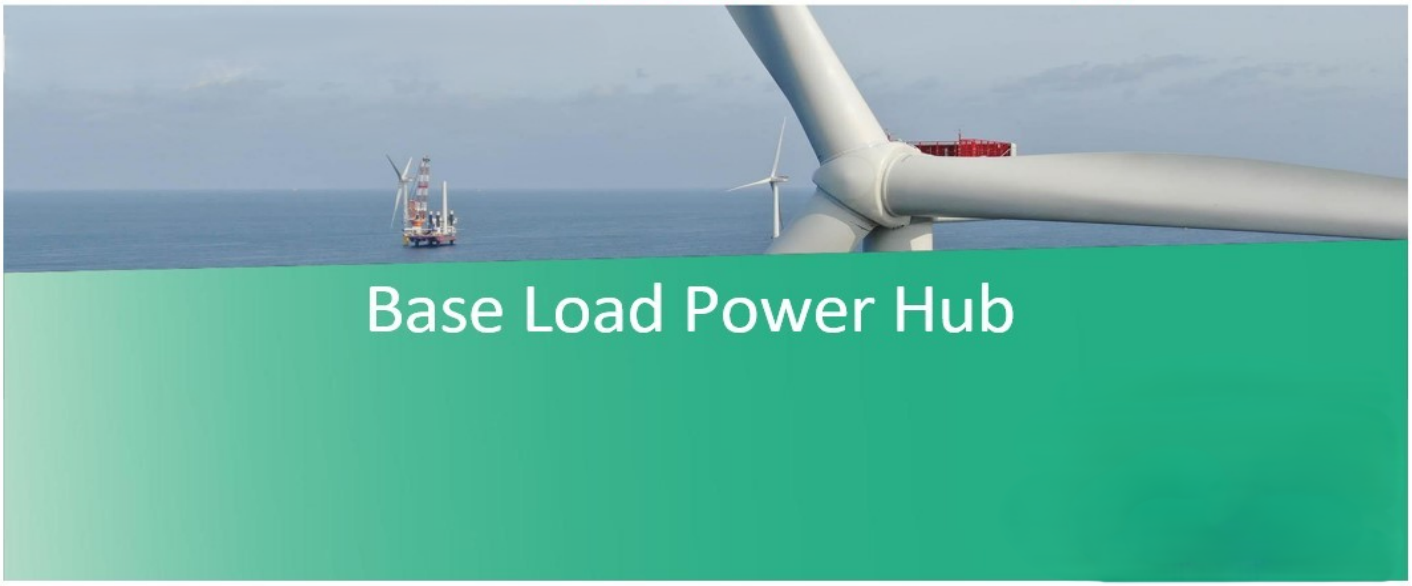
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



MECHANICAL COMPLETION DOSSIER (ONSHORE)

SYSTEM	50 Fresh Water Systems
SUBSYSTEM	50-11 Non-Oxidant Biocide

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

Sub System N°:	50-11	Tick as appropriate	ONSHORE	O
Description:	Non-Oxidant Biocide		OFFSHORE	NA

1.	***READY FOR COMMISSIONING CERTIFICATE*** *Ready For Commissioning Certificate (RFC)*	O
2.	***CONSOLIDATED PUNCH LISTS*** *Cleared and Residual Items*	O
3.	***SYSTEM/SUB-SYSTEM LIMIT DRAWINGS*** *Mark-up drawings showing the limits of the relevant System/Sub-System*	O
4.	***MECHANICAL COMPLETION STATUS INDEX – BUILDING DISCIPLINE*** *Building Sub-System Status Index (Print out) and Check/Test sheets*	NA
5.	***MECHANICAL COMPLETION STATUS INDEX – ELECTRICAL DISCIPLINE*** *Electrical Sub-System Status Index (Print out) and Check/Test Sheets* *Hazardous Area Equipment Detailed Inspection*	NA
6.	***MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE*** *Instrumental Sub-System Status Index (Print out) and Check/Test Sheets*	NA
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:	1		Issued on:	2025-04-03	
System:	50	/	Fresh Water Systems		
SubSystem:	50-11	/	Non-Oxidant Biocide		

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

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

REMARKS:

	CONTRACTOR Construction Manager	**CONTRACTOR** Commissioning Manager	**COMPANY** Construction Lead (if required)	**COMPANY** Commissioning Lead (if required)
Name	Wolmer Borghi	Anthony Iveson	CPY NOT PRESENT	CPY NOT PRESENT
Date	2025-04-07	2025-04-05	2025-04-07	2025-04-07
Signature	PROVERLIS Digitaly signed by Wolmer Borghi 2025-04-07T06:58:39.766Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-04-05T06:55:52.758Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-04-07T07:24:06.656Z	PROVERLIS Digitaly signed by CPY NOT PRESEN 2025-04-07T07:24:15.791Z

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 50-11 & process: MC

Piping	50-11 Non-Oxidant Biocide						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
021-1-J1	Joint 021-1-J1	ONSHORE	C10004329	TMX27	100	2025-02-24	RFC 1
021-1-J2	Joint 021-1-J2	ONSHORE	C10004330	TMX27	100	2025-02-19	RFC 1
021-1-J3	Joint 021-1-J3	ONSHORE	C10004331	TMX27	100	2025-02-19	RFC 1
021-1-J4	Joint 021-1-J4	ONSHORE	C10004332	TMX27	100	2025-02-19	RFC 1
021-1-J5	Joint 021-1-J5	ONSHORE	C10004333	TMX27	100	2025-02-19	RFC 1
021-2-J6	Joint 021-2-J6	ONSHORE	C10004334	TMX27	100	2025-02-19	RFC 1
021-2-J7	Joint 021-2-J7	ONSHORE	C10004335	TMX27	100	2025-02-19	RFC 1
022-1-J1	Joint 022-1-J1	ONSHORE	C10004336	TMX27	100	2025-02-19	RFC 1
022-1-J2	Joint 022-1-J2	ONSHORE	C10004337	TMX27	100	2025-02-19	RFC 1
022-1-J3	Joint 022-1-J3	ONSHORE	C10004338	TMX27	100	2025-02-19	RFC 1
024-1-J1	Joint 024-1-J1	ONSHORE	C10004339	TMX27	100	2025-02-19	RFC 1
024-1-J2	Joint 024-1-J2	ONSHORE	C10004340	TMX27	100	2025-02-19	RFC 1
024-1-J3	Joint 024-1-J3	ONSHORE	C10004341	TMX27	100	2025-02-19	RFC 1
50-11-TP-002	Test Pack 50-11-TP-002	ONSHORE	C10003240	CLX02A	100	2025-02-18	RFC 1
		ONSHORE	C10003241	CLX02B	100	2025-02-26	RFC 1
		ONSHORE	C10003242	CXX01	100	2025-04-02	RFC 1
		ONSHORE	C10003243	TMX03	100	2025-02-20	RFC 1
		ONSHORE	C10003244	TMX05	100	2025-02-20	RFC 1
		ONSHORE	C10003246	TPLX05	100	2025-02-20	RFC 1

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-11	Non-Oxidant Biocide

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003915	B	50-11-TP-002 C10003240	Piping support' clamps to be tightened after hydraulic test.	.		KAlbonetti 2025-02-17	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30004303	B	50-11-TP-002 C10003242	On isometric 021 are missing the insulation pillows around jonts 021-1-J1, BLPH-MV-214, BLPH-MV-215, 021-2-J6 and 021-2-J7. Missing	.		LNovaga 2025-04-02			
C30004304	B	50-11-TP-002 C10003242	On isometric 022 are missing the insulation pillows around BLPH-NRV-007 and joint 022-1-J1.	.		LNovaga 2025-04-02			
C30004305	B	50-11-TP-002 C10003242	On isometric 024 are missing the insulation pillows around BLPH-NRV-024 and joint 024-1-J1.	.		LNovaga 2025-04-02			
C30004306	B	50-11-TP-002 C10003242	The joint and the overlap of the sheets are not sealed.	.		LNovaga 2025-04-02			

Section 2 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	50	Fresh Water Systems
SUBSYSTEM	50-11	Non-Oxidant Biocide

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003915	B	50-11-TP-002 C10003240	Piping support' clamps to be tightened after hydraulic test.	.		KAlbonetti 2025-02-17	2025-02-26	LNovaga 2025-02-26	2025-02-26
C30004303	B	50-11-TP-002 C10003242	On isometric 021 are missing the insulation pillows around jonts 021-1-J1, BLPH-MV-214, BLPH-MV-215, 021-2-J6 and 021-2-J7. Missing	.		LNovaga 2025-04-02	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004304	B	50-11-TP-002 C10003242	On isometric 022 are missing the insulation pillows around BLPH-NRV-007 and joint 022-1-J1.	.		LNovaga 2025-04-02	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004305	B	50-11-TP-002 C10003242	On isometric 024 are missing the insulation pillows around BLPH-NRV-024 and joint 024-1-J1.	.		LNovaga 2025-04-02	2025-04-04	LNovaga 2025-04-04	2025-04-04
C30004306	B	50-11-TP-002 C10003242	The joint and the overlap of the sheets are not sealed.	.		LNovaga 2025-04-02	2025-04-04	LNovaga 2025-04-04	2025-04-04

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004305

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003242	1.4 Discipline	Piping
1.2 Item	50-11-TP-002	Test Pack 50-11-TP-002	
1.3 Subsystem	50-11	Non-Oxidant Biocide	

2 - OBSERVATION

On isometric 024 are missing the insulation pillows around BLPH-NRV-024 and joint 024-1-J1.

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004306

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003242	1.4 Discipline	Piping
1.2 Item	50-11-TP-002	Test Pack 50-11-TP-002	
1.3 Subsystem	50-11	Non-Oxidant Biocide	

2 - OBSERVATION

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

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003915

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003240	1.4 Discipline	Piping
1.2 Item	50-11-TP-002	Test Pack 50-11-TP-002	
1.3 Subsystem	50-11	Non-Oxidant Biocide	

2 - OBSERVATION

Piping support' clamps to be tightened after hydraulic test.

Name: Kangi Albonetti

Date: 2025-02-17

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-02-26

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004303

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003242	1.4 Discipline	Piping
1.2 Item	50-11-TP-002	Test Pack 50-11-TP-002	
1.3 Subsystem	50-11	Non-Oxidant Biocide	

2 - OBSERVATION

On isometric 021 are missing the insulation pillows around jonts 021-1-J1, BLPH-MV-214, BLPH-MV-215, 021-2-J6 and 021-2-J7.
Missing insulation box on the support PS-01058.

Name: Lorenzo Novaga
Date: 2025-04-02
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installed.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004304

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003242	1.4 Discipline	Piping
1.2 Item	50-11-TP-002	Test Pack 50-11-TP-002	
1.3 Subsystem	50-11	Non-Oxidant Biocide	

2 - OBSERVATION

On isometric 022 are missing the insulation pillows around BLPH-NRV-007 and joint 022-1-J1.

Name: Lorenzo Novaga

Date: 2025-04-02

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-04

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Section 3 SYSTEM,SUB-SYSTEM LIMIT DRAWINGS

DRAWING NO. DRAWING_NO.

REV. REV

P-50001 A/B
SEA WATER LIFT PUMPS

POWER : 1.6 KW
FLOW : 2.5 m³/h
DESIGN P/T : 7.6 barg / 80°C
DISCHARGE PRESSURE : 5.6 barg (NOTE 9)
MATERIAL : SDSS

02

B-50013 A/B
SEA WATER LIFT PUMPS CAISSONS

02

SIZE : 3432 mm (ID) x 27308 mm (H)
MATERIAL : CS + CA

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

1"-CI-029-01CP-E

3/4" BLPH-MV-214

3/4"x1/2" CONC. RED. 1/2" BLPH-MV-215

Sea Water Intake System SS 50-00

Electrochlorinated Water SS 50-11

1-1/2"-SWS-035-01SD-E

123A90-DDL-PR-PID-80022
SEA WATER COARSE FILTER PACKAGE

BLPH-MV-043 1.1/2"

1-1/2"-SWS-031-01SD-E

50 RO 001 NOTE 7

50 XY 001 / 50 XV 001 NOTE 5

50 XY 002 / 50 XV 002 NOTE 3

FC TYP.1

3/4" BLPH-MV-044

BLPH-NRV-004 1.1/2"

50 PI 001 H L

50 PT 001

INSTR. PIPING 2" 2" x 1.5"

BLPH-MV-464

1"-SWS-146-01SD-E

BLPH-MV-050 1.1/2"

1-1/2"-SWS-033-01SD-E

50 RO 002 NOTE 7

50 XY 003 / 50 XV 003 NOTE 5

50 XY 004 / 50 XV 004 NOTE 3

FC TYP.1

3/4" BLPH-MV-054

BLPH-NRV-008 1.1/2"

50 PI 002 H L

50 PT 002

INSTR. PIPING 2" 2" x 1.5"

BLPH-MV-465

1"-SWS-147-01SD-E

START/STOP 50 HS 001 / 50 HS 002

RUNNING/STOPPED 50 XI 001 / 50 XI 003

AUTO START READY 50 XI 002 / 50 XI 004

TRIPPED/FAULT 50 XA 001 / 50 XA 003

SHUTDOWN ALARM 50 XA 002 / 50 XA 004

ESD

BLPH-NRV-007 1"

1"-CI-030-01CP-E

MCC

SP 0033

1"-SWS-222-01SD-E

PM-50001A

BLPH-MV-048 1"

SP 0043

50 PSV 006 1D2 BLOCKED OUTLET SET @ 7.6 barg

2"-SWR-289-01SD-N

BLPH-MV-469

1"-SWS-288-01SD-E

RS

LOWER DECK: +23.310 m

TOP OF CAISSON: +21.808 m

SUCTION

NOTE 1, 2, 8

P-50001A

PUMP RETENTION BARS

EL: 5.500 m

B-50013A

BLPH-NRV-024 1"

1"-CI-032-01CP-E

MCC

SP 0034

1"-SWS-221-01SD-E

PM-50001B

BLPH-MV-051 1"

SP 0044

50 PSV 007 1D2 BLOCKED OUTLET SET @ 7.6 barg

2"-SWR-287-01SD-N

BLPH-MV-470

1"-SWS-286-01SD-E

LOWER DECK: +23.310 m

TOP OF CAISSON: +21.808 m

SUCTION

NOTE 1, 2, 8

P-50001B

PUMP RETENTION BARS

EL: 5.500 m

B-50013B

NOTES

1. SEAWATER LIFT PUMPS ARE RATED 2 X 100%
2. AUTO START OF DESIGNATED STANDBY PUMP ON LOSS OF RUNNING STATUS AND DISCHARGE LOW PRESSURE ALARM OF DUTY PUMP.
3. VALVE TO BE OPENED WHEN PUMP IS OFFLINE TO DOSE CAISSON WITH TREATED SEAWATER TO PREVENT BIOLOGICAL GROWTH.
4. DELETED. 02
5. SOFTWARE INTERLOCK PREVENTS PUMPS FROM STARTING UNLESS DISCHARGE XV IS FULLY CLOSED.
6. DELETED. 02
7. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "123A90-DDL-IN-DS-40054 - TECHNICAL DATASHEET FOR RESTRICTION ORIFICE".
8. LOGIC FOR CONTROL OF P-5001A/B THAT PREVENTS SIMULTANEOUS RUNNING OF A AND B PUMP IS PROVIDED.
9. DISCHARGE PRESSURE REFERS TO THE FLANGE DISCHARGE OF THE PUMP AT LOWER DECK.

02

HOLDS

1. DELETED.
2. DELETED.
3. DELETED.
4. DELETED.
5. 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
SEA-WATER INTAKE SYSTEM SHEET 1

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80021		SHEET 001 / REV. 02

File Name : FILE_NAME

DRAWING_NO.

REV.

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

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

02

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

CONTRACTOR | SUPPLIER

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

123A90-DDL-PR-PID-80025
TO 50-TDI-002
50 TI 001
BLOCKED OUTLET SET @ 6 barg
50 PSV 011 1D2
2"-SWR-291-01SD-N
02
BLPH-MV-471
SB
1"-SWS-290-01SD-E
50 TT 001
50 TE 001
1.1/2"
4"x1.1/2"
ECC. RED.
TP 017
E
123A90-DDL-PR-PID-80021
FROM SEA WATER LIFT PUMP
1-1/2"-SWS-035-01SD-E
BLPH-MV-241 3/4"

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

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

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

1"-CI-043-01CP-E
TP 006
123A90-DDL-PR-PID-80026
TO WASTE WATER TANK
DECK HOOK-UP 003
02

SUPPLIER | CONTRACTOR

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

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

NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

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

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE NTS	
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80022	SHEET 001	REV. 02

File Name : FILE_NAME

Section 4 MECHANICAL COMPLETION STATUS INDEX - BUILDING DISCIPLINE

NOT APPLICABLE

Section 5 MECHANICAL COMPLETION STATUS INDEX - ELECTRICAL DISCIPLINE

NOT APPLICABLE

Section 6 MECHANICAL COMPLETION STATUS INDEX - INSTRUMENTAL DISCIPLINE

NOT APPLICABLE

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: 50-11 & process: MC & discipline : P

Piping	50-11 Non-Oxidant Biocide						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
021-1-J1	Joint 021-1-J1	ONSHORE	C10004329	TMX27	100	2025-02-24	RFC 1
021-1-J2	Joint 021-1-J2	ONSHORE	C10004330	TMX27	100	2025-02-19	RFC 1
021-1-J3	Joint 021-1-J3	ONSHORE	C10004331	TMX27	100	2025-02-19	RFC 1
021-1-J4	Joint 021-1-J4	ONSHORE	C10004332	TMX27	100	2025-02-19	RFC 1
021-1-J5	Joint 021-1-J5	ONSHORE	C10004333	TMX27	100	2025-02-19	RFC 1
021-2-J6	Joint 021-2-J6	ONSHORE	C10004334	TMX27	100	2025-02-19	RFC 1
021-2-J7	Joint 021-2-J7	ONSHORE	C10004335	TMX27	100	2025-02-19	RFC 1
022-1-J1	Joint 022-1-J1	ONSHORE	C10004336	TMX27	100	2025-02-19	RFC 1
022-1-J2	Joint 022-1-J2	ONSHORE	C10004337	TMX27	100	2025-02-19	RFC 1
022-1-J3	Joint 022-1-J3	ONSHORE	C10004338	TMX27	100	2025-02-19	RFC 1
024-1-J1	Joint 024-1-J1	ONSHORE	C10004339	TMX27	100	2025-02-19	RFC 1
024-1-J2	Joint 024-1-J2	ONSHORE	C10004340	TMX27	100	2025-02-19	RFC 1
024-1-J3	Joint 024-1-J3	ONSHORE	C10004341	TMX27	100	2025-02-19	RFC 1
50-11-TP-002	Test Pack 50-11-TP-002	ONSHORE	C10003240	CLX02A	100	2025-02-18	RFC 1
		ONSHORE	C10003241	CLX02B	100	2025-02-26	RFC 1
		ONSHORE	C10003242	CXX01	100	2025-04-02	RFC 1
		ONSHORE	C10003243	TMX03	100	2025-02-20	RFC 1
		ONSHORE	C10003244	TMX05	100	2025-02-20	RFC 1
		ONSHORE	C10003246	TPLX05	100	2025-02-20	RFC 1

ITEM	Tag	50-11-TP-002	: Test Pack 50-11-TP-002			Dwg	123A90-DDL-PR-PID-80021
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10003240		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02A Pipework Before Test

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

Comments: Point n.6 to be checked after Hydrotest.

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	R.F. Montaggi	RM (Rosetti Marino)	
Name	Raffaele Forioso	Kangi Albonetti	
Date	2025-02-18	2025-02-18	
Signature	PROVERLIS Digitaly signed by Raffaele Forioso 2025-02-18T06:21:19.744Z	PROVERLIS Digitaly signed by Kangi Albonetti 2025-02-18T06:22:51.477Z	

ITEM	Tag	50-11-TP-002	: Test Pack 50-11-TP-002			Dwg	123A90-DDL-PR-PID-80021
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10003241		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	CLX02B Pipework After Test

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Lorenzo Novaga	
Date	2025-02-06	2025-02-26	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-06T15:28:01.695Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-02-26T14:58:15.900Z	

ITEM	Tag	50-11-TP-002	: Test Pack 50-11-TP-002			Dwg	123A90-DDL-PR-PID-80021
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10003242		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity CCK	Discipline	Piping	Form	CXX01 Thermal Insulation

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM_CONSTR (ROSETTI MARINO)	RM (ROSETTI MARINO)	
Name	Gianluca De Maglie	Lorenzo Novaga	
Date	2025-03-21	2025-04-02	
Signature	PROVERLIS Digitaly signed by Gianluca De Maglie 2025-03-21T15:17:18.678Z	PROVERLIS Digitaly signed by Lorenzo Novaga 2025-04-02T07:11:26.035Z	

ITEM	Tag	50-11-TP-002	: Test Pack 50-11-TP-002		Dwg	123A90-DDL-PR-PID-80021	
	S/Sys	50-11	: Non-Oxidant Biocide		Module	LD	
TASK	code	C10003243	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity	PIP	Discipline	Piping	Form	TMX03	Cleaning

CLEANING MEDIUM

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

Component	NA					
Chemical treatment	No	NA	Filtration	No	Screen size	NA

EQUIPMENTS

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

TEST RESULTS

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

Operation Description

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

Safety Precautions

Restricting access to the area.

Result and comments

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

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-20	2025-02-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-20T05:13:56.271Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-20T10:03:26.701Z	

ROSETTI MARINO — CROSSWIND

ITEM	Tag	50-11-TP-002	: Test Pack 50-11-TP-002		Dwg	123A90-DDL-PR-PID-80021	
	S/Sys	50-11	: Non-Oxidant Biocide		Module	LD	
TASK	code	C10003244	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	MC	Activity PIP	Discipline Piping	Form	TMX05	Pressure Test

TEST DATA

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

TEST PREPARATION

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

Medium

Test medium	WATER

TEST RESULTS

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

Comments:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-20	2025-02-20	
Signature	Digitaly signed by Emanuele Delfino 2025-02-20T05:14:07.525Z	Digitaly signed by Massimo Bruschi 2025-02-20T10:03:52.877Z	

Logger protocol

Protocollo di acquisizione elenco dati

	Log no. *N. elenco dati*	123A90-50-11-TP-002

Instrument

Strumento

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

Measurement conditions

Condizioni di misura

Settings *Impostazioni*	
Mode *Modalità*	Automatic *Automatico*
Interval (ms) *Intervallo (ms)*	60000
Duration (hh:mm:ss) *Durata (hh:mm:ss)*	01:03:50
Start time (hh:mm:ss) *Tempo di avvio (hh:mm:ss)*	09:04:24 am

Logger protocol

Protocollo di acquisizione elenco dati

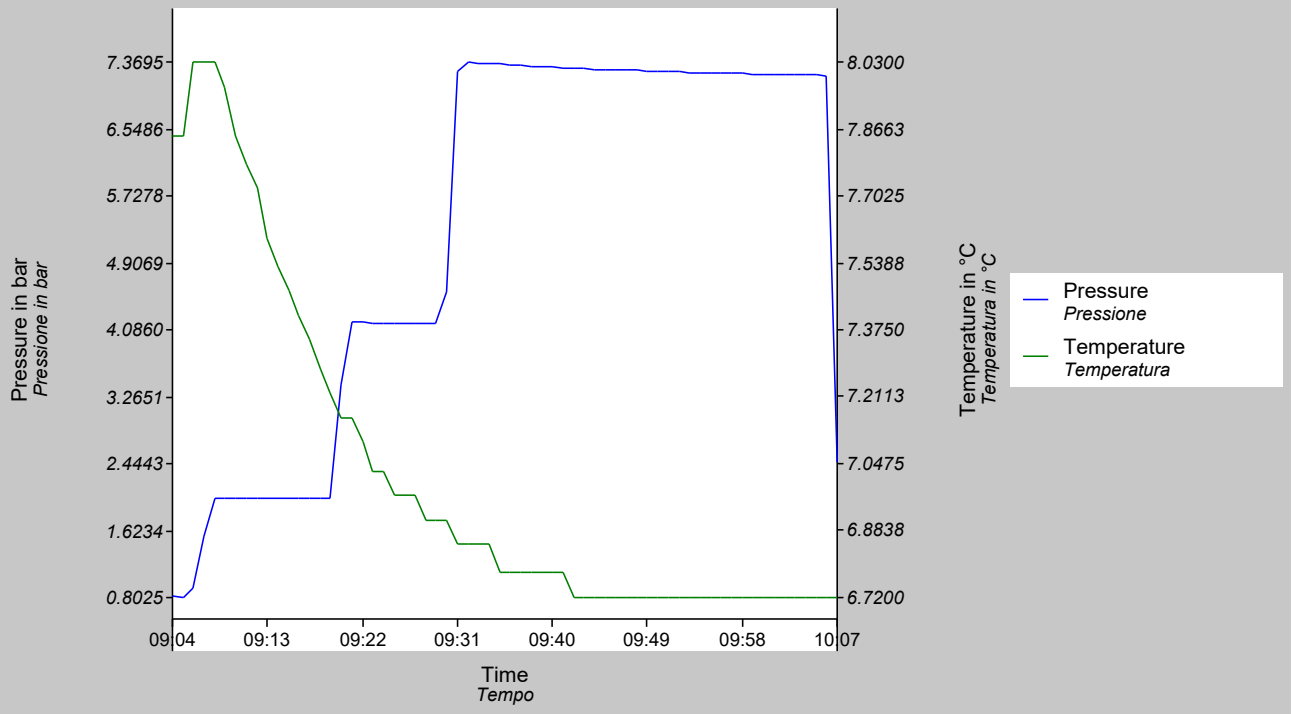
ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-50-11-TP-002

Measurement results

Risultati della misura

Graphical representation of progression
Rappresentazione grafica dell'andamento



Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/19/2025 09:04:24.000	0.8304	7.8500
02/19/2025 09:05:24.000	0.8025	7.8500
02/19/2025 09:06:24.000	0.9234	8.0300
02/19/2025 09:07:24.000	1.5612	8.0300
02/19/2025 09:08:24.000	2.0186	8.0300
02/19/2025 09:09:24.000	2.0169	7.9700
02/19/2025 09:10:24.000	2.0158	7.8500
02/19/2025 09:11:24.000	2.0136	7.7800
02/19/2025 09:12:24.000	2.0154	7.7200
02/19/2025 09:13:24.000	2.0158	7.6000
02/19/2025 09:14:24.000	2.0151	7.5300
02/19/2025 09:15:24.000	2.0191	7.4700
02/19/2025 09:16:24.000	2.0119	7.4100
02/19/2025 09:17:24.000	2.0169	7.3500
02/19/2025 09:18:24.000	2.0184	7.2800
02/19/2025 09:19:24.000	2.0141	7.2200
02/19/2025 09:20:24.000	3.4150	7.1600

