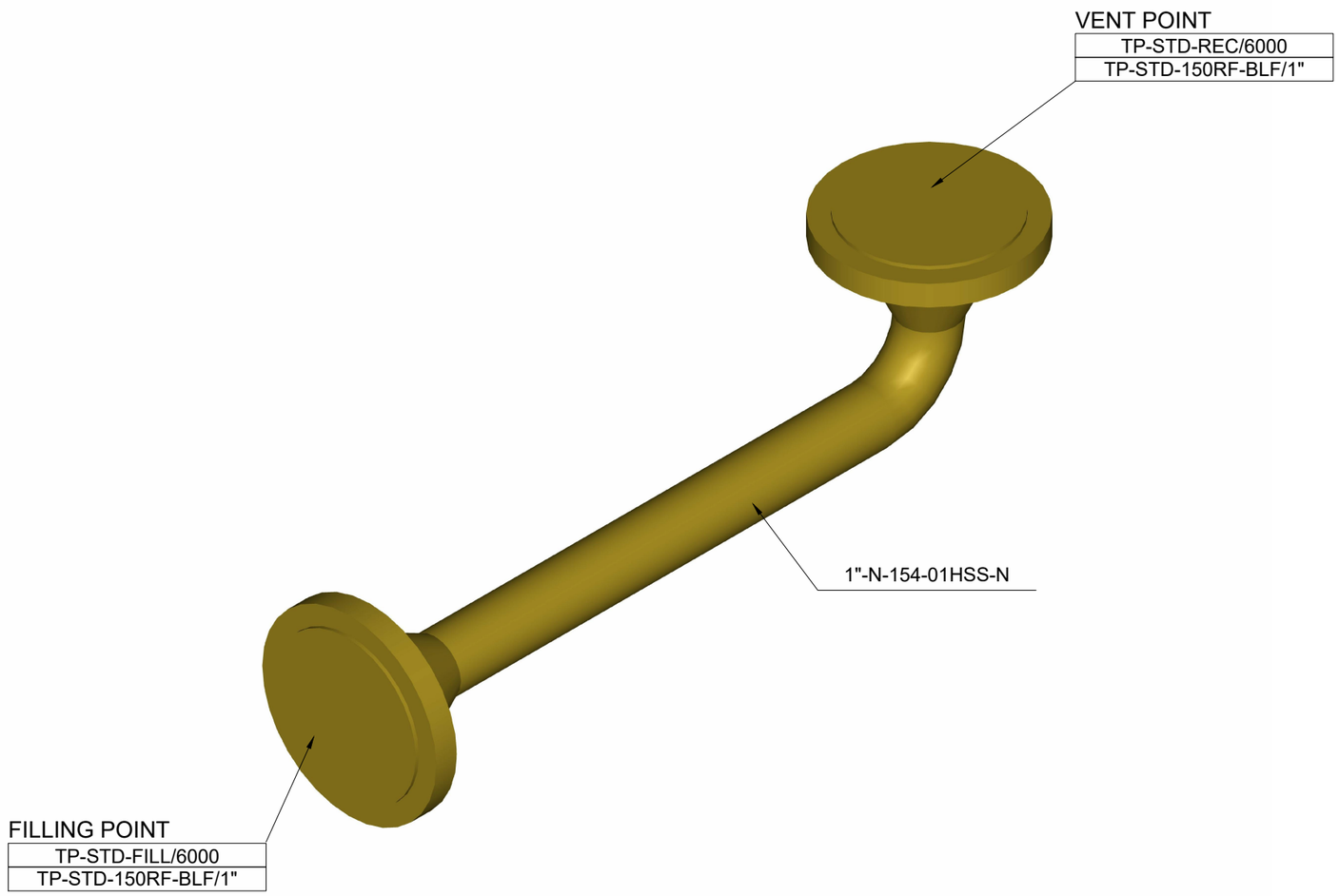
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN VENT HEADER

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-80028	SHEET 001	REV. 03

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT



64-10-TP-047

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
64-10-TP-047

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

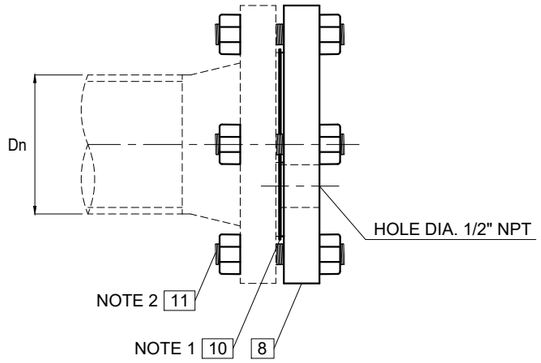
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-047	TP-STD-150RF-BLF/1"	FLBHCS0022010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB RF ASTM/ASME A/SA105	1	2	2	
TP-047	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-047	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

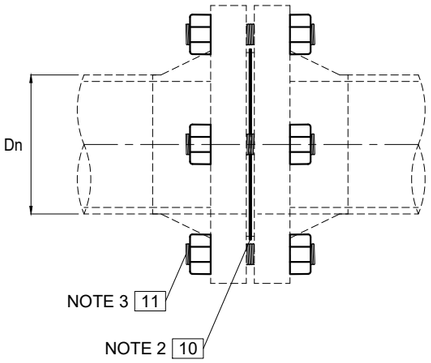
TP-STD-150RF-BLF/Dn
TP-STD-150RF-GSK/Dn

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

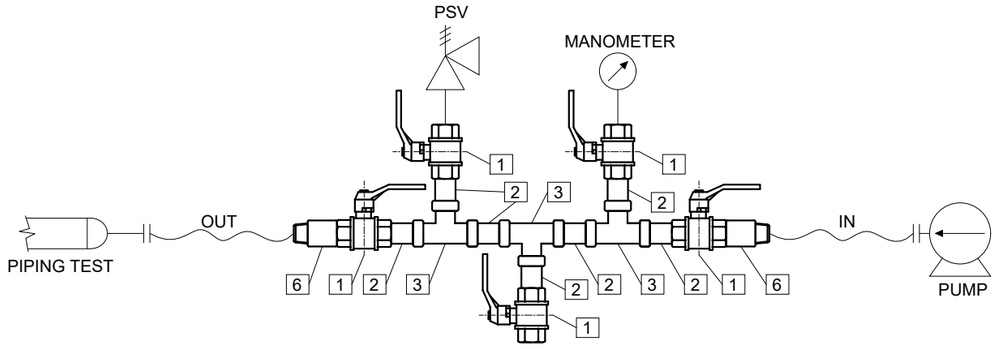
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

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

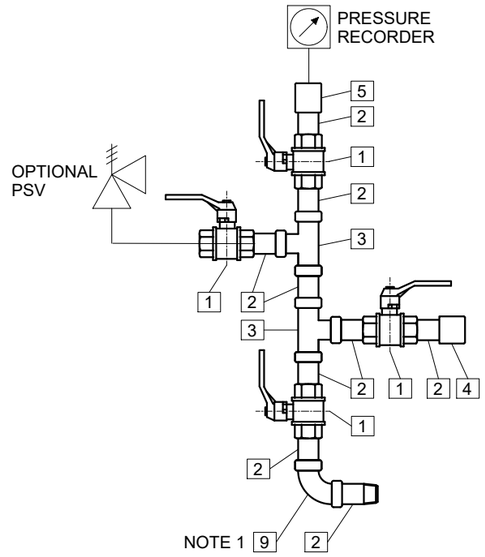
TP-STD-FILL

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
65	N-154	154	1	01HSS	N	3,38	40S	N/A	1"-N-154-01HSS-N	123A90-DDL-PR-PID-80028	3,50	43 / 64	43-00 / 64-10	TP-024/TP-047	Water	5.25	Nitrogen Gas	Stainless Steel	INF	Art. 4, par. 3	6A	RAL 9002

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

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

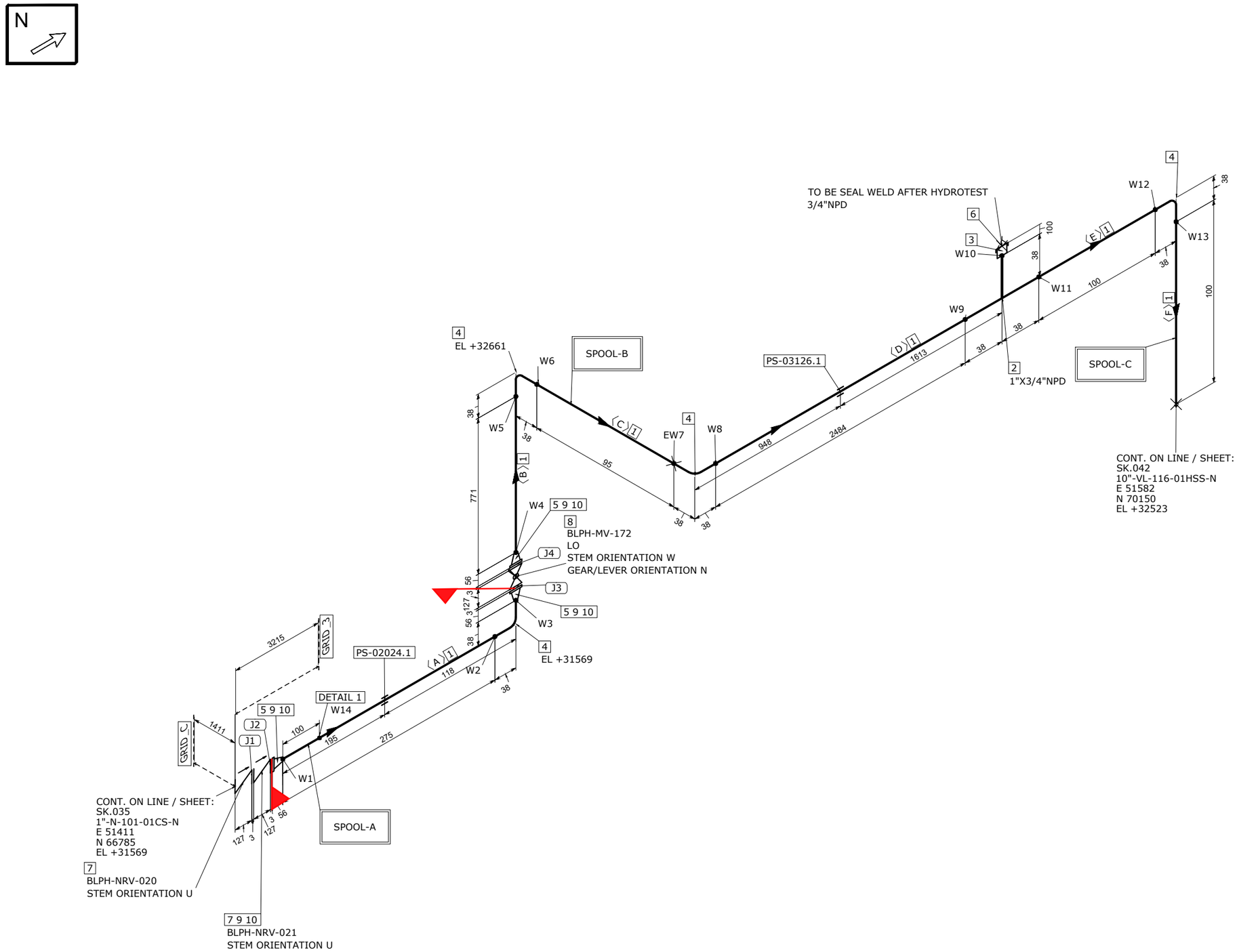
REV. **05**

TITLE

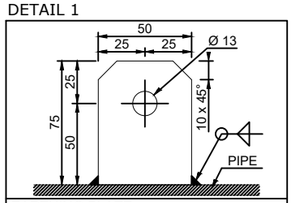
SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
89	123A90-FDL-PP-DI-00065-01	**065**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-N-154-01HSS-N	20/08/2024													**00**	**02**		**TP-024/TP-047**



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.8M	9.7
2	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	0.6
5	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	3	4.3

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2
7	1	VDRNNN02460100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01C02RFH	2	0.0
8	1	VBC0NN24350100	Ball Valve Split Body FB API 6D FLG 150LB RF BS01C01RFH	1	6.0
9	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
10	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	15.1
ERECTION WEIGHT [kg]	8.3
OVERALL WEIGHT [kg]	23.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
EW7	1	BW
W8	1	BW
W9	1	BW
W10	3/4	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	275	BEVEL	BEVEL
B	1	771	BEVEL	BEVEL
C	1	95	BEVEL	BEVEL
D	1	2484	BEVEL	BEVEL
E	1	100	BEVEL	BEVEL
F	1	100	BEVEL	BEVEL

SUPPORT LIST

PS-02024.1
PS-03126.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.7
B	3	3.8
C	5.75	7.6
MONT	1	8.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-154-01HSS-N

SK.065

63-10-TP-047

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -29 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 5.25 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80028
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

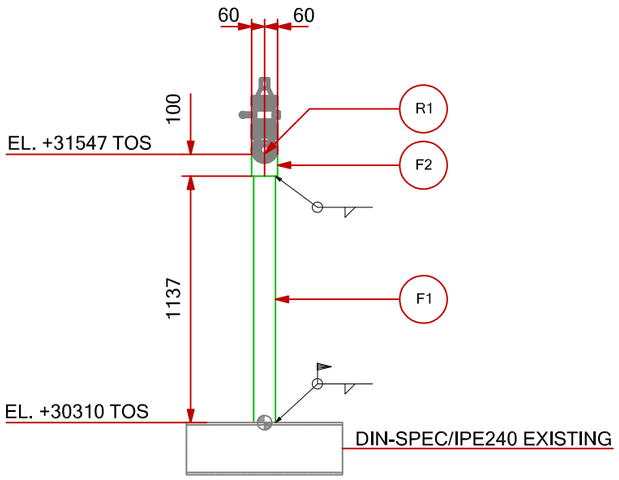
NOTES

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN	STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00065		SHEET / OF 1/1	REV. 00

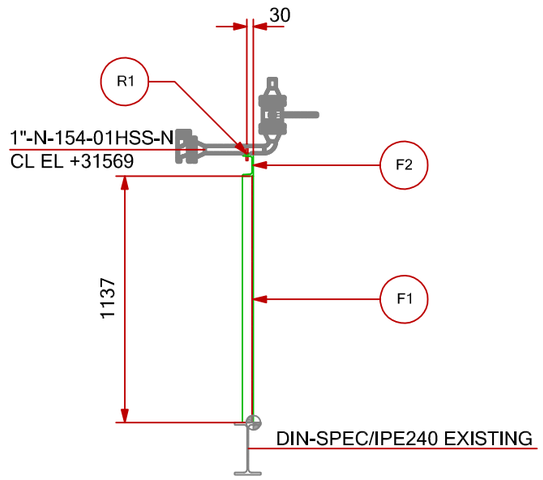
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

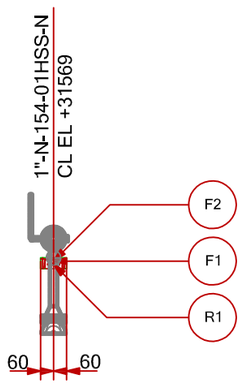
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-02024	B1	PIP	UPPER DECK		1"-N-154-01HSS-N	S-211 - 1"		1	0,286	0,000	00	19/08/2024	IFR		TP-047



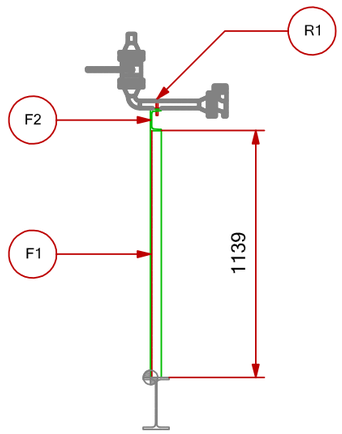
VIEW LOOKING NORTH



VIEW LOOKING WEST



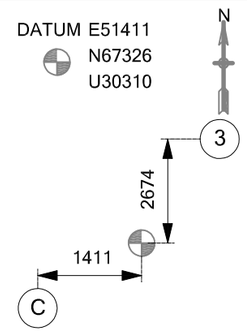
PLAN VIEW

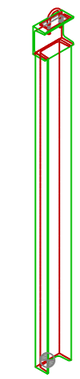


VIEW LOOKING EAST

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	UPN100	Carbon Steel	1137	1	10.57	12.02	0.426
F2	BEAM	UPN100	Carbon Steel	120	1	10.57	1.27	0.047
						TOTAL	13.6	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-02024

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

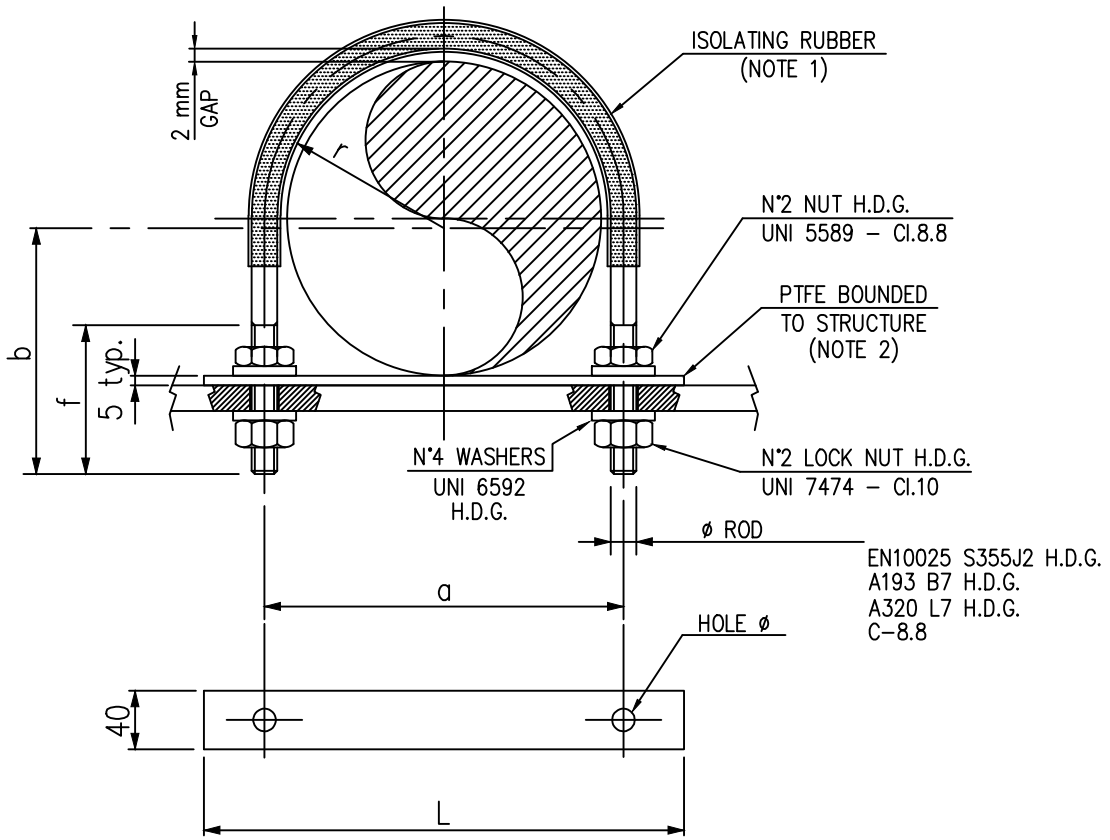
Revision: 0

Date: –

CAVALLOTTI GALVANIZZATI DI GUIDA PER TUBAZIONI IN C.S S.S. E ALLOY
GALVANIZED U–BOLTS GUIDE FOR C.S. S.S. AND ALLOY PIPES (NON GRIP)

S–211

Example of designation : STD – PIPE ND"
(S–211 – 10")



SIZE ND	ROD DIA	r	a	b	f	L	HOLE ø	DEV	DEV. RUBBER	WEIGHT Kg
½"	M8	14	36	55	52	65	10	167	62	0.16
3/4"	M8	17	42	55	52	70	10	176	75	0.16
1"	M8	20	48	60	55	80	10	196	90	0.18
1½"	M10	27	64	70	65	100	12	240	120	0.32
2"	M10	33	76	80	70	110	12	280	150	0.35
3"	M12	48	108	100	80	150	14	370	210	0.60
4"	M12	60	132	110	80	180	14	430	260	0.67
6"	M16	87	190	150	100	250	18	600	380	1.39
8"	M16	113	242	170	100	300	18	720	500	1.60
10"	M16	140	296	200	100	350	18	865	650	1.86
12"	M20	165	350	240	120	420	22	1030	750	3.31
14"	M20	181	382	260	120	450	22	1120	840	3.55
16"	M24	207	438	290	130	520	26	1270	1000	5.76
18"	M24	232	488	320	130	570	26	1410	1100	6.28
20"	M30	257	544	360	160	640	32	1570	1200	11.02
24"	M30	308	646	410	160	750	32	1830	1450	12.52

NOTES:

1) HEAT SHRINK TUBE TYPE FLAME RETARDANT, WITH RATIO 2:1
2) MULTIPLE SHEETS OF PTFE CAN BE ADDED IN ORDER TO ENSURE THE CORRECT ELEVATION AND SLOPE OF THE LINES.

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

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.

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**	65	**To**	65
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**	A	**To**	A
		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
1/65/1/_		**00**	**10-09-2024**	**6**	**AZ39**		**FWN**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**11-09-2024**	**A**
01HSS	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
2/65/1/_		**00**	**12-09-2024**	**8**	**AZ35**		**PIPE**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**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				13-09-2024				
		RT	FIN	Weld Completion	IDL-QCI-RT 0036 00	AA	10 %	000056	4	Acceptable				18-09-2024				
3/65/1/_		**00**	**11-09-2024**	**7**	**AZ35**		**ELB**	**1,00 in**	**3,38 mm**	**V**	**0,104 m**	**P**	**S.S.**	**C1A**	**GTAW**	**BW**	**13-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				13-09-2024				
		RT	FIN	Weld Completion			10 %			Acceptable								
14/65/1/_		**00**	**10-09-2024**	**6**	**AZ39**		**PL**	**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**C1A**	**GTAW**	**F**	**11-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld	123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				11-09-2024				
		LP	FIN	Weld Completion			10 %			Acceptable								

Totals per DWG	**65**	**Prefabrication**	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Accepted	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Accepted	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,35 m**	**4 Nr. Welds**	**3,00 inch**
		Accepted	**0,35 m**	**4 Nr. Welds**	**3,00 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: 17/12/2024	
	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
65	00	1	A	01HSS	4	1	90 Deg Elbow Long Radius BW ›1" Thk.3.38mm ASTM A403 Gr.WP316/316L	M230689	1724000839	00270	MCP2401-00015-52	W2-W3	
65	00	1	A	01HSS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	W1	
65	00	1	A	01HSS	5	1	Flange WN ›1" Thk.3.38mm 150LB RF ASTM A182 Gr.F316/316L	CH-19714	1724000839	00960	1779F/23-24-45	W3	
65	00	1	A	01HSS	1A	0,275	Pipe 33.4mm(1") thk.3.38mm ASTM A312 Gr.TP316/316L	235689	1724000839	00050	WSSL/SP-316L/0923/1223		
65	00	1	A	01CS	MESSA A TERRA	1	MESSA A TERRA PL75 x 50 x 5 thk. FORO Ø13	43076	1724000275	00010	929116/002	W14	

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

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation - NOT APPLICABLE

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning

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	64-10-TP-047	: Test Pack 64-10-TP-047			Dwg	123A90-DDL-PR-PID-80028
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003595		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	2025-01-02	2025-01-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-02T08:26:31.218Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-01-03T17:14:28.975Z	

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	64-10-TP-051	: Test Pack 64-10-TP-051			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10003609		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	Rodeo	RM (Rosetti Marino)	
Name	Emanuele Delfino	Kangi Albonetti	
Date	2024-12-10	2024-12-10	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2024-12-10T04:56:10.769Z	PROVERLIS Digitaly signed by Kangi Albonetti 2024-12-10T17:06:15.192Z	

Base Load Power Hub (BLPH)

TEST PACK

N°64-10-TP-051
SUB-SYSTEM N° 64-10

System	64
Sub-System	64-10
Test Pressure	N/A
Test Fluid	N/A
Test Duration	N/A

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

List of Contents

1. COLOURED MARKED P&IDs
2. PIPING TEST 3D CIRCUIT
3. MATERIAL LIST FOR TEST
4. EXTRACT OF LINE LIST
5. ISOMETRIC RED-MARKED DRAWINGS & EXTRACT OF ISO LIST
6. EXTRACT OF SUPPORT LIST AND DETAILS
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 – NOT APPLICABLE
   - 8.4 CXX02 – Painting Line
   - 8.5 TMX03 – Cleaning – NOT APPLICABLE
   - 8.6 TMX05 – Pressure test – NOT APPLICABLE
   - 8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE
   - 8.8 TMX27 – Bolt Tensioning / Torquing
   - 8.9 TPLX05 – Drying – NOT APPLICABLE

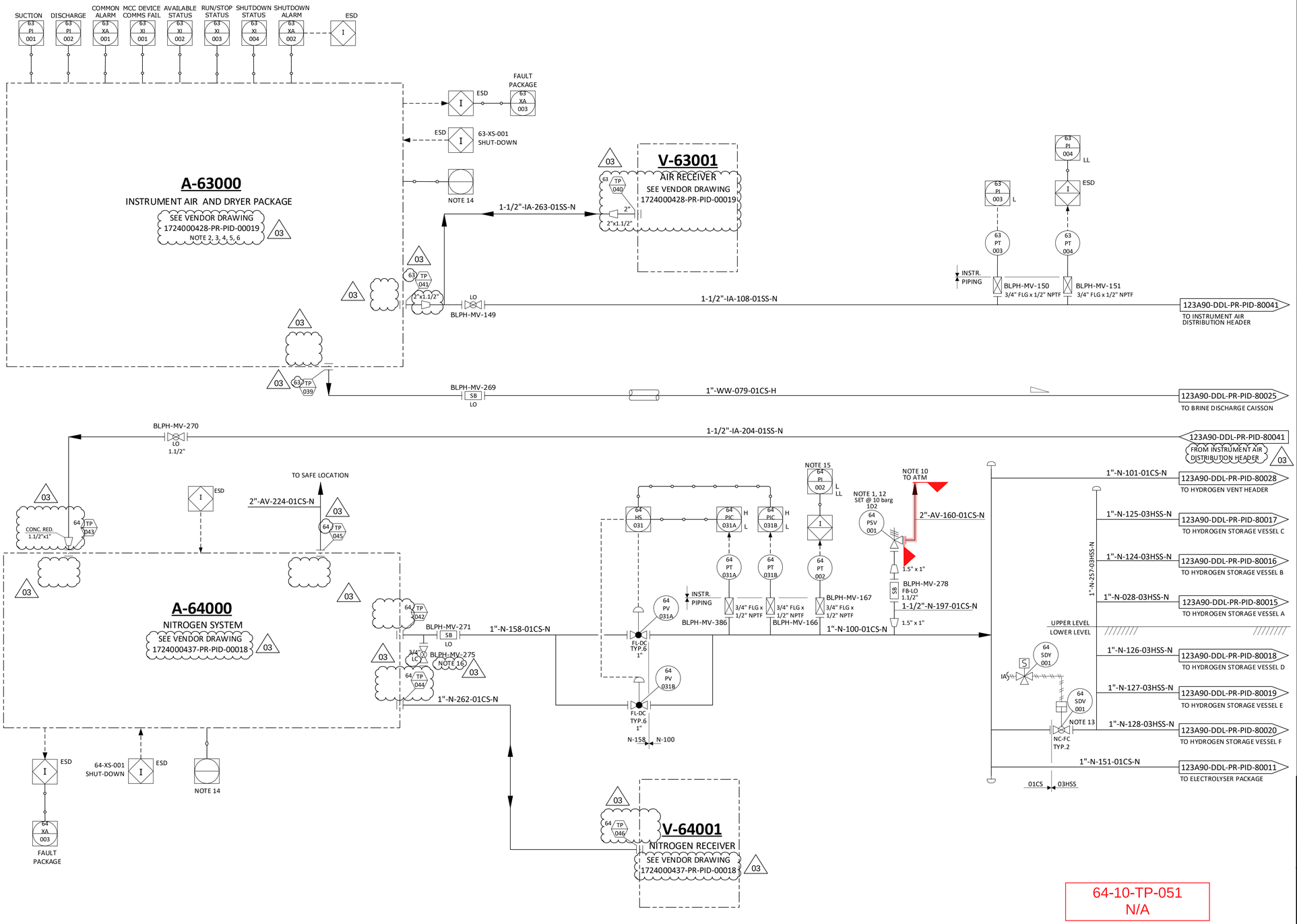
1. COLOURED MARKED P&IDs

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)



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.
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.

HOLDS

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

64-10-TP-051
N/A

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

CROSSWIND

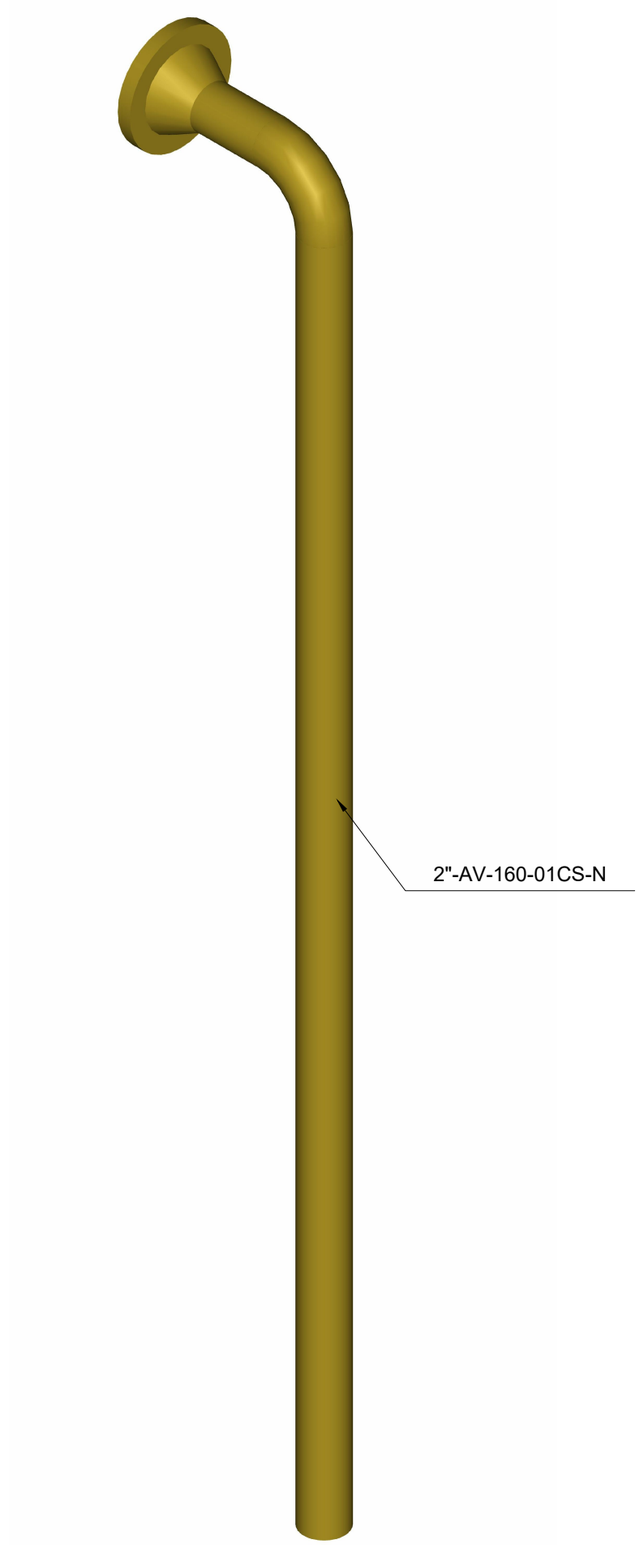
ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
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



64-10-TP-051

N/A

NOTES

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

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

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
64-10-TP-051

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

3. MATERIAL LIST FOR TEST

NOT APPLICABLE

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
67	AV-160	160	2	01CS	N	5,54	80	N/A	2"-AV-160-01CS-N	123A90-DDL-PR-PID-80027	3,50	64	64-10	TP-051	N/A	N/A	Atmospheric Vent	Carbon Steel	SUP	Art. 4, par. 3	1	RAL 9002

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

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

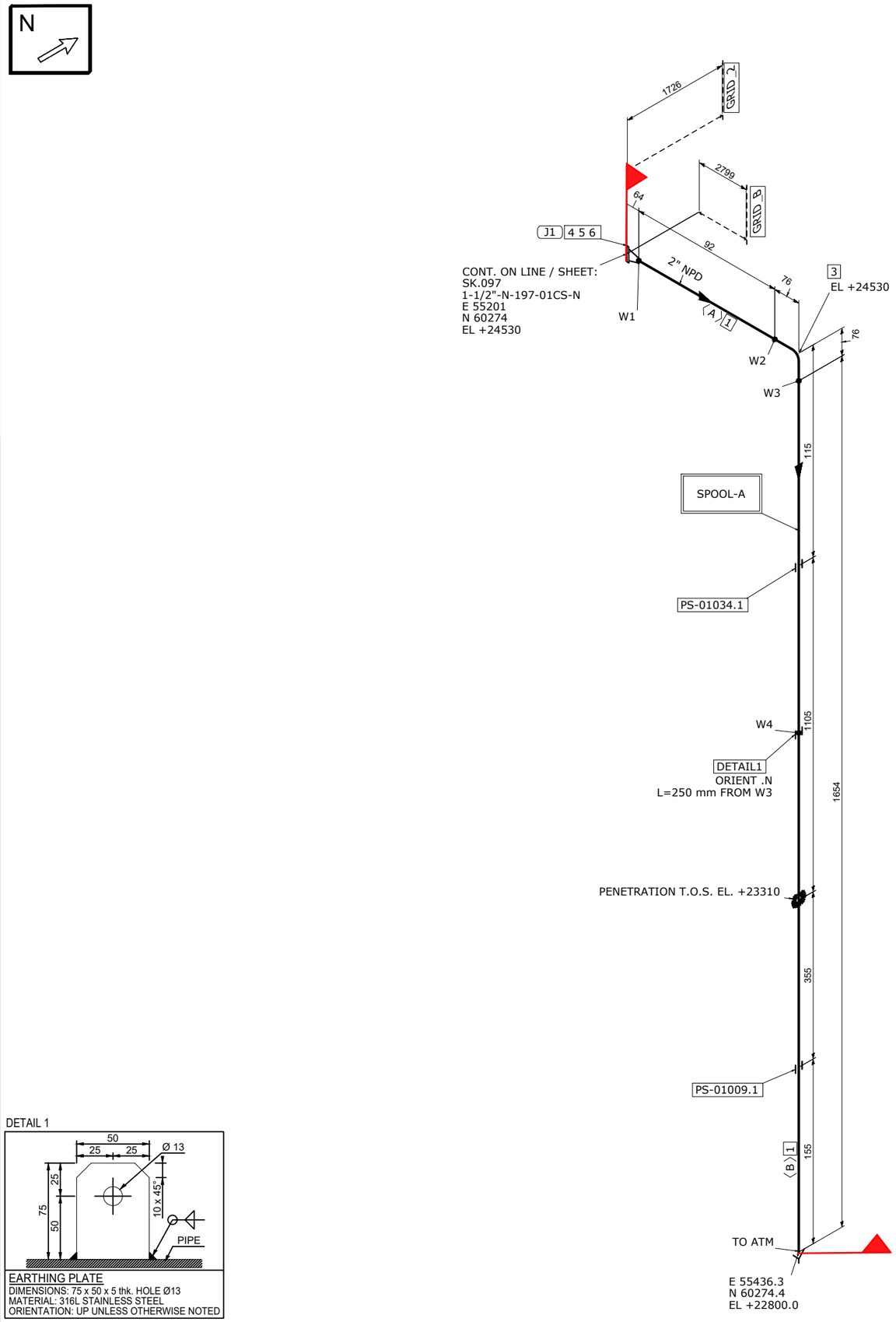
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
91	123A90-FDL-PP-DI-00067-01	**067**	01	SHOP DRAWING ISOMETRIC - LINE NR 2"-AV-160-01CS-N	27/08/2024													**00**	**03**		**TP-051**



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	2	PIPECS02960200	Pipe ASME B36.10M PE 5,54 SML ASTM/ASME A/SA333 Gr.6	1.7M	13.0
3	2	E90RCS01330200	90 Deg Elbow Long Radius ASME B16.9 BW 5,54 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.9
4	2	FLW0CS02210200	Flange WN ASME B16.5 150LB RF 5,54 FRG ASTM/ASME A/SA350 Gr.LF2	1	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
5	2	GSW0GK11130200	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
6	5/8	SB20BO00660300	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	16.6
ERECTION WEIGHT [kg]	1.1
OVERALL WEIGHT [kg]	17.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	2	BW
W2	2	BW
W3	2	BW
W4		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	2	92	BEVEL	BEVEL
B	2	1654	BEVEL	BEVEL

SUPPORT LIST

PS-01034.1
PS-01009.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	16.6
MONT	0	1.1

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 2"-AV-160-01CS-N
SK.067

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-00067 | SHEET / OF: 1/1 | REV.: 00

64-10-TP-051

MASTER

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 3.5 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. N/A [barg]	TEMP. AMB	MEDIUM N/A	

REFERENCE DOCUMENTS

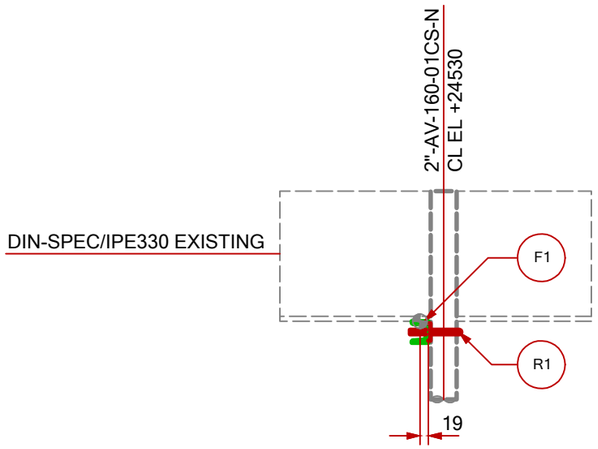
P&ID	123A90-DDL-PR-PID-80027
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

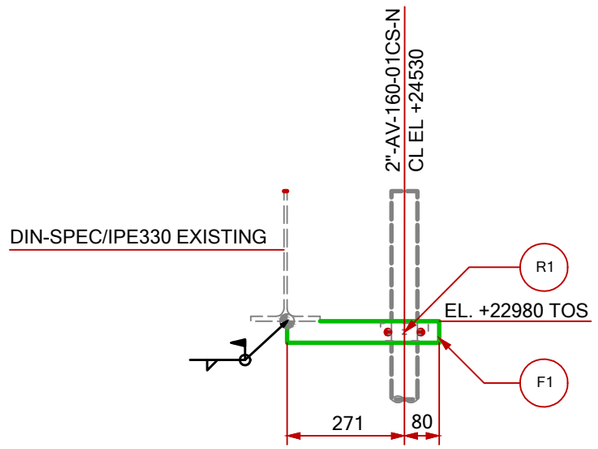
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

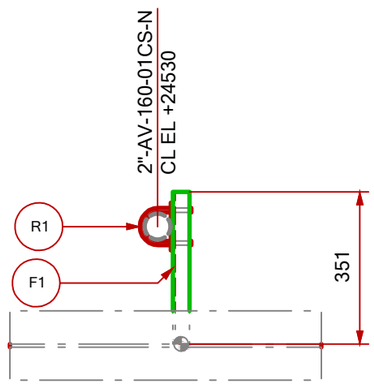
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01009	B1	PIP	LOWER DECK		2"-AV-160-01CS-N	S-211 - 2"		1	0,519	0,000	00	19/08/2024	IFR		TP-051
PS-01034	B1	PIP	LOWER DECK		2"-AV-160-01CS-N	S-211 - 2"		1	0,519	0,000	00	19/08/2024	IFR		TP-051



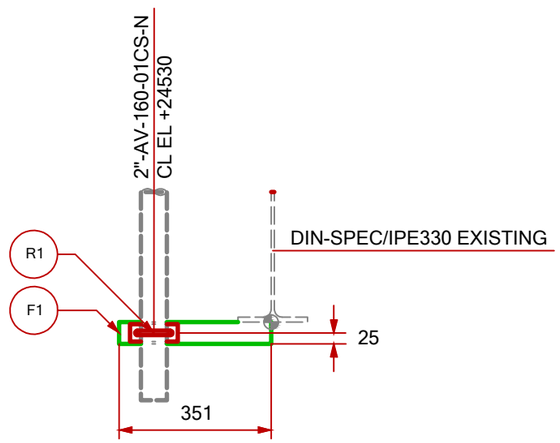
VIEW LOOKING SOUTH



VIEW LOOKING WEST



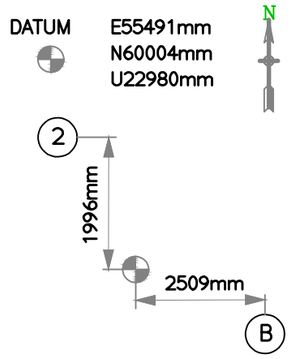
PLAN VIEW

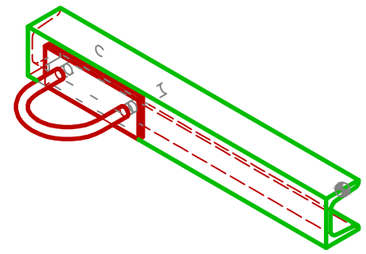


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-2"	-	-	1	-	0.52	-
F1	BEAM	UPN50	Carbon Steel	351	1	5.61	1.97	0.082
						TOTAL	2.5	0.08





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

CROSSWIND

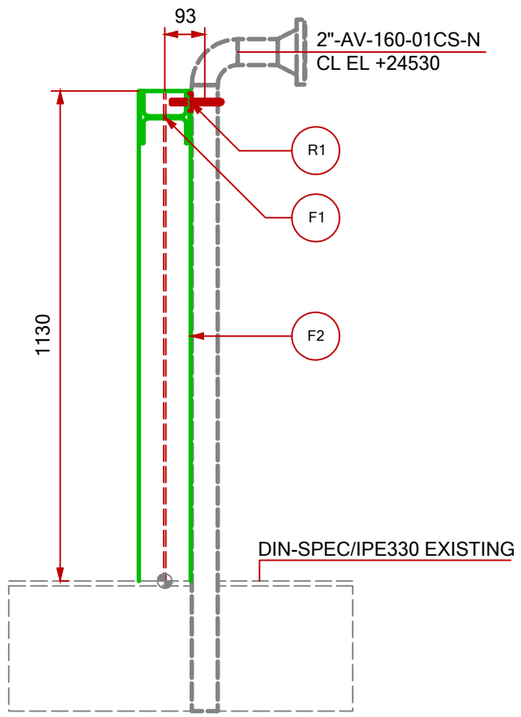
ROSETTI MARINO

TITLE :

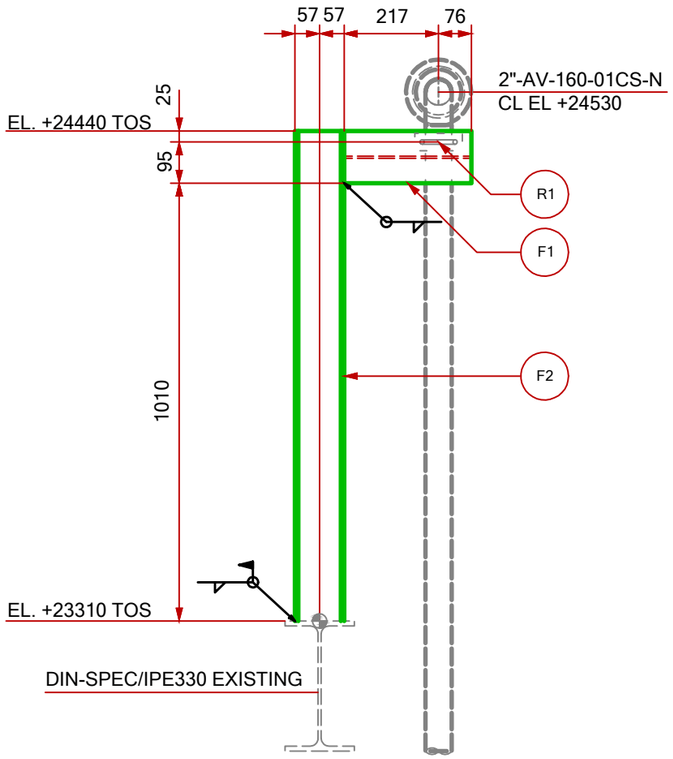
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01009

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

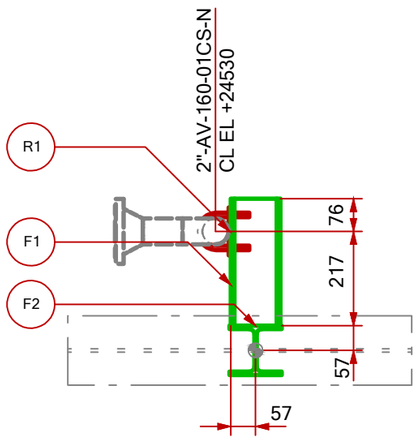
File Name :



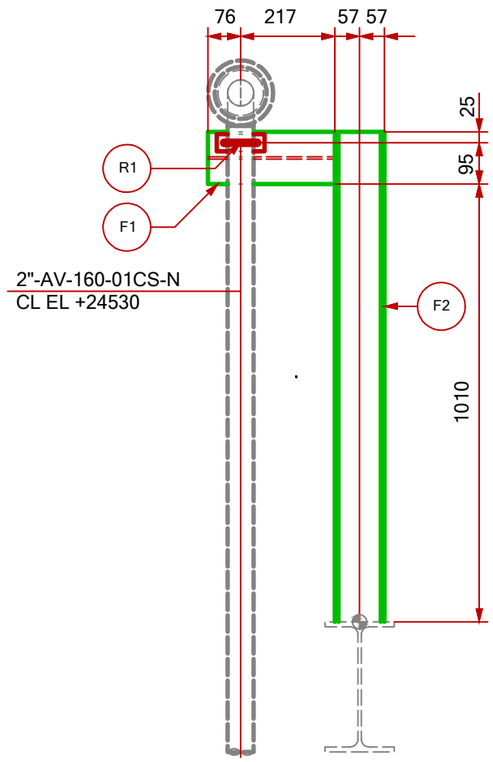
VIEW LOOKING SOUTH



VIEW LOOKING WEST



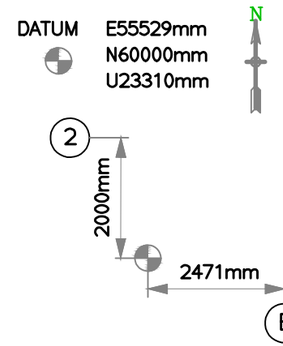
PLAN VIEW

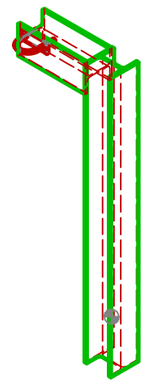


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-211-2"	-	-	1	-	0.52	-
F1	BEAM	HEA120	Carbon Steel	293	1	19.98	5.85	0.203
F2	BEAM	HEA120	Carbon Steel	1130	1	19.98	22.58	0.770
						TOTAL	29.0	0.97





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-01034

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

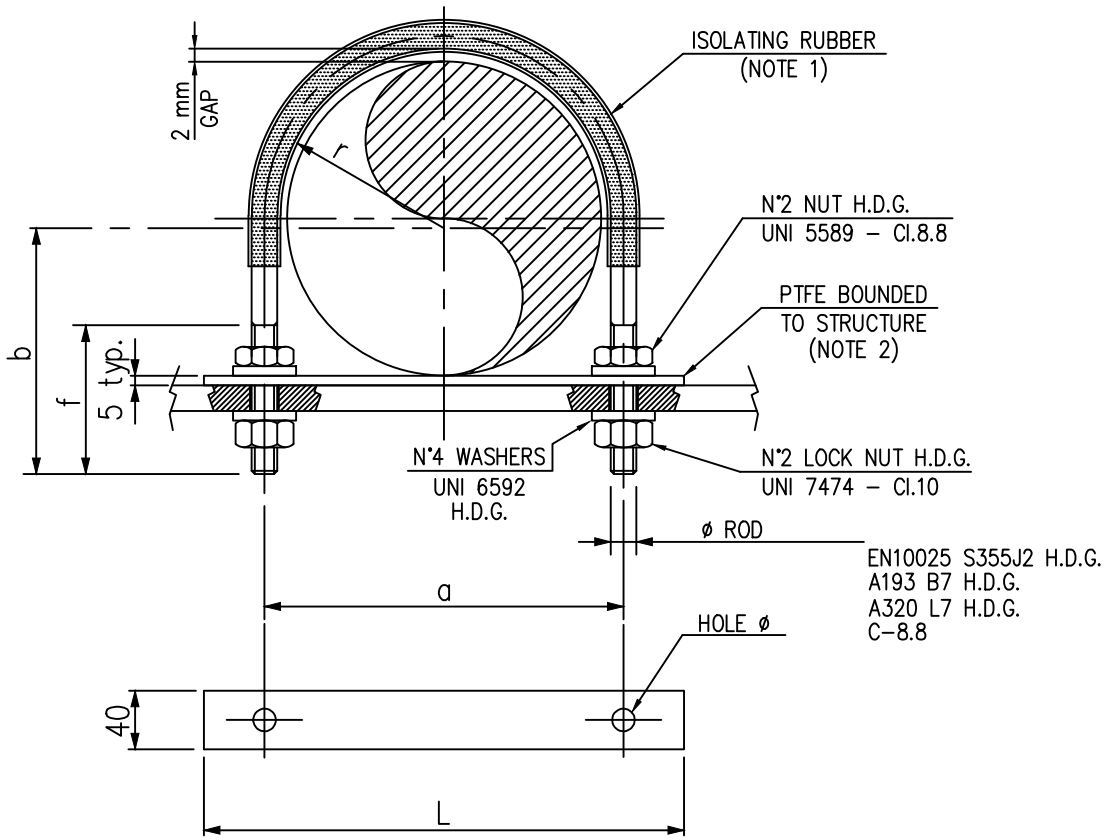
Revision: 0

Date: –

CAVALLOTTI GALVANIZZATI DI GUIDA PER TUBAZIONI IN C.S S.S. E ALLOY
GALVANIZED U–BOLTS GUIDE FOR C.S. S.S. AND ALLOY PIPES (NON GRIP)

S–211

Example of designation : STD – PIPE ND"
(S–211 – 10")



SIZE ND	ROD DIA	r	a	b	f	L	HOLE ø	DEV	DEV. RUBBER	WEIGHT Kg
½"	M8	14	36	55	52	65	10	167	62	0.16
3/4"	M8	17	42	55	52	70	10	176	75	0.16
1"	M8	20	48	60	55	80	10	196	90	0.18
1½"	M10	27	64	70	65	100	12	240	120	0.32
2"	M10	33	76	80	70	110	12	280	150	0.35
3"	M12	48	108	100	80	150	14	370	210	0.60
4"	M12	60	132	110	80	180	14	430	260	0.67
6"	M16	87	190	150	100	250	18	600	380	1.39
8"	M16	113	242	170	100	300	18	720	500	1.60
10"	M16	140	296	200	100	350	18	865	650	1.86
12"	M20	165	350	240	120	420	22	1030	750	3.31
14"	M20	181	382	260	120	450	22	1120	840	3.55
16"	M24	207	438	290	130	520	26	1270	1000	5.76
18"	M24	232	488	320	130	570	26	1410	1100	6.28
20"	M30	257	544	360	160	640	32	1570	1200	11.02
24"	M30	308	646	410	160	750	32	1830	1450	12.52

NOTES:

1) HEAT SHRINK TUBE TYPE FLAME RETARDANT, WITH RATIO 2:1
2) MULTIPLE SHEETS OF PTFE CAN BE ADDED IN ORDER TO ENSURE THE CORRECT ELEVATION AND SLOPE OF THE LINES.

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

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.

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**	67	**To**	67
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
1/67/1/_		**00**	**18-09-2024**	**10**	**AZ53**			**FWN**	**2,00 in**	**5,54 mm**	**V**	**0,189 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
01CS	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				19-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
2/67/1/_		**00**	**18-09-2024**	**10**	**AZ53**			**PIPE**	**2,00 in**	**5,54 mm**	**V**	**0,189 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**19-09-2024**	**A**
	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								
3/67/1/_		**00**	**23-09-2024**	**13**	**AZ53**			**ELB**	**2,00 in**	**5,54 mm**	**V**	**0,189 m**	**P**	**C.S.**	**A1A**	**GTAW**	**BW**	**24-09-2024**	**A**
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	RGARDINIT	100 %	OK		Acceptable				24-09-2024				
		RT	FIN	Weld Completion				10 %			Acceptable								
4/67/1/_		**00**	**09-10-2024**	**26-10**	**AZ53**			**PL**	**50,00 mm**	**5,00 mm**	**FILL**	**0,050 m**	**P**	**S.S.**	**E1A**	**GTAW**	**F**	**05-12-2024**	**A**
					AX416	**After Cutting**													
	2	VIS	FTP	FIT-UP and on weld		123A90-PML-QHSE-PRO-00103 Rev 00	SSANTUCCI	100 %	OK		Acceptable				10-10-2024				
		LP	FIN	Weld Completion				10 %			Acceptable								
Cut 02-12-2024		VIS	C 1 DTA	After Cutting		123A90-PML-QHSE-PRO-00103 Rev 00	LCOSCA	100 %	OK		Acceptable	E1A		GTAW	05-12-2024				
		LP	C 1 DTA	After Cutting				10 %			Acceptable								

Totals per DWG	**67**	**Prefabrication**	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Accepted	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Discipline		**Prefabrication**	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Accepted	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Repaired	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
Totals by Project		**Prefabrication**	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Erection	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Offshore	**0,00 m**	**0 Nr. Welds**	**0,00 inch**
		Performed	**0,62 m**	**4 Nr. Welds**	**6,00 inch**
		Accepted	**0,62 m**	**4 Nr. Welds**	**6,00 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
67	00	1	A	01CS	3	1	90 Deg Elbow Long Radius BW ›2" Thk.5.54mm ASTM/ASME A/SA420 Gr.WPL6	774	1724000839	00670	4527-P2	W2-W3	
67	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	
67	00	1	A	01CS	1A	0,092	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065		
67	00	1	A	01CS	1B	1,654	Pipe 60.3mm(2") thk.5.54mm ASTM/ASME A/SA333 Gr.6	R58853	1724000838	00020	E10065		

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

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation – NOT APPLICABLE

8.4 CXX02 – Painting Line

8.5 TMX03 – Cleaning – NOT APPLICABLE

8.6 TMX05 – Pressure test – NOT APPLICABLE

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 – Drying – NOT APPLICABLE

ITEM	Tag	64-10-TP-051	: Test Pack 64-10-TP-051			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10003610		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MA	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-01-28	2025-02-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-28T14:49:45.718Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-03T08:31:35.979Z	

ITEM	Tag	64-10-TP-051	: Test Pack 64-10-TP-051			Dwg	123A90-DDL-PR-PID-80027
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10003611		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX02 Painting Line

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

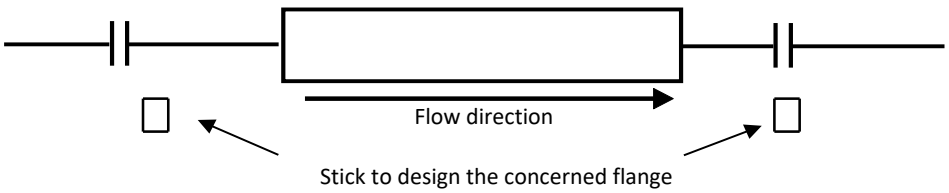
Comments: 1. Checked the painting report made by Vendor and signed by RM coating Dpt.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	IMPRESA DONELLI	RM (ROSETTI MARINO)	
Name	Alex Sanna	Kangi Albonetti	
Date	2025-02-04	2025-02-05	
Signature	Digitaly signed by Alex Sanna 2025-02-04T12:35:24.620Z	Digitaly signed by Kangi Albonetti 2025-02-05T12:43:26.570Z	

ITEM	Tag	064-1-J1	: Joint 064-1-J1			Dwg	123A90-FDL-PP-DI-00064-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003927		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

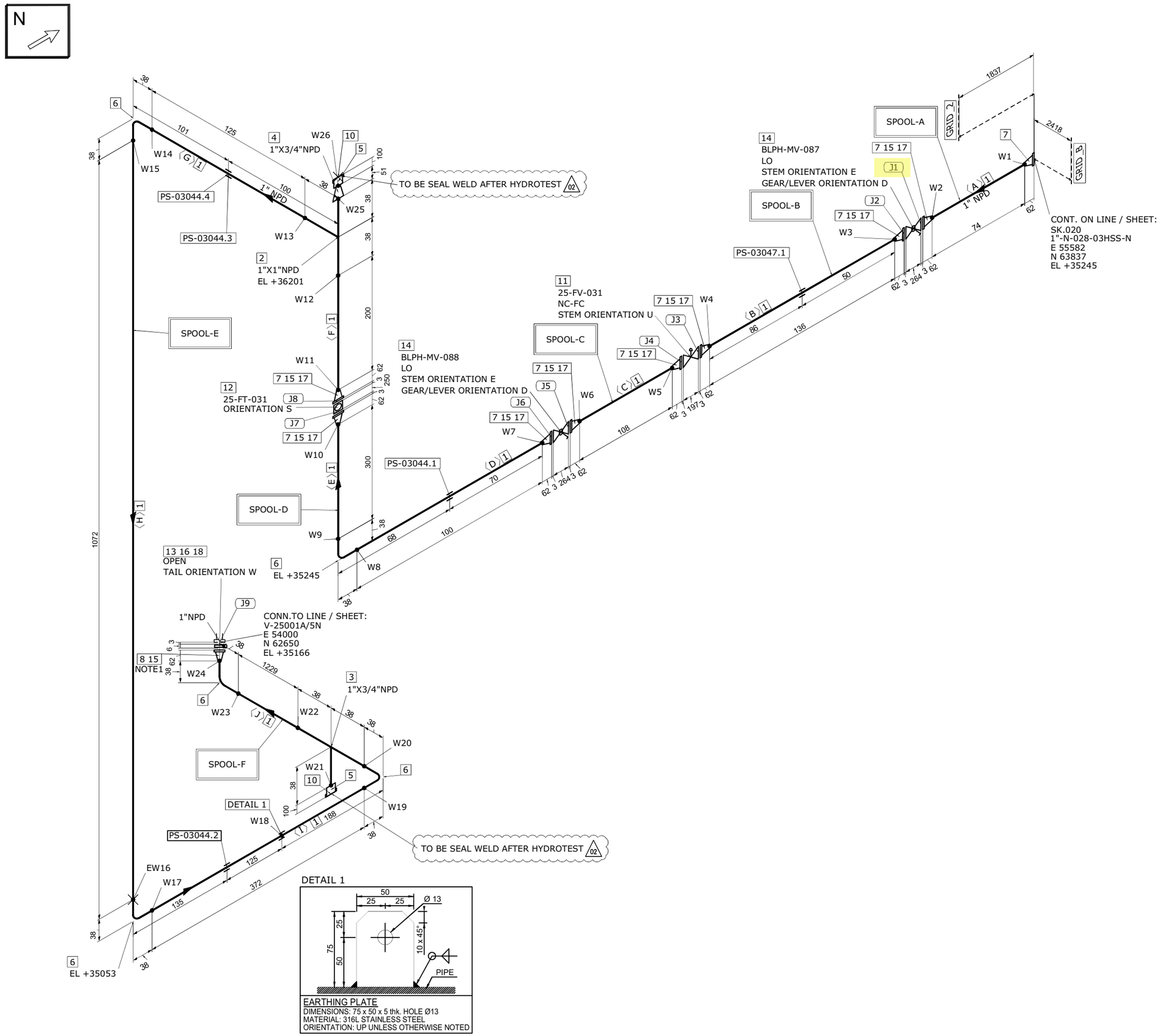
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	Luca Mussi	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:24:15.311Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-15T17:28:18.942Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	20.4
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	82.4
OVERALL WEIGHT [kg]	111.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03047.1
PS-03044.1
PS-03044.3
PS-03044.4
PS-03044.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	82.4

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-153-03HSS-N
SK.064

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00064	SHEET / OF 1/1	REV. 02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

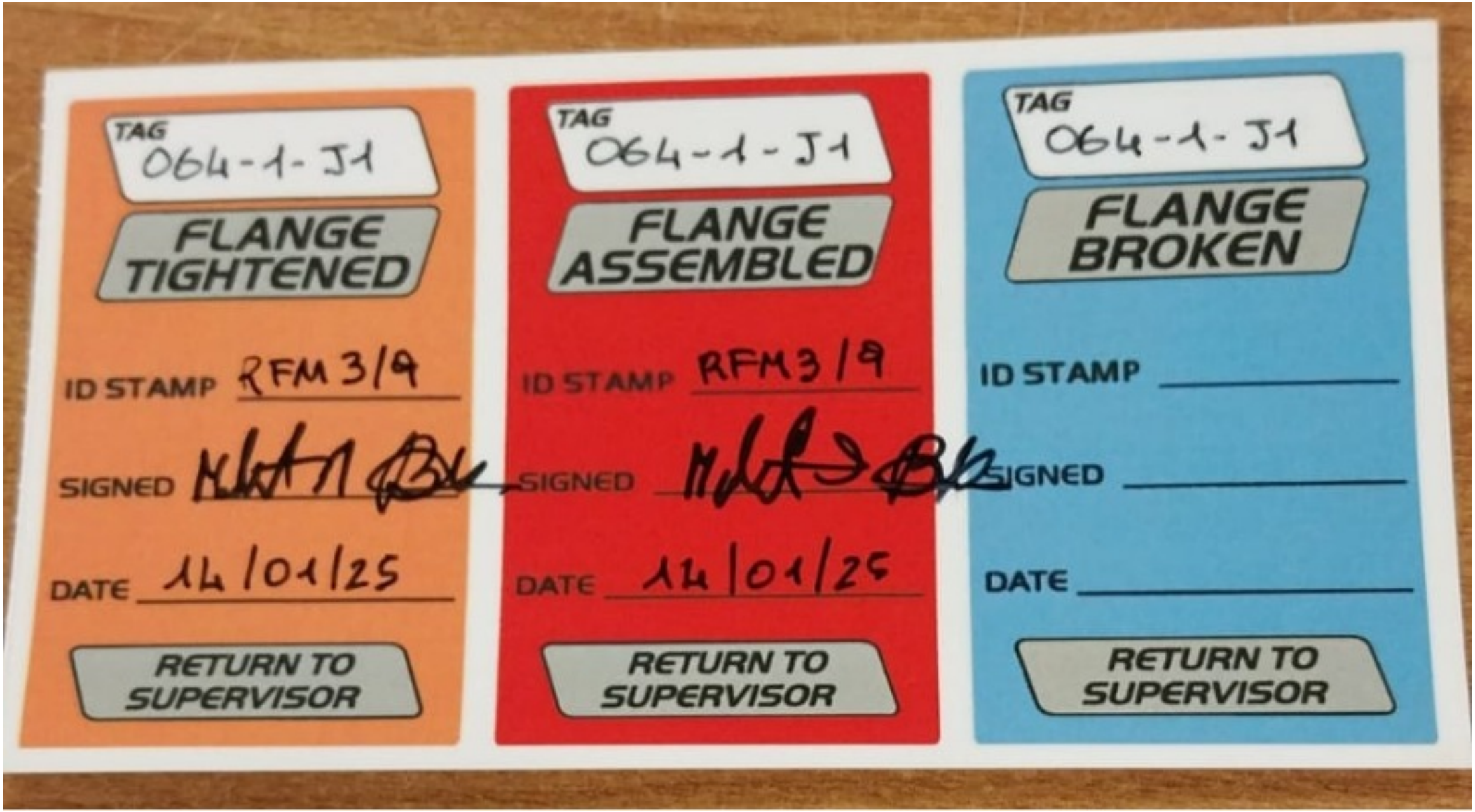
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80015
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

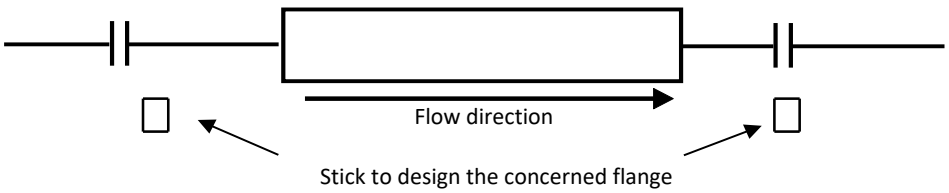
MASTER


TAG
064-1-J1
FLANGE TIGHTENED
ID STAMP RFM 3/9
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
064-1-J1
FLANGE ASSEMBLED
ID STAMP RFM 3/9
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
064-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	064-1-J2	: Joint 064-1-J2			Dwg	123A90-FDL-PP-DI-00064-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003928		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

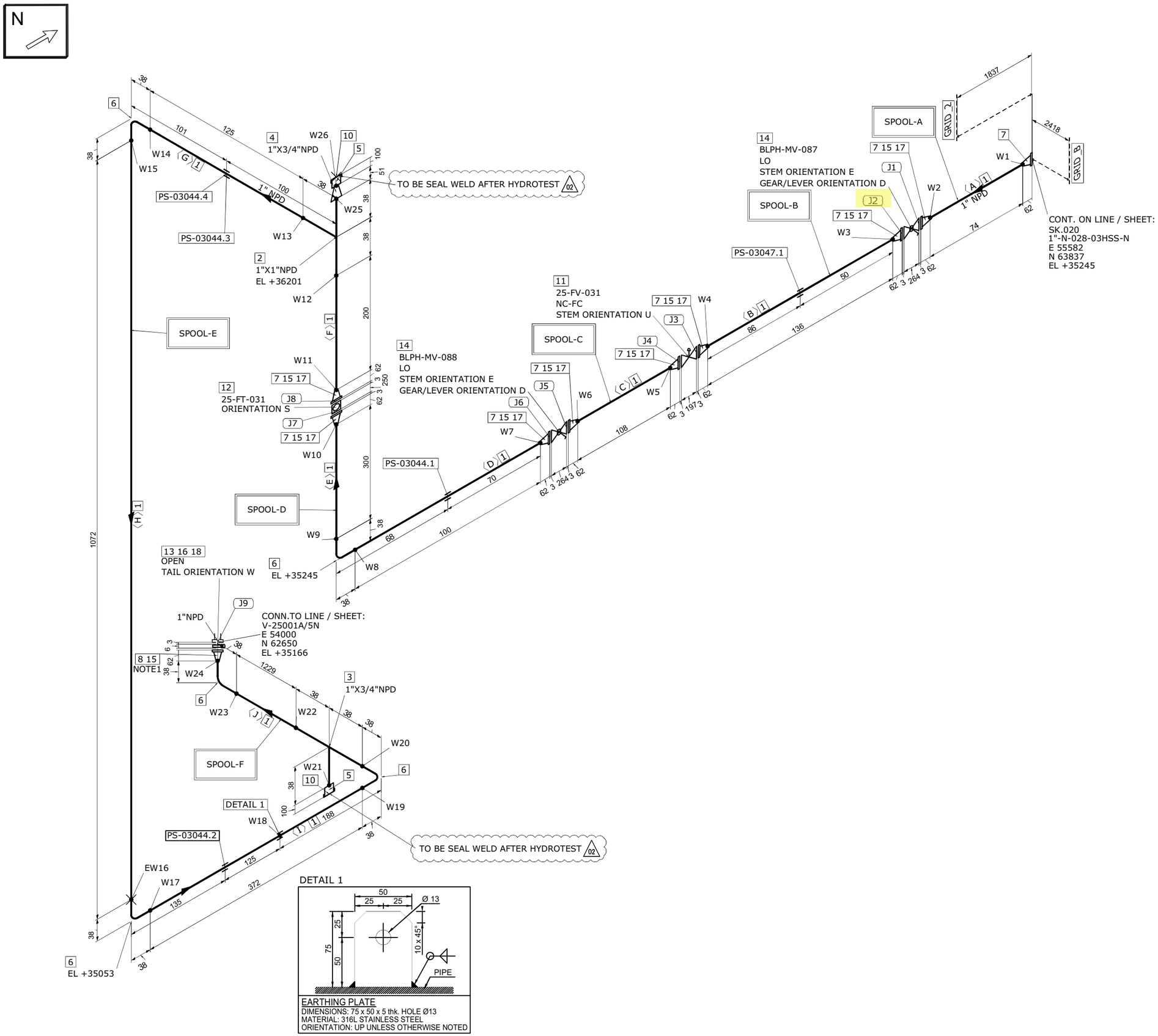
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	Luca Mussi	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:24:26.522Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-15T17:28:29.469Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	20.4
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	82.4
OVERALL WEIGHT [kg]	111.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03047.1
PS-03044.1
PS-03044.3
PS-03044.4
PS-03044.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	82.4

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-153-03HSS-N

SK.064

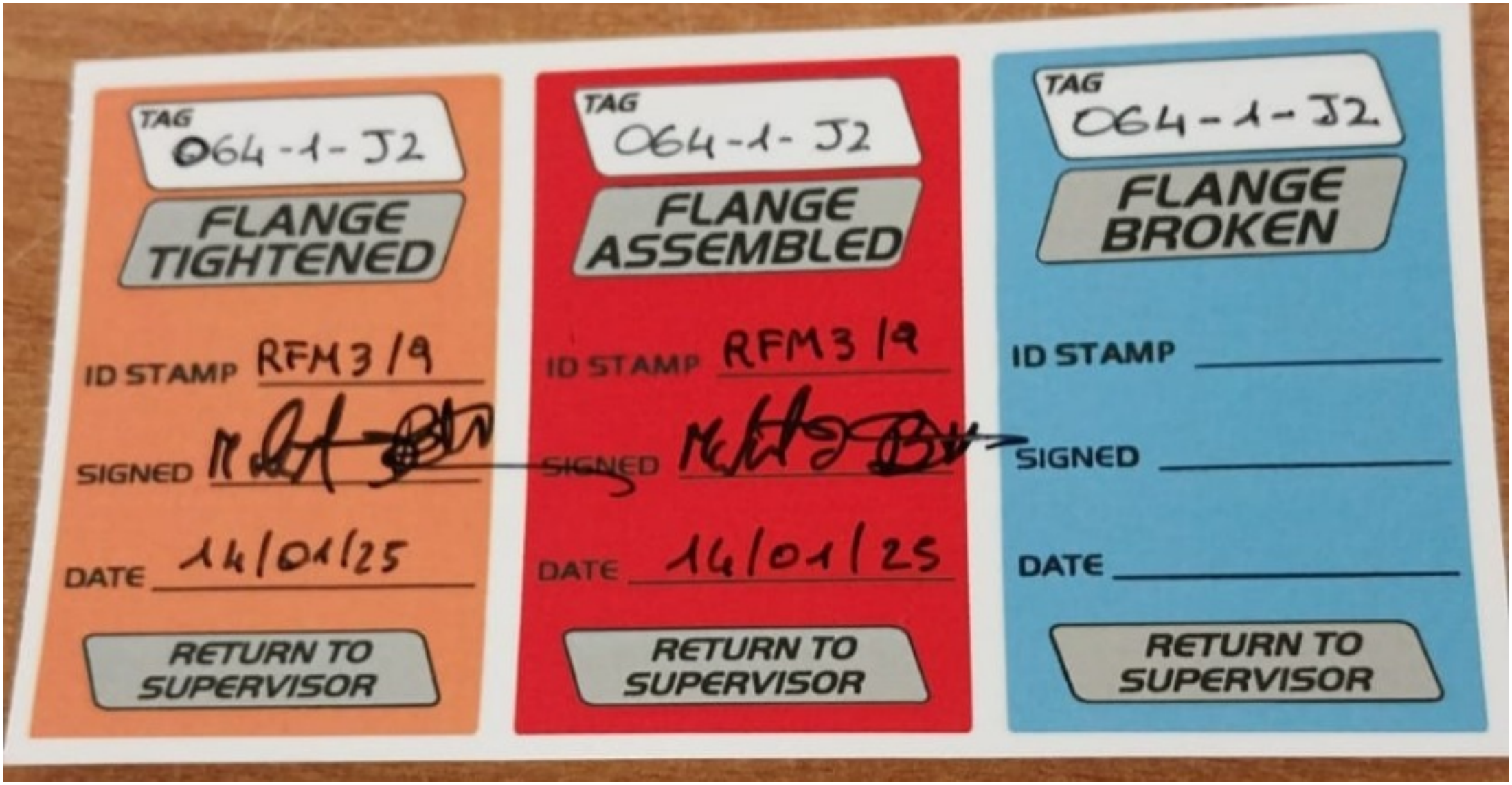
LINE DATA								
NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80015
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

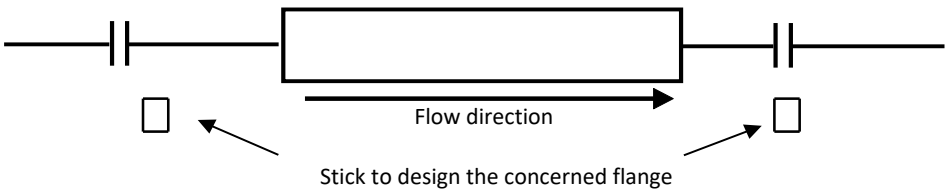
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00064	SHEET / OF 1/1	REV. 02


TAG
064-1-J2
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
064-1-J2
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
064-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	064-1-J3	: Joint 064-1-J3			Dwg	123A90-FDL-PP-DI-00064-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003929		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RA00598
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

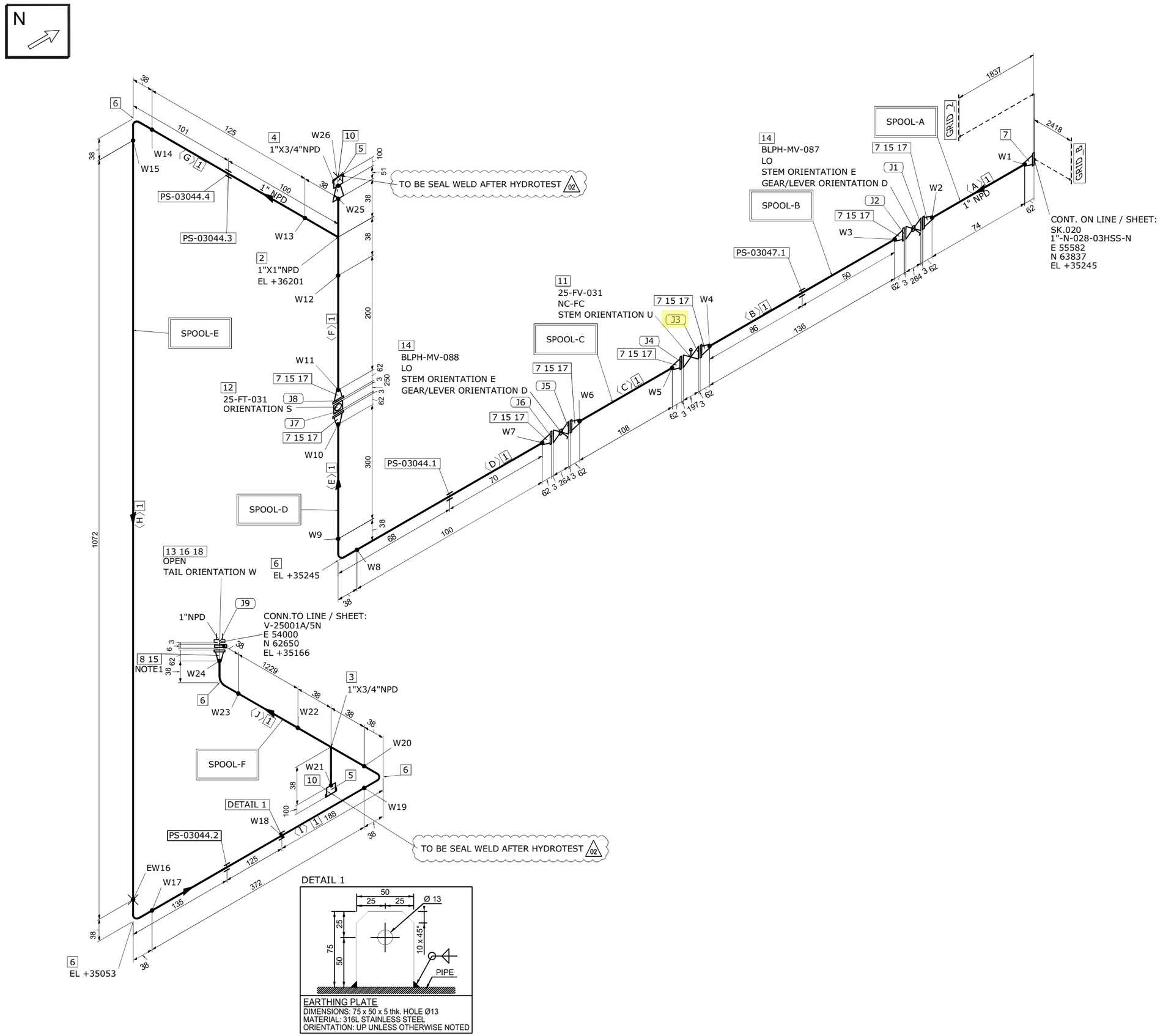
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:26:05.415Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:01:11.365Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	20.4
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	82.4
OVERALL WEIGHT [kg]	111.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03047.1
PS-03044.1
PS-03044.3
PS-03044.4
PS-03044.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	82.4

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-153-03HSS-N
SK.064

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00064
SHEET / OF	1/1	REV.	02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]	
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water	

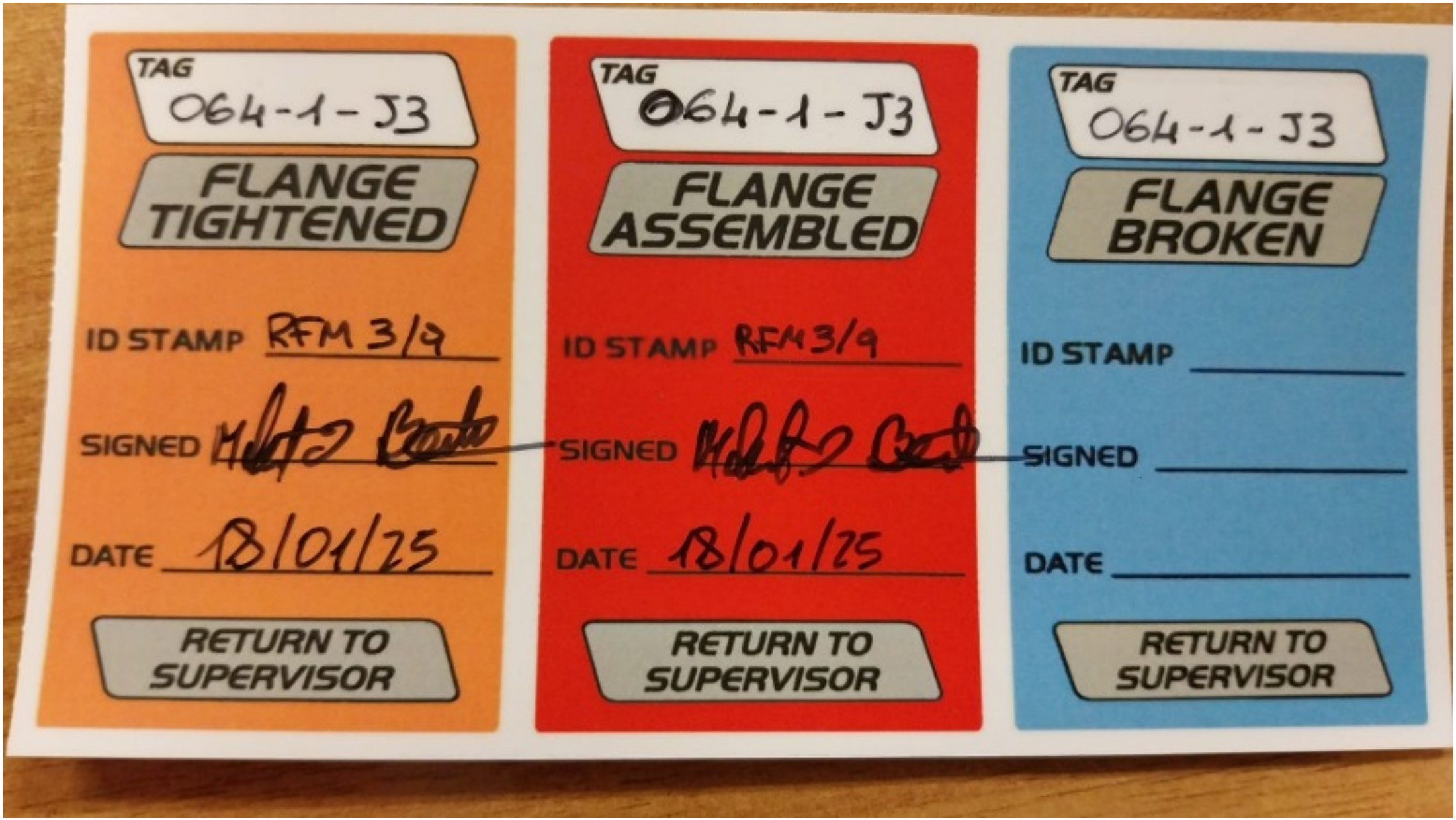
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80015
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

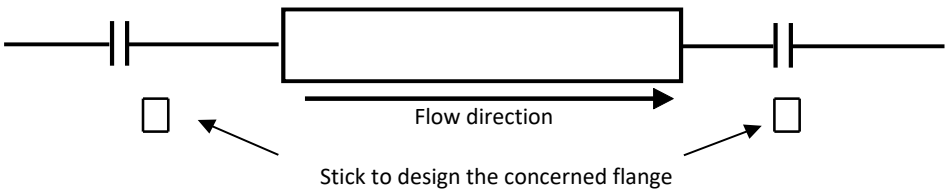
MASTER


TAG
064-1-J3
FLANGE TIGHTENED
ID STAMP RFM 3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
064-1-J3
FLANGE ASSEMBLED
ID STAMP RFM 3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
064-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	064-1-J4	: Joint 064-1-J4			Dwg	123A90-FDL-PP-DI-00064-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003930		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RA00598
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

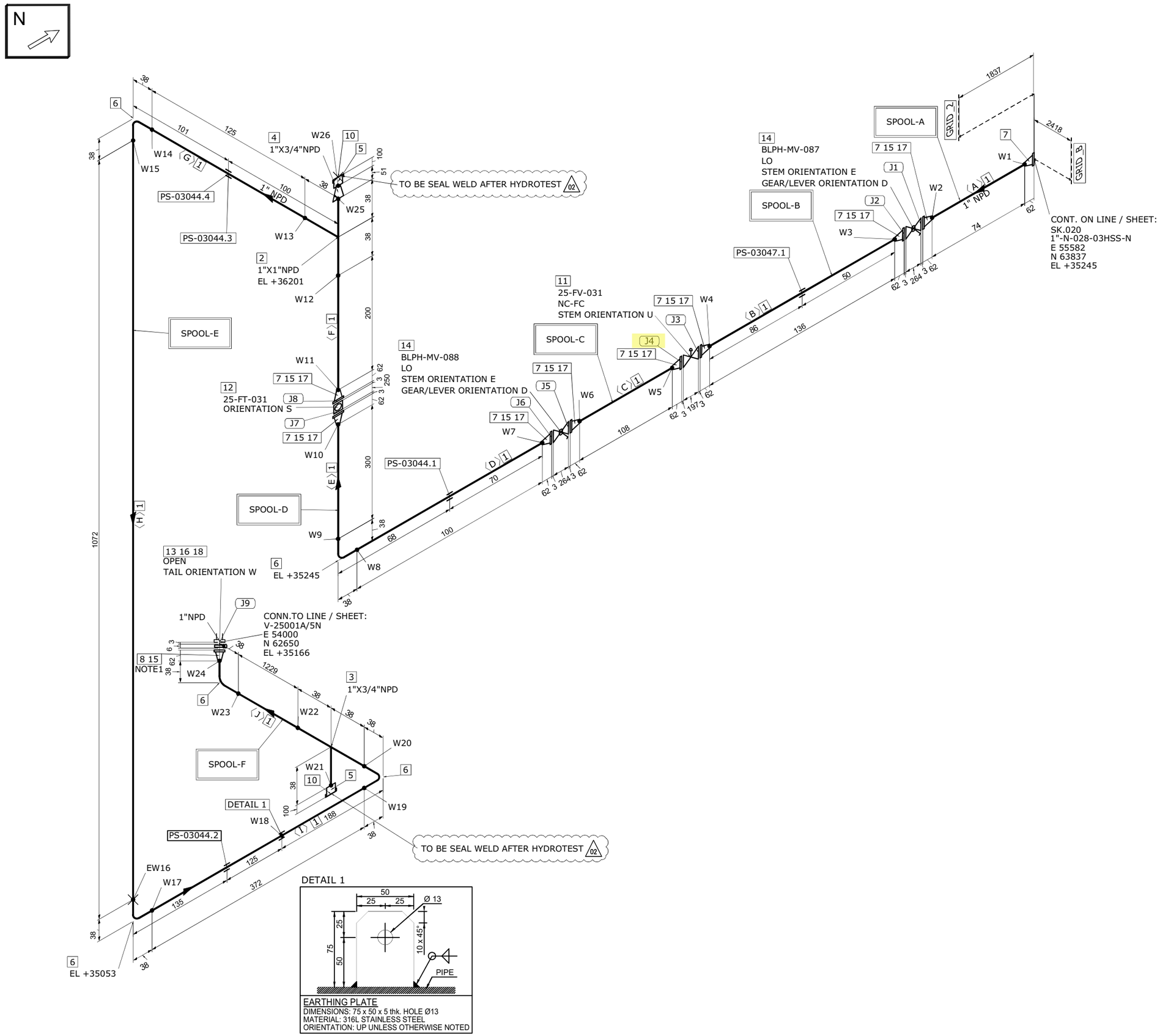
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:26:18.218Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:00:54.301Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	20.4
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	82.4
OVERALL WEIGHT [kg]	111.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03047.1
PS-03044.1
PS-03044.3
PS-03044.4
PS-03044.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	82.4

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-153-03HSS-N
SK.064

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00064
SHEET / OF	1/1	REV.	02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]	
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water	

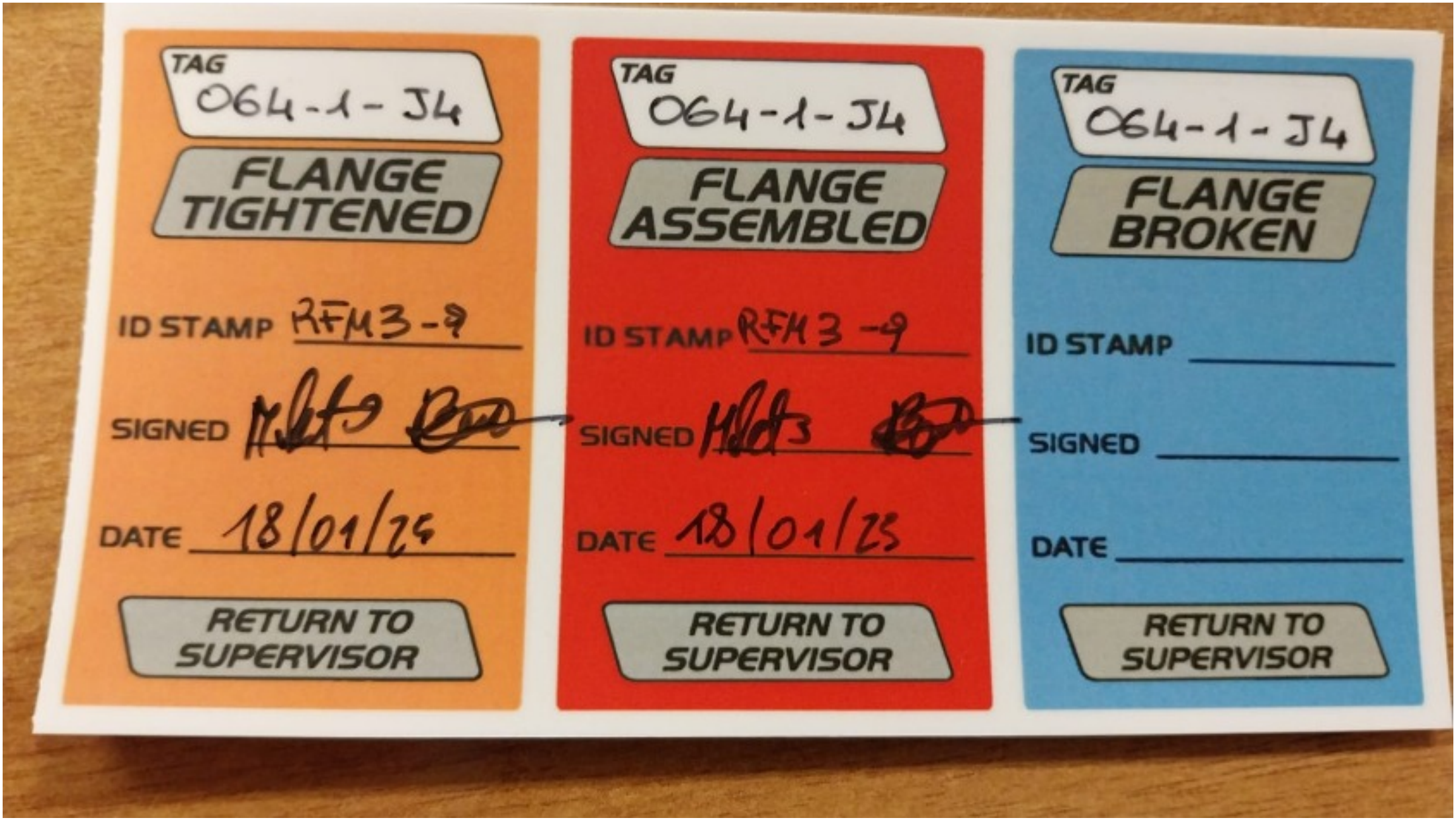
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80015
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

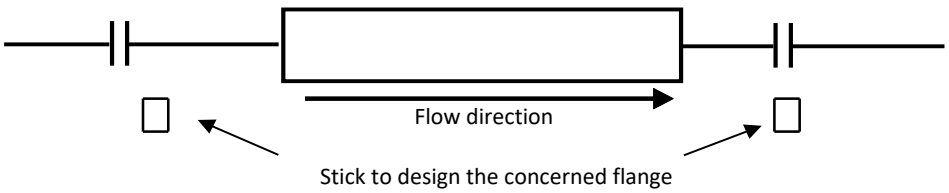
MASTER


TAG
064-1-J4
FLANGE TIGHTENED
ID STAMP RFM3-9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
064-1-J4
FLANGE ASSEMBLED
ID STAMP RFM3-9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
064-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	064-1-J5	: Joint 064-1-J5			Dwg	123A90-FDL-PP-DI-00064-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10003931		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench T064079 / RA00598

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

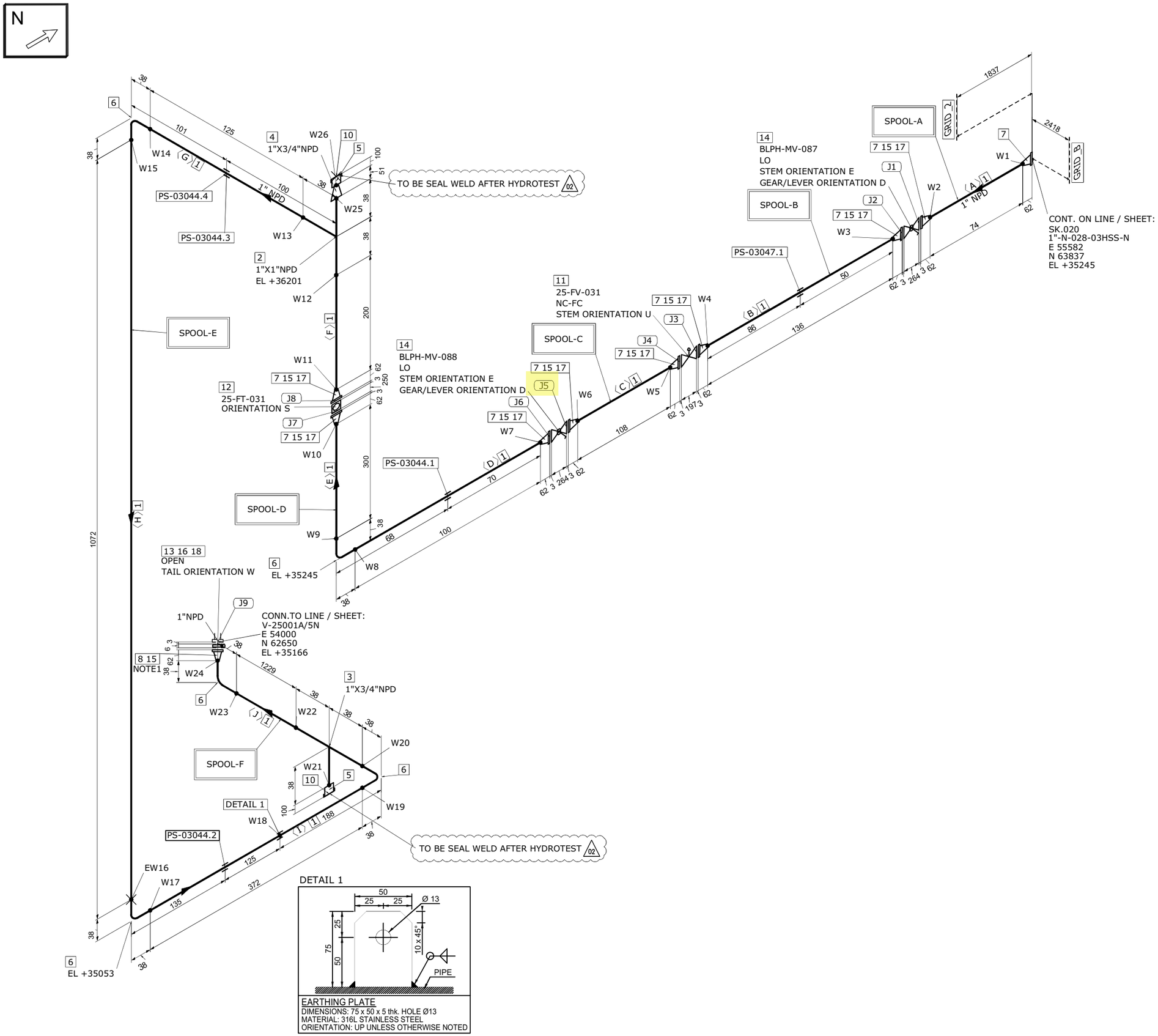
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:26:31.067Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:59:56.864Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	20.4
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	82.4
OVERALL WEIGHT [kg]	111.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03047.1
PS-03044.1
PS-03044.3
PS-03044.4
PS-03044.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	82.4

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-153-03HSS-N

SK.064

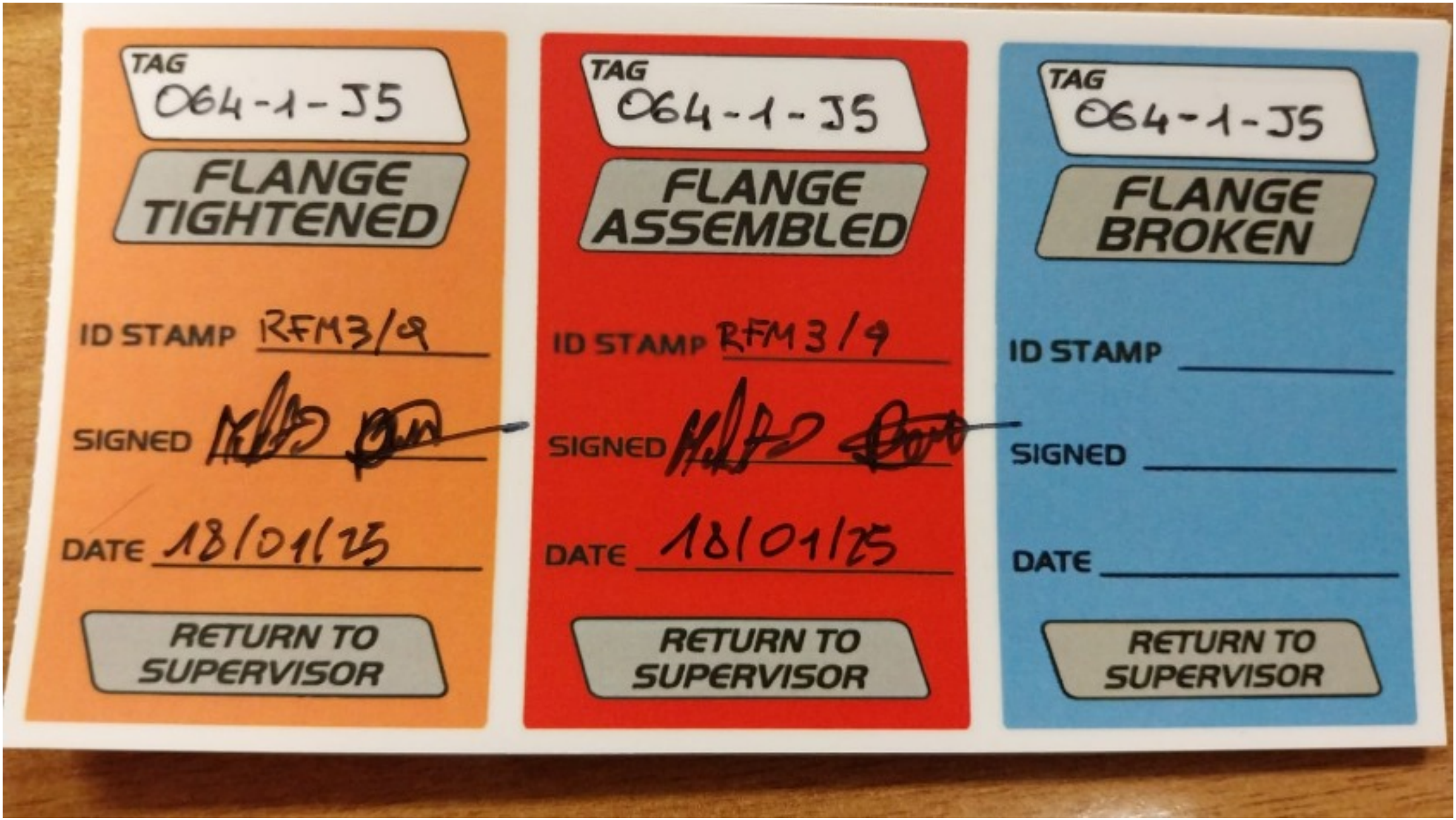
LINE DATA								
NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80015
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

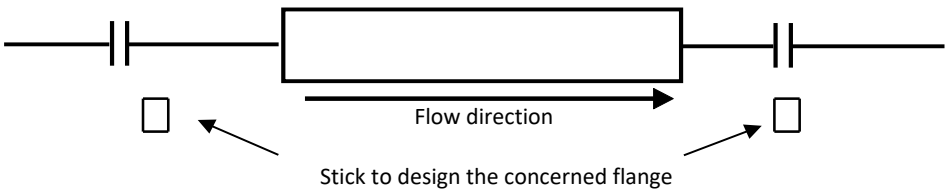
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00064	SHEET / OF 1/1	REV. 02


TAG
064-1-J5
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
064-1-J5
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
064-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	090-1-J1	: Joint 090-1-J1			Dwg	123A90-FDL-PP-DI-00090-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004012		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

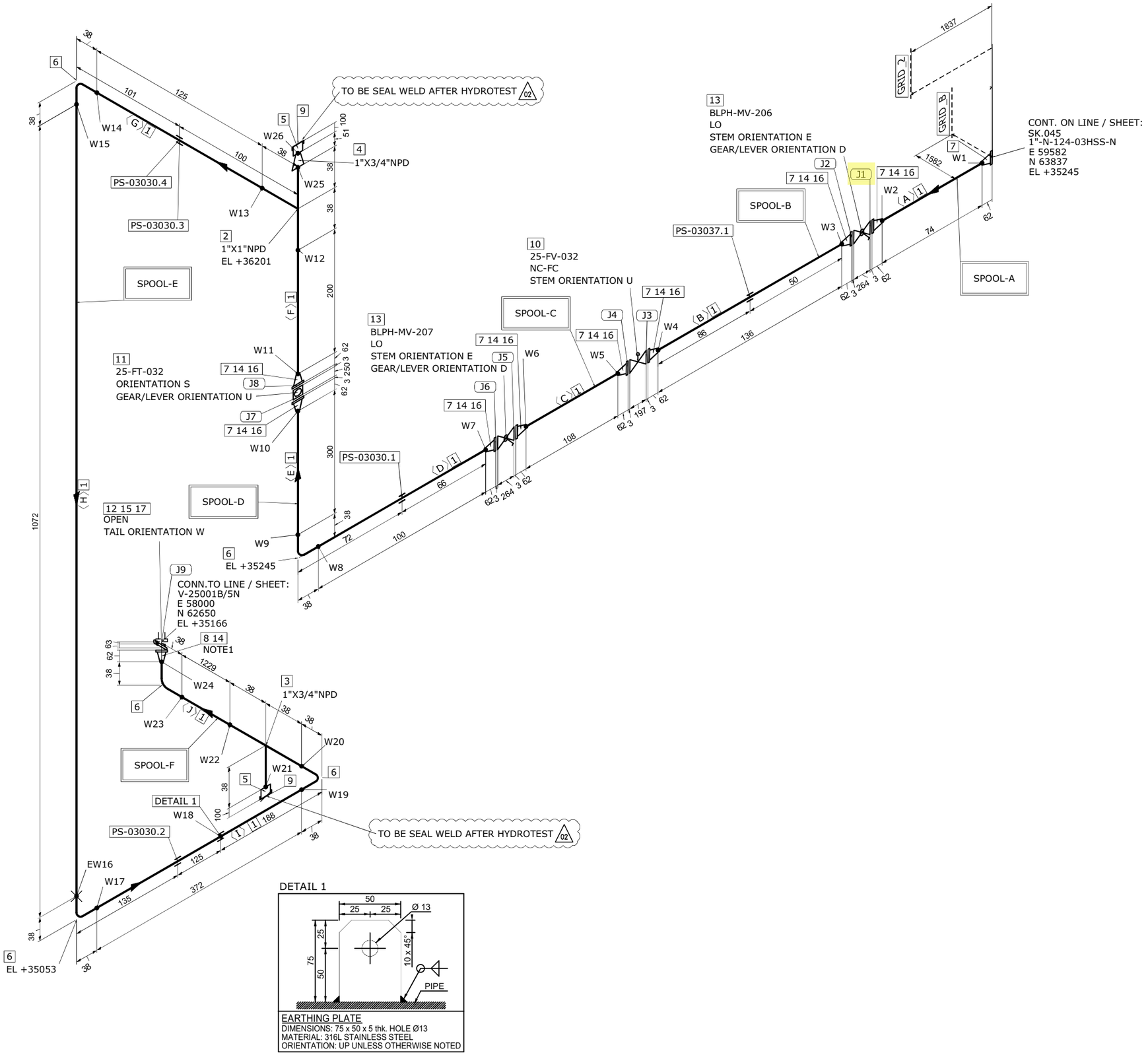
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:45:32.531Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:47:45.987Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03037.1
PS-03030.1
PS-03030.3
PS-03030.4
PS-03030.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-186-03HSS-N

SK.090

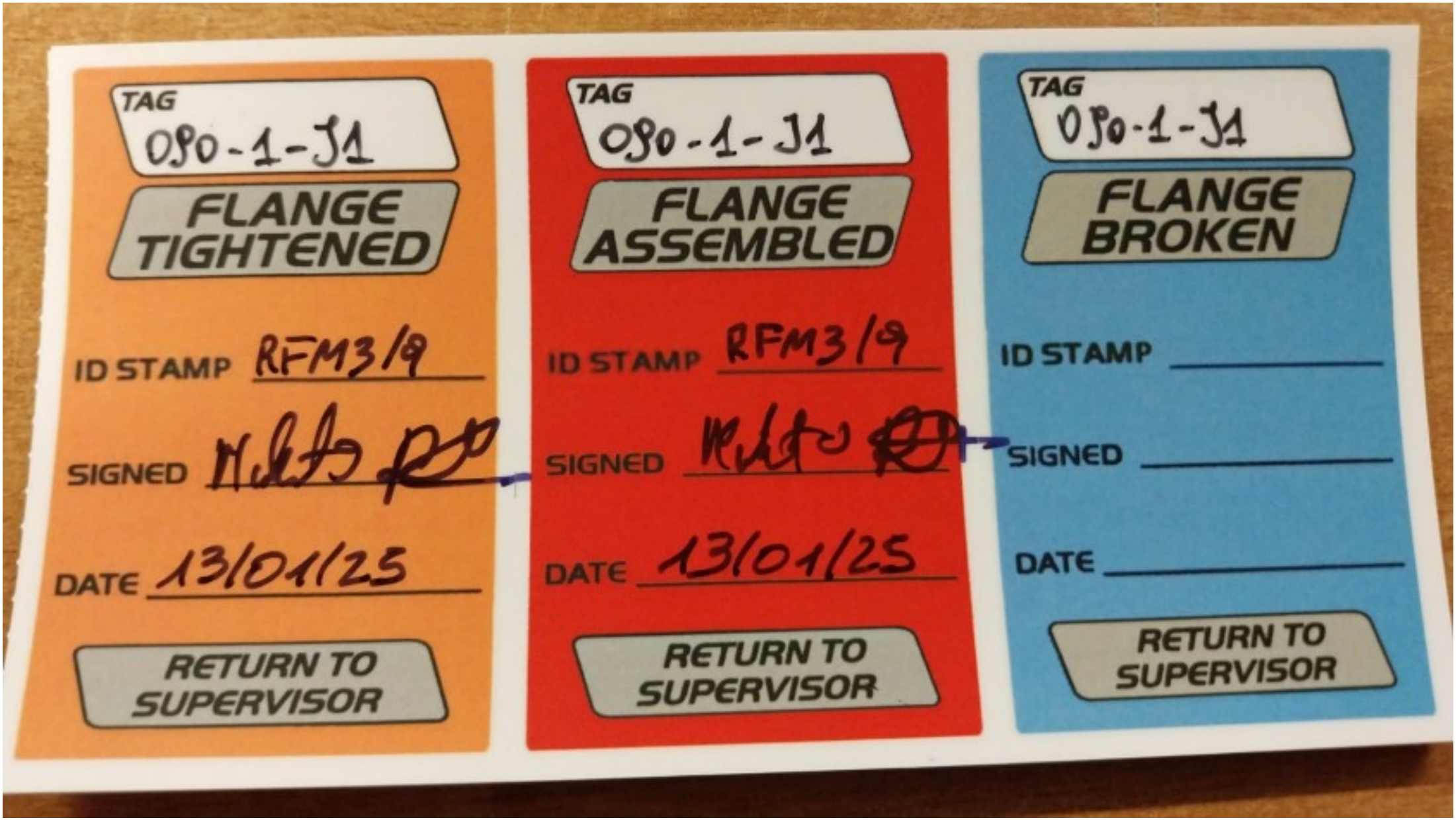
LINE DATA									
NDT INSPECTION CATEGORY	1		PED CATEGORY	II					
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]		
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80016
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

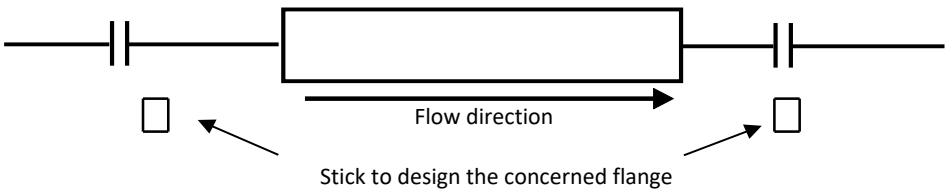
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00090	SHEET / OF 1/1	REV. 02


TAG
080-1-J1
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
080-1-J1
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
080-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	090-1-J2	: Joint 090-1-J2			Dwg	123A90-FDL-PP-DI-00090-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004013		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261& Torque w
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

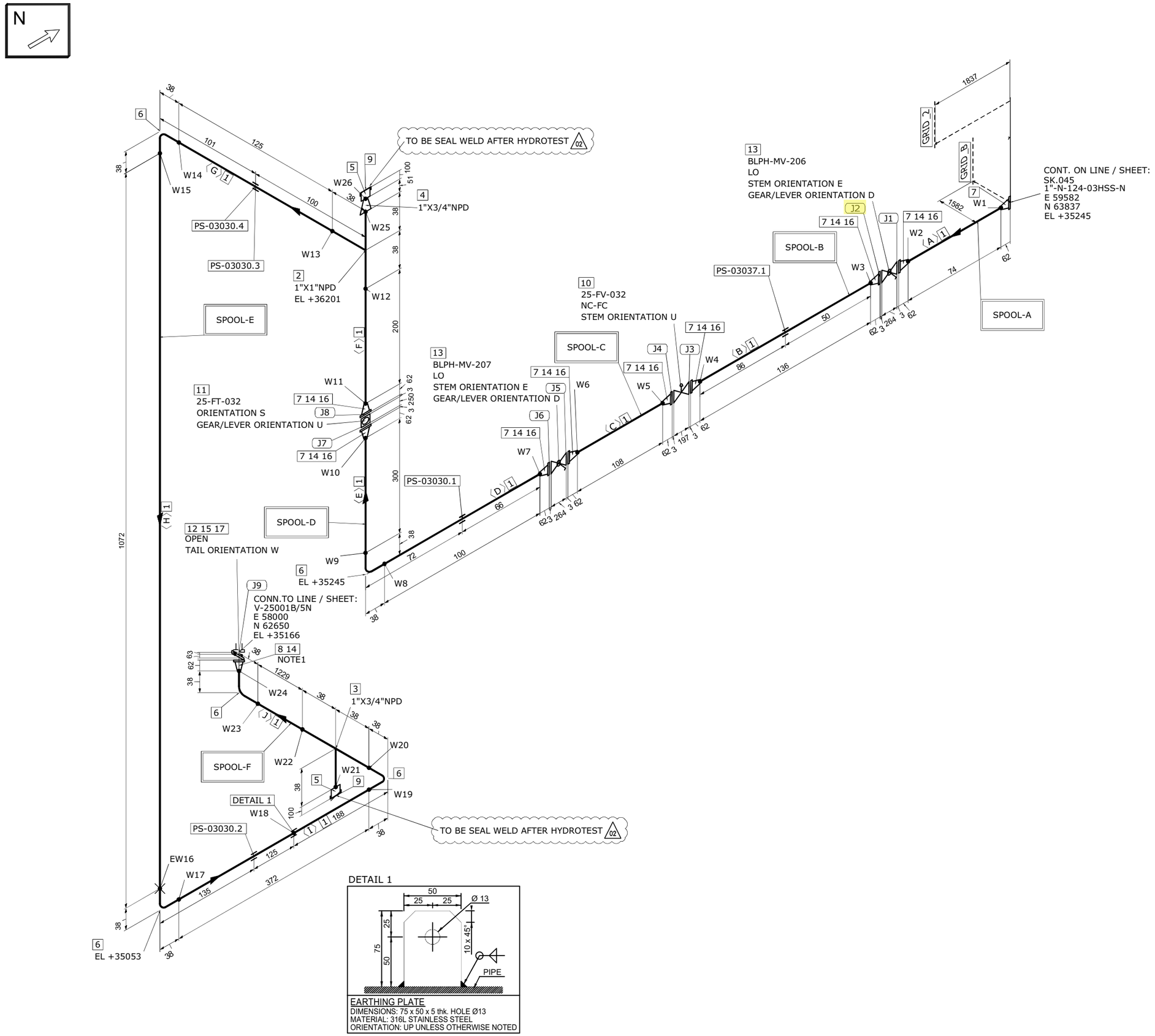
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:45:54.267Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:48:48.535Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03037.1
PS-03030.1
PS-03030.3
PS-03030.4
PS-03030.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-186-03HSS-N

SK.090

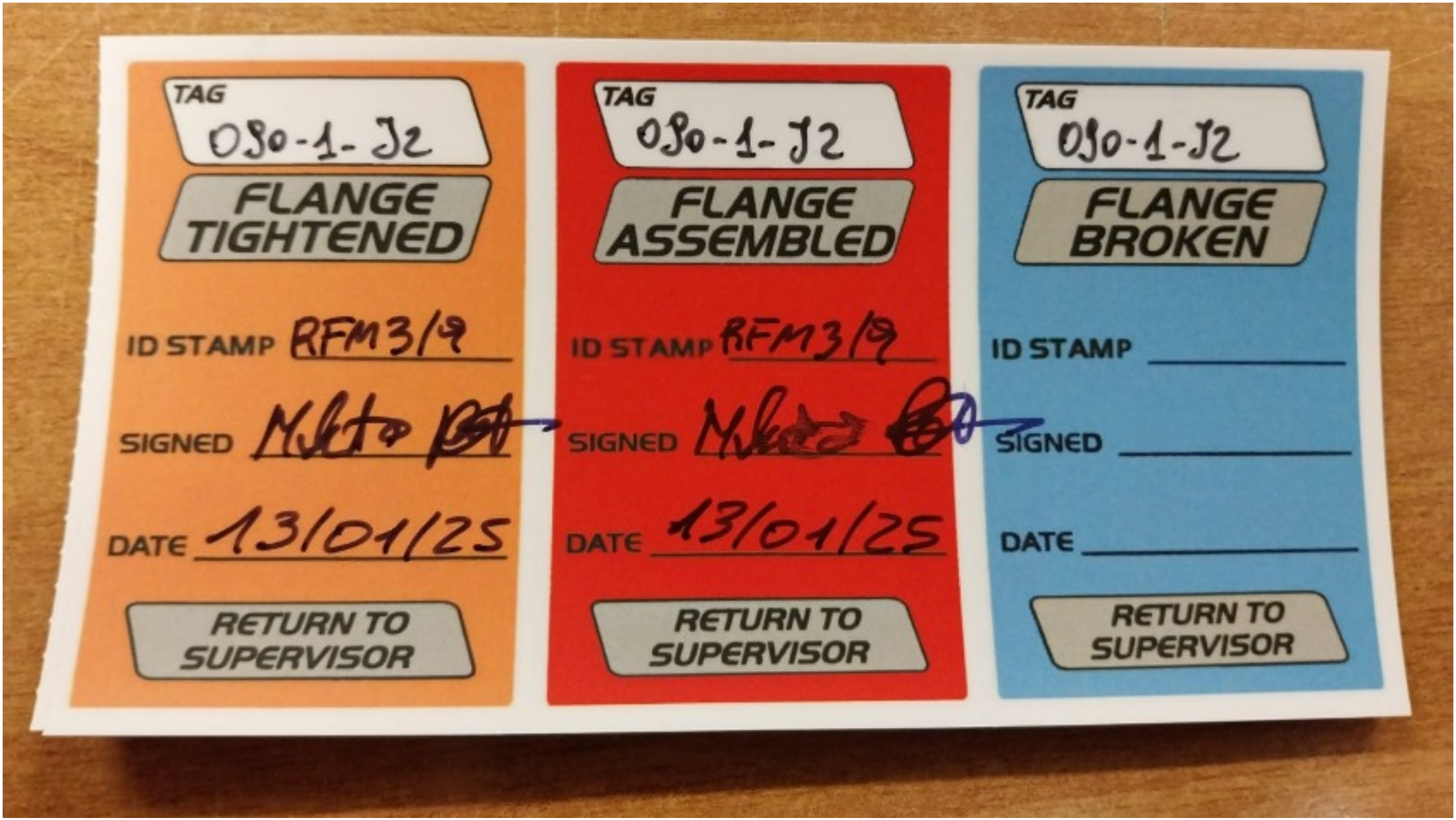
LINE DATA									
NDT INSPECTION CATEGORY	1		PED CATEGORY	II					
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]		
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80016
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

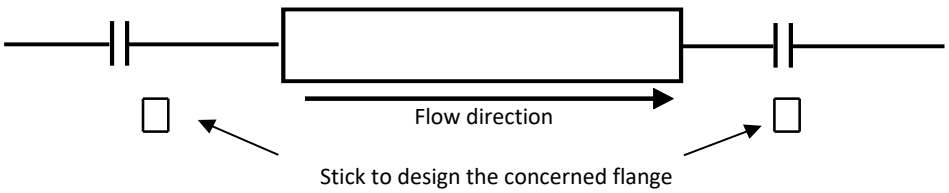
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00090	SHEET / OF 1/1	REV. 02


TAG
030-1-J2
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
030-1-J2
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
030-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	090-1-J3	: Joint 090-1-J3			Dwg	123A90-FDL-PP-DI-00090-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004014		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench T064079 / RA00598

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

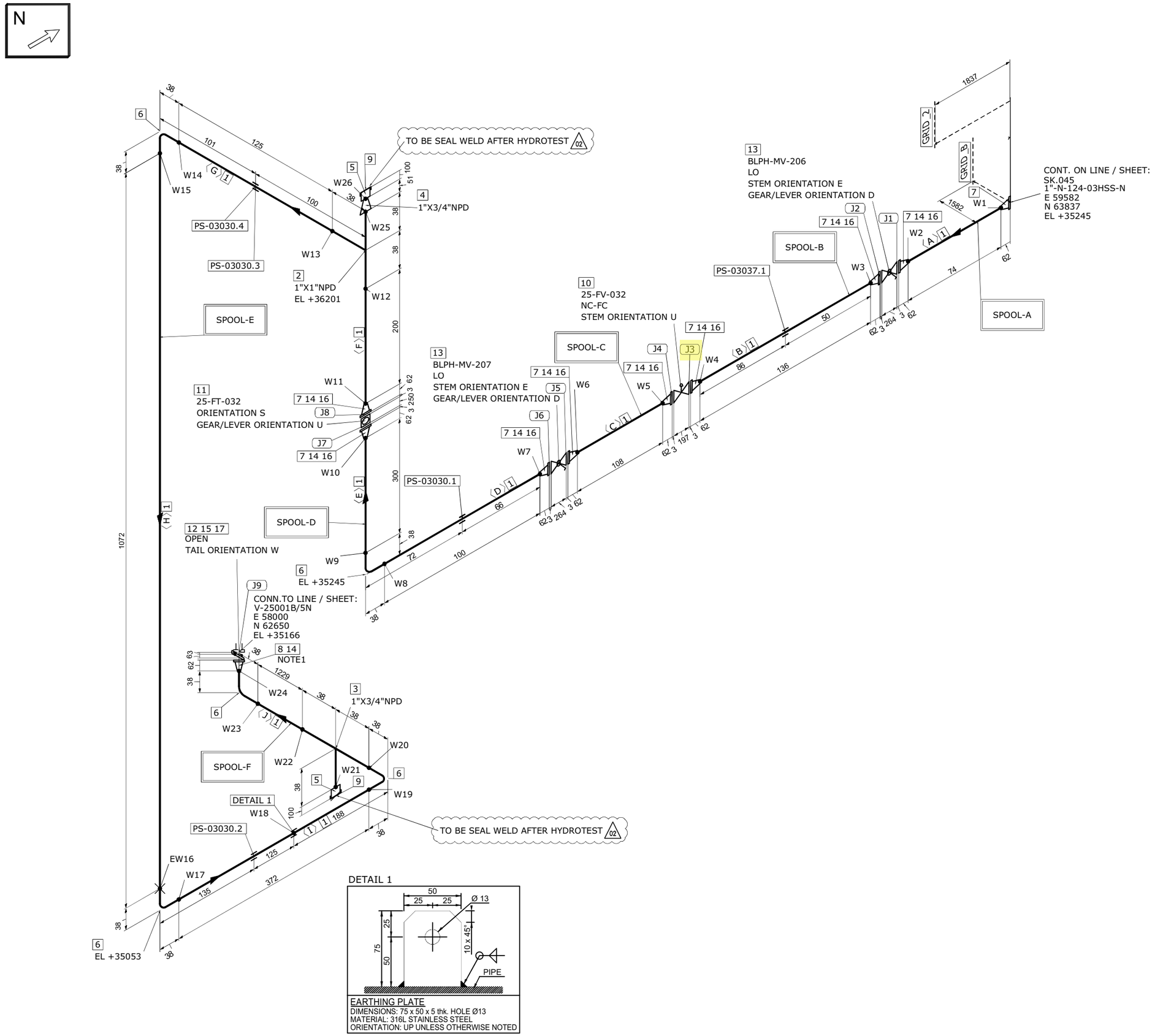
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:27:52.514Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:00:19.797Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03037.1
PS-03030.1
PS-03030.3
PS-03030.4
PS-03030.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-186-03HSS-N

SK.090

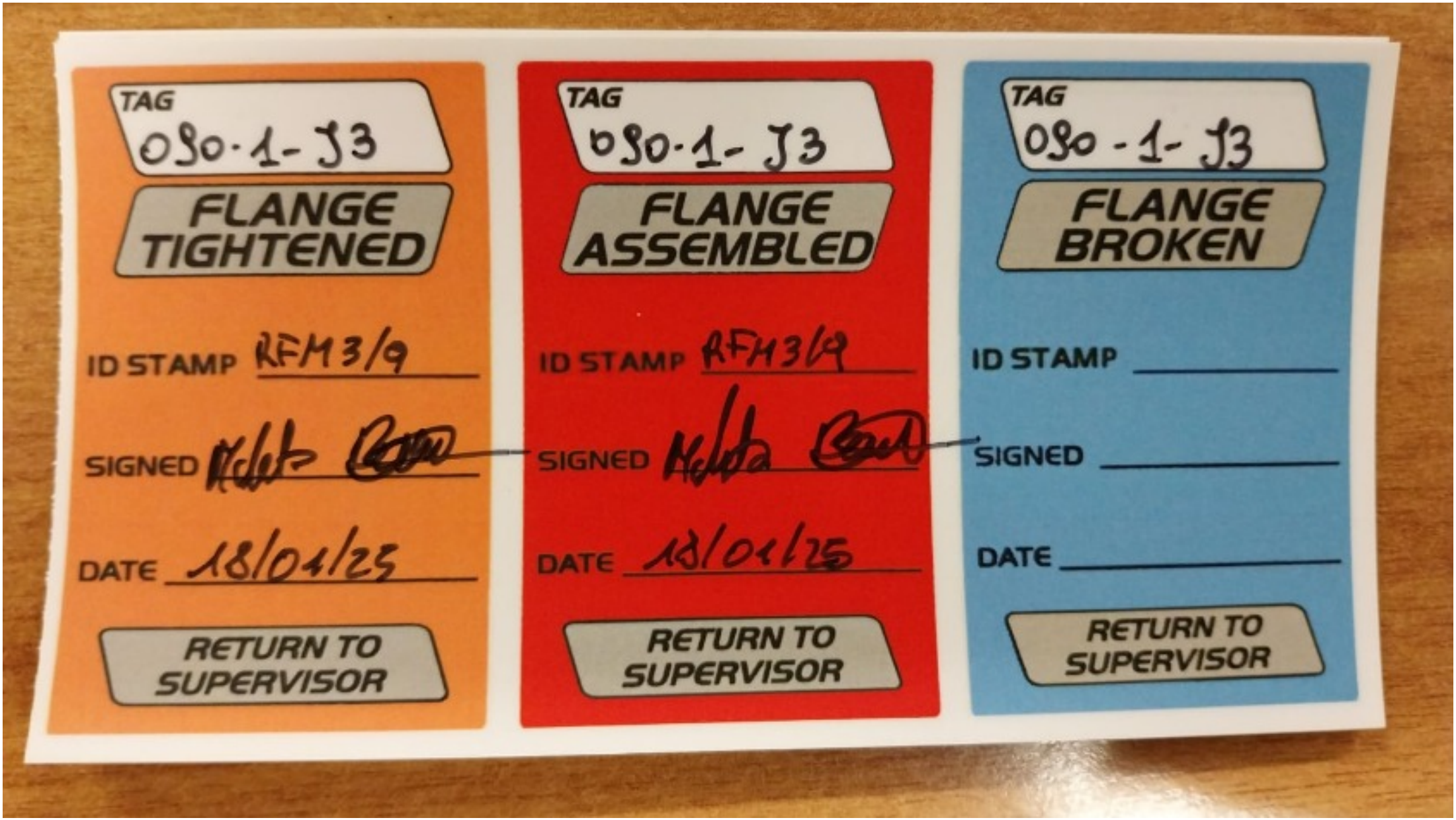
LINE DATA								
NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80016
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

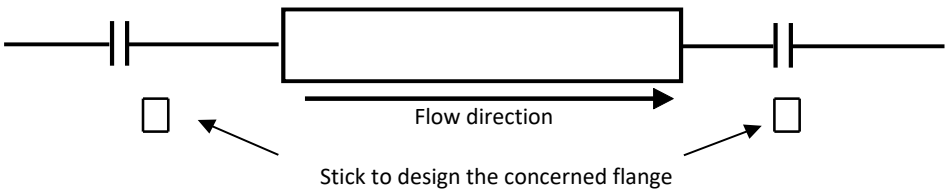
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00090	SHEET / OF 1/1	REV. 02


TAG
080-1-J3
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 18/04/25
RETURN TO SUPERVISOR
TAG
080-1-J3
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 18/04/25
RETURN TO SUPERVISOR
TAG
080-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	090-1-J4	: Joint 090-1-J4			Dwg	123A90-FDL-PP-DI-00090-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004015		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench T064079 / RA00598

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

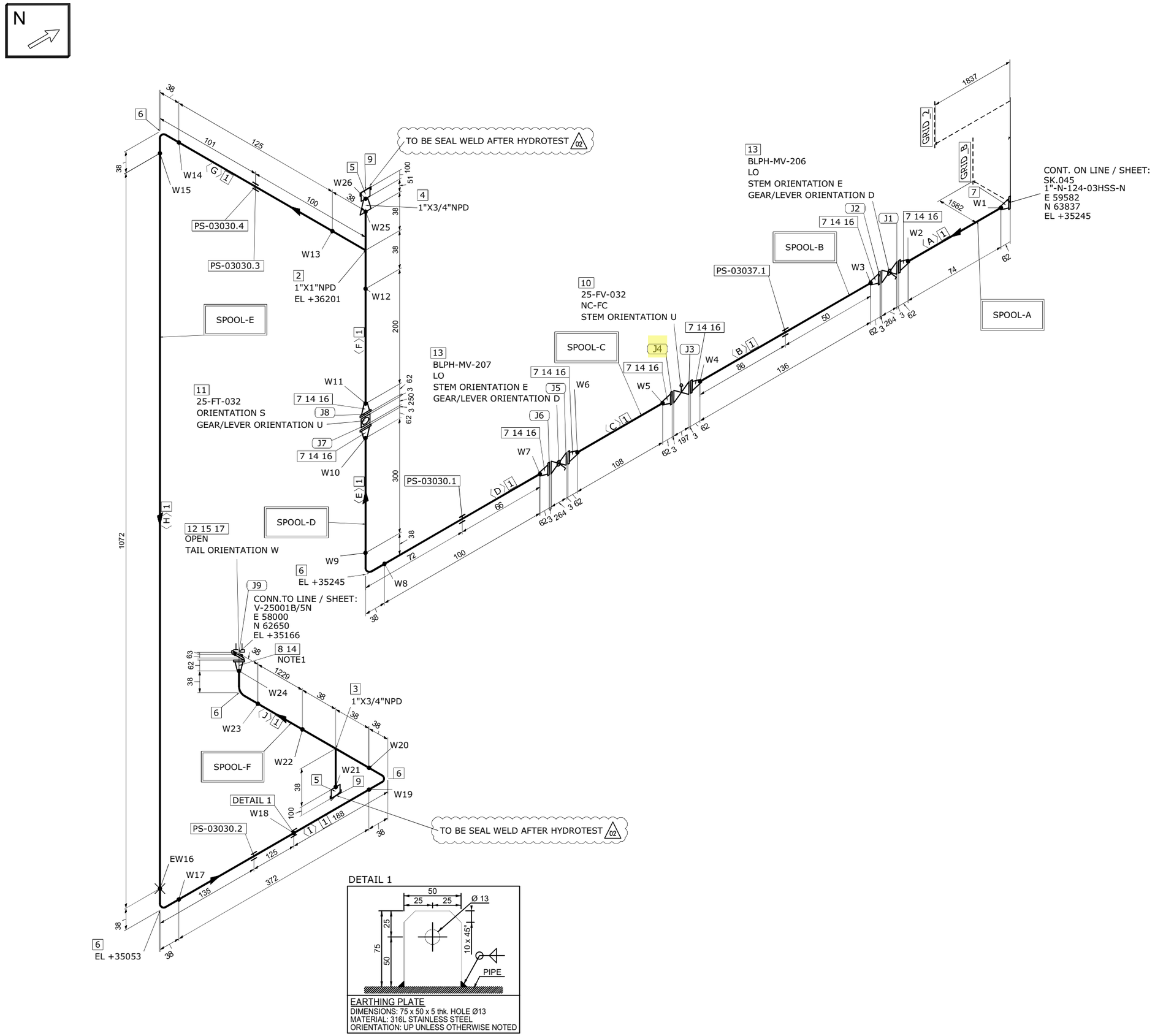
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:28:03.666Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:00:32.811Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03037.1
PS-03030.1
PS-03030.3
PS-03030.4
PS-03030.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-186-03HSS-N

SK.090

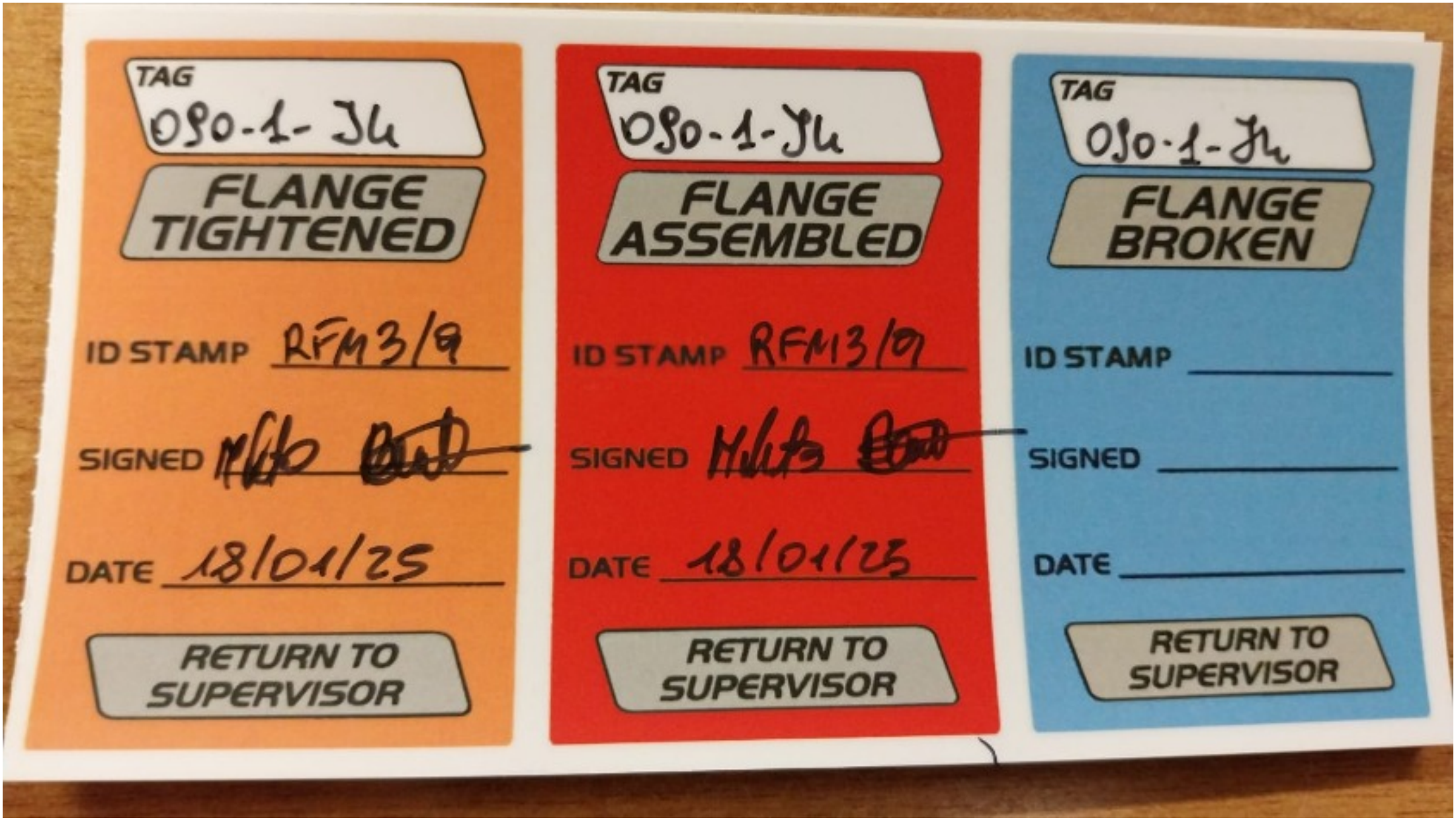
LINE DATA								
NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80016
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

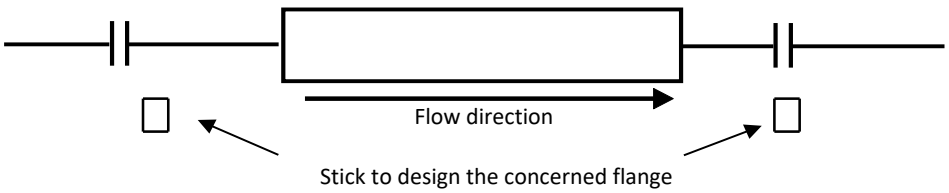
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00090	SHEET / OF 1/1	REV. 02


TAG
080-1-JH
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
080-1-JH
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
080-1-JH
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	090-1-J5	: Joint 090-1-J5			Dwg	123A90-FDL-PP-DI-00090-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004016		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RA00598
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

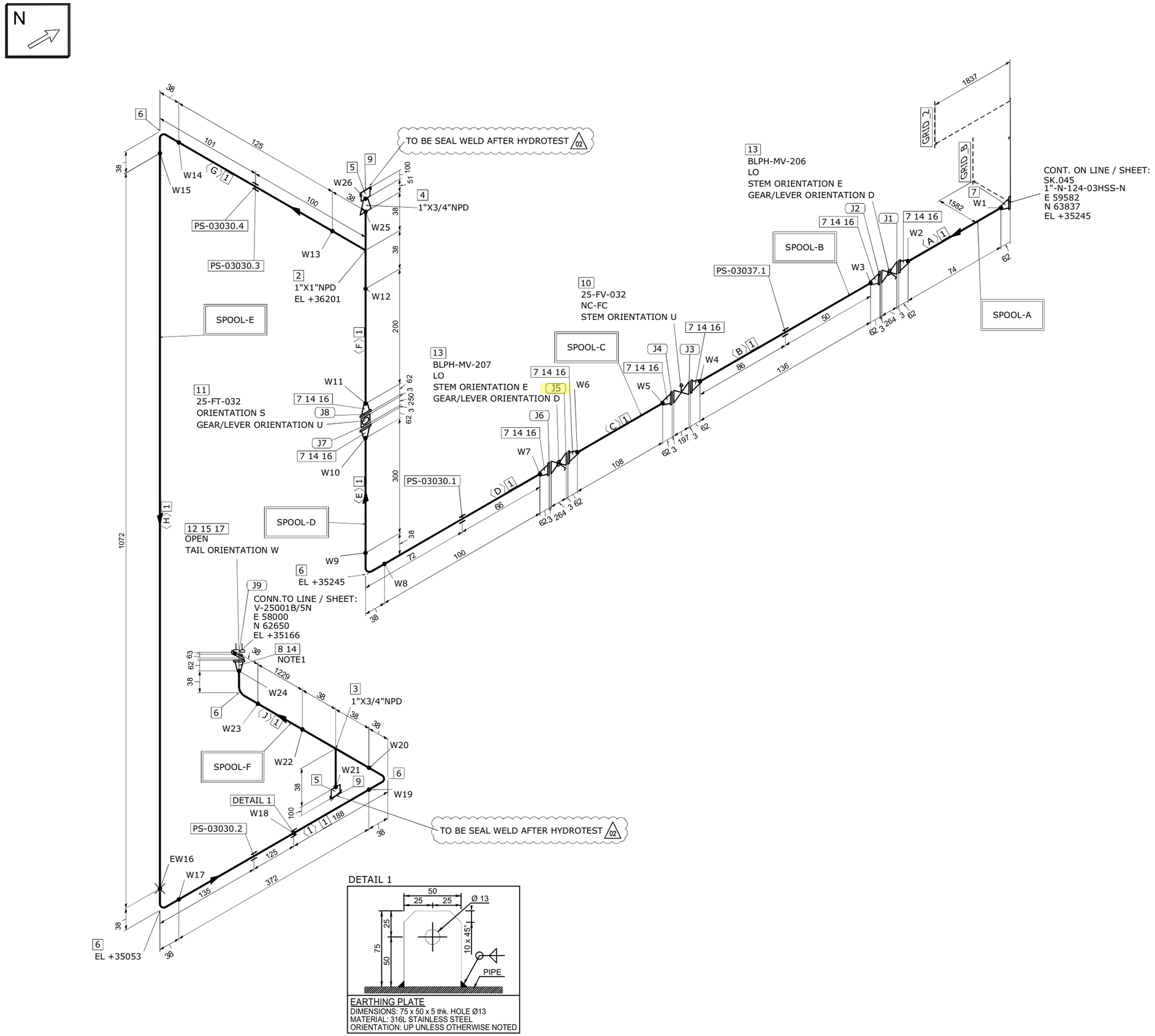
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:28:17.536Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:00:43.112Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03037.1
PS-03030.1
PS-03030.3
PS-03030.4
PS-03030.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-186-03HSS-N

SK.090

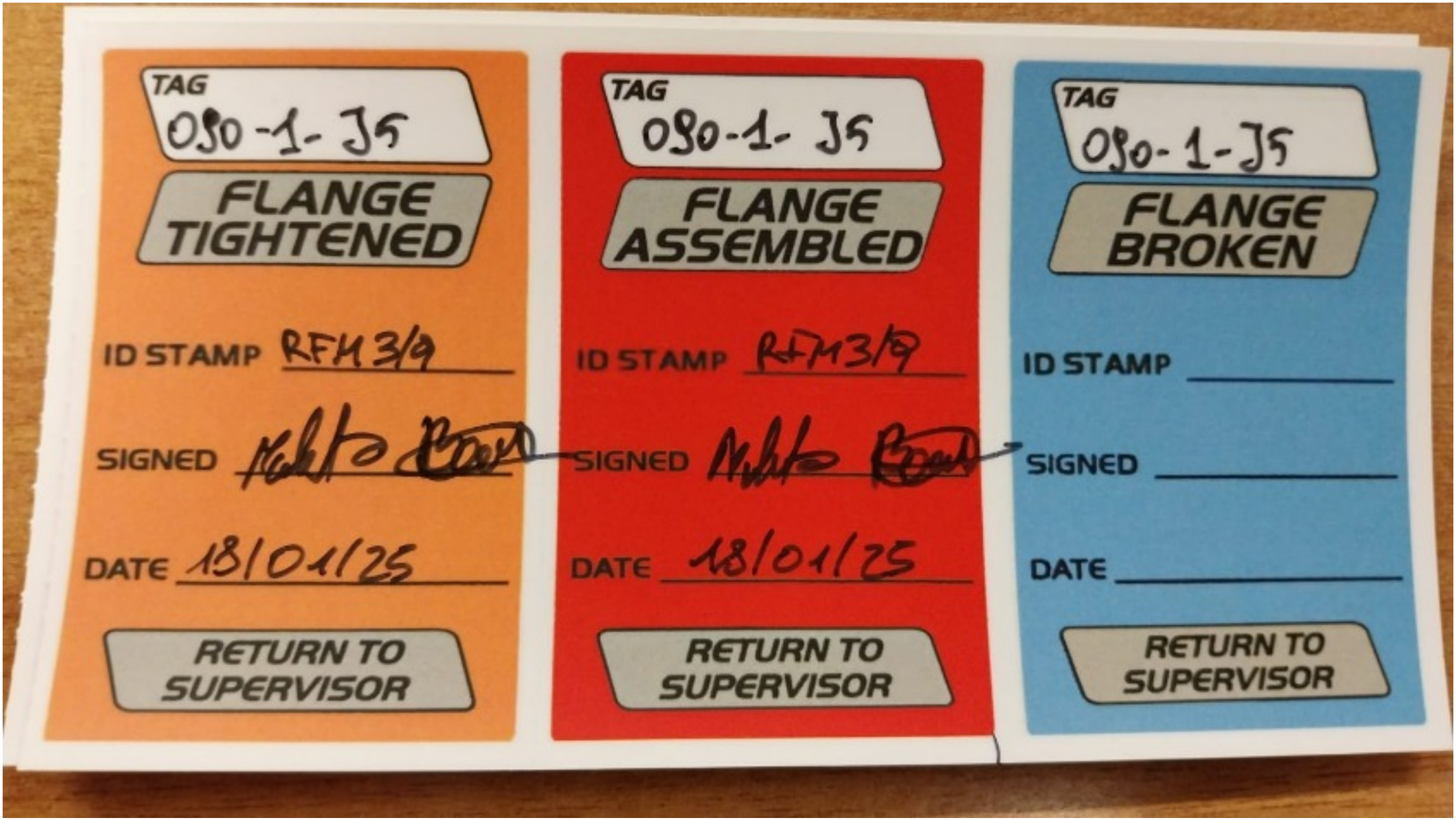
LINE DATA									
NDT INSPECTION CATEGORY	1		PED CATEGORY	II					
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]		
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80016
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

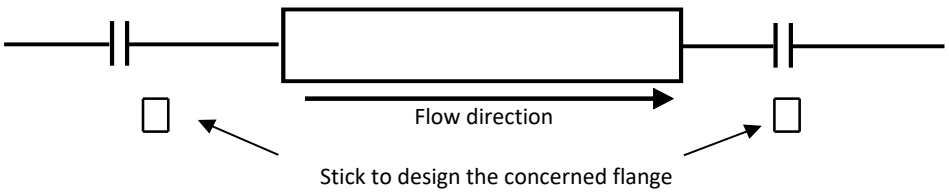
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00090	SHEET / OF 1/1	REV. 02


TAG
080-1-J5
FLANGE TIGHTENED
ID STAMP RFH 3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
080-1-J5
FLANGE ASSEMBLED
ID STAMP RFH 3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
080-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	091-1-J1	: Joint 091-1-J1			Dwg	123A90-FDL-PP-DI-00091-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004021		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

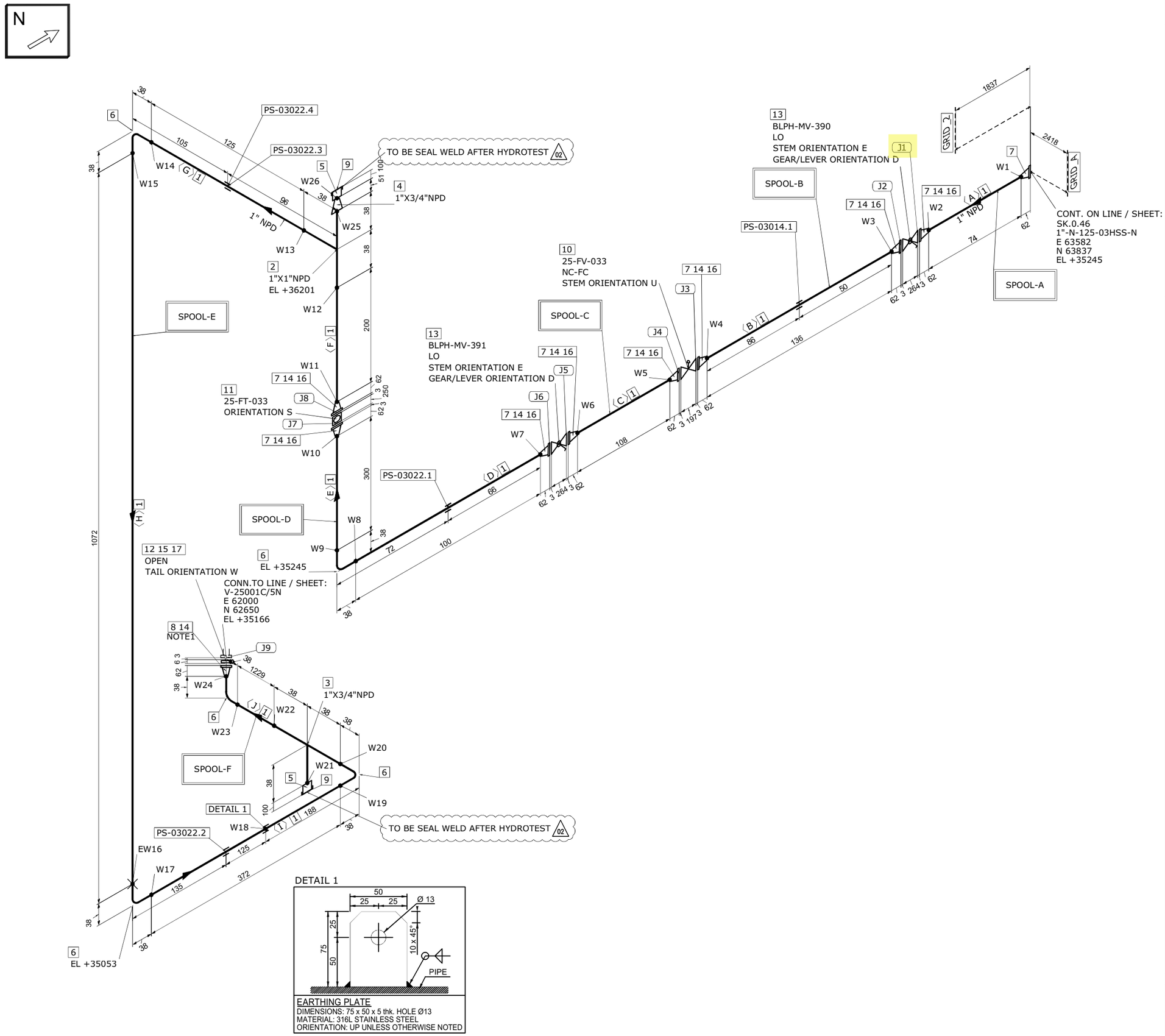
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	Digitaly signed by Emanuele Delfino 2025-01-14T05:46:08.791Z	Digitaly signed by Lorenzo Novaga 2025-01-14T16:49:41.092Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03014.1
PS-03022.1
PS-03022.3
PS-03022.4
PS-03022.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-187-03HSS-N

SK.091

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00091
SHEET / OF	1/1	REV.	02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

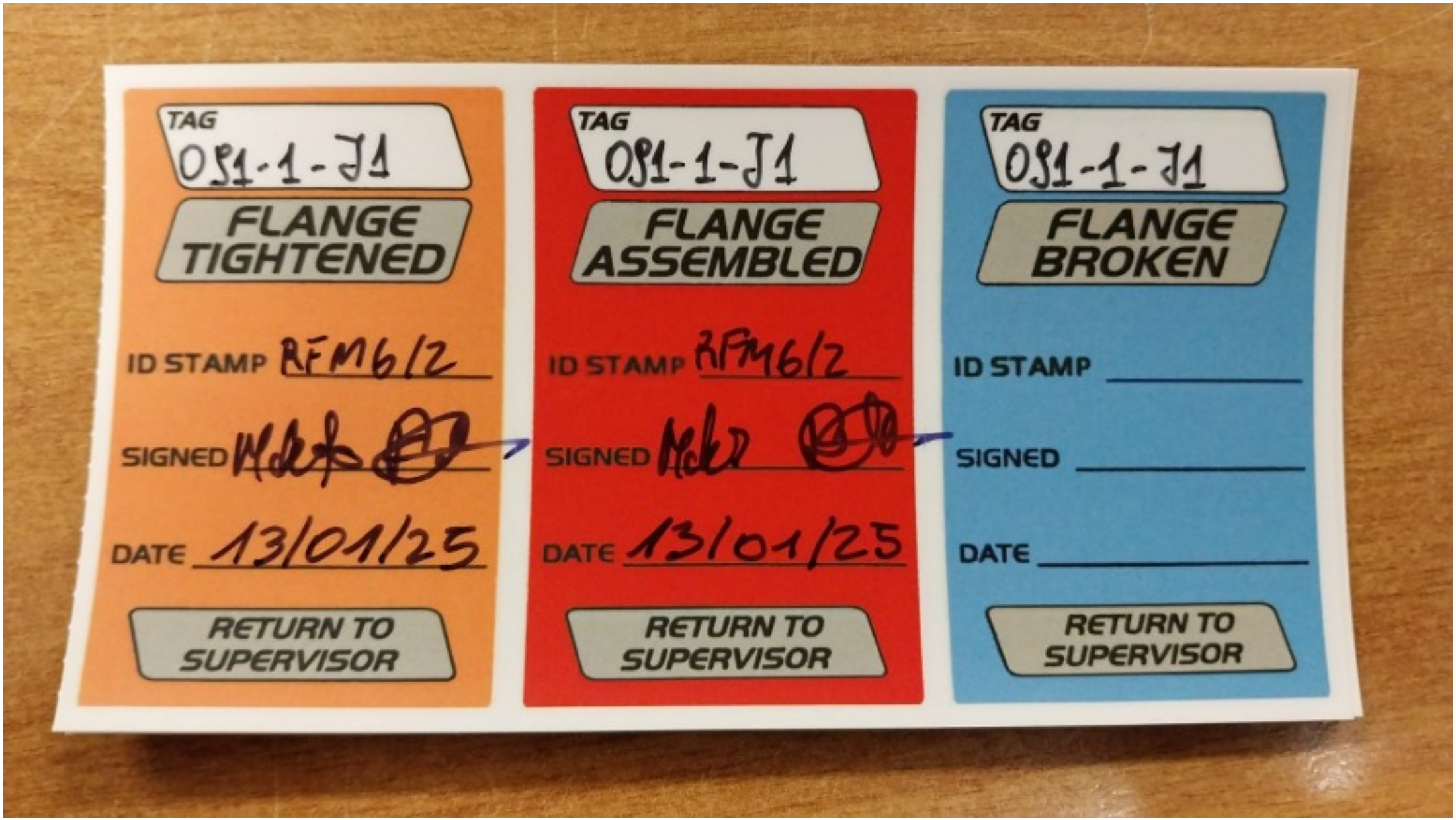
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80017
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

MASTER

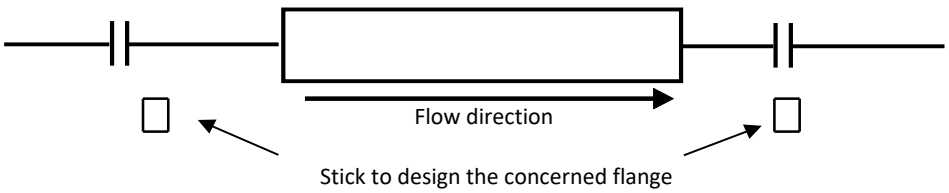

TAG
OS1-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
OS1-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
OS1-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ROSETTI MARINO | CROSSWIND

ITEM	Tag	091-1-J2	: Joint 091-1-J2			Dwg	123A90-FDL-PP-DI-00091-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004022		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

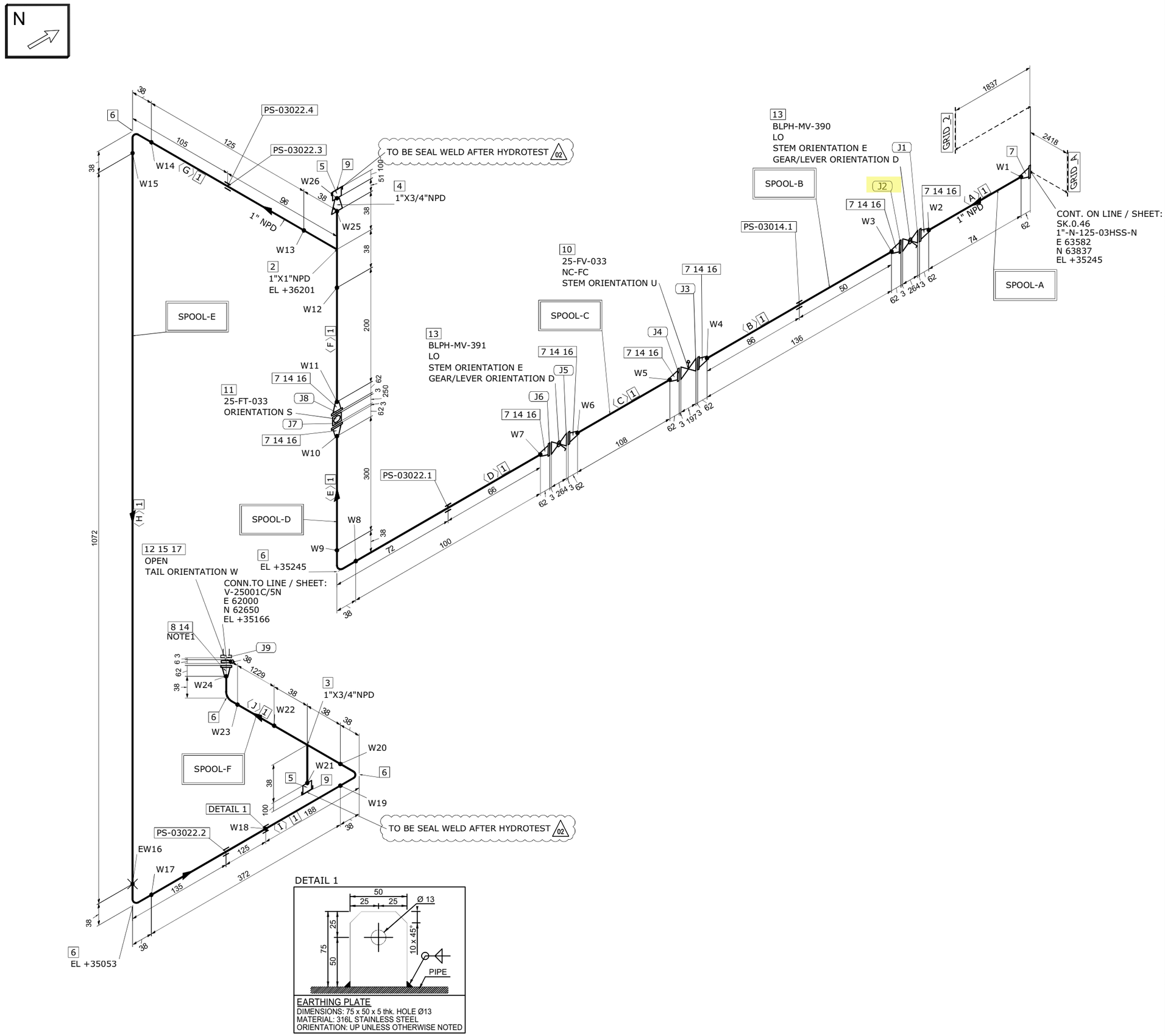
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	Digitaly signed by Emanuele Delfino 2025-01-14T05:46:19.926Z	Digitaly signed by Lorenzo Novaga 2025-01-14T16:50:47.469Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03014.1
PS-03022.1
PS-03022.3
PS-03022.4
PS-03022.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-187-03HSS-N

SK.091

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00091
SHEET / OF: 1/1
REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

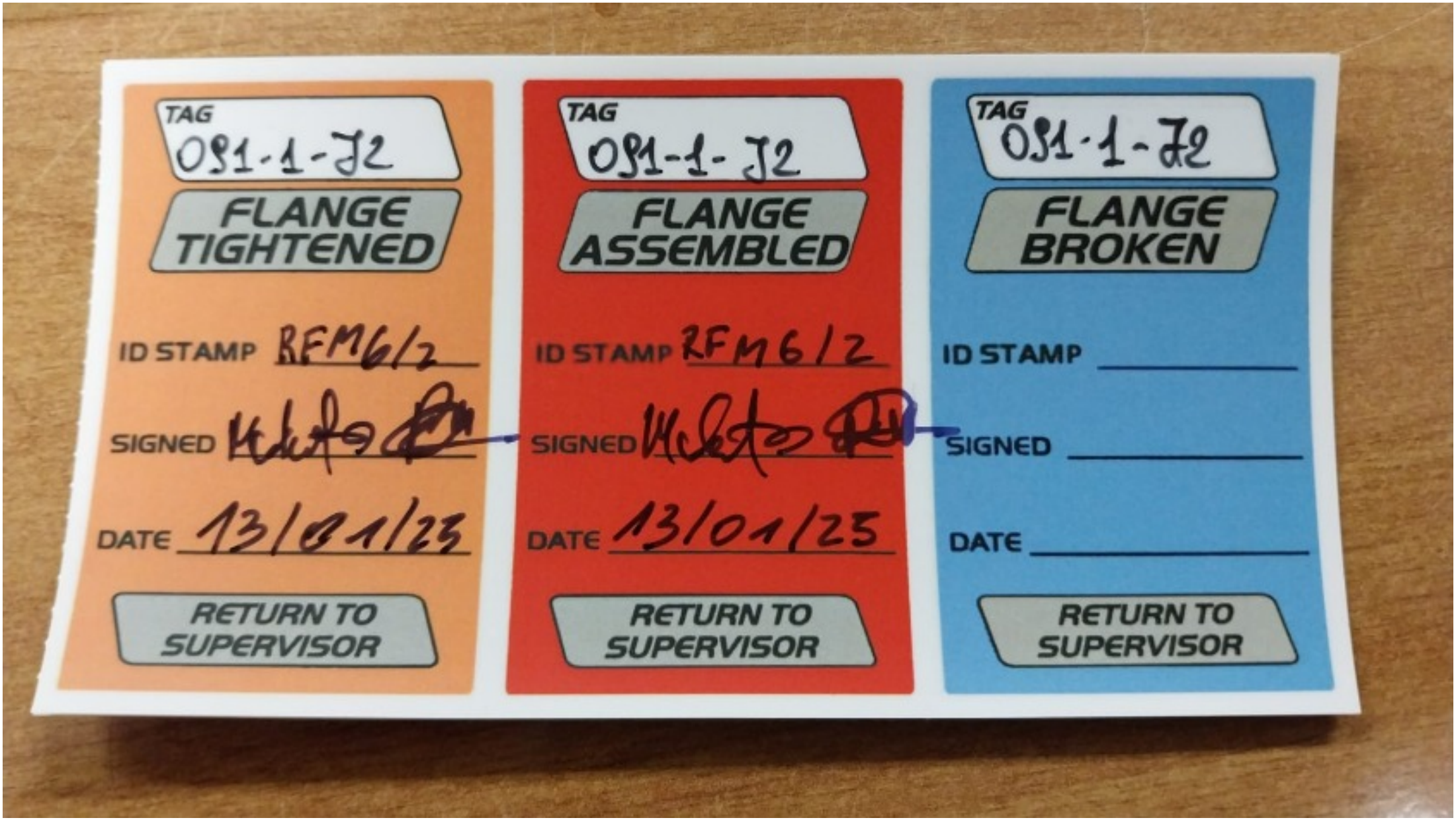
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80017
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