Logger protocol

Protocollo di acquisizione elenco dati

ROSETTI MARINO
Group of Companies

Log no. *N. elenco dati*	123A90-50-11-TP-002

Measurement results

Risultati della misura

Timestamp *Data e ora*	Measured value *Valore misurato* bar	Measured value *Valore misurato* °C
02/19/2025 09:21:24.000	4.1843	7.1600
02/19/2025 09:22:24.000	4.1739	7.1000
02/19/2025 09:23:24.000	4.1717	7.0300
02/19/2025 09:24:24.000	4.1666	7.0300
02/19/2025 09:25:24.000	4.1644	6.9700
02/19/2025 09:26:24.000	4.1619	6.9700
02/19/2025 09:27:24.000	4.1603	6.9700
02/19/2025 09:28:24.000	4.1596	6.9100
02/19/2025 09:29:24.000	4.1580	6.9100
02/19/2025 09:30:24.000	4.5501	6.9100
02/19/2025 09:31:24.000	7.2573	6.8500
02/19/2025 09:32:24.000	7.3695	6.8500
02/19/2025 09:33:24.000	7.3529	6.8500
02/19/2025 09:34:24.000	7.3460	6.8500
02/19/2025 09:35:24.000	7.3430	6.7800
02/19/2025 09:36:24.000	7.3297	6.7800
02/19/2025 09:37:24.000	7.3239	6.7800
02/19/2025 09:38:24.000	7.3139	6.7800
02/19/2025 09:39:24.000	7.3118	6.7800
02/19/2025 09:40:24.000	7.3049	6.7800
02/19/2025 09:41:24.000	7.2977	6.7800
02/19/2025 09:42:24.000	7.2936	6.7200
02/19/2025 09:43:24.000	7.2873	6.7200
02/19/2025 09:44:24.000	7.2823	6.7200
02/19/2025 09:45:24.000	7.2766	6.7200
02/19/2025 09:46:24.000	7.2726	6.7200
02/19/2025 09:47:24.000	7.2660	6.7200
02/19/2025 09:48:24.000	7.2654	6.7200
02/19/2025 09:49:24.000	7.2597	6.7200
02/19/2025 09:50:24.000	7.2567	6.7200
02/19/2025 09:51:24.000	7.2533	6.7200
02/19/2025 09:52:24.000	7.2466	6.7200
02/19/2025 09:53:24.000	7.2436	6.7200
02/19/2025 09:54:24.000	7.2419	6.7200
02/19/2025 09:55:24.000	7.2368	6.7200
02/19/2025 09:56:24.000	7.2329	6.7200
02/19/2025 09:57:24.000	7.2318	6.7200
02/19/2025 09:58:24.000	7.2279	6.7200
02/19/2025 09:59:24.000	7.2222	6.7200
02/19/2025 10:00:24.000	7.2178	6.7200
02/19/2025 10:01:24.000	7.2169	6.7200
02/19/2025 10:02:24.000	7.2129	6.7200
02/19/2025 10:03:24.000	7.2085	6.7200
02/19/2025 10:04:24.000	7.2069	6.7200
02/19/2025 10:05:24.000	7.2060	6.7200
02/19/2025 10:06:24.000	7.2020	6.7200
02/19/2025 10:07:24.000	2.4659	6.7200

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

LAT N° 114

CERTIFICATO DI TARATURA LAT 114 0580-SM-24

Certificate of Calibration

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

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

Si riferisce a
referring to

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

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

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

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

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

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

Direzione Tecnica
(Approving Officer)

Enrico Reccagni

Enrico Reccagni

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Laboratorio Accreditato di Taratura
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LAT N° 114

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

CARATTERISTICHE DELLO STRUMENTO IN TARATURA/ Properties of devices under calibration

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

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

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

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

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

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

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

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

muniti di certificati validi di taratura, rispettivamente n° D21090

with the relevant valid calibration certificates n° D21090

Luogo di taratura
Place of calibration

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

Campione di lavoro
Working Standard

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

Operatore
Technichian

Francesco Donatelli

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

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LAT N° 114

Condizioni di misura
Measurement conditions

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

Note di taratura
Calibration Note

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

Condizioni Ambientali
Environmental conditions

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

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

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

Misure rilevate
Measurement results

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

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

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

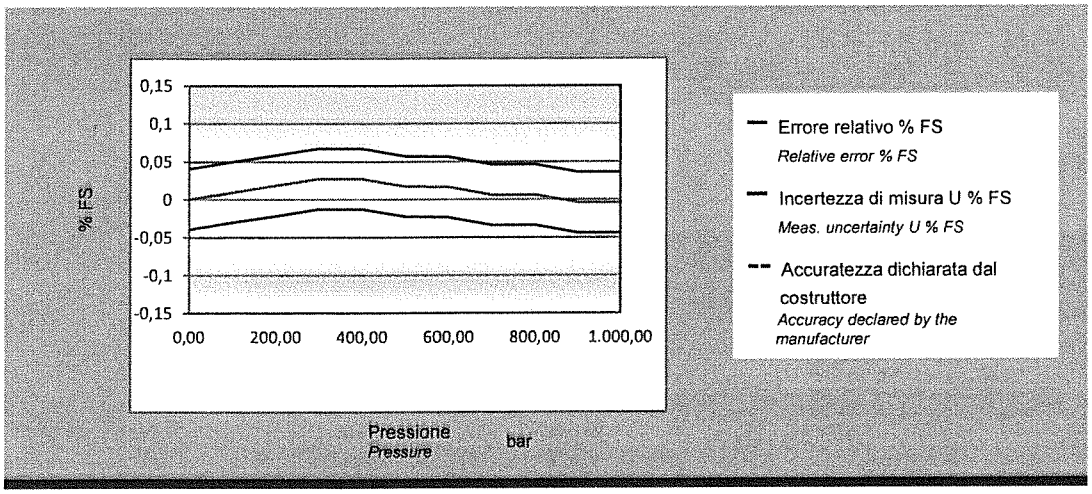
LAT N° 114

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

Incertezza di misura
Uncertainty of measurement

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

Grafico degli errori di misura
Graphical representation of measurement uncertainty



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

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

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

Base Load Power Hub (BLPH)

TEST PACK

N°50-11-TP-002
SUB-SYSTEM N° 50-11

System	50
Sub-System	50-11
Test Pressure	6.75 barg
Test Fluid	WATER
Test Duration	30 min

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

List of Contents

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

1. COLOURED MARKED P&IDs

DRAWING NO. DRAWING_NO.

REV. REV

P-50001 A/B

SEA WATER LIFT PUMPS

POWER : 1.6 KW
FLOW : 2.5 m³/h
DESIGN P/T : 7.6 barg / 80°C
DISCHARGE PRESSURE : 5.6 barg (NOTE 9)
MATERIAL : SDSS

B-50013 A/B

SEA WATER LIFT PUMPS
CAISSONS

SIZE : 343 mm (ID) x 27308 mm (H)
MATERIAL : CS + CA

123A90-DDL-PR-PID-80022
BIOCIDE DOSING UNIT
1"-CI-029-01CP-E
3/4" BLPH-MV-214
3/4"x1/2" CONC. RED.
1/2" BLPH-MV-215
1"-CI-030-01CP-E
1"-CI-032-01CP-E
1-1/2"-SWS-035-01SD-E
123A90-DDL-PR-PID-80022
SEA WATER COARSE FILTER PACKAGE
BLPH-MV-043 1.1/2"
SWS-035
SWS-031
1-1/2"-SWS-031-01SD-E
BLPH-MV-050 1.1/2"
SWS-035
SWS-033
1-1/2"-SWS-033-01SD-E
50 XY 001
50 XV 001
50 XY 002
50 XV 002
50 RO 001
NOTE 7
NOTE 5
NOTE 3
FC TYP.1
3/4" BLPH-MV-044
50 XY 003
50 XV 003
50 XY 004
50 XV 004
50 RO 002
3/4" BLPH-MV-054
INSTR. PIPING
1.1/2" BLPH-NRV-004
50 PI 001
50 PT 001
2" x 1.5"
BLPH-MV-464
1"-SWS-146-01SD-E
1.1/2" BLPH-NRV-008
50 PI 002
50 PT 002
BLPH-MV-465
1"-SWS-147-01SD-E
03
LOCAL/ REMOTE 50 XL 002A
STOP 50 HS 005A
START 50 HS 001A
RUNNING/ STOPPED 50 XL 001A
AUTO START READY 50 XL 003A
TRIPPED/ FAULT 50 XA 004A
MOTOR STOPPED BY LOCAL PUSH BUTTON 50 XA 006A
83-XS-001A
ESD
BLPH-MV-501
BLPH-MV-503
50 LG 001
50 RO 003
BLPH-MV-502
V-50000A
NOTE 11
BLPH-NRV-007
1"
MCC
PM-50001A
M
RS
1D2 50 PSV 006
BLOCKED OUTLET SET @ 7.6 barg
SP 0043
1"-SWS-222-01SD-E
BLPH-MV-048 1"
BLPH-MV-469
SB
LO
1"-SWS-288-01SD-E
2"-SWR-289-01SD-N
NOTE 10
LOWER DECK: +23.310 m
TOP OF CAISSON: +21.808 m
SUCTION
EL: - 5.500 m
NOTE 1, 2, 8
P-50001A
PUMP RETENTION BARS
B-50013A
LOCAL/ REMOTE 50 XL 002B
STOP 50 HS 005B
START 50 HS 001B
RUNNING/ STOPPED 50 XL 001B
AUTO START READY 50 XL 003B
TRIPPED/ FAULT 50 XA 004B
MOTOR STOPPED BY LOCAL PUSH BUTTON 50 XA 006B
83-XS-001B
BLPH-MV-511
BLPH-MV-513
50 LG 002
50 RO 004
BLPH-MV-512
V-50000B
NOTE 11
BLPH-NRV-024
1"
MCC
PM-50001B
M
RS
1D2 50 PSV 007
BLOCKED OUTLET SET @ 7.6 barg
SP 0044
2"-SWR-287-01SD-N
1"-SWS-221-01SD-E
BLPH-MV-051 1"
BLPH-MV-470
SB
LO
1"-SWS-286-01SD-E
NOTE 10
LOWER DECK: +23.310 m
TOP OF CAISSON: +21.808 m
SUCTION
EL: - 5.500 m
NOTE 1, 2, 8
P-50001B
PUMP RETENTION BARS
B-50013B
50-11-TP-002
6.75 barg

NOTES

1. SEAWATER LIFT PUMPS ARE RATED 2 X 100%
2. AUTO START OF DESIGNATED STANDBY PUMP ON LOSS OF RUNNING STATUS AND DISCHARGE LOW PRESSURE ALARM OF DUTY PUMP.
3. VALVE TO BE OPENED WHEN PUMP IS OFFLINE TO DOSE CAISSON WITH TREATED SEAWATER TO PREVENT BIOLOGICAL GROWTH.
4. DELETED.
5. SOFTWARE INTERLOCK PREVENTS PUMPS FROM STARTING IN CASE THE RELEVANT XV VALVE IS FULLY CLOSED. 03
6. DELETED.
7. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "123A90-DDL-IN-DS-40054 - TECHNICAL DATASHEET FOR RESTRICTION ORIFICE".
8. LOGIC FOR CONTROL OF P-5001A/B THAT PREVENTS SIMULTANEOUS RUNNING OF A AND B PUMP IS PROVIDED.
9. DISCHARGE PRESSURE REFERS TO THE FLANGE DISCHARGE OF THE PUMP AT LOWER DECK.
10. ROUTED TO THE SEA.
11. VESSELS V-50000A/B ARE INSULATED AND HEAT TRACED. 03

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 1

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	NTS
DRAWN	CHECKED	APPROVED	DATE	
A1	DRAWING NO. 123A90-DDL-PR-PID-80021		SHEET 001	REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

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

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

CONTRACTOR | SUPPLIER

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

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

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

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

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

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

SUPPLIER | CONTRACTOR

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

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

50-11-TP-002
6.75 barg

NOTES

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

HOLDS

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

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

CROSSWIND

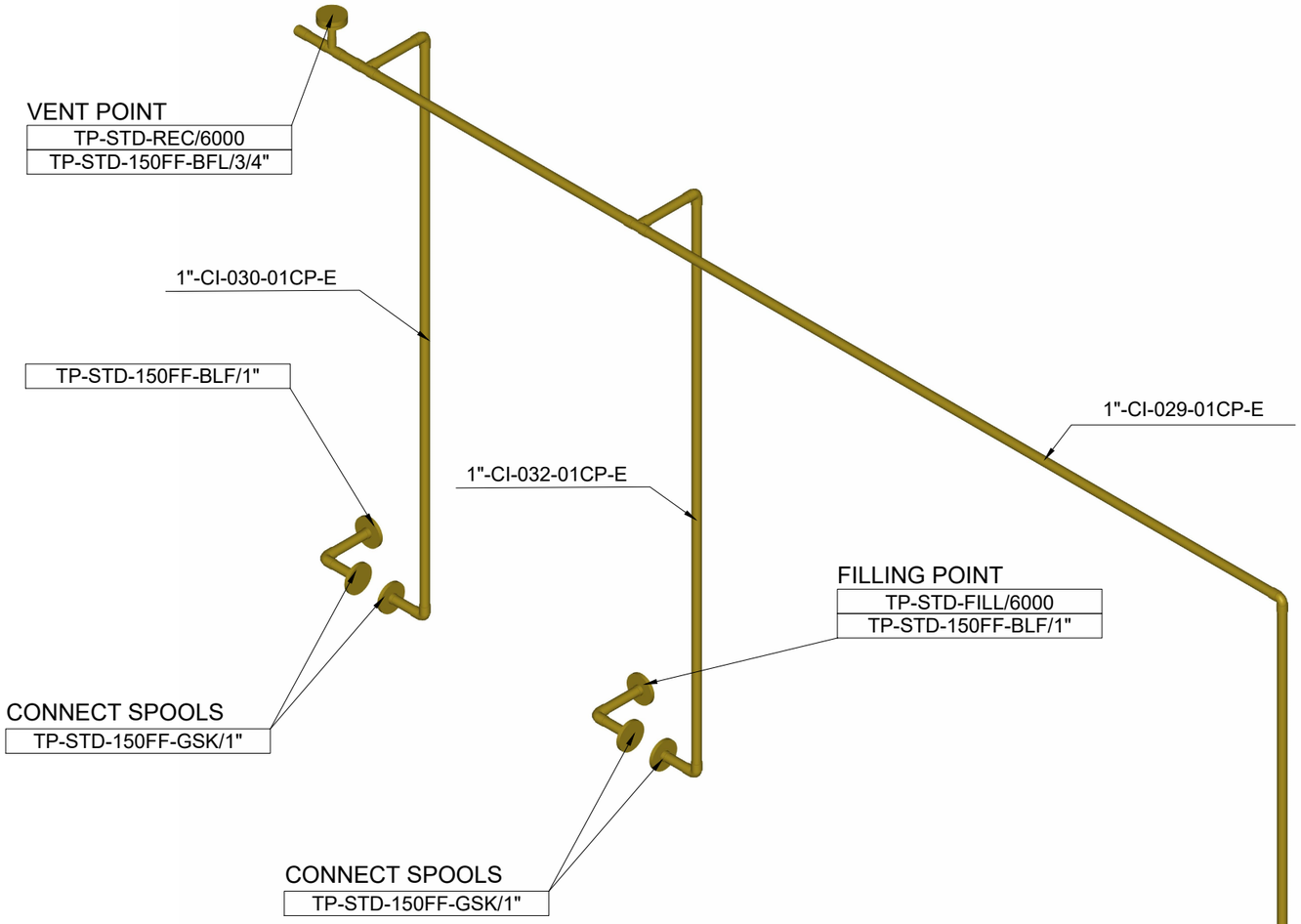
ROSETTI MARINO

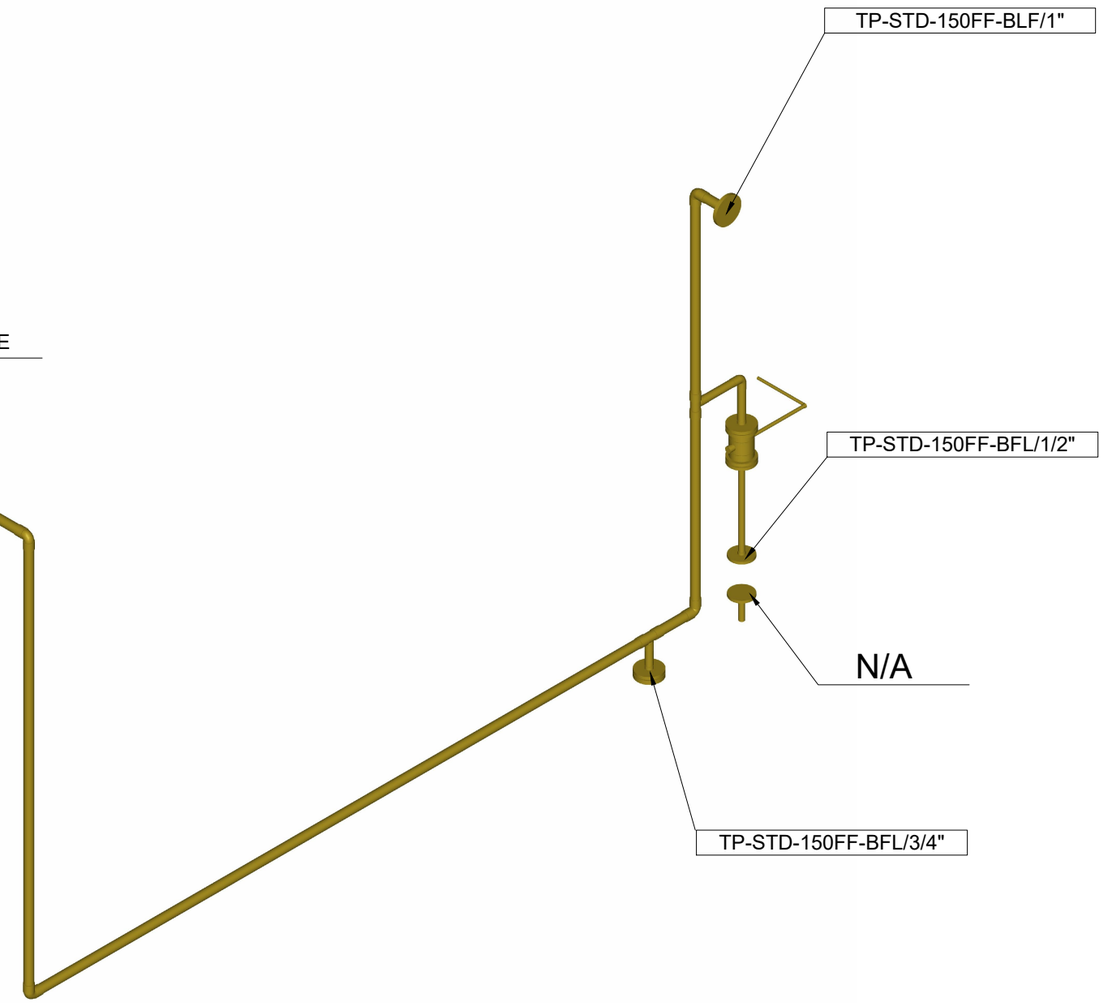
TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
SEA-WATER INTAKE SYSTEM SHEET 2

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

File Name : FILE_NAME

2. HYDROSTATIC TEST 3D CIRCUIT





50-11-TP-002

6.75 barg

NOTES

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

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

CROSSWIND

ROSETTI MARINO

HOLLANDSE KUST NOORD WIND PARK

PIPING TEST 3D CIRCUIT
50-11-TP-002

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

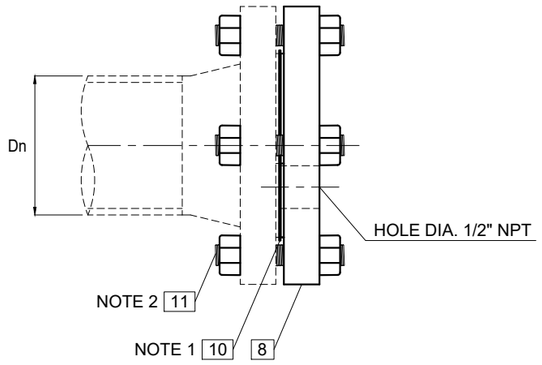
TEST REF.	TYPICAL ITEM CODE	ROSETTI CODE	ROSETTI DESCRIPTION	Q.TY X SINGLE STD	Q.TY STD X TP	Q.ty x TP	NOTES
ALL TEST	TP-STD-FILL/6000	1EQP252	Ball Valve THRD-F NPT ø1/2" 7250 psi 316L	5	1	5	
ALL TEST	TP-STD-FILL/6000	N100SS02660H00	Nipple L=100mm TBE ø1/2" Thk.4,78mm ASTM A312 Gr.TP316/316L	7	1	7	
ALL 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-002	TP-STD-150FF-BLF/1/2"	FLBHCS02420H0H	Flange Blind c/w NPT Hole ø1/2"x1/2" 150LB FF ASTM/ASME A/SA105	1	1	1	
TP-002	TP-STD-150FF-BLF/1/2"	GFL3GK13670H00	Gasket Flat Thk. 3 mm ø1/2" 150LB FF NITRILE RUBBER	1	1	1	
TP-002	TP-STD-150FF-BLF/1/2"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	1	4	
TP-002	TP-STD-150FF-BLF/3/4"	FLBHCS02433Q0H	Flange Blind c/w NPT Hole ø3/4"x1/2" 150LB FF ASTM/ASME A/SA105	1	2	2	
TP-002	TP-STD-150FF-BLF/3/4"	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ø3/4" 150LB FF NITRILE RUBBER	1	2	2	
TP-002	TP-STD-150FF-BLF/3/4"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	2	8	
TP-002	TP-STD-150FF-BLF/1"	FLBHCS0244010H	Flange Blind c/w NPT Hole ø1"x1/2" 150LB FF ASTM/ASME A/SA105	1	3	3	
TP-002	TP-STD-150FF-BLF/1"	GFL3GK13690100	Gasket Flat Thk. 3 mm ø1" 150LB FF NITRILE RUBBER	1	3	3	
TP-002	TP-STD-150FF-BLF/1"	SB20BO00980200	Stud Bolt + 2 Heavy Nuts 1/2" L=80MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	3	12	
TP-002	TP-STD-150FF-GSK/1"	GFL3GK13690100	Gasket Flat Thk. 3 mm ø1" 150LB FF NITRILE RUBBER	1	2	2	
TP-002	TP-STD-150FF-GSK/1"	SB20BO01080200	Stud Bolt + 2 Heavy Nuts 1/2" L=65MM ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	4	2	8	

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

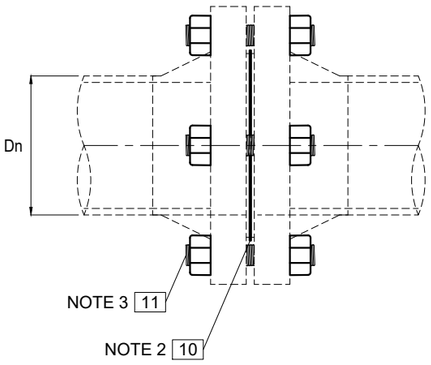
TP-STD-150FF-BLF/Dn
TP-STD-150FF-GSK/Dn

MATERIAL LIST

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



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



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

NOTES

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

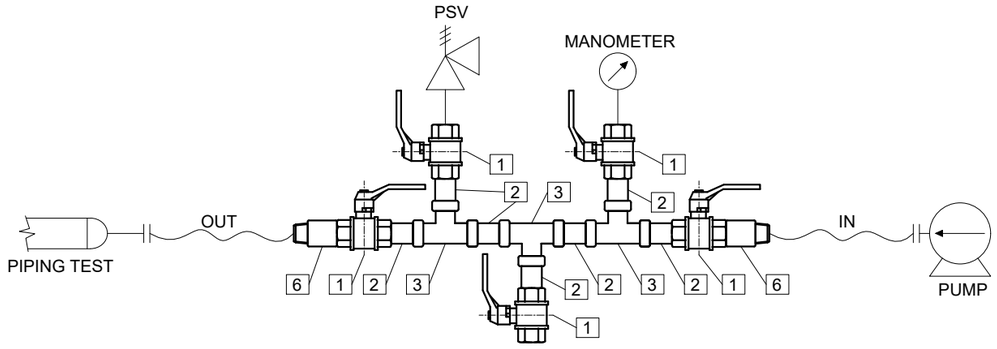
REV.	DATE	DESCRIPTION	DRN	CHKD	APPD
00	06-09-24	ISSUED FOR INFORMATION	J.Q.	T.L.	L.M.

ROSETTI MARINO

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

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

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



TP-STD-FILL/RATING

FILLING POINT 3000/6000/9000

MATERIAL LIST

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

NOTES

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

ROSETTI MARINO

PIPING TEST STANDARD DRAWING

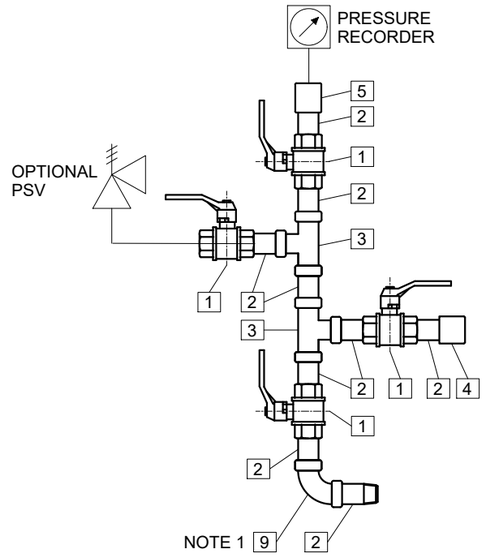
TP-STD-FILL

TP-STD-FILL/RATING

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

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

TP-STD-REC/RATING



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

MATERIAL LIST

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

NOTES

1. 90 DEG ELBOW SHALL BE INSTALLED WHERE APPLICABLE ONLY

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

ROSETTI MARINO

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

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

4. EXTRACT OF LINE LIST

Isometric N°	Short Line N°	Sequential Number	Size [in]	Piping Class	Insulation Type	Pipe Wall Thicknes [mm]	Pipe Schedule	Tracing	Line Number	PID Number	Design Pressure [barg]	Commissioning System Code	Commissioning SubSystem Code	Test Pack N°	Test Fluid	Test Pressure [barg]	Fluid Service	Class Base Material	Line INF/SUP/TL	Ped Category	Painting System	Line Base Ral
21	CI-029	029	1	01CP	E	4,55	80	Yes	1"-CI-029-01CP-E	123A90-DDL-PR-PID-80021	4,50	50	50-11	TP-002	Water	6.75	Chemical Injection	CPVC	INF	Art. 4, par. 3	N/A	N/A
22	CI-030	030	1	01CP	E	4,55	80	Yes	1"-CI-030-01CP-E	123A90-DDL-PR-PID-80021	4,50	50	50-11	TP-002	Water	6.75	Chemical Injection	CPVC	INF	Art. 4, par. 3	N/A	N/A
24	CI-032	032	1	01CP	E	4,55	80	Yes	1"-CI-032-01CP-E	123A90-DDL-PR-PID-80021	4,50	50	50-11	TP-002	Water	6.75	Chemical Injection	CPVC	INF	Art. 4, par. 3	N/A	N/A

5. ISOMETRIC RED MARKED DRAWING & EXTRACT OF ISO LIST

CROSSWIND

ROSETTI MARINO

PROJECT

BASE LOAD POWER HUB (BLPH)