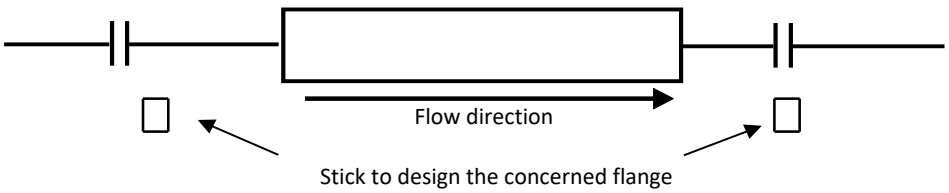
MASTER


TAG
091-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
091-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
091-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	091-1-J3	: Joint 091-1-J3			Dwg	123A90-FDL-PP-DI-00091-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004023		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench T064079 / RA00598

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

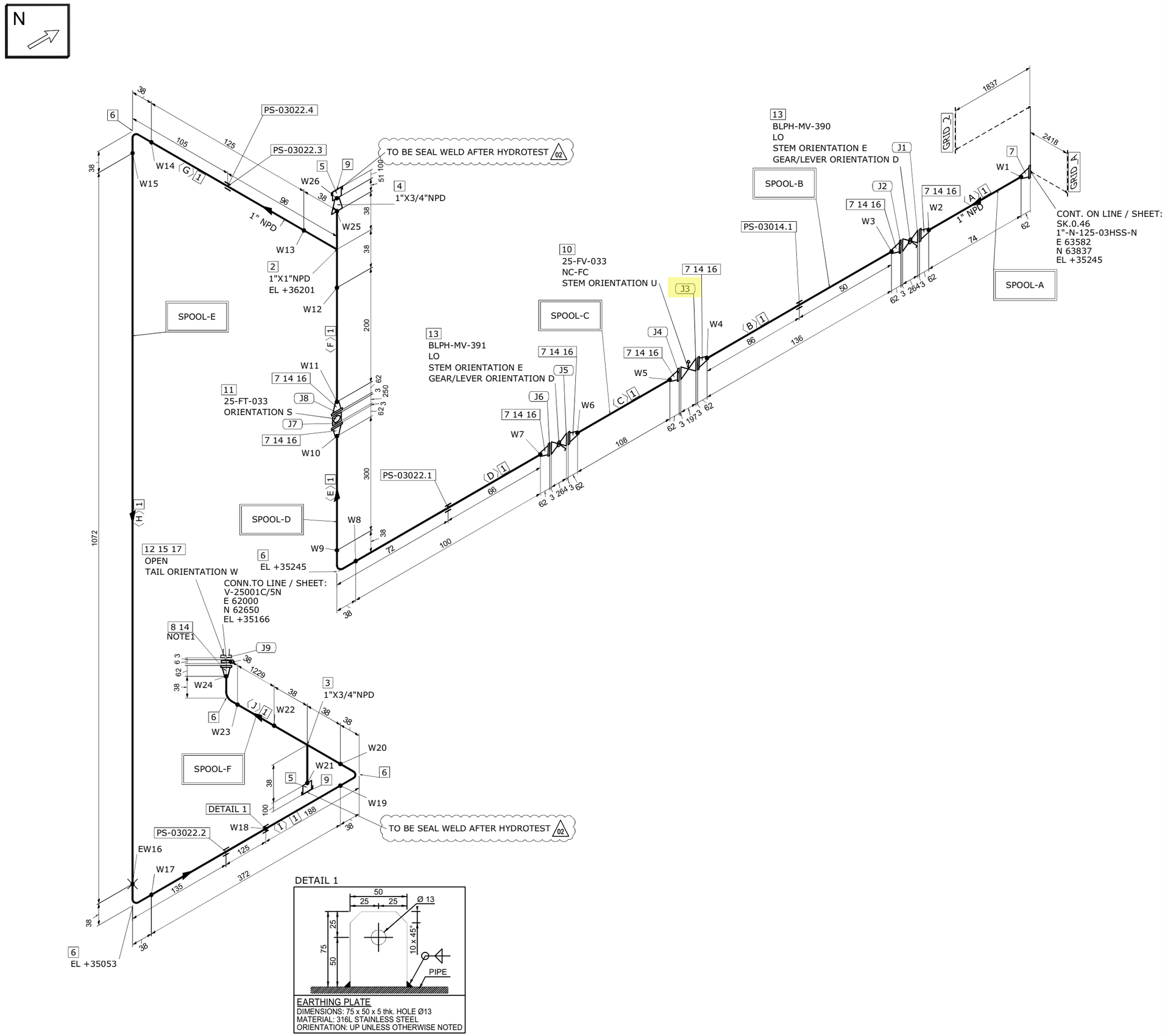
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:29:32.552Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:01:58.660Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03014.1
PS-03022.1
PS-03022.3
PS-03022.4
PS-03022.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-187-03HSS-N

SK.091

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00091
SHEET / OF	1/1	REV.	02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80017
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

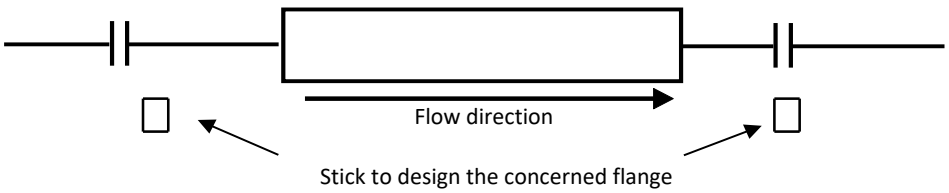
MASTER


TAG
OS1-1-J3
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
OS1-1-J3
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
OS1-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	091-1-J4	: Joint 091-1-J4			Dwg	123A90-FDL-PP-DI-00091-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004024		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RA00598
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

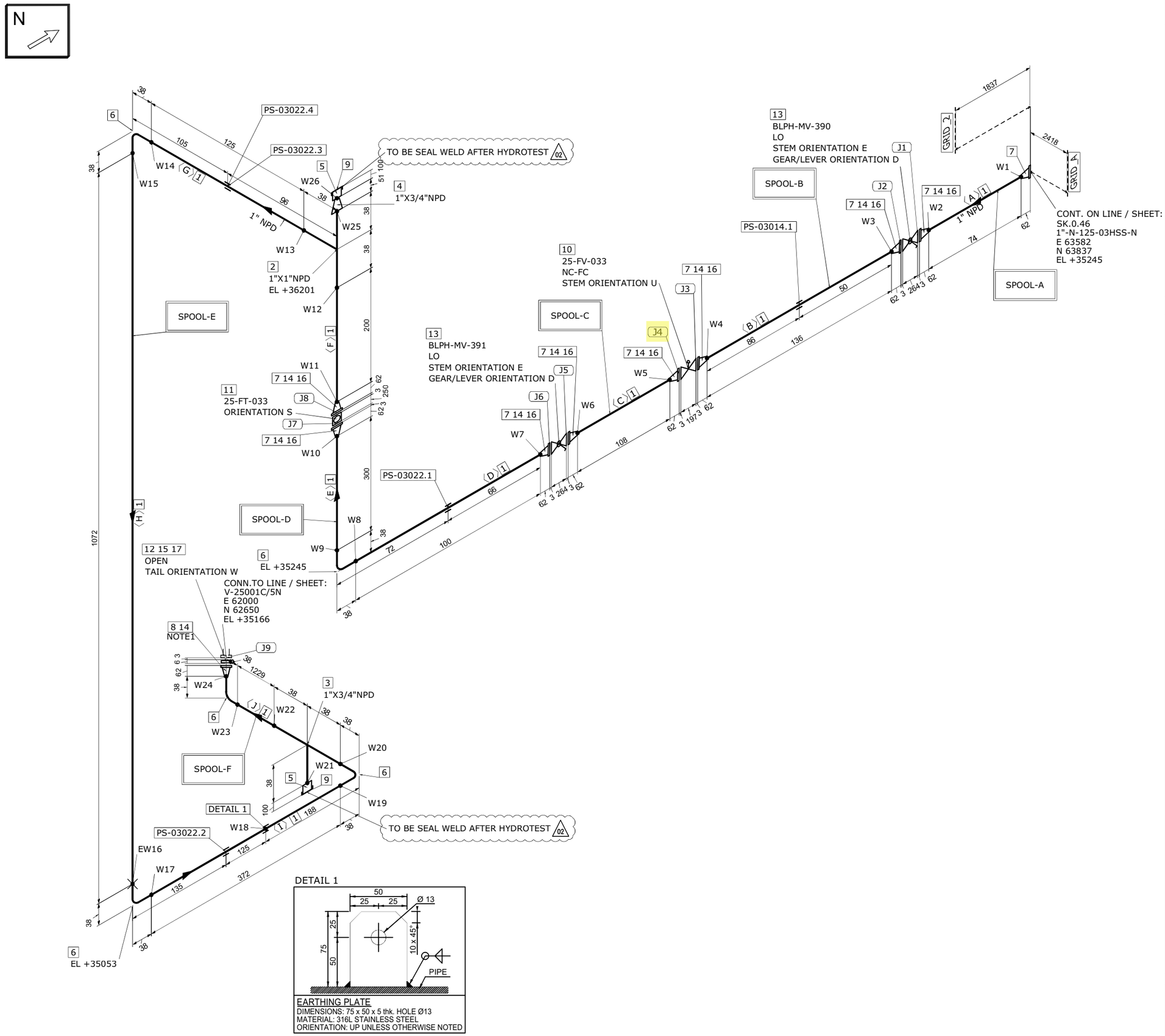
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:29:43.304Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T09:01:46.636Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03014.1
PS-03022.1
PS-03022.3
PS-03022.4
PS-03022.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-187-03HSS-N

SK.091

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00091
SHEET / OF	1/1	REV.	02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

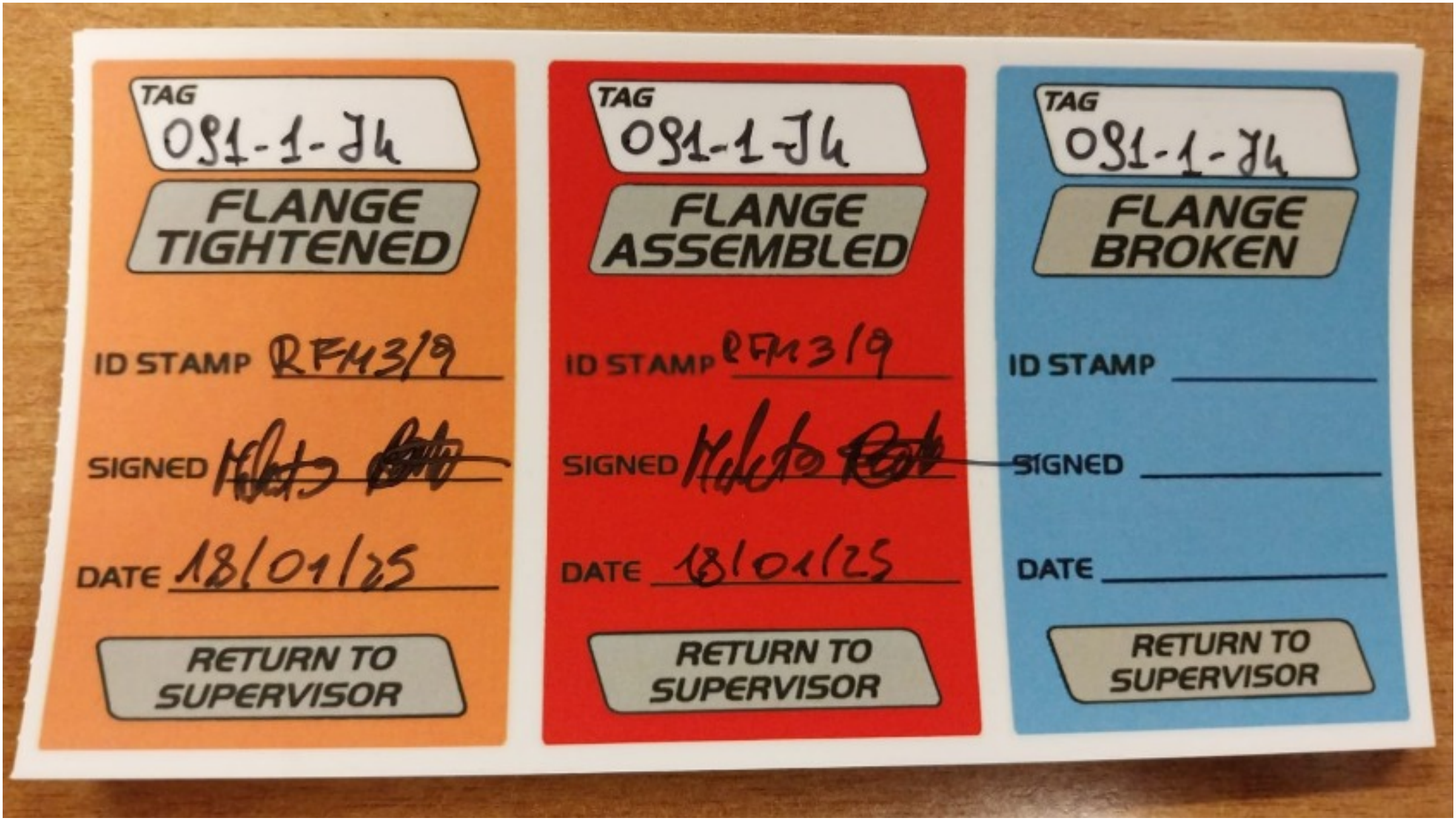
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80017
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

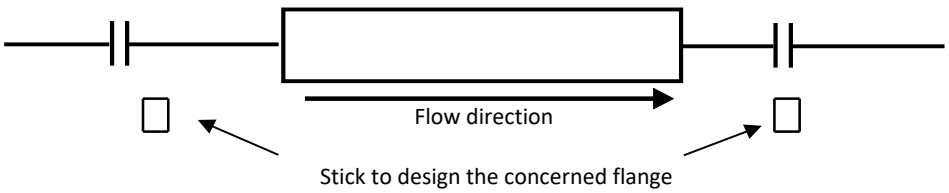
MASTER


TAG
091-1-J4
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
091-1-J4
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
091-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	091-1-J5	: Joint 091-1-J5			Dwg	123A90-FDL-PP-DI-00091-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004025		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench T064079 / RA00598
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

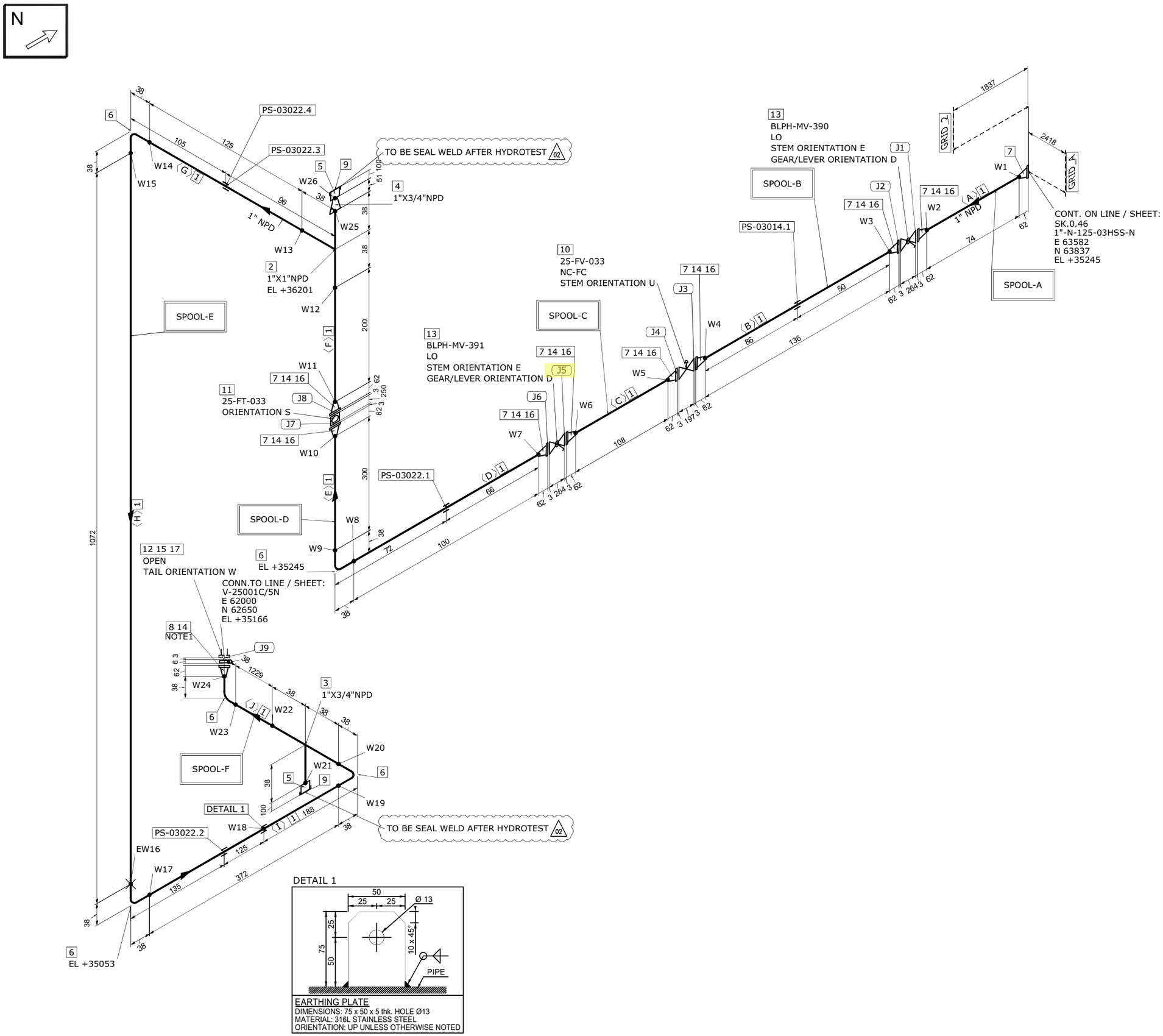
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	Digitaly signed by Emanuele Delfino 2025-01-18T08:29:55.914Z	Digitaly signed by Lorenzo Novaga 2025-01-20T09:01:35.291Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	108	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-03014.1
PS-03022.1
PS-03022.3
PS-03022.4
PS-03022.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-187-03HSS-N

SK.091

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00091
SHEET / OF	1/1	REV.	02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

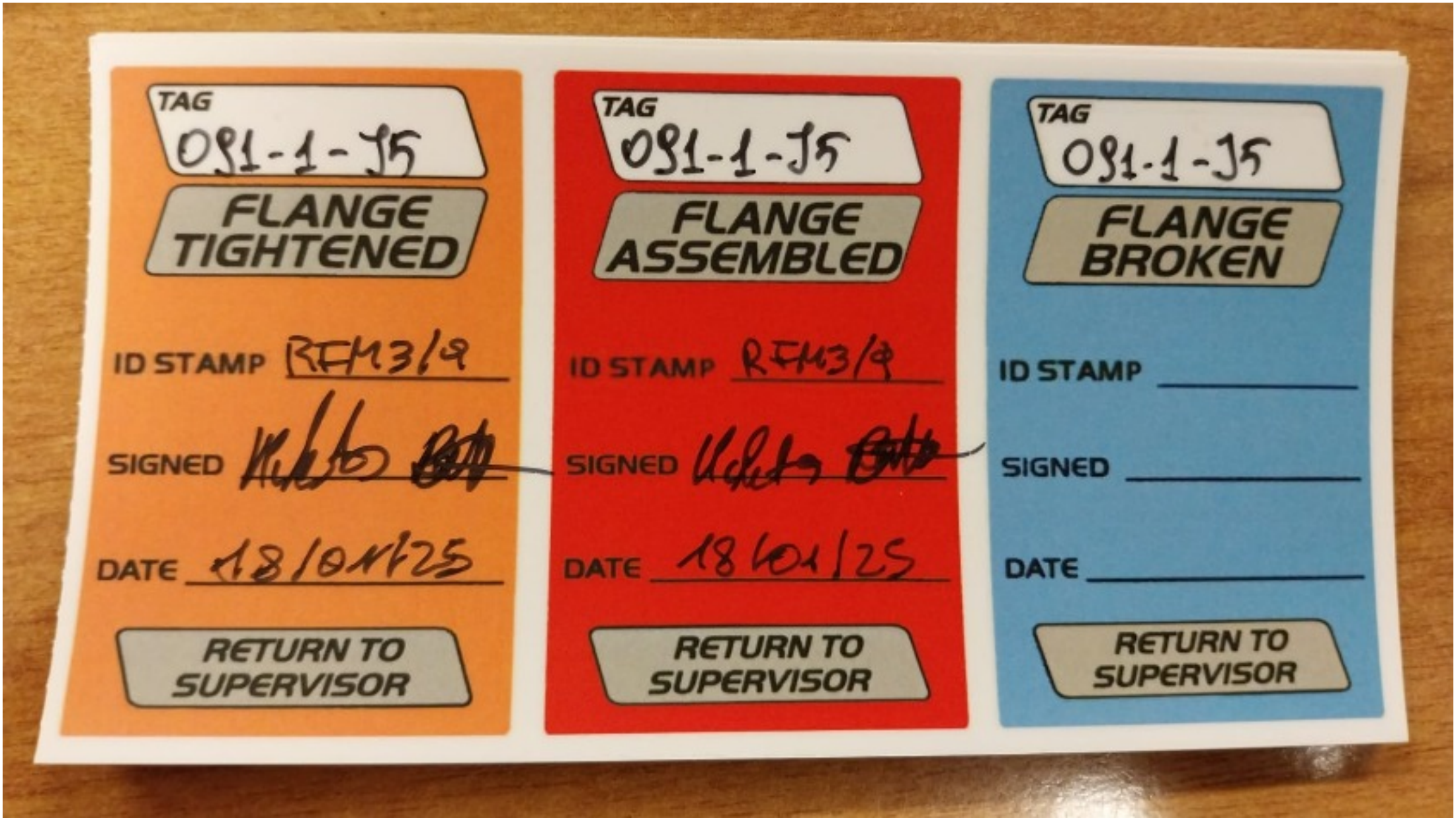
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80017
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

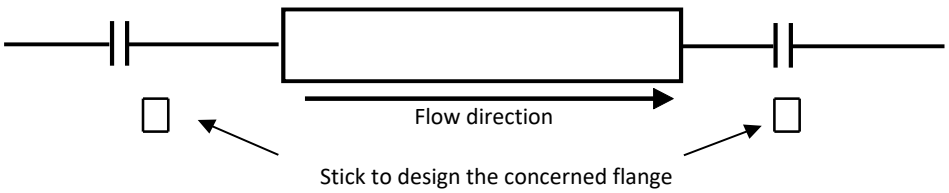
MASTER


TAG
091-1-J5
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
091-1-J5
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 18/01/25
RETURN TO SUPERVISOR
TAG
091-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	092-1-J1	: Joint 092-1-J1			Dwg	123A90-FDL-PP-DI-00092-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004030		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 / RD00261

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

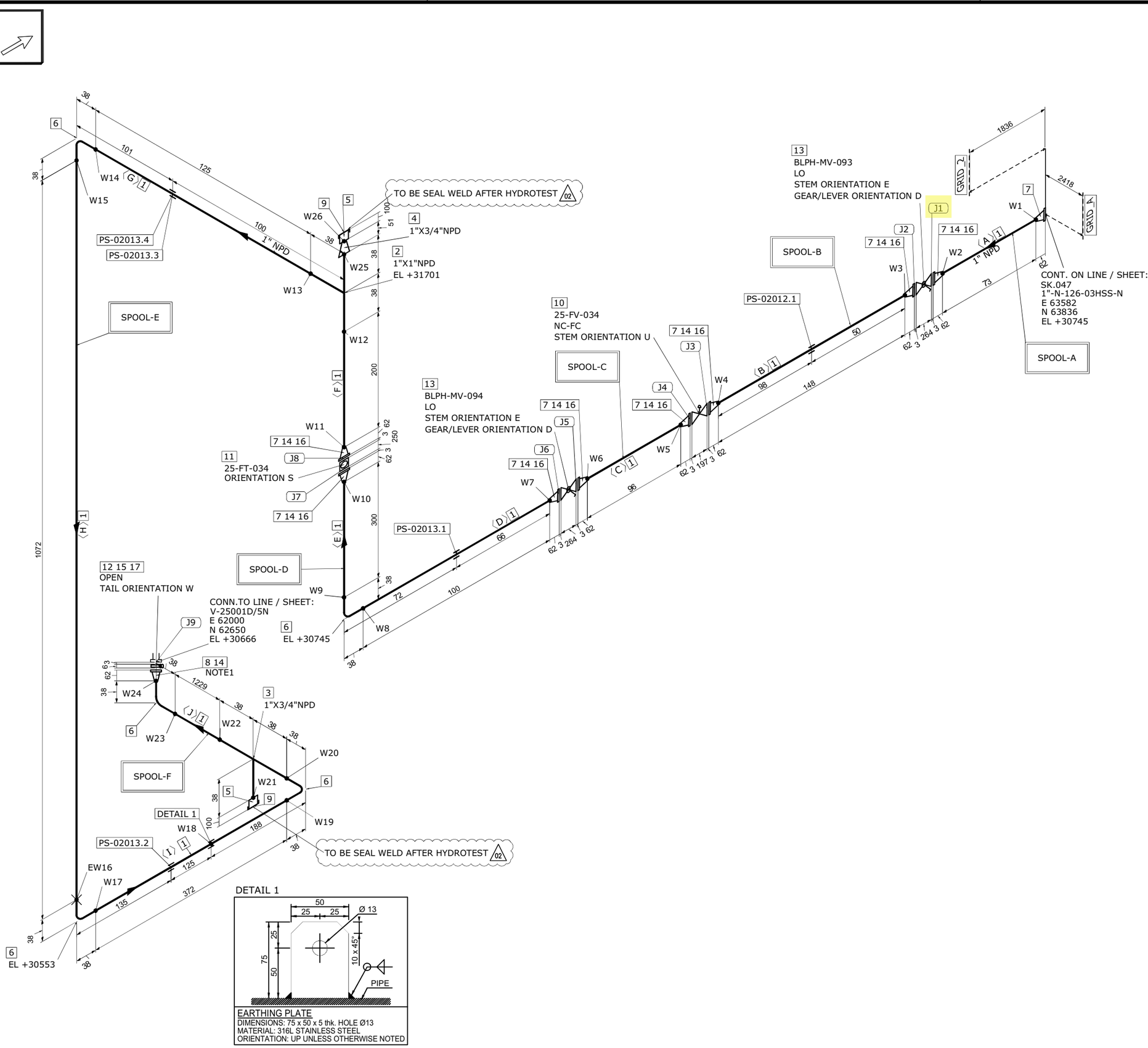
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:46:33.728Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:27:35.778Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	73	BEVEL	BEVEL
B	1	148	BEVEL	BEVEL
C	1	96	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02012.1
PS-02013.1
PS-02013.3
PS-02013.4
PS-02013.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-188-03HSS-N
SK.092

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00092 | SHEET / OF: 1/1 | REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1	PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

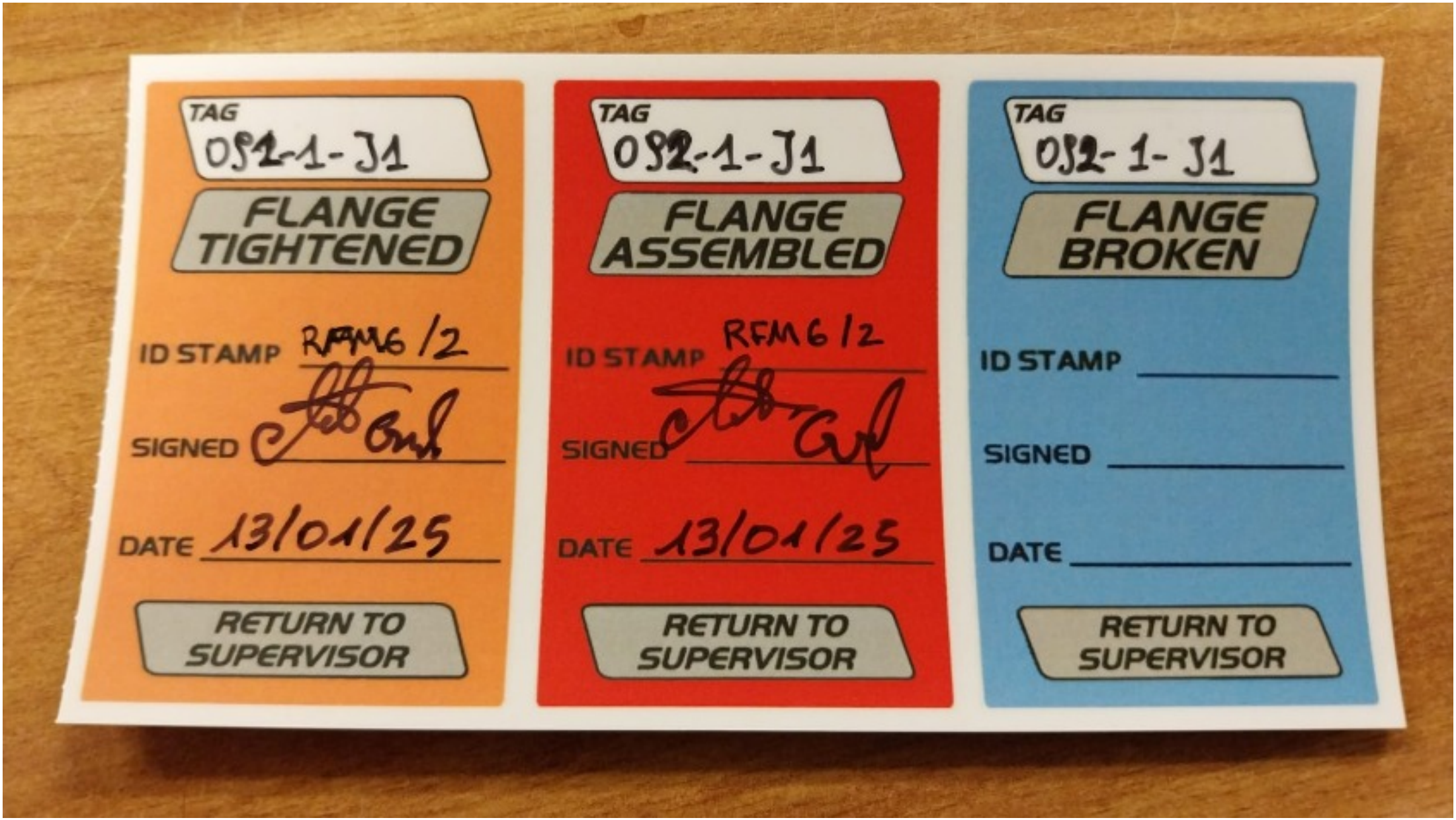
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80018
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

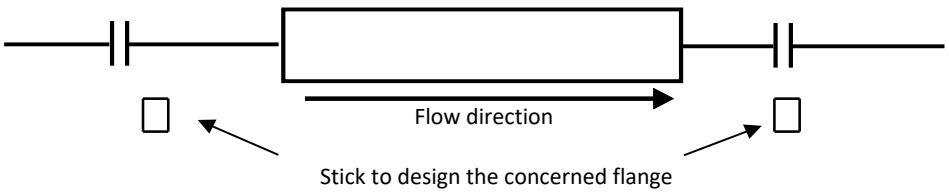
MASTER


TAG
052-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
052-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
052-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	092-1-J2	: Joint 092-1-J2			Dwg	123A90-FDL-PP-DI-00092-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004031		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Stick to design the concerned flange

Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

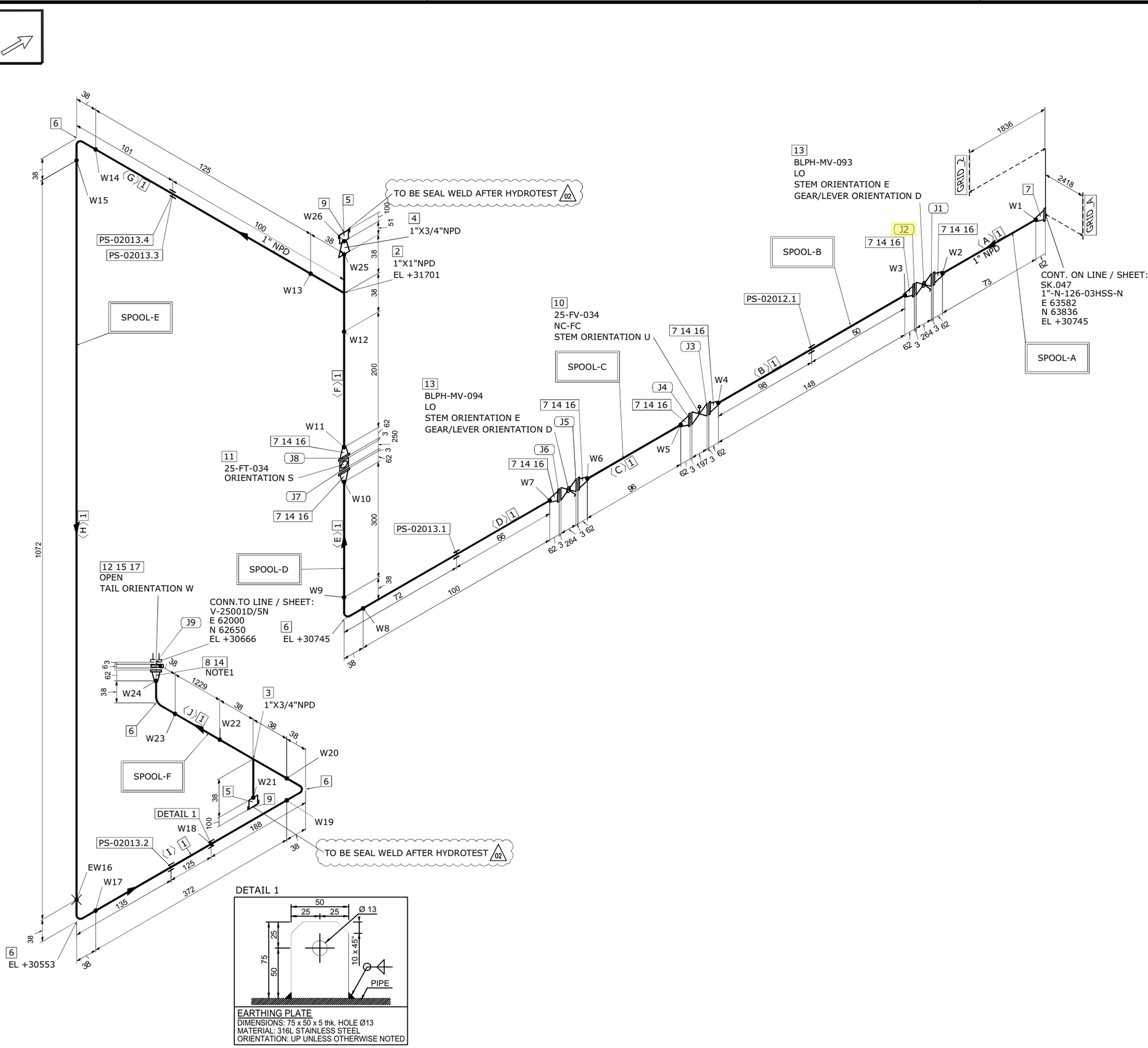
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:46:47.683Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:22:03.366Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	73	BEVEL	BEVEL
B	1	148	BEVEL	BEVEL
C	1	96	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02012.1
PS-02013.1
PS-02013.3
PS-02013.4
PS-02013.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-188-03HSS-N
SK.092

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00092 | SHEET / OF: 1/1 | REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1	PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

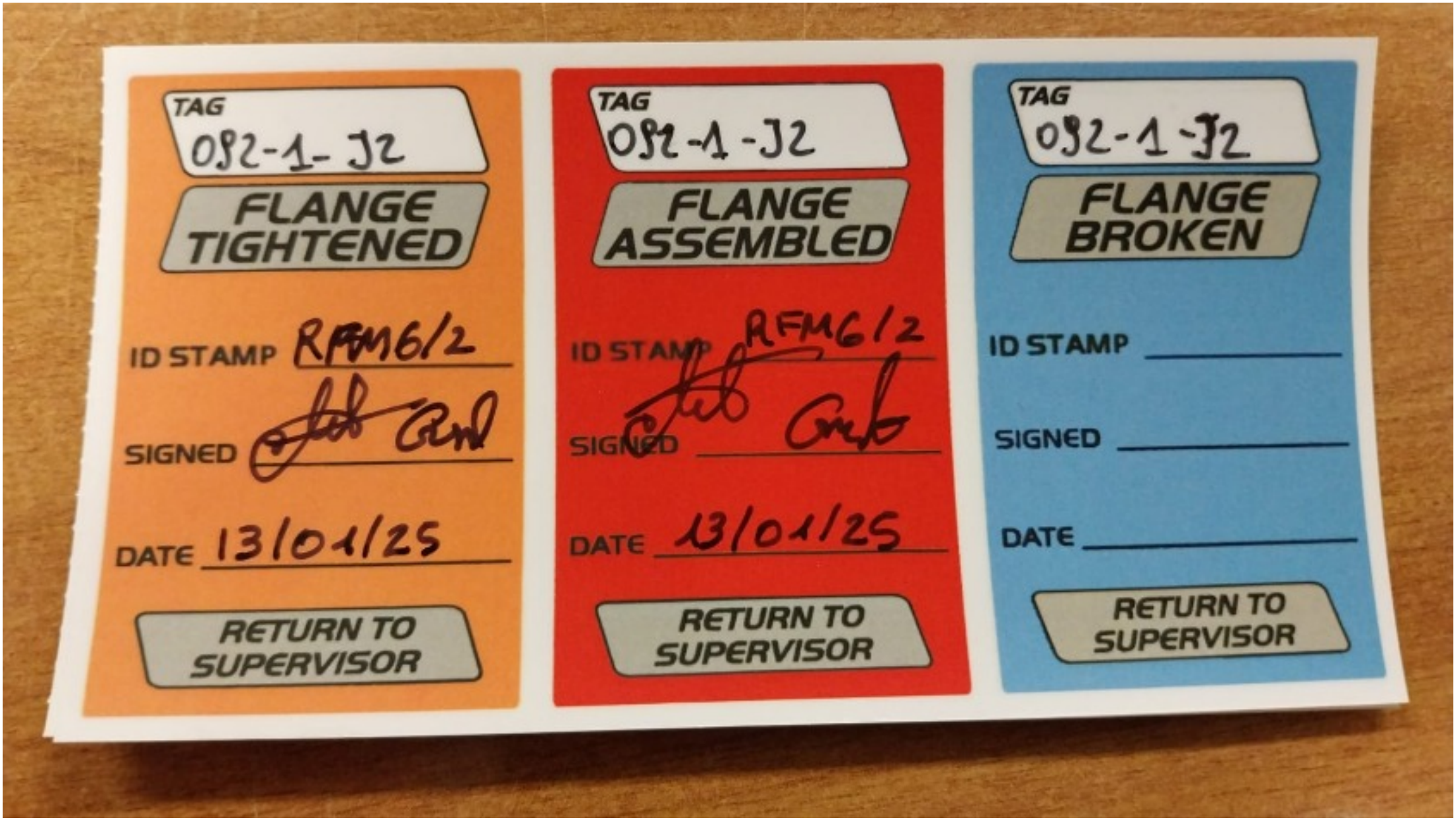
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80018
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

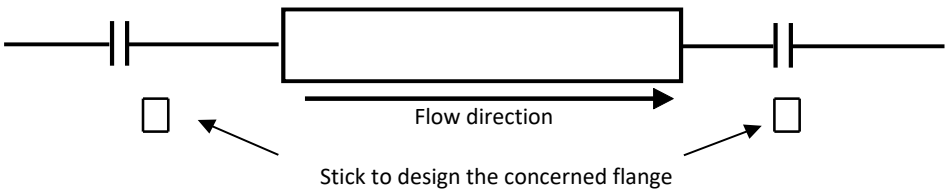
MASTER


TAG
092-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
092-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
092-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	092-1-J3	: Joint 092-1-J3			Dwg	123A90-FDL-PP-DI-00092-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004032		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27
							Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

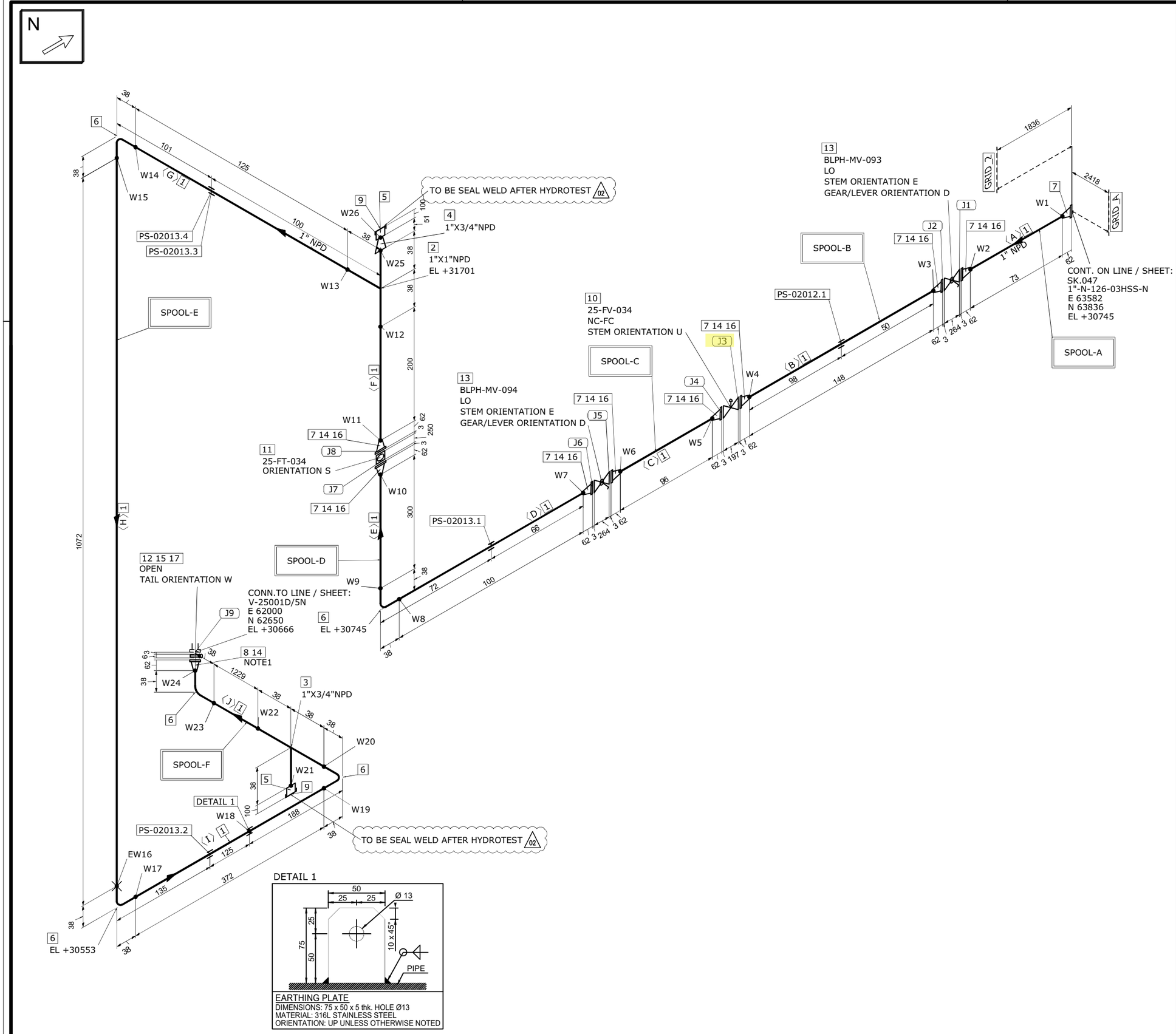
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:30:54.394Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:42:13.266Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	73	BEVEL	BEVEL
B	1	148	BEVEL	BEVEL
C	1	96	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02012.1
PS-02013.1
PS-02013.3
PS-02013.4
PS-02013.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-188-03HSS-N
SK.092

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00092 | SHEET / OF: 1/1 | REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]			
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

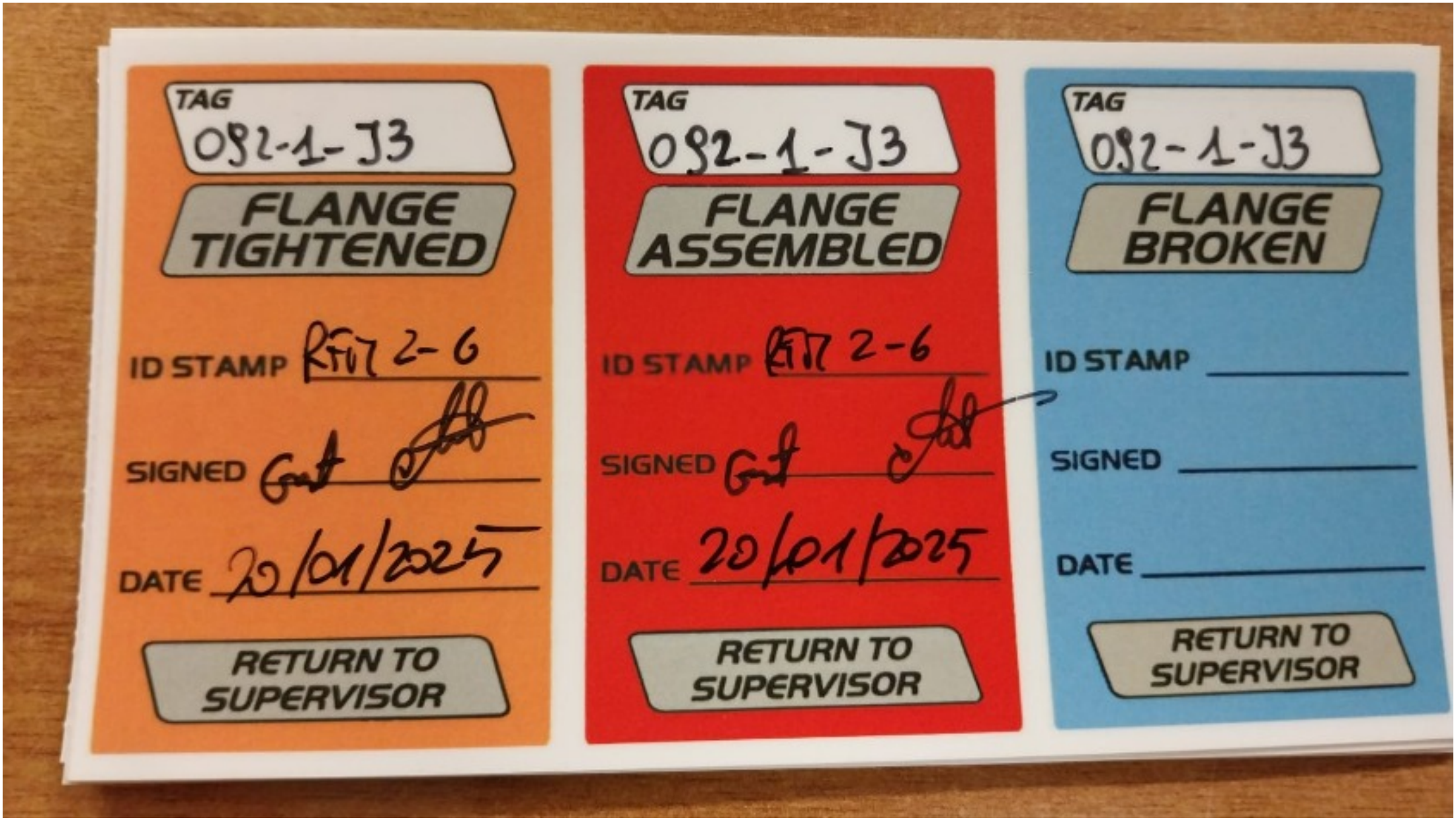
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80018
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

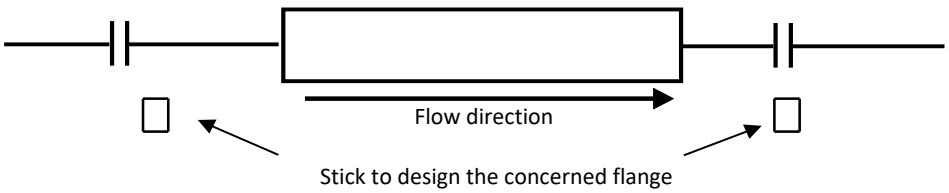
MASTER


TAG
082-1-J3
FLANGE TIGHTENED
ID STAMP RFT 2-6
SIGNED
DATE 20/01/2025
RETURN TO SUPERVISOR
TAG
082-1-J3
FLANGE ASSEMBLED
ID STAMP RFT 2-6
SIGNED
DATE 20/01/2025
RETURN TO SUPERVISOR
TAG
082-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	092-1-J4	: Joint 092-1-J4		Dwg	123A90-FDL-PP-DI-00092-01	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10004033	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX27	Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

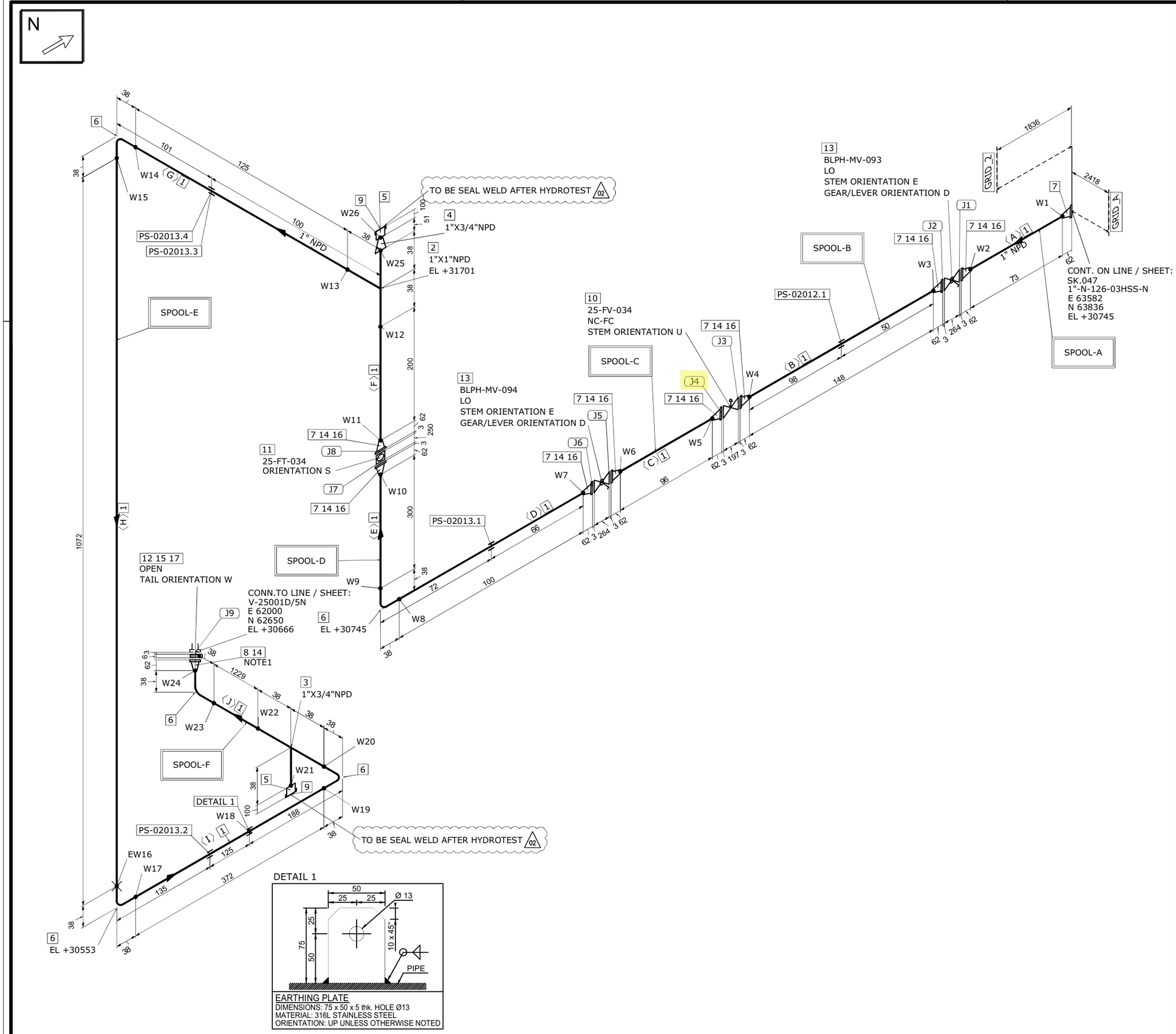
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:31:08.313Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:42:39.254Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	73	BEVEL	BEVEL
B	1	148	BEVEL	BEVEL
C	1	96	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02012.1
PS-02013.1
PS-02013.3
PS-02013.4
PS-02013.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-188-03HSS-N
SK.092

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00092 | SHEET / OF: 1/1 | REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II			
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80018
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

MASTER

TAG
OS2-1-J4

FLANGE TIGHTENED

ID STAMP RT72-6

SIGNED

DATE 22/01/2025

RETURN TO SUPERVISOR

TAG
OS2-1-J4

FLANGE ASSEMBLED

ID STAMP RT72-6

SIGNED

DATE 22/01/2025

RETURN TO SUPERVISOR

TAG
OS2-1-J4

FLANGE BROKEN

ID STAMP

SIGNED

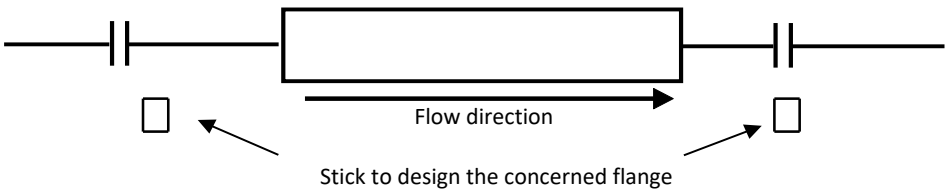
DATE

RETURN TO SUPERVISOR

ITEM	Tag	092-1-J5	: Joint 092-1-J5			Dwg	123A90-FDL-PP-DI-00092-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004034		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

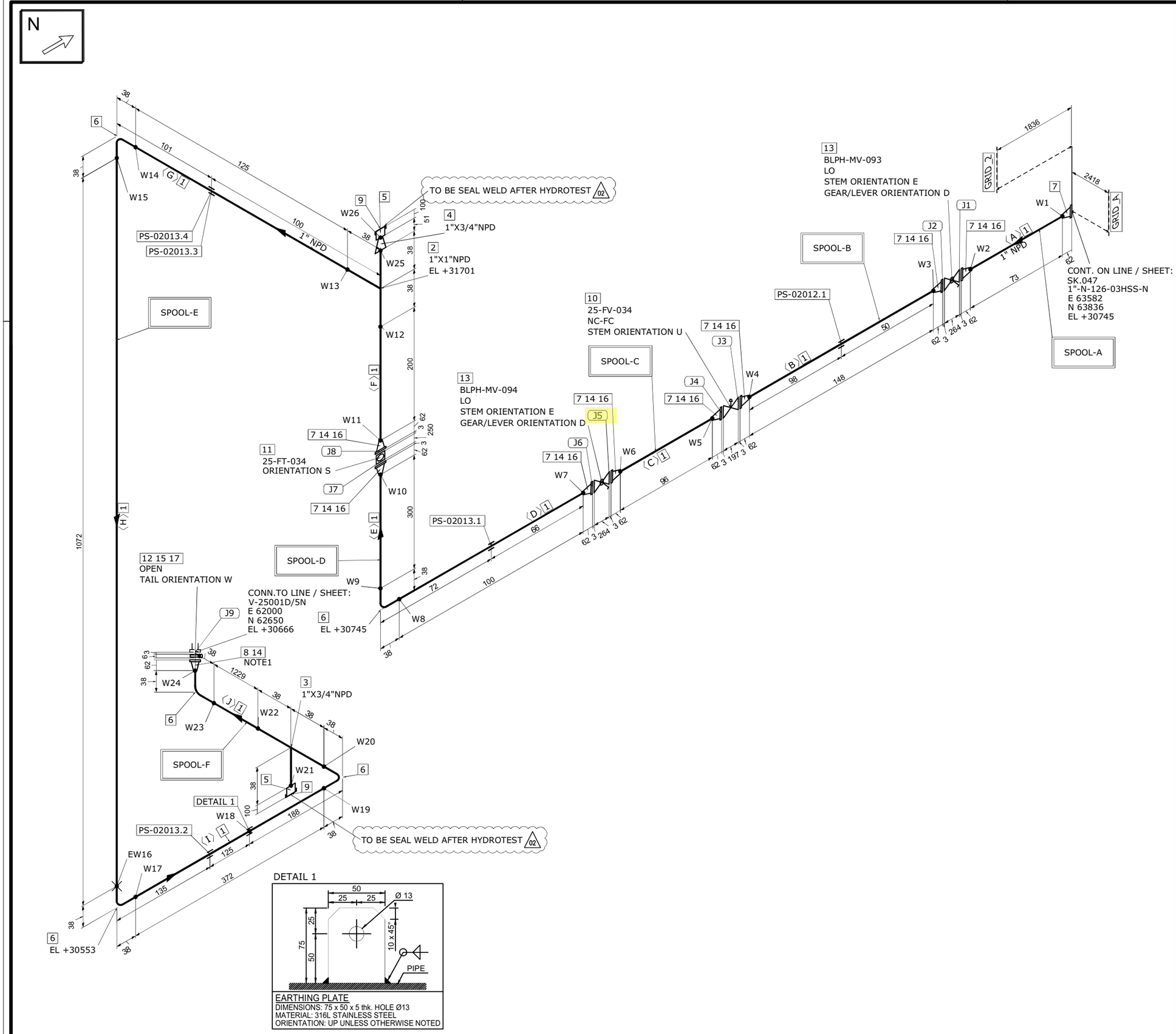
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:31:20.048Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:53:06.417Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	73	BEVEL	BEVEL
B	1	148	BEVEL	BEVEL
C	1	96	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02012.1
PS-02013.1
PS-02013.3
PS-02013.4
PS-02013.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-188-03HSS-N
SK.092

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00092 | SHEET / OF: 1/1 | REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1	PED CATEGORY	II				
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

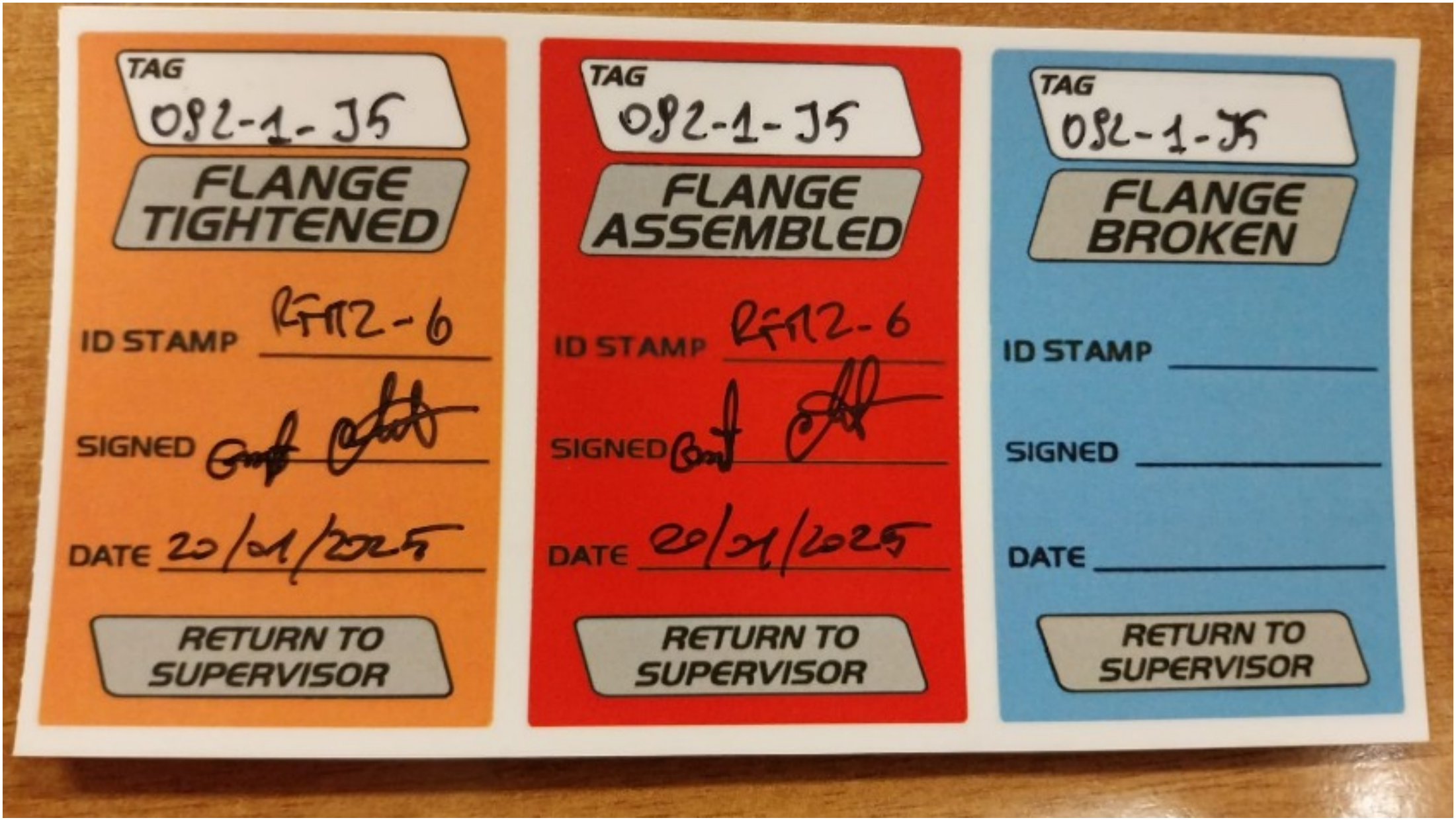
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80018
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

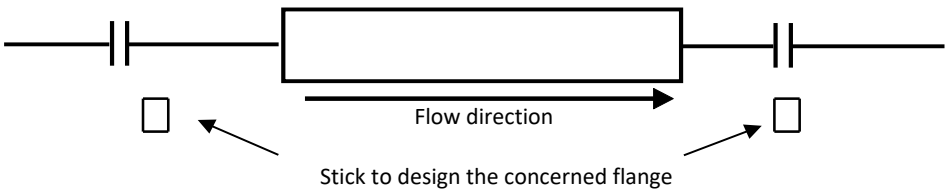
MASTER


TAG
082-1-J5
FLANGE TIGHTENED
ID STAMP RH12-6
SIGNED
DATE 20/01/2025
RETURN TO SUPERVISOR
TAG
082-1-J5
FLANGE ASSEMBLED
ID STAMP RH12-6
SIGNED
DATE 20/01/2025
RETURN TO SUPERVISOR
TAG
082-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	093-1-J1	: Joint 093-1-J1		Dwg	123A90-FDL-PP-DI-00093-01	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10004039	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX27	Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

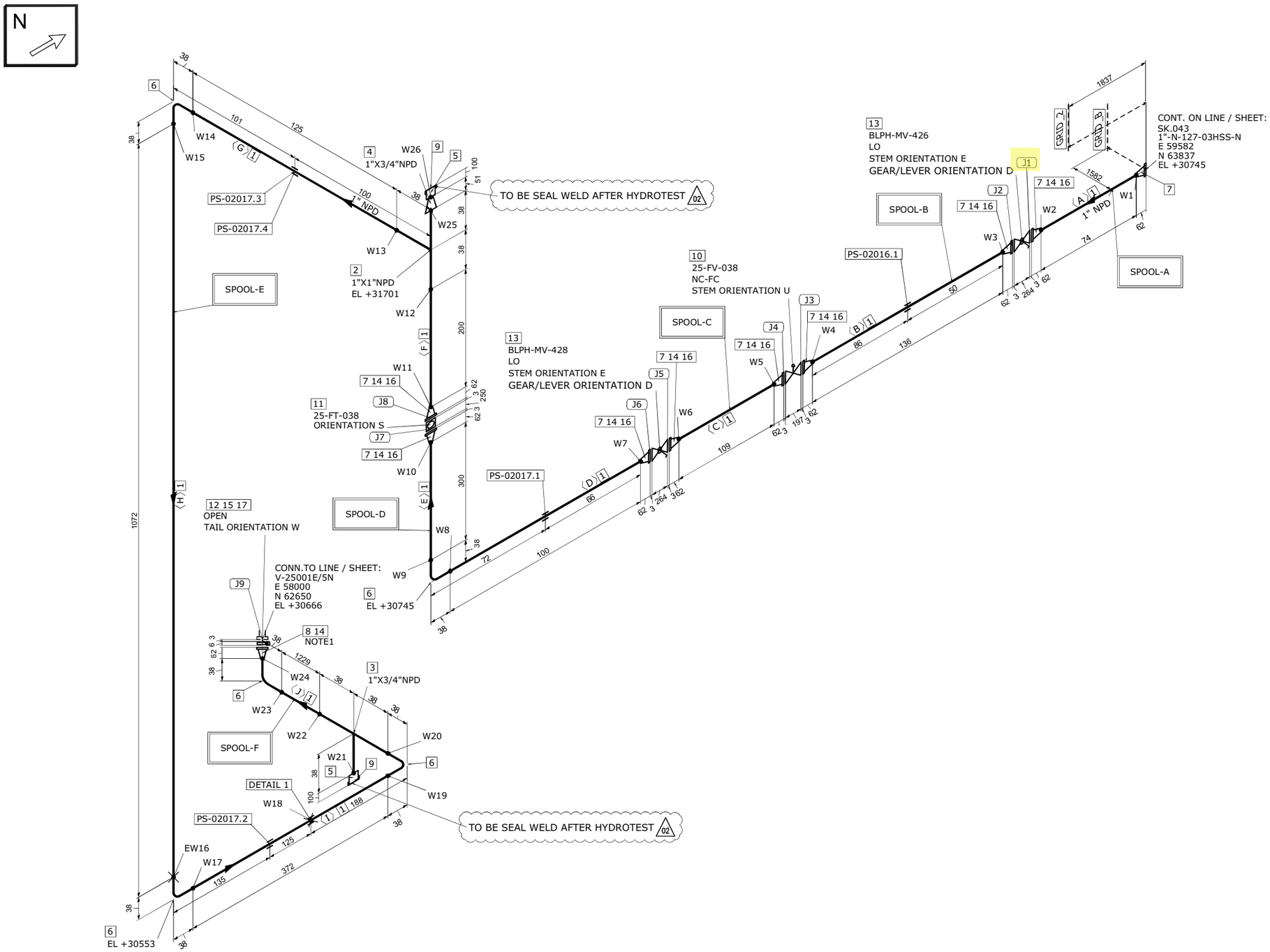
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

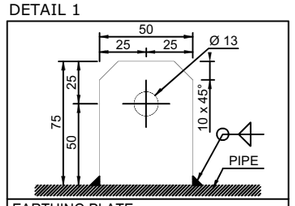
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:47:00.466Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T17:43:08.128Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02016.1
PS-02017.1
PS-02017.3
PS-02017.4
PS-02017.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-189-03HSS-N

SK.093

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
DATE	17-09-2024				
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00093	SHEET / OF	1/1
REV.	02				

LINE DATA

NDT INSPECTION CATEGORY	1			PED CATEGORY	II				
PAINTING	SYSTEM 6A		BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N		THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]	
HEAT TRACING	--			TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water	

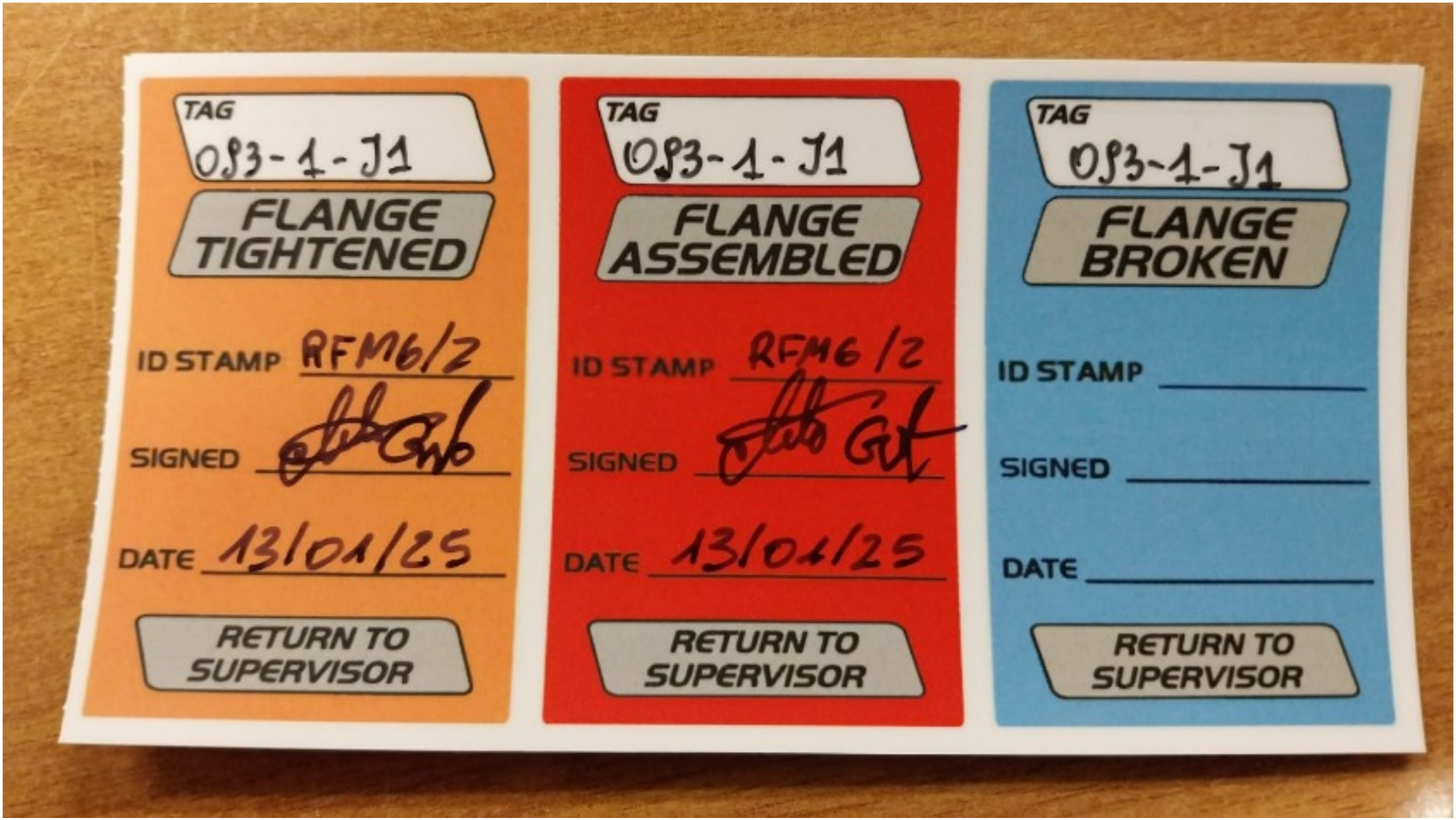
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80019
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

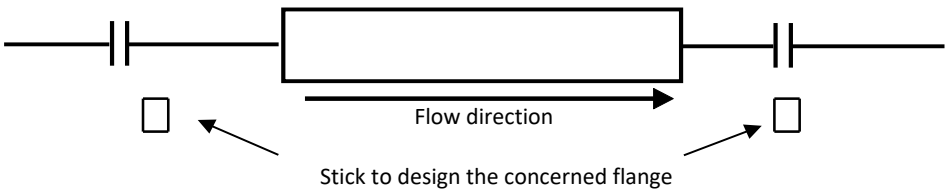
MASTER


TAG
083-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
083-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
083-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	093-1-J2	: Joint 093-1-J2			Dwg	123A90-FDL-PP-DI-00093-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004040		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

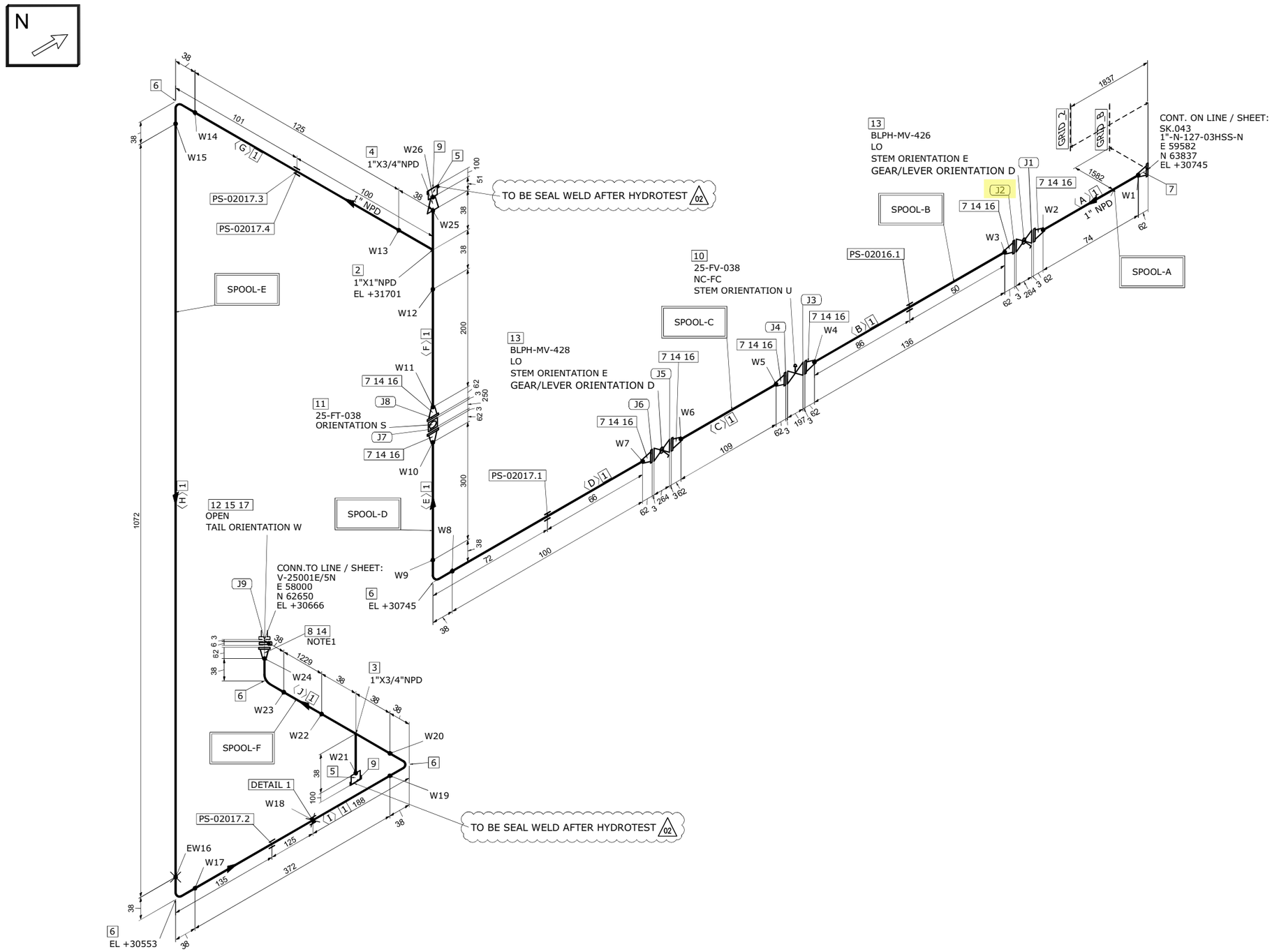
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

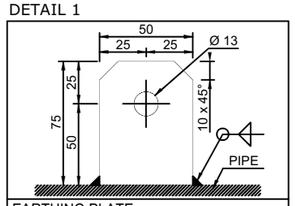
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:47:17.046Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T17:44:04.132Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02016.1
PS-02017.1
PS-02017.3
PS-02017.4
PS-02017.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-189-03HSS-N

SK.093

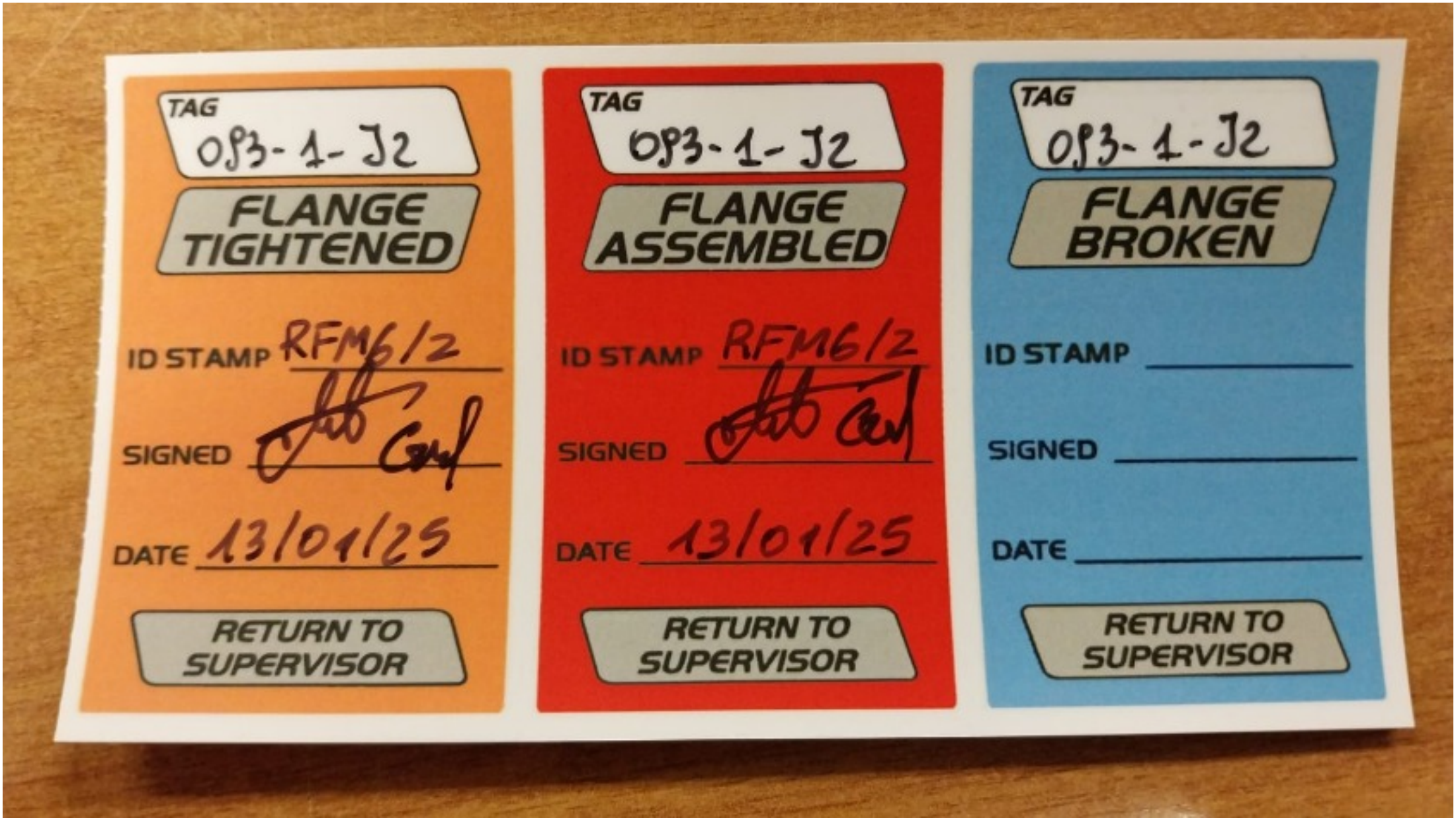
LINE DATA									
NDT INSPECTION CATEGORY	1		PED CATEGORY	II					
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]		
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80019
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

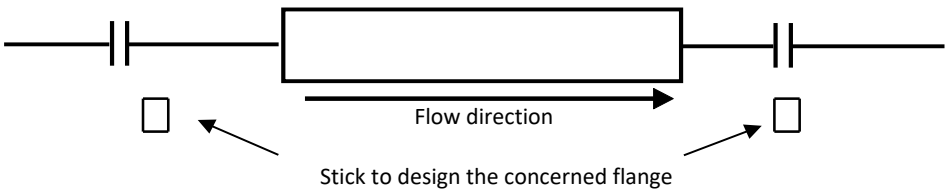
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE	N/A
DRAWN	STAFF SRL
CHECKED	RT
APPROVED	LM
DATE	17-09-2024
FORMAT	A3
DRAWING NO.	123A90-FDL-PP-DI-00093
SHEET / OF	1/1
REV.	02


TAG
OP3-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
OP3-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
OP3-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	093-1-J3	: Joint 093-1-J3			Dwg	123A90-FDL-PP-DI-00093-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004041		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

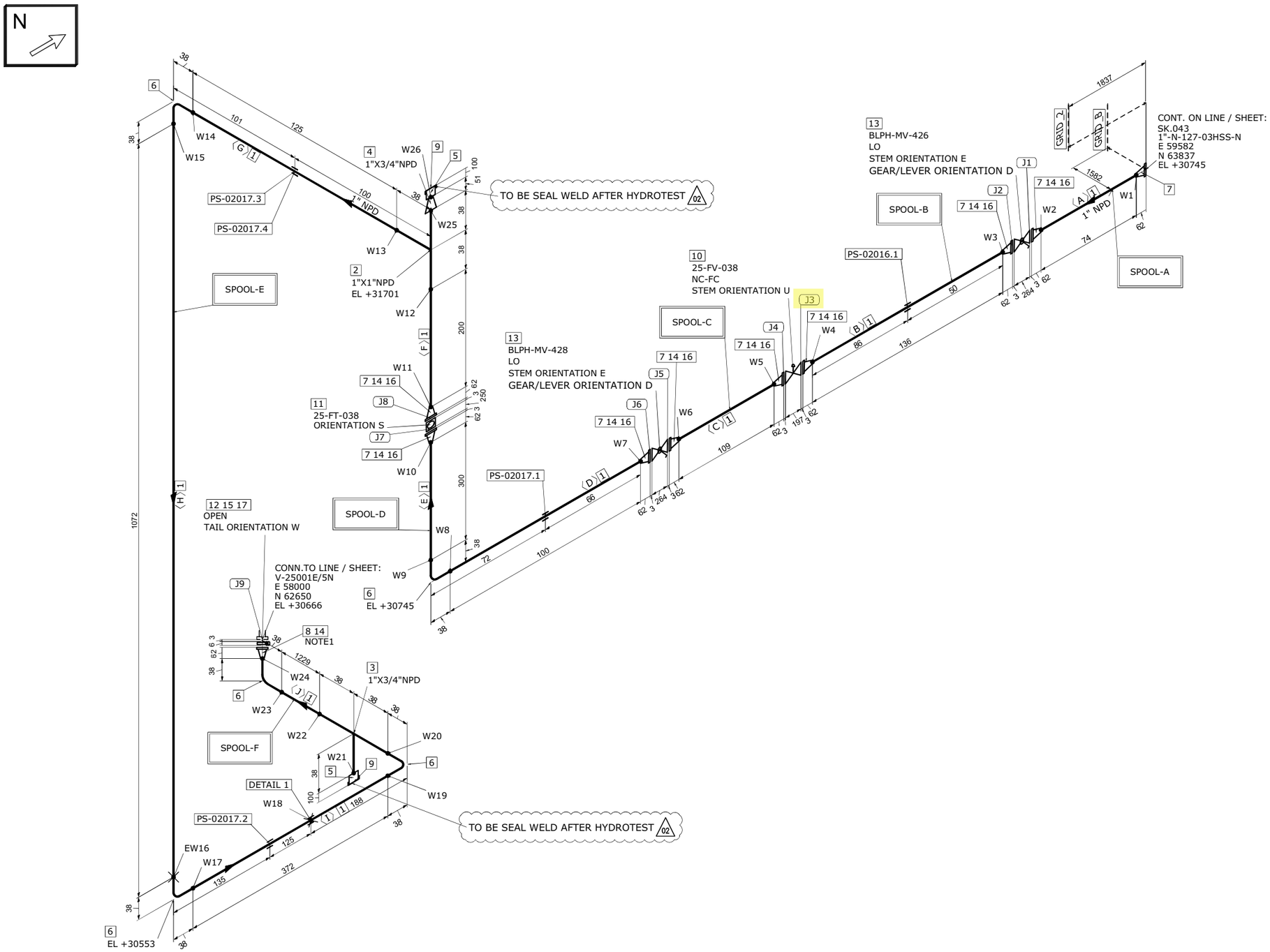
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

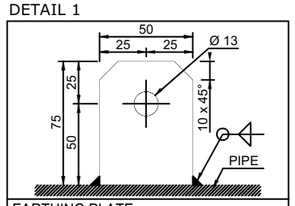
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:32:28.398Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:41:47.169Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02016.1
PS-02017.1
PS-02017.3
PS-02017.4
PS-02017.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-189-03HSS-N

SK.093

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
DATE	17-09-2024				
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00093	SHEET / OF	1/1
REV.	02				

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II					
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]		
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

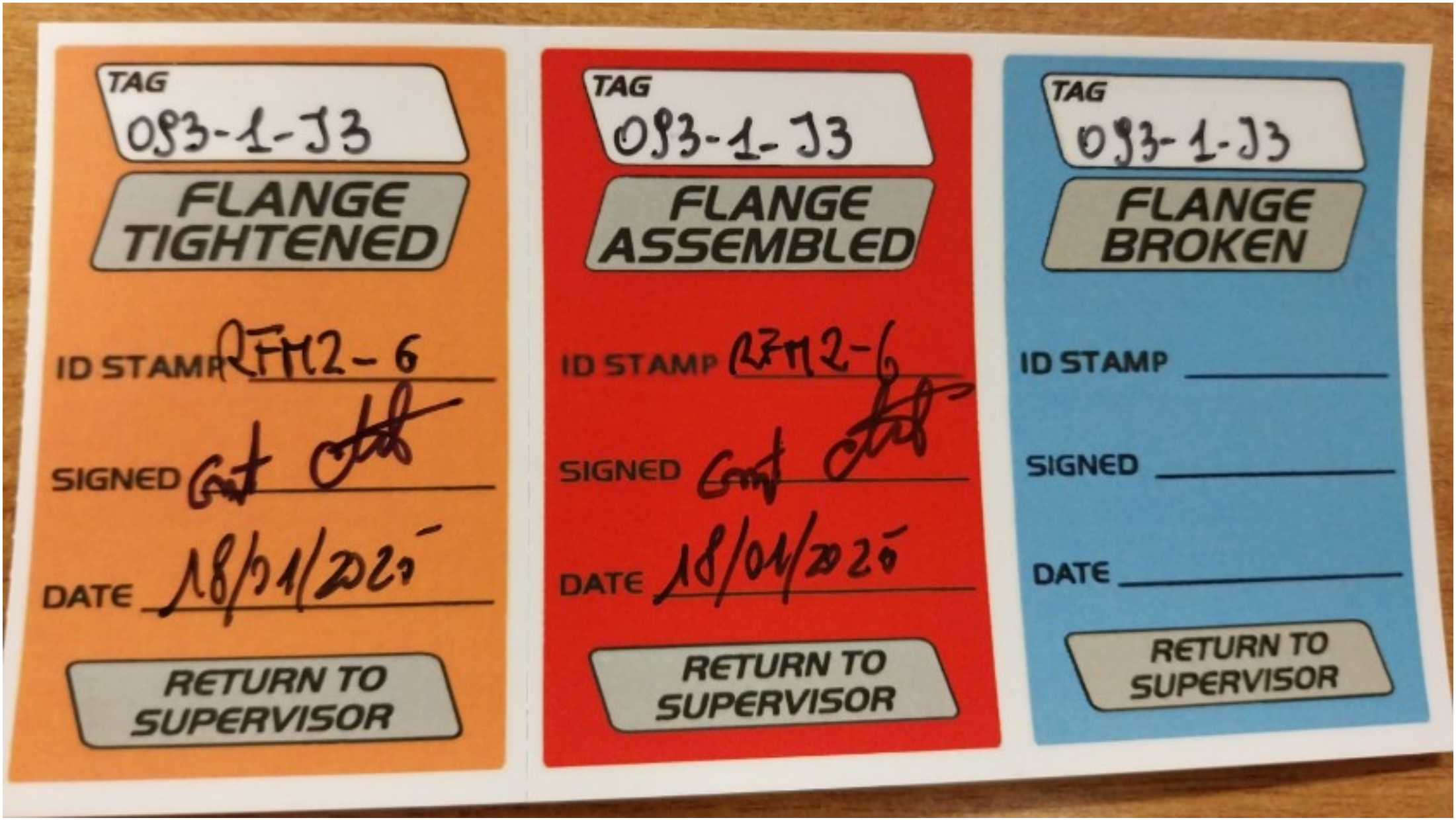
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80019
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

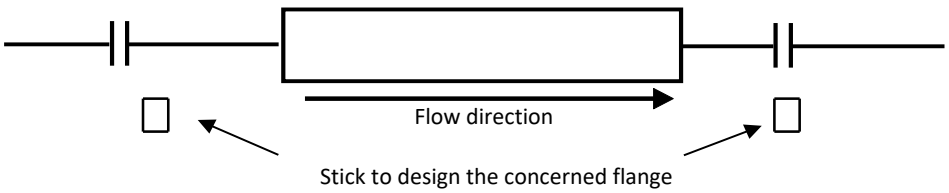
MASTER


TAG
093-1-J3
FLANGE TIGHTENED
ID STAMP RFM2-6
SIGNED
DATE 18/01/2025
RETURN TO SUPERVISOR
TAG
093-1-J3
FLANGE ASSEMBLED
ID STAMP RFM2-6
SIGNED
DATE 18/01/2025
RETURN TO SUPERVISOR
TAG
093-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	093-1-J4	: Joint 093-1-J4			Dwg	123A90-FDL-PP-DI-00093-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004042		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

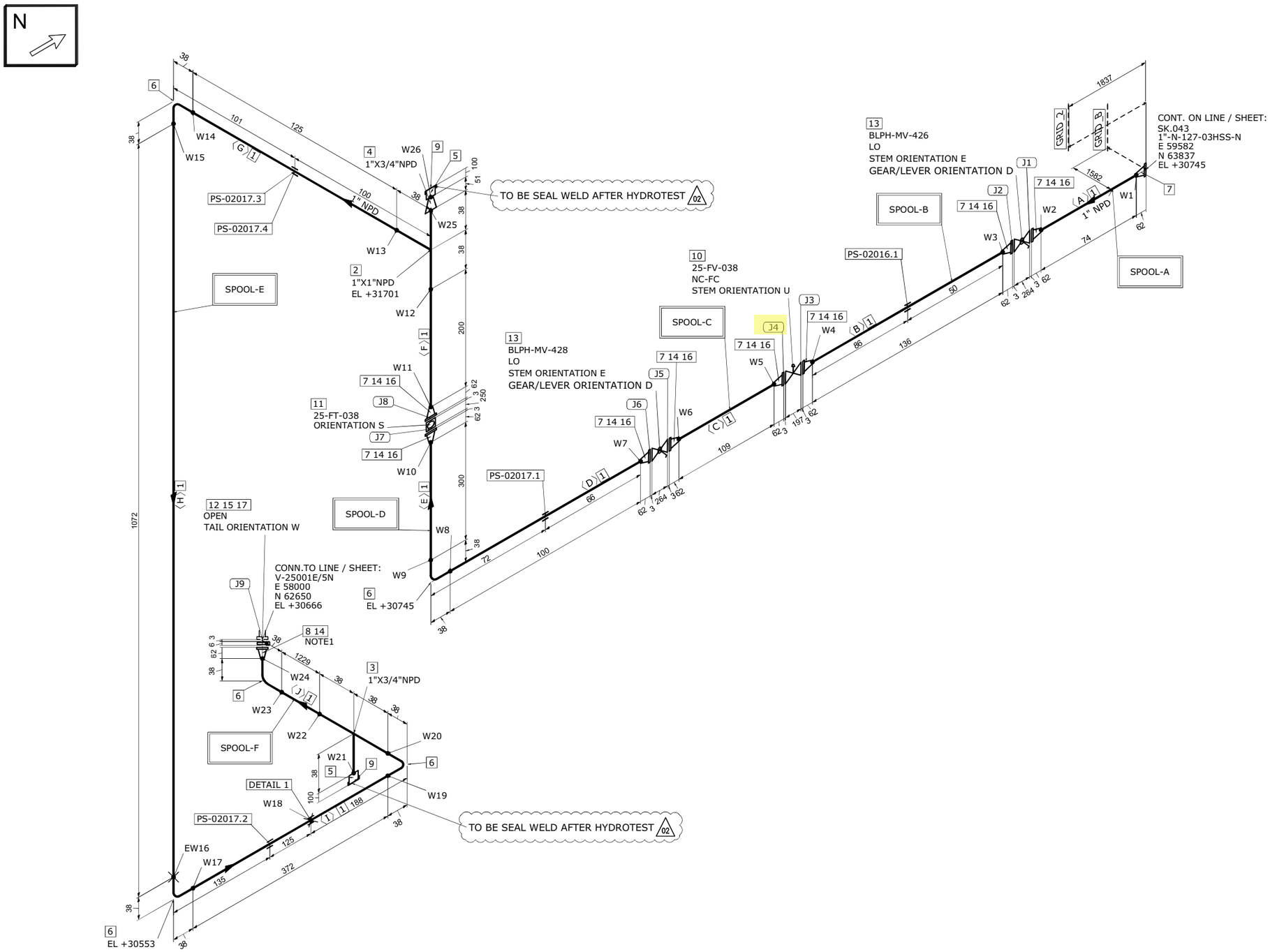
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

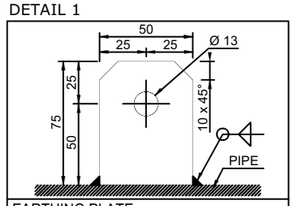
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:32:39.133Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:41:18.712Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02016.1
PS-02017.1
PS-02017.3
PS-02017.4
PS-02017.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-189-03HSS-N

SK.093

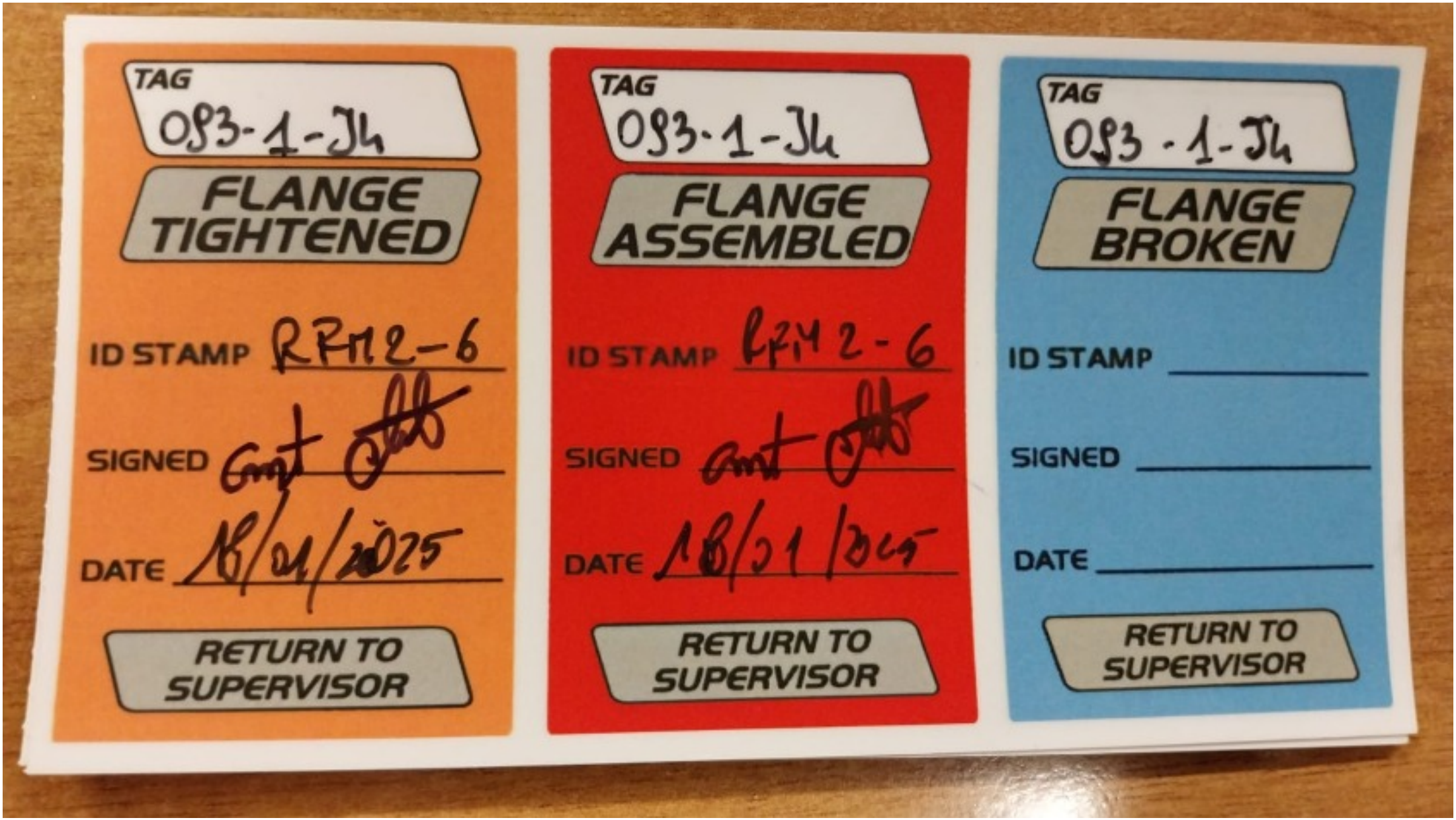
LINE DATA									
NDT INSPECTION CATEGORY	1		PED CATEGORY	II					
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]		
HEAT TRACING	--		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80019
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

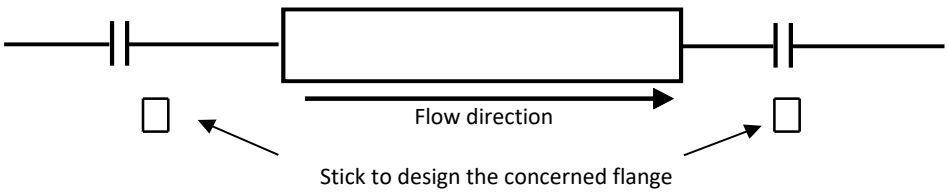
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE	N/A
DRAWN	STAFF SRL
CHECKED	RT
APPROVED	LM
DATE	17-09-2024
FORMAT	A3
DRAWING NO.	123A90-FDL-PP-DI-00093
SHEET / OF	1/1
REV.	02


TAG
083-1-J4
FLANGE TIGHTENED
ID STAMP RFM2-6
SIGNED
DATE 16/01/2025
RETURN TO SUPERVISOR
TAG
083-1-J4
FLANGE ASSEMBLED
ID STAMP RFM2-6
SIGNED
DATE 16/01/2025
RETURN TO SUPERVISOR
TAG
083-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	093-1-J5	: Joint 093-1-J5		Dwg	123A90-FDL-PP-DI-00093-01	
	S/Sys	64-10	: Nitrogen Distribution Network		Module	UD	
TASK	code	C10004043	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX27	Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

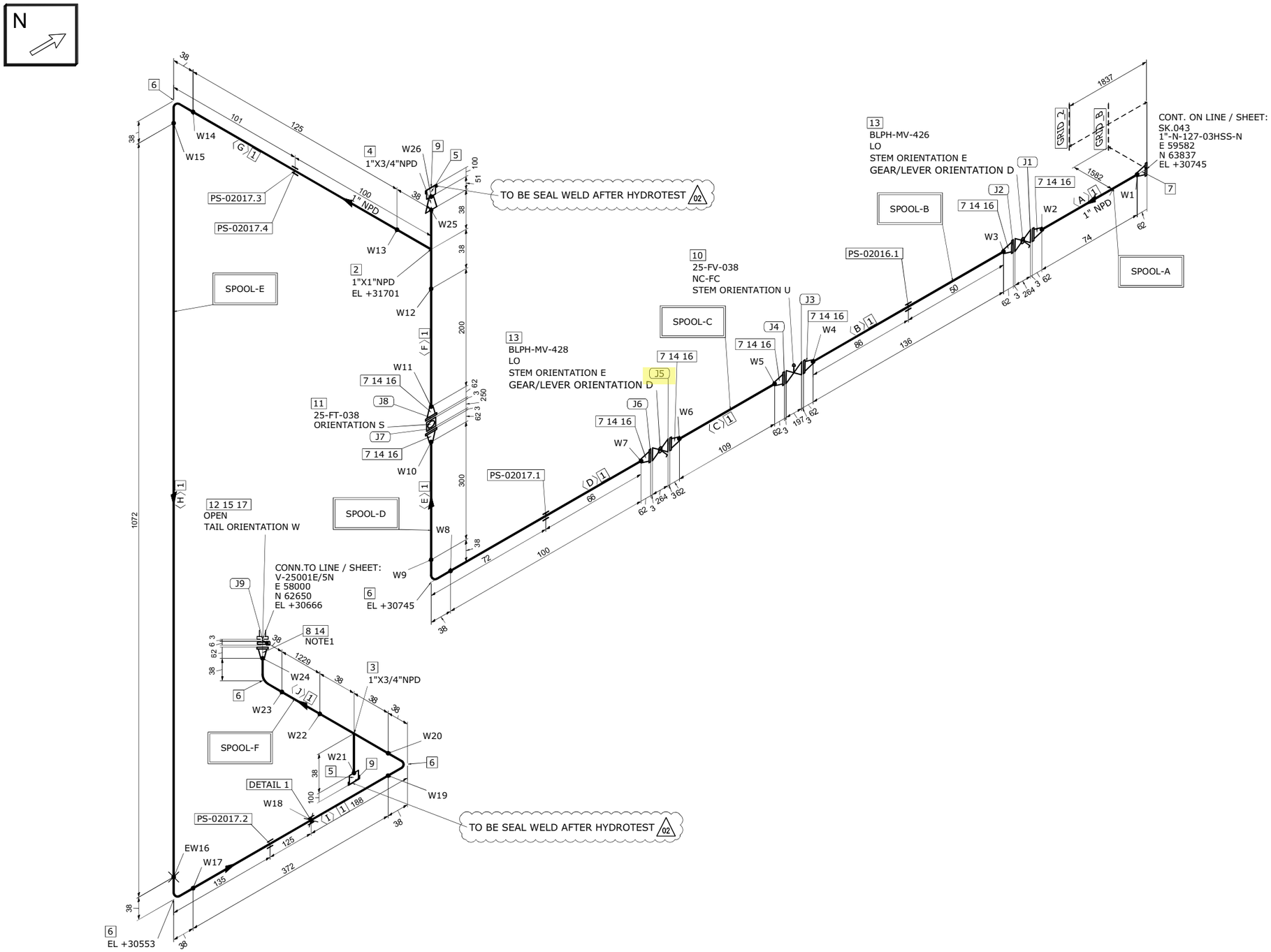
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

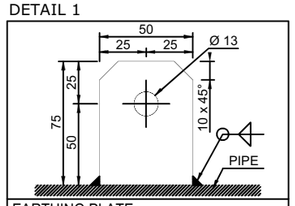
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:32:50.653Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:40:47.777Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
9	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
10	1		Control Valve - FLG 300 #RF	1	40.0
11	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
12	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
13	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
14	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
15	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
16	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
17	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	74	BEVEL	BEVEL
B	1	136	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02016.1
PS-02017.1
PS-02017.3
PS-02017.4
PS-02017.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.8
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-189-03HSS-N

SK.093

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
DATE	17-09-2024				
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00093	SHEET / OF	1/1
REV.	02				

LINE DATA

NDT INSPECTION CATEGORY	1			PED CATEGORY	II				
PAINTING	SYSTEM 6A		BASE RAL RAL 9002	FLUID PHASE	GAS				
INSULATION	TYPE N		THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -29 / 80	[°C]	
HEAT TRACING	--			TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water	

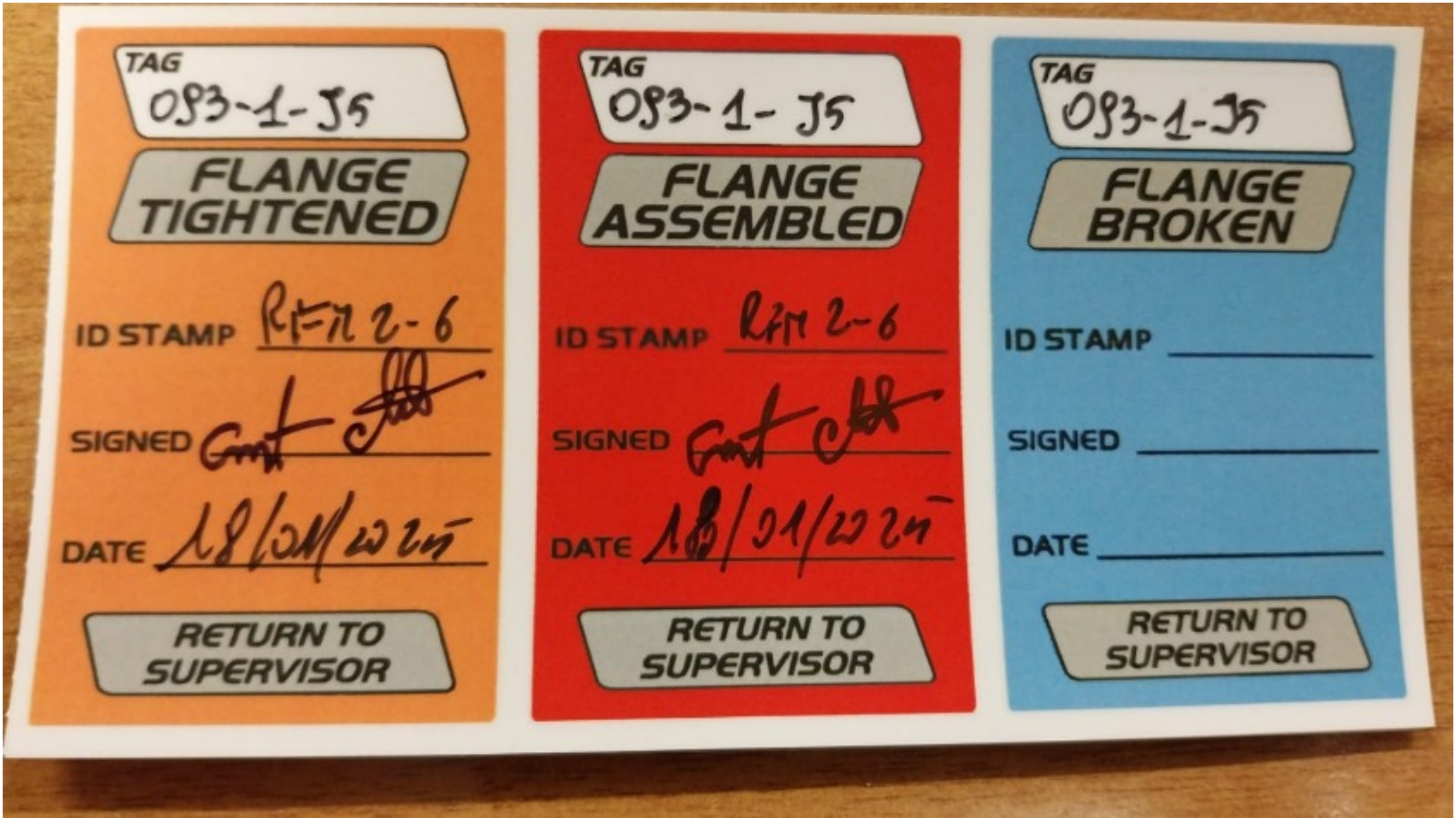
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80019
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

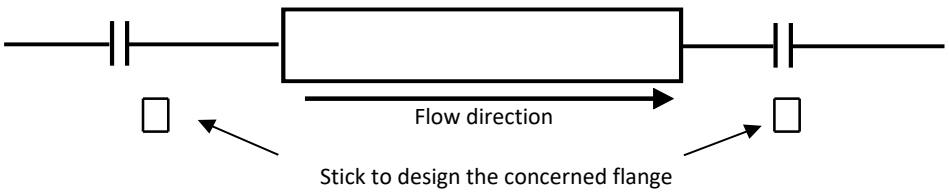
MASTER


TAG
083-1-J5
FLANGE TIGHTENED
ID STAMP RFM 2-6
SIGNED
DATE 18/11/2025
RETURN TO SUPERVISOR
TAG
083-1-J5
FLANGE ASSEMBLED
ID STAMP RFM 2-6
SIGNED
DATE 18/11/2025
RETURN TO SUPERVISOR
TAG
083-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	094-1-J1	: Joint 094-1-J1			Dwg	123A90-FDL-PP-DI-00094-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004048		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

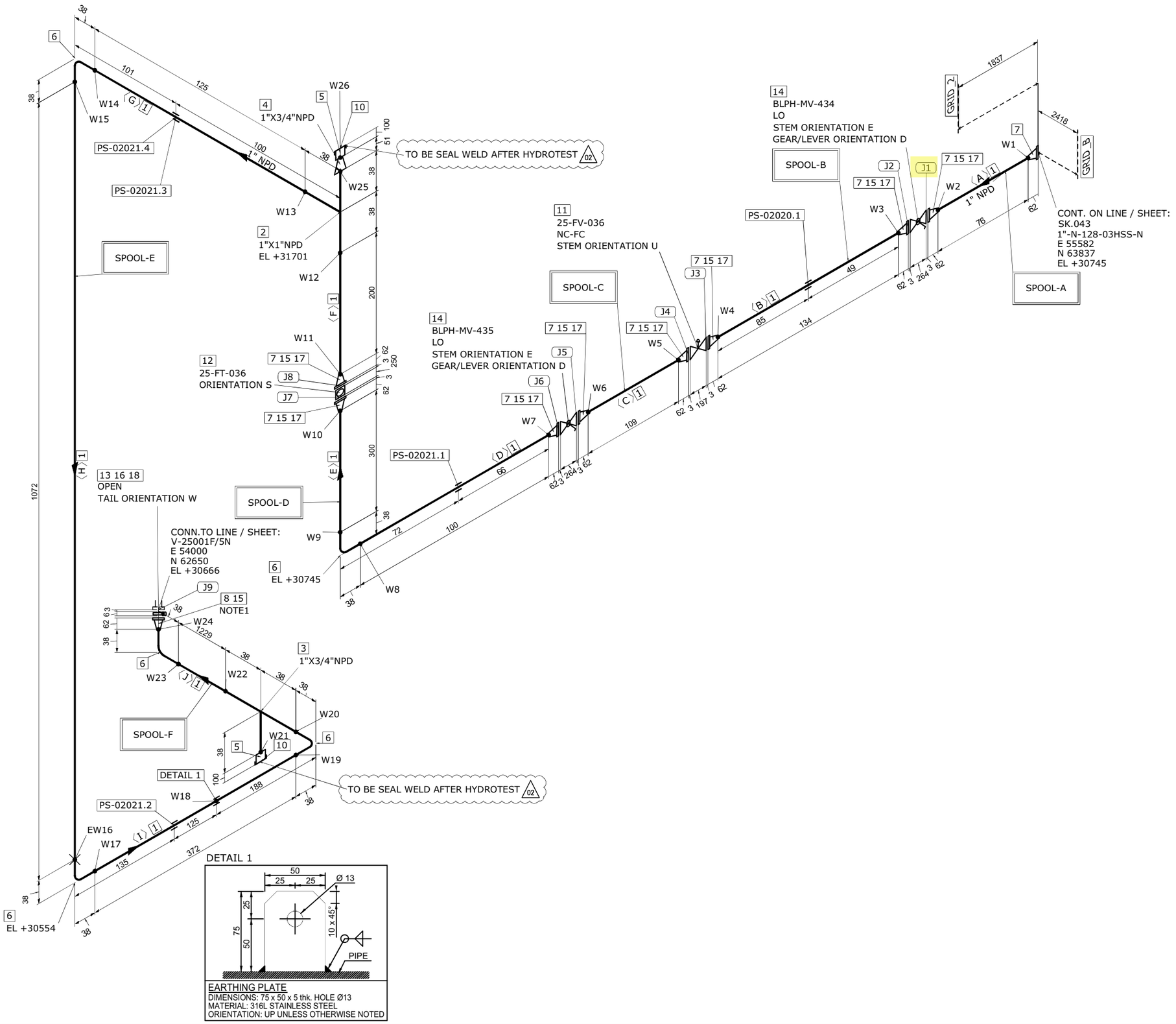
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-15	2025-01-15	
Signature	Digitaly signed by Emanuele Delfino 2025-01-15T06:24:39.096Z	Digitaly signed by Lorenzo Novaga 2025-01-15T08:35:59.787Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	76	BEVEL	BEVEL
B	1	134	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02020.1
PS-02021.1
PS-02021.3
PS-02021.4
PS-02021.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.9
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-190-03HSS-N

SK.094

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00094
SHEET / OF: 1/1
REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1			PED CATEGORY	II		
PAINTING	SYSTEM 6A	BASE RAL RAL 9002		FLUID PHASE	GAS		
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]	
HEAT TRACING	--			TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water

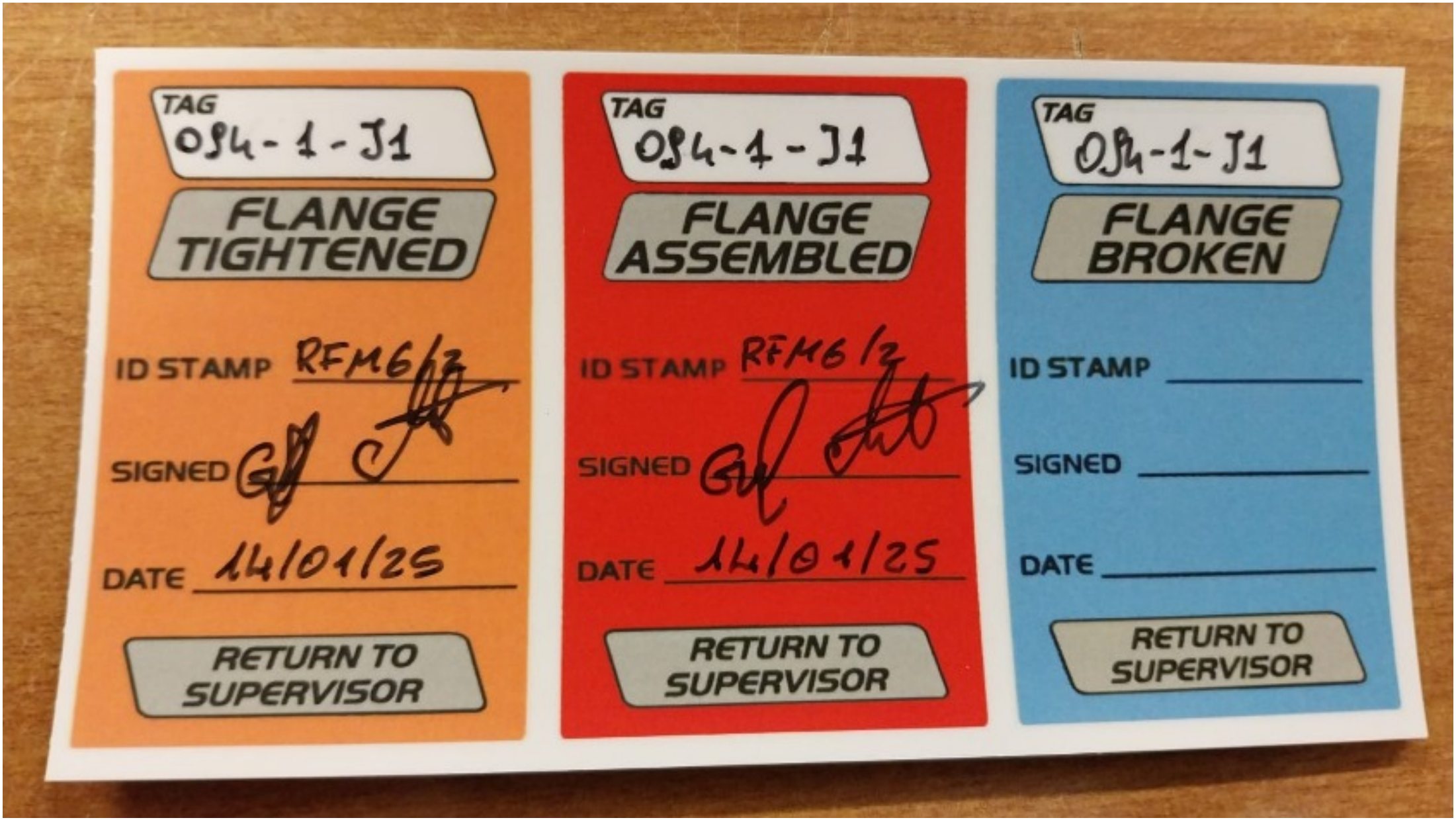
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80020
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

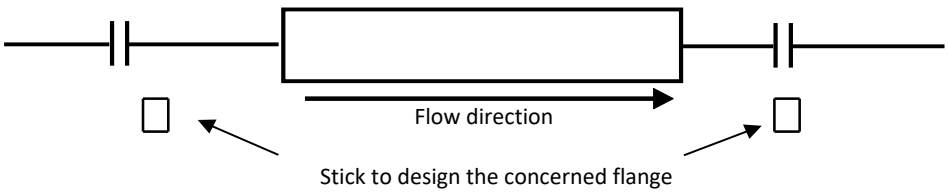
MASTER


TAG
OS4-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/Z
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
OS4-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/Z
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
OS4-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	094-1-J2	: Joint 094-1-J2			Dwg	123A90-FDL-PP-DI-00094-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004049		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

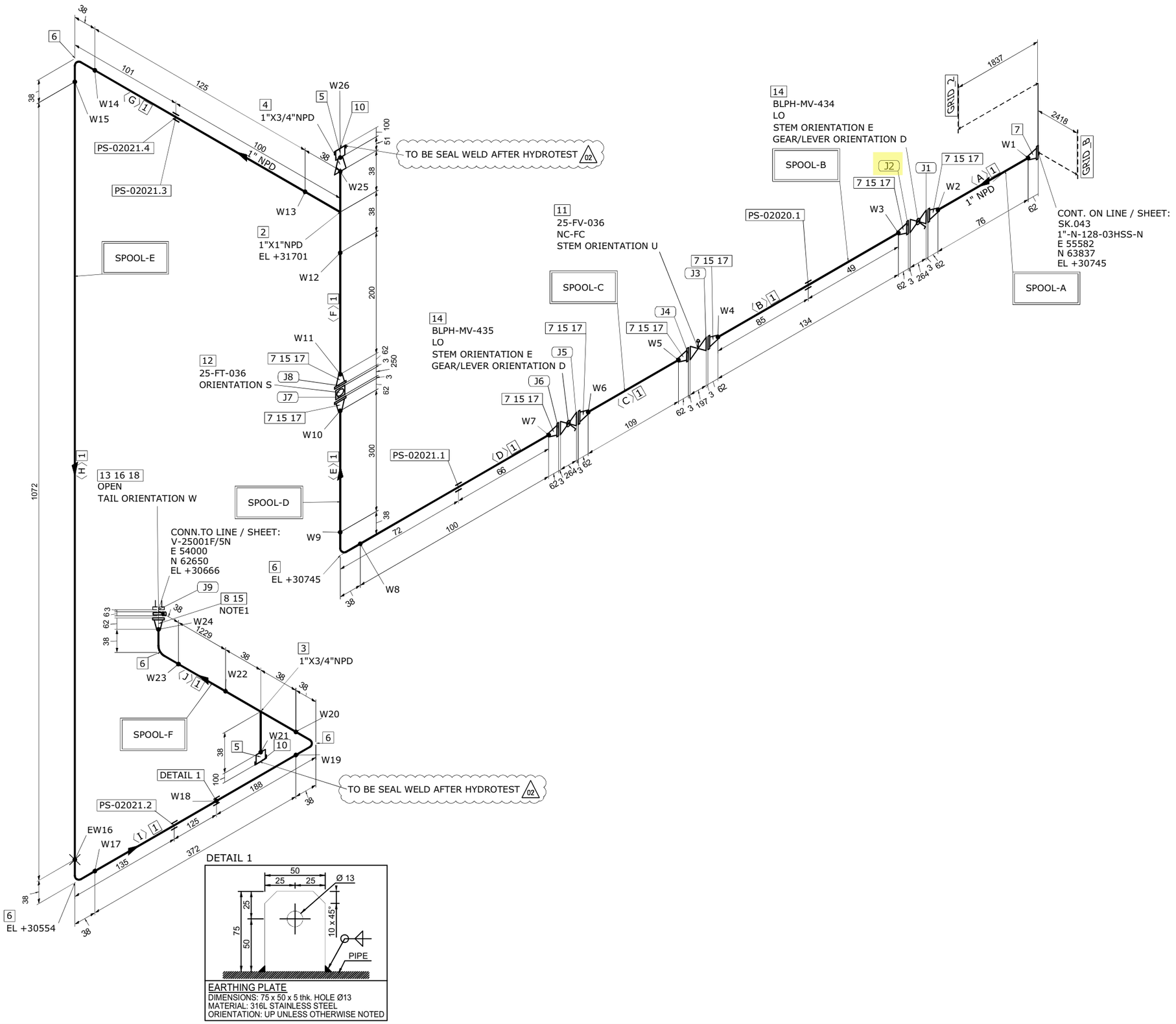
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:24:55.452Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-15T08:36:58.213Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	76	BEVEL	BEVEL
B	1	134	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02020.1
PS-02021.1
PS-02021.3
PS-02021.4
PS-02021.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.9
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-190-03HSS-N

SK.094

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00094
SHEET / OF: 1/1
REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1		PED CATEGORY	II			
PAINTING	SYSTEM 6A	BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

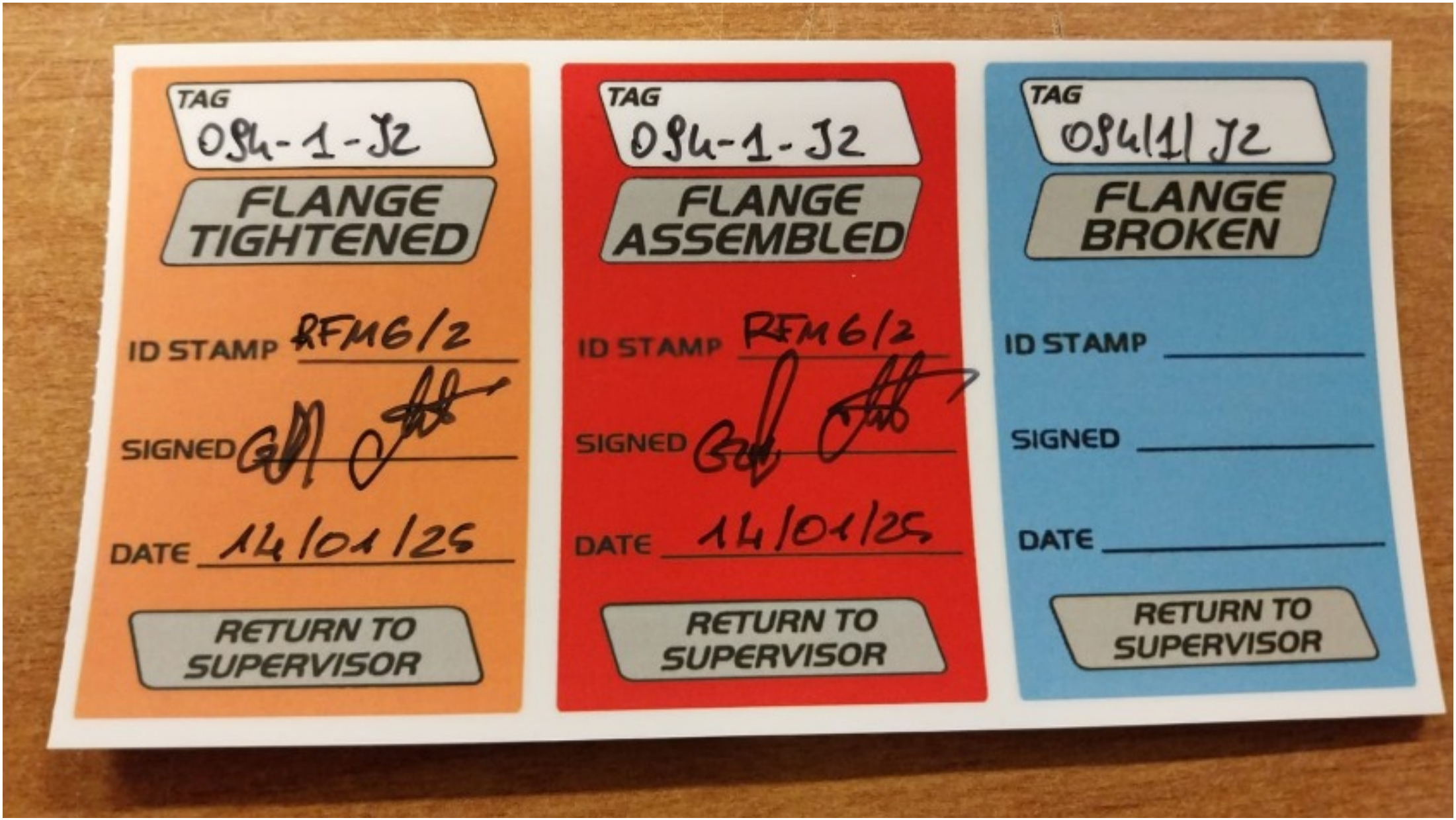
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80020
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

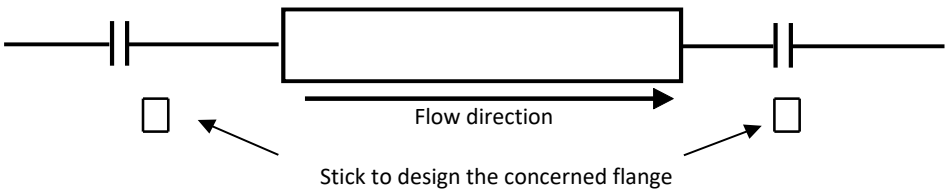
MASTER


TAG
084-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
084-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
084/1/J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	094-1-J3	: Joint 094-1-J3			Dwg	123A90-FDL-PP-DI-00094-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004050		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

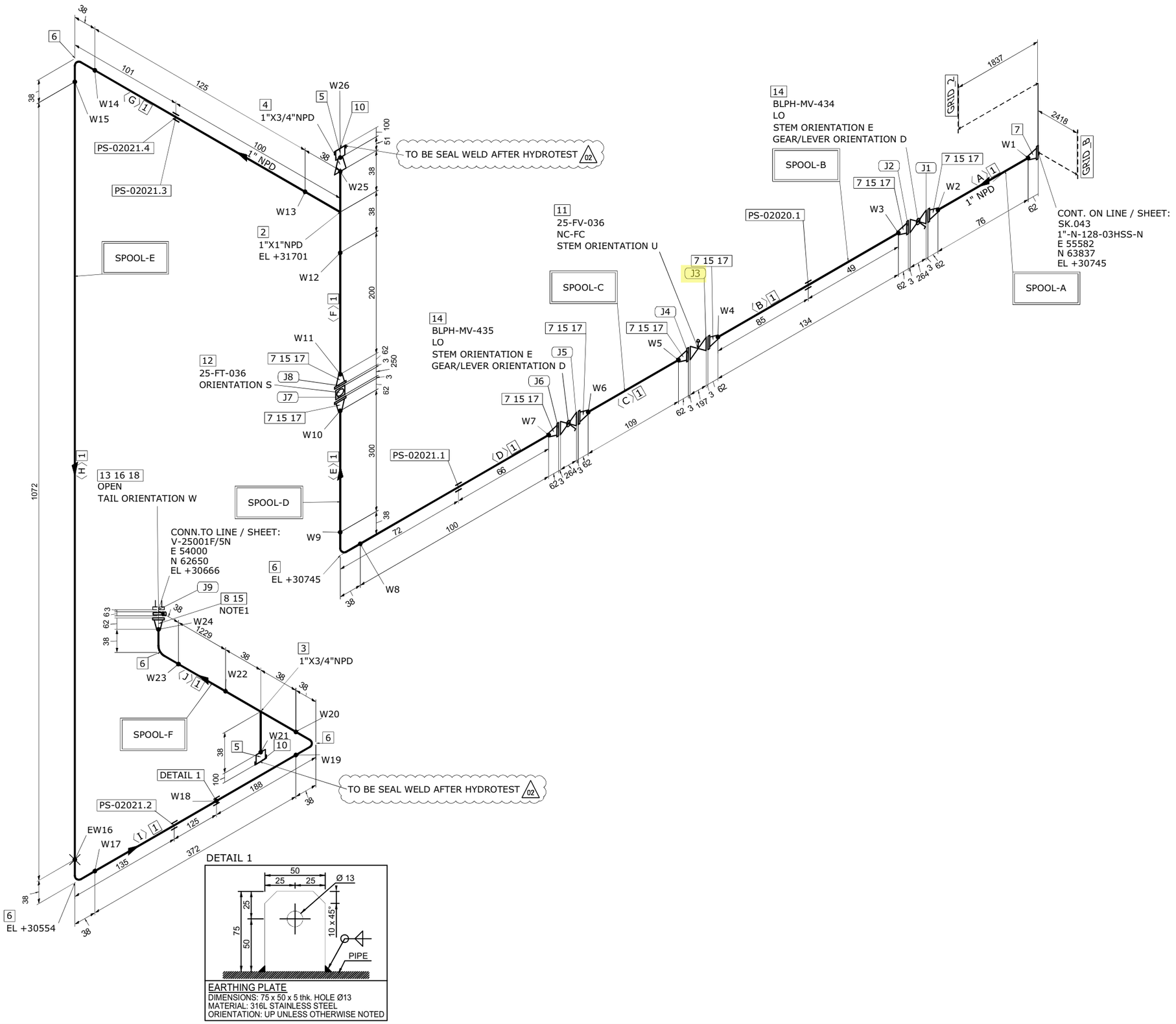
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:34:25.623Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:52:10.412Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	76	BEVEL	BEVEL
B	1	134	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02020.1
PS-02021.1
PS-02021.3
PS-02021.4
PS-02021.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.9
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-190-03HSS-N

SK.094

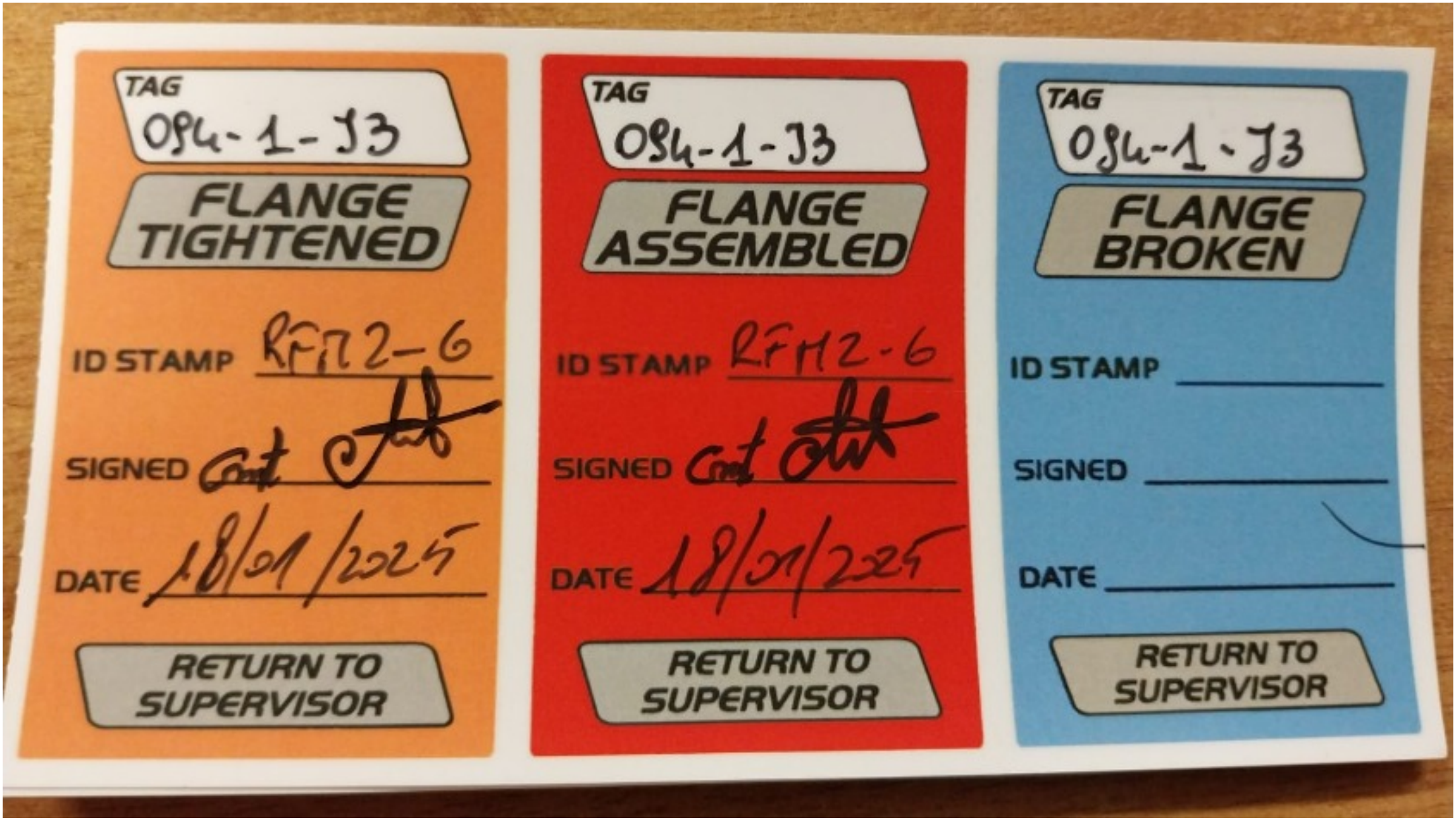
LINE DATA								
NDT INSPECTION CATEGORY	1			PED CATEGORY	II			
PAINTING	SYSTEM 6A		BASE RAL RAL 9002	FLUID PHASE	GAS			
INSULATION	TYPE N		THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--			TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80020
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

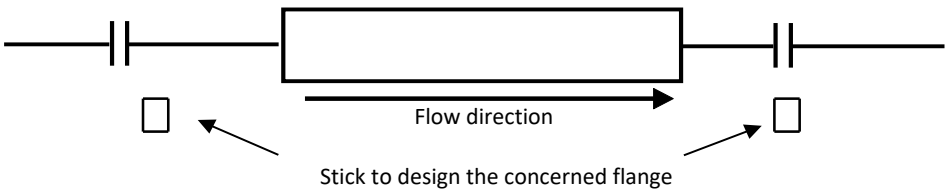
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 17-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00094	SHEET / OF 1/1	REV. 02


TAG
084-1-J3
FLANGE TIGHTENED
ID STAMP RF12-6
SIGNED
DATE 18/01/2025
RETURN TO SUPERVISOR
TAG
084-1-J3
FLANGE ASSEMBLED
ID STAMP RF12-6
SIGNED
DATE 18/01/2025
RETURN TO SUPERVISOR
TAG
084-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	094-1-J4	: Joint 094-1-J4			Dwg	123A90-FDL-PP-DI-00094-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004051		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

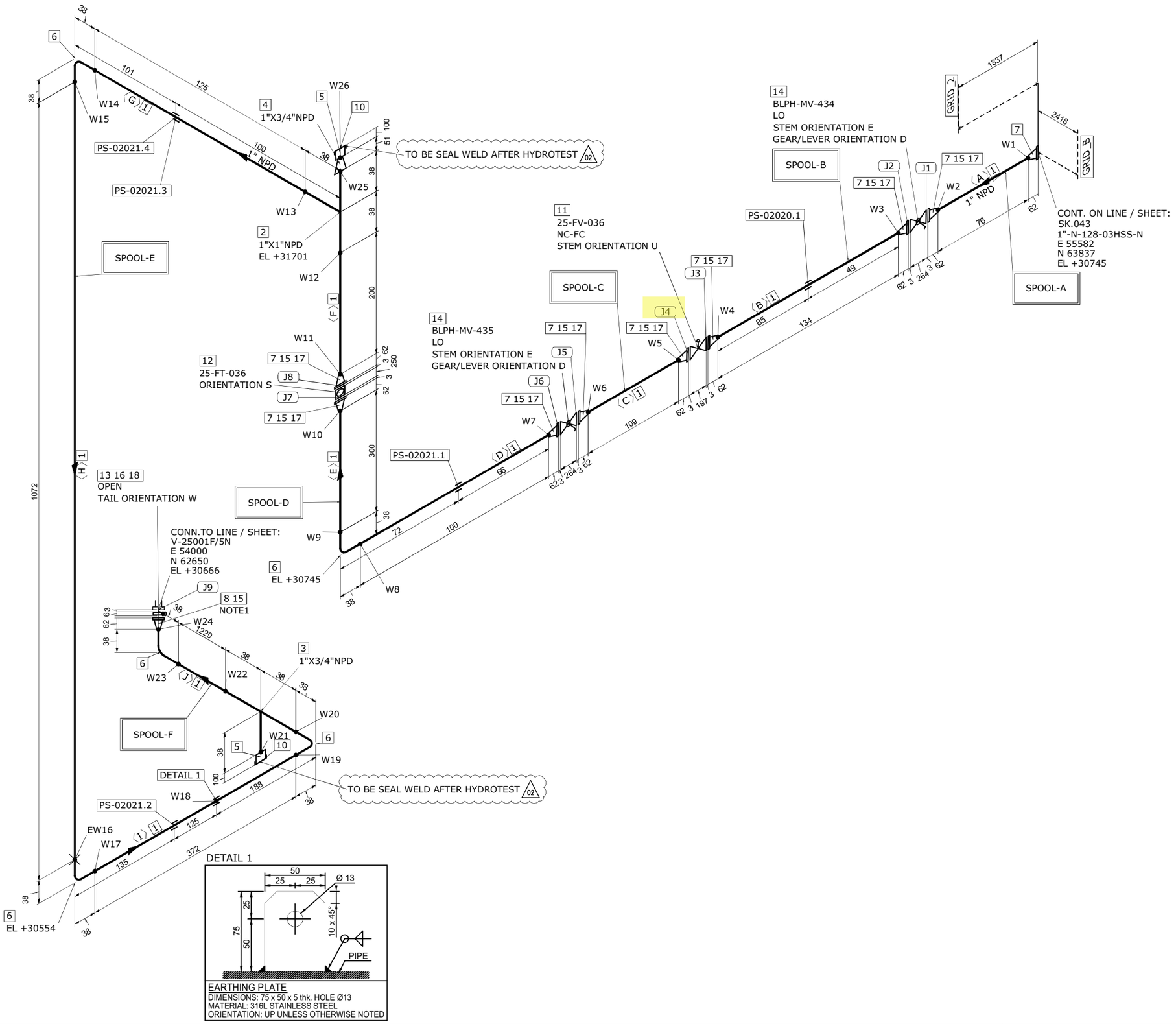
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:34:40.677Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:51:21.046Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	76	BEVEL	BEVEL
B	1	134	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02020.1
PS-02021.1
PS-02021.3
PS-02021.4
PS-02021.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.9
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-190-03HSS-N

SK.094

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00094
SHEET / OF: 1/1
REV.: 02

LINE DATA

NDT INSPECTION CATEGORY	1			PED CATEGORY	II		
PAINTING	SYSTEM 6A	BASE RAL RAL 9002		FLUID PHASE	GAS		
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]	
HEAT TRACING	--			TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water

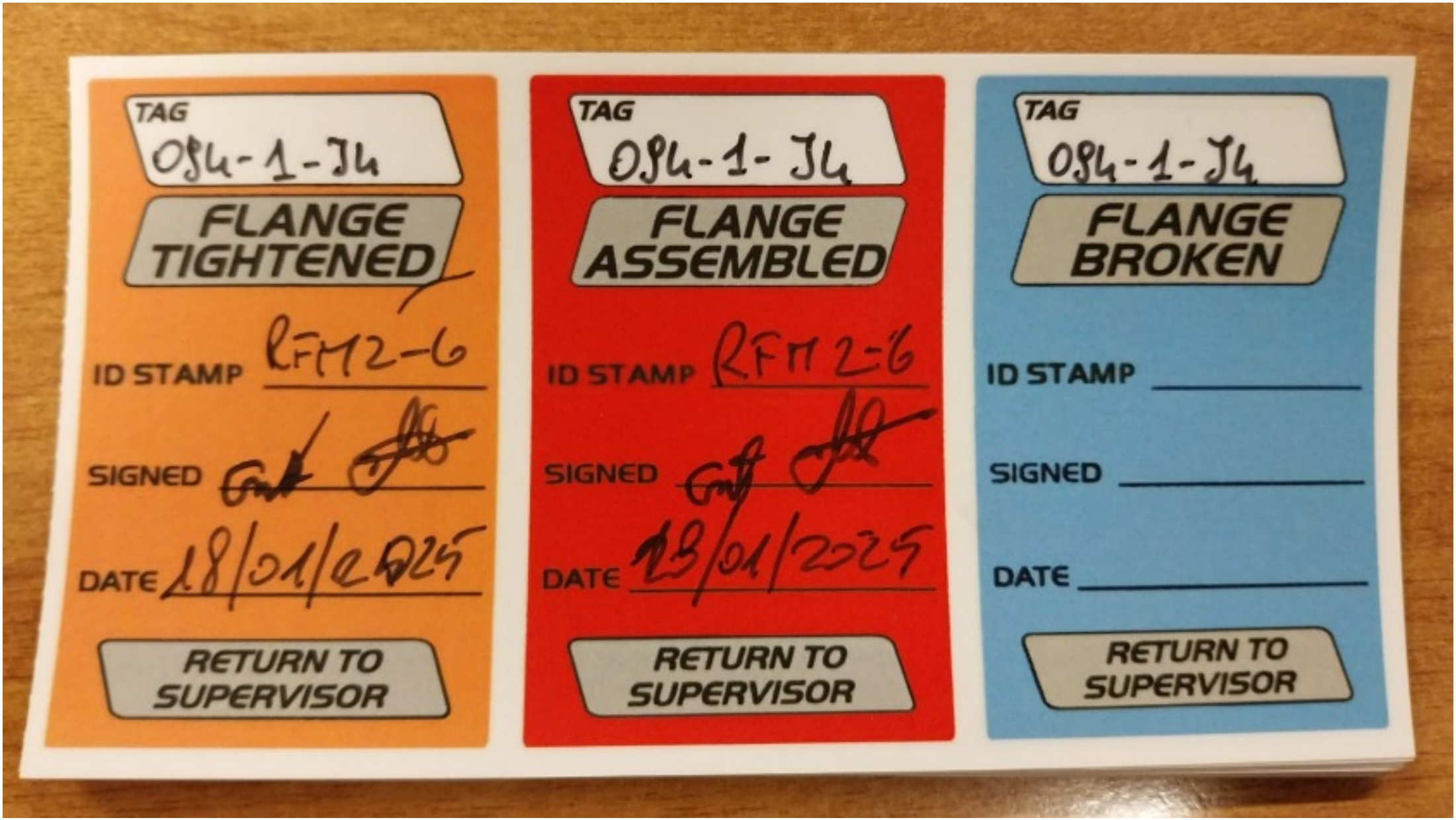
REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80020
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

1.JACKSCREWS POSITION N/S

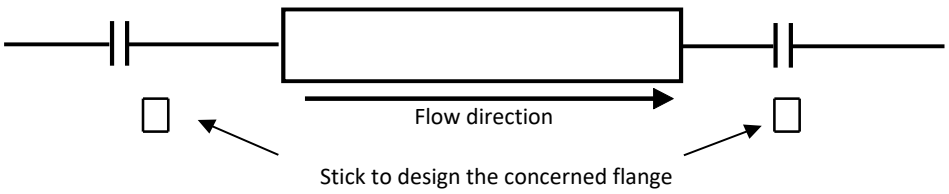
MASTER


TAG
084-1-J4
FLANGE TIGHTENED
ID STAMP RFM2-6
SIGNED
DATE 18/01/2025
RETURN TO SUPERVISOR
TAG
084-1-J4
FLANGE ASSEMBLED
ID STAMP RFM2-6
SIGNED
DATE 18/01/2025
RETURN TO SUPERVISOR
TAG
084-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	094-1-J5	: Joint 094-1-J5			Dwg	123A90-FDL-PP-DI-00094-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004052		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 / RD00261

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	159	48	95	158.8
2	48	159	48	95	158.8
3	48	159	48	95	158.8
4	48	159	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

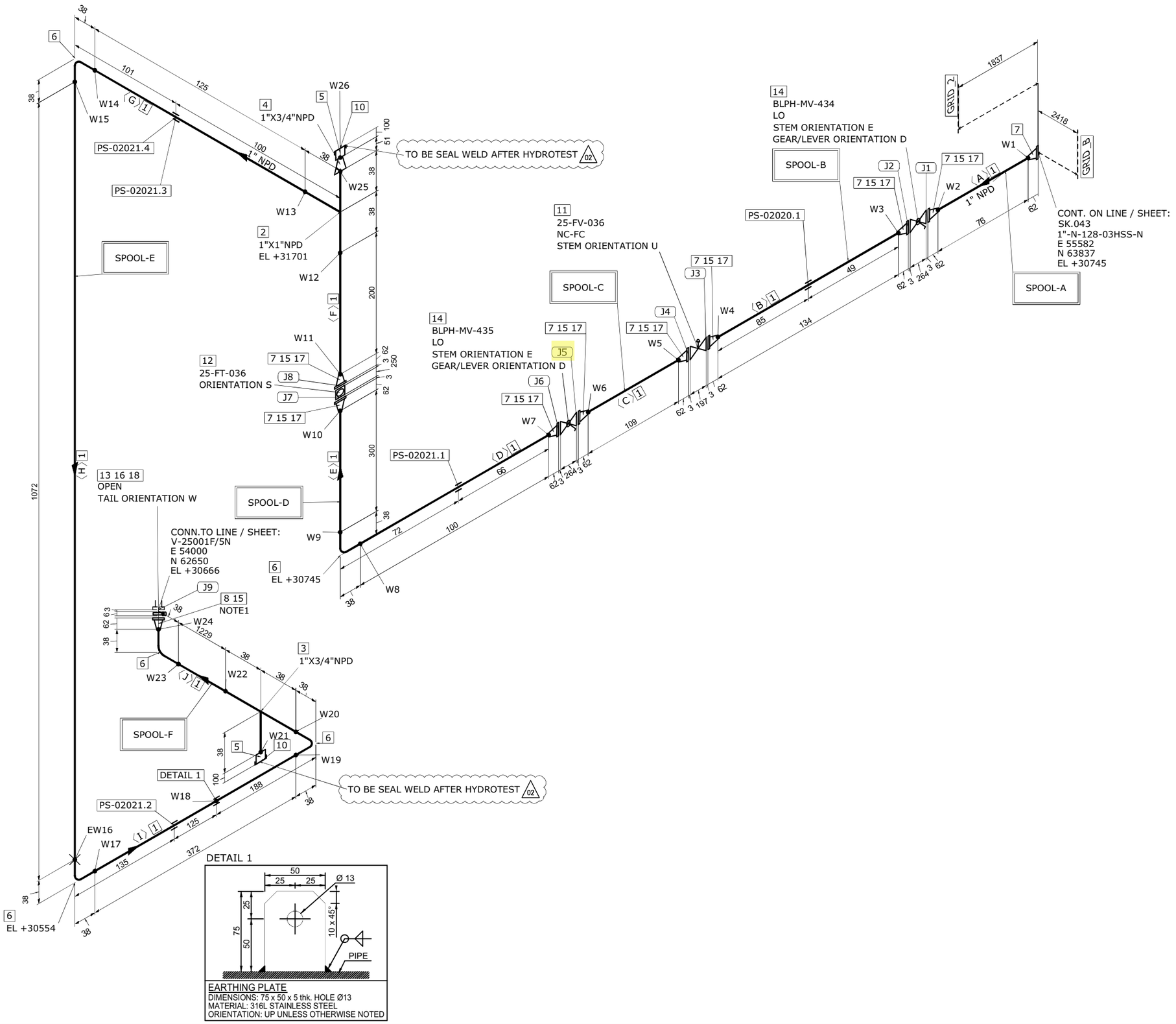
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-18	2025-01-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-18T08:34:52.396Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-20T08:50:49.311Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.7M	9.4
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
4	1X3/4	REC0SS0120013Q	Reducer Concentric ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	2	0.3
6	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	5	0.7
7	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	9	16.5
8	1	FLWDSS00770100	Flange WN For Jackscrews ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
10	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	2	0.4
11	1		Control Valve - FLG 300 #RF	1	40.0
12	1		Flow Transmitter - ANSI - FLG 300#	1	12.0
13	1	BSPESS01580100	Spectacle Blinds ASME B16.48 THRU BOLTED 300LB RF FPL ASTM A240 Gr.TP316/316L	1	0.5
14	1	VLBBNN07190100	Double Block & Bleed Valve API 6D FLG 300LB RF DA03C01RFH	2	27.0
15	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	9	0.6
16	1	SPIKNN01420100	Insulation Kit Ends as per ASME B16.5 300LB RF	1	0.1
17	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	32	7.4
18	5/8	SB20BO04200300	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	29.4
ERECTION WEIGHT [kg]	89.0
OVERALL WEIGHT [kg]	118.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
W15	1	BW
EW16	1	BW
W17	1	BW
W18		FW
W19	1	BW
W20	1	BW
W21	3/4	BW
W22	1	BW
W23	1	BW
W24	1	BW
W25	1	BW
W26	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	76	BEVEL	BEVEL
B	1	134	BEVEL	BEVEL
C	1	109	BEVEL	BEVEL
D	1	100	BEVEL	BEVEL
E	1	300	BEVEL	BEVEL
F	1	200	BEVEL	BEVEL
G	1	125	BEVEL	BEVEL
H	1	1072	BEVEL	BEVEL
I	1	372	BEVEL	BEVEL
J	1	1229	BEVEL	BEVEL

SUPPORT LIST

PS-02020.1
PS-02021.1
PS-02021.3
PS-02021.4
PS-02021.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	2	3.9
B	2	4.0
C	2	3.9
D	4	4.8
E	6.75	6.1
F	6.75	6.8
MONT	1	89.0

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
02	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
01	03-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	30-07-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-190-03HSS-N

SK.094

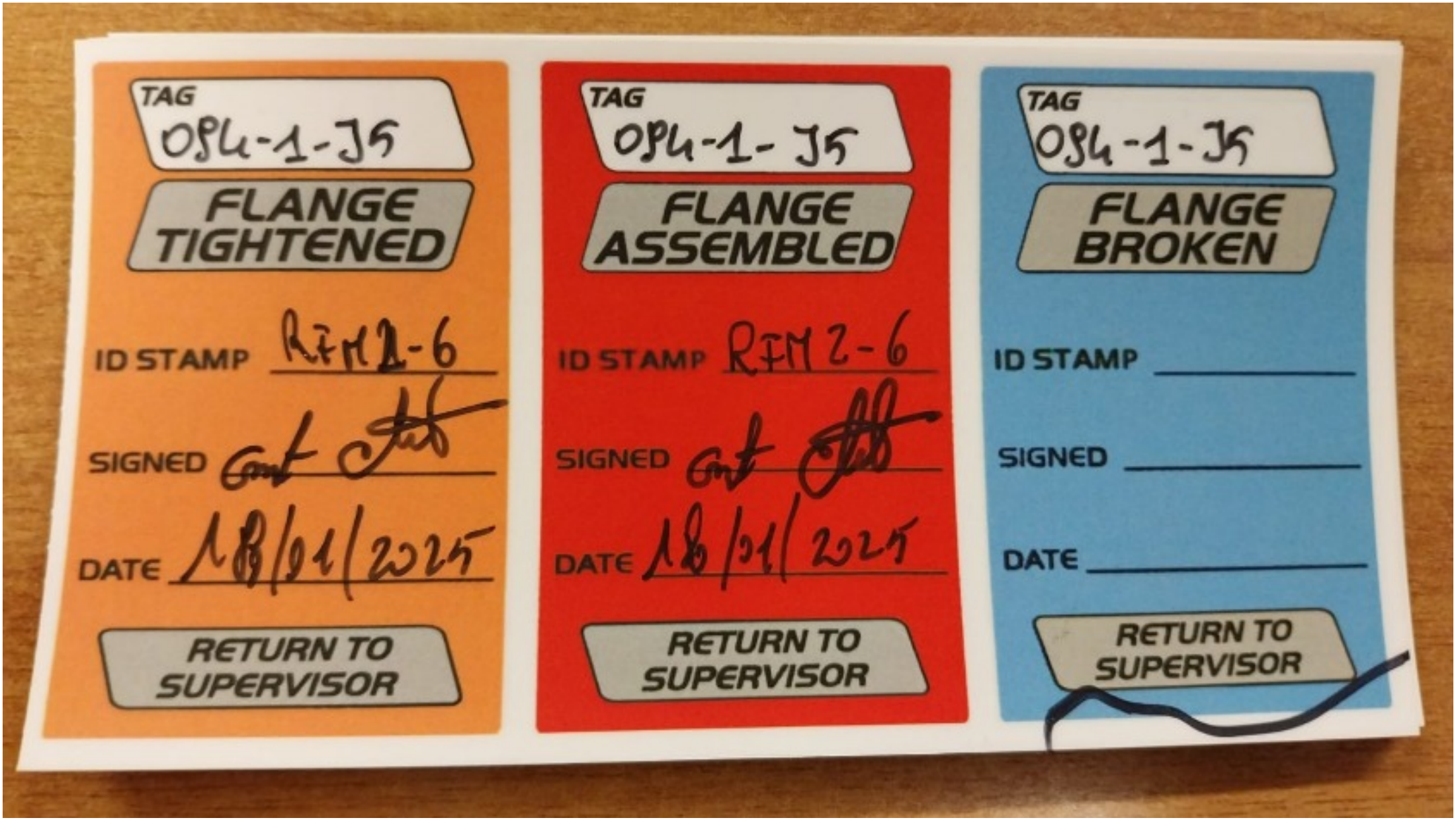
LINE DATA								
NDT INSPECTION CATEGORY	1			PED CATEGORY	II			
PAINTING	SYSTEM 6A	BASE RAL RAL 9002		FLUID PHASE	GAS			
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 40 [barg]	TEMP. -29 / 80 [°C]		
HEAT TRACING	--			TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80020
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES
1.JACKSCREWS POSITION N/S

MASTER

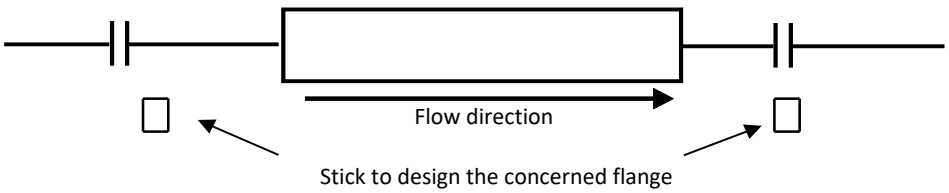
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SCALE	N/A
DRAWN	STAFF SRL
CHECKED	RT
APPROVED	LM
DATE	17-09-2024
FORMAT	A3
DRAWING NO.	123A90-FDL-PP-DI-00094
SHEET / OF	1/1
REV.	02


TAG
OS4-1-J5
FLANGE TIGHTENED
ID STAMP RFM2-6
SIGNED
DATE 18/11/2025
RETURN TO SUPERVISOR
TAG
OS4-1-J5
FLANGE ASSEMBLED
ID STAMP RFM2-6
SIGNED
DATE 18/11/2025
RETURN TO SUPERVISOR
TAG
OS4-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	020-1-J1	: Joint 020-1-J1			Dwg	123A90-FDL-PP-DI-00020-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004081		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

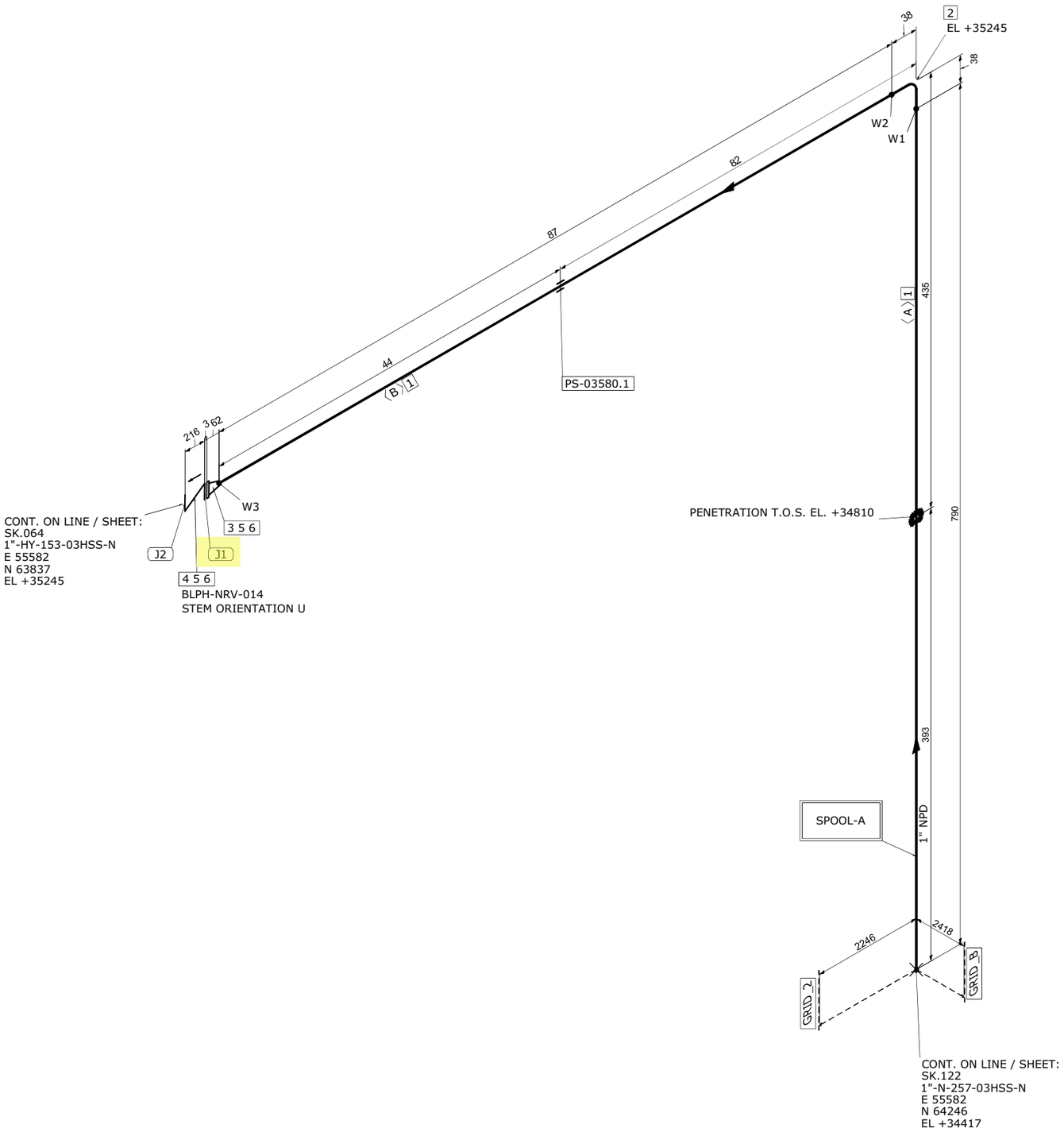
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-13	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-13T12:05:29.853Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:20:31.698Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03580.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-028-03HSS-N