JOB **123A90**

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

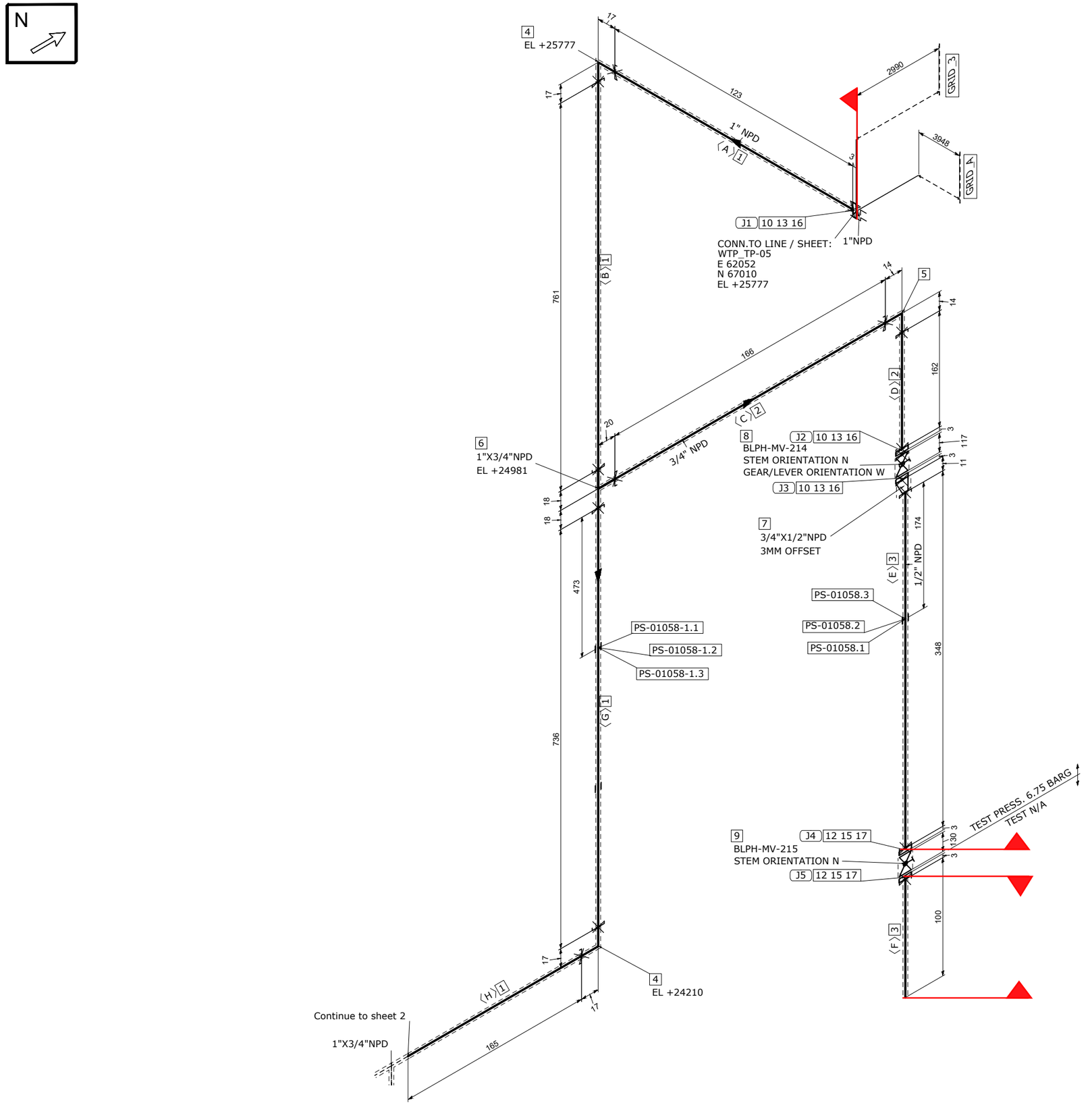
REV. **05**

TITLE

SHOP DRAWING ISOMETRIC LIST

DATE **17/09/2024**

POS.	DOCUMENT NR	ROSETTI SKETCH NR	SHEET	DOCUMENT TITLE	Rev. 00	Rev. 01	Rev. 02	Rev. 03	Rev. 04	Rev. 05	Rev. 06	Rev. 07	Rev. 08	Rev. 09	Rev. 10	Mark-up Rev.	Mark-up Data	LAST REV	LIST REV	NOTES	TEST PACK NR
26	123A90-FDL-PP-DI-00021-01	**021**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-CI-029-01CP-E	03/09/2024													**00**	**04**		**TP-002**
27	123A90-FDL-PP-DI-00021-02	**021**	02	SHOP DRAWING ISOMETRIC - LINE NR 1"-CI-029-01CP-E	03/09/2024													**00**	**04**		**TP-002**
28	123A90-FDL-PP-DI-00022-01	**022**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-CI-030-01CP-E	03/09/2024													**00**	**04**		**TP-002**
30	123A90-FDL-PP-DI-00024-01	**024**	01	SHOP DRAWING ISOMETRIC - LINE NR 1"-CI-032-01CP-E	03/09/2024													**00**	**04**		**TP-002**



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	1.8M	0.7
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.3M	0.1
3	1/2	PIPPPV00290H00	Pipe - Plastic ASTM F441 PE 3,73 PLT CPVC	0.4M	0.1
4	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
5	3/4	E90PPV00353Q00	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
6	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4X1/2	BUSPPV00073Q0H	Bushing - Plastic ASTM F439 PE x THRD-F NPT 10 Bar PLT CPVC	1	0.1
8	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
9	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
10	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	1	0.2
11	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.3
12	1/2	FLAPPV00090H00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
13	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
14	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
15	1/2	GFL3GK13670H00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
16	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.4
17	1/2	SB2WBO01960200	60 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	0.9

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	15.5
OVERALL WEIGHT [kg]	15.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	124	SQ.CUT	SQ.CUT
B	1	761	SQ.CUT	SQ.CUT
C	3/4	166	SQ.CUT	SQ.CUT
D	3/4	162	SQ.CUT	SQ.CUT
E	1/2	348	SQ.CUT	SQ.CUT
F	1/2	100	SQ.CUT	SQ.CUT
G	1	736	SQ.CUT	SQ.CUT
H	1	165	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01058.1
PS-01058.3
PS-01058.2
PS-01058-1.1
PS-01058-1.3
PS-01058-1.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		15.5

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

CROSSWIND

ROSETTI MARINO

50-11-TP-002

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E
SK.021

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM
DATE: 03-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00021
SHEET / OF: 1/2
REV.: 00

MASTER

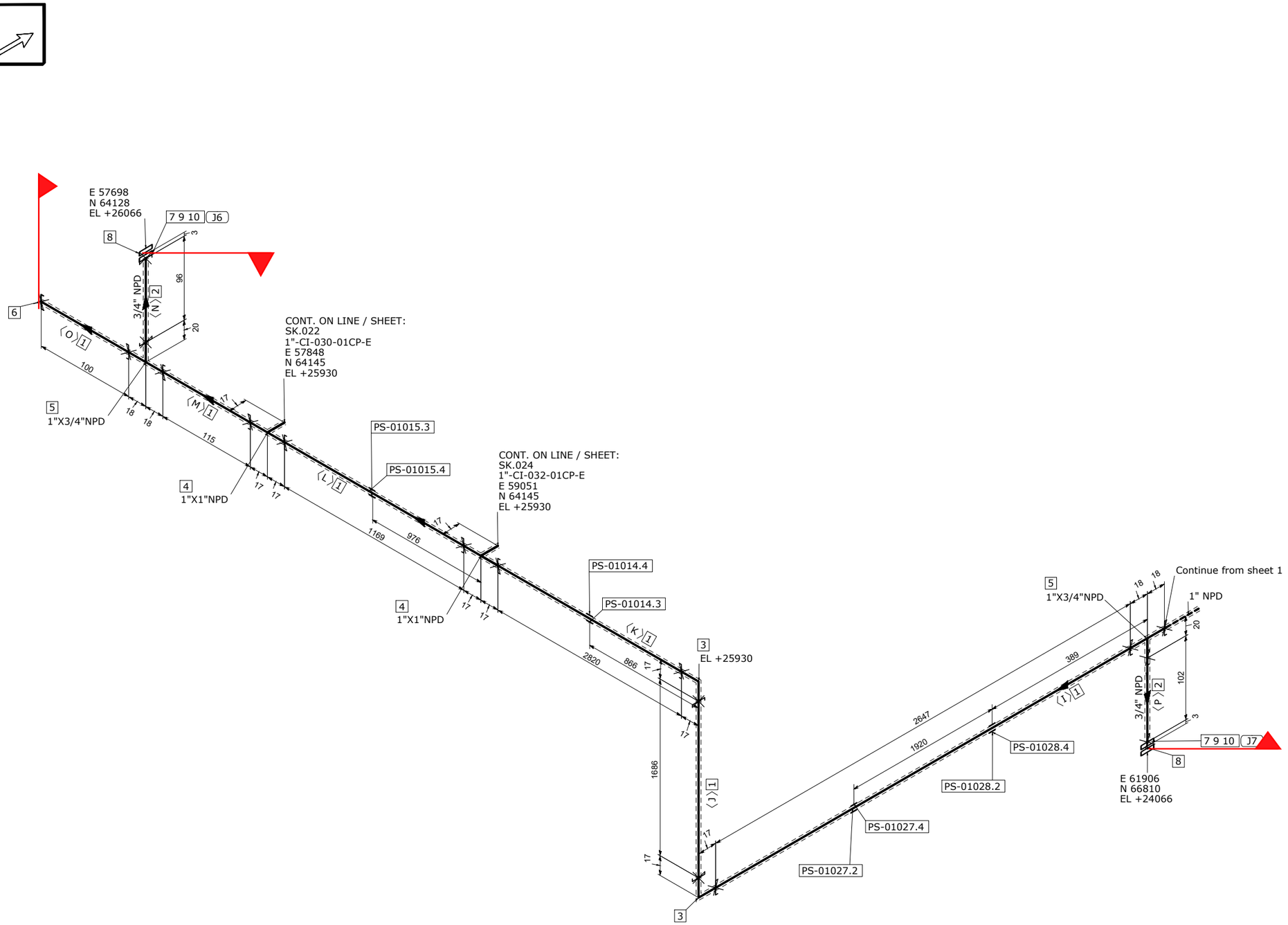
LINE DATA

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

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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]

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	8.5M	3.2
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.2M	0.1
3	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
4	1X1	TEEPPV00330100	Tee - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.3
5	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
6	1	CAPPPV00250100	Cap - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
8	3/4	FLBPPV00083Q00	Flange Blind - Plastic Flanged as per ASME B16.5 150LB FF PLT CPVC	2	0.2
9	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
10	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	5.4
OVERALL WEIGHT [kg]	5.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1	2648	SQ.CUT	SQ.CUT
J	1	1686	SQ.CUT	SQ.CUT
K	1	2820	SQ.CUT	SQ.CUT
L	1	1170	SQ.CUT	SQ.CUT
M	1	115	SQ.CUT	SQ.CUT
N	3/4	96	SQ.CUT	SQ.CUT
O	1	100	SQ.CUT	SQ.CUT
P	3/4	102	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01028.2
PS-01028.4
PS-01027.4
PS-01027.2
PS-01014.3
PS-01014.4
PS-01015.4
PS-01015.3

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		5.4

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E
SK.021

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL | CHECKED: RT | APPROVED: LM | DATE: 03-09-2024
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00021 | SHEET / OF: 2/2 | REV.: 00

50-11-TP-002

MASTER

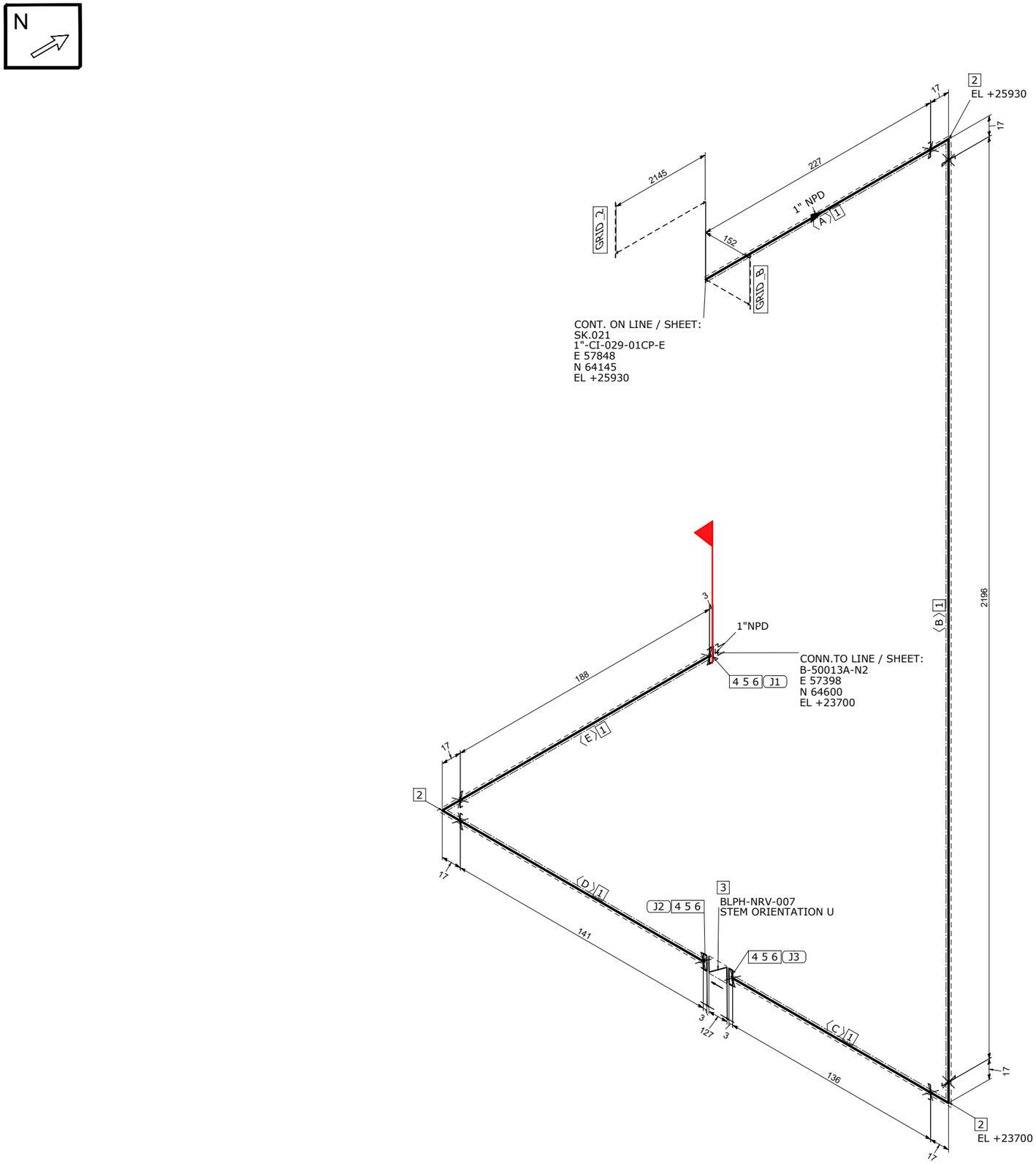
LINE DATA

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

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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]

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	136	SQ.CUT	SQ.CUT
D	1	141	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-030-01CP-E

SK.022

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

SCALE: N/A

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

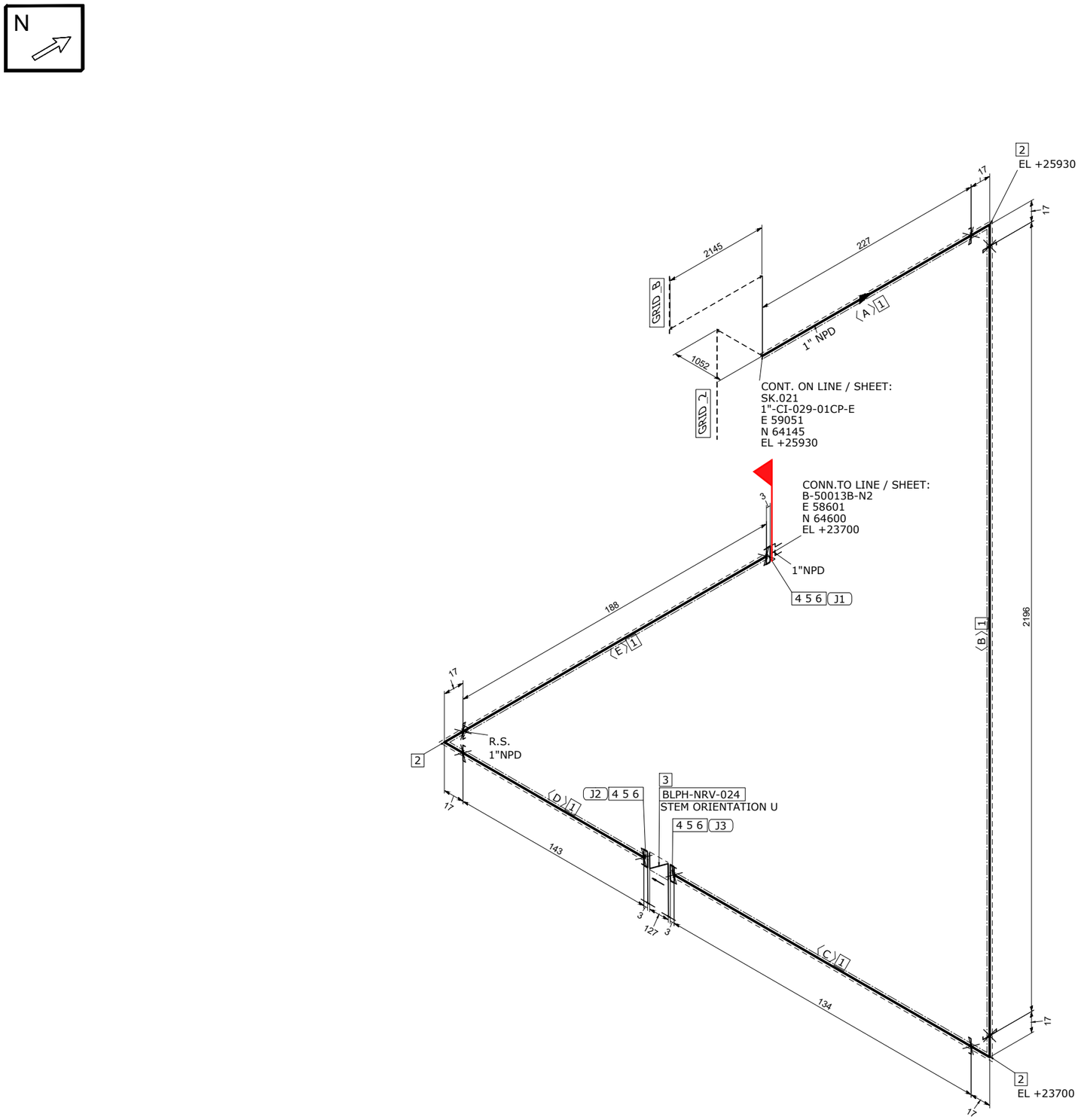
FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00022 | SHEET / OF: 1/1 | REV.: 00

50-11-TP-002

MASTER

LINE DATA										REFERENCE DOCUMENTS	
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3						P&ID	123A90-DDL-PR-PID-80021
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid						ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5	[barg]	TEMP. 5 / 50	[°C]			PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
HEAT TRACING	Yes		TEST	PRESS. 6.75	[barg]	TEMP. AMB	MEDIUM	Water		PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	134	SQ.CUT	SQ.CUT
D	1	143	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-032-01CP-E

SK.024

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-00024	SHEET / OF	1/1
				DATE	03-09-2024
				REV.	00

50-11-TP-002

MASTER

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

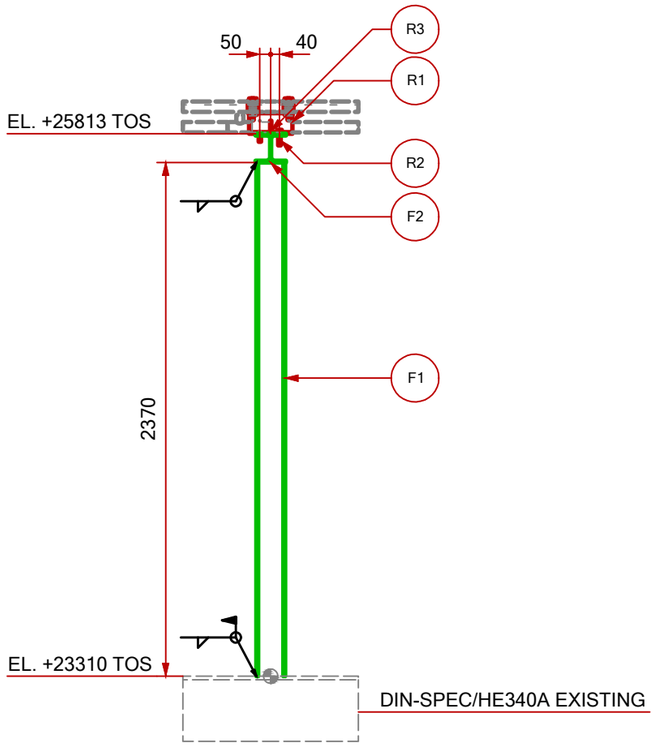
REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80021
ISOMETRIC SHOP DWG LIST	123A90-FDL-PP-LIS-00001
PIPING SUPPORT BOOK	123A90-DDL-PP-DD-72000
PIPING MATERIAL CLASS	123A90-DDL-PP-SP-70029

NOTES

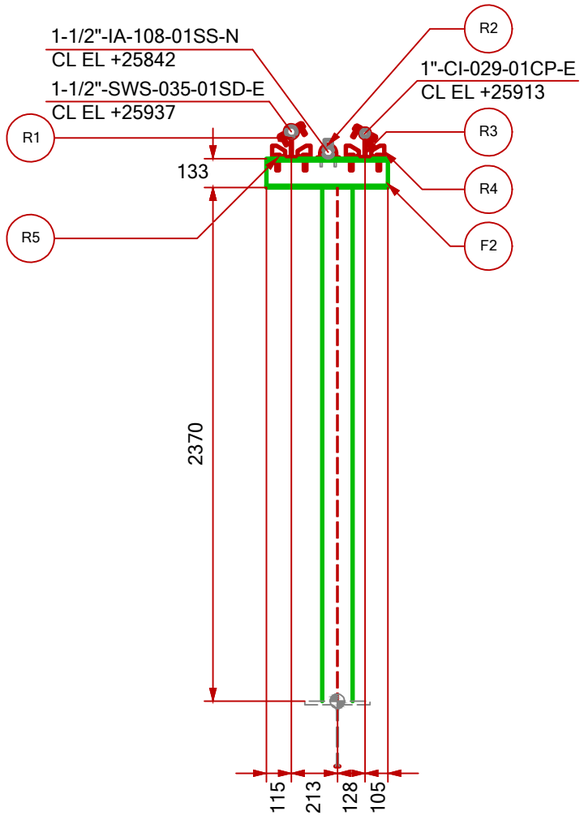
6. EXTRACT OF SUPPORT LIST & DETAILS

SUPPORT LIST

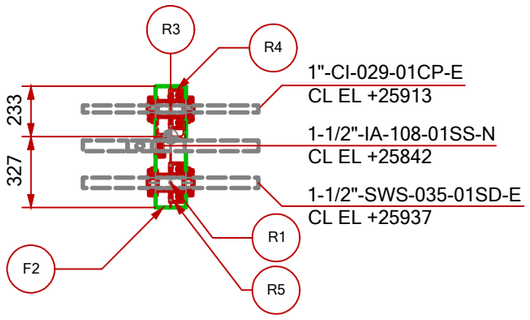
SUPPORT	SUFFIX	SERVICE	DECK IDENTIFICATION	SUB ASSEMBLY	LINE	SUPPORTS STANDARD	NDT CATEGORY	QUANTITY	TOT. WEIGTH (KG)	PAINTING SURFACE (SQM)	REV	DATE	STATUS	NOTES	Test Pack N°
PS-01014	B3	PIP	LOWER DECK		1"-CI-029-01CP-E	S-64 - 1" - 100 - 200		1	3,805	0,102	01	04/11/2024	AFC		TP-002
PS-01014	B4	PIP	LOWER DECK		1"-CI-029-01CP-E	C-33 - 1 - C - 2		1	2,280	0,028	01	04/11/2024	AFC		TP-002
PS-01015	B3	PIP	LOWER DECK		1"-CI-029-01CP-E	S-64 - 1" - 100 - 200		1	3,805	0,102	01	04/11/2024	AFC		TP-002
PS-01015	B4	PIP	LOWER DECK		1"-CI-029-01CP-E	C-33 - 1 - I - 2		1	2,280	0,028	01	04/11/2024	AFC		TP-002
PS-01027	B2	PIP	LOWER DECK		1"-CI-029-01CP-E	S-64 - 1" - 100 - 200		1	3,805	0,102	01	04/11/2024	AFC		TP-002
PS-01027	B4	PIP	LOWER DECK		1"-CI-029-01CP-E	C-33 - 1 - I - 2		1	2,280	0,028	01	04/11/2024	AFC		TP-002
PS-01028	B2	PIP	LOWER DECK		1"-CI-029-01CP-E	S-64 - 1" - 100 - 200		1	3,805	0,102	01	04/11/2024	AFC		TP-002
PS-01028	B4	PIP	LOWER DECK		1"-CI-029-01CP-E	C-33 - 1 - I - 2		1	2,280	0,028	01	04/11/2024	AFC		TP-002
PS-01058	B1	PIP	LOWER DECK		1"-CI-029-01CP-E	S-64 - 1/2" - 106 - 200		1	3,619	0,097	01	04/11/2024	AFC		TP-002
PS-01058	B2	PIP	LOWER DECK		1"-CI-029-01CP-E	C-33 - 1 - I - 2		1	2,280	0,028	01	04/11/2024	AFC		TP-002
PS-01058	B3	PIP	LOWER DECK		1"-CI-029-01CP-E	C-37 - 4 - E - 2		1	1,035	0,031	01	04/11/2024	AFC		TP-002
PS-01058	B4	PIP	LOWER DECK		1"-CI-029-01CP-E	S-64 - 1" - 100 - 200		1	46,930	1,591	01	04/11/2024	AFC		TP-002
PS-01058	B5	PIP	LOWER DECK		1"-CI-029-01CP-E	C-33 - 1 - I - 2		1	3,805	0,102	01	04/11/2024	AFC		TP-002
PS-01058	B6	PIP	LOWER DECK		1"-CI-029-01CP-E	C-37 - 4 - E - 2		1	2,280	0,028	01	04/11/2024	AFC		TP-002



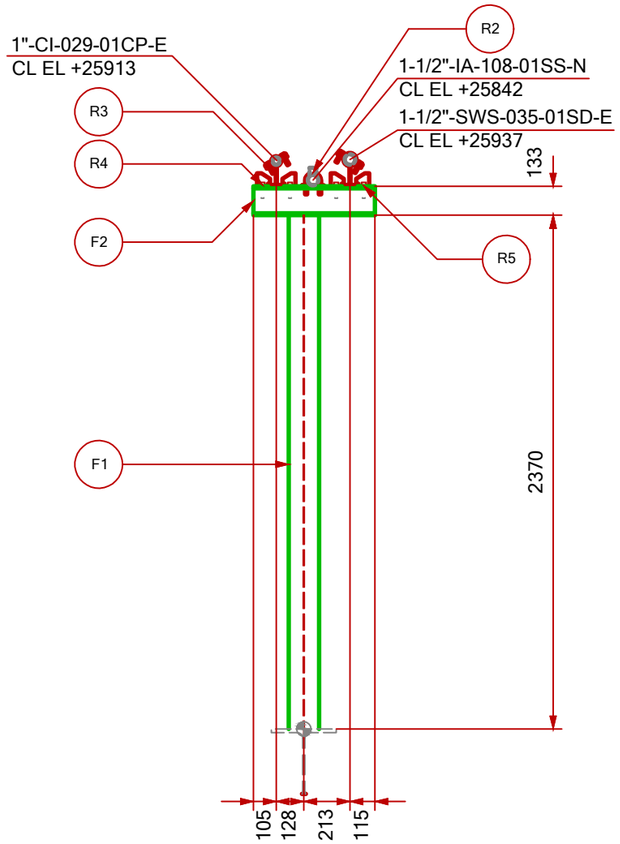
VIEW LOOKING NORTH



VIEW LOOKING WEST



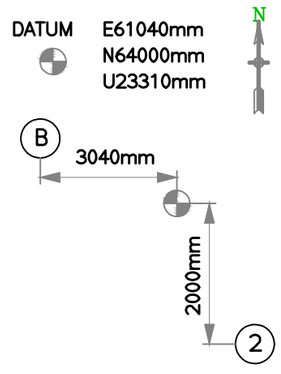
PLAN VIEW

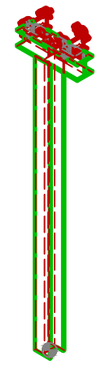


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	S-211-1 1/2"	-	-	1	-	0.49	-
R3	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R4	STD	C-33-1-C-2	-	-	1	-	2.28	0.028
R5	STD	C-33-1-I-2	-	-	1	-	2.28	0.028
F1	BEAM	HEA140	Carbon Steel	2370	1	24.75	58.66	1.888
F2	BEAM	HEA140	Carbon Steel	560	1	24.75	13.86	0.451
						TOTAL	85.4	2.60