SK.020

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00020 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

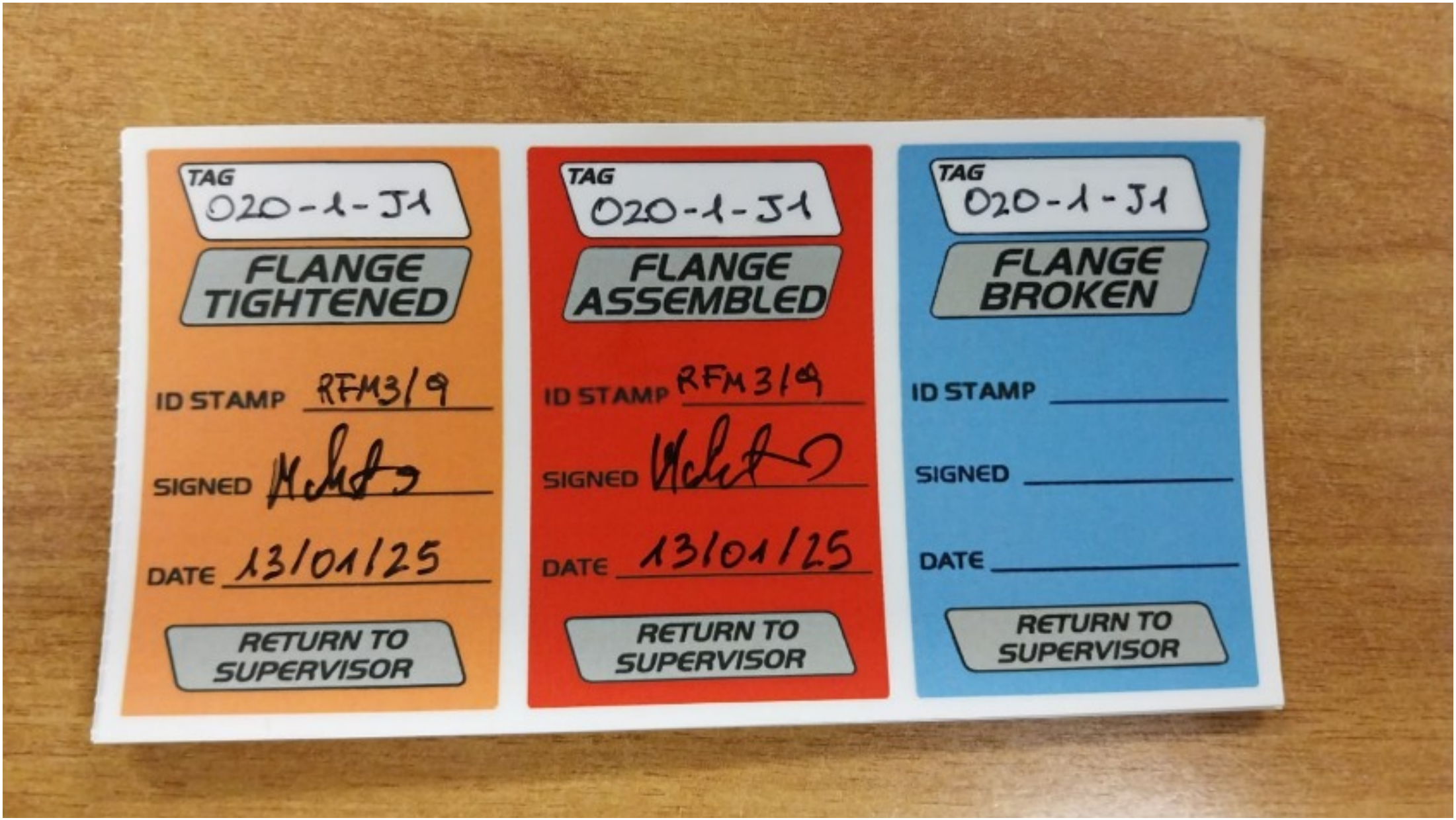
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

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

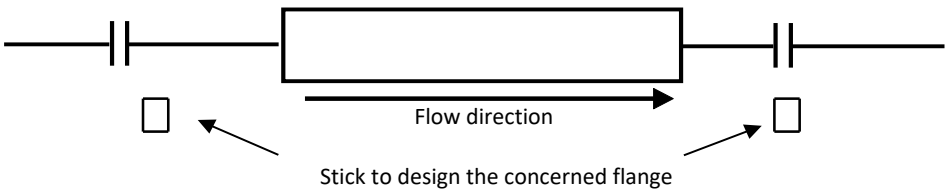
MASTER


TAG
020-1-J1
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
020-1-J1
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
020-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	020-1-J2	: Joint 020-1-J2			Dwg	123A90-FDL-PP-DI-00020-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004082		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

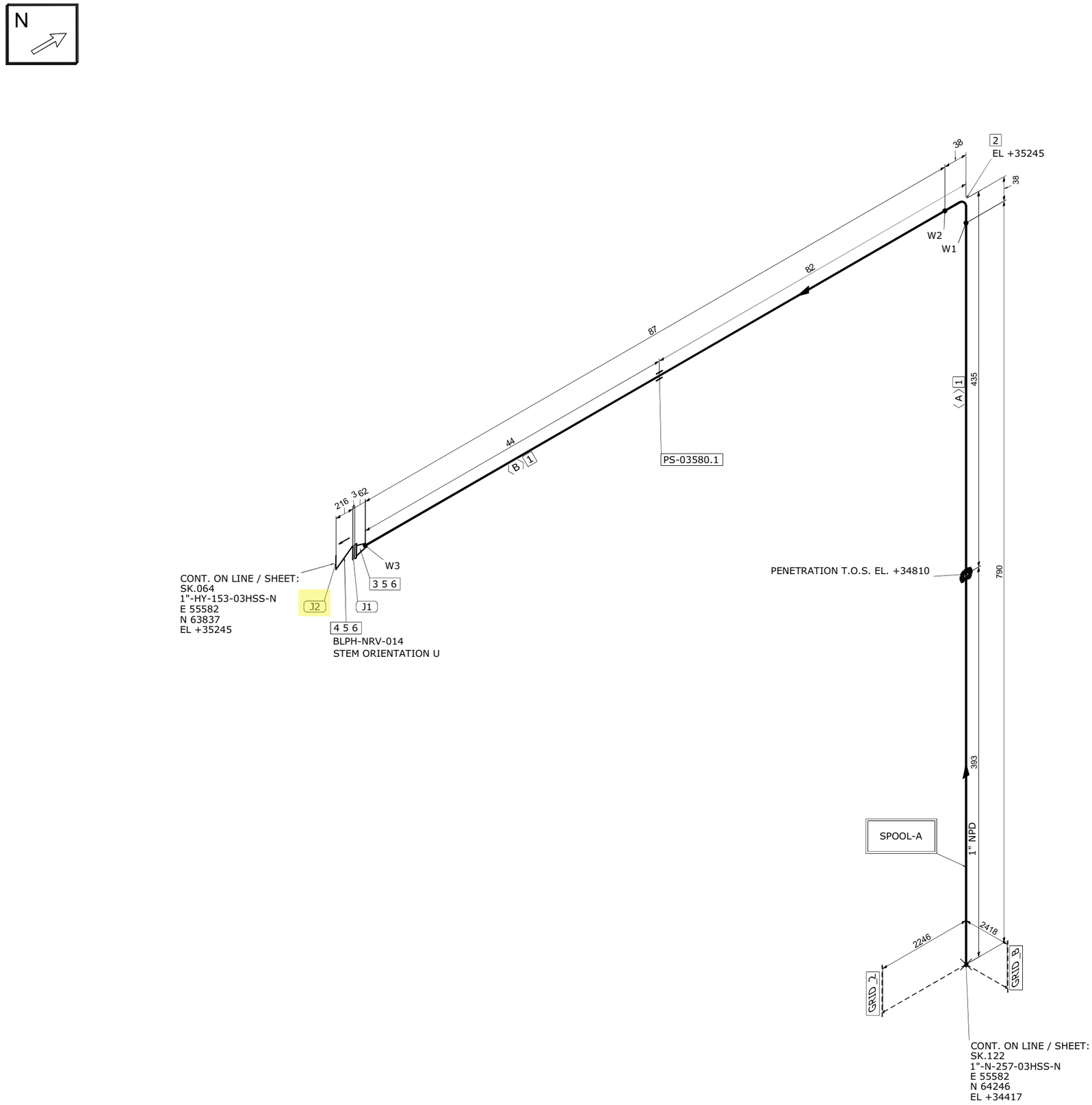
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-13	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-13T12:05:41.484Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:19:47.808Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03580.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-028-03HSS-N

SK.020

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00020 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

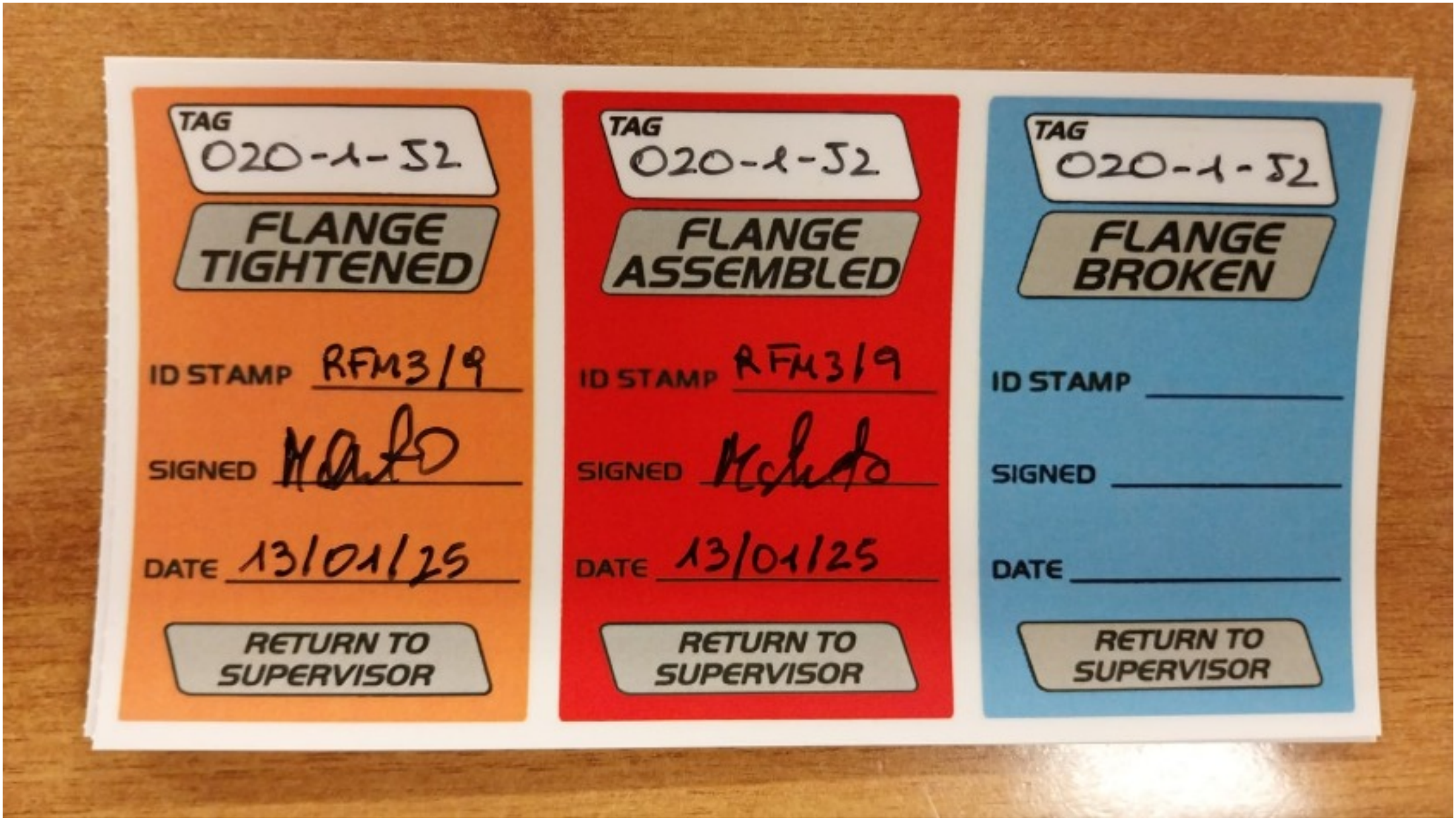
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

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

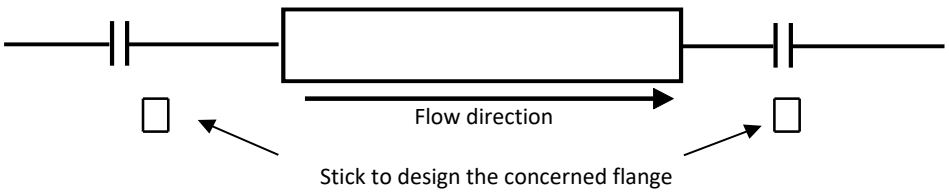
MASTER


TAG
020-1-52
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
020-1-52
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
020-1-52
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	034-1-J1	: Joint 034-1-J1			Dwg	123A90-FDL-PP-DI-00034-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004083		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



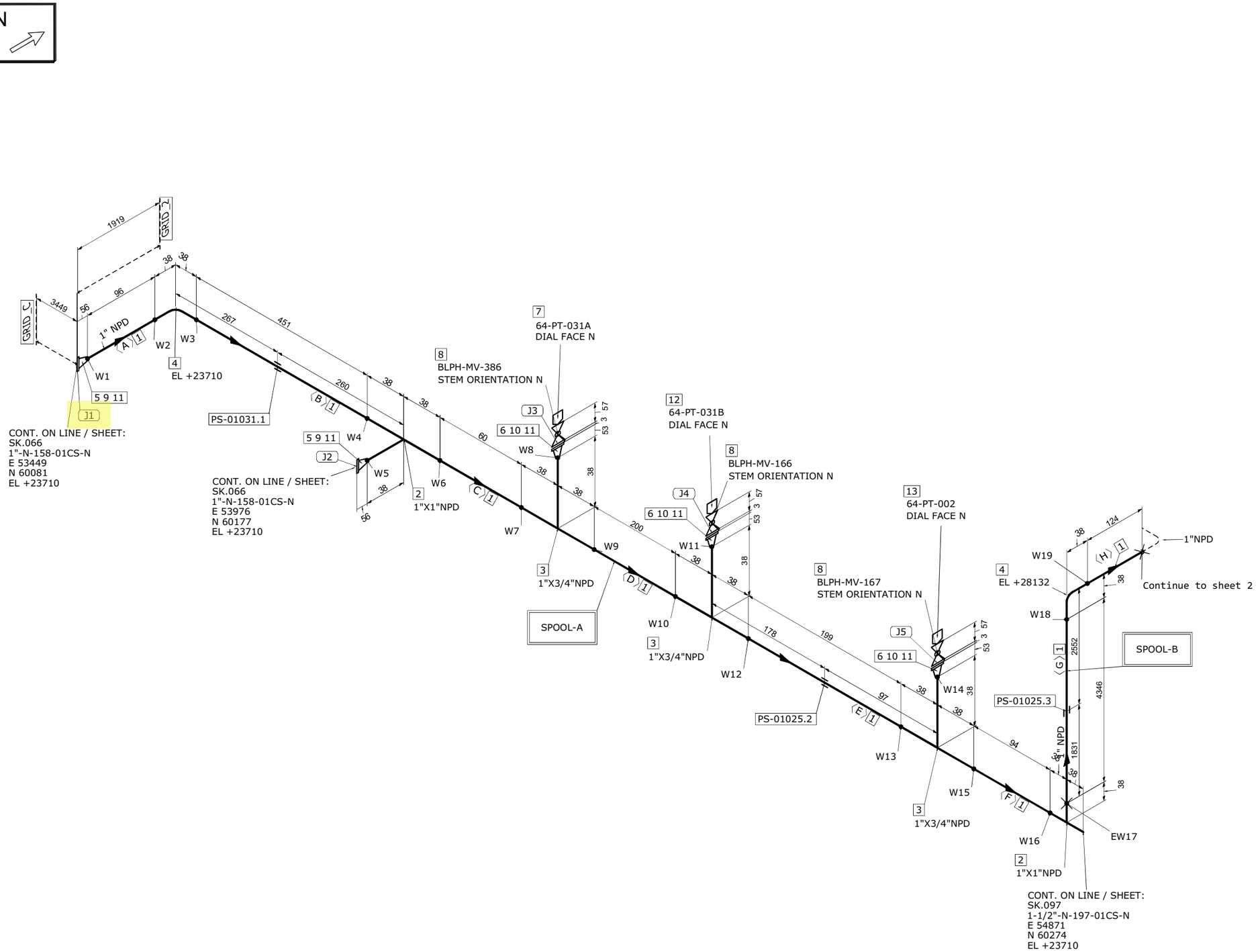
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-17	2025-01-17	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T05:51:11.481Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-17T07:48:28.253Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	TER0CS2607013Q	Tee Reducing ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.4
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	3	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1/2		Pressure Transmitter - Online	1	0.0
8	3/4X1/2	VLBNNN00063QOH	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	3	15.0
9	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
10	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.2
11	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	20	2.4
12	1/2		Pressure Transmitter - Online	1	0.0
13	1/2		Pressure Transmitter - Online	1	0.0

FABRICATION WEIGHT [kg]	26.2
ERECTION WEIGHT [kg]	17.6
OVERALL WEIGHT [kg]	43.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	3/4	BW
W9	1	BW
W10	1	BW
W11	3/4	BW
W12	1	BW
W13	1	BW
W14	3/4	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	96	BEVEL	BEVEL
B	1	451	BEVEL	BEVEL
C	1	60	BEVEL	BEVEL
D	1	200	BEVEL	BEVEL
E	1	199	BEVEL	BEVEL
F	1	94	BEVEL	BEVEL
G	1	4346	BEVEL	BEVEL
H	1	124	BEVEL	BEVEL

SUPPORT LIST

PS-01031.1
PS-01025.2
PS-01025.3

SPOOL	WELD [inches]	WEIGHT [kg]
A	15.25	11.5
B	2	14.7
MONT	1	17.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N

SK.034

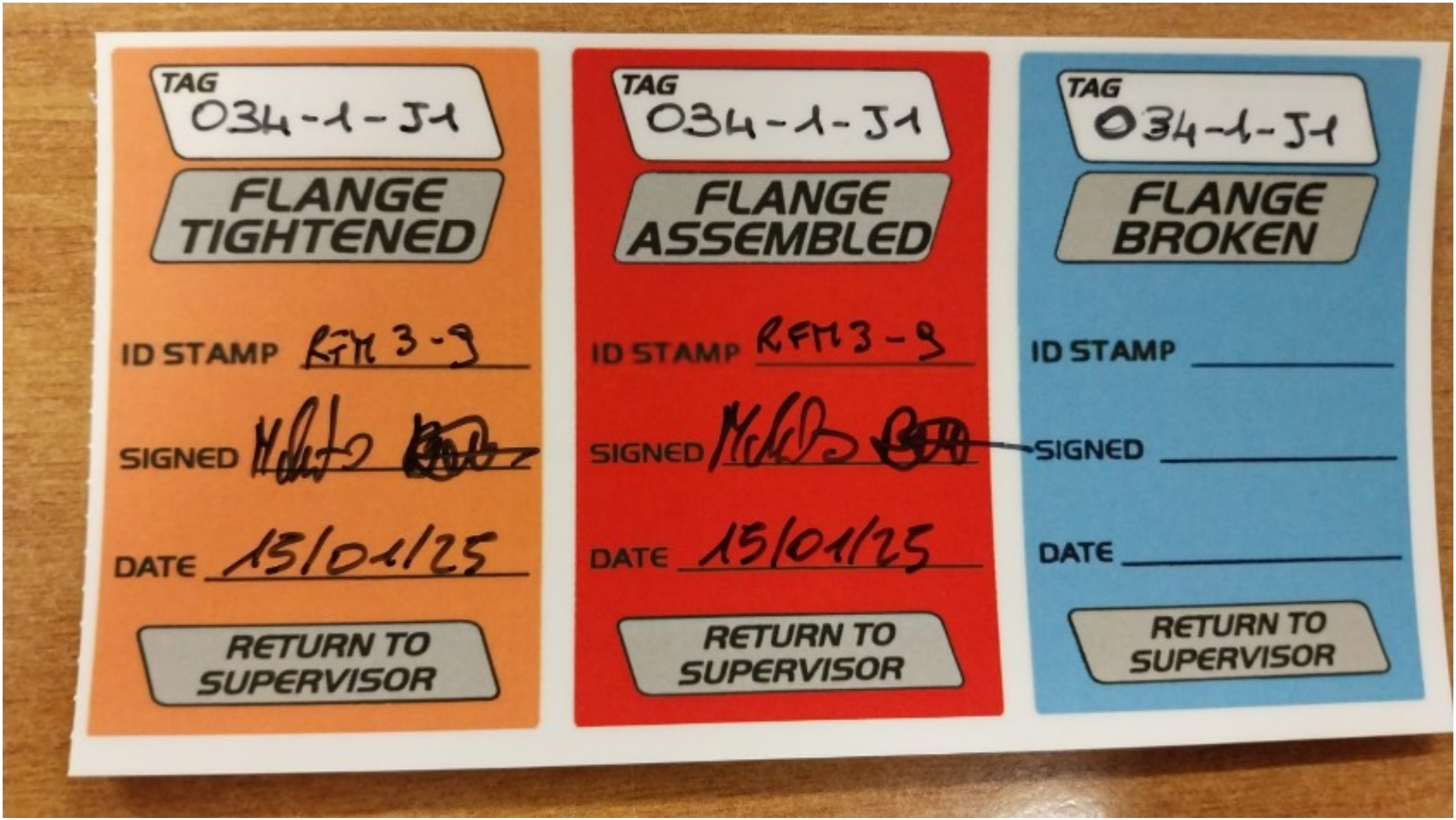
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB.	MEDIUM Water	

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

MASTER

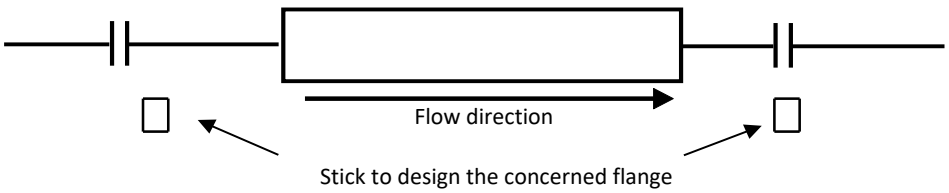
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00034	SHEET / OF 1/2	REV. 00


TAG
034-1-J1
FLANGE TIGHTENED
ID STAMP RFM 3-9
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
034-1-J1
FLANGE ASSEMBLED
ID STAMP RFM 3-9
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
034-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	034-1-J2	: Joint 034-1-J2			Dwg	123A90-FDL-PP-DI-00034-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004084		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



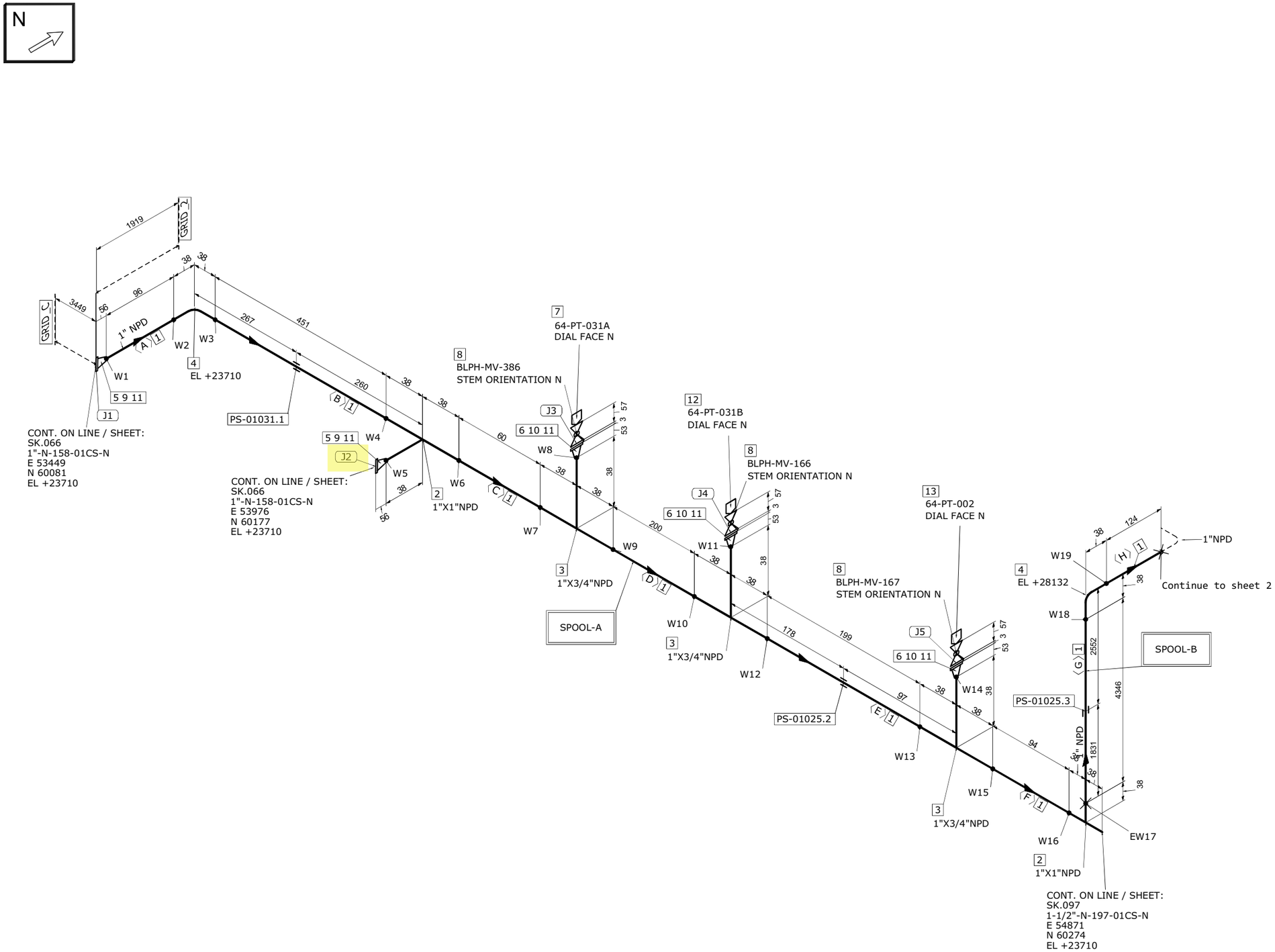
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-16	2025-01-16	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-16T13:03:59.497Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-16T14:31:31.815Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	TER0CS2607013Q	Tee Reducing ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.4
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	3	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1/2		Pressure Transmitter - Online	1	0.0
8	3/4X1/2	VLBNNN00063QOH	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	3	15.0
9	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
10	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.2
11	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	20	2.4
12	1/2		Pressure Transmitter - Online	1	0.0
13	1/2		Pressure Transmitter - Online	1	0.0

FABRICATION WEIGHT [kg]	26.2
ERECTION WEIGHT [kg]	17.6
OVERALL WEIGHT [kg]	43.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	3/4	BW
W9	1	BW
W10	1	BW
W11	3/4	BW
W12	1	BW
W13	1	BW
W14	3/4	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	96	BEVEL	BEVEL
B	1	451	BEVEL	BEVEL
C	1	60	BEVEL	BEVEL
D	1	200	BEVEL	BEVEL
E	1	199	BEVEL	BEVEL
F	1	94	BEVEL	BEVEL
G	1	4346	BEVEL	BEVEL
H	1	124	BEVEL	BEVEL

SUPPORT LIST

PS-01031.1
PS-01025.2
PS-01025.3

SPOOL	WELD [inches]	WEIGHT [kg]
A	15.25	11.5
B	2	14.7
MONT	1	17.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N

SK.034

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00034	SHEET / OF 1/2	REV. 00

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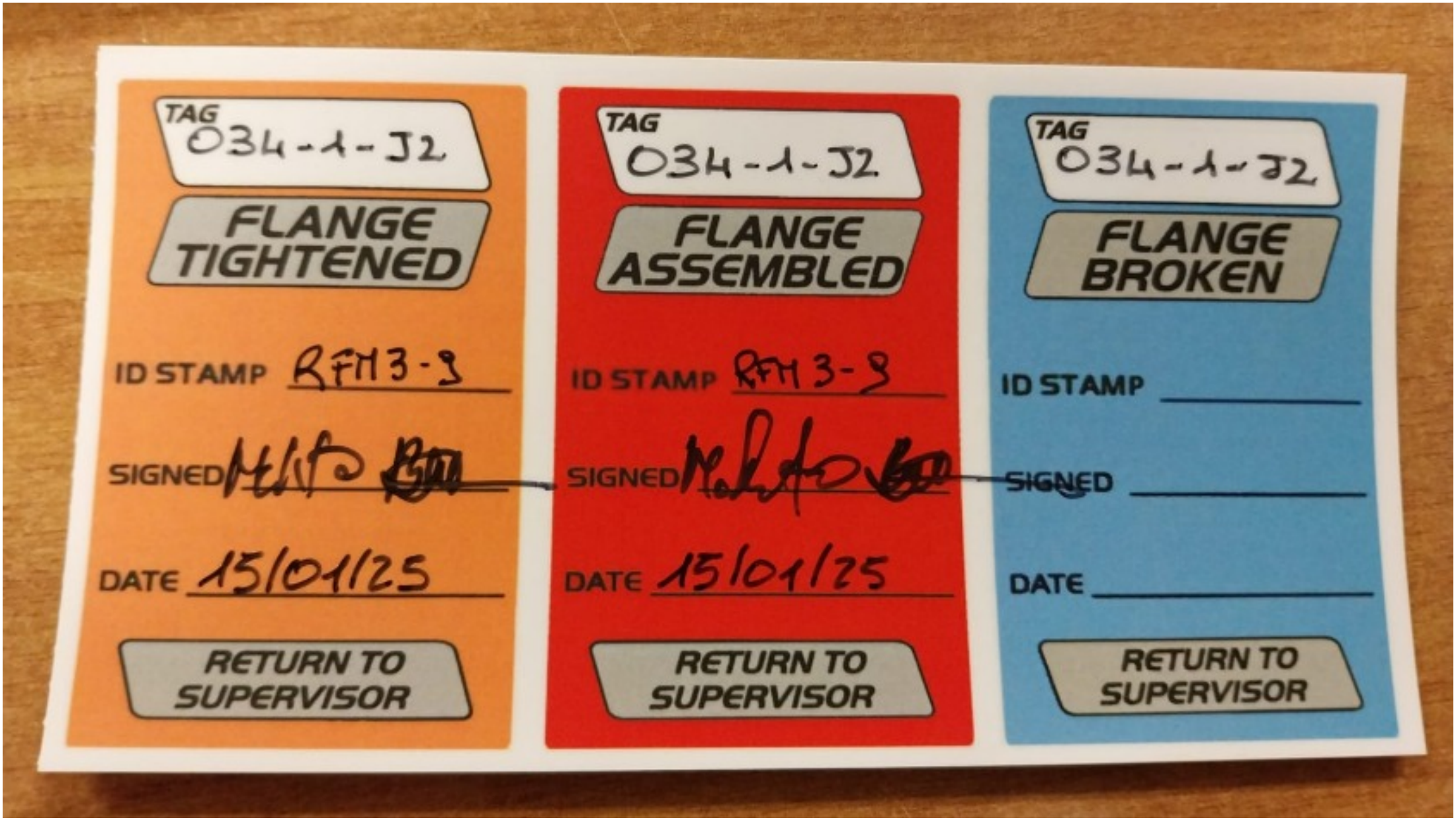
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB.	MEDIUM Water	

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

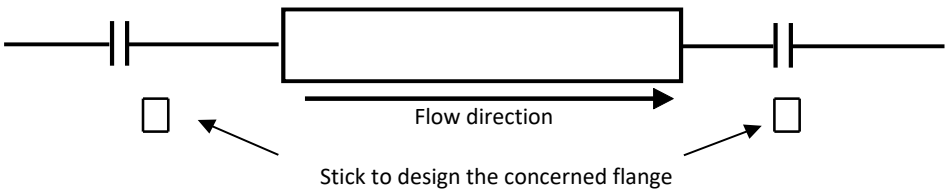
MASTER


TAG
034-1-J2
FLANGE TIGHTENED
ID STAMP RFM3-3
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
034-1-J2
FLANGE ASSEMBLED
ID STAMP RFM3-3
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
034-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	034-1-J3	: Joint 034-1-J3			Dwg	123A90-FDL-PP-DI-00034-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004085		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

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

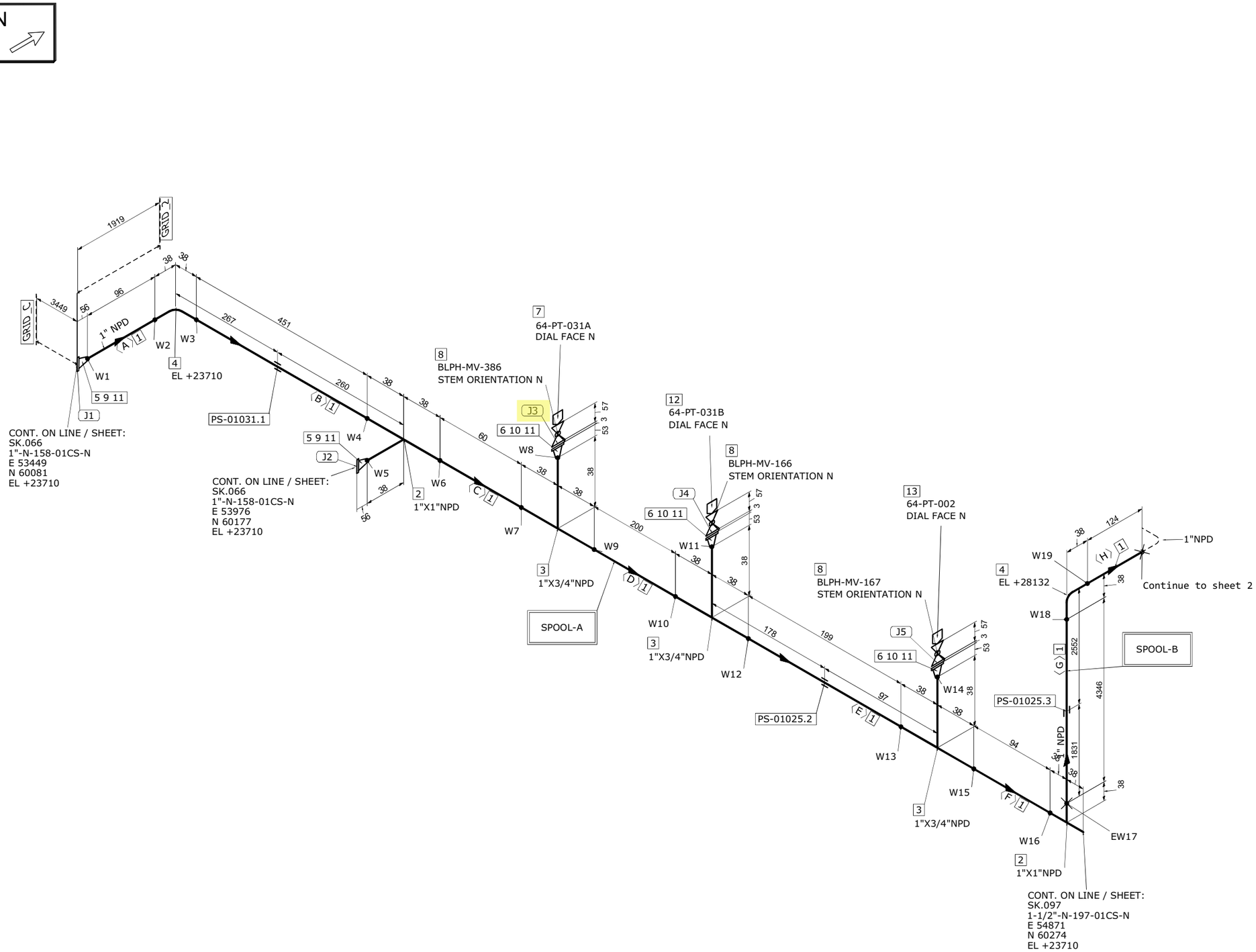
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-23	2025-02-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:56:18.486Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-03T09:40:28.163Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	TER0CS2607013Q	Tee Reducing ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.4
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	3	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1/2		Pressure Transmitter - Online	1	0.0
8	3/4X1/2	VLBNNN00063QOH	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	3	15.0
9	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
10	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.2
11	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	20	2.4
12	1/2		Pressure Transmitter - Online	1	0.0
13	1/2		Pressure Transmitter - Online	1	0.0

FABRICATION WEIGHT [kg]	26.2
ERECTION WEIGHT [kg]	17.6
OVERALL WEIGHT [kg]	43.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	3/4	BW
W9	1	BW
W10	1	BW
W11	3/4	BW
W12	1	BW
W13	1	BW
W14	3/4	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	96	BEVEL	BEVEL
B	1	451	BEVEL	BEVEL
C	1	60	BEVEL	BEVEL
D	1	200	BEVEL	BEVEL
E	1	199	BEVEL	BEVEL
F	1	94	BEVEL	BEVEL
G	1	4346	BEVEL	BEVEL
H	1	124	BEVEL	BEVEL

SUPPORT LIST

PS-01031.1
PS-01025.2
PS-01025.3

SPOOL	WELD [inches]	WEIGHT [kg]
A	15.25	11.5
B	2	14.7
MONT	1	17.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N

SK.034

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [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

MASTER

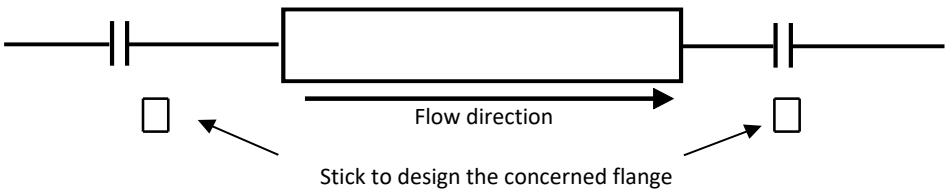
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00034	SHEET / OF 1/2	REV. 00


TAG
034-1-J3
FLANGE TIGHTENED
ID STAMP RTH2/RTH6
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J3
FLANGE ASSEMBLED
ID STAMP RTH2/RTH6
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	034-1-J4	: Joint 034-1-J4			Dwg	123A90-FDL-PP-DI-00034-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004086		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



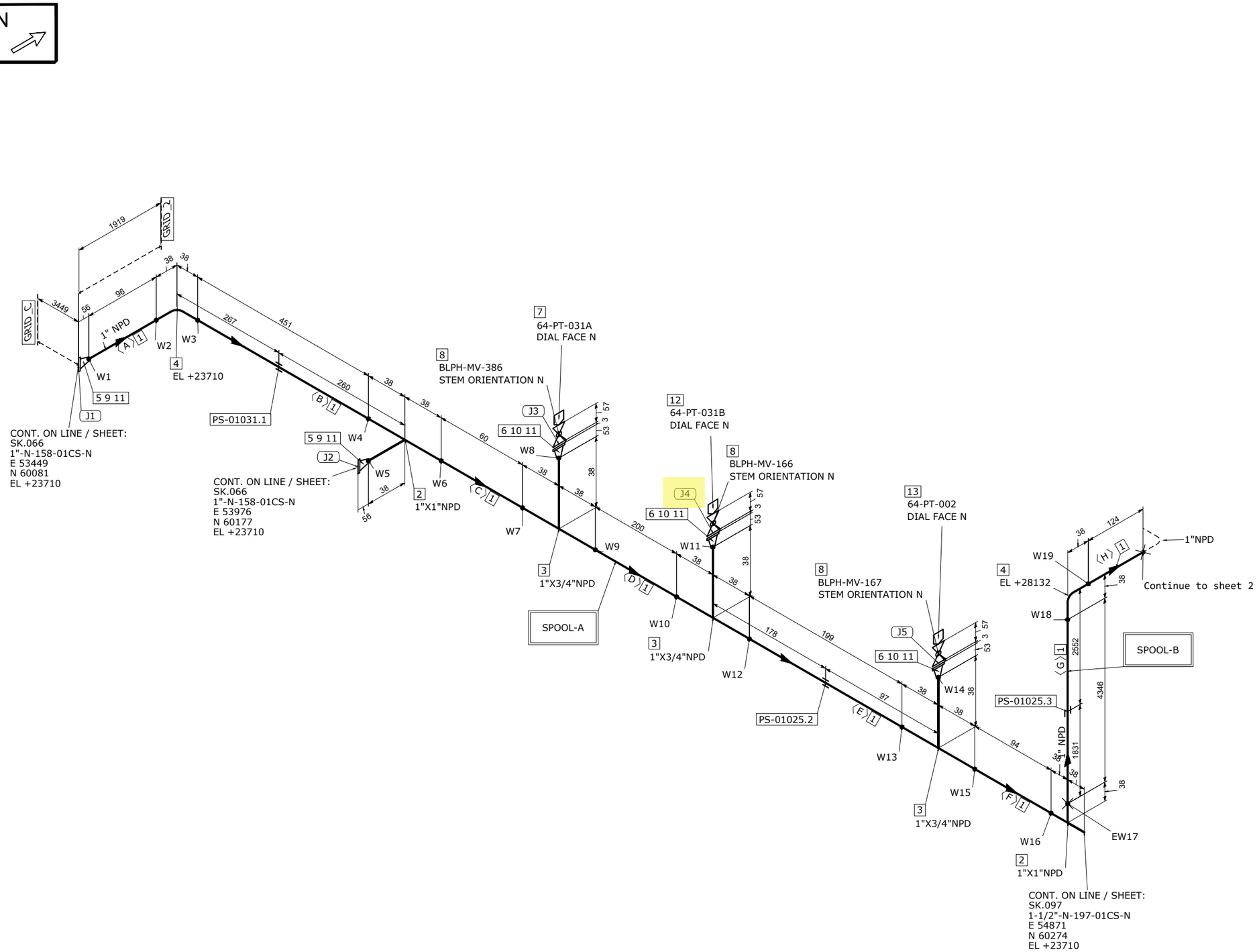
Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	2025-01-23	2025-02-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:56:32.572Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-03T09:40:16.857Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	TER0CS2607013Q	Tee Reducing ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.4
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	3	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1/2		Pressure Transmitter - Online	1	0.0
8	3/4X1/2	VLBNNN00063Q0H	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	3	15.0
9	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
10	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.2
11	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	20	2.4
12	1/2		Pressure Transmitter - Online	1	0.0
13	1/2		Pressure Transmitter - Online	1	0.0

FABRICATION WEIGHT [kg]	26.2
ERECTION WEIGHT [kg]	17.6
OVERALL WEIGHT [kg]	43.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	3/4	BW
W9	1	BW
W10	1	BW
W11	3/4	BW
W12	1	BW
W13	1	BW
W14	3/4	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	96	BEVEL	BEVEL
B	1	451	BEVEL	BEVEL
C	1	60	BEVEL	BEVEL
D	1	200	BEVEL	BEVEL
E	1	199	BEVEL	BEVEL
F	1	94	BEVEL	BEVEL
G	1	4346	BEVEL	BEVEL
H	1	124	BEVEL	BEVEL

SUPPORT LIST

PS-01031.1
PS-01025.2
PS-01025.3

SPOOL	WELD [inches]	WEIGHT [kg]
A	15.25	11.5
B	2	14.7
MONT	1	17.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N

SK.034

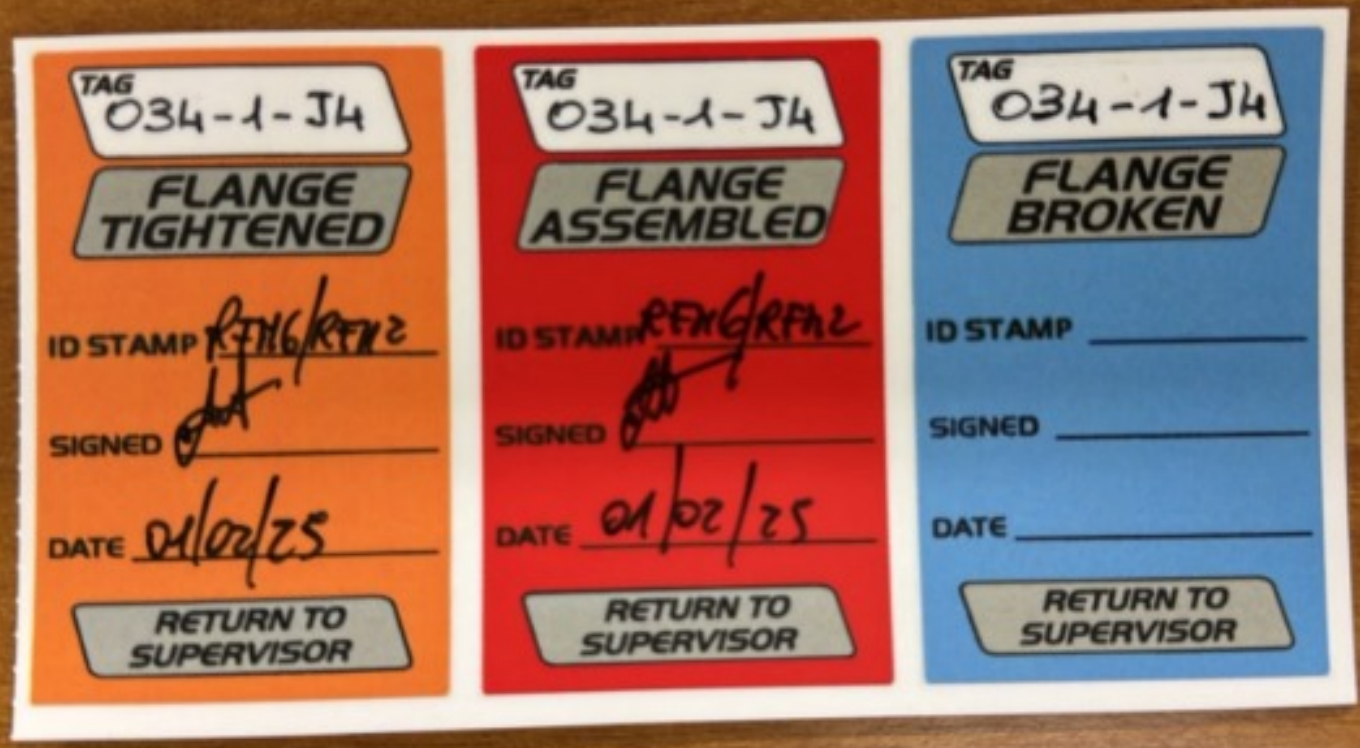
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water	

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

MASTER

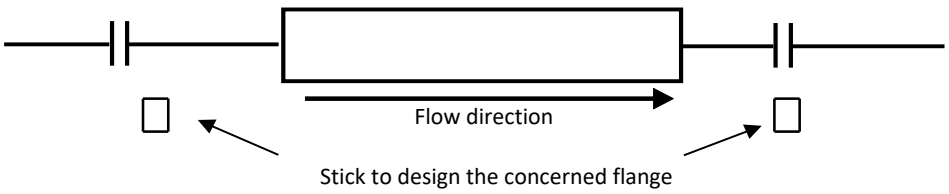
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00034	SHEET / OF 1/2	REV. 00


TAG
034-1-J4
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J4
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	034-1-J5	: Joint 034-1-J5			Dwg	123A90-FDL-PP-DI-00034-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004087		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

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:

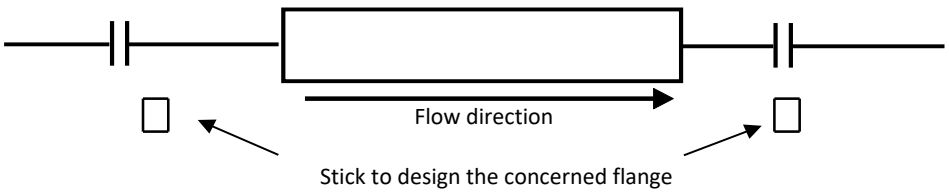
Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-19	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-19T07:25:59.116Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T08:29:48.215Z	


TAG
034-1-J5
FLANGE TIGHTENED
ID STAMP RFM6/RFM2
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE ASSEMBLED
ID STAMP RFM6/RFM2
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE TIGHTENED
ID STAMP RFM3/RFM9
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE ASSEMBLED
ID STAMP RFM3/RFM9
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE BROKEN
ID STAMP RFM3/RFM9
SIGNED
DATE 18/02/25
RETURN TO SUPERVISOR

ITEM	Tag	034-1-J5	: Joint 034-1-J5			Dwg	123A90-FDL-PP-DI-00034-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004087		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



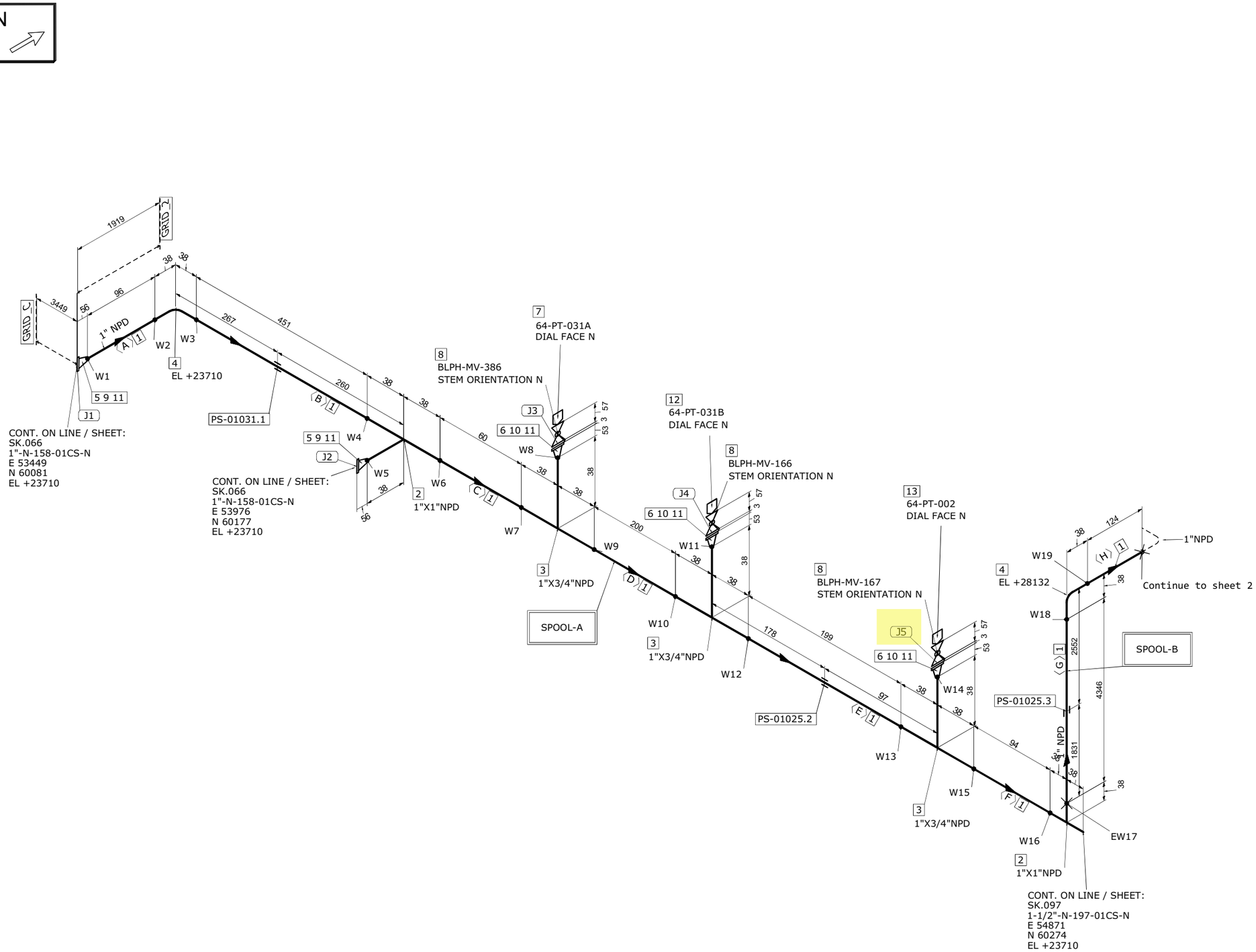
Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	2025-01-23	2025-02-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:56:43.630Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-03T09:40:04.810Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	5.6M	18.0
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	TER0CS2607013Q	Tee Reducing ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	3	1.4
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	2	2.8
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	3	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1/2		Pressure Transmitter - Online	1	0.0
8	3/4X1/2	VLBNNN00063QOH	Monoflange Block & Bleed Valve API 6D FLG x THRD-F NPT 150LB RF MS01B02Y	3	15.0
9	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
10	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	3	0.2
11	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	20	2.4
12	1/2		Pressure Transmitter - Online	1	0.0
13	1/2		Pressure Transmitter - Online	1	0.0

FABRICATION WEIGHT [kg]	26.2
ERECTION WEIGHT [kg]	17.6
OVERALL WEIGHT [kg]	43.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8	3/4	BW
W9	1	BW
W10	1	BW
W11	3/4	BW
W12	1	BW
W13	1	BW
W14	3/4	BW
W15	1	BW
W16	1	BW
EW17	1	BW
W18	1	BW
W19	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	96	BEVEL	BEVEL
B	1	451	BEVEL	BEVEL
C	1	60	BEVEL	BEVEL
D	1	200	BEVEL	BEVEL
E	1	199	BEVEL	BEVEL
F	1	94	BEVEL	BEVEL
G	1	4346	BEVEL	BEVEL
H	1	124	BEVEL	BEVEL

SUPPORT LIST

PS-01031.1
PS-01025.2
PS-01025.3

SPOOL	WELD [inches]	WEIGHT [kg]
A	15.25	11.5
B	2	14.7
MONT	1	17.6

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-100-01CS-N

SK.034

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT
APPROVED	LM	DATE	20-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00034
SHEET / OF	1/2	REV.	00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [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

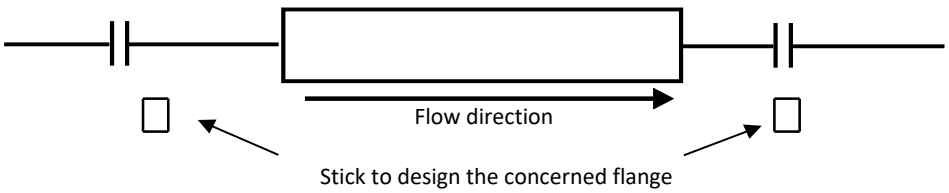
MASTER


TAG
034-1-J5
FLANGE TIGHTENED
ID STAMP RFH6/RFH2
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE ASSEMBLED
ID STAMP RFH6/RFH2
SIGNED
DATE 01/02/25
RETURN TO SUPERVISOR
TAG
034-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	045-1-J1	: Joint 045-1-J1			Dwg	123A90-FDL-PP-DI-00045-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004108		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

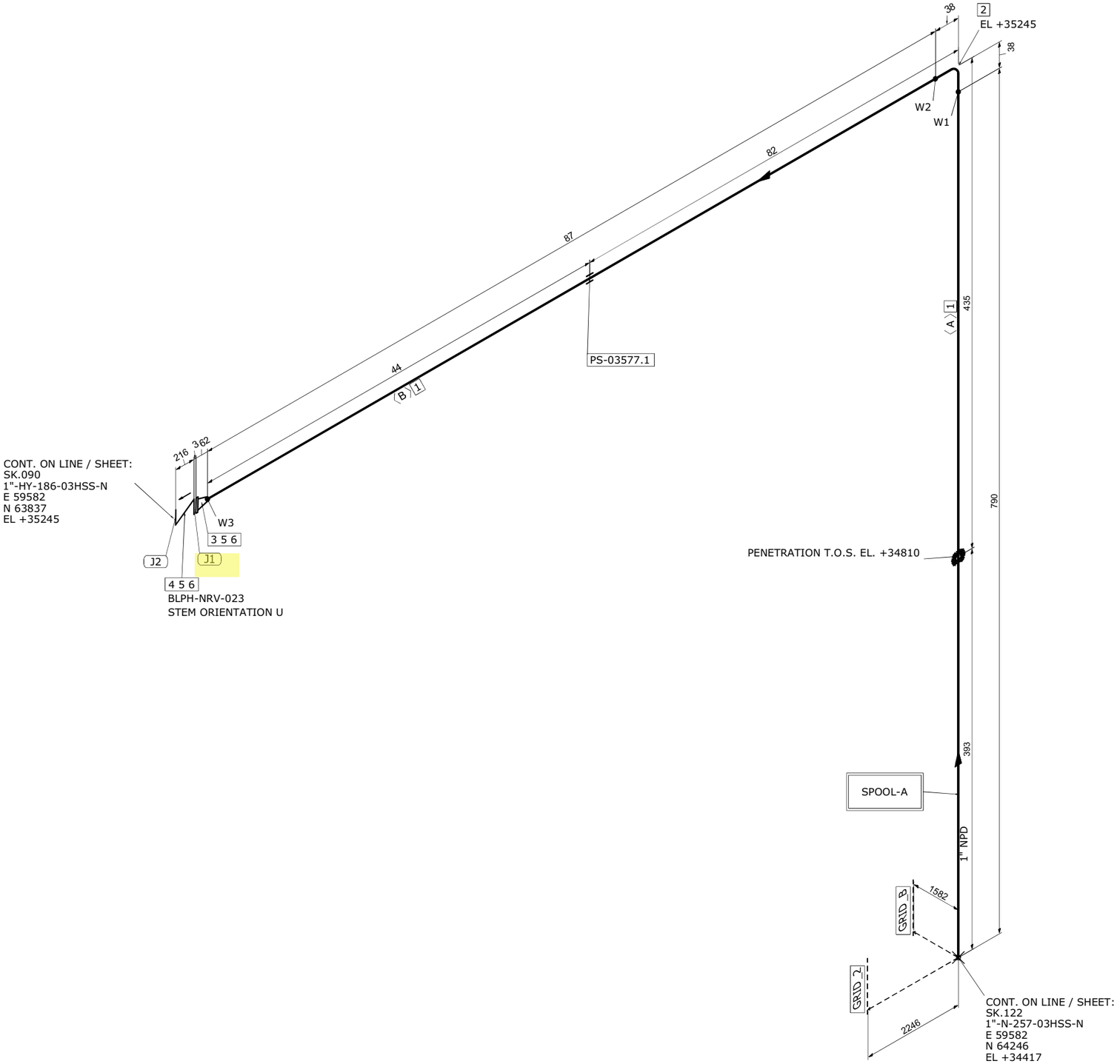
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:47:30.142Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:19:19.287Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03577.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-124-03HSS-N

SK.045

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00045 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

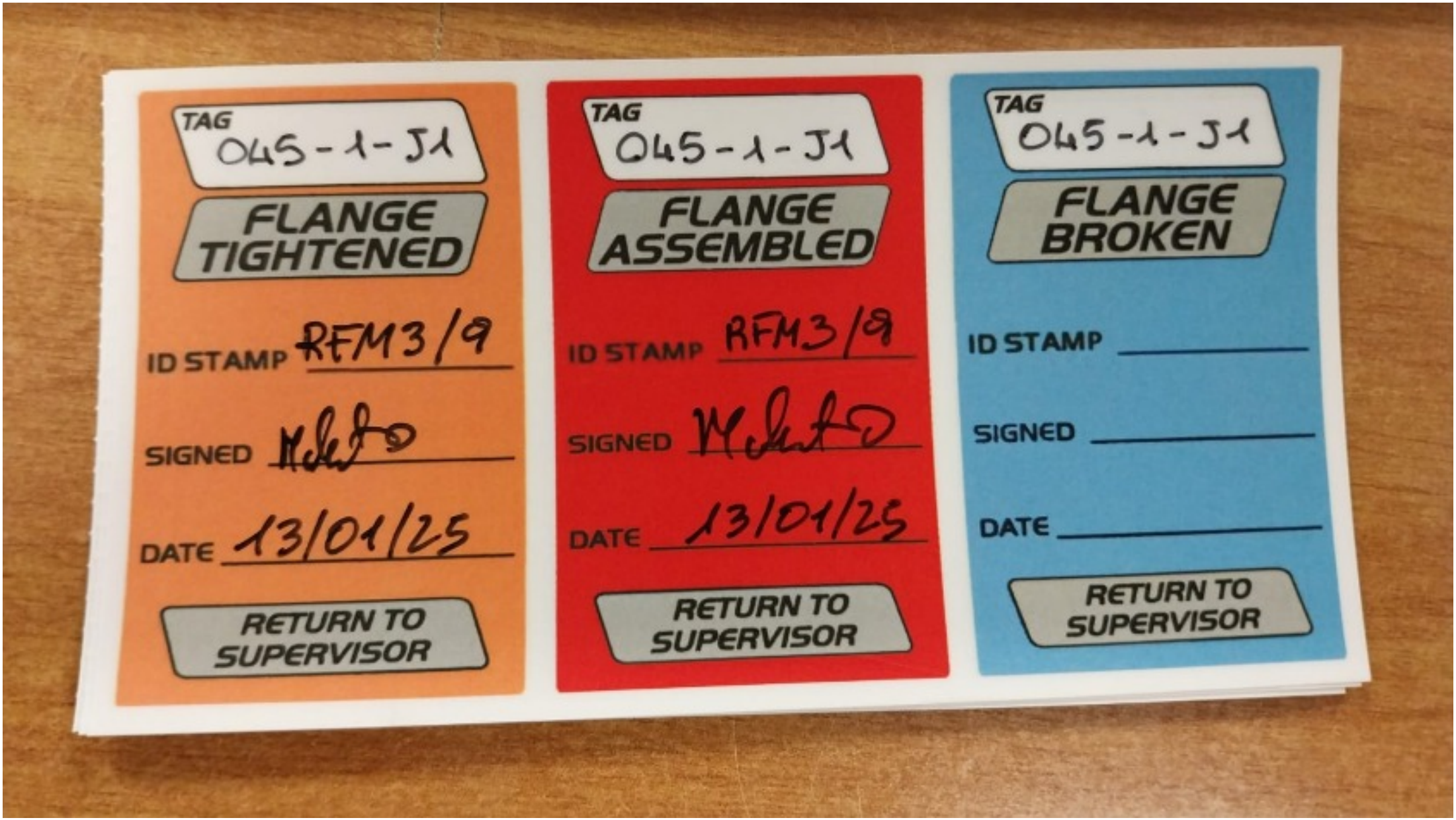
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80016
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

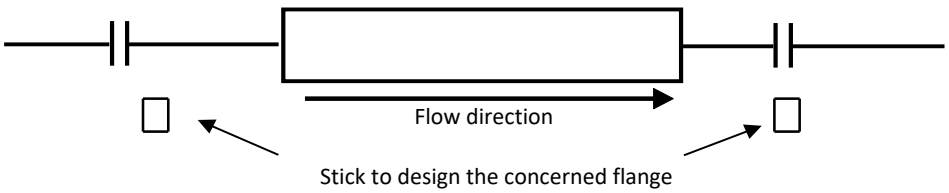
MASTER


TAG
045-1-J1
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
045-1-J1
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
045-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	045-1-J2	: Joint 045-1-J2			Dwg	123A90-FDL-PP-DI-00045-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004109		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

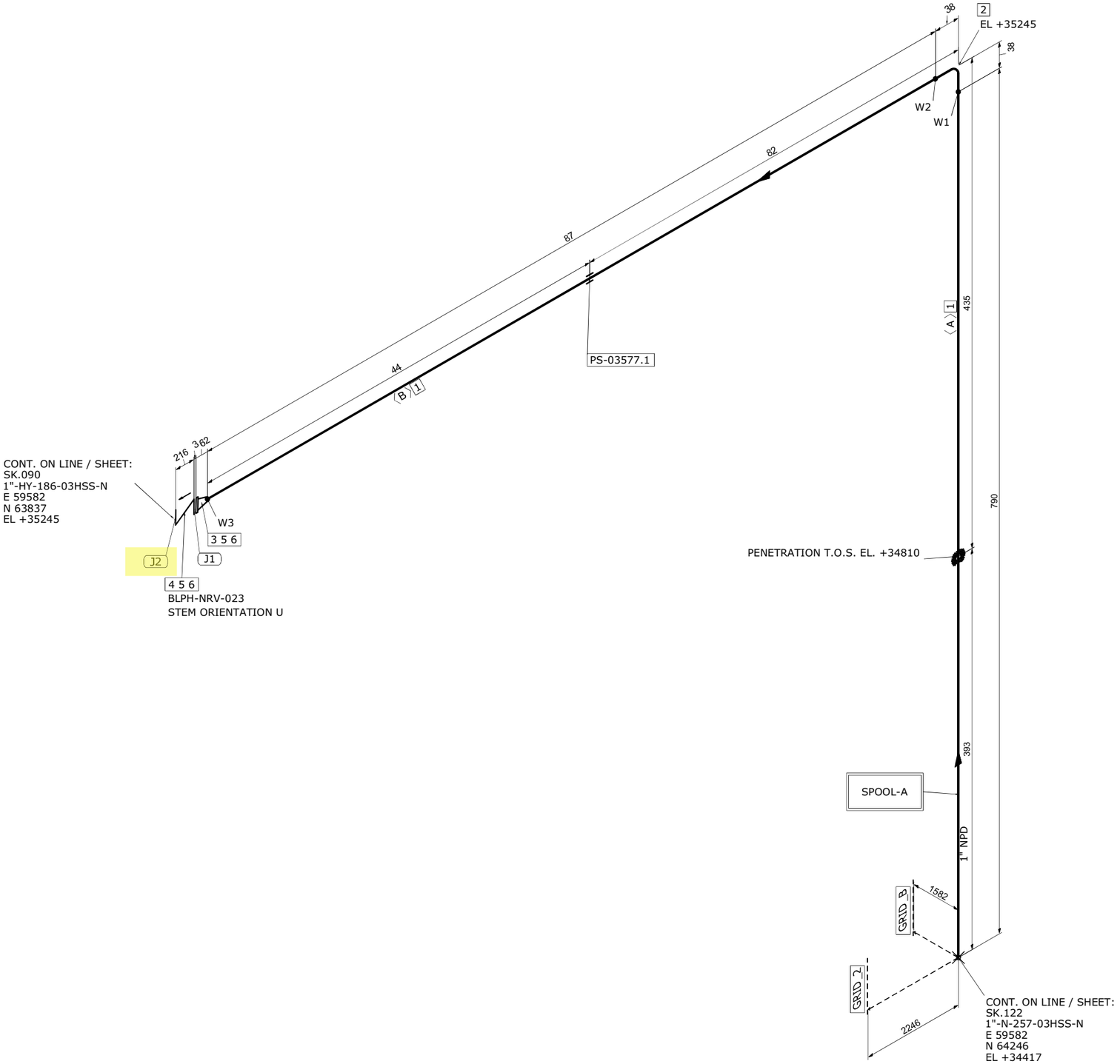
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:47:43.011Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:13:58.811Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03577.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-124-03HSS-N

SK.045

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00045 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

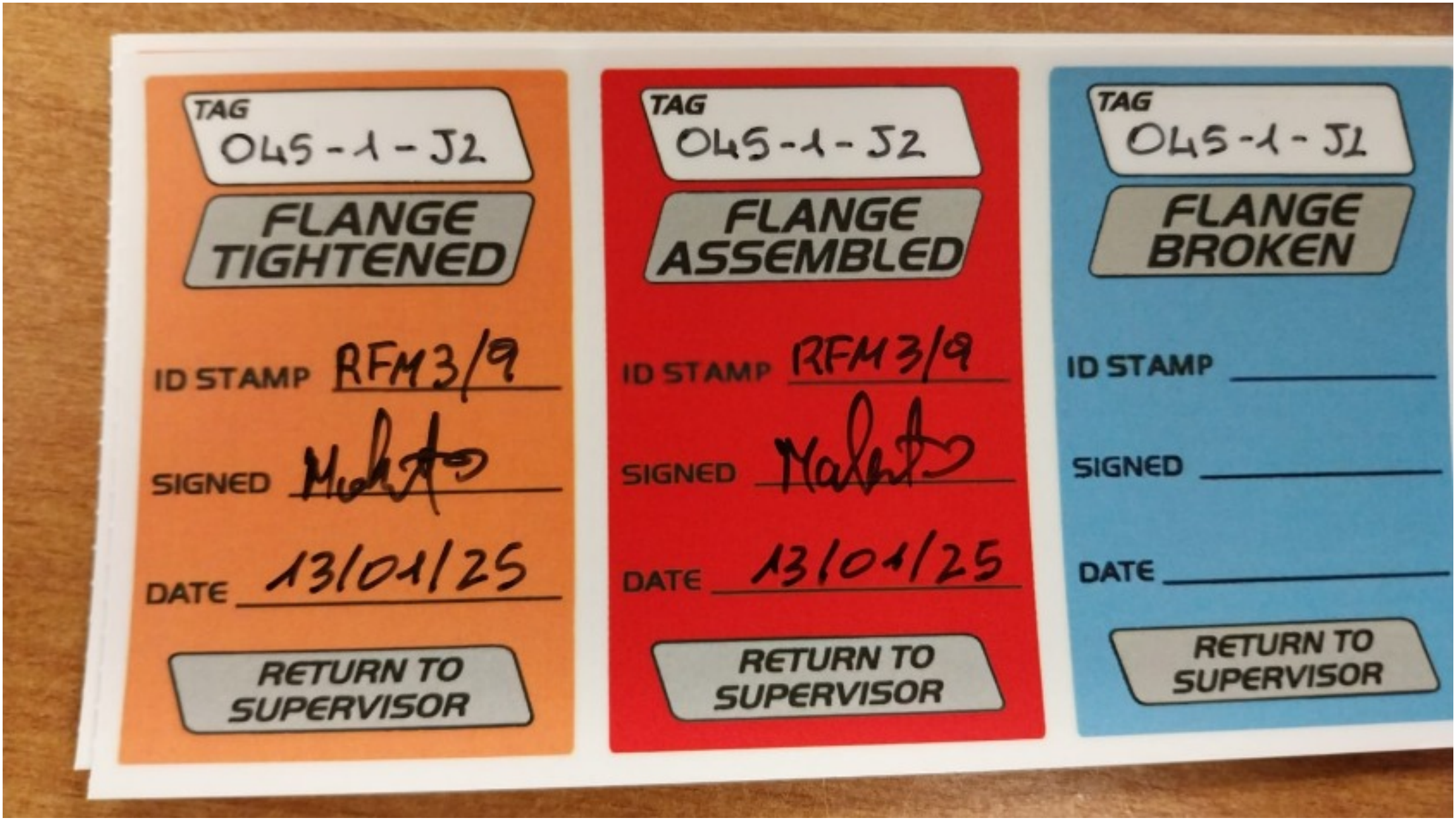
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80016
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

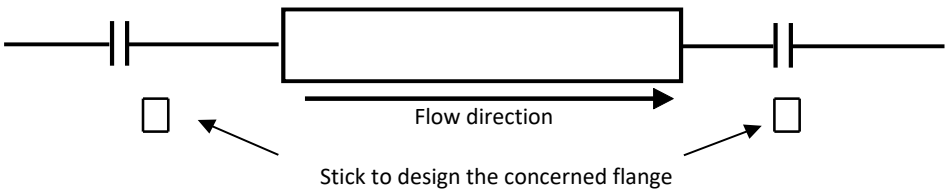
MASTER


TAG
045-1-J2
FLANGE TIGHTENED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
045-1-J2
FLANGE ASSEMBLED
ID STAMP RFM3/9
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
045-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	046-1-J1	: Joint 046-1-J1			Dwg	123A90-FDL-PP-DI-00046-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004110		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 / RD00261

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

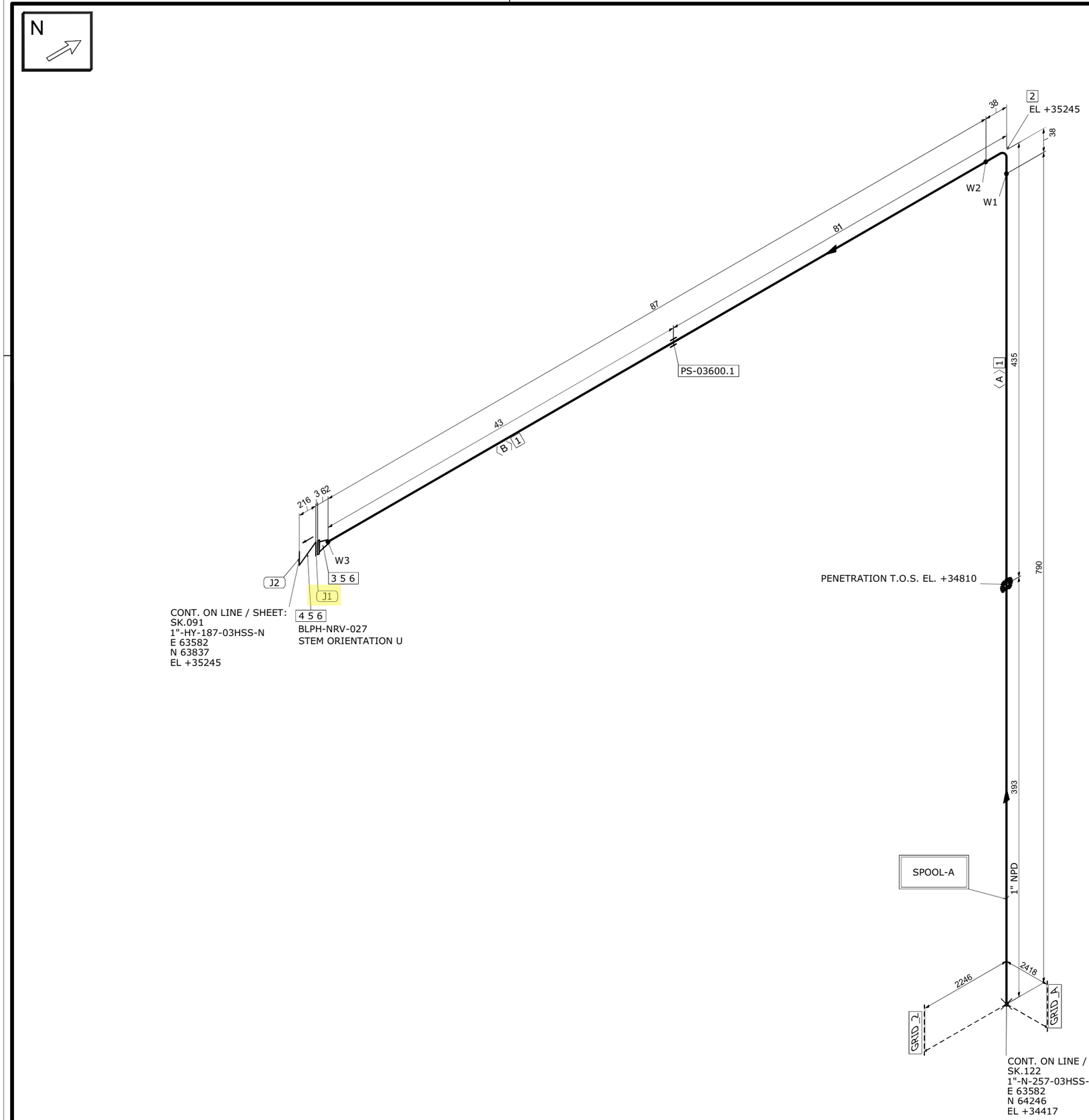
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:47:54.363Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T17:44:42.786Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03600.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-125-03HSS-N
SK.046

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00046 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

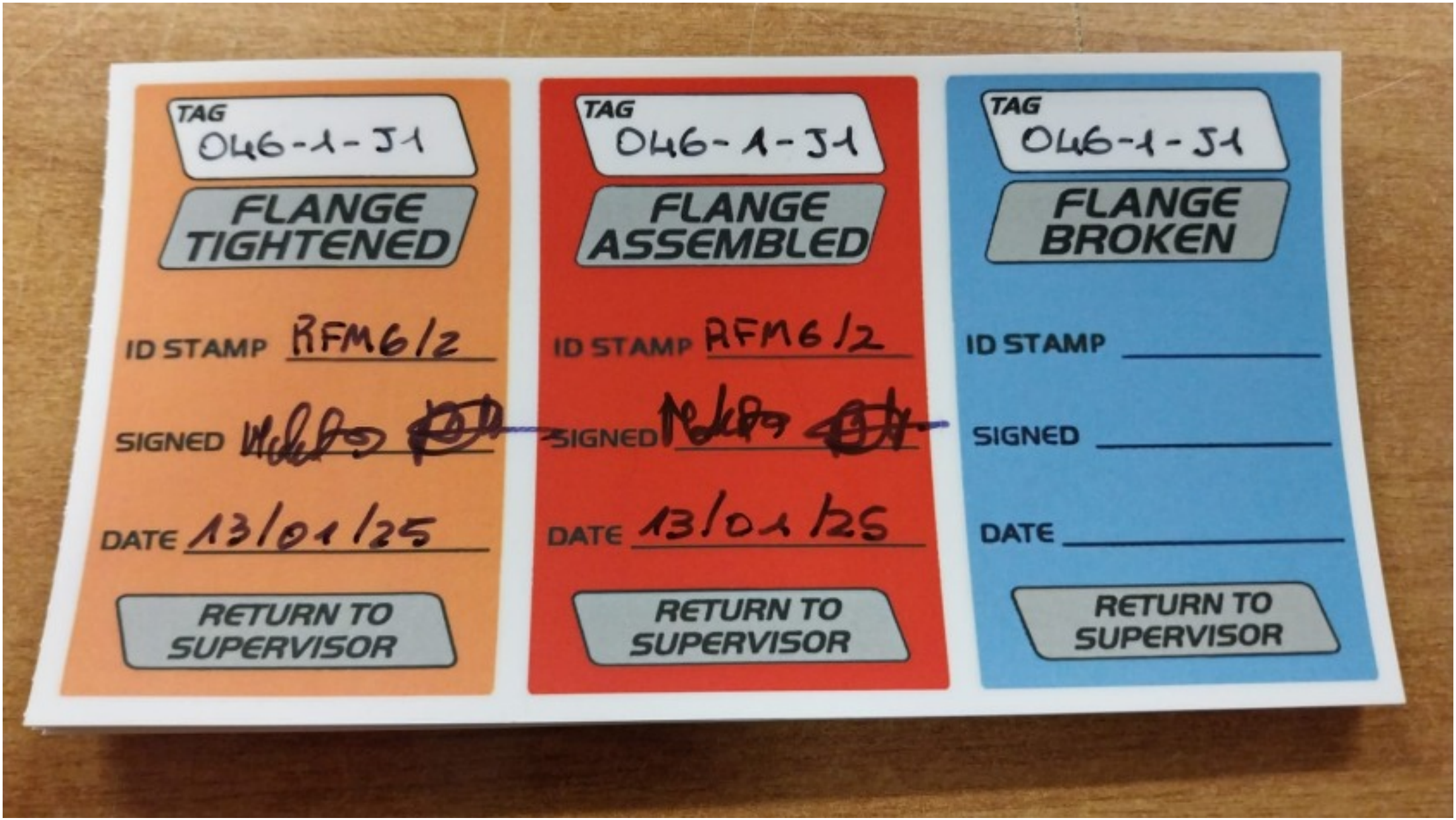
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