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

ROSETTI MARINO

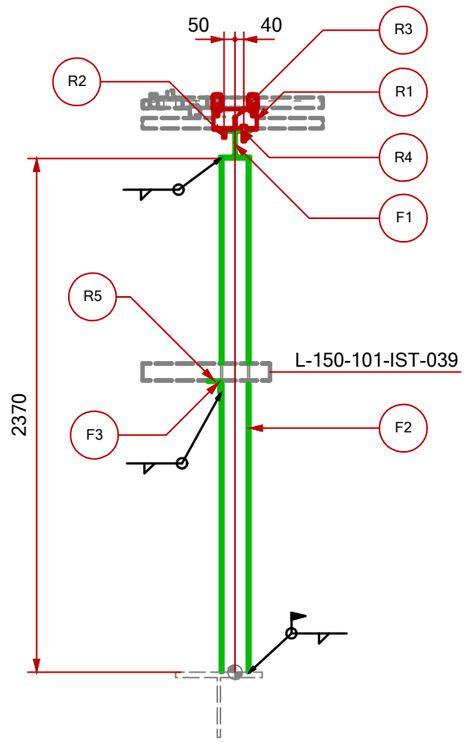
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

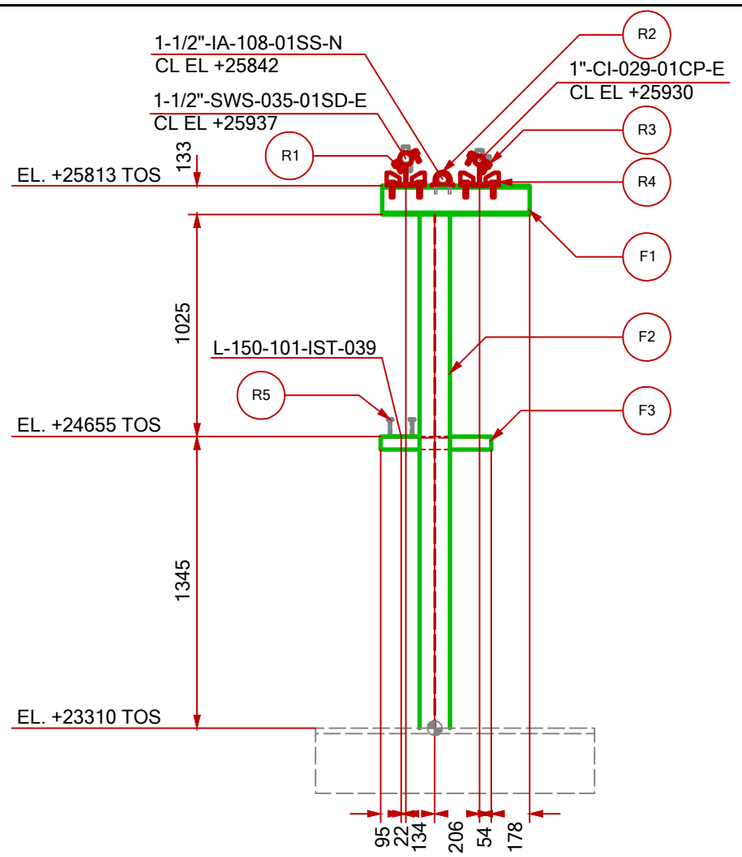
PS-01014

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

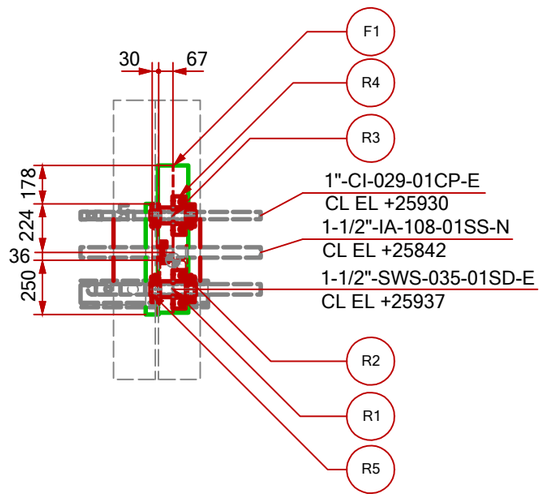
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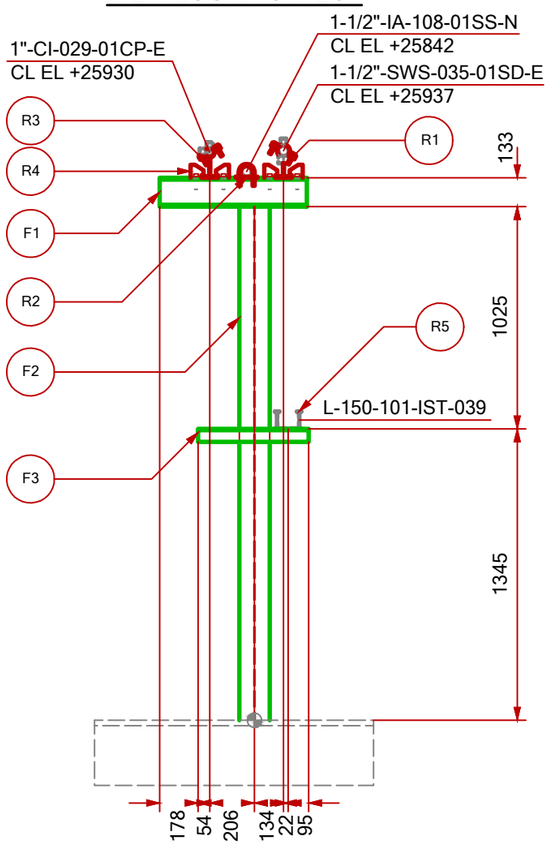
VIEW LOOKING NORTH



VIEW LOOKING WEST



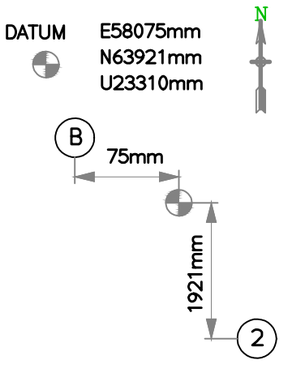
PLAN VIEW

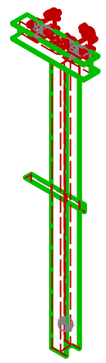


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	S-211-1 1/2"	-	-	1	-	0.49	-
R3	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R4	STD	C-33-1-I-2	-	-	2	-	2.28	0.028
R5	STD	RACK SUPPORT	-	-	1	-	0.00	-
F1	BEAM	HEA140	Carbon Steel	680	1	24.75	16.83	0.546
F2	BEAM	HEA140	Carbon Steel	2370	1	24.75	58.66	1.888
F3	BEAM	L60x60x6	Carbon Steel	510	1	5.42	2.77	0.120
						TOTAL	91.1	2.82





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
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CROSSWIND

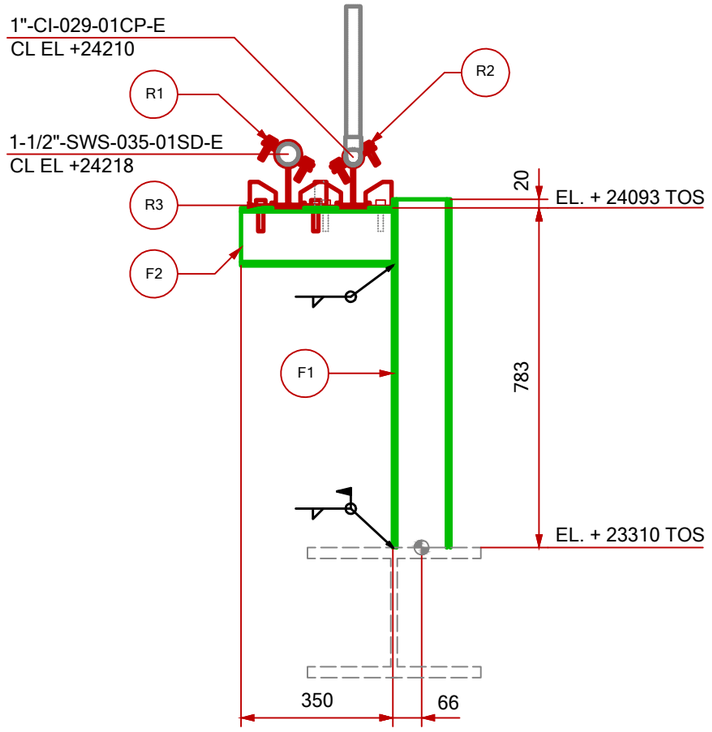
ROSETTI MARINO

TITLE :

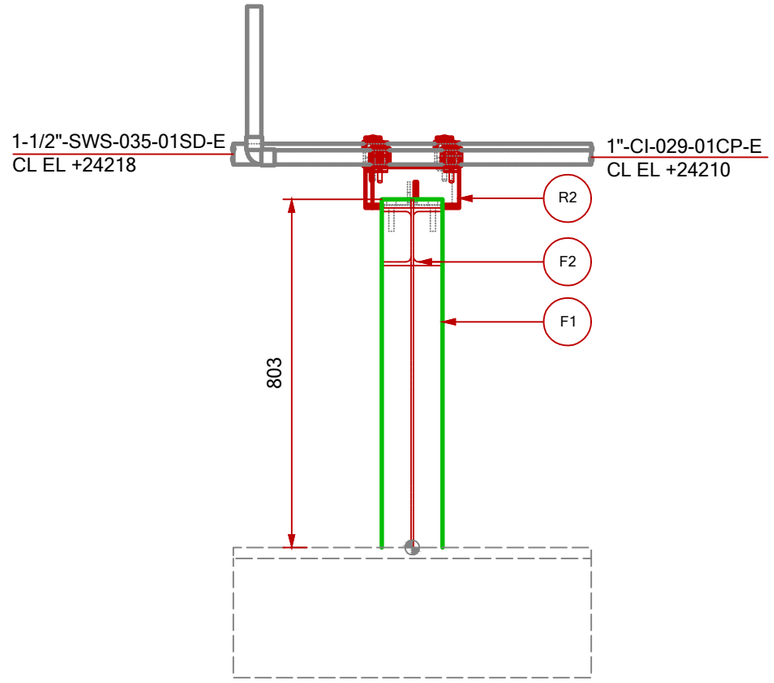
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01015

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

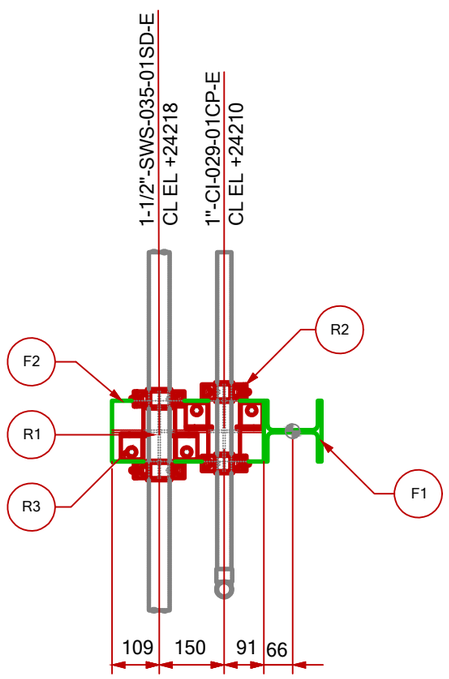
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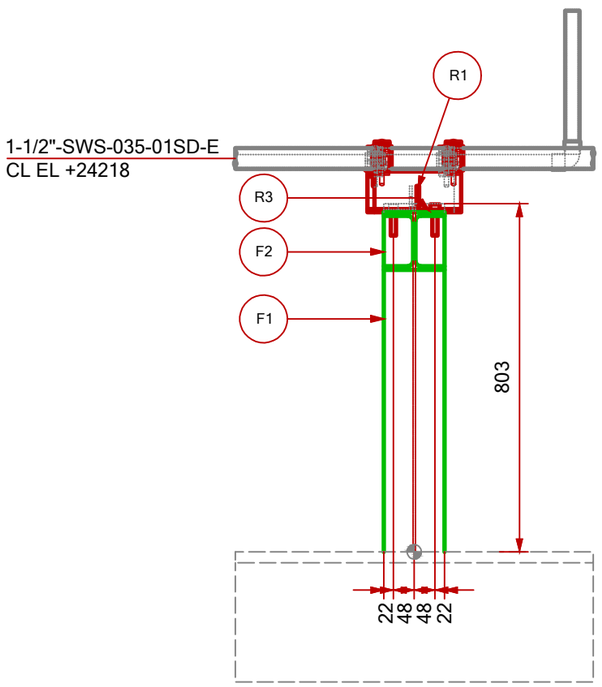
VIEW LOOKING NORTH



VIEW LOOKING WEST



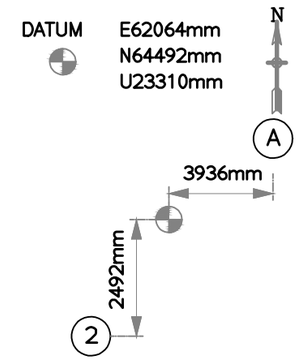
PLAN VIEW

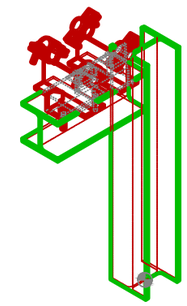


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R3	STD	C-33-1-I-2	-	-	2	-	2.28	0.028
F1	BEAM	HEA140	Carbon Steel	803	1	24.75	19.88	0.644
F2	BEAM	HEA140	Carbon Steel	350	1	24.75	8.66	0.284
						TOTAL	40.9	1.19





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

CROSSWIND

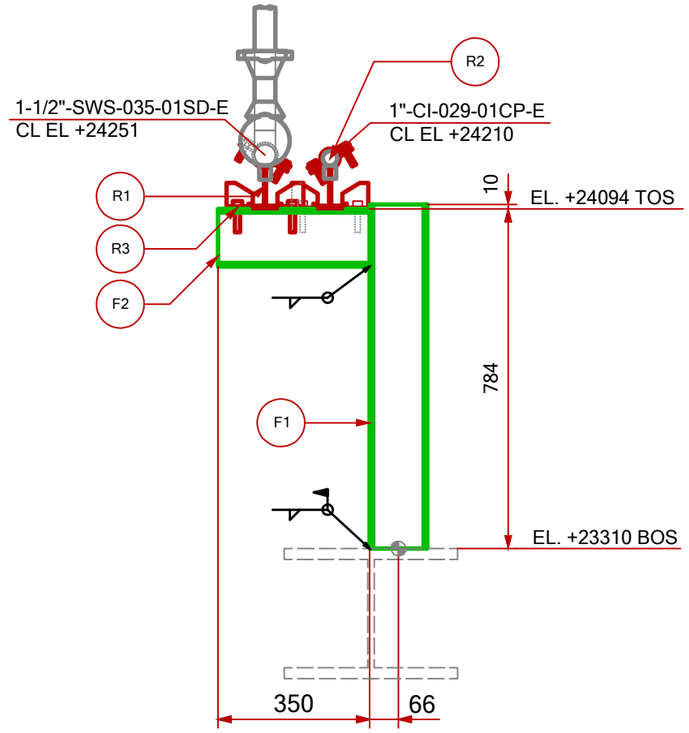
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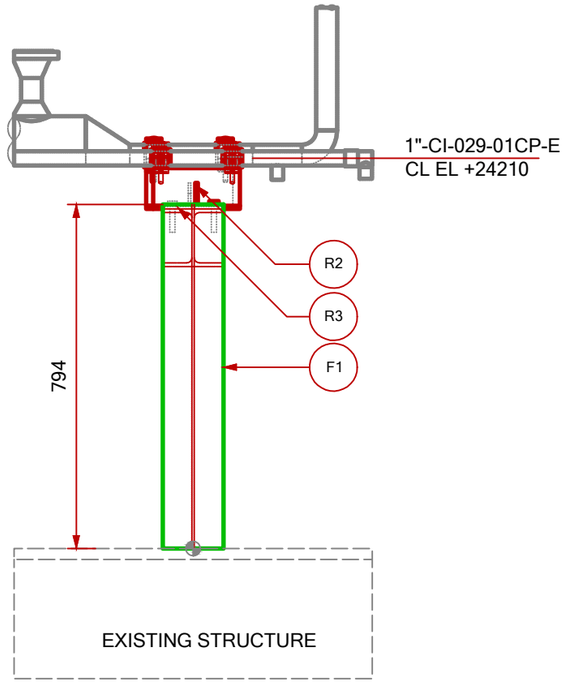
BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01027

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

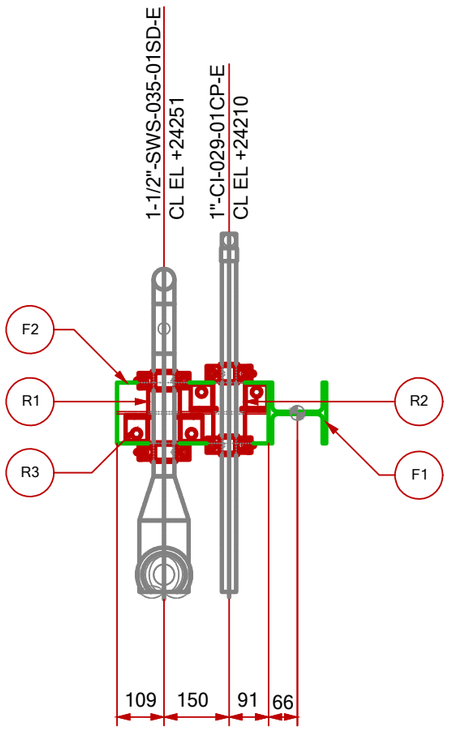
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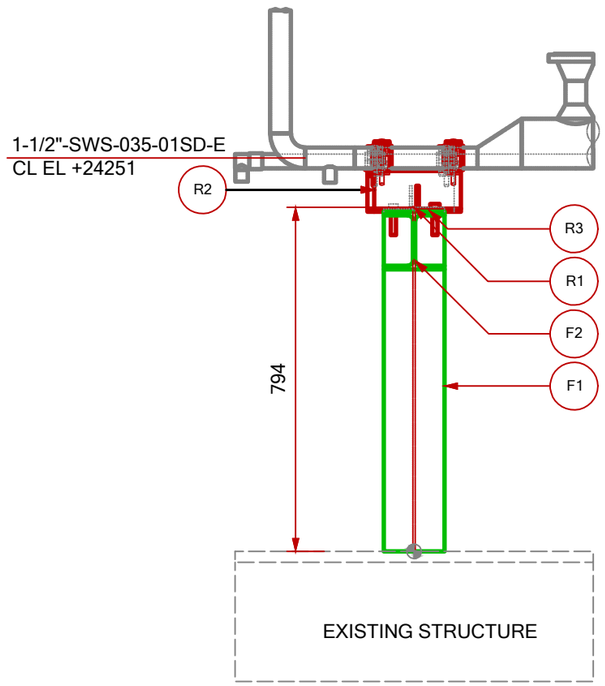
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VIEW LOOKING WEST



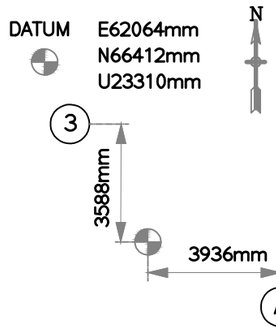
PLAN VIEW

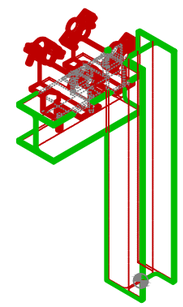


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1.1/2"-100-200	-	-	1	-	4.00	0.108
R2	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
R3	STD	C-33-1-I-2	-	-	2	-	2.28	0.028
F1	BEAM	HEA140	Carbon Steel	794	1	24.75	19.64	0.636
F2	BEAM	HEA140	Carbon Steel	350	1	24.75	8.66	0.284
						TOTAL	40.7	1.19





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

CROSSWIND

ROSETTI MARINO

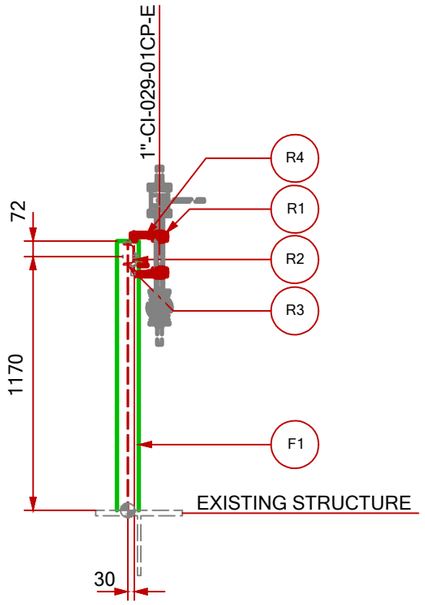
TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings

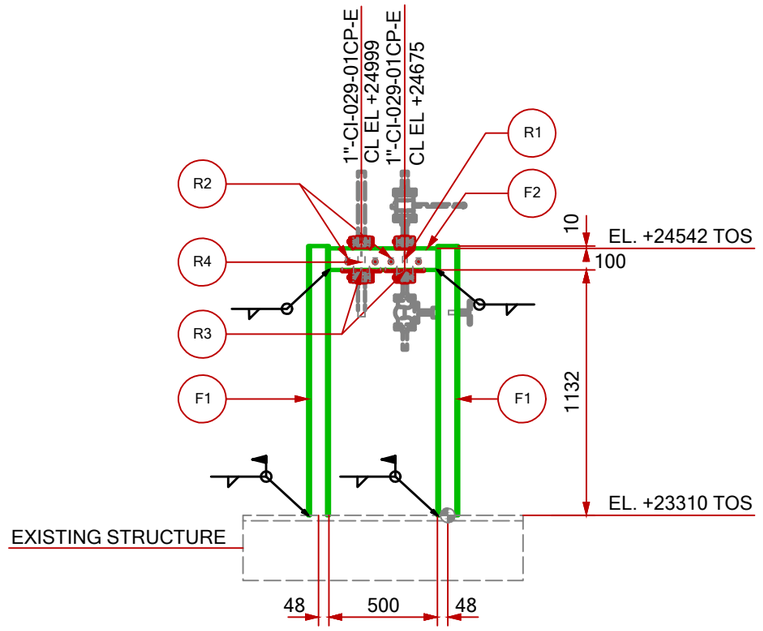
PS-01028

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

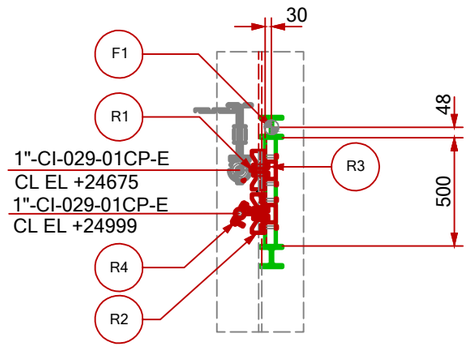
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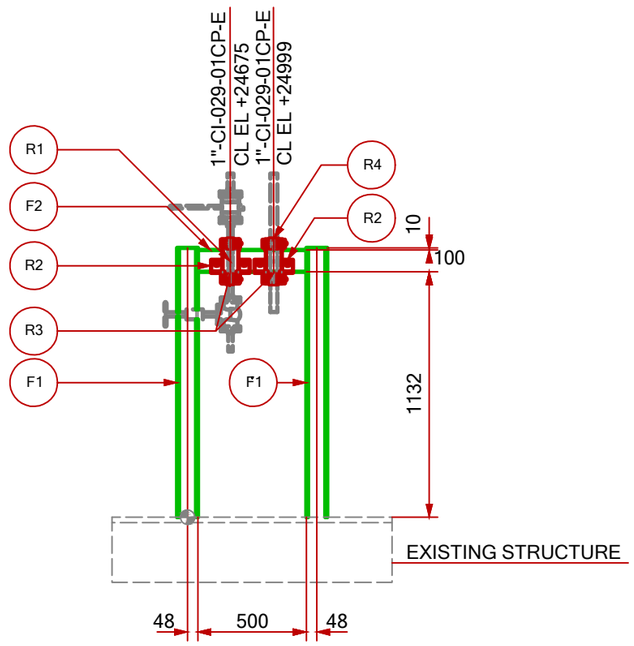
VIEW LOOKING SOUTH



VIEW LOOKING WEST



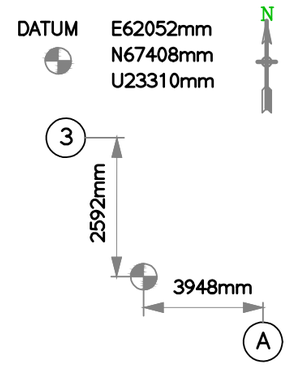
PLAN VIEW

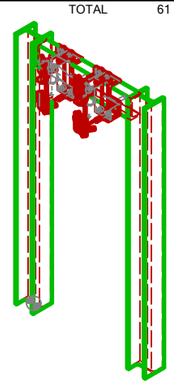


VIEW LOOKING EAST

SUPPORT MATERIAL LIST

POS.	TYPE	DESCRIPTION	MATERIAL	LENGHT (mm)	Q.TY (n°)	UNIT WEIGHT (Kg/mt)	TOTAL WEIGHT (Kg)	PAINT SURF. (m2)
R1	STD	S-64-1/2"-106-200	-	-	1	-	3.62	0.097
R2	STD	C-33-1-I-2	-	-	2	-	4.56	0.056
R3	STD	C-37-4-E-2	-	-	2	-	2.08	0.062
R4	STD	S-64-1"-100-200	-	-	1	-	3.81	0.102
F1	BEAM	HE100A		1242	2	16.76	41.64	1.402
F2	BEAM	UPN100		500	1	10.57	5.29	0.189
						TOTAL	61	1.908





REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
00	04/11/24	MMA	SLO	DLO	ACCEPTED FR CONSTRUCTION

CROSSWIND

ROSETTI MARINO

TITLE :

BASE LOAD POWER HUB (BLPH)
Support Drawings
PS-01058

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE 1 : 20
DRAWN	CHECKED	APPROVED	DATE 04/11/24
DRAWING NO. 123A90-DDL-PP-DD-72000			SHEET 1 of 1 / REV. 01

File Name :

ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

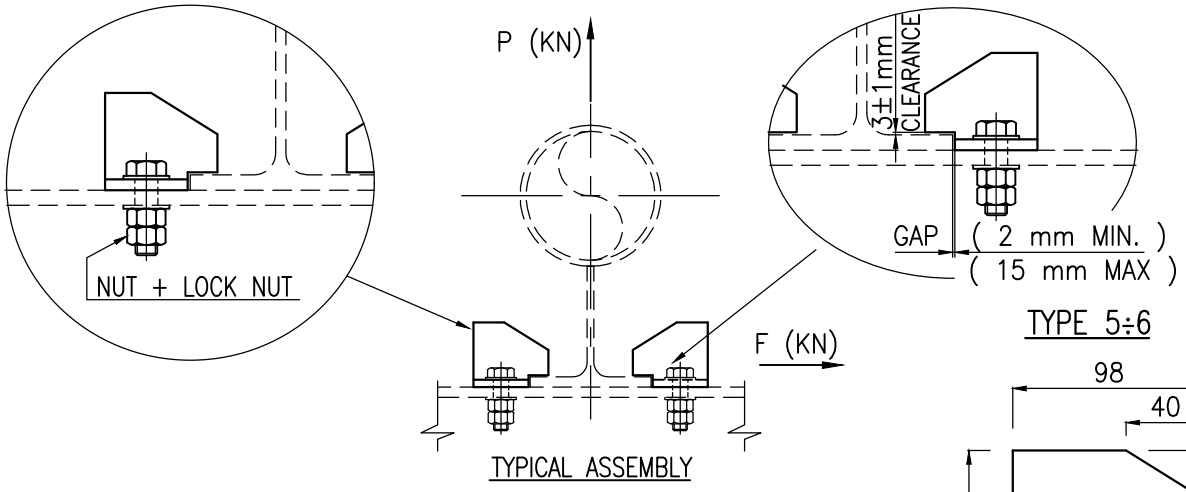
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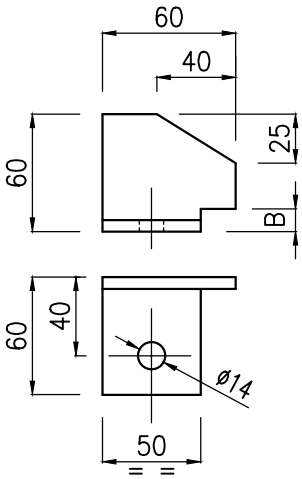
Date: –

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

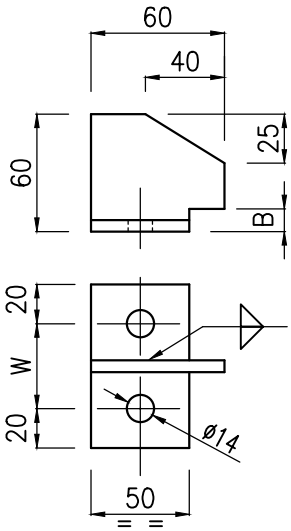
C–33



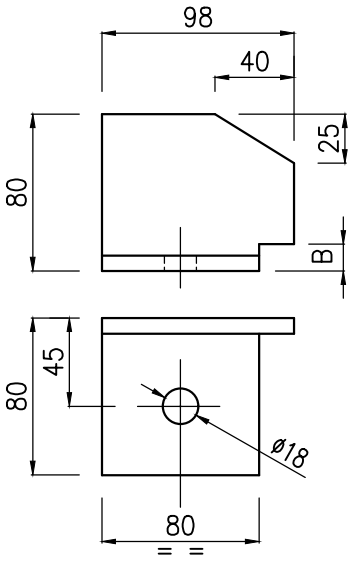
TYPE 1 (NOTE 4)



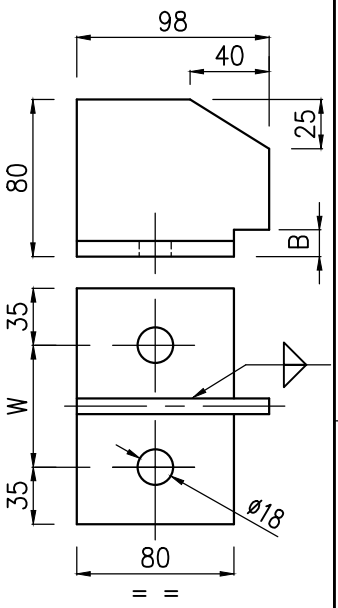
TYPE 2



TYPE 3÷4 (NOTE 4)



TYPE 5÷6



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

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

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

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

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

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ROSETTI MARINO

STANDARD SPECIFICATION
PIPE SUPPORT DETAIL STANDARD

Document Number: STD–PP–DD–0001

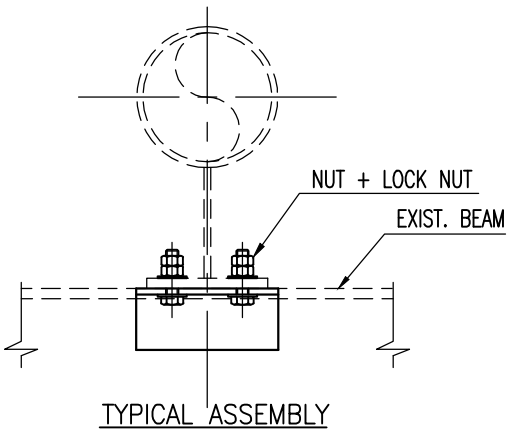
Revision: 0

Date: –

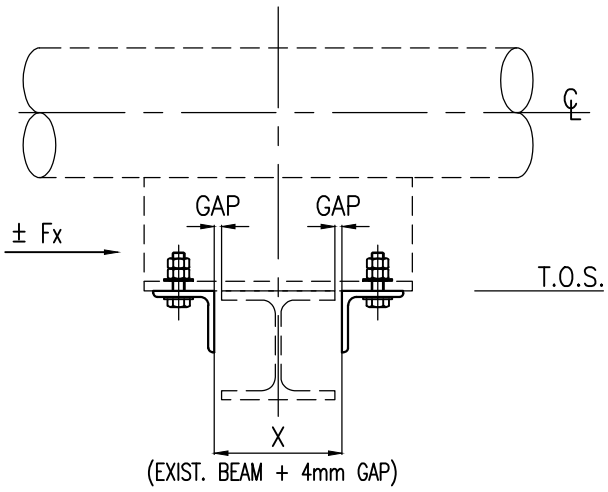
STOP ASSIALE BULLONATO
BOLTED AXIAL STOP

C–37

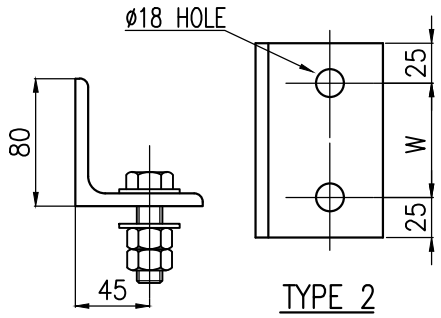
Example of designation : STD – TYPE – SIZE – GAP
(C–37 – 1 – B – 2)



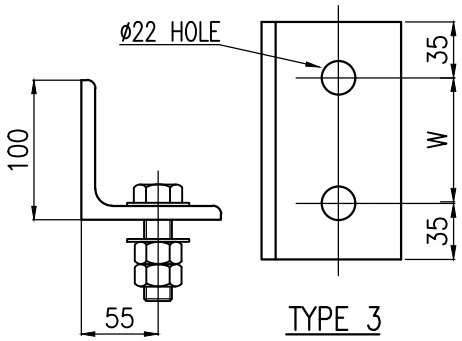
TYPICAL ASSEMBLY



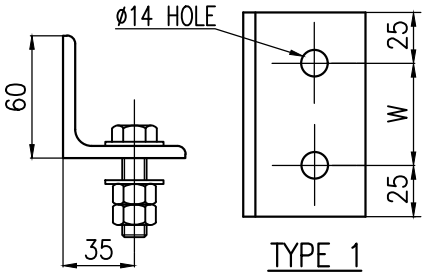
(EXIST. BEAM + 4mm GAP)



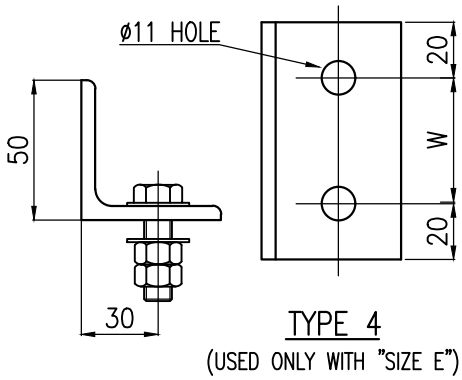
TYPE 2



TYPE 3



TYPE 1



TYPE 4
(USED ONLY WITH "SIZE E")

SIZE	EXIST. SHOE	W mm
A	IPE 220	62
B	IPE 270	80
C	HEA 220	120
D	HEA 300	200
E	IPE 140	40

TYPE	PROFILE	BOLTING (DIN933)	MAXIMUM LOAD Fx (KN)	WEIGHT (INCL BOLTS)
1	L60x60x6	M12x60	20	.....
2	L80x80x8	M16x70	36	.....
3	L100x100x10	M20x75	56	.....
4	L50x50x5	M10x60	...	.....

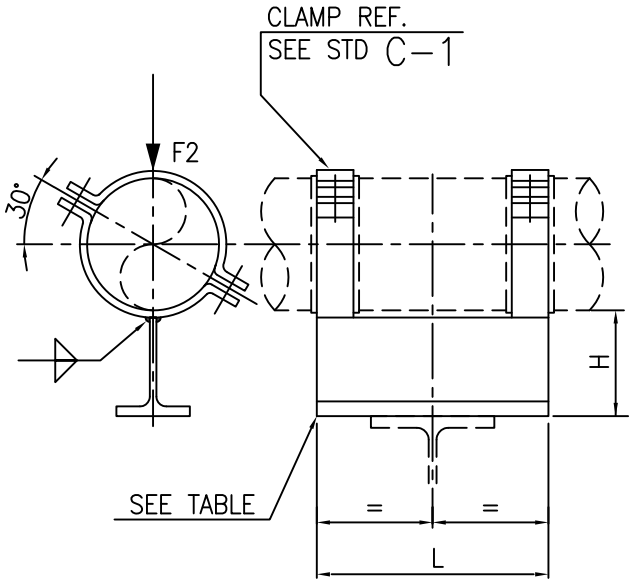
NOTES:
1– PROFILE MATERIAL : CARBON STEEL
2– BOLTS (UNI 5739 CI 8.8), NUTS (UNI 5588 CI 8.8), LOCK NUT (UNI 7474 CI.10) & WASHERS (UNI 6592) SHALL BE H.D.G.
3– SAFE LOADS ARE BASED ON BOLT SHEAR LOADS ONLY.
4– AXIAL STOPS ARE TO BE SITE LOCATED AND DRILLED UNLESS OTHERWISE ON.
5– VARIABLE WEIGHT ADDICTED TO THE "TYPE" SELECTED AND THE "W" DIMENSION INDICATED.

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

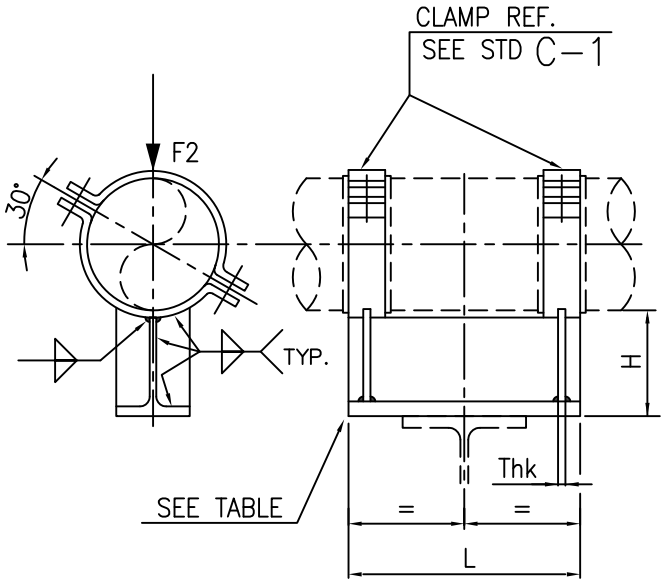
Documento di proprietà aziendale.La Società tutelerà i propri diritti a termine di legge.This document is Company property. The Company lawfulliy reserves all rights.

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

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



PIPES ½" TO 4"



PIPES 6" TO 24"

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

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

NOTES:

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

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

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7. WELDING REGISTER & MATERIAL TRACEABILITY RECORD

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

8.1 CLX02A - Pipework Before test

8.2 CLX02B - Pipework After Test

8.3 CXX01 - Thermal insulation

8.4 CXX02 – Painting Line – NOT APPLICABLE

8.5 TMX03 – Cleaning

8.6 TMX05 – Pressure test

8.7 TMX25 – Gross Air Leak Test – NOT APPLICABLE

8.8 TMX27 – Bolt Tensioning / Torquing

8.9 TPLX05 - Drying

ITEM	Tag	50-11-TP-002	: Test Pack 50-11-TP-002			Dwg	123A90-DDL-PR-PID-80021
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10003246		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity STS	Discipline	Piping	Form	TPLX05 Drying

1	Drying out method :	Drying with dry air.
2	Operation description :	Dried the system using a flow of dry air, ensuring all drains/vents (when present) were open to facilitate the removal of moisture. Continued the drying until no moisture remained in the system, particularly in areas that were difficult to reach. After drying, inlet and outlet points were closed with covers.
3	Temporary means :	Blind flanges and plugs, if necessary, to isolate inlet and outlet points during process. Covers to close all openings after the drying.
4	Dew point (obtain after soaking and nitrogen purging):	NA

5	Valve body cavity, branches, etc.. Have been drained form residual water	●
	Attachments	
6	Procedures	
7	Sketches and drawings	
8	Pressure records	
9	Records of failures	

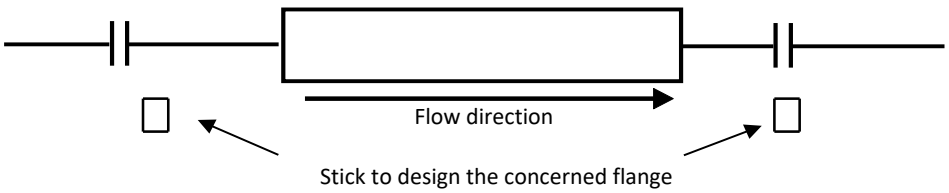
10	SAFETY PRECAUTIONS:	Restricting access to the area.
11	REMARKS:	

Page 1/1	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-20	2025-02-20	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-20T05:14:19.115Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-20T10:04:08.750Z	

ITEM	Tag	021-1-J1	: Joint 021-1-J1			Dwg	123A90-FDL-PP-DI-00021-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004329		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	Torque wrench V030390
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

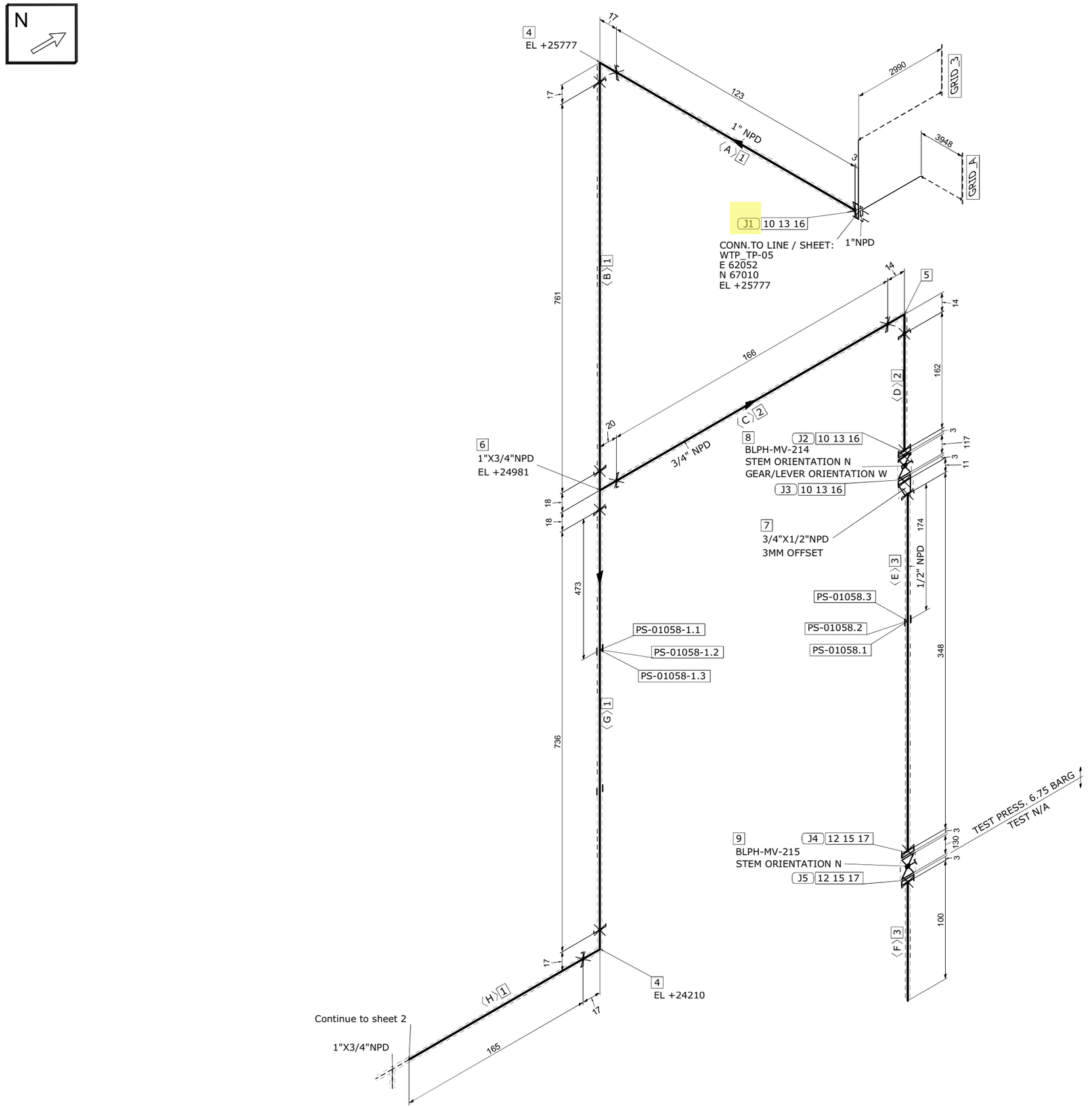
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-24	
Signature	Digitaly signed by Emanuele Delfino 2025-02-07T13:24:44.015Z	Digitaly signed by Massimo Bruschi 2025-02-24T16:01:46.794Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	1.8M	0.7
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.3M	0.1
3	1/2	PIPPPV00290H00	Pipe - Plastic ASTM F441 PE 3,73 PLT CPVC	0.4M	0.1
4	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
5	3/4	E90PPV00353Q00	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
6	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4X1/2	BUSPPV00073Q0H	Bushing - Plastic ASTM F439 PE x THRD-F NPT 10 Bar PLT CPVC	1	0.1
8	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
9	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
10	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	1	0.2
11	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.3
12	1/2	FLAPPV00090H00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
13	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
14	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
15	1/2	GFL3GK13670H00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
16	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.4
17	1/2	SB2WBO01960200	60 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	0.9

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	15.5
OVERALL WEIGHT [kg]	15.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	124	SQ.CUT	SQ.CUT
B	1	761	SQ.CUT	SQ.CUT
C	3/4	166	SQ.CUT	SQ.CUT
D	3/4	162	SQ.CUT	SQ.CUT
E	1/2	348	SQ.CUT	SQ.CUT
F	1/2	100	SQ.CUT	SQ.CUT
G	1	736	SQ.CUT	SQ.CUT
H	1	165	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01058.1
PS-01058.3
PS-01058.2
PS-01058-1.1
PS-01058-1.3
PS-01058-1.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		15.5

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00021			SHEET / OF	1/2
						REV.	00

LINE DATA

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

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

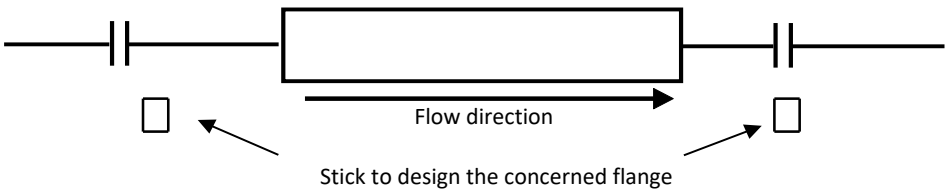
MASTER


TAG
021-1-J1
FLANGE TIGHTENED
ID STAMP RFH3/RFH9
SIGNED
DATE 24/02/25
RETURN TO SUPERVISOR
TAG
021-1-J1
FLANGE ASSEMBLED
ID STAMP RFH3/RFH9
SIGNED
DATE 24/02/25
RETURN TO SUPERVISOR
TAG
021-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	021-1-J2	: Joint 021-1-J2			Dwg	123A90-FDL-PP-DI-00021-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004330		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type 150LB

Flange Size 1"

Gasket Type Gasket Flat Thk. 3 mm

Bolt tensioning/Torquing value 15

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

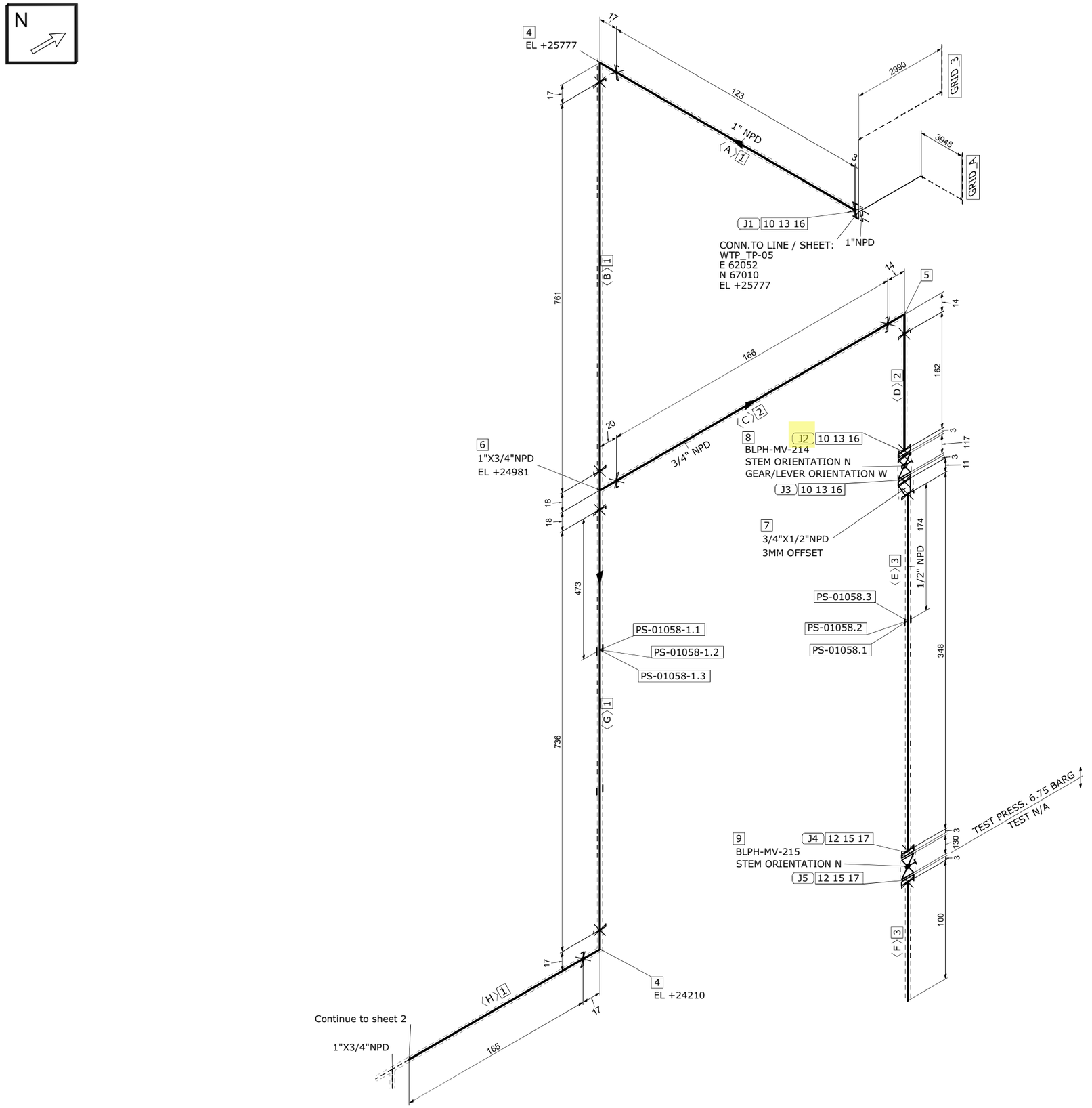
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:24:59.943Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:42:15.001Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	1.8M	0.7
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.3M	0.1
3	1/2	PIPPPV00290H00	Pipe - Plastic ASTM F441 PE 3,73 PLT CPVC	0.4M	0.1
4	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
5	3/4	E90PPV00353Q00	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
6	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4X1/2	BUSPPV00073Q0H	Bushing - Plastic ASTM F439 PE x THRD-F NPT 10 Bar PLT CPVC	1	0.1
8	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
9	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
10	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	1	0.2
11	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.3
12	1/2	FLAPPV00090H00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
13	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
14	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
15	1/2	GFL3GK13670H00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
16	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.4
17	1/2	SB2WBO01960200	60 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	0.9

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	15.5
OVERALL WEIGHT [kg]	15.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	124	SQ.CUT	SQ.CUT
B	1	761	SQ.CUT	SQ.CUT
C	3/4	166	SQ.CUT	SQ.CUT
D	3/4	162	SQ.CUT	SQ.CUT
E	1/2	348	SQ.CUT	SQ.CUT
F	1/2	100	SQ.CUT	SQ.CUT
G	1	736	SQ.CUT	SQ.CUT
H	1	165	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01058.1
PS-01058.3
PS-01058.2
PS-01058-1.1
PS-01058-1.3
PS-01058-1.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		15.5

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00021			SHEET / OF	1/2
						REV.	00

LINE DATA

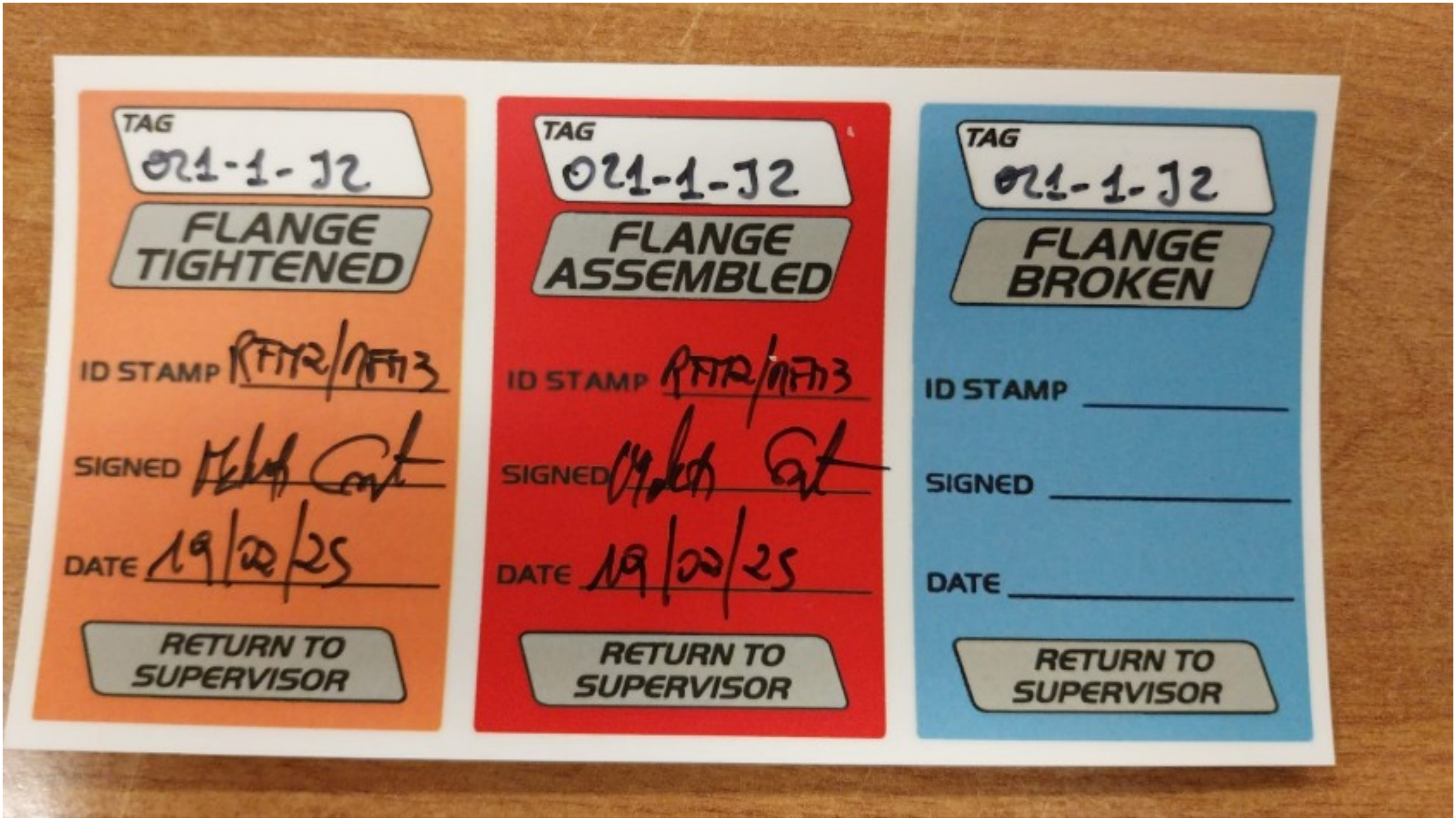
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

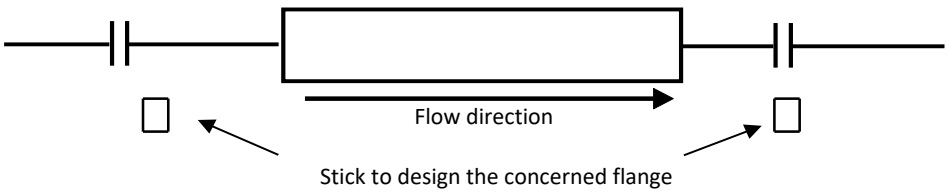
MASTER


TAG
021-1-J2
FLANGE TIGHTENED
ID STAMP RFTR/MFT13
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
021-1-J2
FLANGE ASSEMBLED
ID STAMP RFTR/MFT13
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
021-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	021-1-J3	: Joint 021-1-J3			Dwg	123A90-FDL-PP-DI-00021-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004331		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



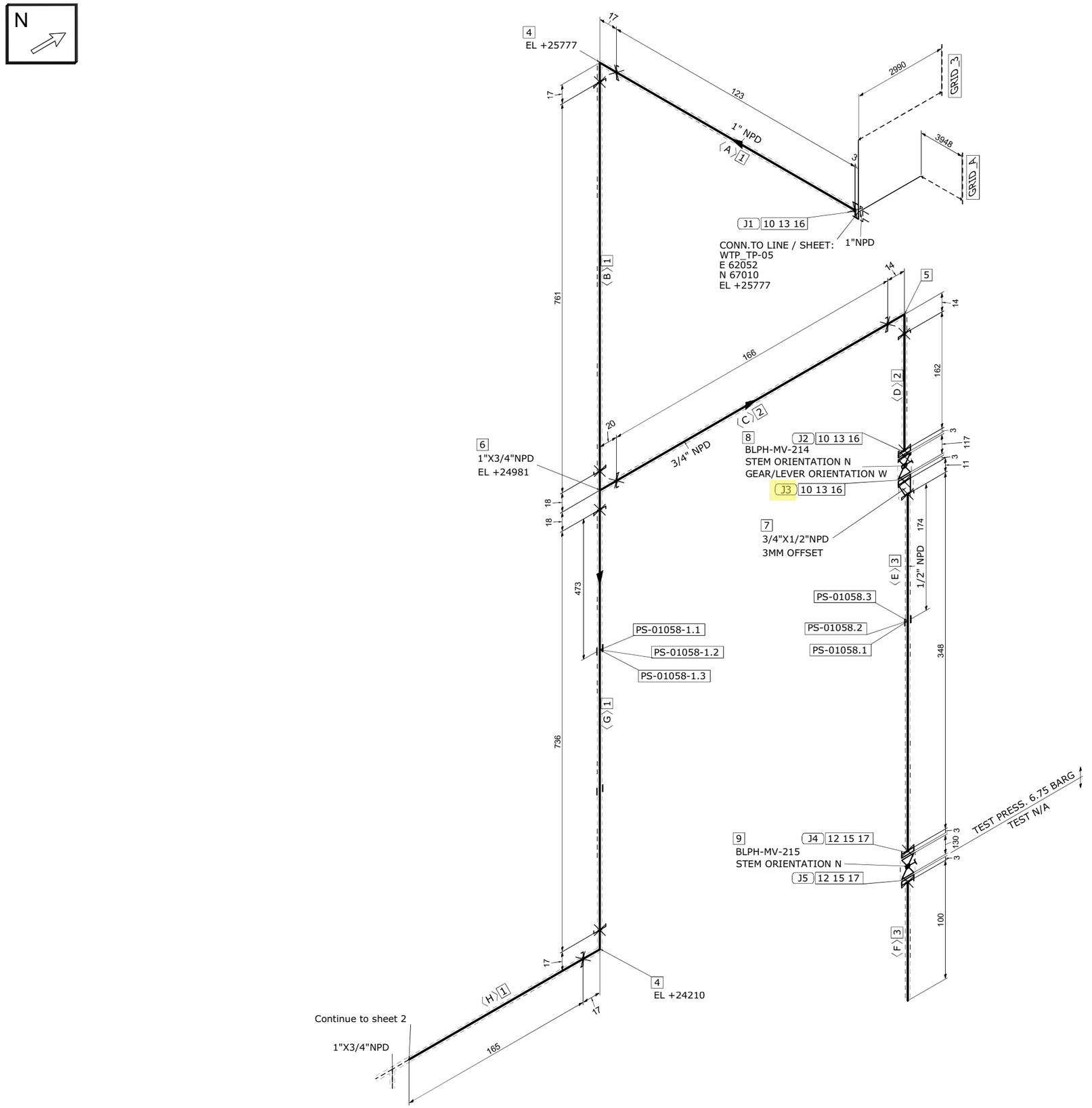
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:25:14.495Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:42:28.763Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	1.8M	0.7
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.3M	0.1
3	1/2	PIPPPV00290H00	Pipe - Plastic ASTM F441 PE 3,73 PLT CPVC	0.4M	0.1
4	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
5	3/4	E90PPV00353Q00	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
6	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4X1/2	BUSPPV00073Q0H	Bushing - Plastic ASTM F439 PE x THRD-F NPT 10 Bar PLT CPVC	1	0.1
8	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
9	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
10	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	1	0.2
11	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.3
12	1/2	FLAPPV00090H00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
13	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
14	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
15	1/2	GFL3GK13670H00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
16	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.4
17	1/2	SB2WBO01960200	60 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	0.9

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	15.5
OVERALL WEIGHT [kg]	15.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	124	SQ.CUT	SQ.CUT
B	1	761	SQ.CUT	SQ.CUT
C	3/4	166	SQ.CUT	SQ.CUT
D	3/4	162	SQ.CUT	SQ.CUT
E	1/2	348	SQ.CUT	SQ.CUT
F	1/2	100	SQ.CUT	SQ.CUT
G	1	736	SQ.CUT	SQ.CUT
H	1	165	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01058.1
PS-01058.3
PS-01058.2
PS-01058-1.1
PS-01058-1.3
PS-01058-1.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		15.5

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00021			SHEET / OF	1/2
						REV.	00

LINE DATA

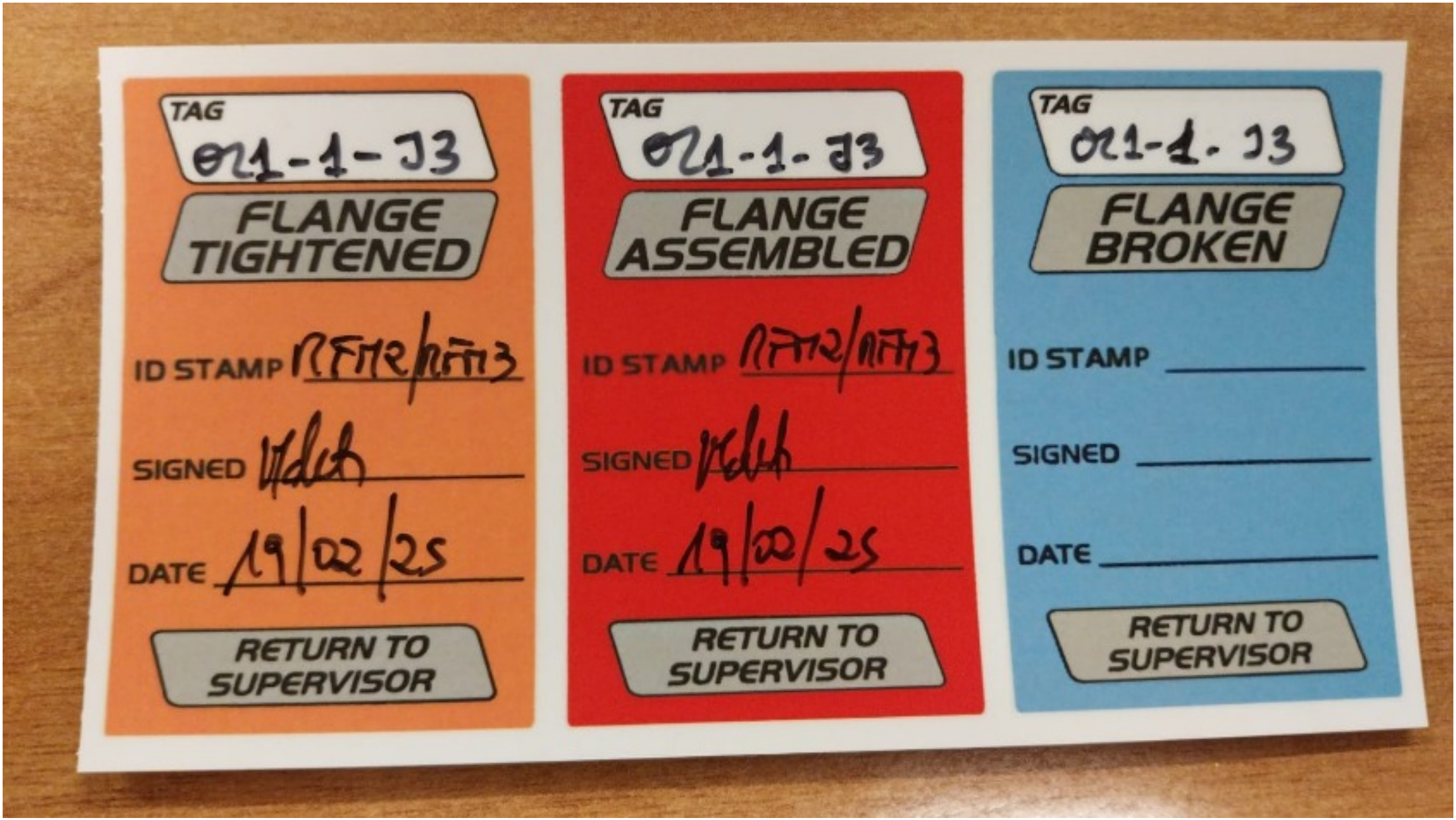
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

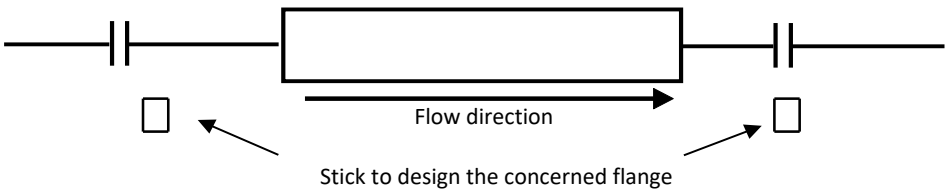
MASTER


TAG
021-1-J3
FLANGE TIGHTENED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-1-J3
FLANGE ASSEMBLED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	021-1-J4	: Joint 021-1-J4			Dwg	123A90-FDL-PP-DI-00021-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004332		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type 150LB

Flange Size 3/4"

Gasket Type Gasket Flat Thk. 3 mm

Bolt tensioning/Torquing value 15

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

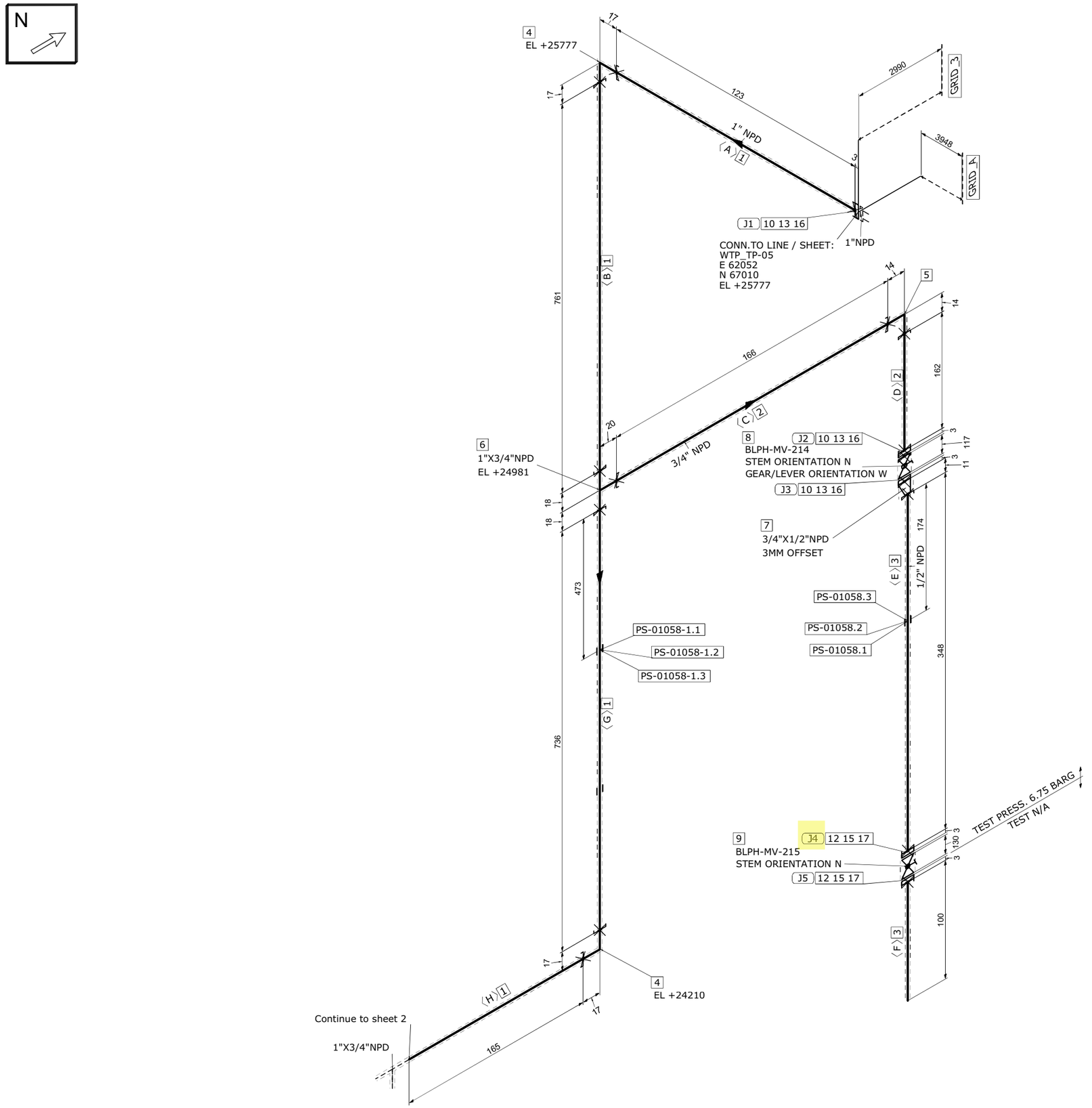
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:25:29.004Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:42:40.166Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	1.8M	0.7
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.3M	0.1
3	1/2	PIPPPV00290H00	Pipe - Plastic ASTM F441 PE 3,73 PLT CPVC	0.4M	0.1
4	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
5	3/4	E90PPV00353Q00	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
6	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4X1/2	BUSPPV00073Q0H	Bushing - Plastic ASTM F439 PE x THRD-F NPT 10 Bar PLT CPVC	1	0.1
8	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
9	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
10	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	1	0.2
11	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.3
12	1/2	FLAPPV00090H00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
13	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
14	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
15	1/2	GFL3GK13670H00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
16	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.4
17	1/2	SB2WBO01960200	60 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	0.9

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	15.5
OVERALL WEIGHT [kg]	15.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	124	SQ.CUT	SQ.CUT
B	1	761	SQ.CUT	SQ.CUT
C	3/4	166	SQ.CUT	SQ.CUT
D	3/4	162	SQ.CUT	SQ.CUT
E	1/2	348	SQ.CUT	SQ.CUT
F	1/2	100	SQ.CUT	SQ.CUT
G	1	736	SQ.CUT	SQ.CUT
H	1	165	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01058.1
PS-01058.3
PS-01058.2
PS-01058-1.1
PS-01058-1.3
PS-01058-1.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		15.5

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK	SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE 03-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00021	SHEET / OF 1/2	REV. 00

LINE DATA

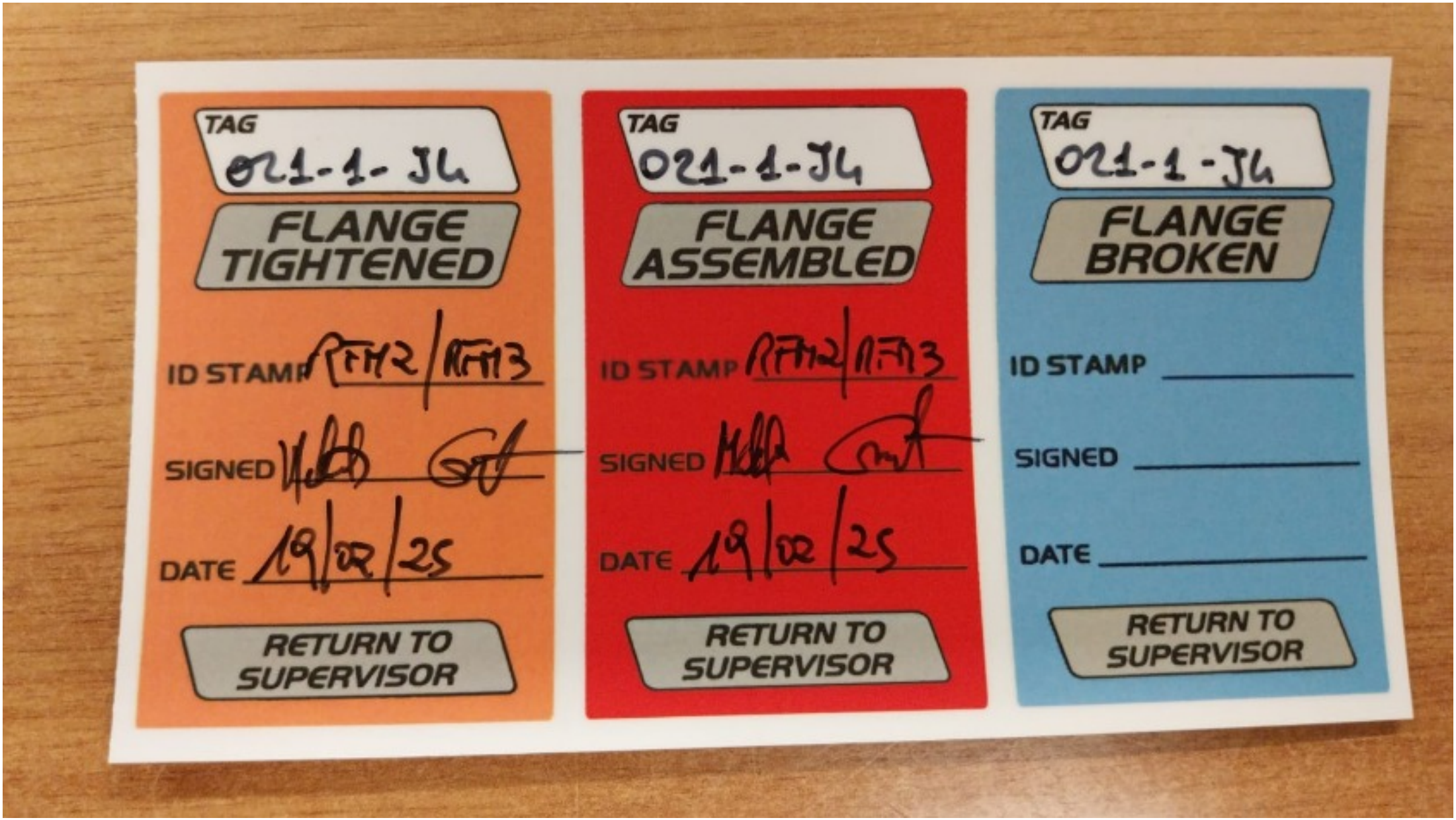
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

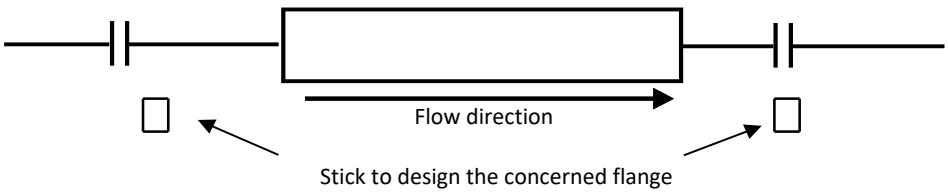
MASTER


TAG
021-1-J4
FLANGE TIGHTENED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-1-J4
FLANGE ASSEMBLED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-1-J4
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	021-1-J5	: Joint 021-1-J5			Dwg	123A90-FDL-PP-DI-00021-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004333	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

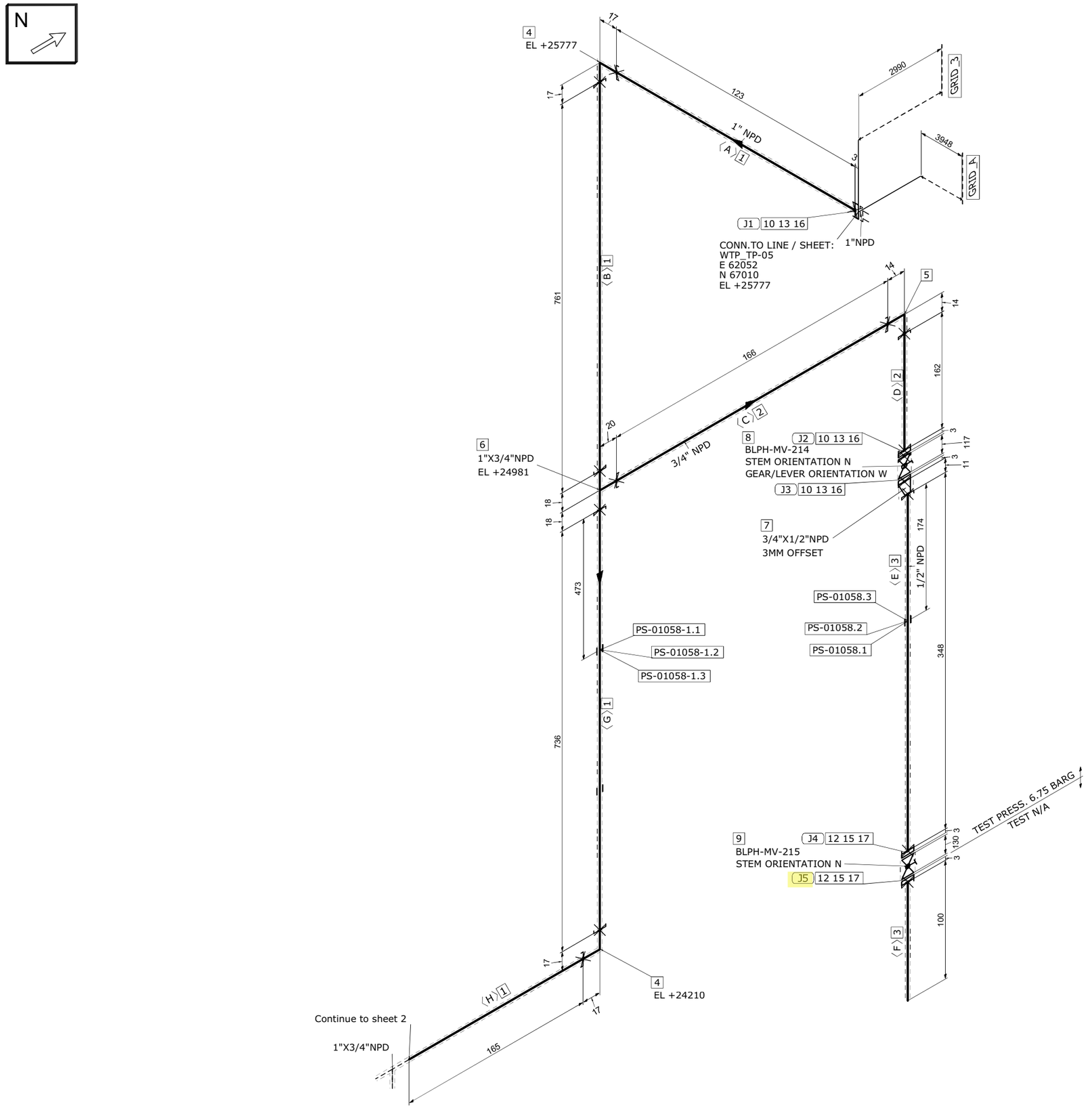
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:25:45.354Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:42:55.538Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	1.8M	0.7
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.3M	0.1
3	1/2	PIPPPV00290H00	Pipe - Plastic ASTM F441 PE 3,73 PLT CPVC	0.4M	0.1
4	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
5	3/4	E90PPV00353Q00	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
6	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4X1/2	BUSPPV00073Q0H	Bushing - Plastic ASTM F439 PE x THRD-F NPT 10 Bar PLT CPVC	1	0.1
8	3/4	VBC0NN24893Q00	Ball Valve Split Body FB Manuf.s STD FLG 150LB FF BA01P01KT	1	7.0
9	1/2	VDA0NN16150H00	Globe Valve Manuf.s STD FLG 150LB FF HS01P01KT	1	3.8
10	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	1	0.2
11	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.3
12	1/2	FLAPPV00090H00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
13	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	1	0.1
14	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
15	1/2	GFL3GK13670H00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
16	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.4
17	1/2	SB2WBO01960200	60 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	0.9

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	15.5
OVERALL WEIGHT [kg]	15.5

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	124	SQ.CUT	SQ.CUT
B	1	761	SQ.CUT	SQ.CUT
C	3/4	166	SQ.CUT	SQ.CUT
D	3/4	162	SQ.CUT	SQ.CUT
E	1/2	348	SQ.CUT	SQ.CUT
F	1/2	100	SQ.CUT	SQ.CUT
G	1	736	SQ.CUT	SQ.CUT
H	1	165	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01058.1
PS-01058.3
PS-01058.2
PS-01058-1.1
PS-01058-1.3
PS-01058-1.2

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		15.5

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM
DATE	03-09-2024				
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00021	SHEET / OF	1/2
REV.	00				