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

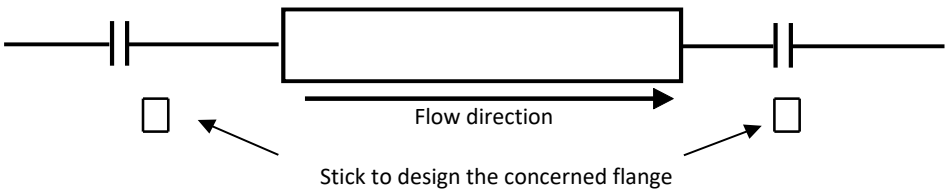
MASTER


TAG
046-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
046-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
046-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	046-1-J2	: Joint 046-1-J2			Dwg	123A90-FDL-PP-DI-00046-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004111		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 / RD00261

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

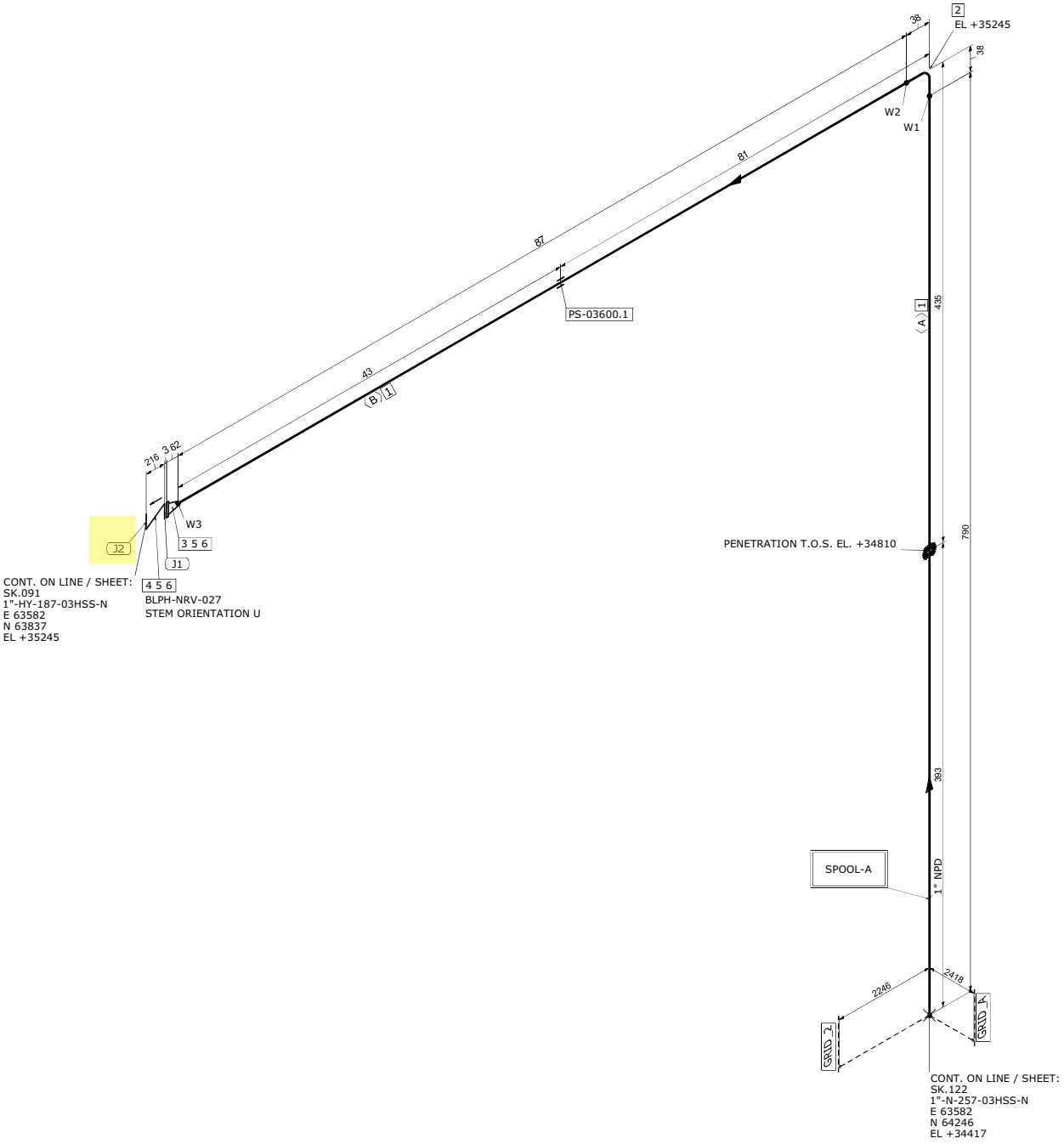
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:48:06.714Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T17:45:56.043Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	0.9M	2.2
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.1
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.0

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	790	BEVEL	BEVEL
B	1	87	BEVEL	BEVEL

SUPPORT LIST

PS-03600.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.2
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-125-03HSS-N

SK.046

LINE DATA

NDT INSPECTION CATEGORY	2	PED CATEGORY	Art. 4, par. 3		
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas	
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg] TEMP. -46 / 80 [°C]	
HEAT TRACING	N/A		TEST	PRESS. 60 [barg] TEMP. AMB MEDIUM Water	

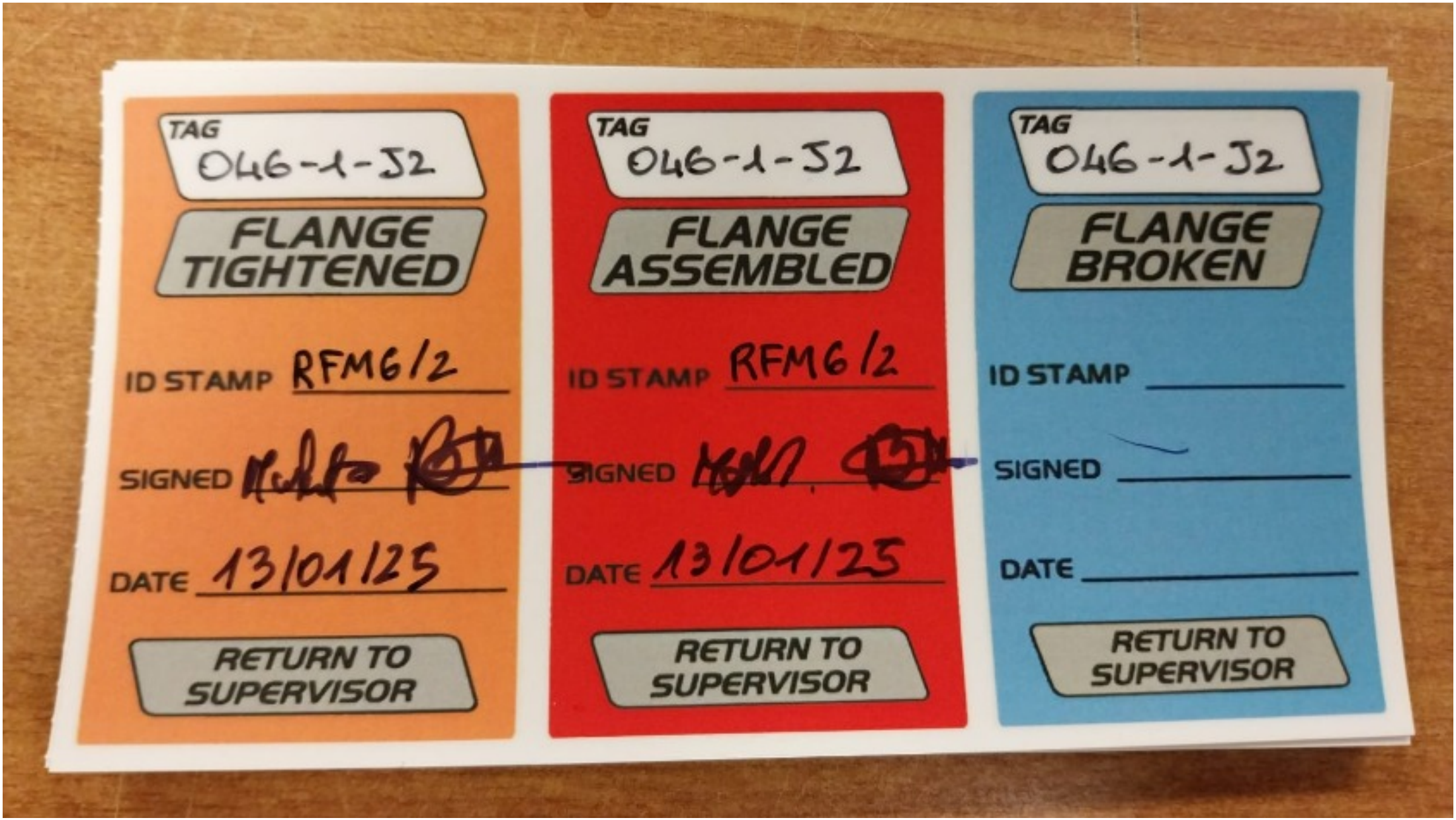
REFERENCE DOCUMENTS

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

MASTER

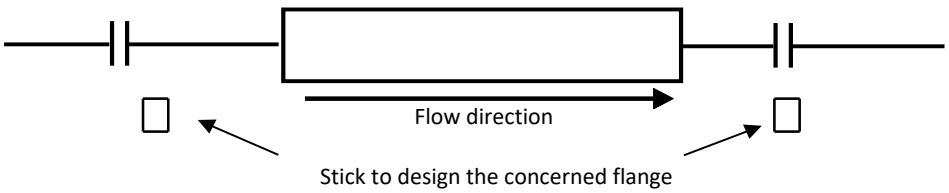
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE	N/A
DRAWN	STAFF SRL
CHECKED	RT
APPROVED	LM
DATE	20-08-2024
FORMAT	A3
DRAWING NO.	123A90-FDL-PP-DI-00046
SHEET / OF	1/1
REV.	00


TAG
046-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
046-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
046-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	047-1-J1	: Joint 047-1-J1			Dwg	123A90-FDL-PP-DI-00047-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004112		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

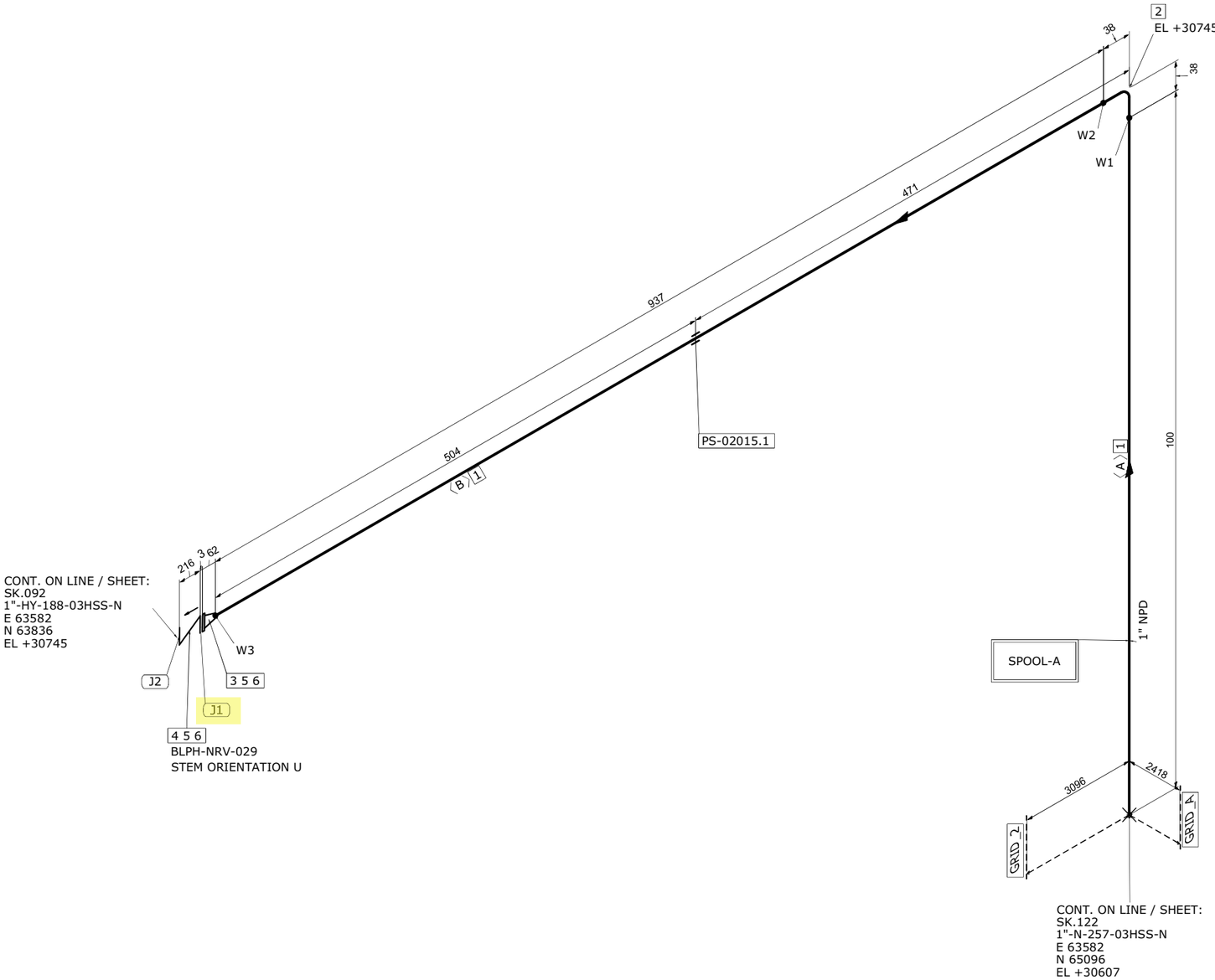
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-13	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-13T12:05:57.407Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:12:57.352Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02015.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-126-03HSS-N

SK.047

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00047 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

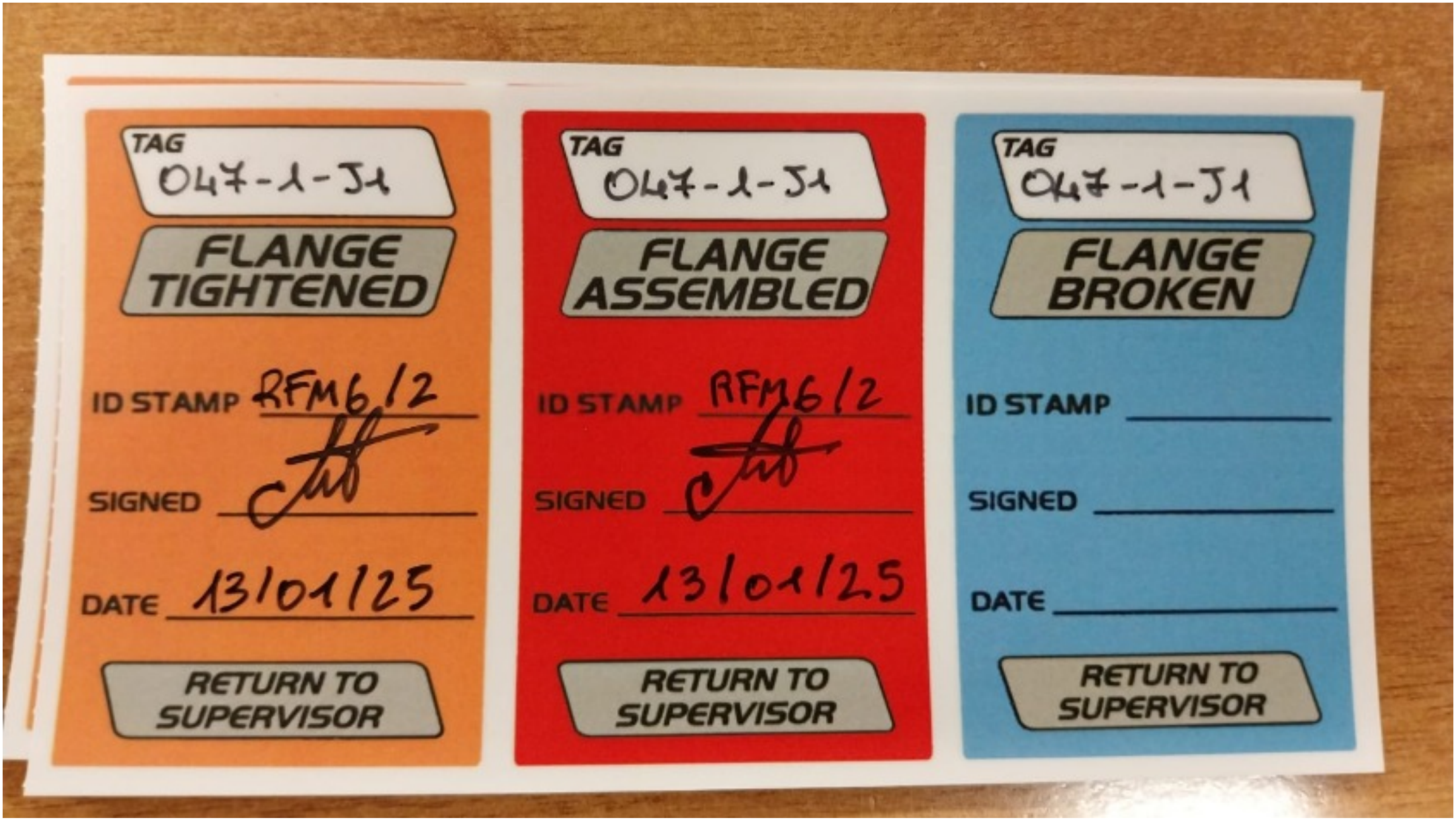
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

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

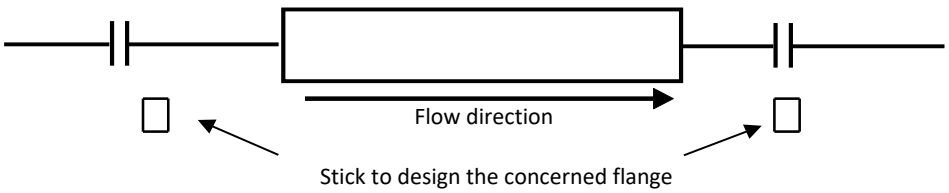
MASTER


TAG
047-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/12
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
047-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/12
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
047-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	047-1-J2	: Joint 047-1-J2			Dwg	123A90-FDL-PP-DI-00047-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004113		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 / RD00261

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

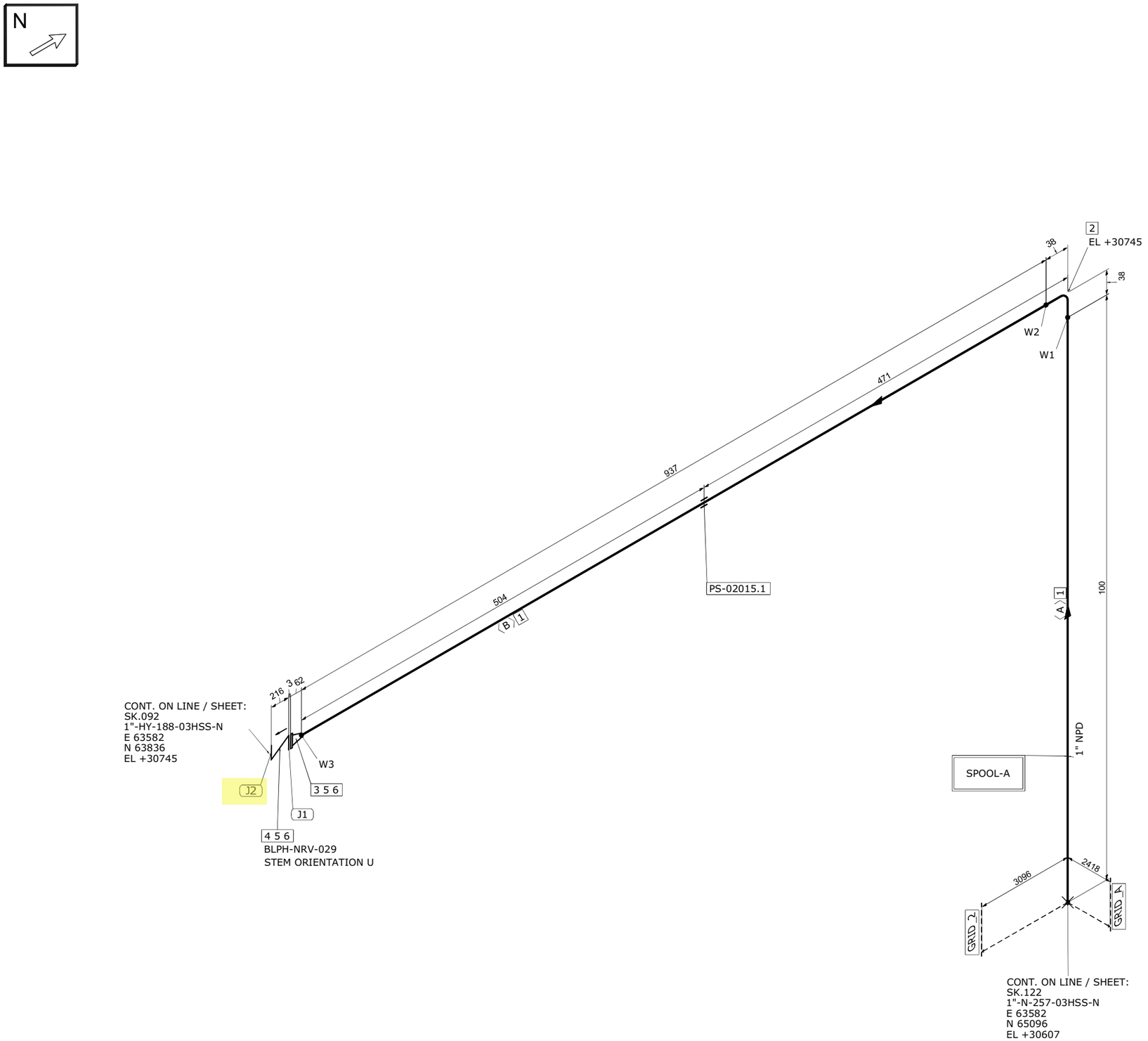
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-13	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-13T12:06:09.524Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:09:59.542Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02015.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-126-03HSS-N

SK.047

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00047 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

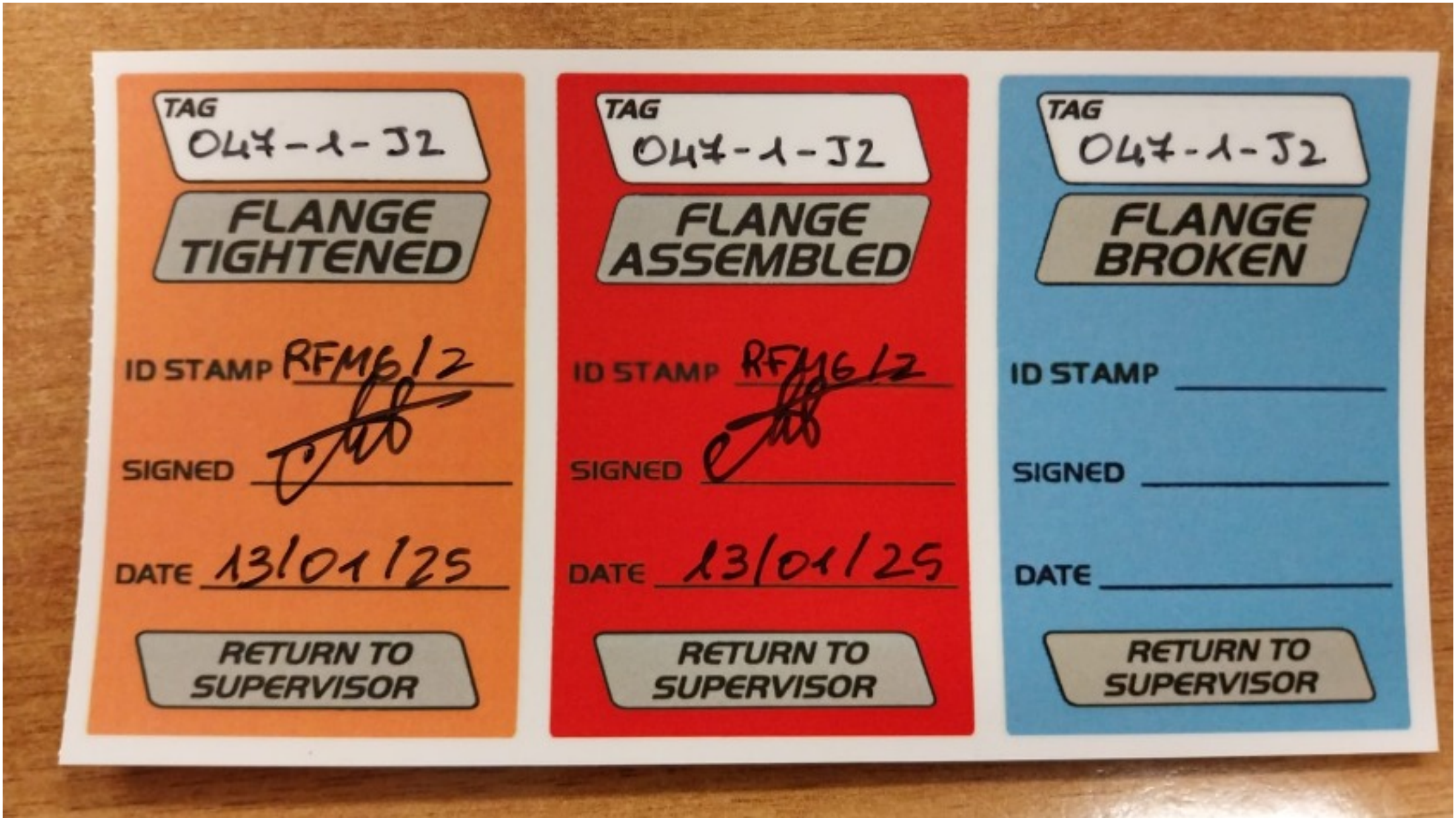
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 60 [barg]	TEMP. AMB	MEDIUM Water		

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

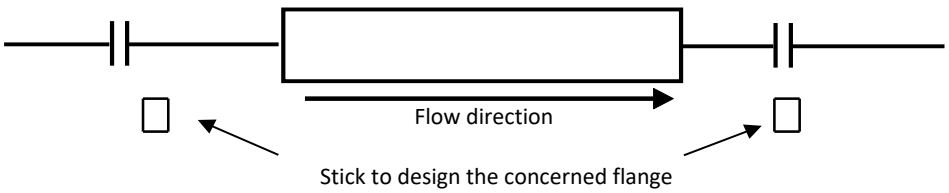
MASTER


TAG
047-1-J2
FLANGE TIGHTENED
ID STAMP RFM612
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
047-1-J2
FLANGE ASSEMBLED
ID STAMP RFM612
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
047-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	048-1-J1	: Joint 048-1-J1			Dwg	123A90-FDL-PP-DI-00048-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004114		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

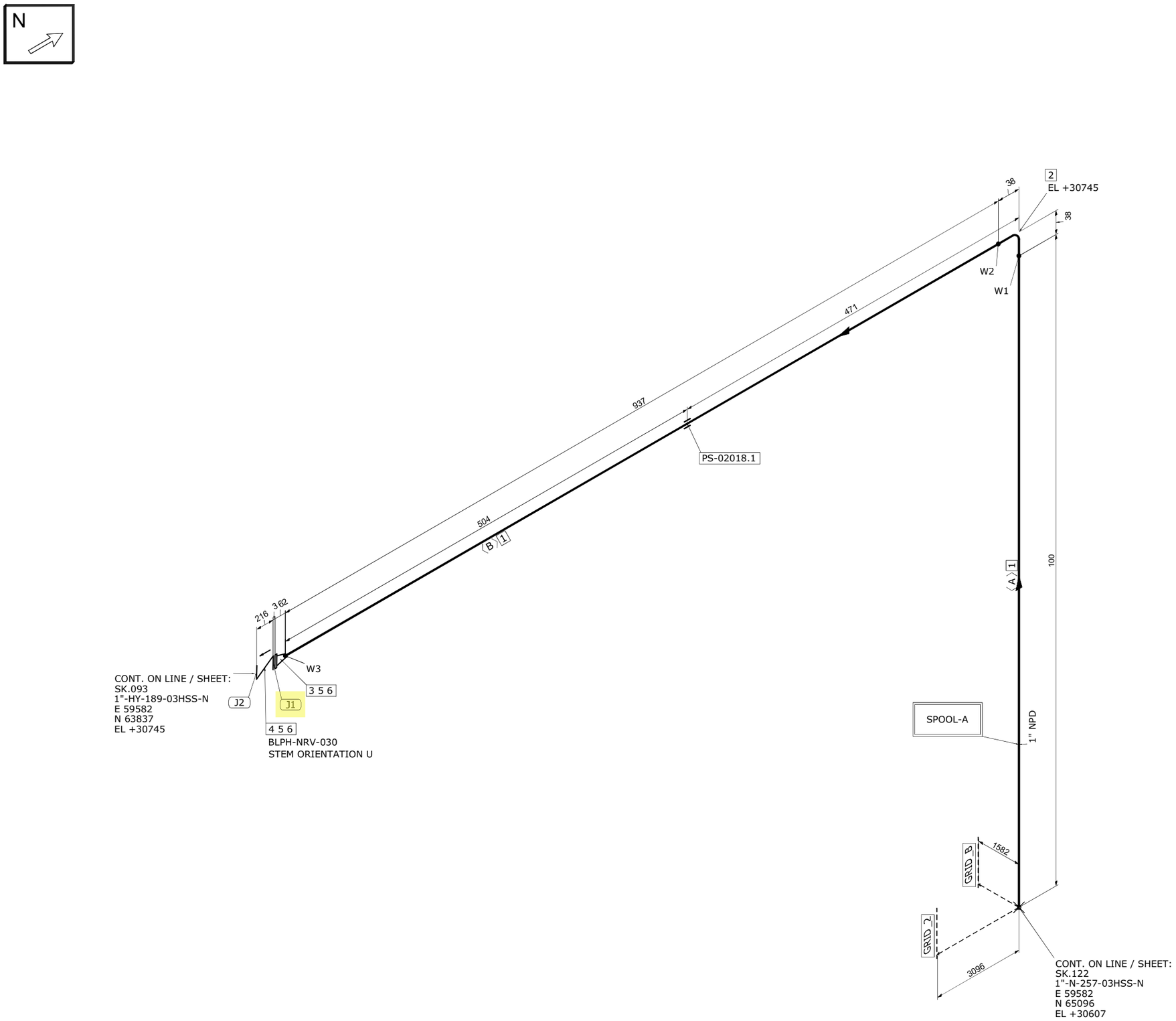
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-14T05:48:21.450Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-14T16:08:38.294Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02018.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-127-03HSS-N

SK.048

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00048 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

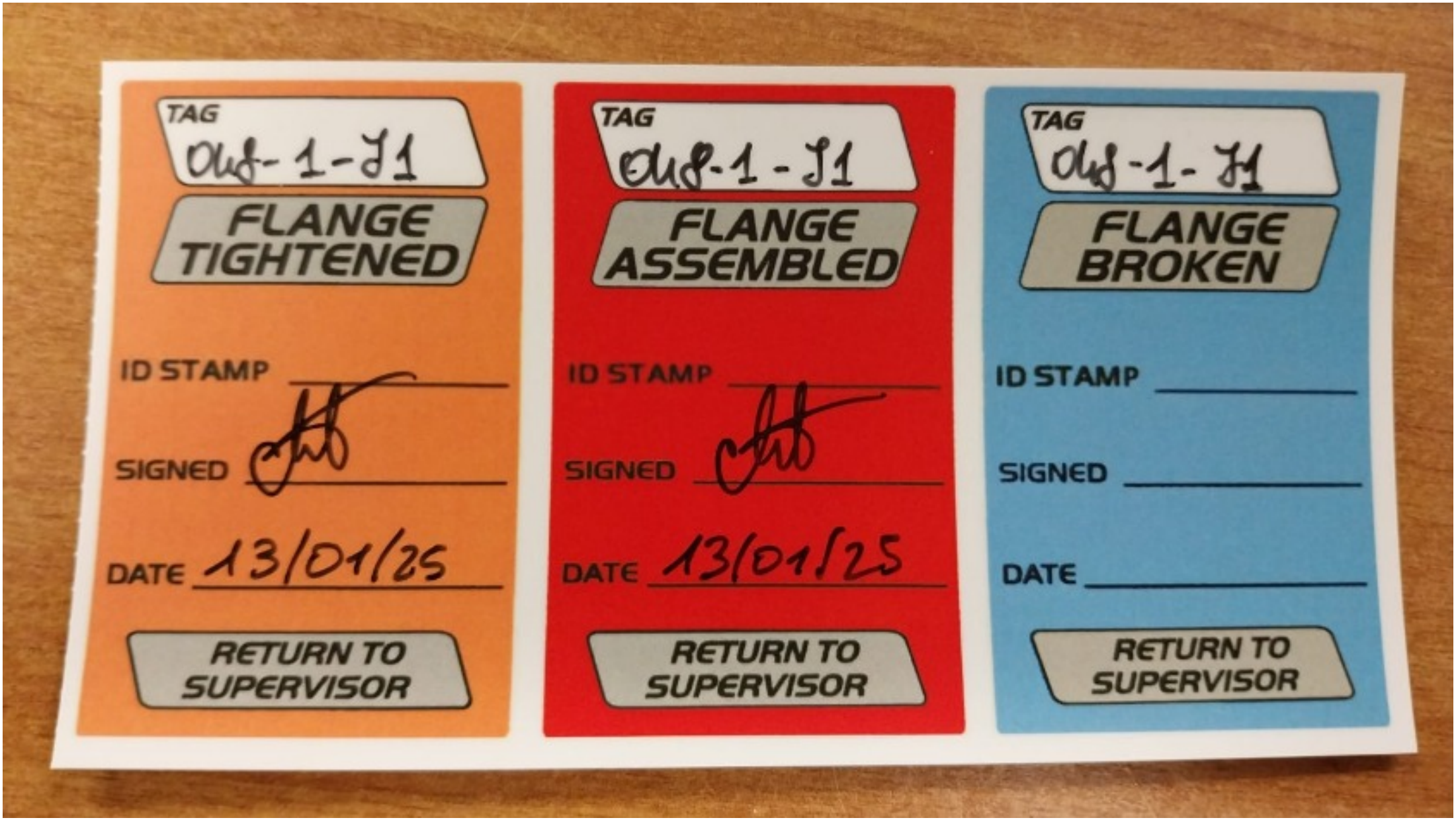
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 60	[barg]	TEMP. AMB.	MEDIUM Water	

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

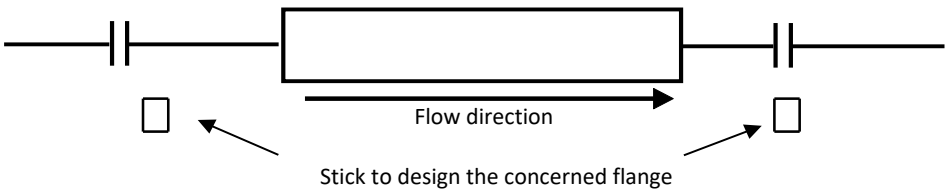
MASTER


TAG
Ch8-1-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
Ch8-1-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
Ch8-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	048-1-J2	: Joint 048-1-J2			Dwg	123A90-FDL-PP-DI-00048-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004115		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

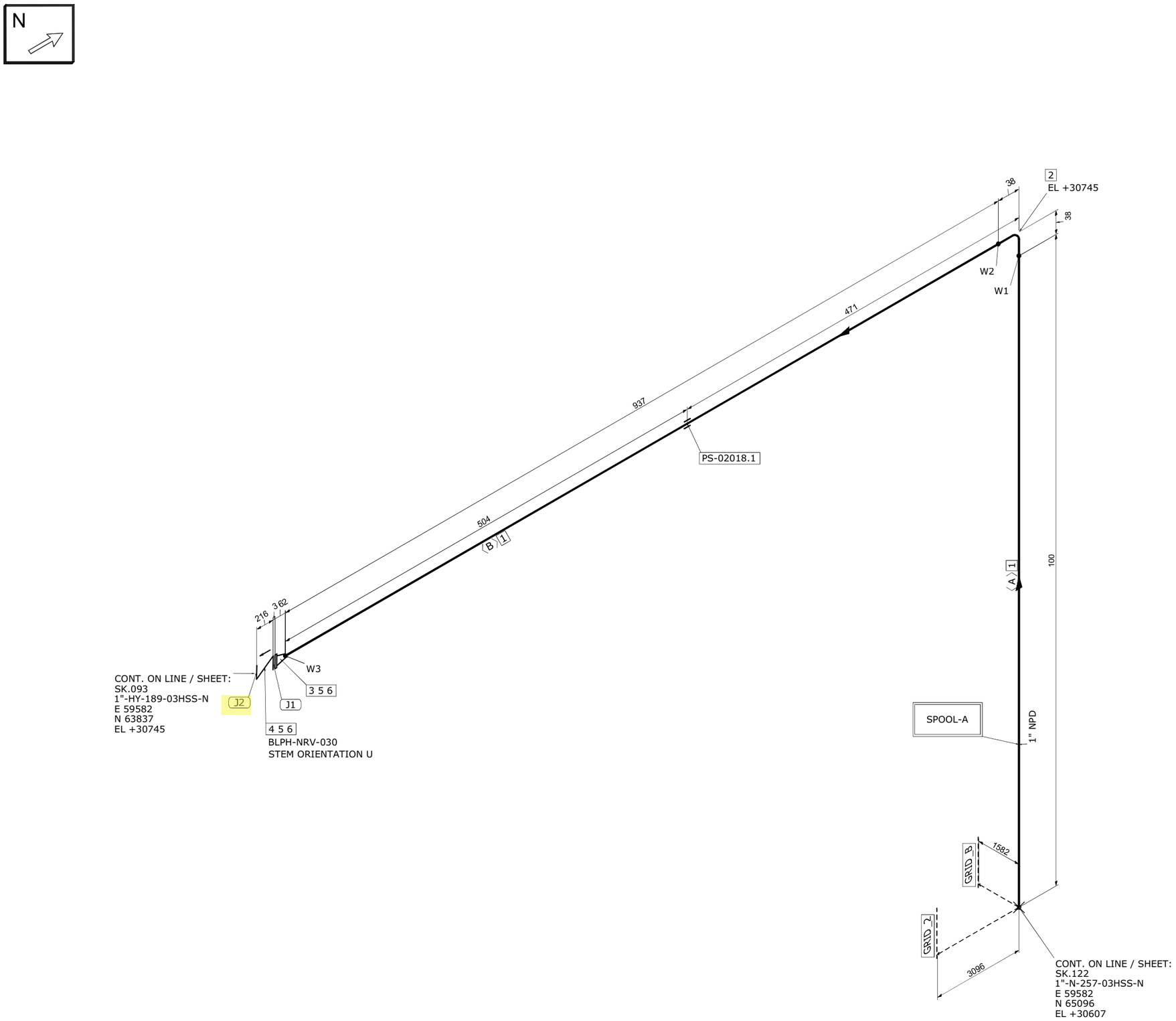
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-14	2025-01-14	
Signature	Digitaly signed by Emanuele Delfino 2025-01-14T05:48:42.545Z	Digitaly signed by Lorenzo Novaga 2025-01-14T16:08:24.506Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02018.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-127-03HSS-N

SK.048

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00048 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

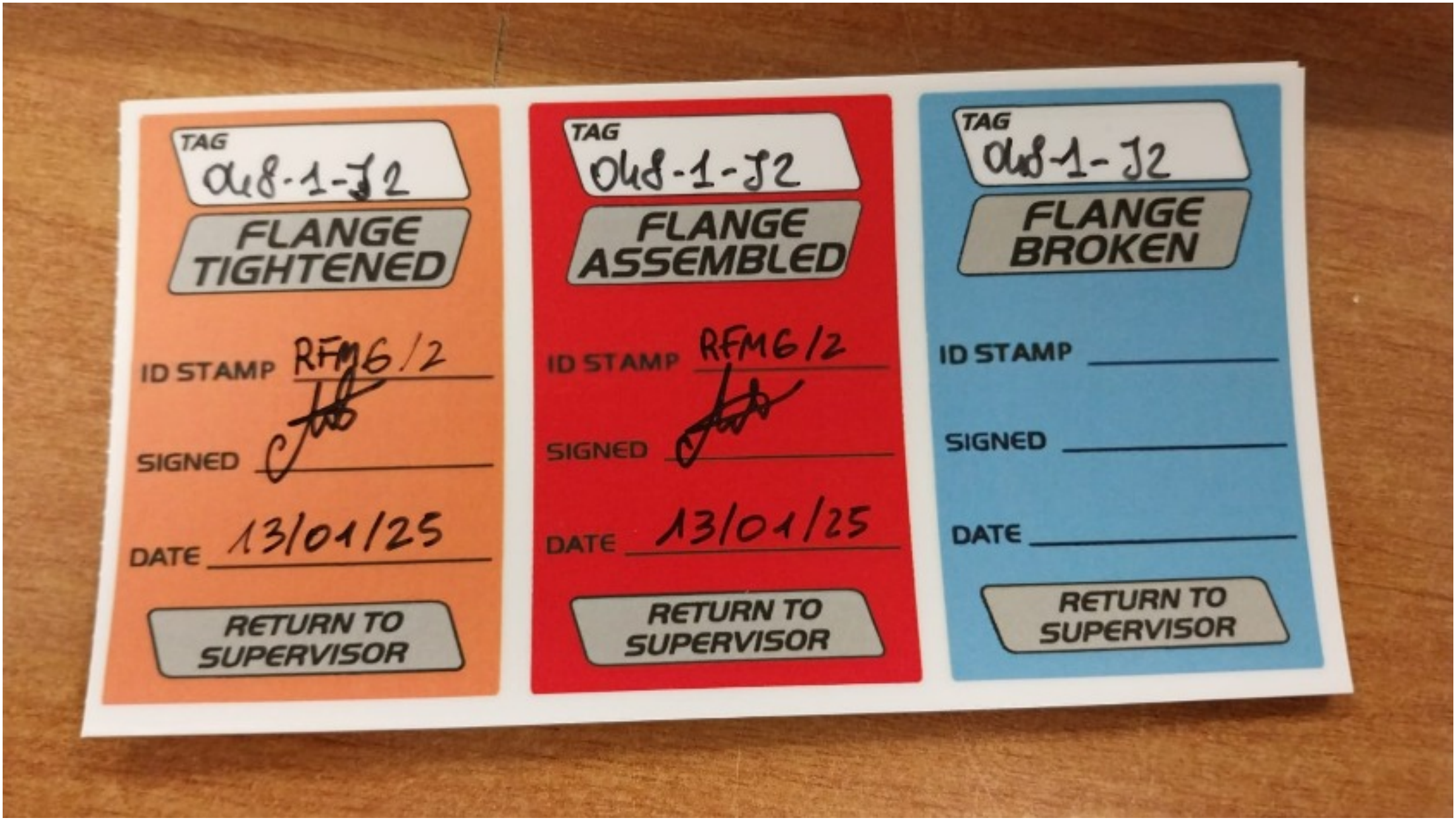
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 60	[barg]	TEMP. AMB.	MEDIUM Water	

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

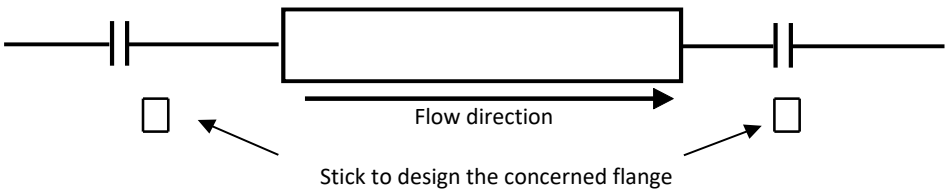
MASTER


TAG
048-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
048-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 13/01/25
RETURN TO SUPERVISOR
TAG
048-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	049-1-J1	: Joint 049-1-J1			Dwg	123A90-FDL-PP-DI-00049-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004116		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

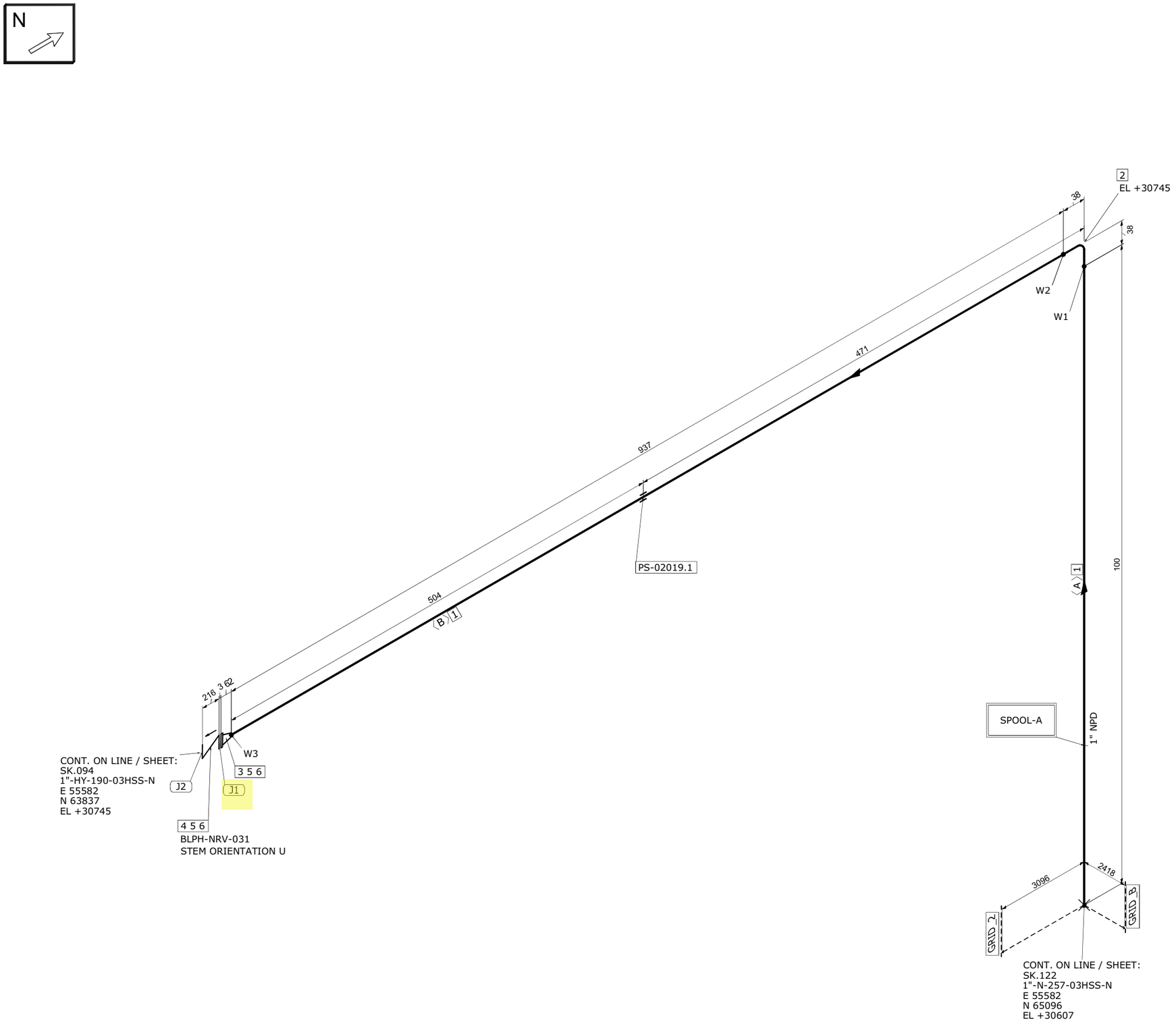
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-15	2025-01-15	
Signature	Digitaly signed by Emanuele Delfino 2025-01-15T06:25:06.961Z	Digitaly signed by Lorenzo Novaga 2025-01-15T08:37:25.369Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02019.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-128-03HSS-N

SK.049

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00049 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 40 [barg]	TEMP. -46 / 80 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 60 [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

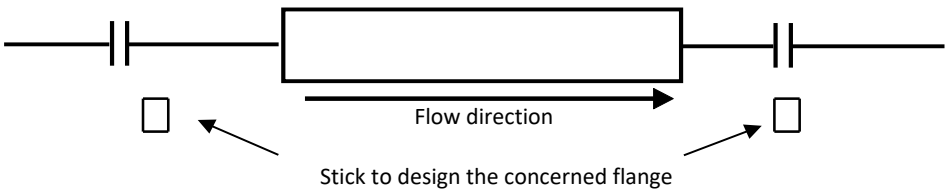
MASTER


TAG
049-1-J1
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
049-1-J1
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
049-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	049-1-J2	: Joint 049-1-J2			Dwg	123A90-FDL-PP-DI-00049-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004117		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type 300LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 158.8

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 / RD00261

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

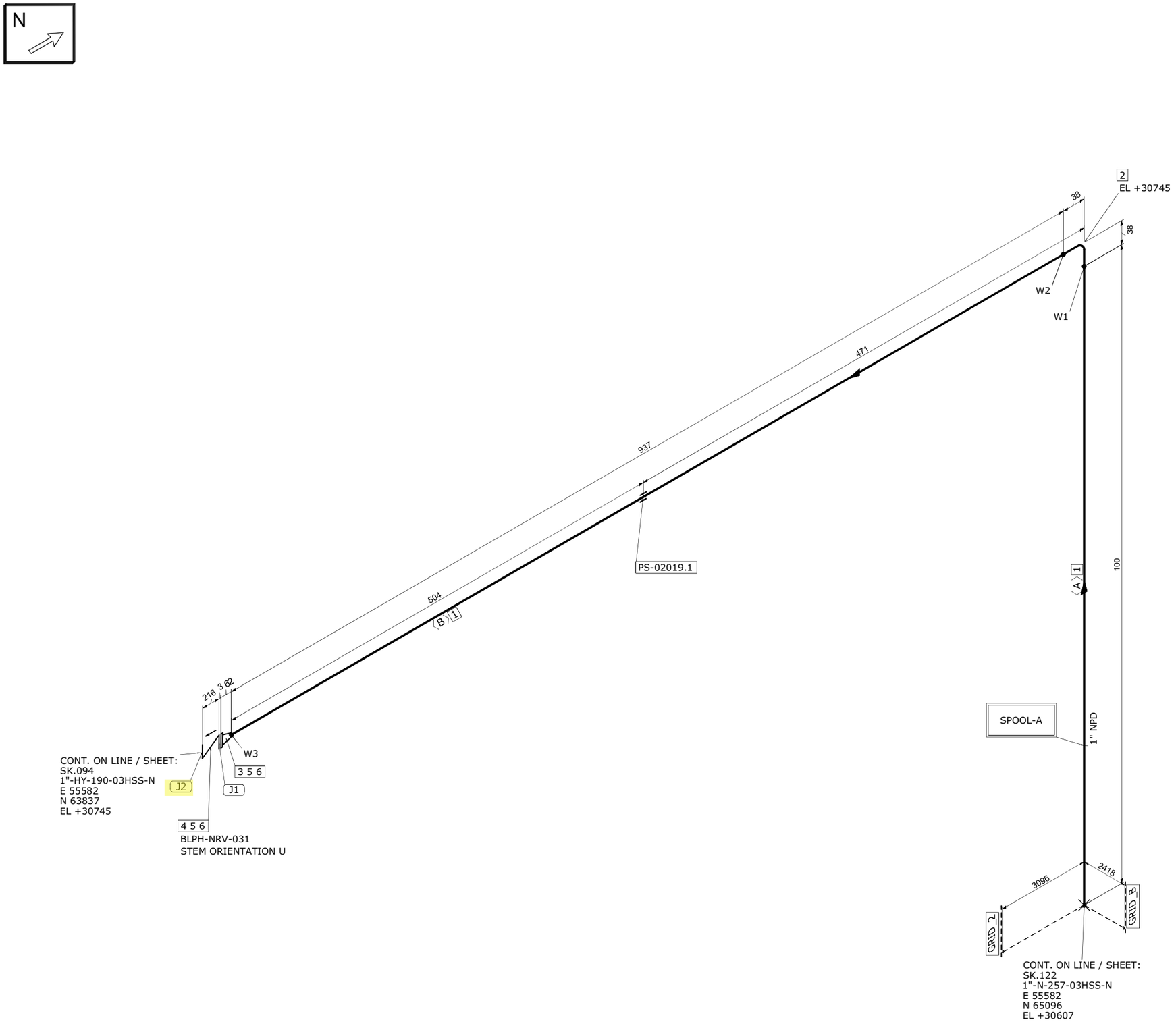
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:25:17.472Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-15T08:38:52.128Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	1.0M	2.6
2	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
3	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02620100	Check Valve Piston EN ISO 15761 FLG 300LB RF CH03C02RFH	1	0.0
5	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
6	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8

FABRICATION WEIGHT [kg]	4.5
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	6.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	100	BEVEL	BEVEL
B	1	937	BEVEL	BEVEL

SUPPORT LIST

PS-02019.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	4.6
MONT	0	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-128-03HSS-N

SK.049

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00049 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

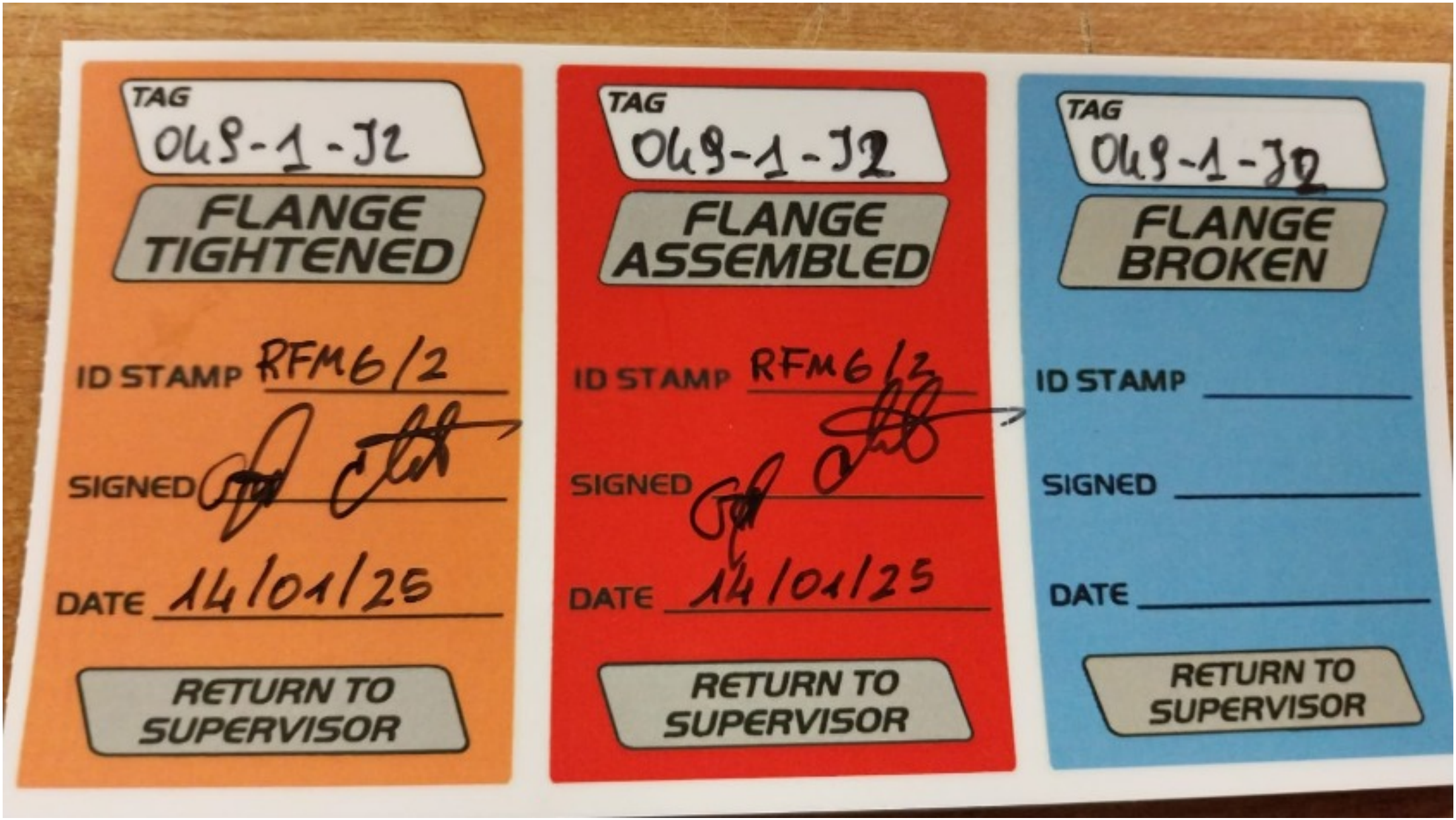
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 60	[barg]	TEMP. AMB	MEDIUM Water		

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

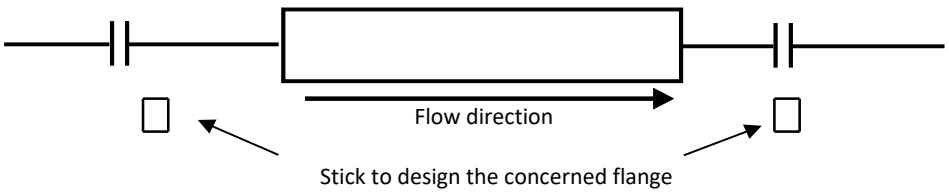
MASTER


TAG
049-1-J2
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
049-1-J2
FLANGE ASSEMBLED
ID STAMP RFM6/3
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
049-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	062-2-J1	: Joint 062-2-J1			Dwg	123A90-FDL-PP-DI-00062-02
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004118		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



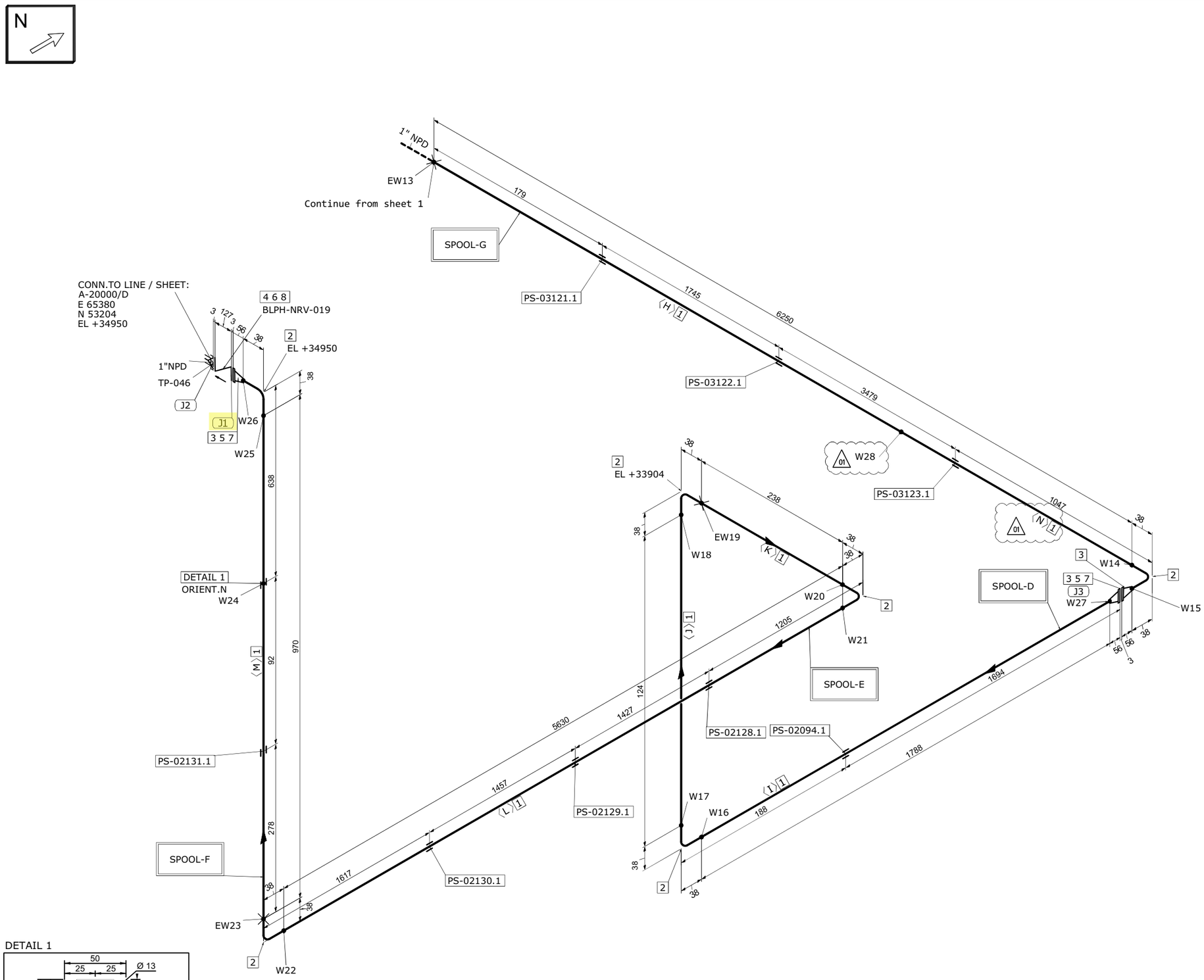
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-17	2025-01-18	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:25:07.558Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-18T07:27:59.445Z	



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	15.0M	48.6
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	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02580100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.2
6	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
8	1/2	SB20BO00650200	85 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6

FABRICATION WEIGHT [kg]	53.9
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	55.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW
EW19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
EW23	1	BW
W24		FW
W25	1	BW
W26	1	BW
W27	1	BW
W28	1 (01)	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
H	1	5000 (01)	BEVEL	BEVEL
I	1	1788	BEVEL	BEVEL
J	1	124	BEVEL	BEVEL
K	1	238	BEVEL	BEVEL
L	1	5630	BEVEL	BEVEL
M	1	970	BEVEL	BEVEL
N	1	1250 (01)	BEVEL	BEVEL

SUPPORT LIST

PS-03121.1
PS-03122.1
PS-03123.1
PS-02094.1
PS-02128.1
PS-02129.1
PS-02130.1
PS-02131.1

SPOOL	WELD [inches]	WEIGHT [kg]
D	4	8.2
E	3	19.1
F	2	4.7
G	3 (01)	21.9
MONT	3	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-151-01CS-N

SK.062

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00062 | SHEET / OF: 2/2 | REV.: 01

LINE DATA

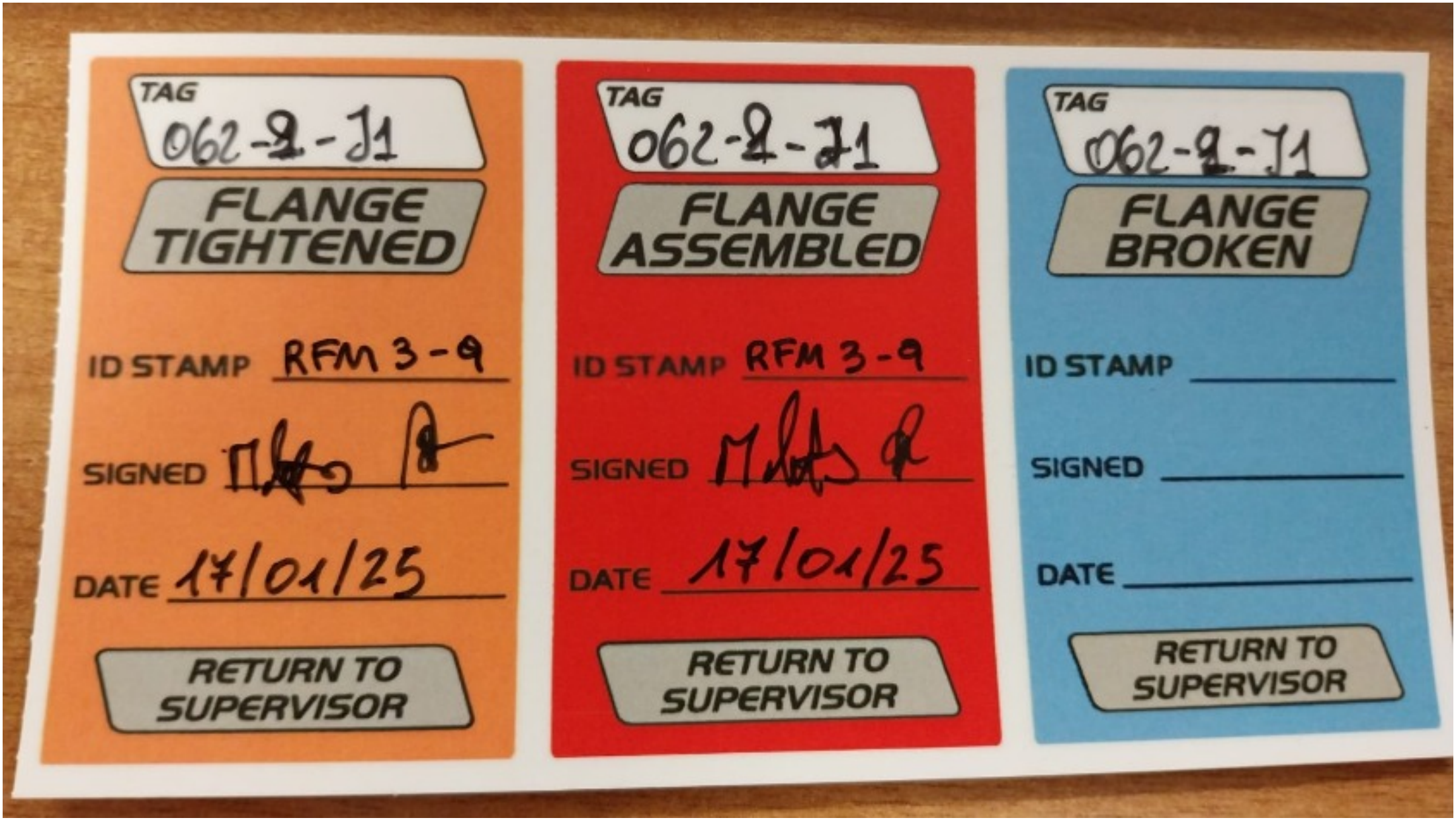
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water	

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

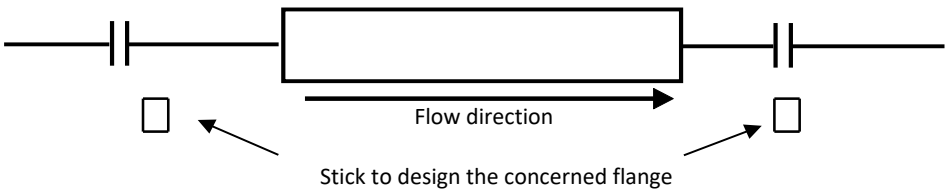
MASTER


TAG
062-2-J1
FLANGE TIGHTENED
ID STAMP RFM 3-9
SIGNED
DATE 17/01/25
RETURN TO SUPERVISOR
TAG
062-2-J1
FLANGE ASSEMBLED
ID STAMP RFM 3-9
SIGNED
DATE 17/01/25
RETURN TO SUPERVISOR
TAG
062-2-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	062-2-J2	: Joint 062-2-J2			Dwg	123A90-FDL-PP-DI-00062-02
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004119	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



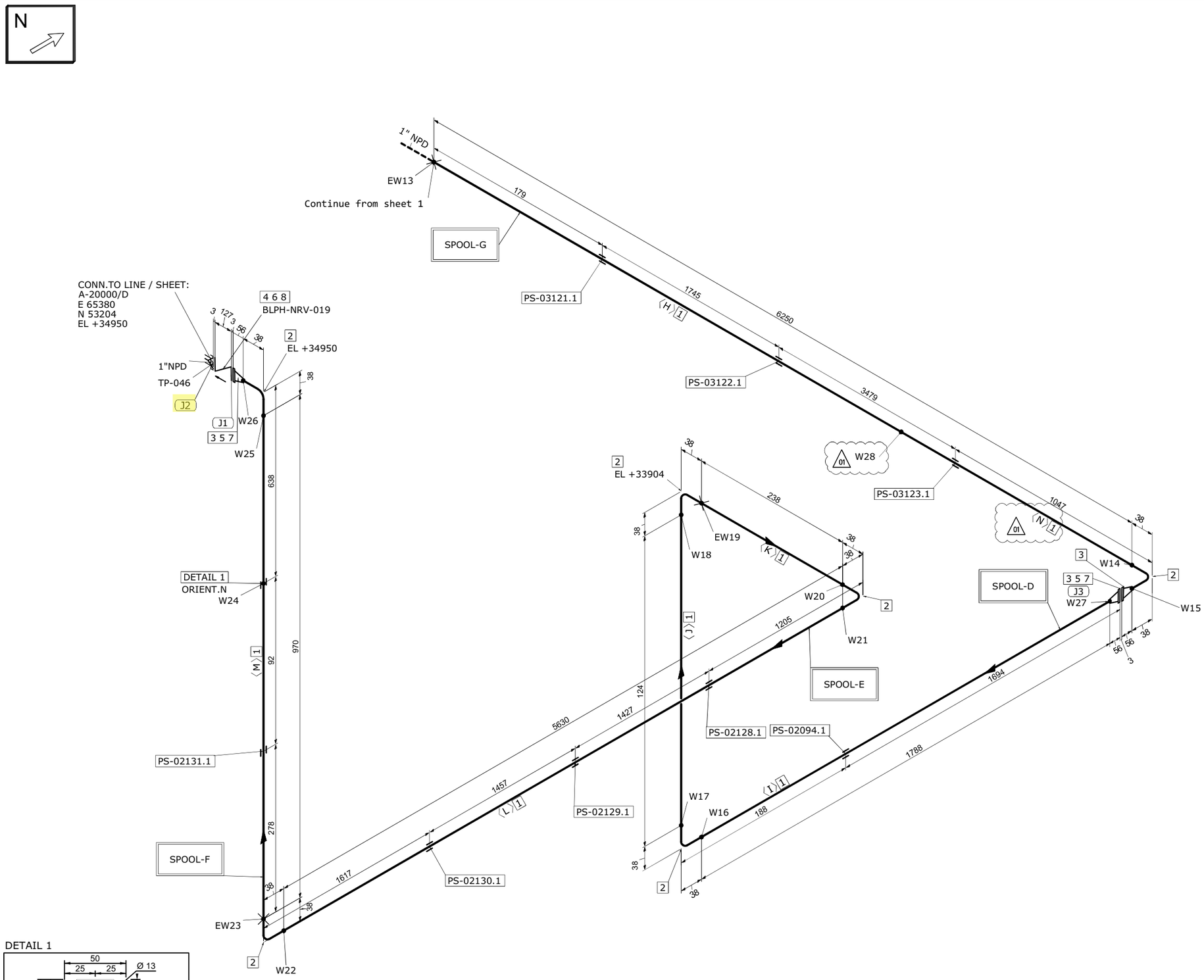
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	65		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	20	65	20	39	65
2	20	65	20	39	65
3	20	65	20	39	65
4	20	65	20	39	65
5			20	39	65
6			20	39	65
7			20	39	65
8			20	39	65
9			20	39	65
10			20	39	65
11			20	39	65
12			20	39	65
13			20	39	65
14			20	39	65
15			20	39	65
16			20	39	65
17			20	39	65
18			20	39	65
19			20	39	65
20			20	39	65

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	2025-01-18	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-17T14:25:17.049Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-18T07:27:36.001Z	



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	15.0M	48.6
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	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02580100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.2
6	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
8	1/2	SB20BO00650200	85 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6

FABRICATION WEIGHT [kg]	53.9
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	55.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW
EW19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
EW23	1	BW
W24		FW
W25	1	BW
W26	1	BW
W27	1	BW
W28	1 (01)	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
H	1	5000 (01)	BEVEL	BEVEL
I	1	1788	BEVEL	BEVEL
J	1	124	BEVEL	BEVEL
K	1	238	BEVEL	BEVEL
L	1	5630	BEVEL	BEVEL
M	1	970	BEVEL	BEVEL
N	1	1250 (01)	BEVEL	BEVEL

SUPPORT LIST

PS-03121.1
PS-03122.1
PS-03123.1
PS-02094.1
PS-02128.1
PS-02129.1
PS-02130.1
PS-02131.1

SPOOL	WELD [inches]	WEIGHT [kg]
D	4	8.2
E	3	19.1
F	2	4.7
G	3 (01)	21.9
MONT	3	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-151-01CS-N

SK.062

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

SCALE: N/A

DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00062 | SHEET / OF: 2/2 | REV.: 01

LINE DATA

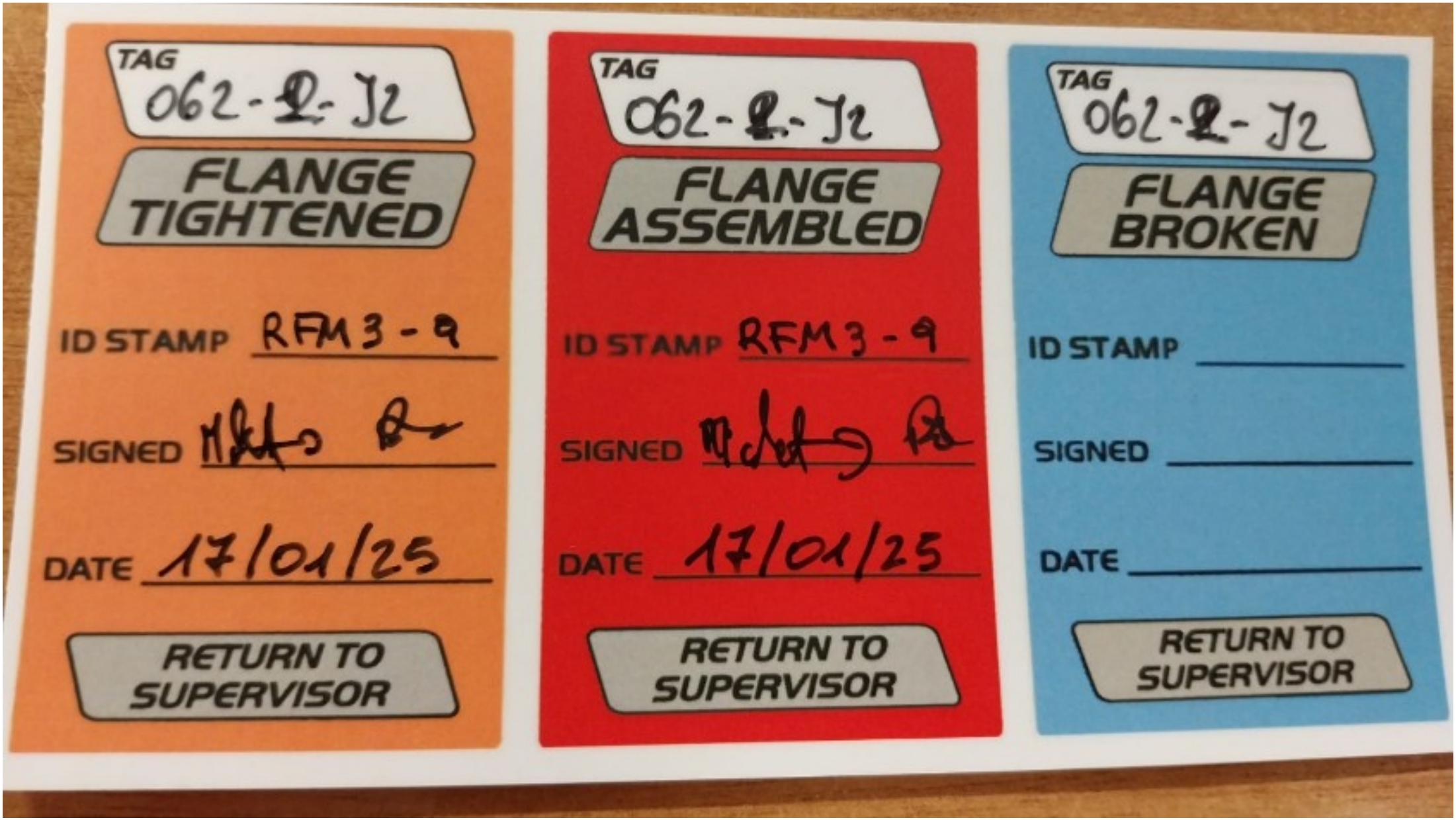
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water	

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

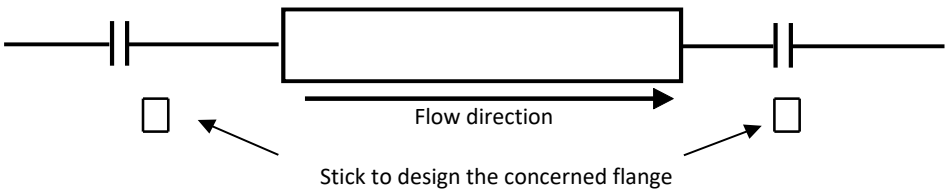
MASTER


TAG
062-2-J2
FLANGE TIGHTENED
ID STAMP RFM3-9
SIGNED
DATE 17/01/25
RETURN TO SUPERVISOR
TAG
062-2-J2
FLANGE ASSEMBLED
ID STAMP RFM3-9
SIGNED
DATE 17/01/25
RETURN TO SUPERVISOR
TAG
062-2-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	062-2-J3	: Joint 062-2-J3			Dwg	123A90-FDL-PP-DI-00062-02
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004120		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

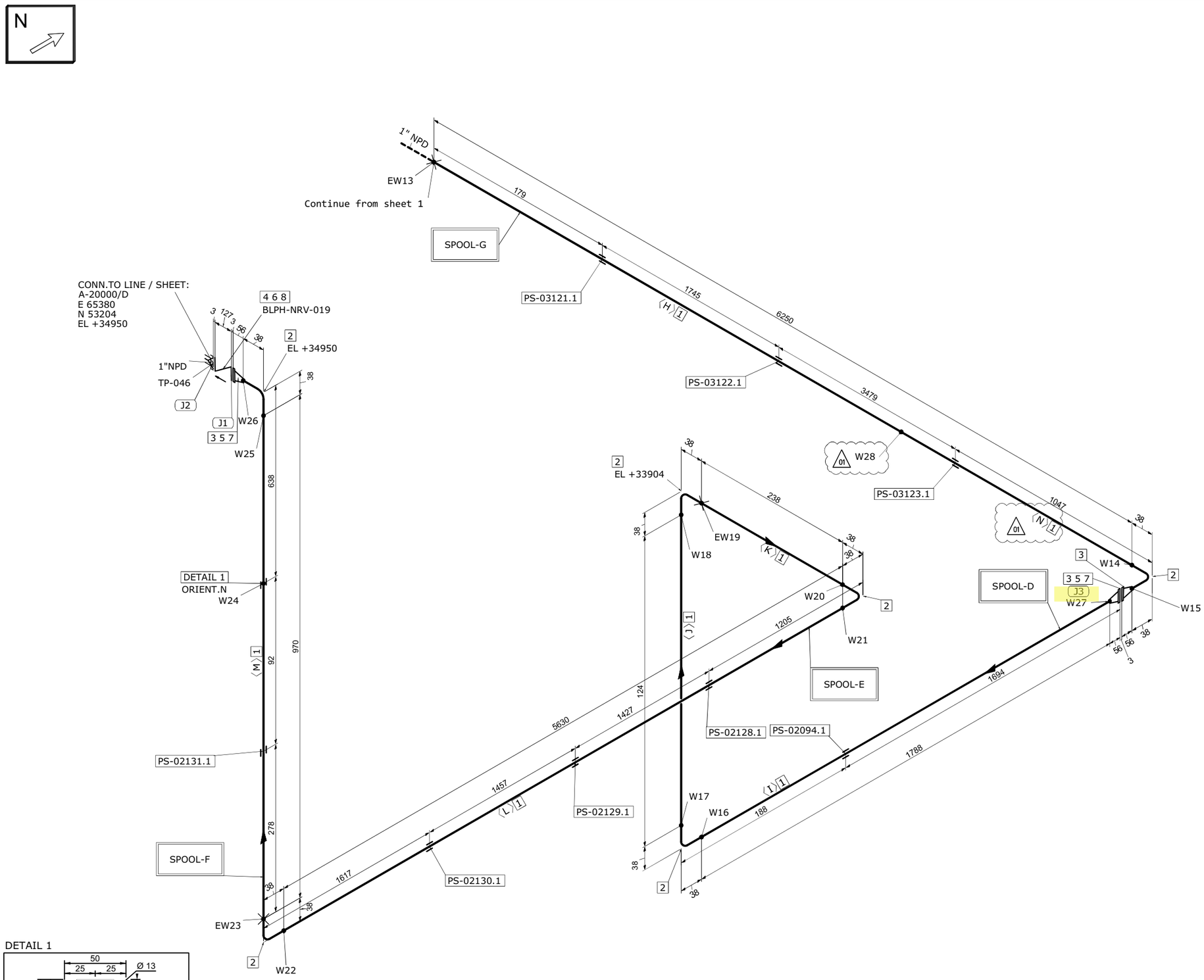
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

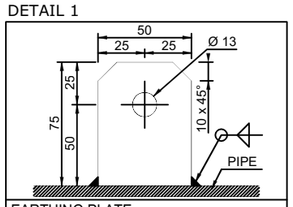
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-16	2025-01-16	
Signature	Digitaly signed by Emanuele Delfino 2025-01-16T13:04:14.076Z	Digitaly signed by Lorenzo Novaga 2025-01-16T14:31:22.455Z	



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	15.0M	48.6
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	3	4.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1	VDRNNN02580100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01B02RF	1	0.0
5	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.2
6	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
7	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
8	1/2	SB20BO00650200	85 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.6

FABRICATION WEIGHT [kg]	53.9
ERECTION WEIGHT [kg]	1.9
OVERALL WEIGHT [kg]	55.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW13	1	BW
W14	1	BW
W15	1	BW
W16	1	BW
W17	1	BW
W18	1	BW
EW19	1	BW
W20	1	BW
W21	1	BW
W22	1	BW
EW23	1	BW
W24		FW
W25	1	BW
W26	1	BW
W27	1	BW
W28	1 (01)	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
H	1	5000 (01)	BEVEL	BEVEL
I	1	1788	BEVEL	BEVEL
J	1	124	BEVEL	BEVEL
K	1	238	BEVEL	BEVEL
L	1	5630	BEVEL	BEVEL
M	1	970	BEVEL	BEVEL
N	1	1250 (01)	BEVEL	BEVEL

SUPPORT LIST

PS-03121.1
PS-03122.1
PS-03123.1
PS-02094.1
PS-02128.1
PS-02129.1
PS-02130.1
PS-02131.1

SPOOL	WELD [inches]	WEIGHT [kg]
D	4	8.2
E	3	19.1
F	2	4.7
G	3 (01)	21.9
MONT	3	1.9

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-151-01CS-N

SK.062

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	17-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00062			SHEET / OF	2/2
						REV.	01

LINE DATA

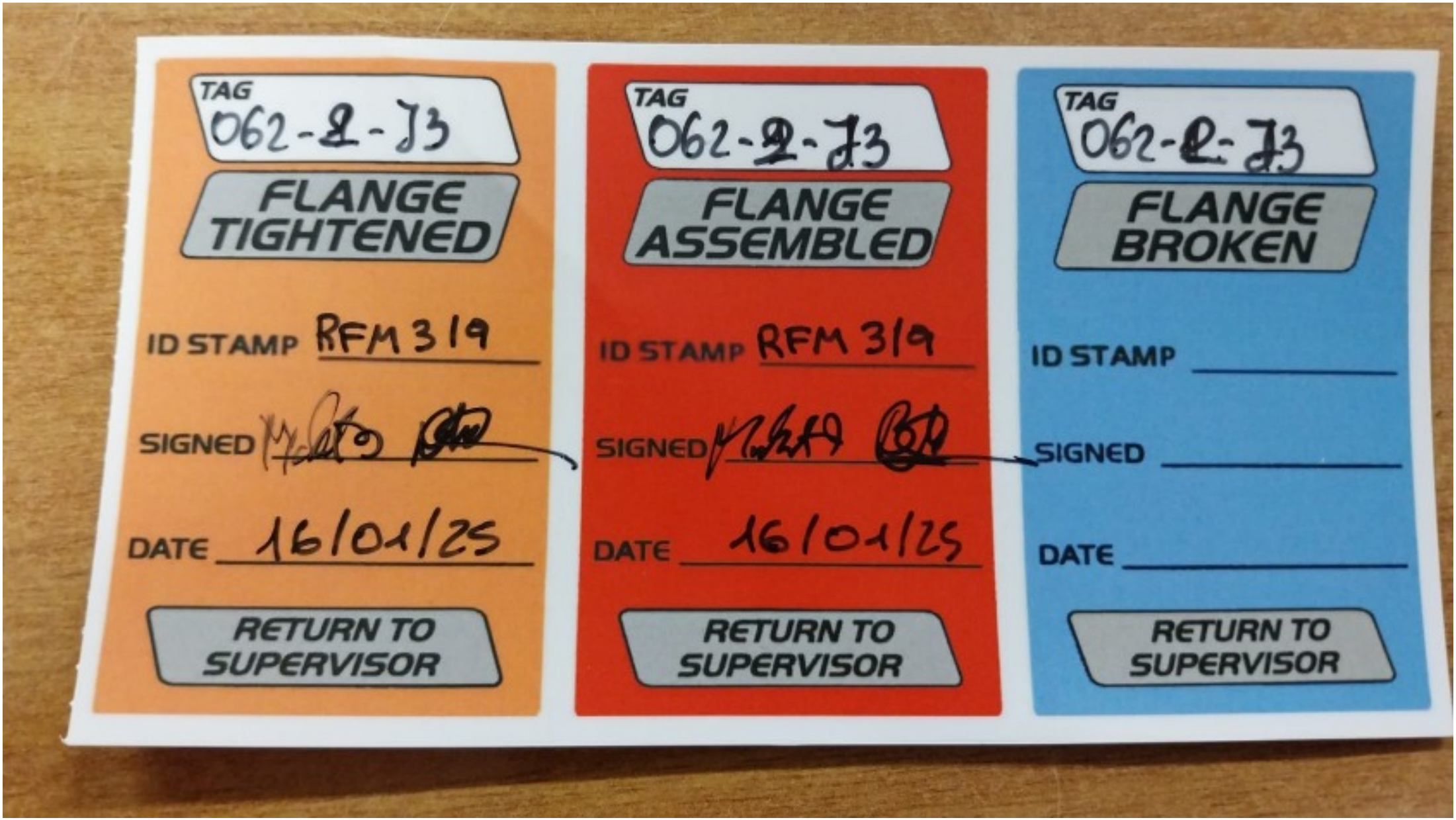
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water		

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

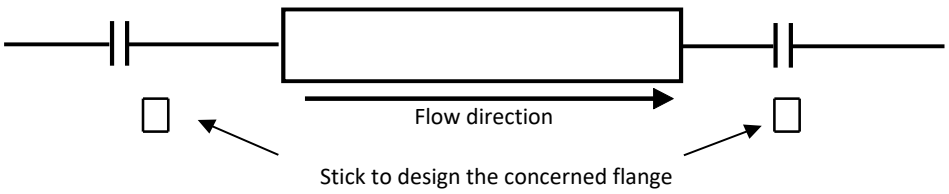
MASTER


TAG
062-2-J3
FLANGE TIGHTENED
ID STAMP RFM 319
SIGNED
DATE 16/01/25
RETURN TO SUPERVISOR
TAG
062-2-J3
FLANGE ASSEMBLED
ID STAMP RFM 319
SIGNED
DATE 16/01/25
RETURN TO SUPERVISOR
TAG
062-2-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	065-1-J1	: Joint 065-1-J1			Dwg	123A90-FDL-PP-DI-00065-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004121		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-047

EQUIPMENT TAG



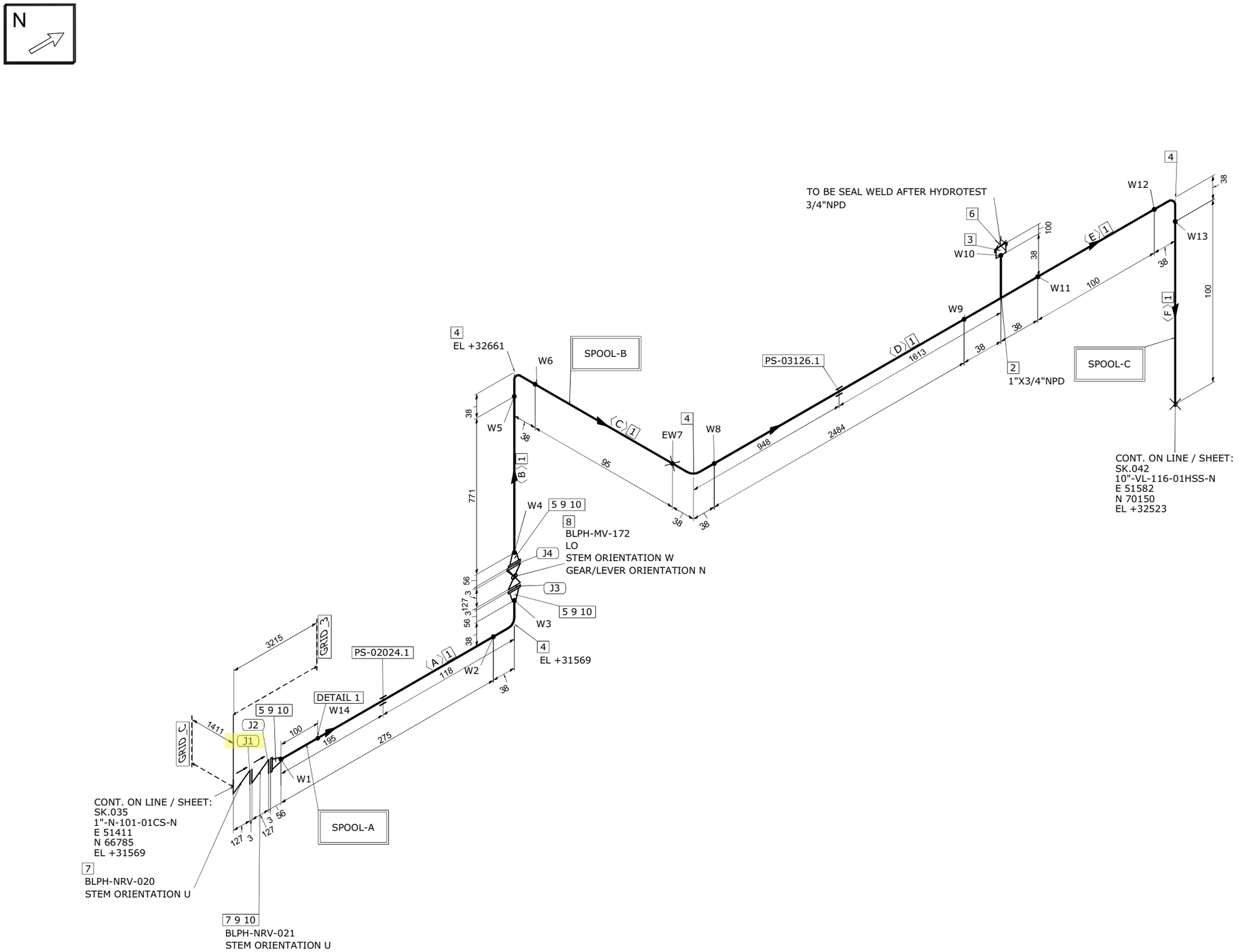
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	62.5		

			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

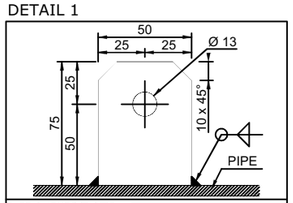
1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check 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	2025-01-23	2025-02-03	
Signature	Digitaly signed by Emanuele Delfino 2025-01-23T05:56:54.836Z	Digitaly signed by Andrea Mancini 2025-02-03T13:24:30.770Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.8M	9.7
2	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	0.6
5	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	3	4.3

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2
7	1	VDRNNN02460100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01C02RFH	2	0.0
8	1	VBC0NN24350100	Ball Valve Split Body FB API 6D FLG 150LB RF BS01C01RFH	1	6.0
9	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
10	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	15.1
ERECTION WEIGHT [kg]	8.3
OVERALL WEIGHT [kg]	23.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
EW7	1	BW
W8	1	BW
W9	1	BW
W10	3/4	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	275	BEVEL	BEVEL
B	1	771	BEVEL	BEVEL
C	1	95	BEVEL	BEVEL
D	1	2484	BEVEL	BEVEL
E	1	100	BEVEL	BEVEL
F	1	100	BEVEL	BEVEL

SUPPORT LIST

PS-02024.1
PS-03126.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.7
B	3	3.8
C	5.75	7.6
MONT	1	8.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-154-01HSS-N
SK.065

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00065 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 3.5 [barg]	TEMP. -29 / 100 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 5.25 [barg]	TEMP. AMB.	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80028
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

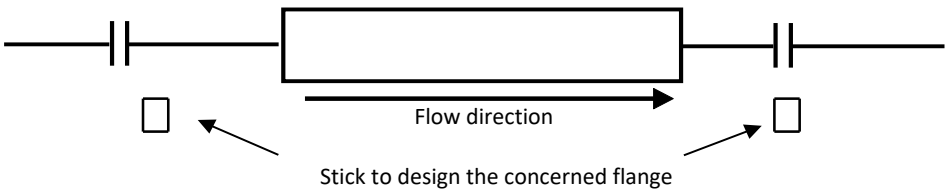
MASTER


TAG
065-1-J1
FLANGE TIGHTENED
ID STAMP
DATE 03/02/25
RETURN TO SUPERVISOR
TAG
065-1-J1
FLANGE ASSEMBLED
ID STAMP
DATE 03/02/25
RETURN TO SUPERVISOR
TAG
065-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	065-1-J2	: Joint 065-1-J2			Dwg	123A90-FDL-PP-DI-00065-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004122		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-047

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

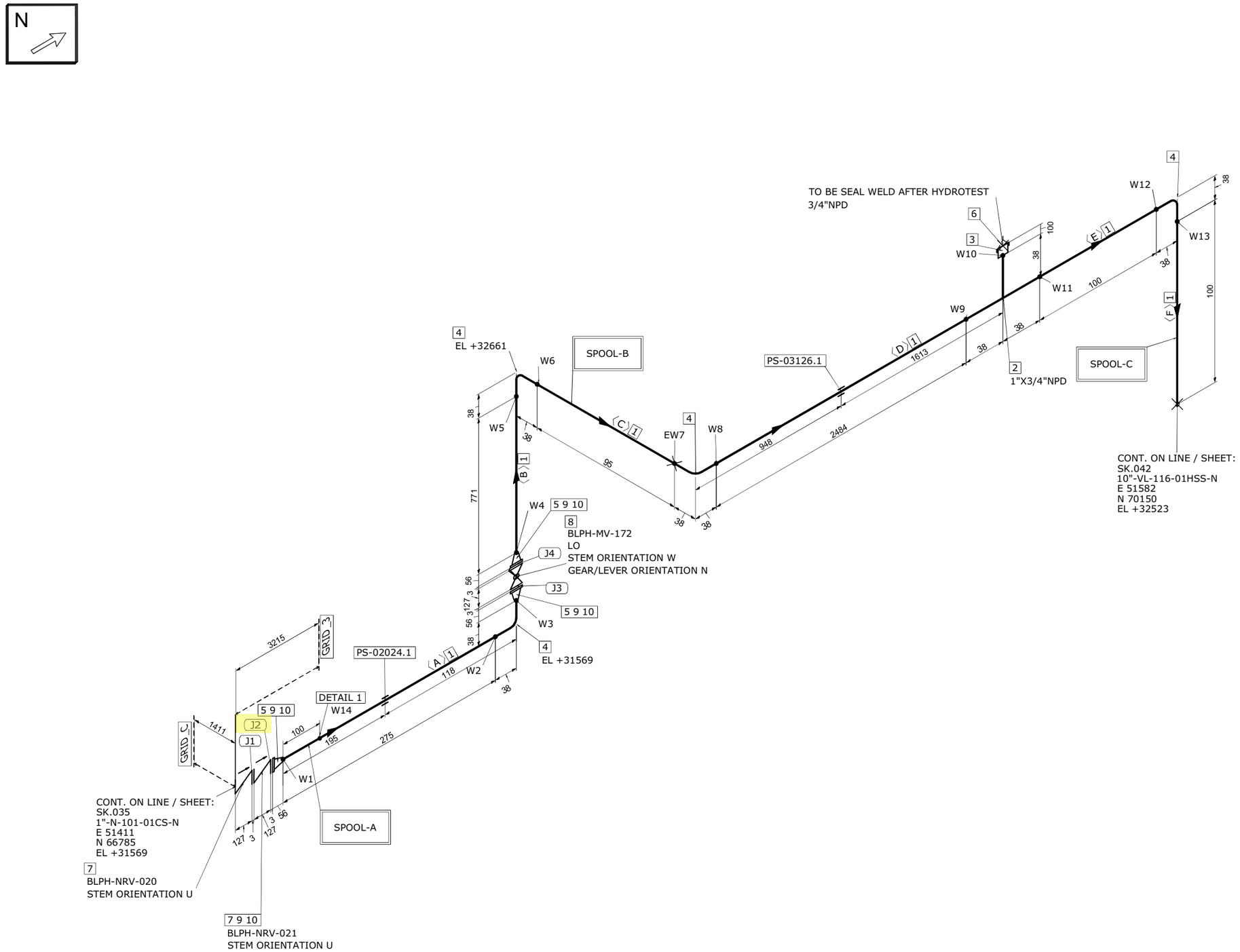
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

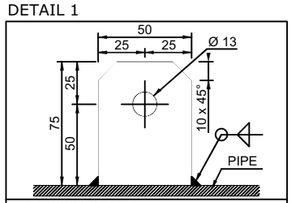
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Andrea Mancini	
Date	2025-01-23	2025-02-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:57:05.003Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-02-03T13:25:07.213Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.8M	9.7
2	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	0.6
5	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	3	4.3

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2
7	1	VDRNNN02460100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01C02RFH	2	0.0
8	1	VBC0NN24350100	Ball Valve Split Body FB API 6D FLG 150LB RF BS01C01RFH	1	6.0
9	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
10	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	15.1
ERECTION WEIGHT [kg]	8.3
OVERALL WEIGHT [kg]	23.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
EW7	1	BW
W8	1	BW
W9	1	BW
W10	3/4	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	275	BEVEL	BEVEL
B	1	771	BEVEL	BEVEL
C	1	95	BEVEL	BEVEL
D	1	2484	BEVEL	BEVEL
E	1	100	BEVEL	BEVEL
F	1	100	BEVEL	BEVEL

SUPPORT LIST

PS-02024.1
PS-03126.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.7
B	3	3.8
C	5.75	7.6
MONT	1	8.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-154-01HSS-N
SK.065

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00065 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

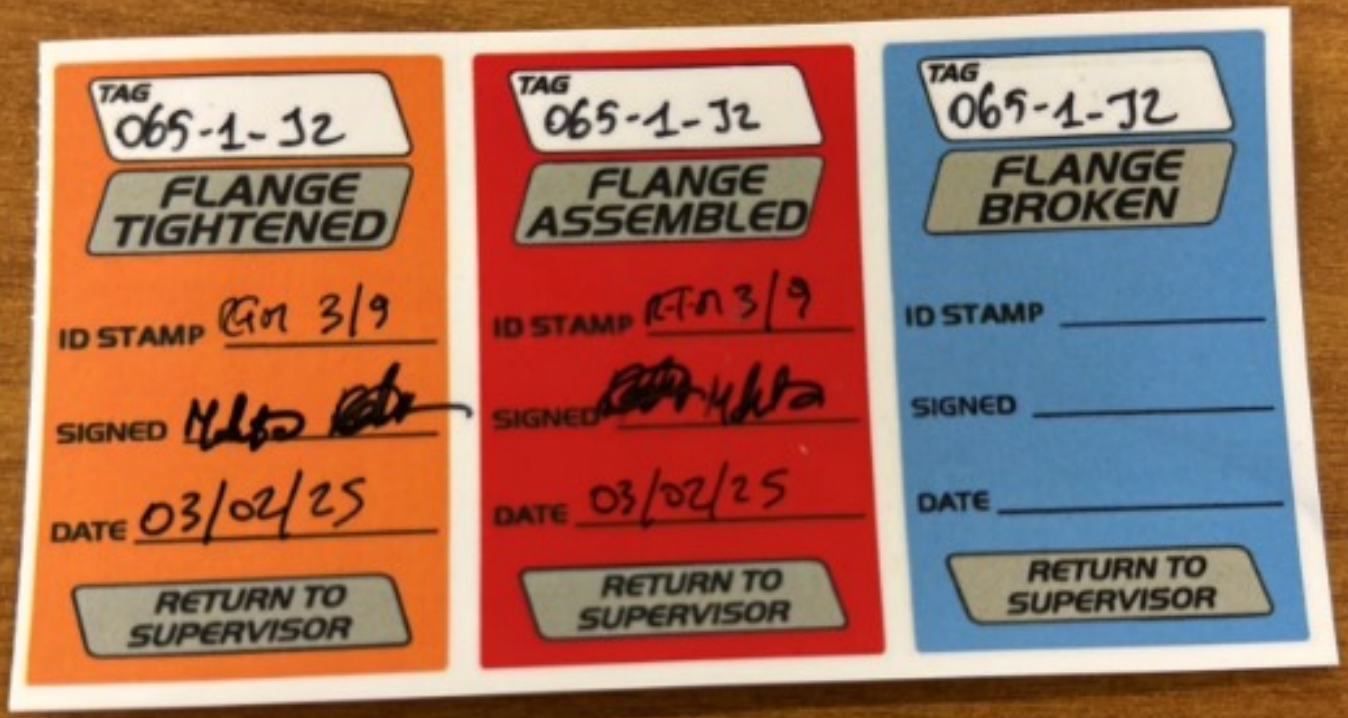
NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 3.5	[barg]	TEMP. -29 / 100	[°C]	
HEAT TRACING	N/A			TEST	PRESS. 5.25	[barg]	TEMP. AMB.	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80028
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

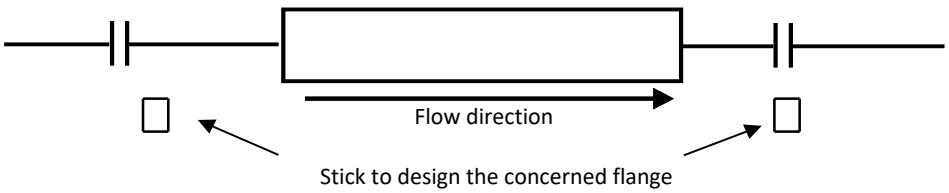
MASTER


TAG
065-1-J2
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 03/02/25
RETURN TO SUPERVISOR
TAG
065-1-J2
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 03/02/25
RETURN TO SUPERVISOR
TAG
065-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	065-1-J3	: Joint 065-1-J3			Dwg	123A90-FDL-PP-DI-00065-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004123		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-047

EQUIPMENT TAG



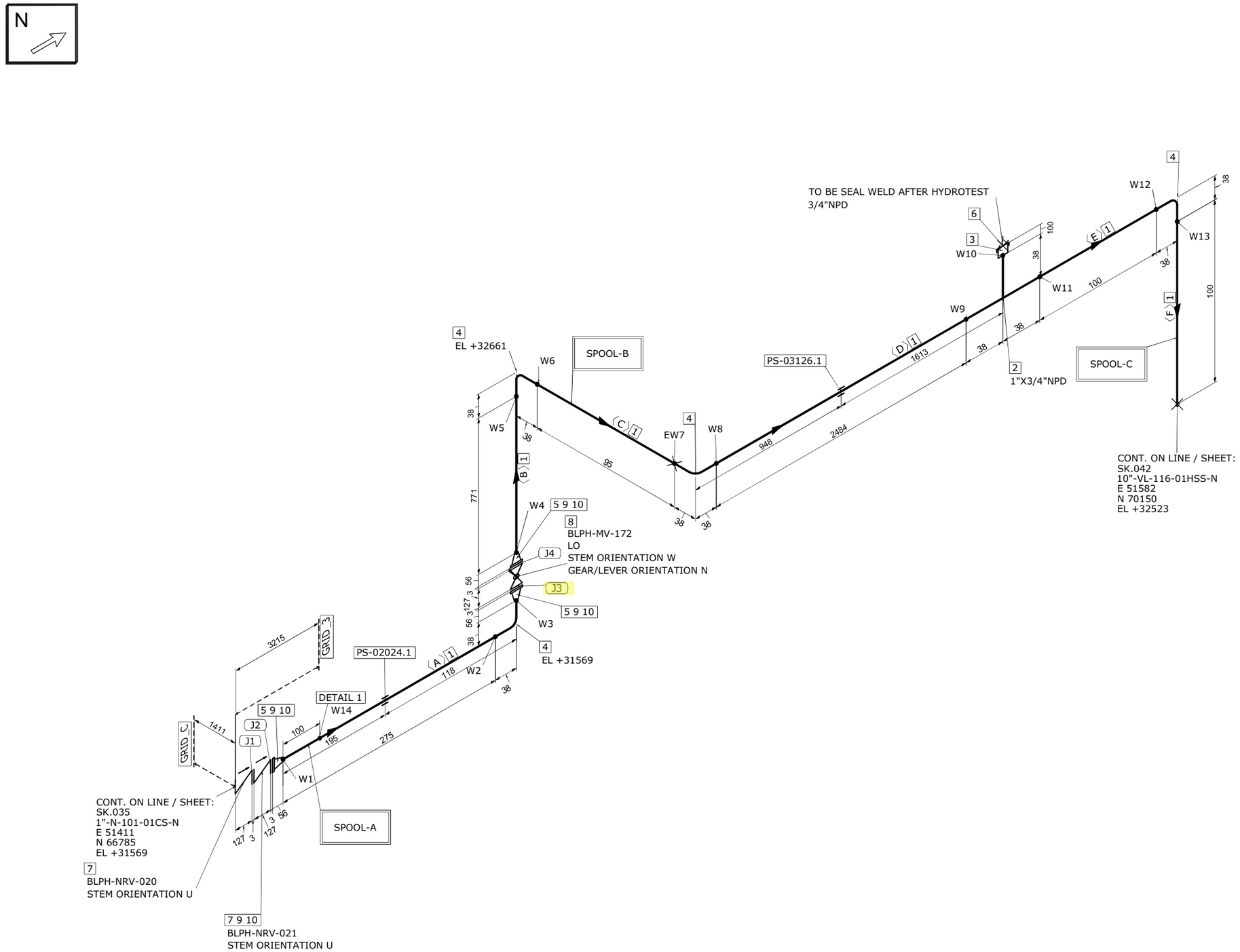
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	62.5		

			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

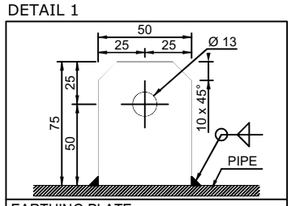
1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check 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	2025-01-23	2025-01-30	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:57:16.283Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-30T15:37:07.241Z	



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	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	3.8M	9.7
2	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.3
3	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	0.6
5	1	FLW0SS00930100	Flange WN ASME B16.5 150LB RF 3,38 FRG ASTM A182 Gr.F316/316L	3	4.3

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2
7	1	VDRNNN02460100	Check Valve Piston EN ISO 15761 FLG 150LB RF CH01C02RFH	2	0.0
8	1	VBC0NN24350100	Ball Valve Split Body FB API 6D FLG 150LB RF BS01C01RFH	1	6.0
9	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
10	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9

FABRICATION WEIGHT [kg]	15.1
ERECTION WEIGHT [kg]	8.3
OVERALL WEIGHT [kg]	23.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
EW7	1	BW
W8	1	BW
W9	1	BW
W10	3/4	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	275	BEVEL	BEVEL
B	1	771	BEVEL	BEVEL
C	1	95	BEVEL	BEVEL
D	1	2484	BEVEL	BEVEL
E	1	100	BEVEL	BEVEL
F	1	100	BEVEL	BEVEL

SUPPORT LIST

PS-02024.1
PS-03126.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.7
B	3	3.8
C	5.75	7.6
MONT	1	8.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-154-01HSS-N
SK.065

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 20-08-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00065 | SHEET / OF: 1/1 | REV.: 00

LINE DATA

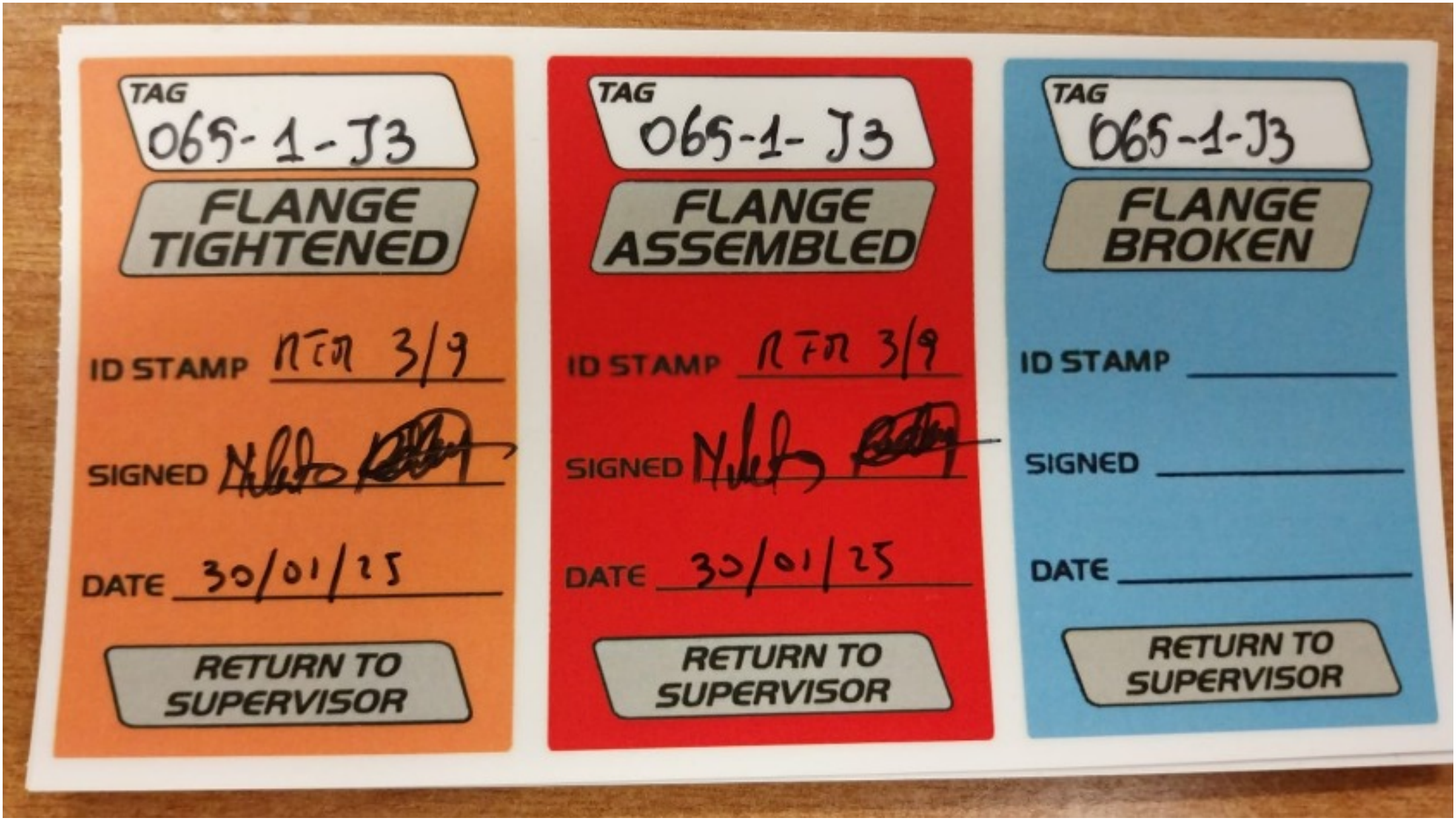
NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 3.5 [barg]	TEMP. -29 / 100 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 5.25 [barg]	TEMP. AMB.	MEDIUM Water		

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80028
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

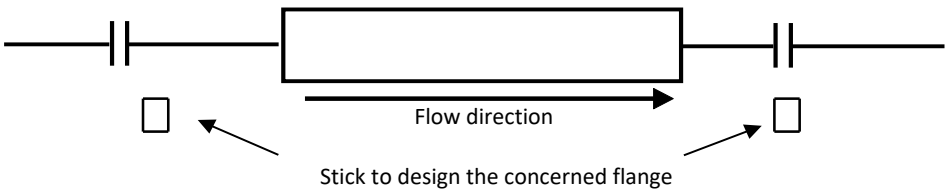
MASTER


TAG
065-1-J3
FLANGE TIGHTENED
ID STAMP NTM 3/9
SIGNED
DATE 30/01/25
RETURN TO SUPERVISOR
TAG
065-1-J3
FLANGE ASSEMBLED
ID STAMP NTM 3/9
SIGNED
DATE 30/01/25
RETURN TO SUPERVISOR
TAG
065-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	066-1-J3	: Joint 066-1-J3			Dwg	123A90-FDL-PP-DI-00066-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004127		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



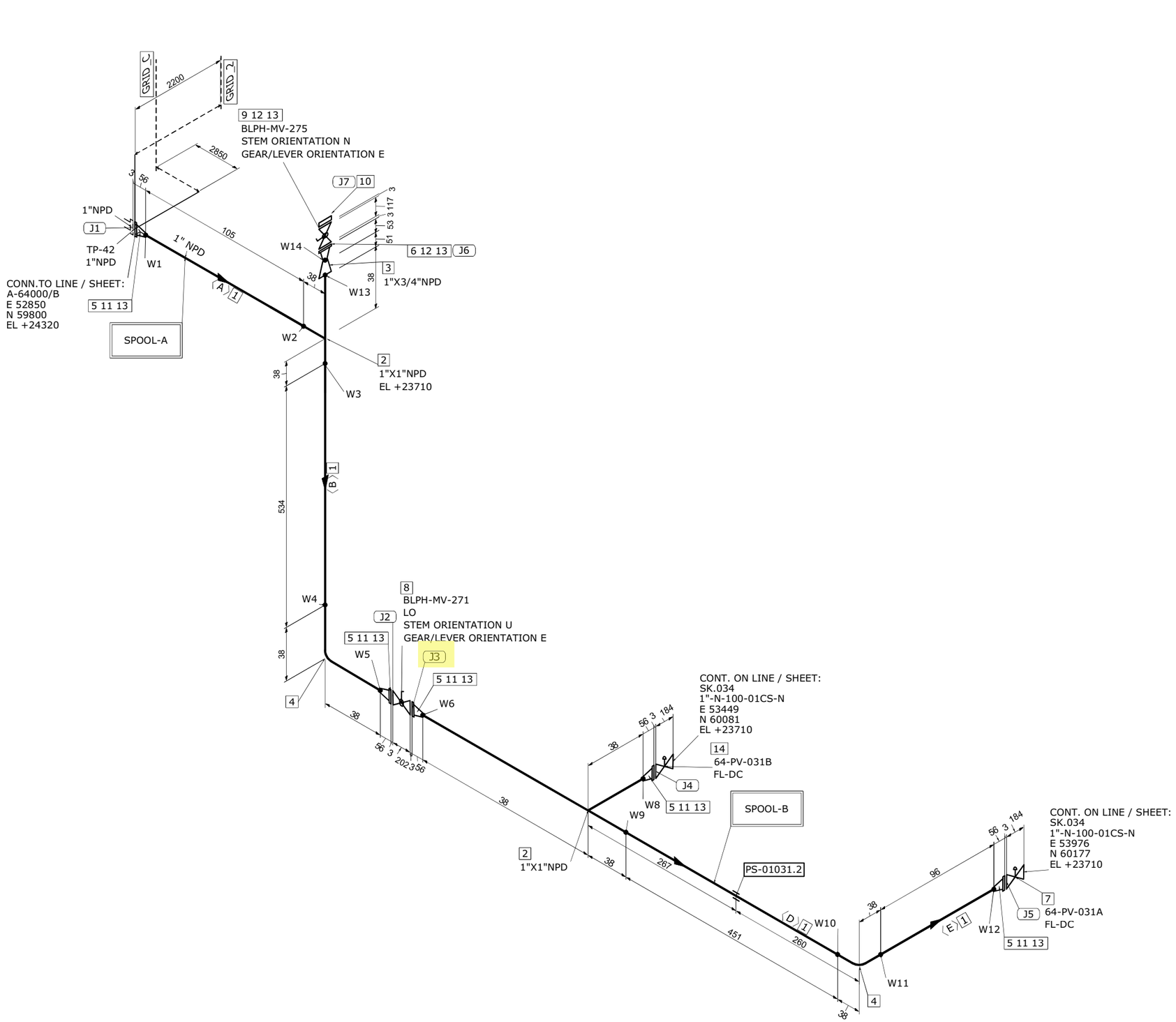
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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	2025-01-10	2025-01-13	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-10T05:54:10.254Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-01-13T18:28:48.709Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.2M	3.8
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1		Control Valve - FLG 150 #RF	1	48.0
8	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
9	3/4	VBC0NN24703Q00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	5.3
10	3/4	FLB0CS07333Q00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	5	0.3
12	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
13	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
14	1		Control Valve - FLG 150 #RF	1	48.0

FABRICATION WEIGHT [kg]	13.2
ERECTION WEIGHT [kg]	118.5
OVERALL WEIGHT [kg]	131.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	105	BEVEL	BEVEL
B	1	534	BEVEL	BEVEL
D	1	451	BEVEL	BEVEL
E	1	96	BEVEL	BEVEL

SUPPORT LIST

PS-01031.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6.75	6.5
B	6	6.7
MONT	0	118.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-158-01CS-N

SK.066

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	20-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00066			SHEET / OF	1/1
						REV.	00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 18 [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

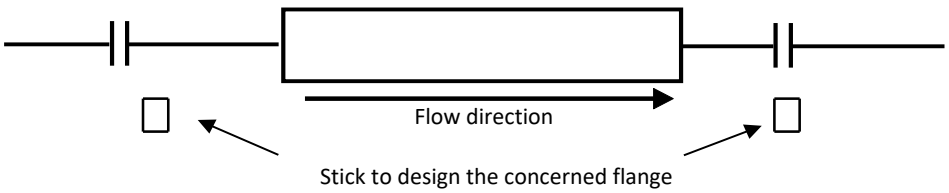
MASTER


TAG
066-1-J3
FLANGE TIGHTENED
ID STAMP RFM9/RPM3
SIGNED
DATE 09/01/25
RETURN TO SUPERVISOR
TAG
066-1-J3
FLANGE ASSEMBLED
ID STAMP RFM9/RPM3
SIGNED
DATE 09/01/25
RETURN TO SUPERVISOR
TAG
066-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	066-1-J4	: Joint 066-1-J4			Dwg	123A90-FDL-PP-DI-00066-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004128		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



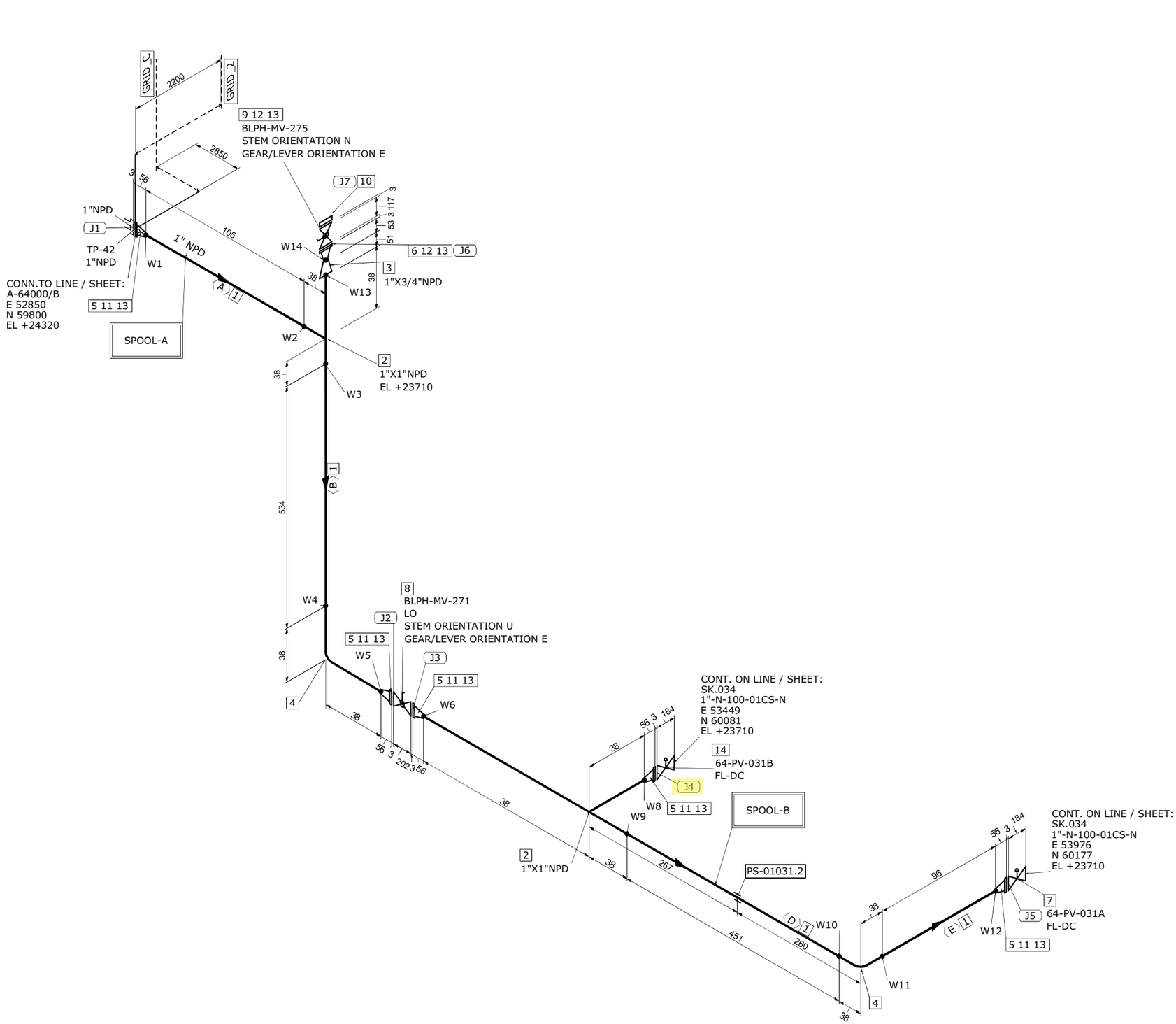
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-16	2025-01-16	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-16T13:04:29.914Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-16T14:31:01.878Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.2M	3.8
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1		Control Valve - FLG 150 #RF	1	48.0
8	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
9	3/4	VBC0NN24703Q00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	5.3
10	3/4	FLB0CS07333Q00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	5	0.3
12	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
13	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
14	1		Control Valve - FLG 150 #RF	1	48.0

FABRICATION WEIGHT [kg]	13.2
ERECTION WEIGHT [kg]	118.5
OVERALL WEIGHT [kg]	131.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	105	BEVEL	BEVEL
B	1	534	BEVEL	BEVEL
D	1	451	BEVEL	BEVEL
E	1	96	BEVEL	BEVEL

SUPPORT LIST

PS-01031.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6.75	6.5
B	6	6.7
MONT	0	118.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-158-01CS-N

SK.066

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	20-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00066			SHEET / OF	1/1
						REV.	00

LINE DATA

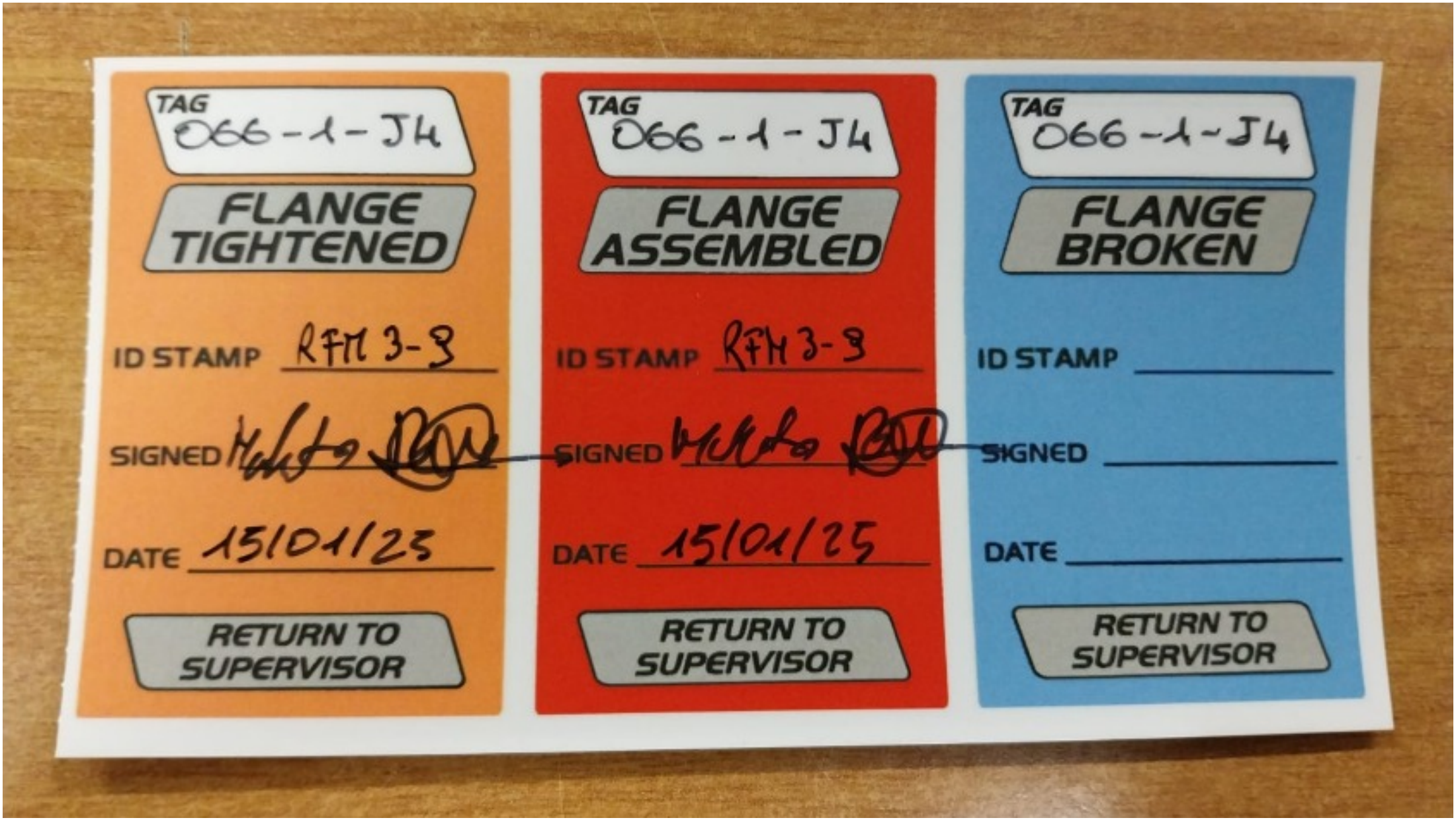
NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water		

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

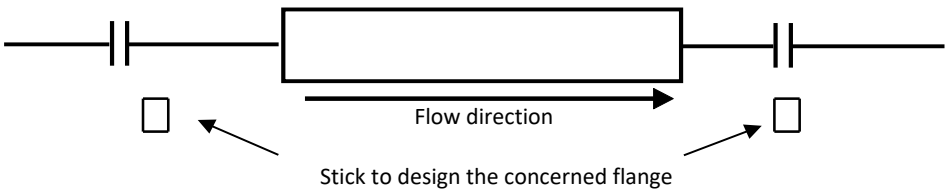
MASTER


TAG
066-1-J4
FLANGE TIGHTENED
ID STAMP RFM 3-8
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
066-1-J4
FLANGE ASSEMBLED
ID STAMP RFM 3-8
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
066-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	066-1-J5	: Joint 066-1-J5			Dwg	123A90-FDL-PP-DI-00066-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004129		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



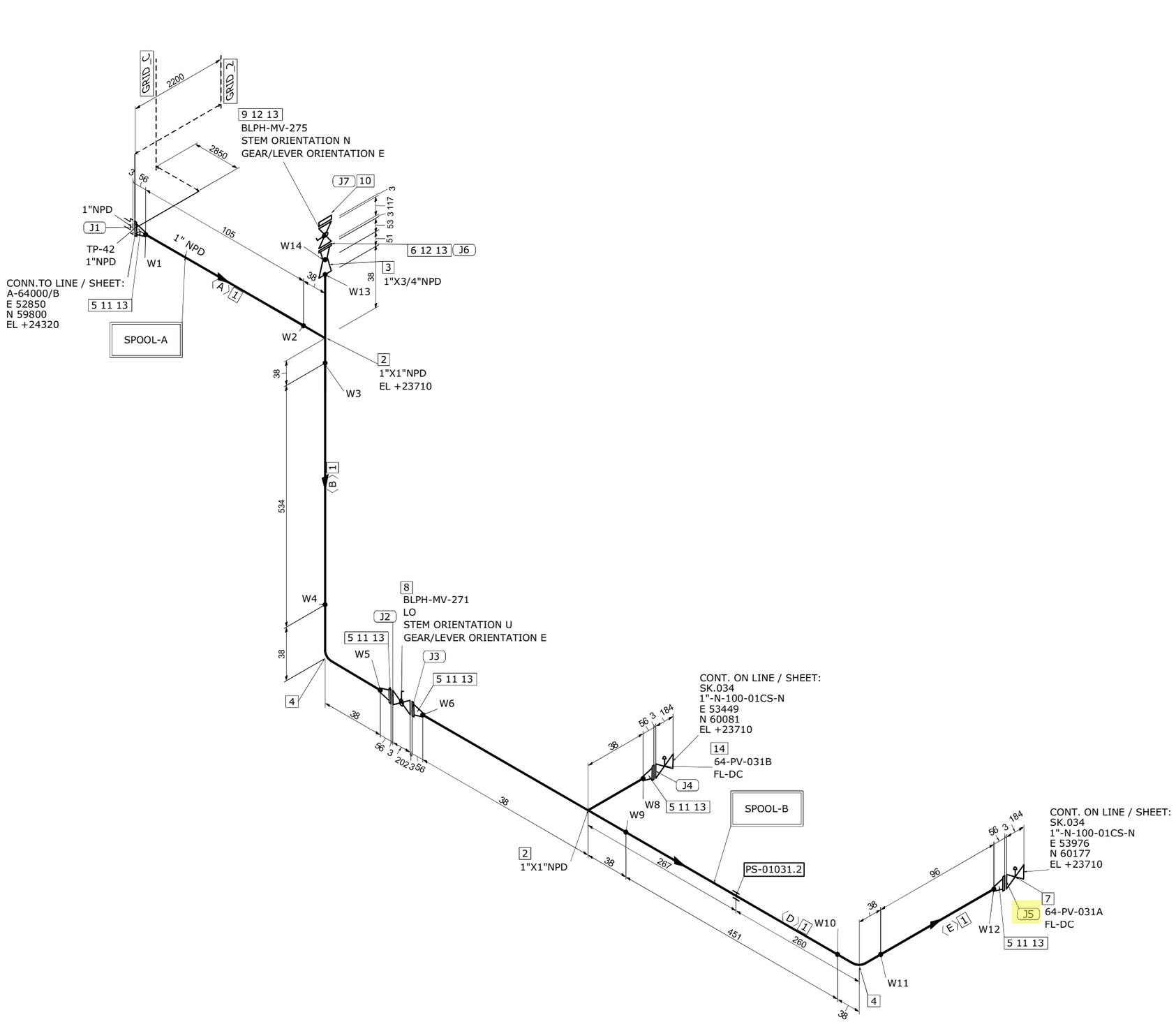
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-16	2025-01-16	
Signature	Digitaly signed by Emanuele Delfino 2025-01-16T13:04:46.526Z	Digitaly signed by Lorenzo Novaga 2025-01-16T14:30:39.594Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPECS08300100	Pipe ASME B36.10M PE 4,55 SML ASTM/ASME A/SA333 Gr.6	1.2M	3.8
2	1X1	TEE0CS01110100	Tee ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.9
3	1X3/4	REC0CS2203013Q	Reducer Concentric ASME B16.9 BW 4,55x3,91 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.2
4	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0
6	3/4	FLW0CS16523Q00	Flange WN ASME B16.5 150LB RF 3,91 FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
7	1		Control Valve - FLG 150 #RF	1	48.0
8	1	VLBLNN01280100	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	12.5
9	3/4	VBC0NN24703Q00	Ball Valve Split Body FB API 6D FLG 150LB RF BS01B01RF	1	5.3
10	3/4	FLB0CS07333Q00	Flange Blind ASME B16.5 150LB RF FRG ASTM/ASME A/SA350 Gr.LF2	1	0.9
11	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	5	0.3
12	3/4	GSW0GK11093Q00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
13	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	28	3.4
14	1		Control Valve - FLG 150 #RF	1	48.0

FABRICATION WEIGHT [kg]	13.2
ERECTION WEIGHT [kg]	118.5
OVERALL WEIGHT [kg]	131.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W8	1	BW
W9	1	BW
W10	1	BW
W11	1	BW
W12	1	BW
W13	1	BW
W14	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	105	BEVEL	BEVEL
B	1	534	BEVEL	BEVEL
D	1	451	BEVEL	BEVEL
E	1	96	BEVEL	BEVEL

SUPPORT LIST

PS-01031.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6.75	6.5
B	6	6.7
MONT	0	118.5

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-158-01CS-N

SK.066

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	20-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00066			SHEET / OF	1/1
						REV.	00

LINE DATA

NDT INSPECTION CATEGORY	2			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 1	BASE RAL RAL-9002		FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]		DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]			
HEAT TRACING	N/A			TEST	PRESS. 18 [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

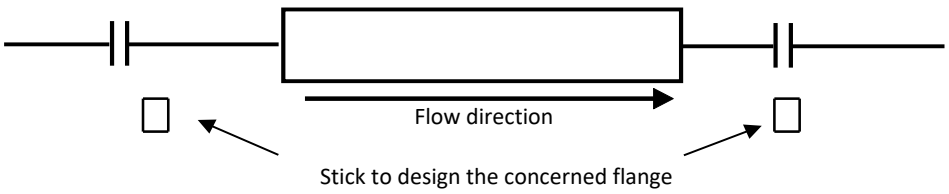
MASTER


TAG
066-1-J5
FLANGE TIGHTENED
ID STAMP RFH 3-3
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
066-1-J5
FLANGE ASSEMBLED
ID STAMP RFH 3-3
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
066-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	097-1-J1	: Joint 097-1-J1			Dwg	123A90-FDL-PP-DI-00097-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004135		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



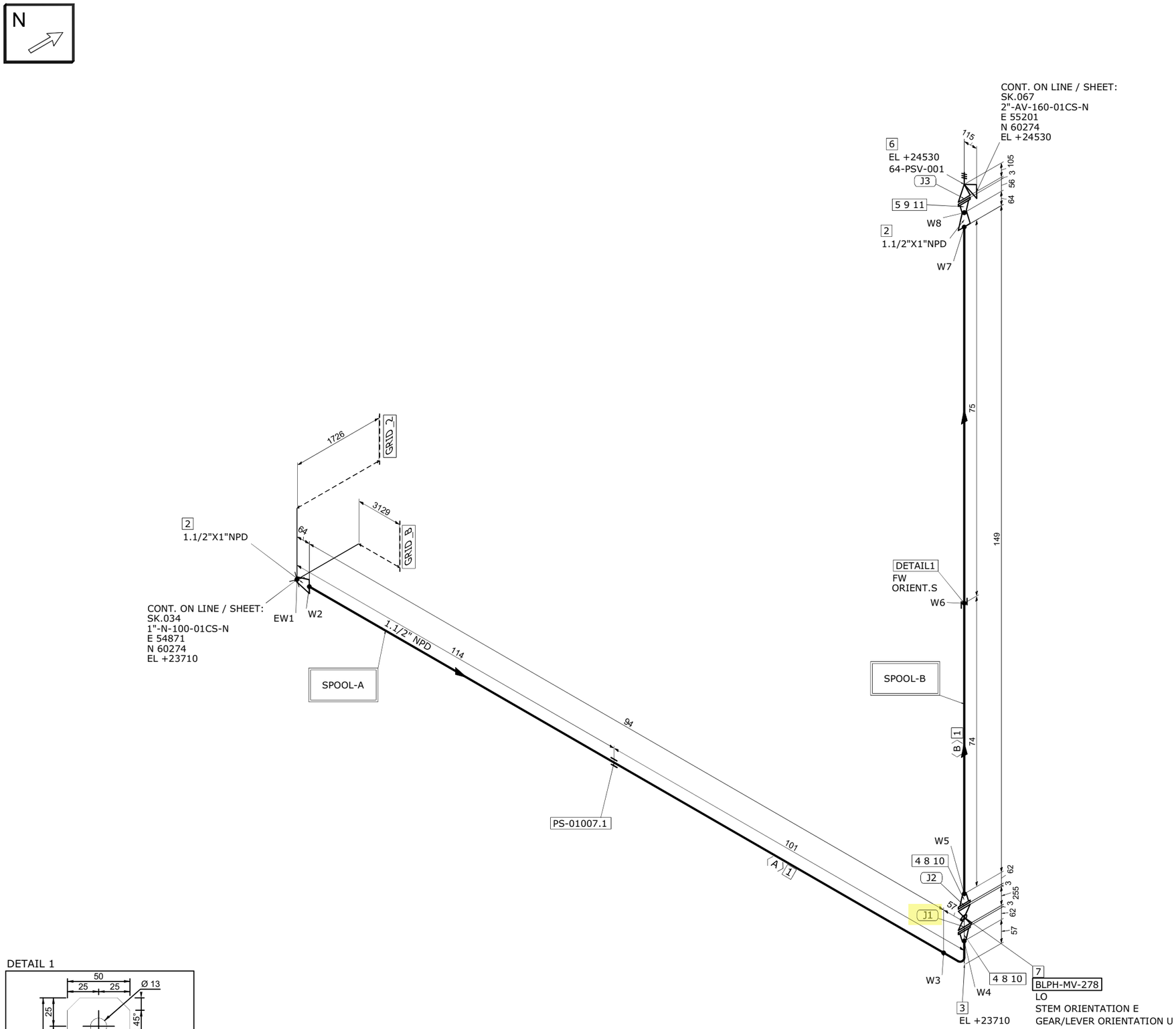
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1.1/2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			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

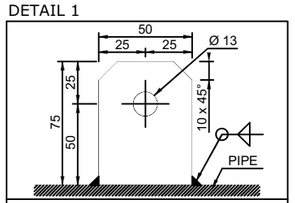
1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Luca Mussi	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:25:28.191Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-15T17:28:41.895Z	



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	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	0.2M	1.3
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.7
3	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.5
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	2	3.6
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2X1		SAFETY VALVE FLG.150/150#	1	15.0
7	1.1/2	VLBLNN01291H00	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	26.4
8	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
9	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
10	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
11	1/2	SB20BO34450200	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.7

FABRICATION WEIGHT [kg]	7.5
ERECTION WEIGHT [kg]	43.3
OVERALL WEIGHT [kg]	50.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW1	1	BW
W2	1.1/2	BW
W3	1.1/2	BW
W4	1.1/2	BW
W5	1.1/2	BW
W6		FW
W7	1.1/2	BW
W8	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	94	BEVEL	BEVEL
B	1.1/2	149	BEVEL	BEVEL

SUPPORT LIST

PS-01007.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	4.5	3.2
B	4	4.4
MONT	1	43.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-N-197-01CS-N

SK.097

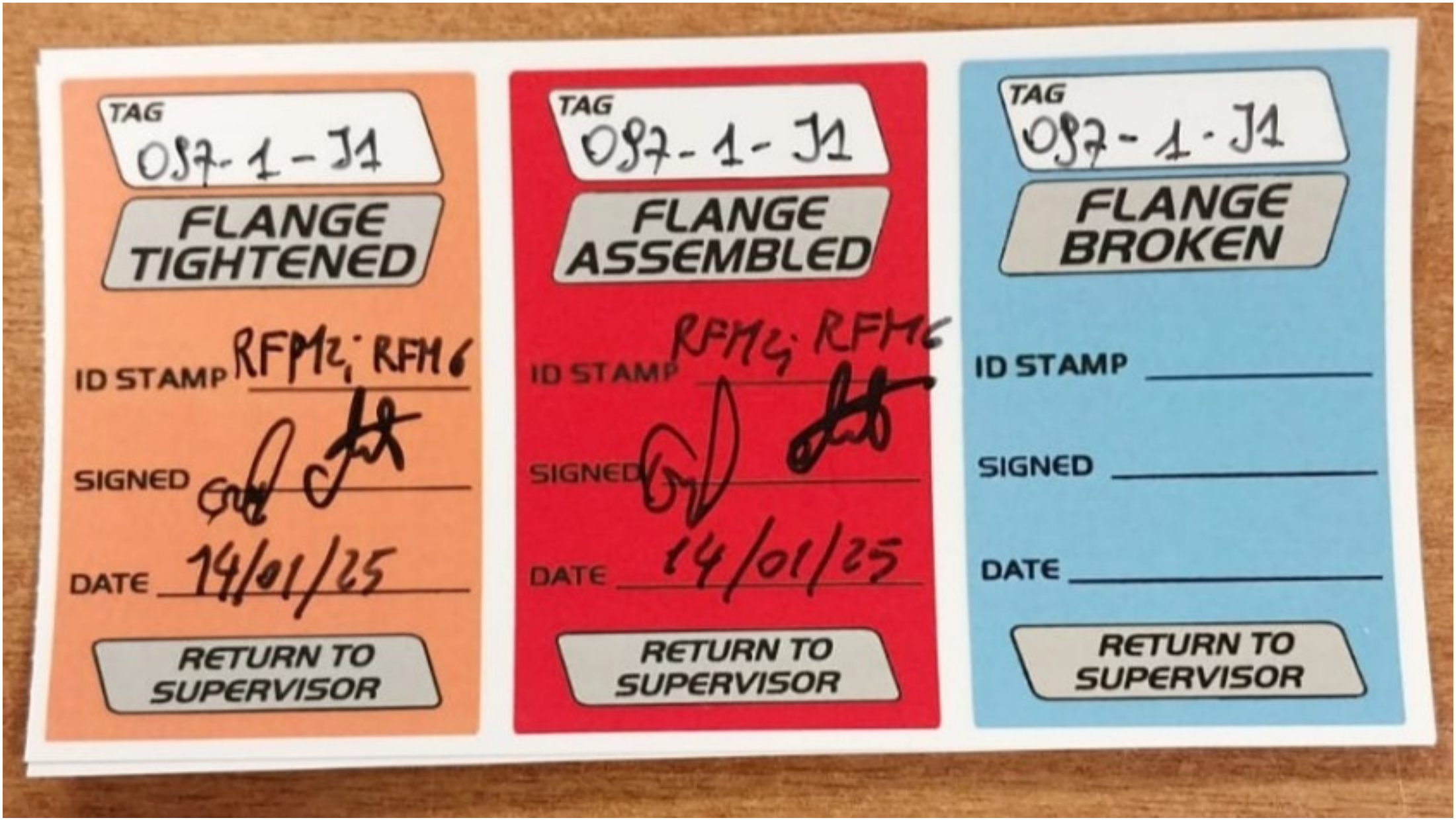
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [barg]	TEMP. AMB	MEDIUM Water	

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

MASTER

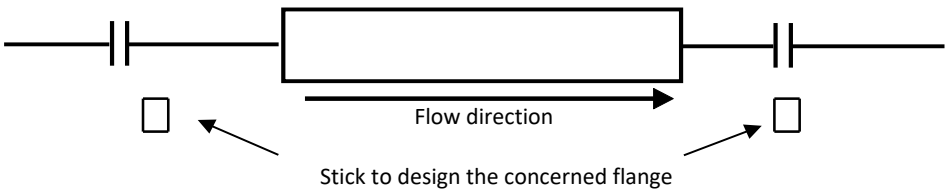
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00097		SHEET / OF 1/1	REV. 00


TAG
087-1-J1
FLANGE TIGHTENED
ID STAMP RFM2; RFM6
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
087-1-J1
FLANGE ASSEMBLED
ID STAMP RFM2; RFM6
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
087-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	097-1-J2	: Joint 097-1-J2			Dwg	123A90-FDL-PP-DI-00097-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004136		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-023

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

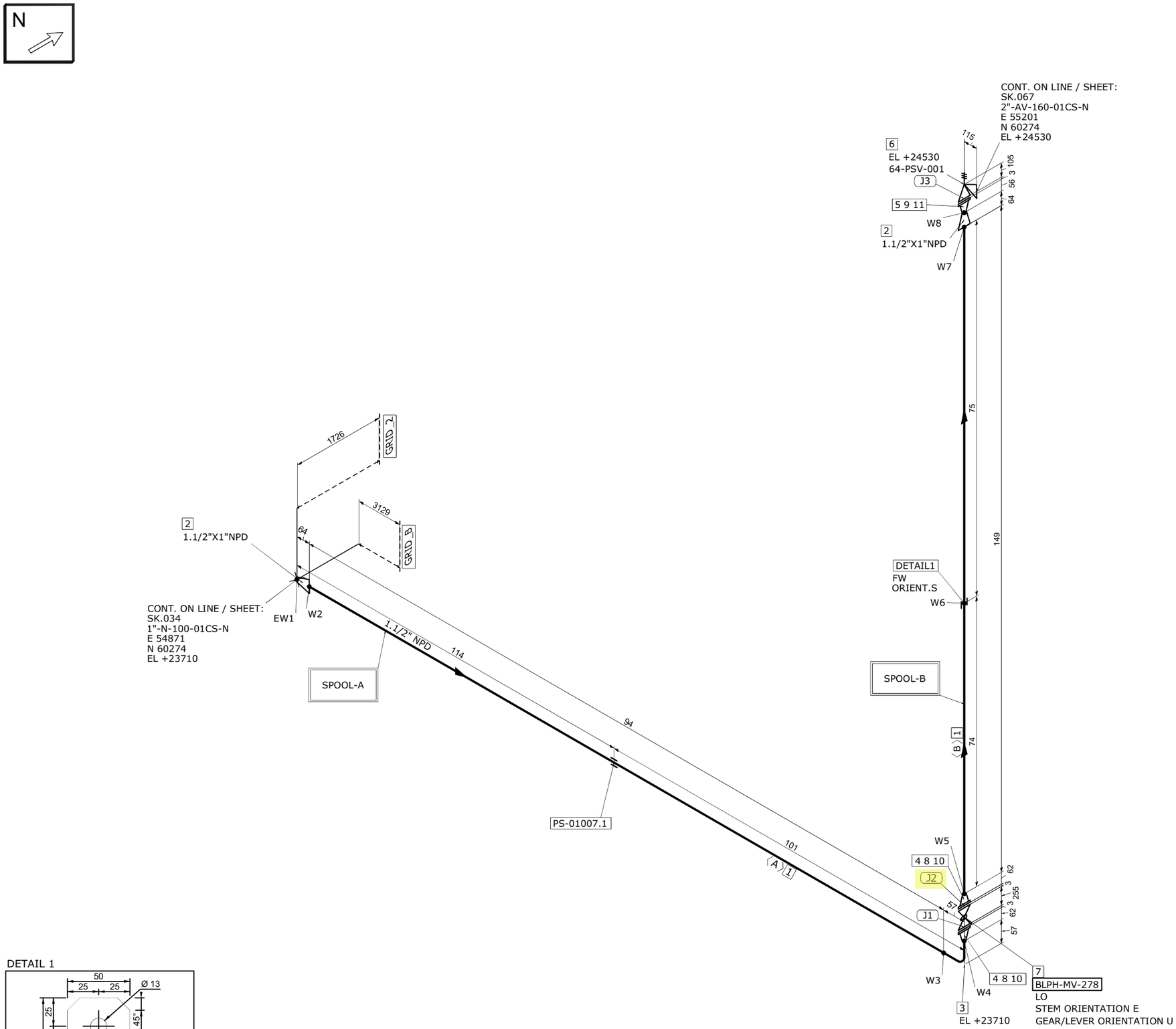
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

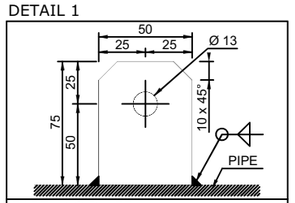
4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Luca Mussi	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:25:42.721Z	PROVERLIS Digitaly signed by Luca Mussi 2025-01-15T17:28:56.954Z	



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	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	0.2M	1.3
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.7
3	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.5
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	2	3.6
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2X1		SAFETY VALVE FLG.150/150#	1	15.0
7	1.1/2	VLBLNN01291H00	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	26.4
8	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
9	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
10	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
11	1/2	SB20BO34450200	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.7

FABRICATION WEIGHT [kg]	7.5
ERECTION WEIGHT [kg]	43.3
OVERALL WEIGHT [kg]	50.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW1	1	BW
W2	1.1/2	BW
W3	1.1/2	BW
W4	1.1/2	BW
W5	1.1/2	BW
W6		FW
W7	1.1/2	BW
W8	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	94	BEVEL	BEVEL
B	1.1/2	149	BEVEL	BEVEL

SUPPORT LIST

PS-01007.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	4.5	3.2
B	4	4.4
MONT	1	43.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

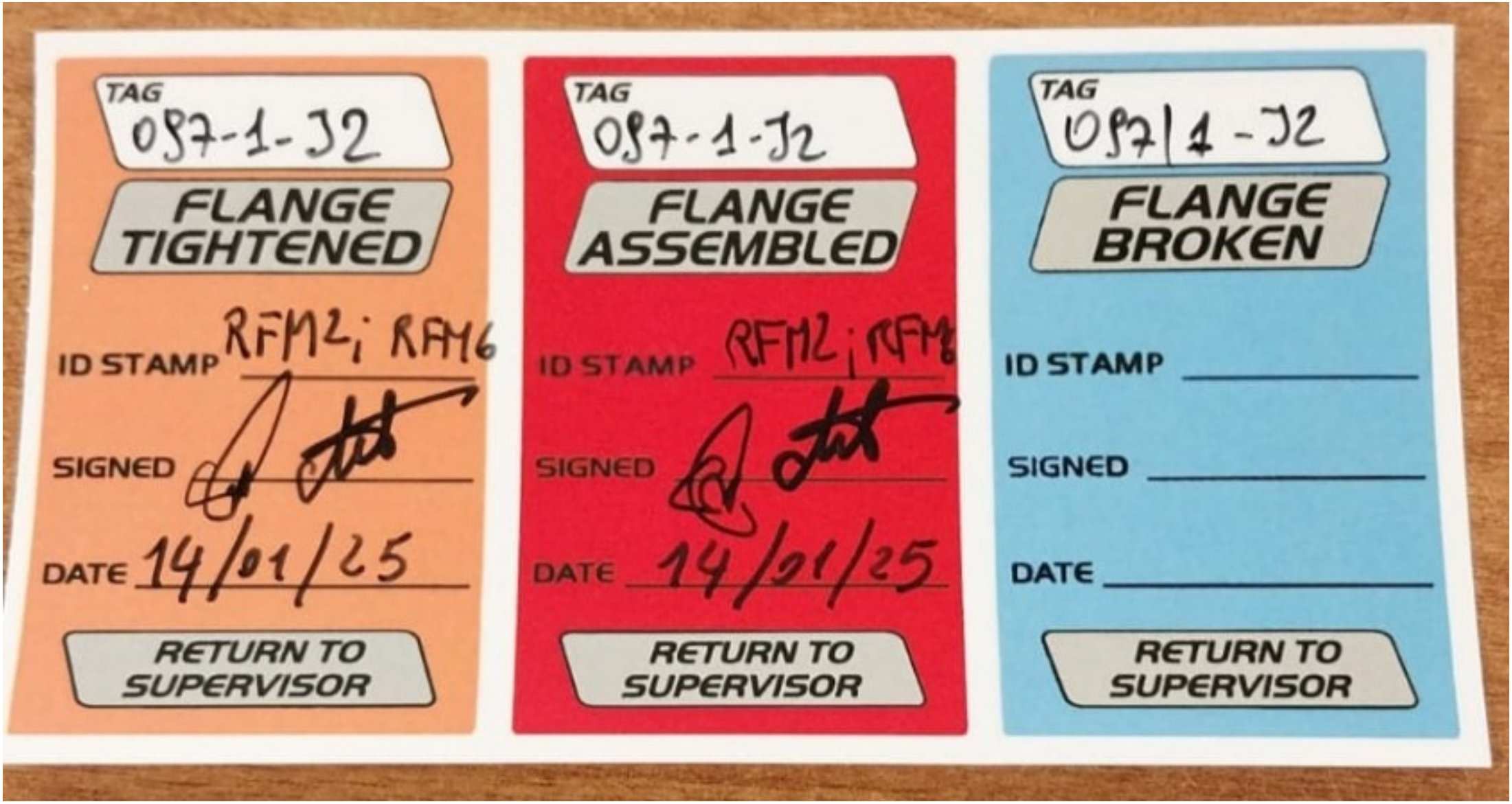
TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-N-197-01CS-N

SK.097

LINE DATA				REFERENCE DOCUMENTS		NOTES	
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3	P&ID	123A90-DDL-PR-PID-80027	
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas	ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001	
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg] TEMP. -46 / 100 [°C]	PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000	
HEAT TRACING	N/A		TEST	PRESS. 18 [barg] TEMP. AMB MEDIUM Water	PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029	

MASTER

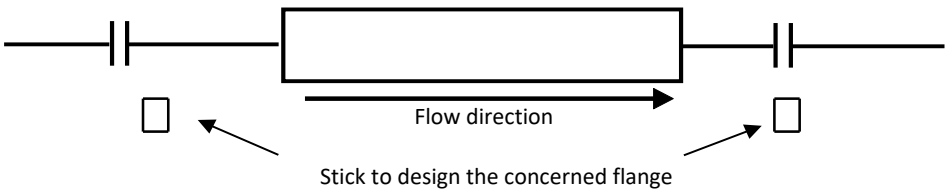
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 20-08-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00097	SHEET / OF 1/1	REV. 00


TAG
087-1-J2
FLANGE TIGHTENED
ID STAMP RFM2; RFM6
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
087-1-J2
FLANGE ASSEMBLED
ID STAMP RFM2; RFM6
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
087|1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	097-1-J3	: Joint 097-1-J3			Dwg	123A90-FDL-PP-DI-00097-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004137		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



Flange Type 150LB

Flange Size 1"

Gasket Type INSULATION KIT

Bolt tensioning/Torquing value 65

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 (12-68 Nm)

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	20	65	20	39	65
2	20	65	20	39	65
3	20	65	20	39	65
4	20	65	20	39	65
5			20	39	65
6			20	39	65
7			20	39	65
8			20	39	65
9			20	39	65
10			20	39	65
11			20	39	65
12			20	39	65
13			20	39	65
14			20	39	65
15			20	39	65
16			20	39	65
17			20	39	65
18			20	39	65
19			20	39	65
20			20	39	65

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

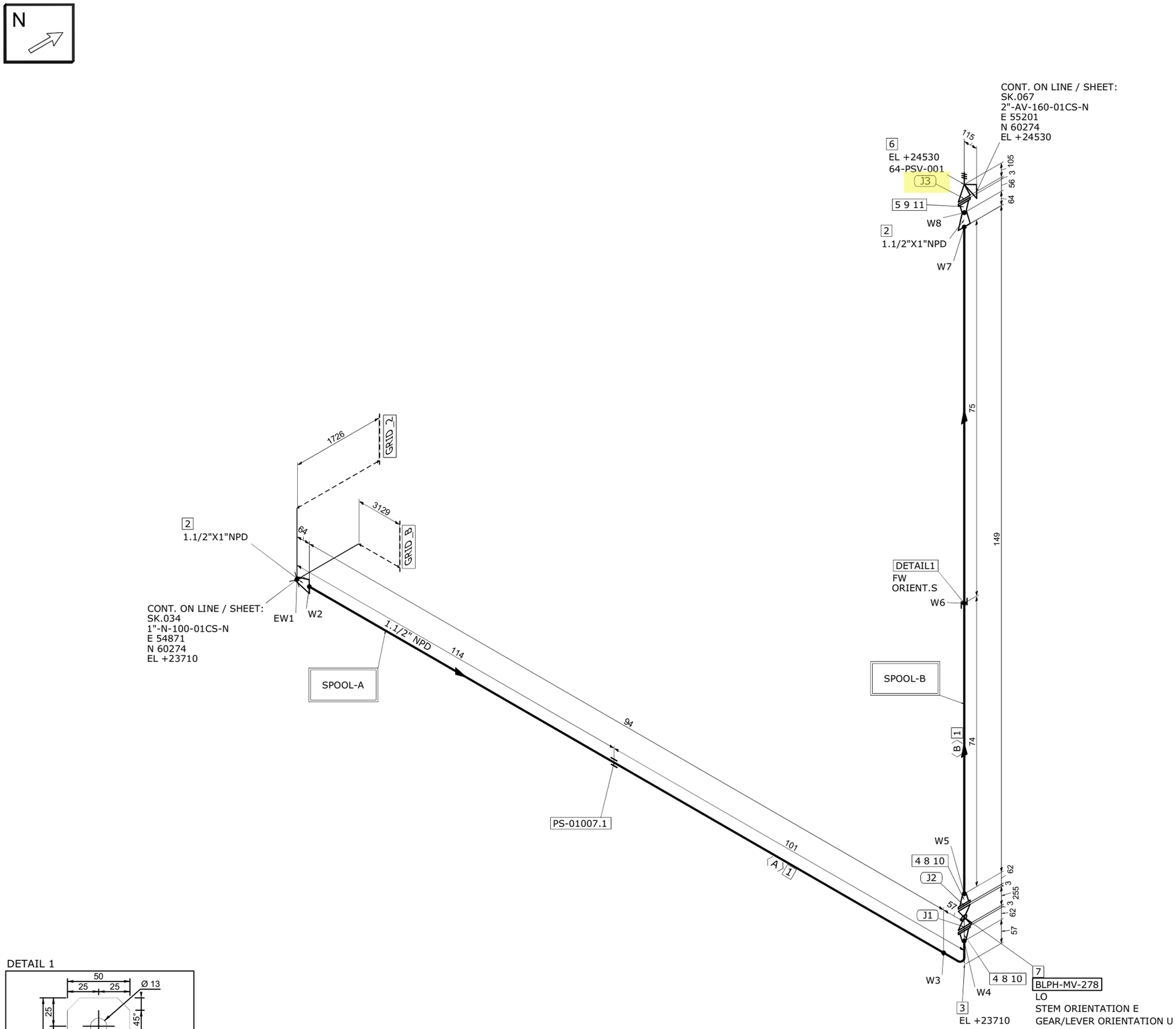
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