LINE DATA

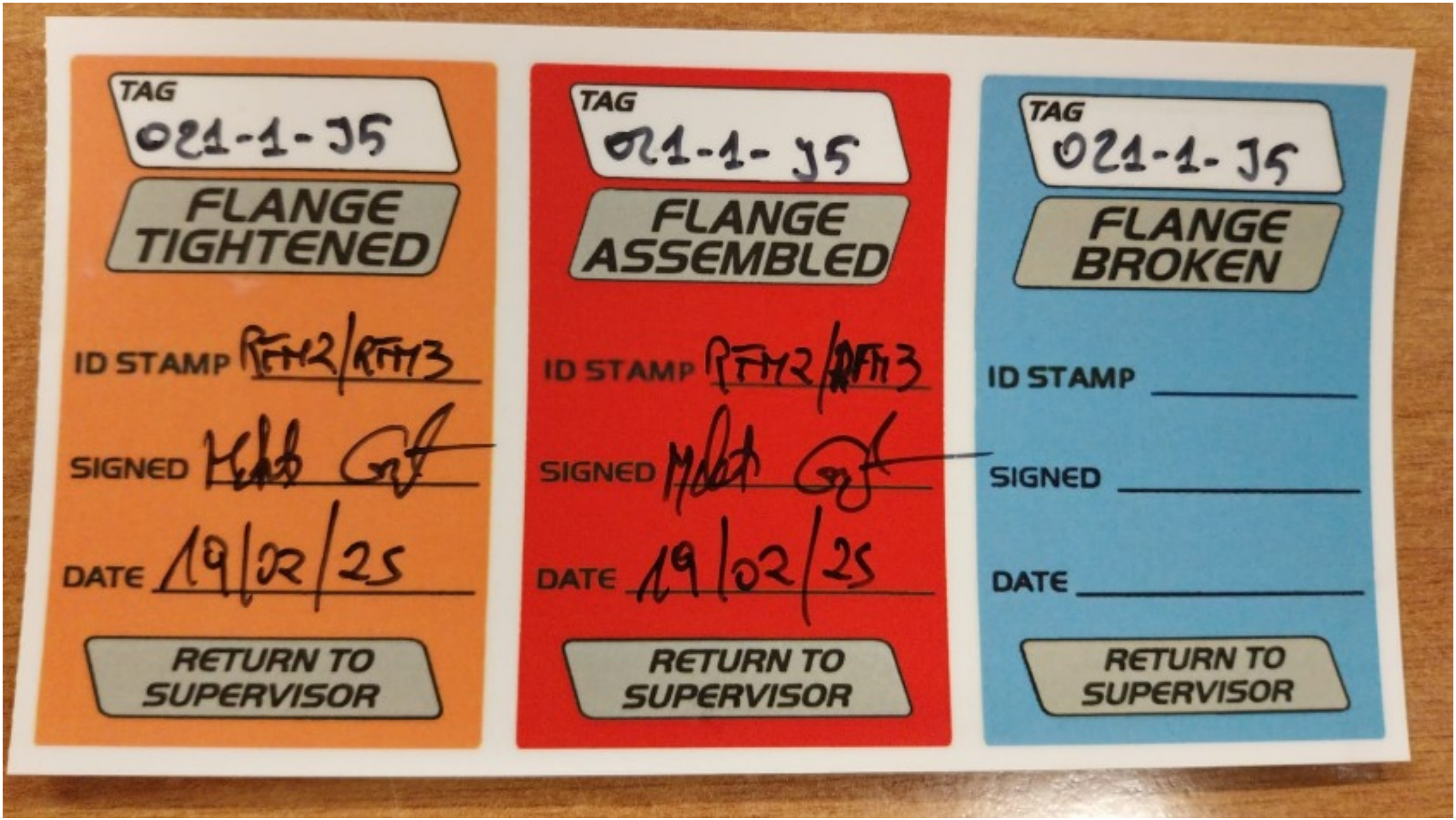
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

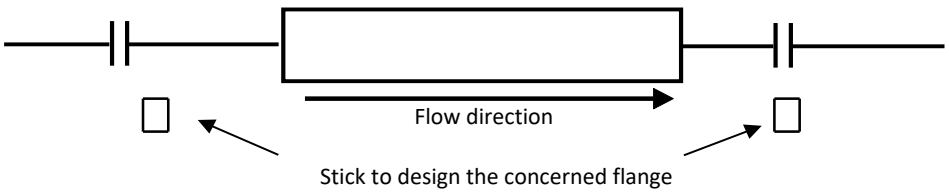
MASTER


TAG
021-1-J5
FLANGE TIGHTENED
ID STAMP RTH2/RTH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-1-J5
FLANGE ASSEMBLED
ID STAMP RTH2/RTH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-1-J5
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	021-2-J6	: Joint 021-2-J6			Dwg	123A90-FDL-PP-DI-00021-02
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004334	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	3/4"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

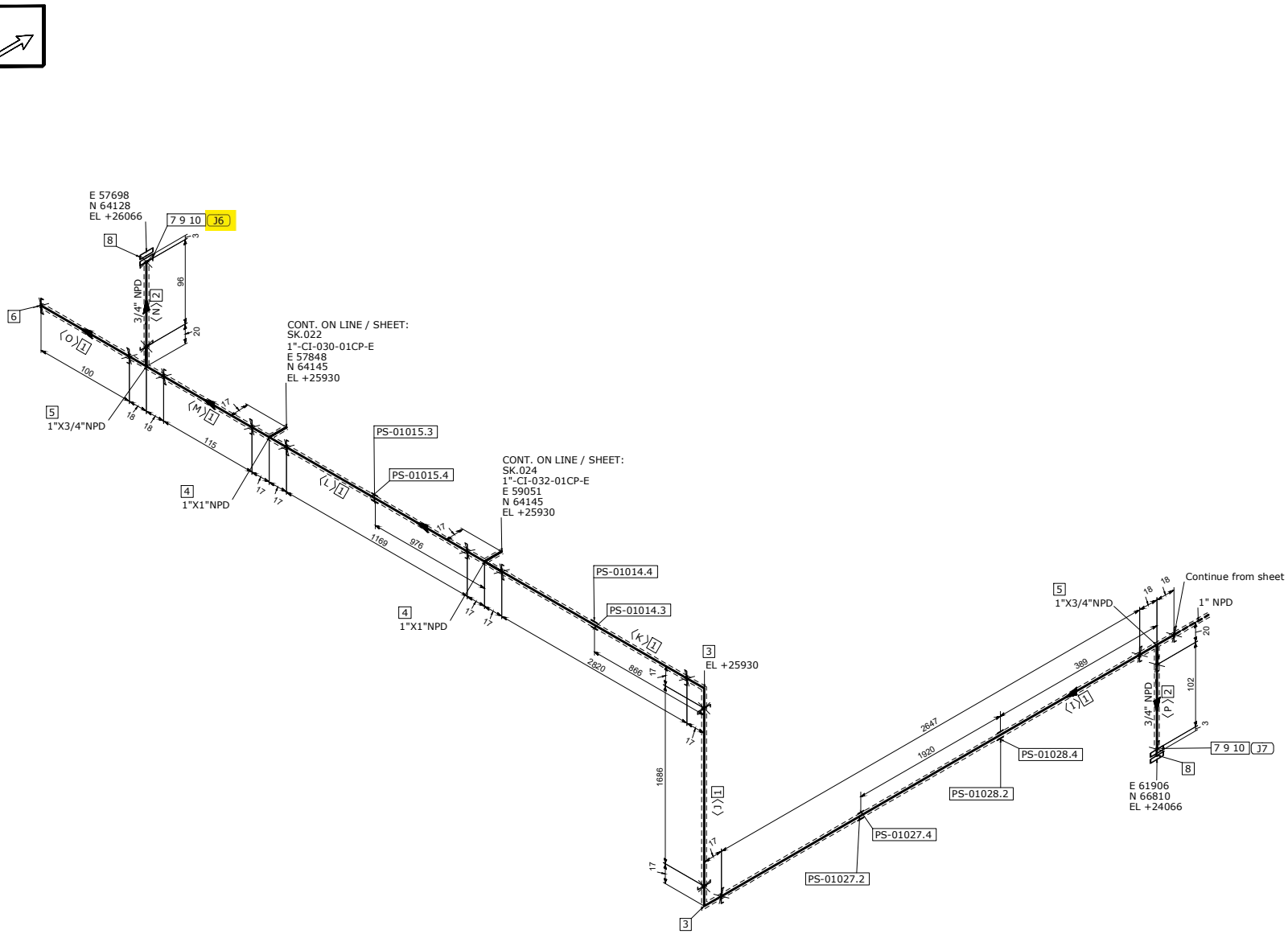
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:26:00.104Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:43:08.910Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	8.5M	3.2
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.2M	0.1
3	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
4	1X1	TEEPPV00330100	Tee - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.3
5	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
6	1	CAPPPV00250100	Cap - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
8	3/4	FLBPPV00083Q00	Flange Blind - Plastic Flanged as per ASME B16.5 150LB FF PLT CPVC	2	0.2
9	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
10	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	5.4
OVERALL WEIGHT [kg]	5.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1	2648	SQ.CUT	SQ.CUT
J	1	1686	SQ.CUT	SQ.CUT
K	1	2820	SQ.CUT	SQ.CUT
L	1	1170	SQ.CUT	SQ.CUT
M	1	115	SQ.CUT	SQ.CUT
N	3/4	96	SQ.CUT	SQ.CUT
O	1	100	SQ.CUT	SQ.CUT
P	3/4	102	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01028.2
PS-01028.4
PS-01027.4
PS-01027.2
PS-01014.3
PS-01014.4
PS-01015.4
PS-01015.3

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		5.4

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

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

SCALE: N/A

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

FORMAT: A3 | DRAWING NO.: 123A90-FDL-PP-DI-00021 | SHEET / OF: 2/2 | REV.: 00

LINE DATA

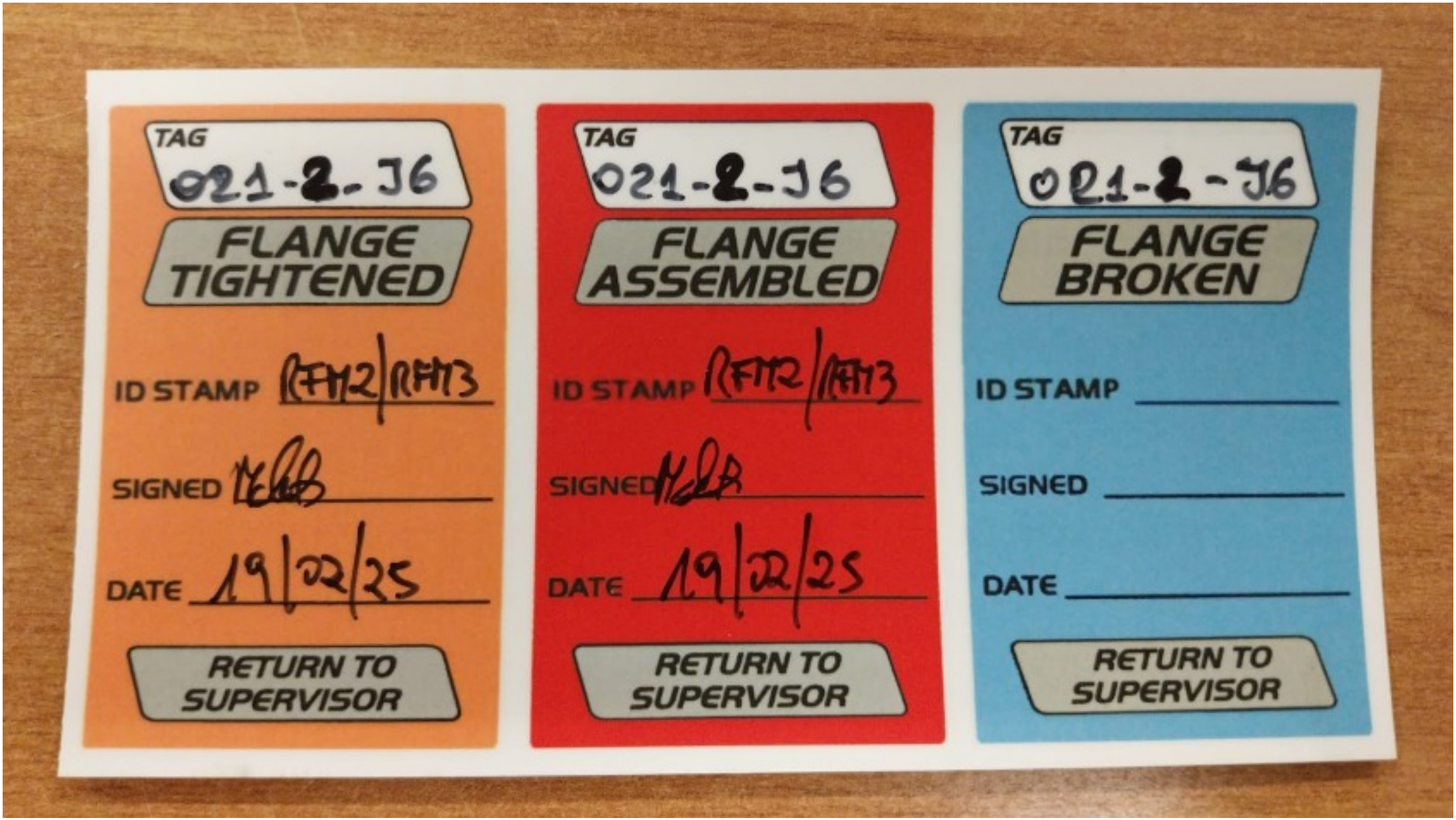
NDT INSPECTION CATEGORY	N/A			PED CATEGORY	Art. 4, par. 3		
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid		
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]	
HEAT TRACING	Yes			TEST	PRESS. 6.75 [barg]	TEMP. AMB.	MEDIUM Water

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

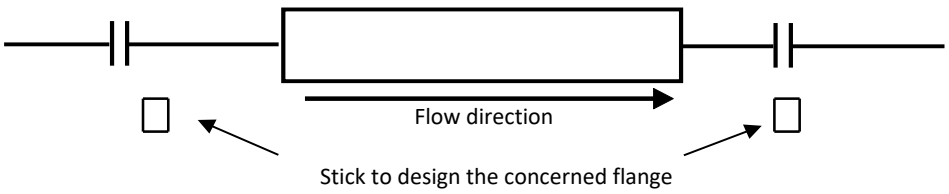
MASTER


TAG
021-2-J6
FLANGE TIGHTENED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-2-J6
FLANGE ASSEMBLED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-2-J6
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	021-2-J7	: Joint 021-2-J7			Dwg	123A90-FDL-PP-DI-00021-02
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004335	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form TMX27	Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type 150LB

Flange Size 3/4"

Gasket Type Gasket Flat Thk. 3 mm

Bolt tensioning/Torquing value 15

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

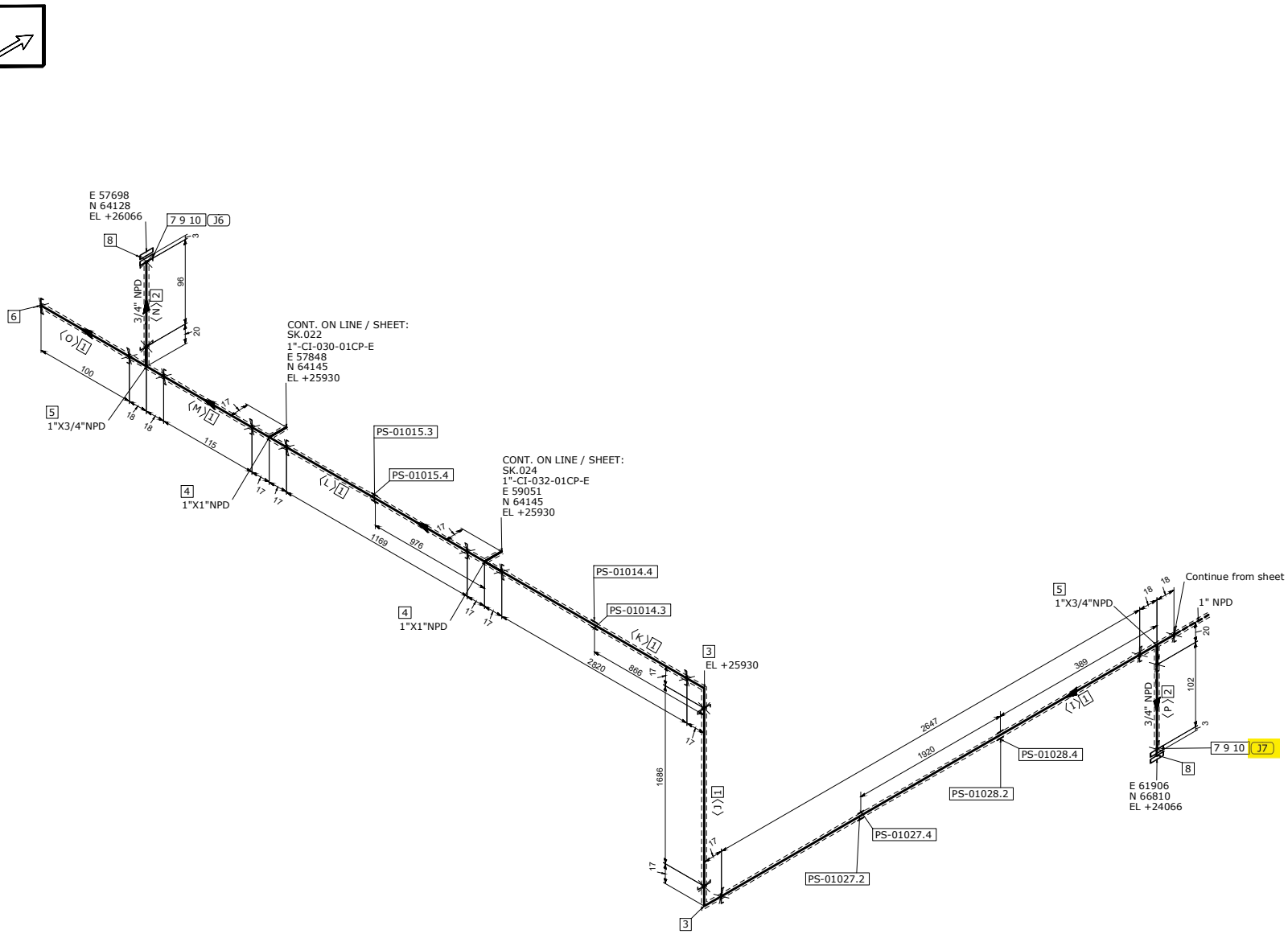
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:29:06.801Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:43:19.812Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	8.5M	3.2
2	3/4	PIPPPV00303Q00	Pipe - Plastic ASTM F441 PE 3,91 PLT CPVC	0.2M	0.1
3	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
4	1X1	TEEPPV00330100	Tee - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.3
5	1X3/4	TRP0PV0025013Q	Tee Reducing - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	2	0.2
6	1	CAPPPV00250100	Cap - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	1	0.1
7	3/4	FLAPPV00113Q00	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	2	0.2
8	3/4	FLBPPV00083Q00	Flange Blind - Plastic Flanged as per ASME B16.5 150LB FF PLT CPVC	2	0.2
9	3/4	GFL3GK13683Q00	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	2	0.1
10	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	8	1.0

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	5.4
OVERALL WEIGHT [kg]	5.4

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
I	1	2648	SQ.CUT	SQ.CUT
J	1	1686	SQ.CUT	SQ.CUT
K	1	2820	SQ.CUT	SQ.CUT
L	1	1170	SQ.CUT	SQ.CUT
M	1	115	SQ.CUT	SQ.CUT
N	3/4	96	SQ.CUT	SQ.CUT
O	1	100	SQ.CUT	SQ.CUT
P	3/4	102	SQ.CUT	SQ.CUT

SUPPORT LIST

PS-01028.2
PS-01028.4
PS-01027.4
PS-01027.2
PS-01027.2
PS-01014.3
PS-01014.4
PS-01015.4
PS-01015.3

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		5.4

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-029-01CP-E

SK.021

CONTRACT NO./ TITLE: CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK
SCALE: N/A
DRAWN: STAFF SRL
CHECKED: RT
APPROVED: LM
DATE: 03-09-2024
FORMAT: A3
DRAWING NO.: 123A90-FDL-PP-DI-00021
SHEET / OF: 2/2
REV.: 00

LINE DATA

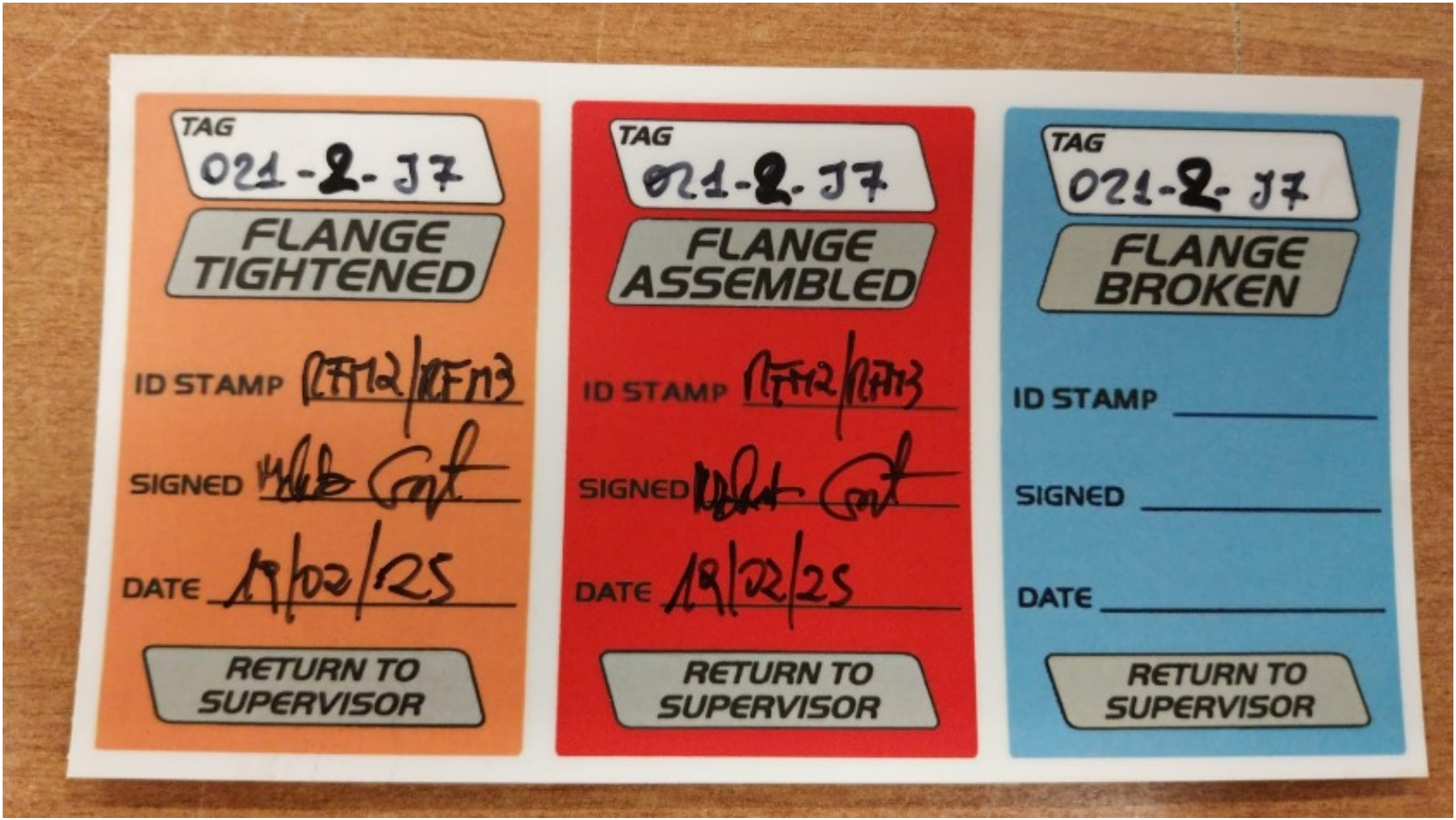
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3	
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid	
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]
HEAT TRACING	Yes		TEST	PRESS. 6,75 [barg]	TEMP. AMB. MEDIUM Water

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

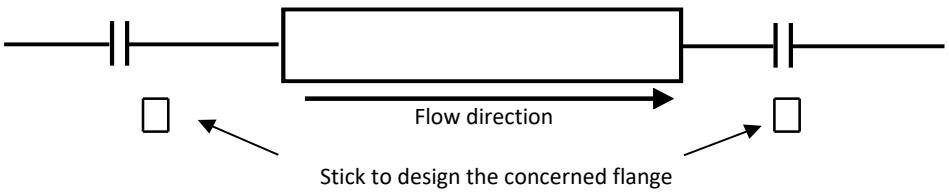
MASTER


TAG
021-2-J7
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
021-2-J7
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 19/12/25
RETURN TO SUPERVISOR
TAG
021-2-J7
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	022-1-J1	: Joint 022-1-J1			Dwg	123A90-FDL-PP-DI-00022-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004336		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type 150LB

Flange Size 1"

Gasket Type Gasket Flat Thk. 3 mm

Bolt tensioning/Torquing value 15

Lubricant Yes

Lubricant Type MOLYKOTE 1000 PASTE

Used tools

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
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10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

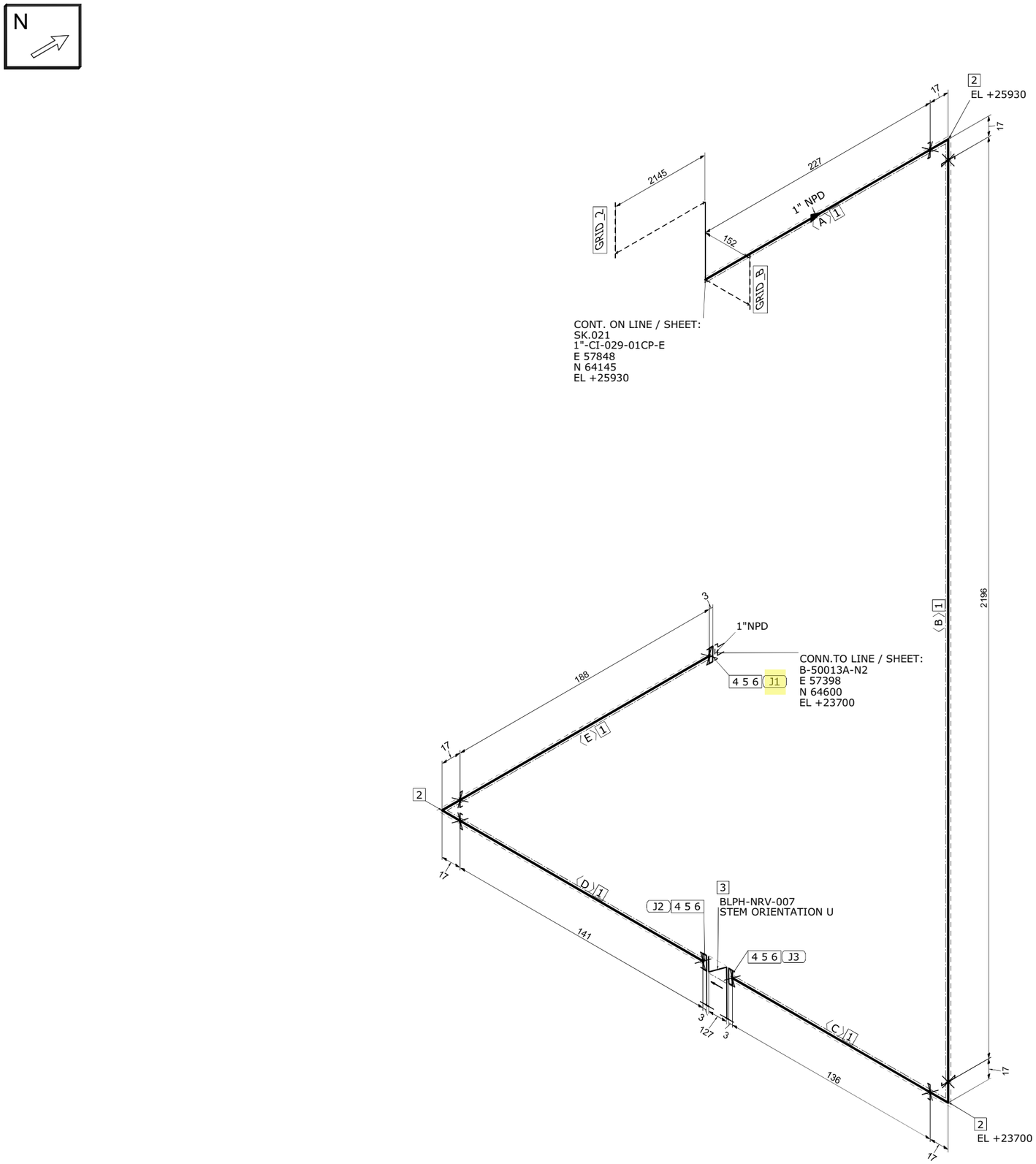
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:28:53.222Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:43:29.225Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	136	SQ.CUT	SQ.CUT
D	1	141	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-030-01CP-E