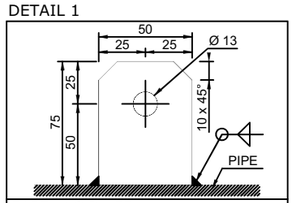
4 **Alignment:** Check alignment according to code. Yes

Comments:

	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-16	2025-01-16	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-16T13:05:01.940Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-16T14:30:18.116Z	



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	1.1/2	PIPECS02951H00	Pipe ASME B36.10M PE 5,08 SML ASTM/ASME A/SA333 Gr.6	0.2M	1.3
2	1.1/2X1	REC0CS22091H01	Reducer Concentric ASME B16.9 BW 5,08x4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.7
3	1.1/2	E90RCS04991H00	90 Deg Elbow Long Radius ASME B16.9 BW 5,08 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.5
4	1.1/2	FLW0CS16561H00	Flange WN ASME B16.5 150LB RF 5,08 FRG ASTM/ASME A/SA350 Gr.LF2	2	3.6
5	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	1	1.4

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	2X1		SAFETY VALVE FLG.150/150#	1	15.0
7	1.1/2	VLBLNN01291H00	Block & Bleed Valve API 6D FLG 150LB RF BS01B01RFS	1	26.4
8	1.1/2	GSW0GK11121H00	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
9	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
10	1/2	SB20BO00930200	70 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0
11	1/2	SB20BO34450200	105 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	0.7

FABRICATION WEIGHT [kg]	7.5
ERECTION WEIGHT [kg]	43.3
OVERALL WEIGHT [kg]	50.8

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
EW1	1	BW
W2	1.1/2	BW
W3	1.1/2	BW
W4	1.1/2	BW
W5	1.1/2	BW
W6		FW
W7	1.1/2	BW
W8	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1.1/2	94	BEVEL	BEVEL
B	1.1/2	149	BEVEL	BEVEL

SUPPORT LIST

PS-01007.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	4.5	3.2
B	4	4.4
MONT	1	43.3

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1-1/2"-N-197-01CS-N

SK.097

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	20-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00097			SHEET / OF	1/1
						REV.	00

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas			
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12 [barg]	TEMP. -46 / 100 [°C]		
HEAT TRACING	N/A		TEST	PRESS. 18 [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

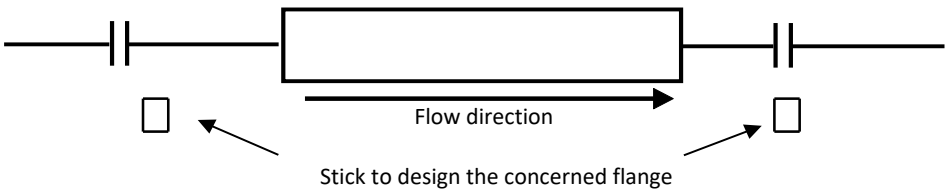
MASTER


TAG
OS7-1-J3
FLANGE TIGHTENED
ID STAMP RFM3-B
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
OS7-1-J3
FLANGE ASSEMBLED
ID STAMP RFM3-B
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
OS7/1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	122-1-J1	: Joint 122-1-J1			Dwg	123A90-FDL-PP-DI-00122-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004167		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**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	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

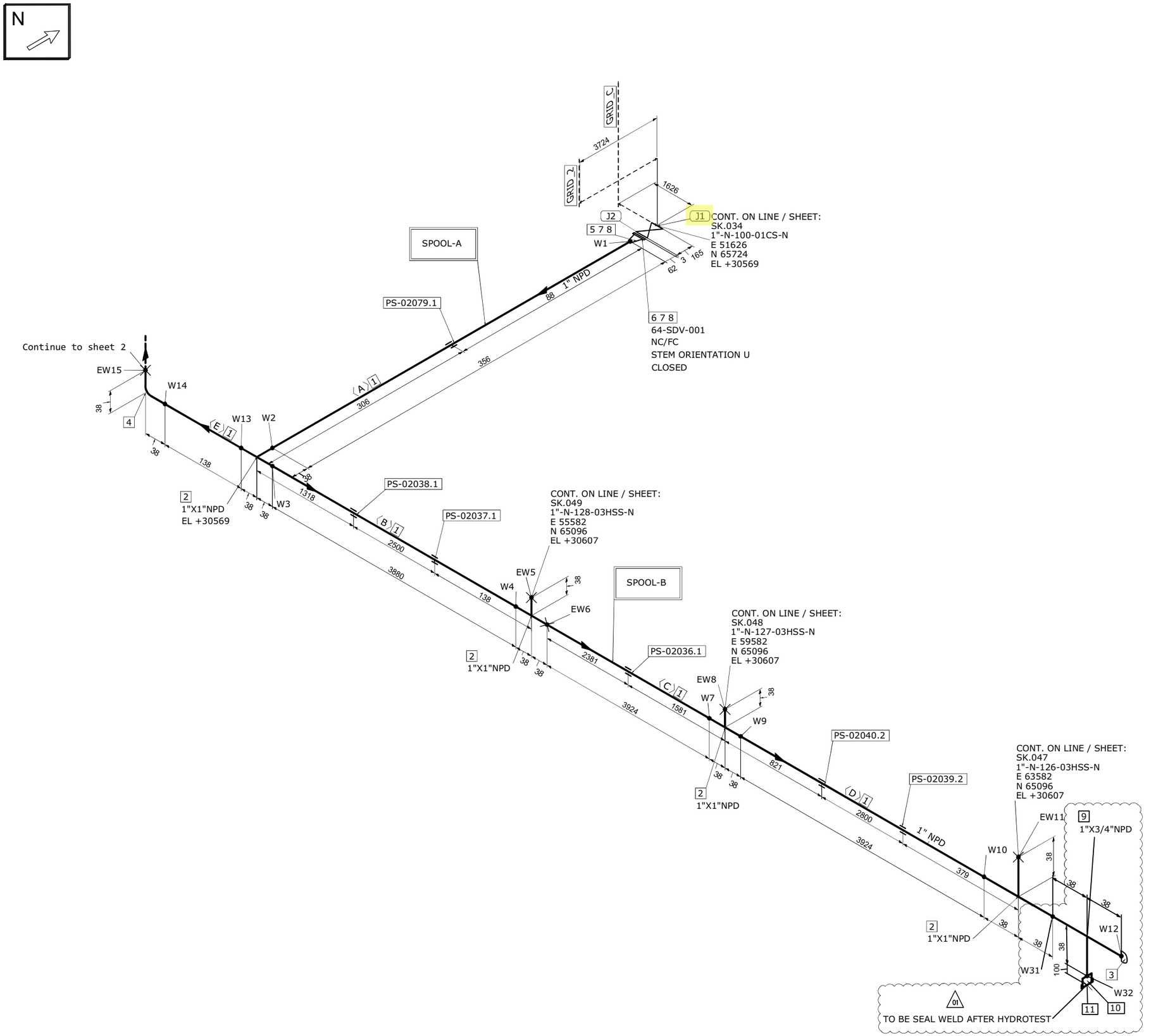
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-23	2025-01-27	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:57:32.797Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-01-27T15:05:29.908Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	12.2M	31.0
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	1.4
3	1	CAP0SS01030100	Cap ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8
9	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.4
10	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1		ON/OFF Ball Actuator Valve - 300#RF Flanged	1	41.0
7	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
8	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8
11	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2

FABRICATION WEIGHT [kg]	35.0
ERECTION WEIGHT [kg]	43.1
OVERALL WEIGHT [kg]	78.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
EW5	1	BW
EW6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
EW11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
EW15	1	BW
W31	1	BW
W32	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	356	BEVEL	BEVEL
B	1	3880	BEVEL	BEVEL
C	1	3924	BEVEL	BEVEL
D	1	3924	BEVEL	BEVEL
E	1	138	BEVEL	BEVEL

SUPPORT LIST

PS-02079.1
PS-02038.1
PS-02037.1
PS-02036.1
PS-02040.2
PS-02039.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	13.8
B	5.75	21.2
MONT	5	43.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-257-03HSS-N

SK.122

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00122 | SHEET / OF: 1/2 | REV.: 01

LINE DATA

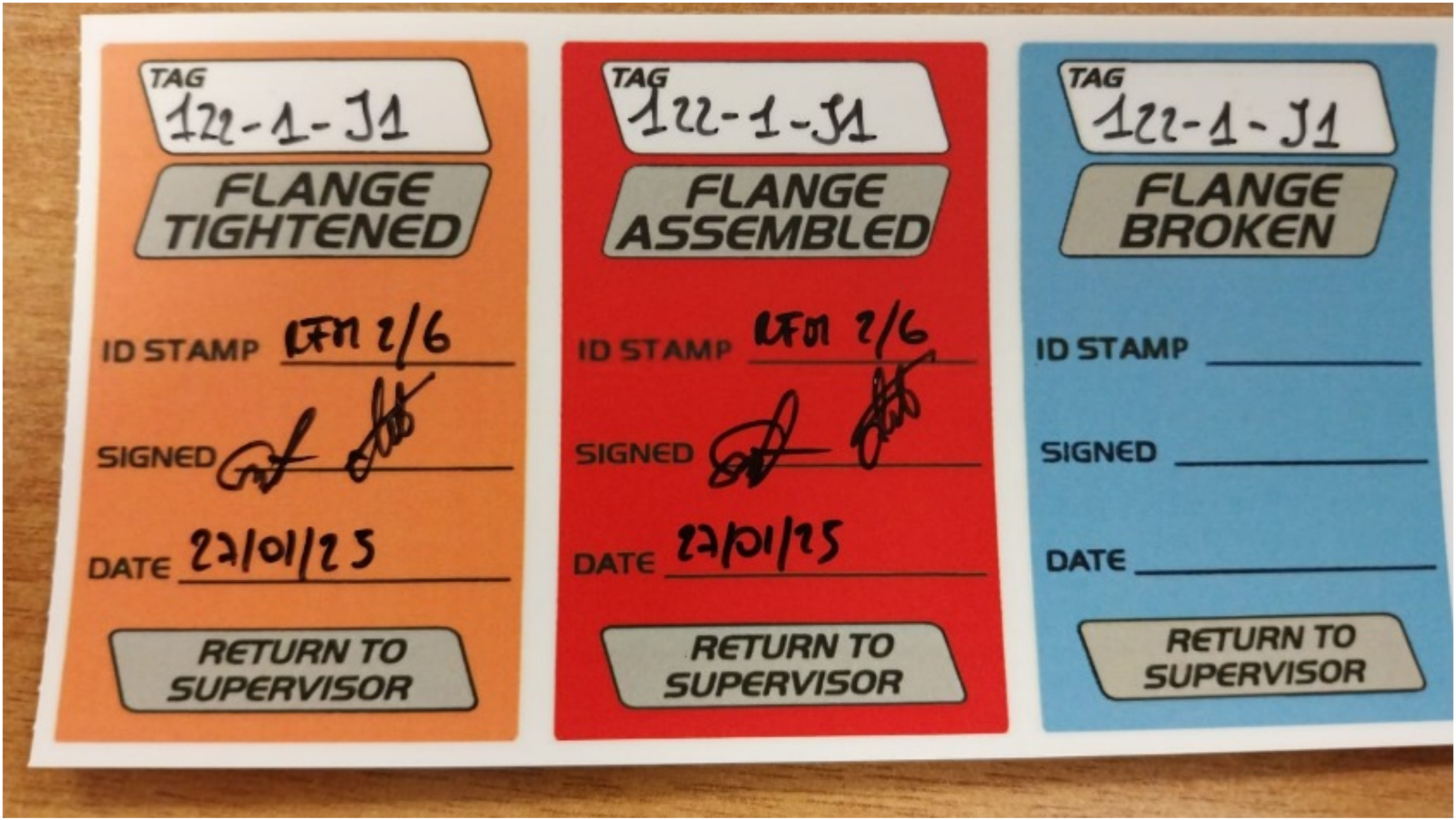
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 60	[barg]	TEMP. AMB.	MEDIUM Water	

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

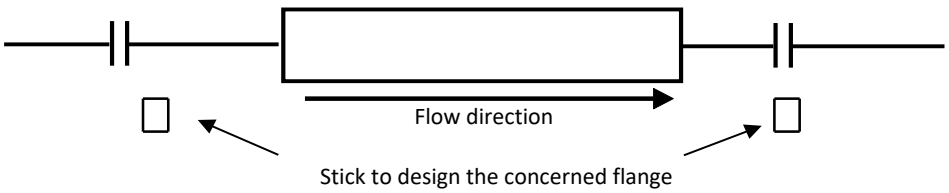
MASTER


TAG
122-1-J1
FLANGE TIGHTENED
ID STAMP LFN 2/6
SIGNED
DATE 22/01/25
RETURN TO SUPERVISOR
TAG
122-1-J1
FLANGE ASSEMBLED
ID STAMP LFN 2/6
SIGNED
DATE 22/01/25
RETURN TO SUPERVISOR
TAG
122-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	122-1-J2	: Joint 122-1-J2			Dwg	123A90-FDL-PP-DI-00122-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	UD
TASK	code	C10004168		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-020

EQUIPMENT TAG



Flange Type	300LB	**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	158.8		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	48	160	48	95	158.8
2	48	160	48	95	158.8
3	48	160	48	95	158.8
4	48	160	48	95	158.8
5			48	95	158.8
6			48	95	158.8
7			48	95	158.8
8			48	95	158.8
9			48	95	158.8
10			48	95	158.8
11			48	95	158.8
12			48	95	158.8
13			48	95	158.8
14			48	95	158.8
15			48	95	158.8
16			48	95	158.8
17			48	95	158.8
18			48	95	158.8
19			48	95	158.8
20			48	95	158.8

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

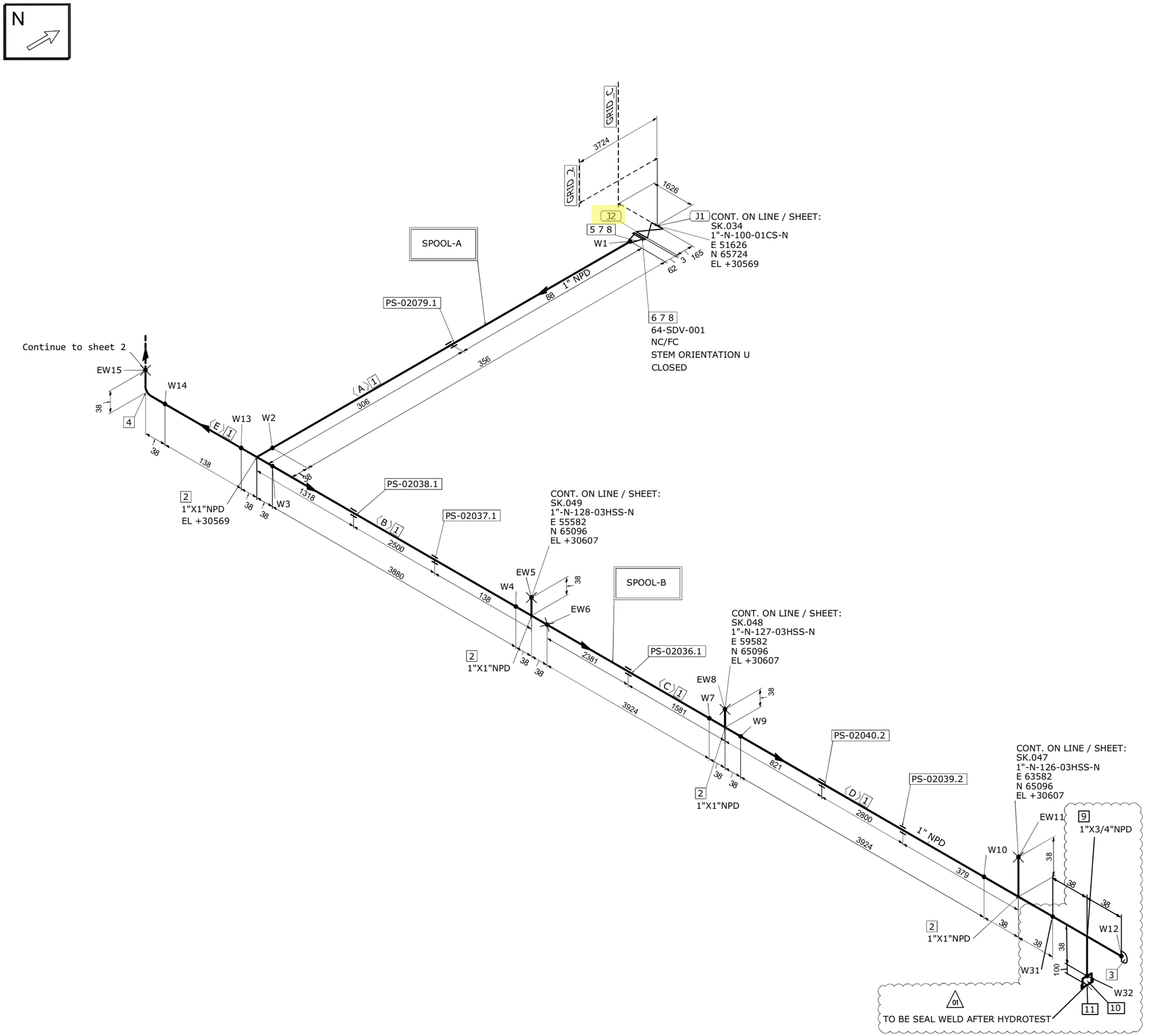
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-23	2025-01-27	
Signature	Digitaly signed by Emanuele Delfino 2025-01-23T05:57:46.997Z	Digitaly signed by Andrea Mancini 2025-01-27T15:06:17.903Z	



MATERIAL LIST

FABRICATION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPESS00480100	Pipe ASME B36.19M PE 3,38 SML ASTM A312 Gr.TP316/316L	12.2M	31.0
2	1X1	TEE0SS00550100	Tee ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	4	1.4
3	1	CAP0SS01030100	Cap ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
4	1	E90RSS00670100	90 Deg Elbow Long Radius ASME B16.9 BW 3,38 WRS ASTM A403 Gr.WP316/316L	1	0.1
5	1	FLW0SS03270100	Flange WN ASME B16.5 300LB RF 3,38 FRG ASTM A182 Gr.F316/316L	1	1.8
9	1X3/4	TER0SS0171013Q	Tee Reducing ASME B16.9 BW 3,38x2,87 WRS ASTM A403 Gr.WP316/316L	1	0.4
10	3/4	N100SS02653Q00	Nipple L=100mm ASME B36.19M THRD-M NPT x PE 2,87 SML ASTM A312 Gr.TP316/316L	1	0.2

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
6	1		ON/OFF Ball Actuator Valve - 300#RF Flanged	1	41.0
7	1	GSW0GK11210100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 300LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	2	0.1
8	5/8	SB20BO01870300	80 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.8
11	3/4	CAPFSS00023Q00	Cap Forged ASME B16.11 THRD-F NPT 3000# FRG ASTM A182 Gr.F316/316L	1	0.2

FABRICATION WEIGHT [kg]	35.0
ERECTION WEIGHT [kg]	43.1
OVERALL WEIGHT [kg]	78.1

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
EW5	1	BW
EW6	1	BW
W7	1	BW
EW8	1	BW
W9	1	BW
W10	1	BW
EW11	1	BW
W12	1	BW
W13	1	BW
W14	1	BW
EW15	1	BW
W31	1	BW
W32	3/4	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	356	BEVEL	BEVEL
B	1	3880	BEVEL	BEVEL
C	1	3924	BEVEL	BEVEL
D	1	3924	BEVEL	BEVEL
E	1	138	BEVEL	BEVEL

SUPPORT LIST

PS-02079.1
PS-02038.1
PS-02037.1
PS-02036.1
PS-02040.2
PS-02039.2

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	13.8
B	5.75	21.2
MONT	5	43.1

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	17-09-2024	STAFF SRL	RT	LM	REVISED WHERE INDICATED
00	20-08-2024	STAFF SRL	RT	LM	ISSUED FOR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-N-257-03HSS-N

SK.122

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 17-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00122 | SHEET / OF: 1/2 | REV.: 01

LINE DATA

NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM 6A	BASE RAL RAL-9002	FLUID PHASE	Gas				
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 40	[barg]	TEMP. -46 / 80	[°C]	
HEAT TRACING	N/A		TEST	PRESS. 60	[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

MASTER

TAG 122-1-J2

FLANGE TIGHTENED

ID STAMP CFM 2/6

SIGNED

DATE 27/01/25

RETURN TO SUPERVISOR

TAG 122-1-J2

FLANGE ASSEMBLED

ID STAMP CFM 2/6

SIGNED

DATE 27/01/25

RETURN TO SUPERVISOR

TAG 122-1-J2

FLANGE BROKEN

ID STAMP

SIGNED

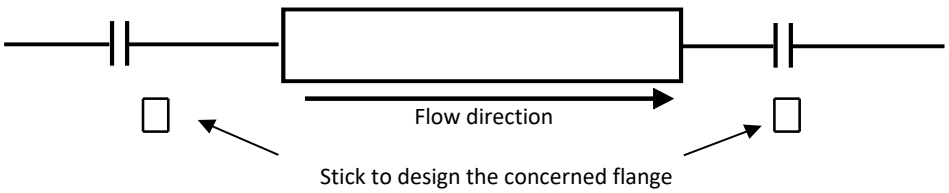
DATE

RETURN TO SUPERVISOR

ITEM	Tag	035-1-J1	: Joint 035-1-J1			Dwg	123A90-FDL-PP-DI-00035-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004226		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



Flange Type 150LB

Flange Size 1"

Gasket Type Gasket Spiral Wound Thk. 3.2 mm

Bolt tensioning/Torquing value 62.5

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools Torque wrench V030390 (12-68 Nm)

			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

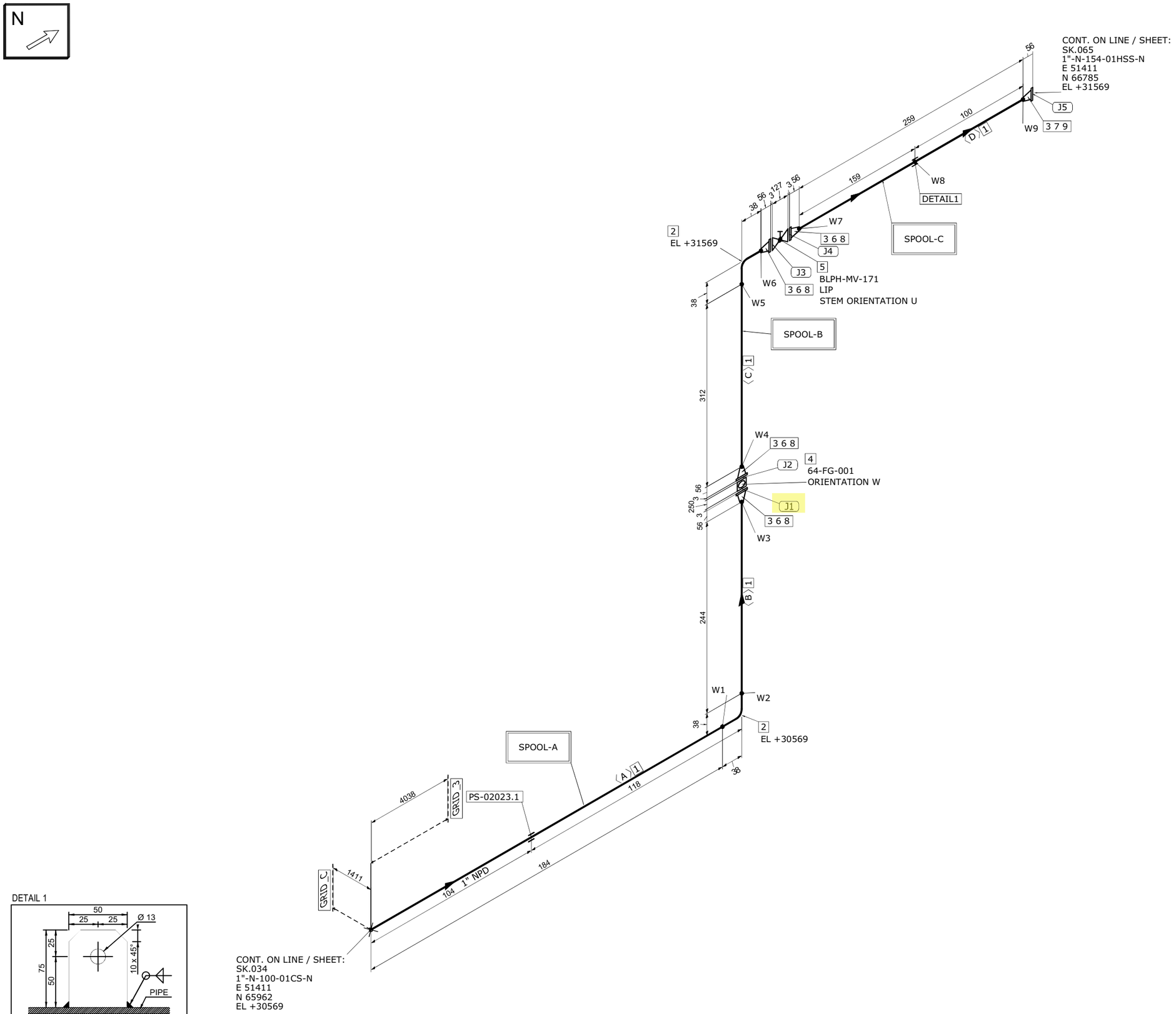
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

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	2025-01-23	2025-01-23	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:58:04.983Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-23T10:02:54.557Z	



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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"-N-101-01CS-N

SK.035

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-00035	SHEET / OF	1/1
				REV.	00

LINE DATA

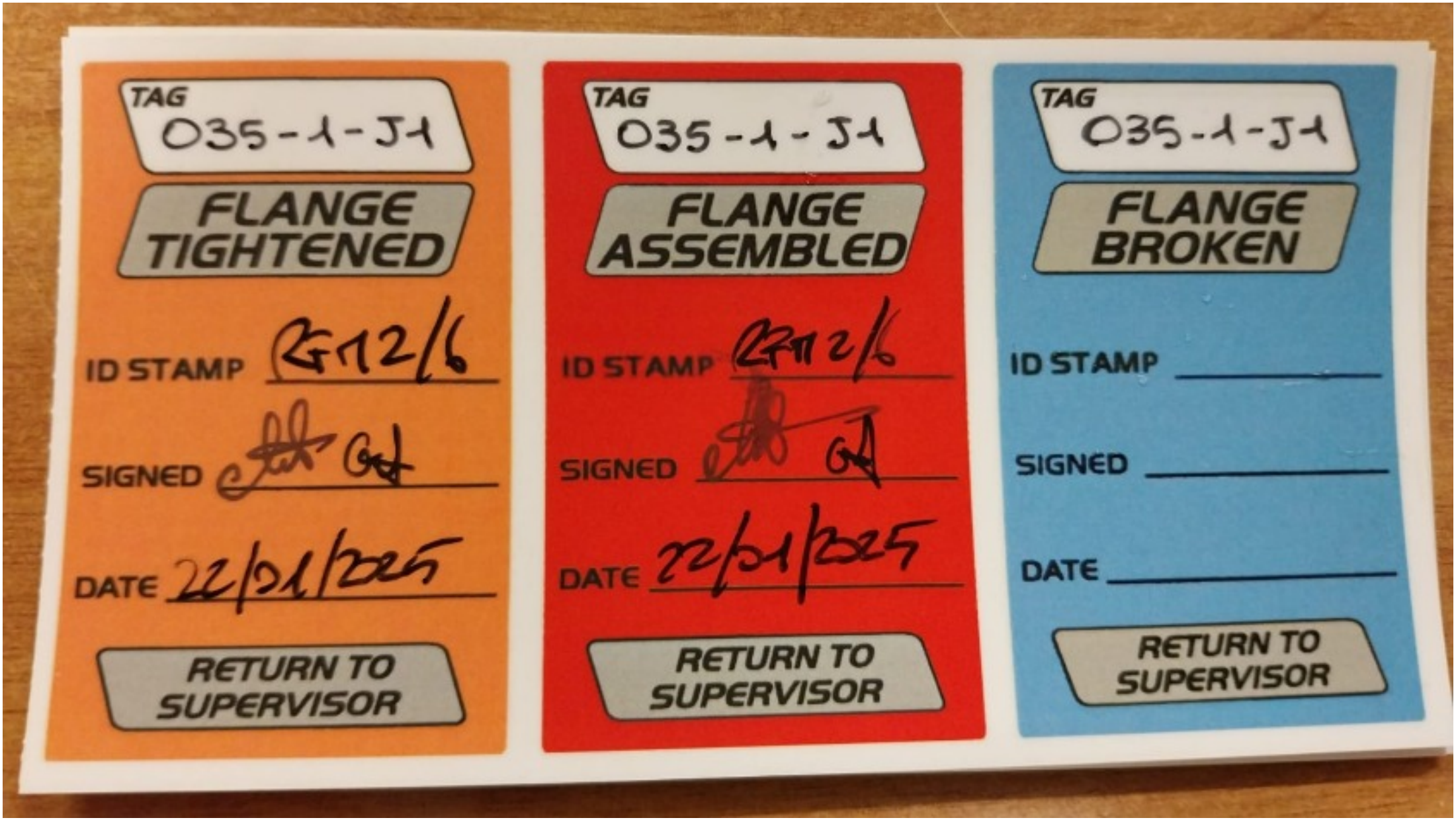
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[barg]	TEMP. AMB	MEDIUM Water		

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

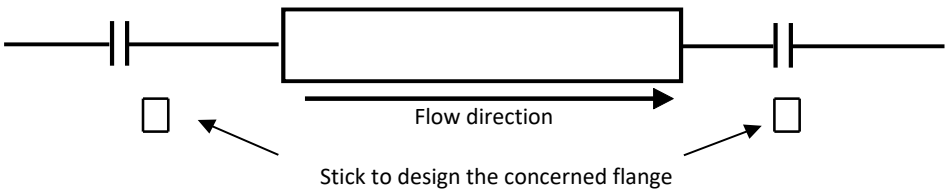
MASTER


TAG
035-1-J1
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 22/01/2025
RETURN TO SUPERVISOR
TAG
035-1-J1
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 22/01/2025
RETURN TO SUPERVISOR
TAG
035-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	035-1-J2	: Joint 035-1-J2			Dwg	123A90-FDL-PP-DI-00035-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004227		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

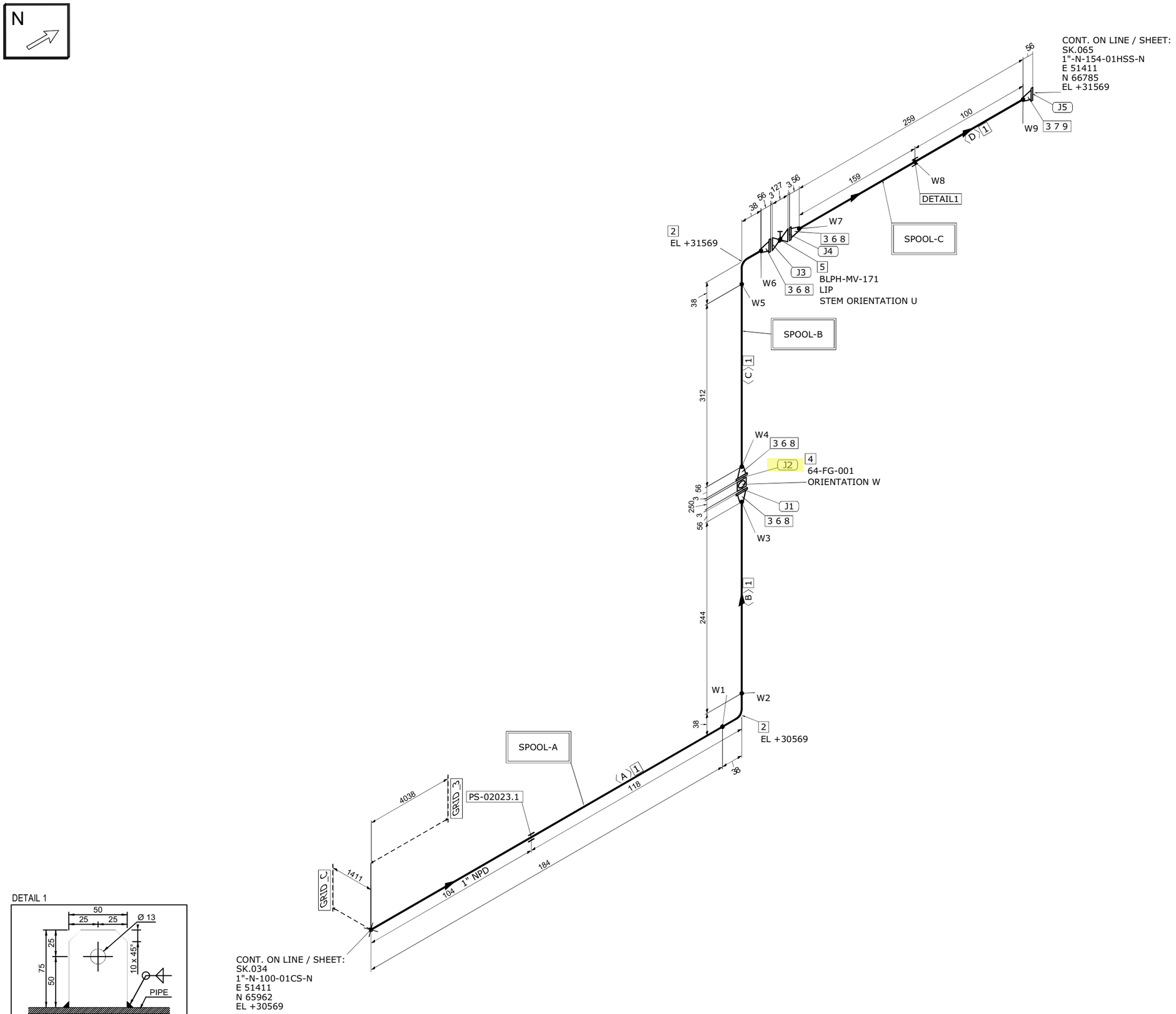
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-23	2025-01-23	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:58:14.900Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-23T10:02:49.109Z	



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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"-N-101-01CS-N

SK.035

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-00035	SHEET / OF	1/1
				REV.	00

LINE DATA

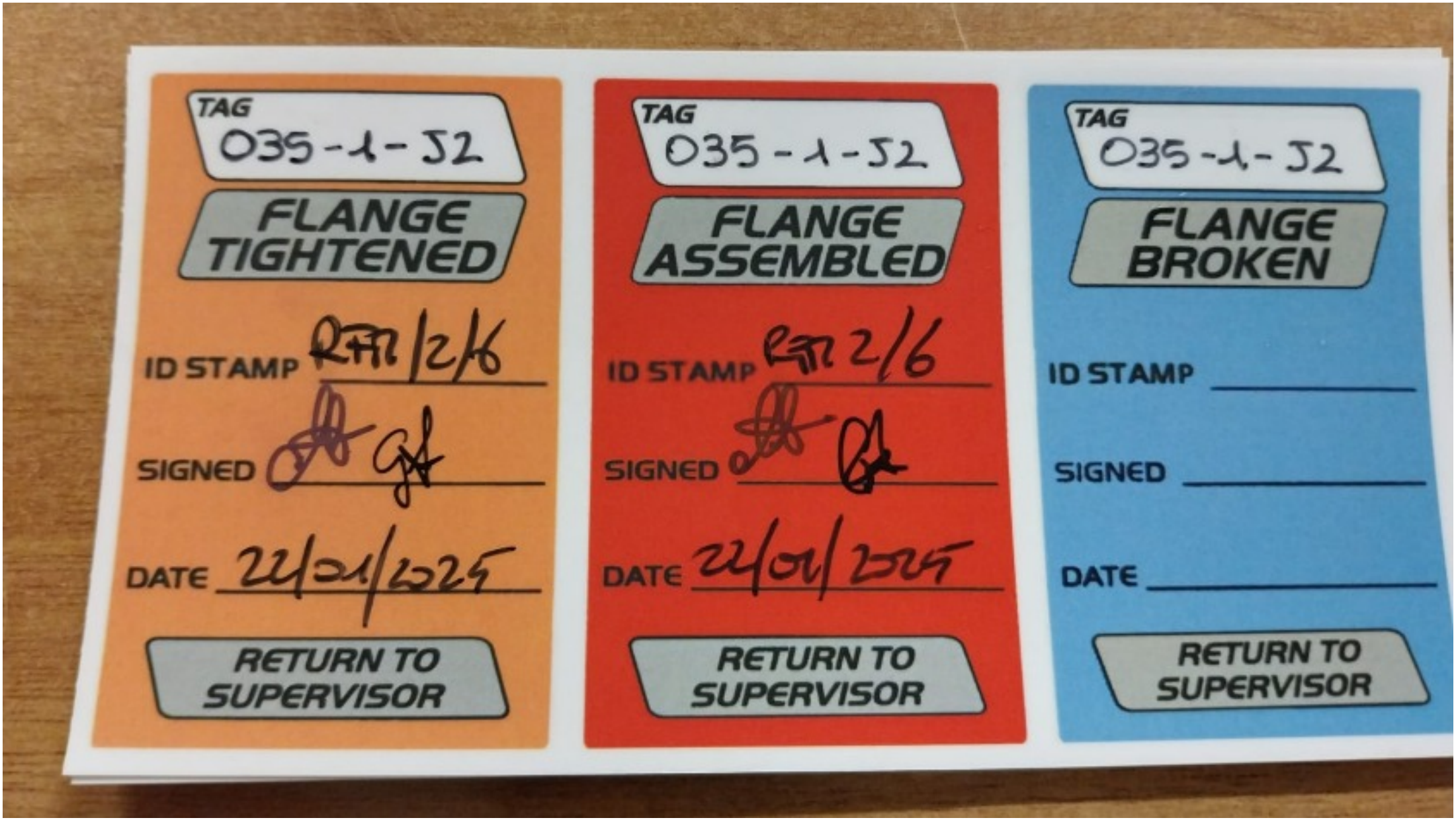
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[barg]	TEMP. AMB	MEDIUM Water		

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

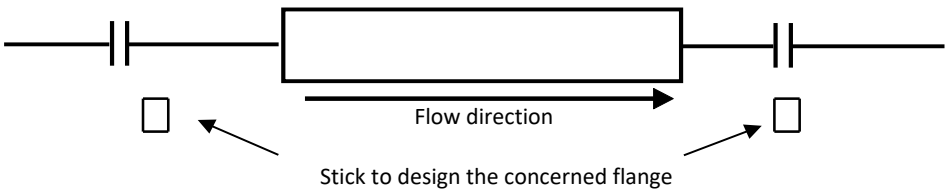
MASTER


TAG
035-1-J2
FLANGE TIGHTENED
ID STAMP RM 12/6
SIGNED
DATE 22/01/2025
RETURN TO SUPERVISOR
TAG
035-1-J2
FLANGE ASSEMBLED
ID STAMP RM 2/6
SIGNED
DATE 22/01/2025
RETURN TO SUPERVISOR
TAG
035-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	035-1-J3	: Joint 035-1-J3			Dwg	123A90-FDL-PP-DI-00035-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004228		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



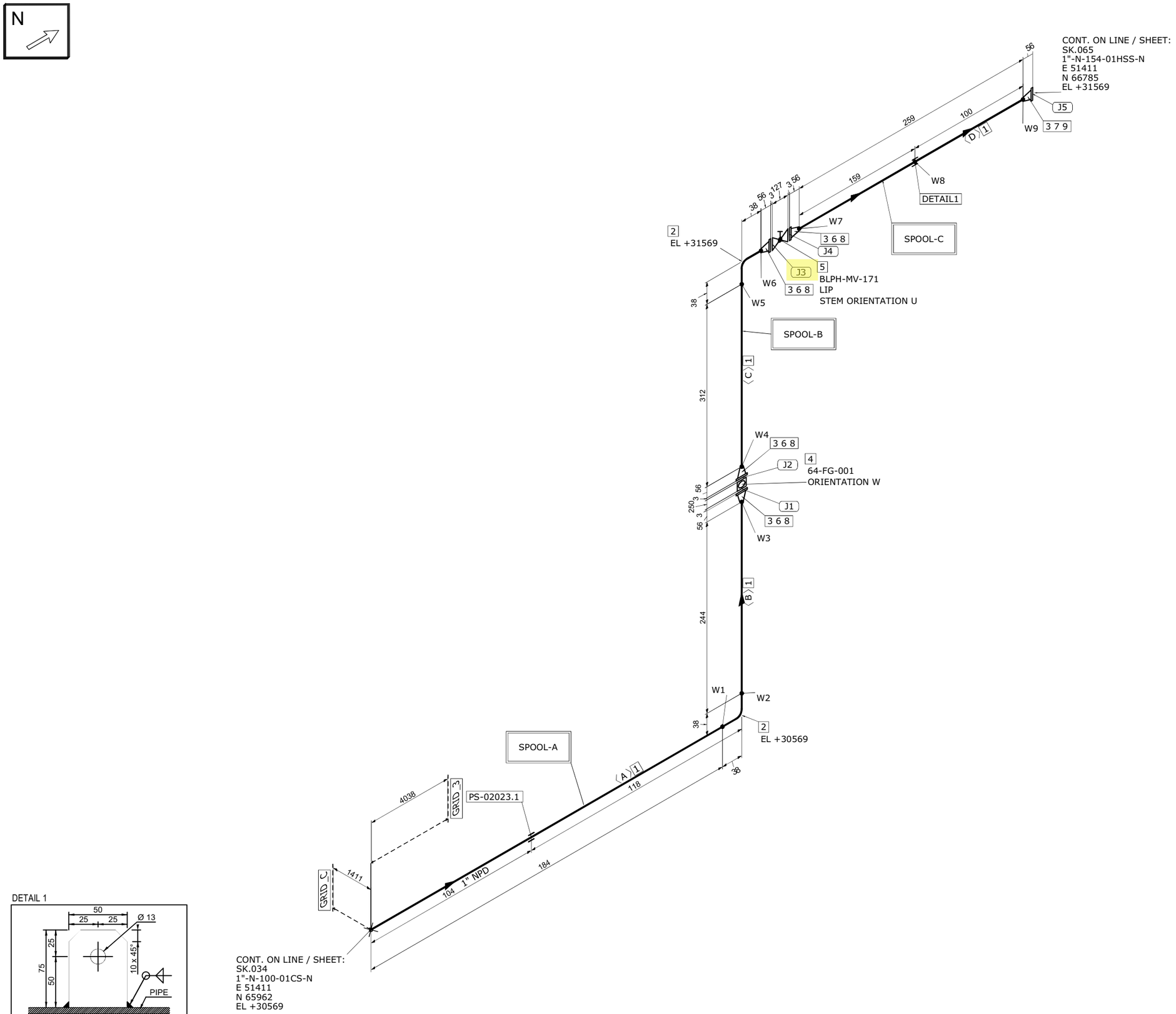
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-15	2025-01-15	
Signature	Digitaly signed by Emanuele Delfino 2025-01-15T06:26:06.847Z	Digitaly signed by Lorenzo Novaga 2025-01-15T08:39:41.452Z	



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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"-N-101-01CS-N

SK.035

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-00035	SHEET / OF	1/1
				REV.	00

LINE DATA

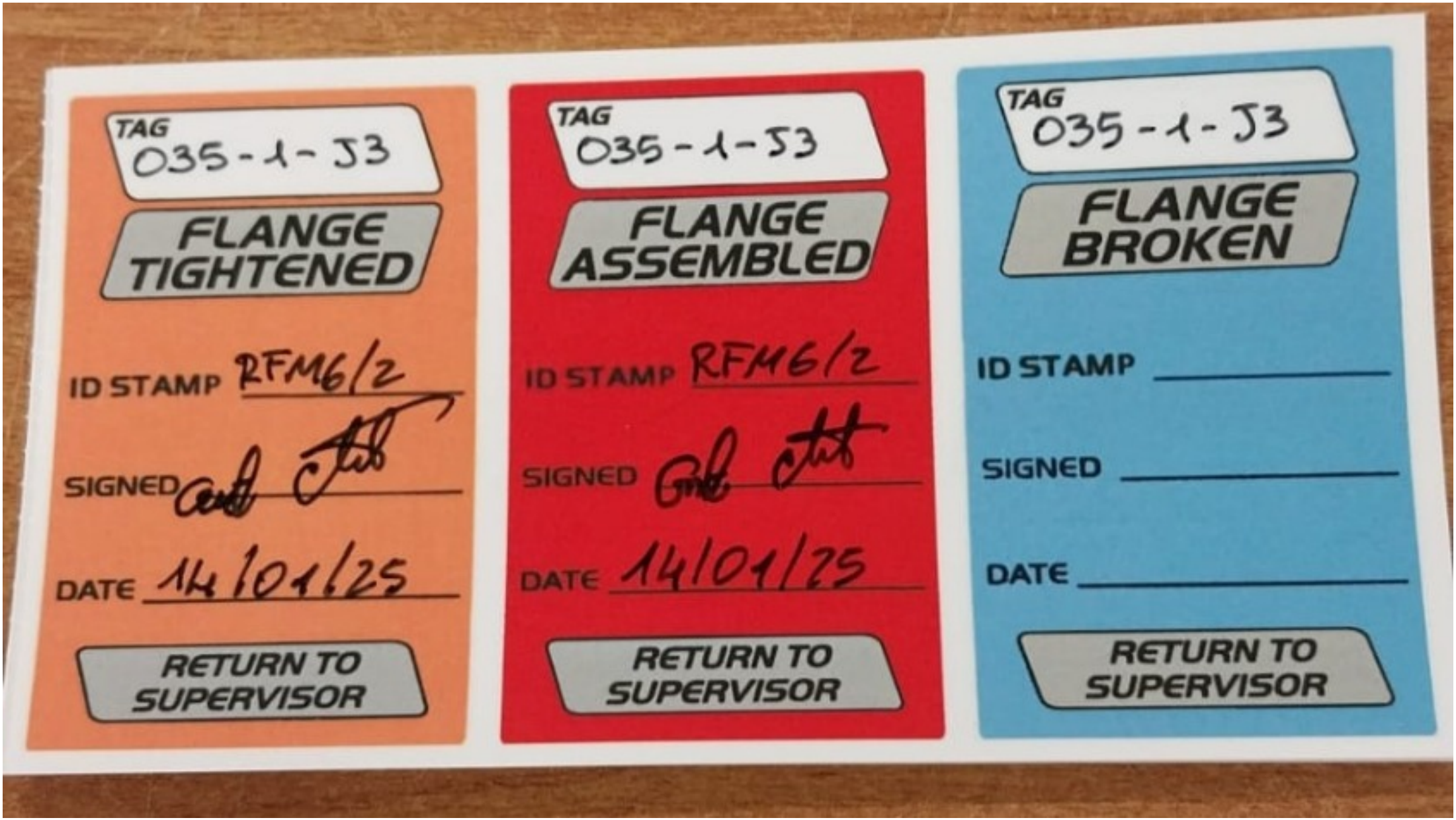
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[barg]	TEMP. AMB	MEDIUM Water		

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

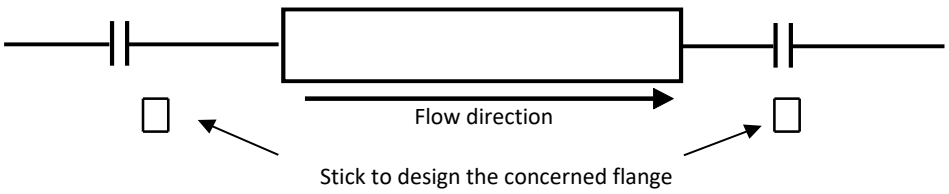
MASTER


TAG
035-1-J3
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
035-1-J3
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
035-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	035-1-J4	: Joint 035-1-J4			Dwg	123A90-FDL-PP-DI-00035-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004229		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 (12-68 Nm)
Bolt tensioning/Torquing value	62.5		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	19	63	19	38	62.5
2	19	63	19	38	62.5
3	19	63	19	38	62.5
4	19	63	19	38	62.5
5			19	38	62.5
6			19	38	62.5
7			19	38	62.5
8			19	38	62.5
9			19	38	62.5
10			19	38	62.5
11			19	38	62.5
12			19	38	62.5
13			19	38	62.5
14			19	38	62.5
15			19	38	62.5
16			19	38	62.5
17			19	38	62.5
18			19	38	62.5
19			19	38	62.5
20			19	38	62.5

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

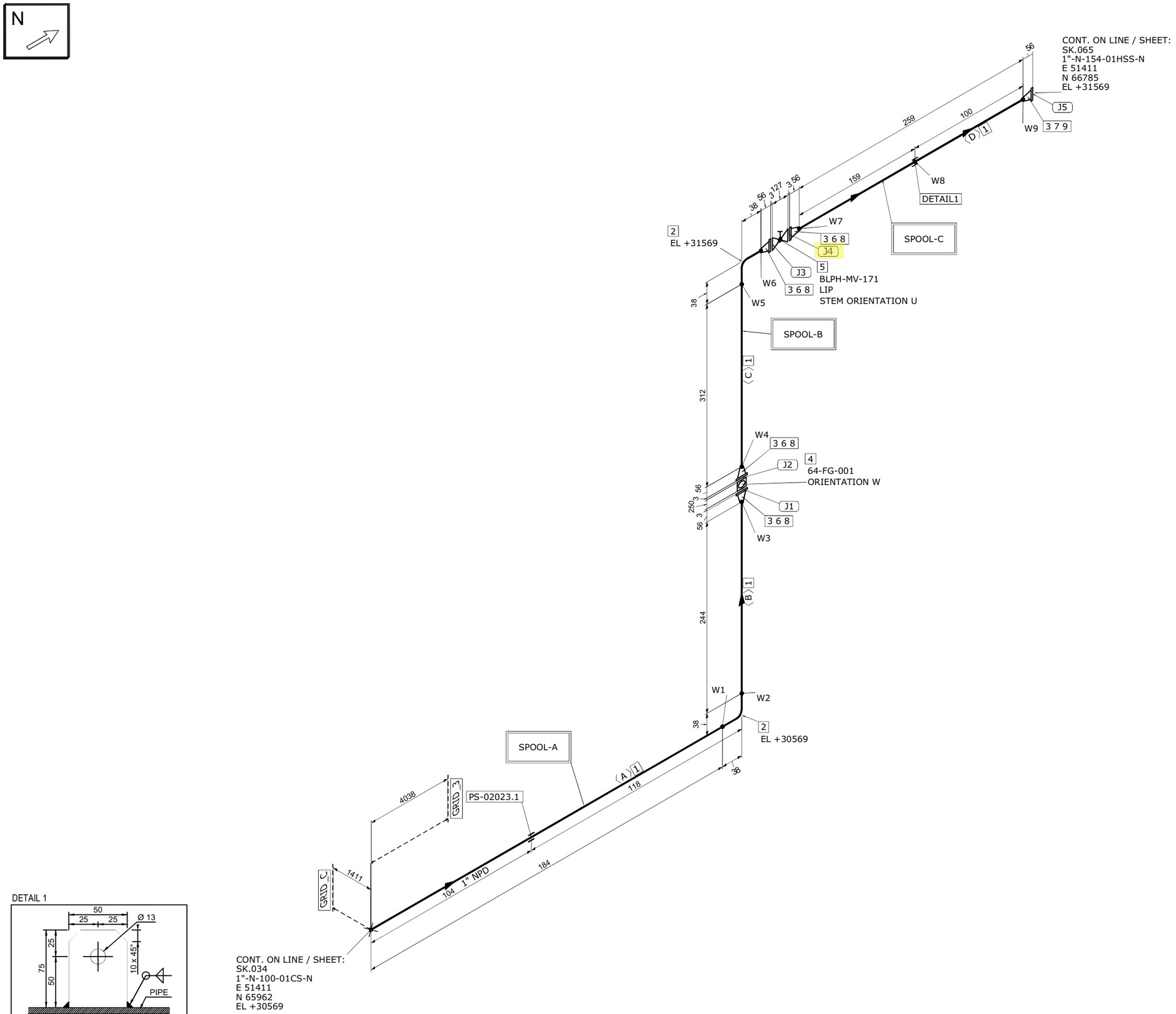
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-15	2025-01-15	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-15T06:26:18.463Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-15T08:40:07.789Z	



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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"-N-101-01CS-N

SK.035

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-00035	SHEET / OF	1/1
				REV.	00

LINE DATA

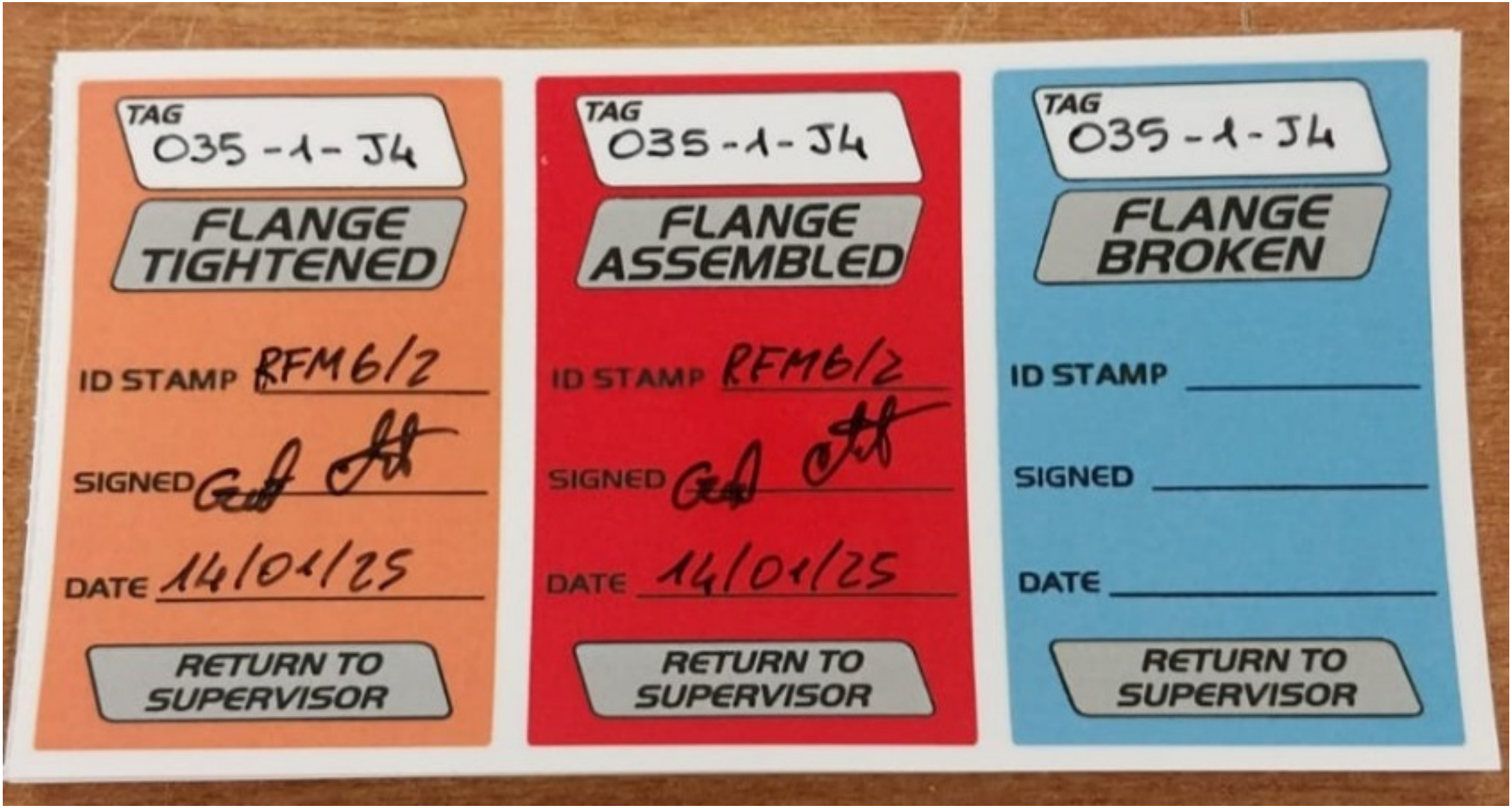
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[barg]	TEMP. AMB	MEDIUM Water		

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

MASTER

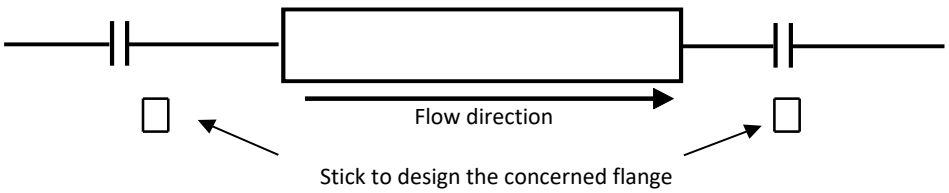

TAG
035 - 1 - J4
FLANGE TIGHTENED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
035 - 1 - J4
FLANGE ASSEMBLED
ID STAMP RFM6/2
SIGNED
DATE 14/01/25
RETURN TO SUPERVISOR
TAG
035 - 1 - J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	035-1-J5	: Joint 035-1-J5			Dwg	123A90-FDL-PP-DI-00035-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004230		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-023

EQUIPMENT TAG



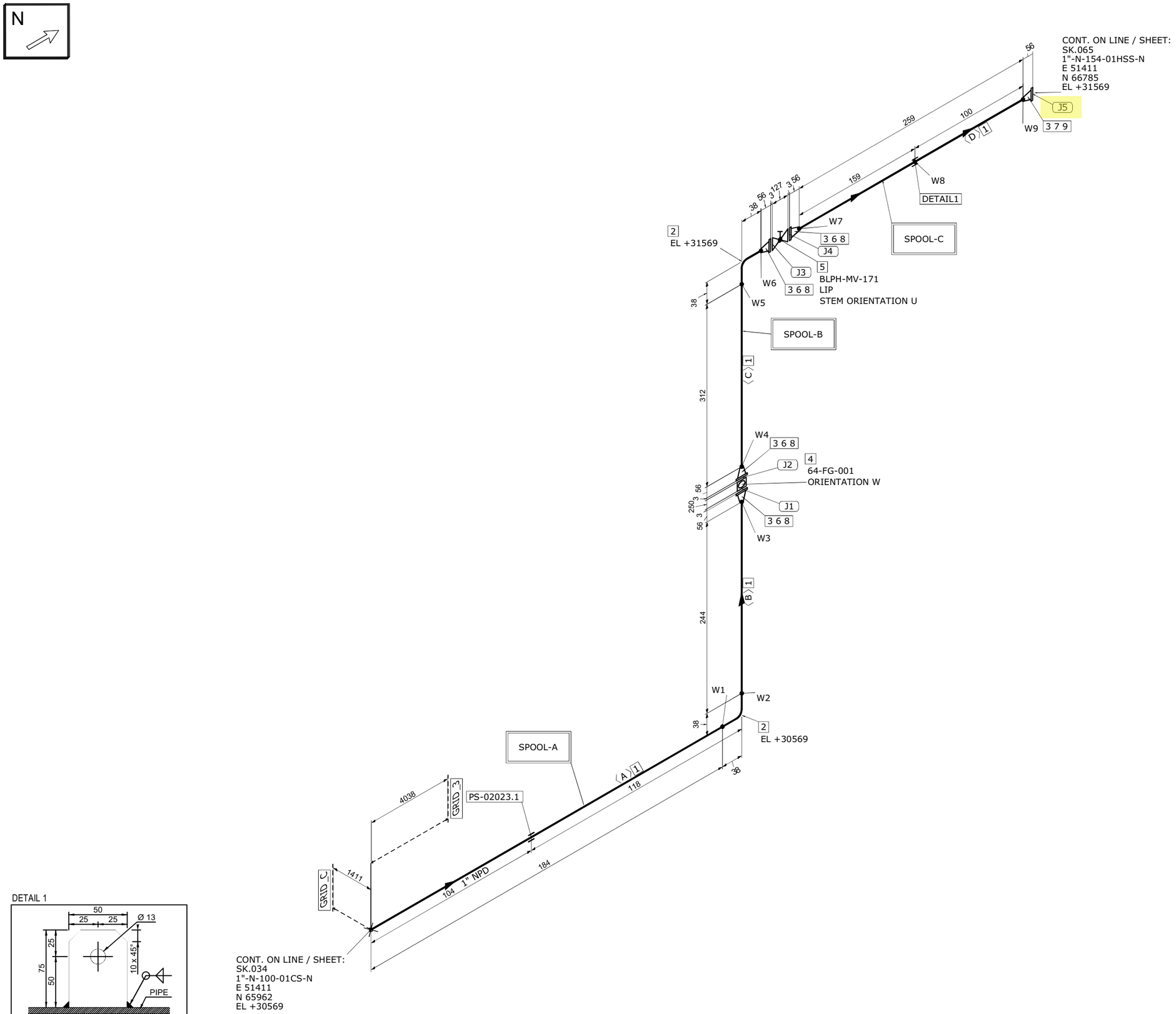
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	INSULATION KIT	**Used tools**	T064079 / RA00598
Bolt tensioning/Torquing value	65		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	20	65	20	39	65
2	20	65	20	39	65
3	20	65	20	39	65
4	20	65	20	39	65
5			20	39	65
6			20	39	65
7			20	39	65
8			20	39	65
9			20	39	65
10			20	39	65
11			20	39	65
12			20	39	65
13			20	39	65
14			20	39	65
15			20	39	65
16			20	39	65
17			20	39	65
18			20	39	65
19			20	39	65
20			20	39	65

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	2025-01-23	2025-02-03	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-23T05:58:24.980Z	PROVERLIS Digitaly signed by Andrea Mancini 2025-02-03T16:12:01.600Z	



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	1.0M	3.2
2	1	E90RCS01780100	90 Deg Elbow Long Radius ASME B16.9 BW 4,55 WRS ASTM/ASME A/SA420 Gr.WPL6	2	0.4
3	1	FLW0CS16540100	Flange WN ASME B16.5 150LB RF 4,55 FRG ASTM/ASME A/SA350 Gr.LF2	5	7.0

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
4	1		Flow Transmitter - ANSI - FLG 150#	1	4.5
5	1	VDE0NN02580100	Globe Valve Needle In Line ASME B16.34 FLG 150LB RF NT01B02RF	1	8.7
6	1	GSW0GK11100100	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	4	0.2
7	1	SPIKNN01220100	Insulation Kit Ends as per ASME B16.5 150LB RF	1	0.1
8	1/2	SB20BO01080200	65 Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	16	1.9
9	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]	10.6
ERECTION WEIGHT [kg]	16.0
OVERALL WEIGHT [kg]	26.6

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	1	BW
W2	1	BW
W3	1	BW
W4	1	BW
W5	1	BW
W6	1	BW
W7	1	BW
W8		FW
W9	1	BW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	184	BEVEL	BEVEL
B	1	244	BEVEL	BEVEL
C	1	312	BEVEL	BEVEL
D	1	259	BEVEL	BEVEL

SUPPORT LIST

PS-02023.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	3	3.0
B	3	4.0
C	2	3.6
MONT	0	16.0

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"-N-101-01CS-N

SK.035

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-00035	SHEET / OF	1/1
				REV.	00

LINE DATA

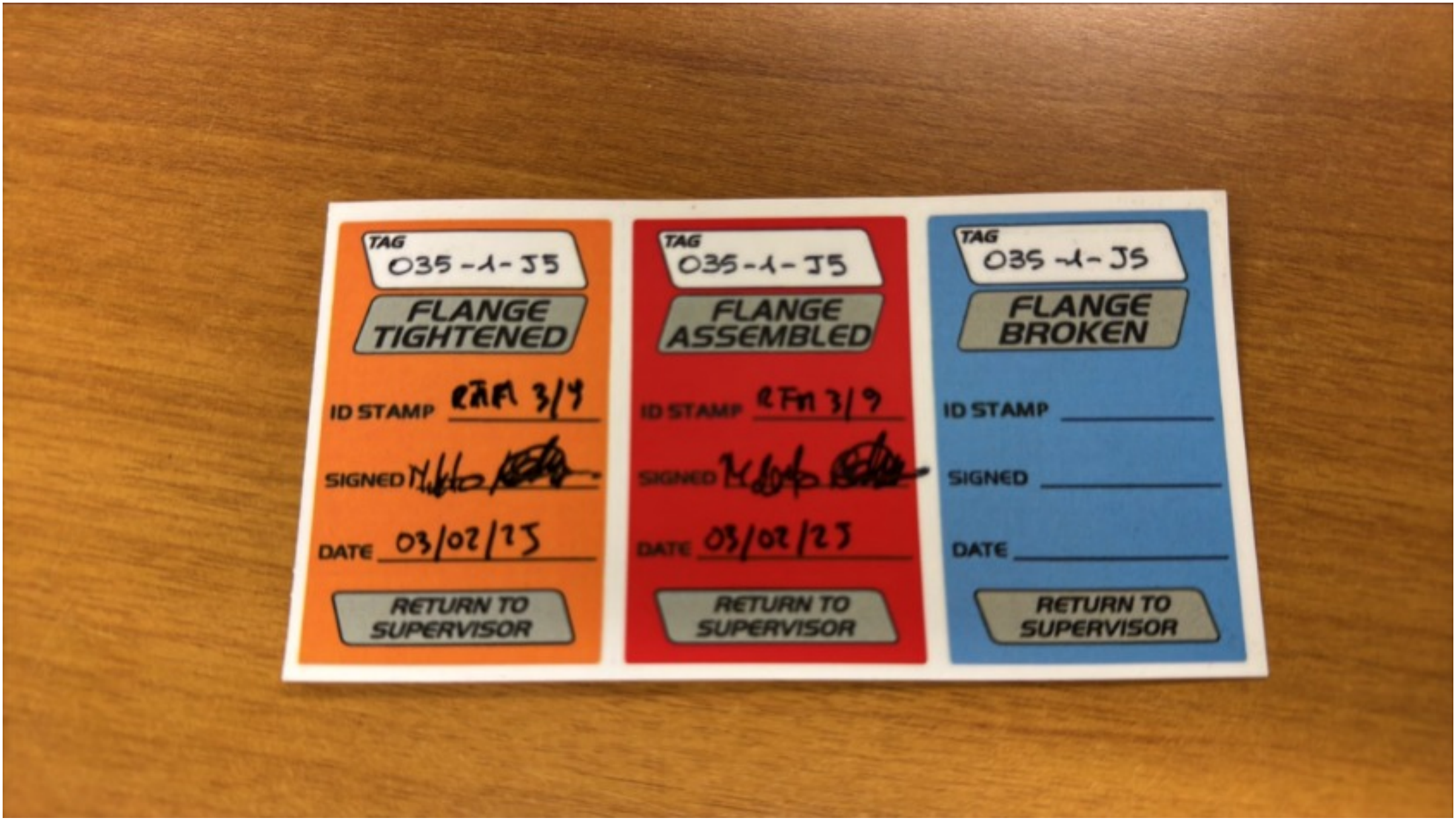
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 12	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. 18	[barg]	TEMP. AMB	MEDIUM Water		

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

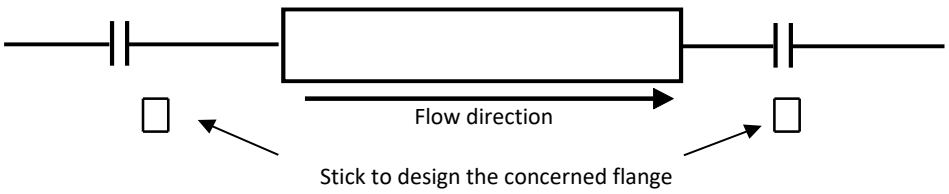
MASTER


TAG
035-1-J5
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 03/02/23
RETURN TO SUPERVISOR
TAG
035-1-J5
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 03/02/23
RETURN TO SUPERVISOR
TAG
035-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	067-1-J1	: Joint 067-1-J1			Dwg	123A90-FDL-PP-DI-00067-01
	S/Sys	64-10	: Nitrogen Distribution Network			Module	LD
TASK	code	C10004242		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 — Bolt tensioning / torquing

Test Pack N.: TP-051

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	2"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Spiral Wound Thk. 3.2 mm	**Used tools**	Torque wrench V030390 / RD00261
Bolt tensioning/Torquing value	120		

			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	73	122.2
6			37	73	122.2
7			37	73	122.2
8			37	73	122.2
9			37	73	122.2
10			37	73	122.2
11			37	73	122.2
12			37	73	122.2
13			37	73	122.2
14			37	73	122.2
15			37	73	122.2
16			37	73	122.2
17			37	73	122.2
18			37	73	122.2
19			37	73	122.2
20			37	73	122.2

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

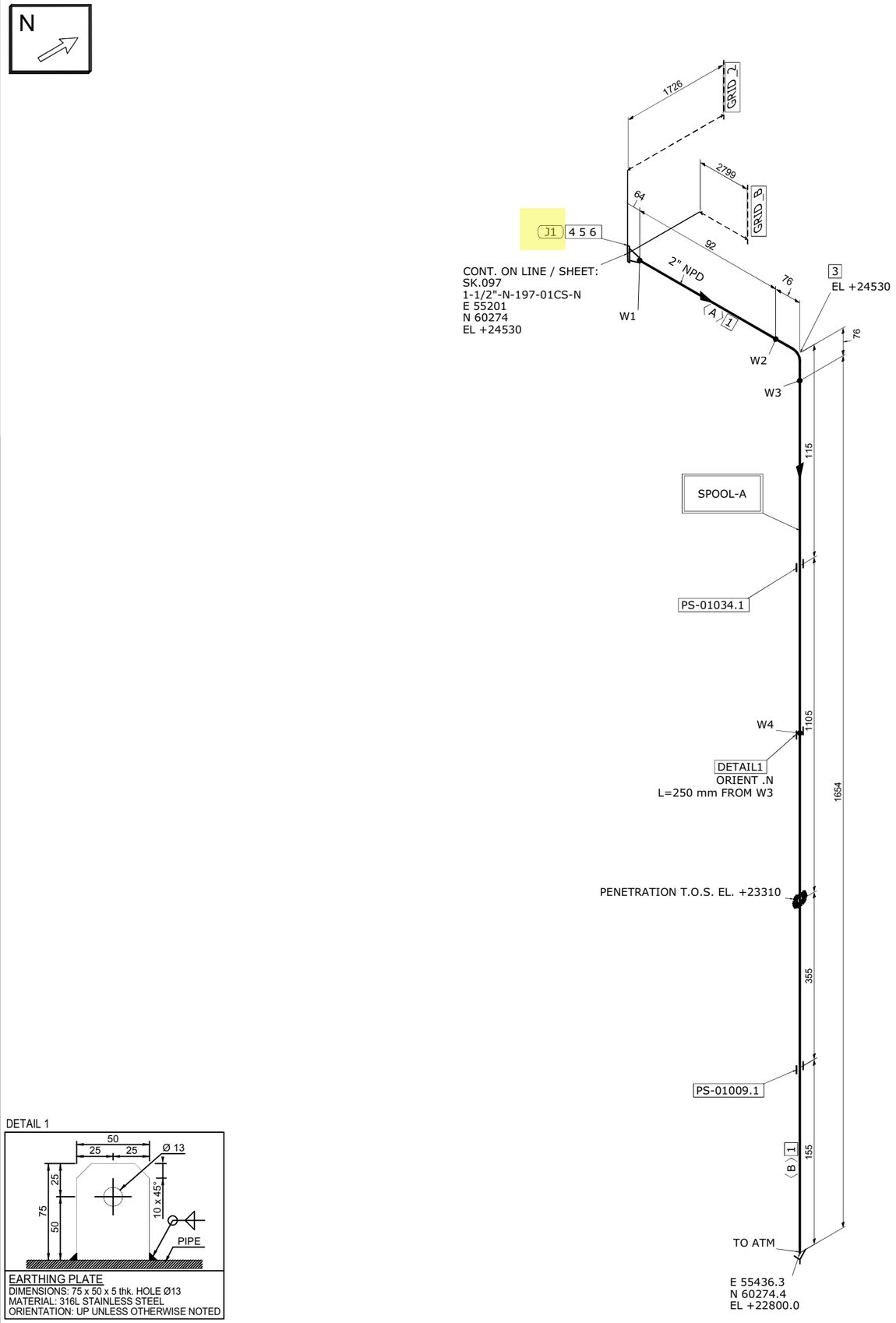
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-01-16	2025-01-16	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-01-16T13:05:15.627Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-01-16T14:22:03.244Z	



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	2	PIPECS02960200	Pipe ASME B36.10M PE 5,54 SML ASTM/ASME A/SA333 Gr.6	1.7M	13.0
3	2	E90RCS01330200	90 Deg Elbow Long Radius ASME B16.9 BW 5,54 WRS ASTM/ASME A/SA420 Gr.WPL6	1	0.9
4	2	FLW0CS02210200	Flange WN ASME B16.5 150LB RF 5,54 FRG ASTM/ASME A/SA350 Gr.LF2	1	2.7

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
5	2	GSW0GK11130200	Gasket Spiral Wound Thk. 3.2 mm ASME B16.20 150LB RF GSK AISI 316 + GRAPHITE c/w INNER RING	1	0.1
6	5/8	SB20BO00660300	Stud Bolt + 2 Heavy Nuts ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1.0

FABRICATION WEIGHT [kg]	16.6
ERECTION WEIGHT [kg]	1.1
OVERALL WEIGHT [kg]	17.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE
W1	2	BW
W2	2	BW
W3	2	BW
W4		FW

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	2	92	BEVEL	BEVEL
B	2	1654	BEVEL	BEVEL

SUPPORT LIST

PS-01034.1
PS-01009.1

SPOOL	WELD [inches]	WEIGHT [kg]
A	6	16.6
MONT	0	1.1

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 2"-AV-160-01CS-N

SK.067

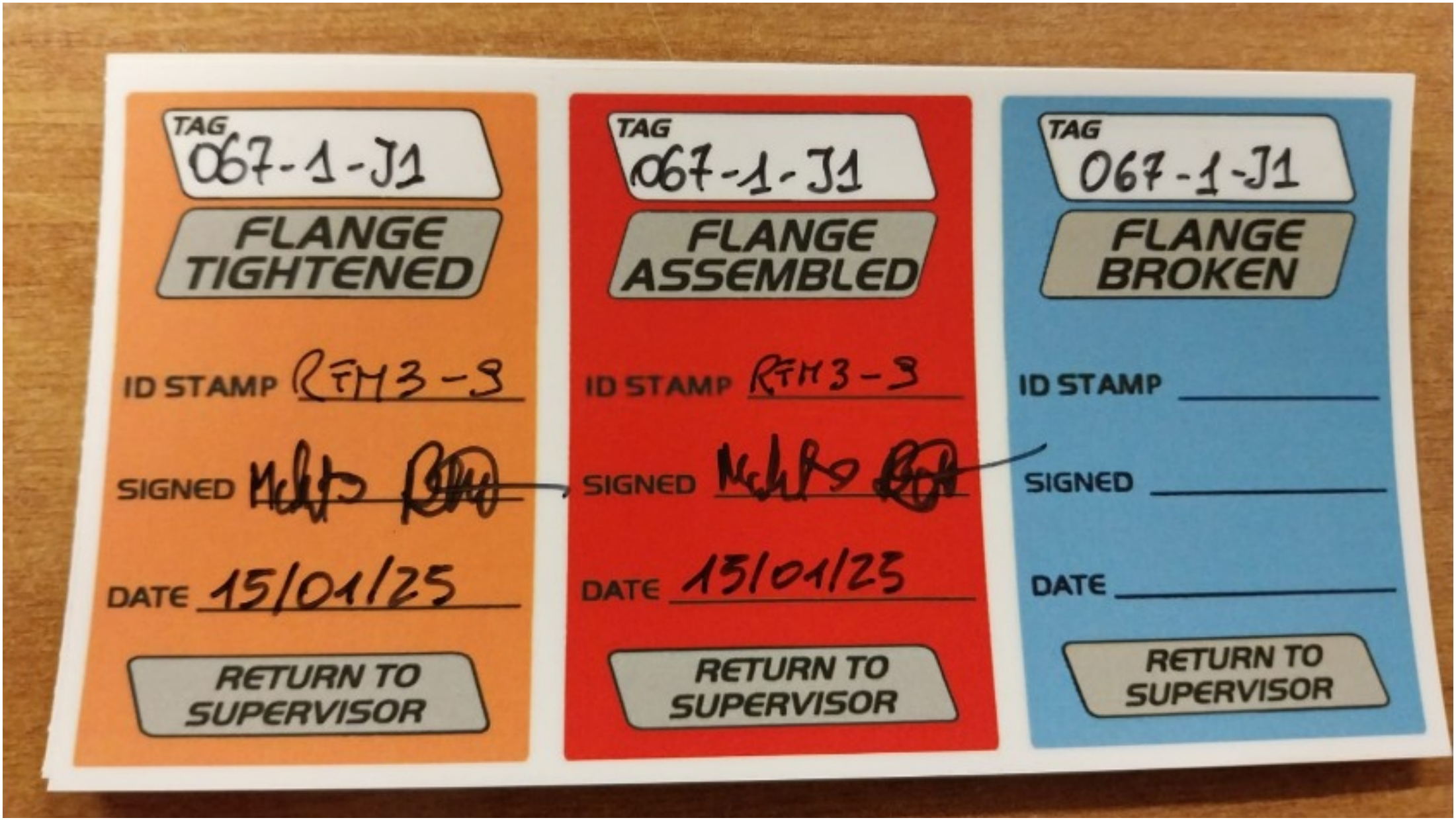
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	27-08-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00067			SHEET / OF	1/1
						REV.	00

LINE DATA									
NDT INSPECTION CATEGORY	2		PED CATEGORY	Art. 4, par. 3					
PAINTING	SYSTEM 1	BASE RAL RAL-9002	FLUID PHASE	Gas					
INSULATION	TYPE N	THICKNESS [mm]	DESIGN	PRESS. 3.5	[barg]	TEMP. -46 / 100	[°C]		
HEAT TRACING	N/A		TEST	PRESS. N/A	[barg]	TEMP. AMB	MEDIUM N/A		

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

MASTER


TAG
067-1-J1
FLANGE TIGHTENED
ID STAMP RTM3-3
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
067-1-J1
FLANGE ASSEMBLED
ID STAMP RTM3-3
SIGNED
DATE 15/01/25
RETURN TO SUPERVISOR
TAG
067-1-J1
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