SK.022

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00022			SHEET / OF	1/1
						REV.	00

LINE DATA

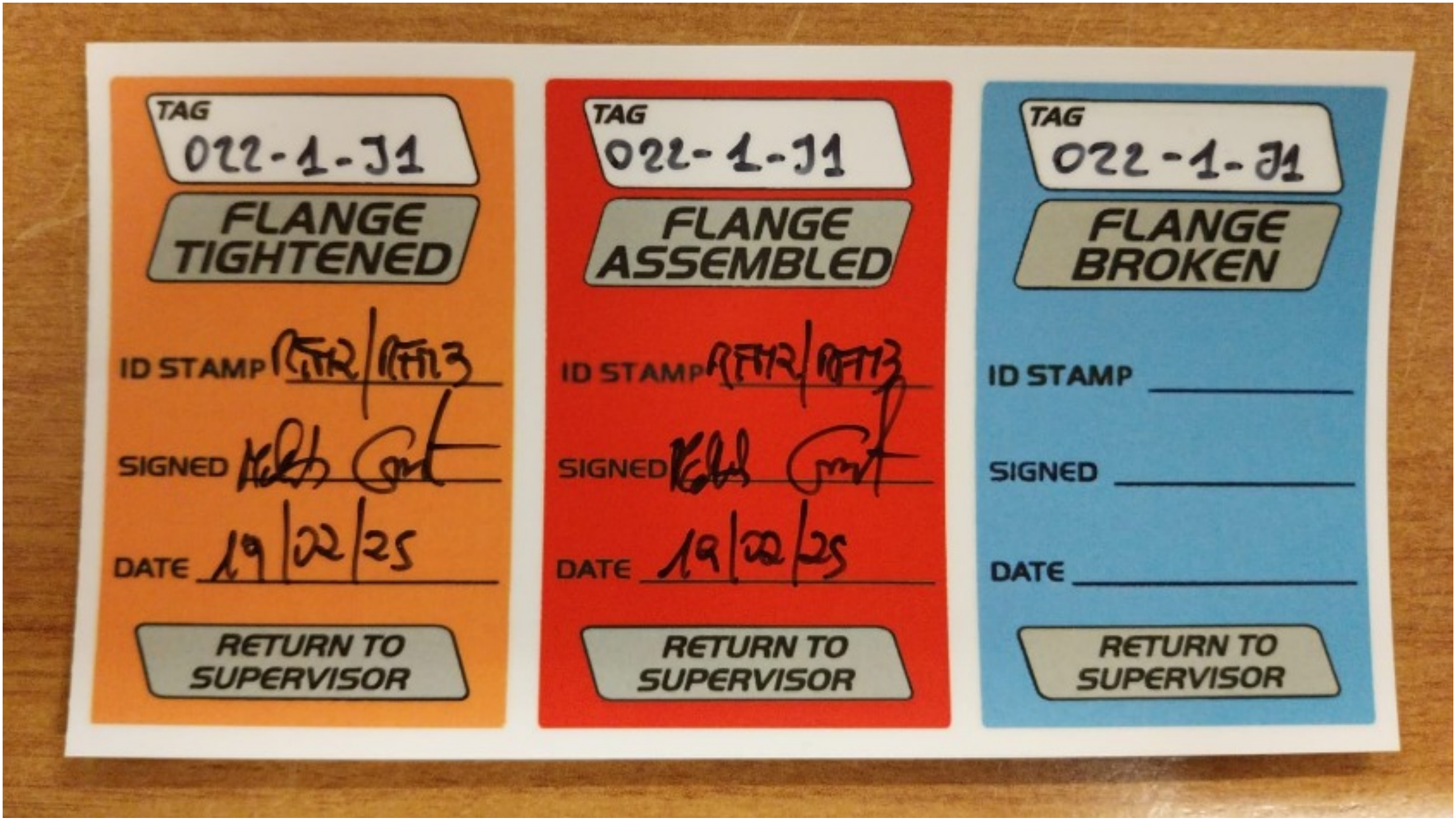
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6,75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

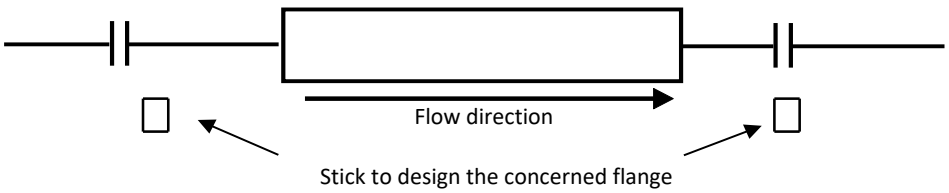
MASTER


TAG
022-1-J1
FLANGE TIGHTENED
ID STAMP RTH2/RTH3
SIGNED
DATE 10/22/25
RETURN TO SUPERVISOR
TAG
022-1-J1
FLANGE ASSEMBLED
ID STAMP RTH2/RTH3
SIGNED
DATE 10/22/25
RETURN TO SUPERVISOR
TAG
022-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	022-1-J2	: Joint 022-1-J2			Dwg	123A90-FDL-PP-DI-00022-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004337		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

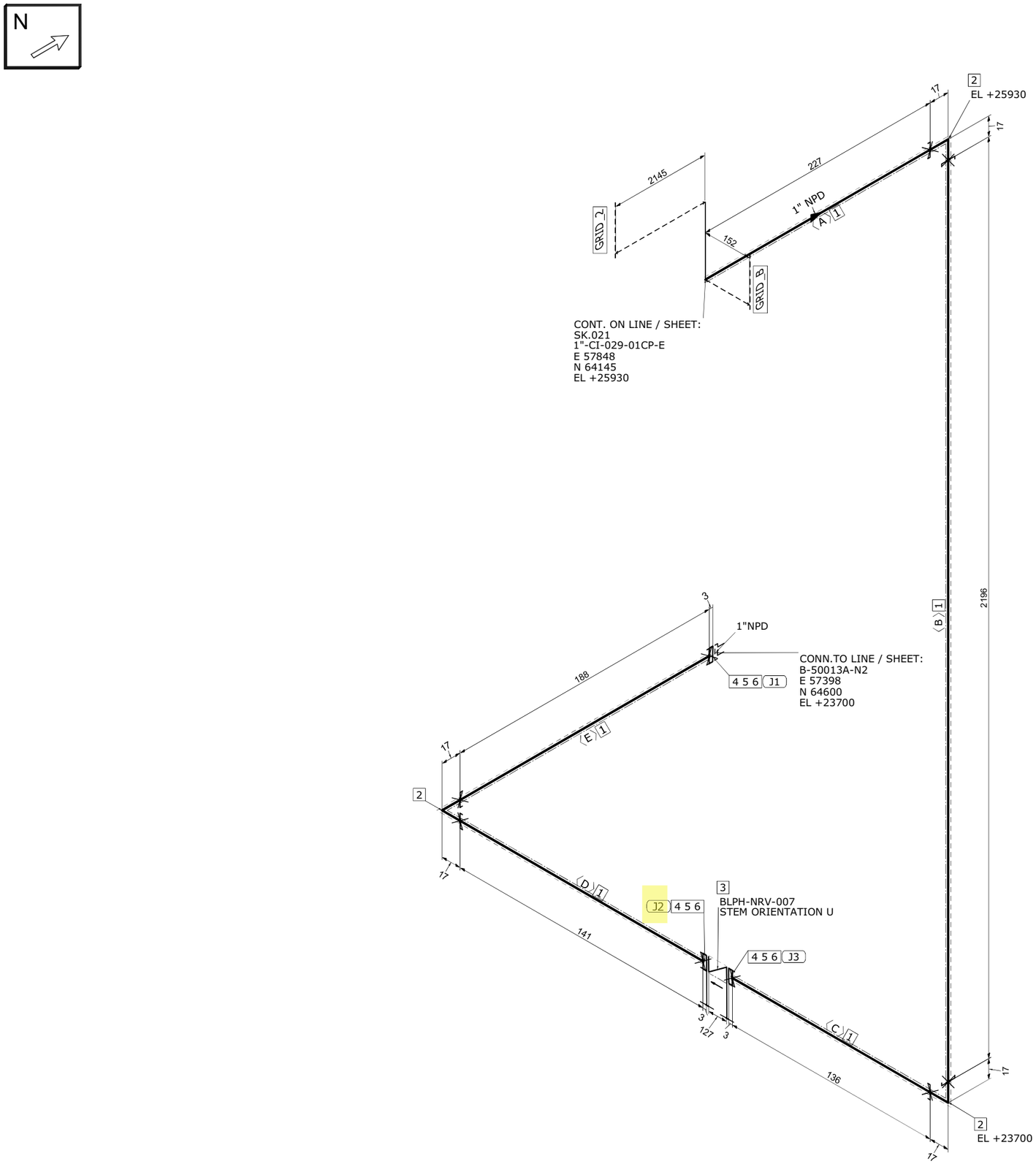
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:28:38.245Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:43:38.864Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	136	SQ.CUT	SQ.CUT
D	1	141	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-030-01CP-E

SK.022

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00022			SHEET / OF	1/1
						REV.	00

LINE DATA

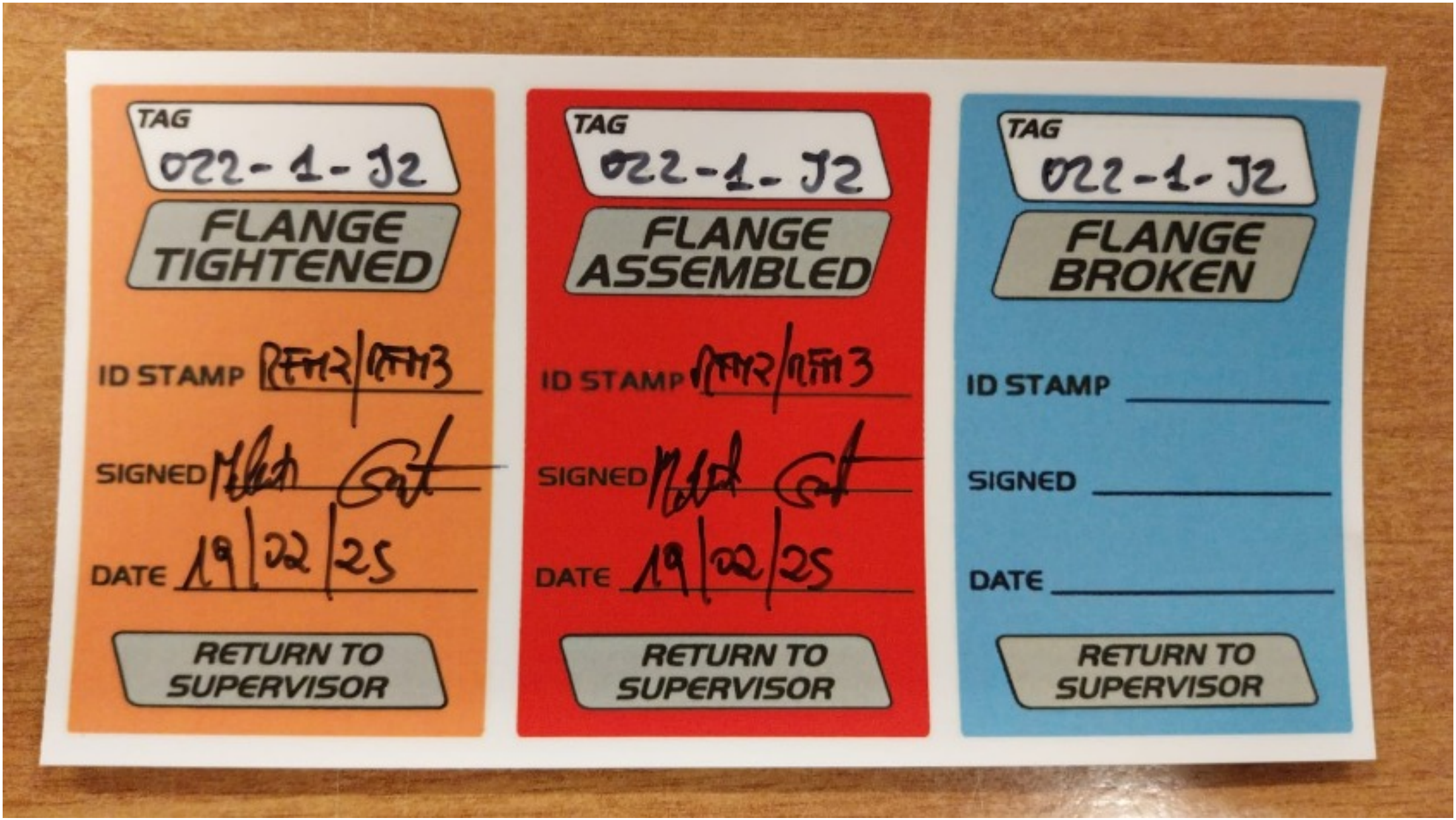
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6,75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

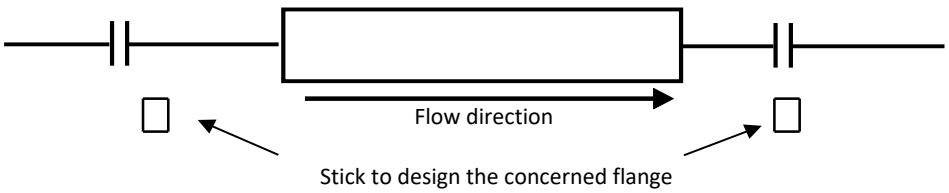
MASTER


TAG
022-1-J2
FLANGE TIGHTENED
ID STAMP RFM2/RFM3
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
022-1-J2
FLANGE ASSEMBLED
ID STAMP RFM2/RFM3
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
022-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	022-1-J3	: Joint 022-1-J3			Dwg	123A90-FDL-PP-DI-00022-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004338		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

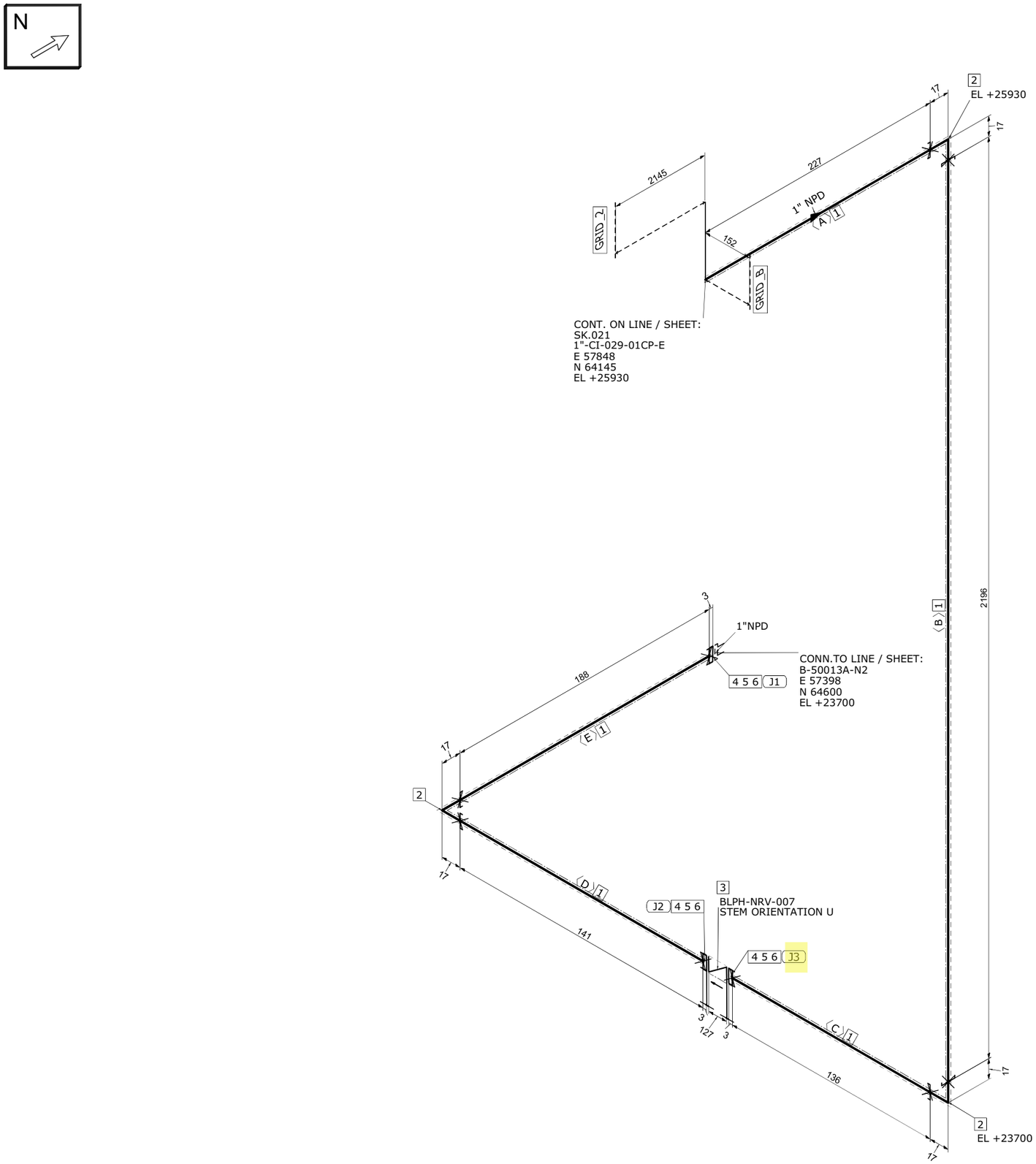
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:28:21.302Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:43:49.715Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	136	SQ.CUT	SQ.CUT
D	1	141	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE
SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-030-01CP-E

SK.022

CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK					SCALE	N/A
DRAWN	STAFF SRL	CHECKED	RT	APPROVED	LM	DATE	03-09-2024
FORMAT	A3	DRAWING NO.	123A90-FDL-PP-DI-00022			SHEET / OF	1/1
						REV.	00

LINE DATA

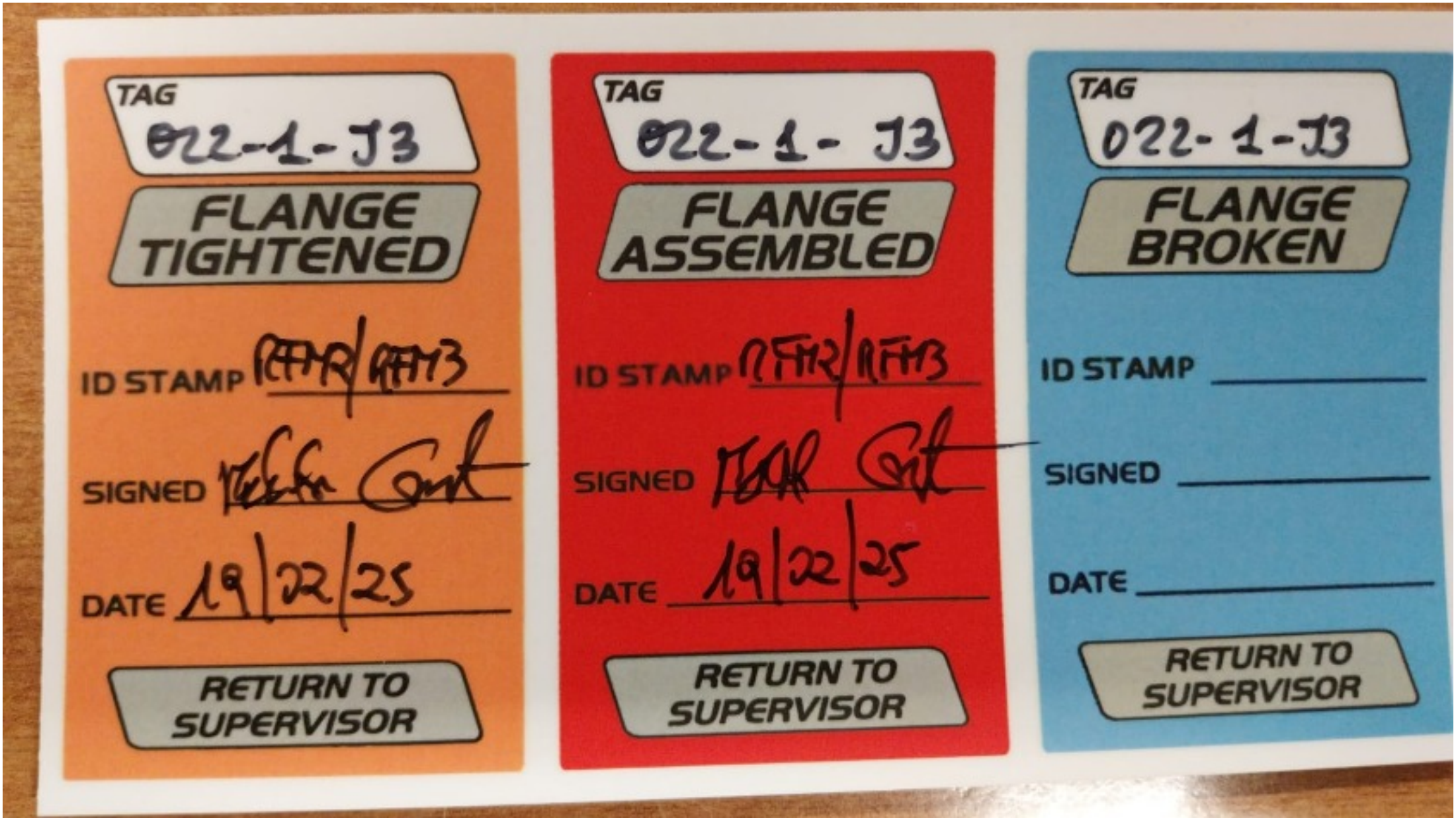
NDT INSPECTION CATEGORY	N/A		PED CATEGORY	Art. 4, par. 3			
PAINTING	SYSTEM N/A	BASE RAL N/A	FLUID PHASE	Liquid			
INSULATION	TYPE H	THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]		
HEAT TRACING	Yes		TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water	

REFERENCE DOCUMENTS

P&ID	123A90-DDL-PR-PID-80021
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

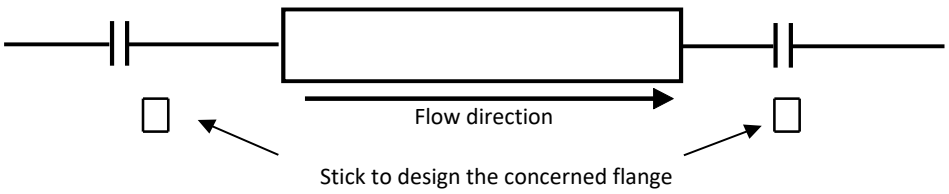
MASTER


TAG
022-1-J3
FLANGE TIGHTENED
ID STAMP RFHR/RFH3
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
022-1-J3
FLANGE ASSEMBLED
ID STAMP RFHR/RFH3
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
022-1-J3
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	024-1-J1	: Joint 024-1-J1			Dwg	123A90-FDL-PP-DI-00024-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004339	Location	Onshore Activities		User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form TMX27	Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



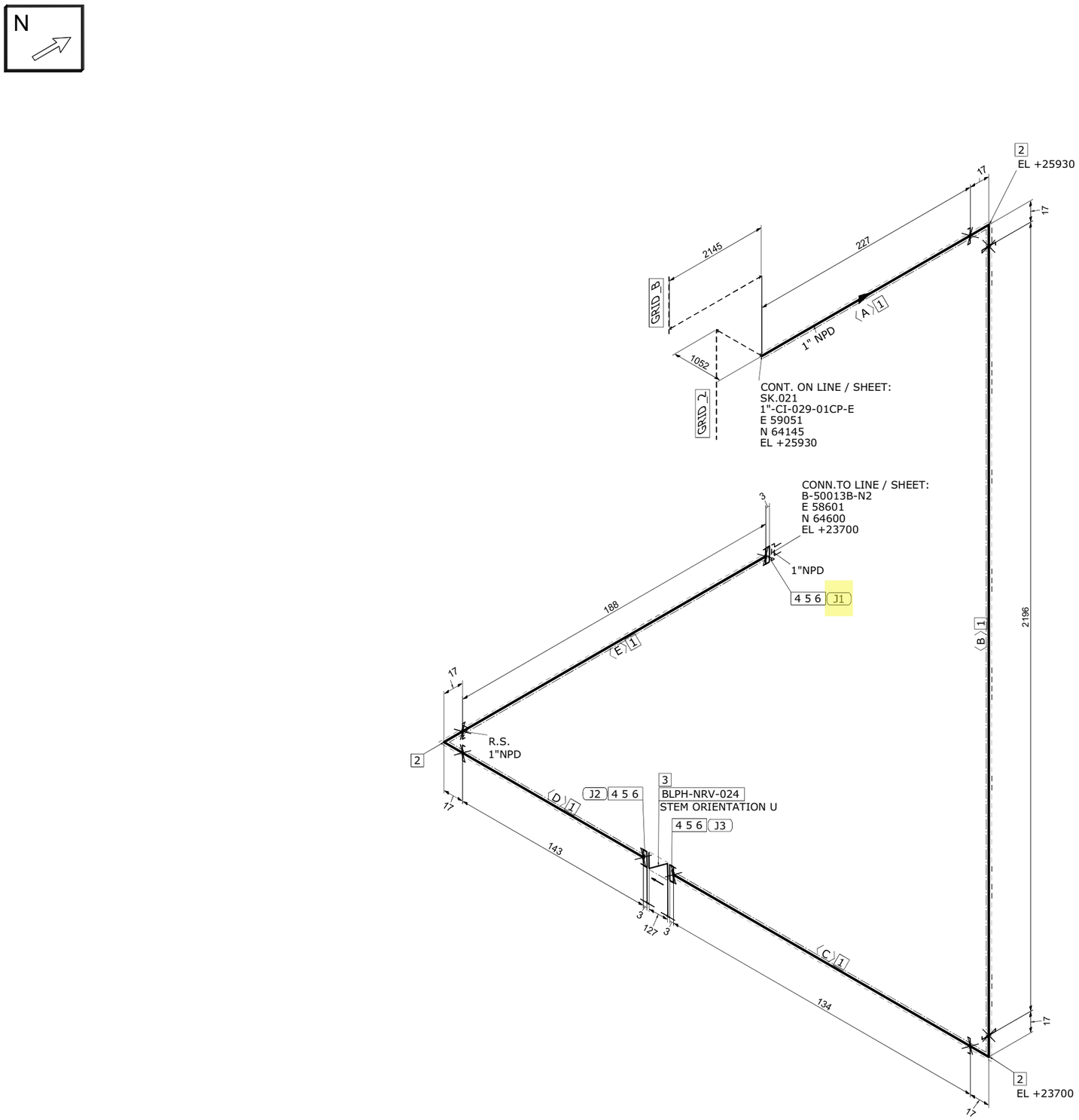
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
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15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:28:08.860Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:44:02.752Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	134	SQ.CUT	SQ.CUT
D	1	143	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-032-01CP-E

SK.024

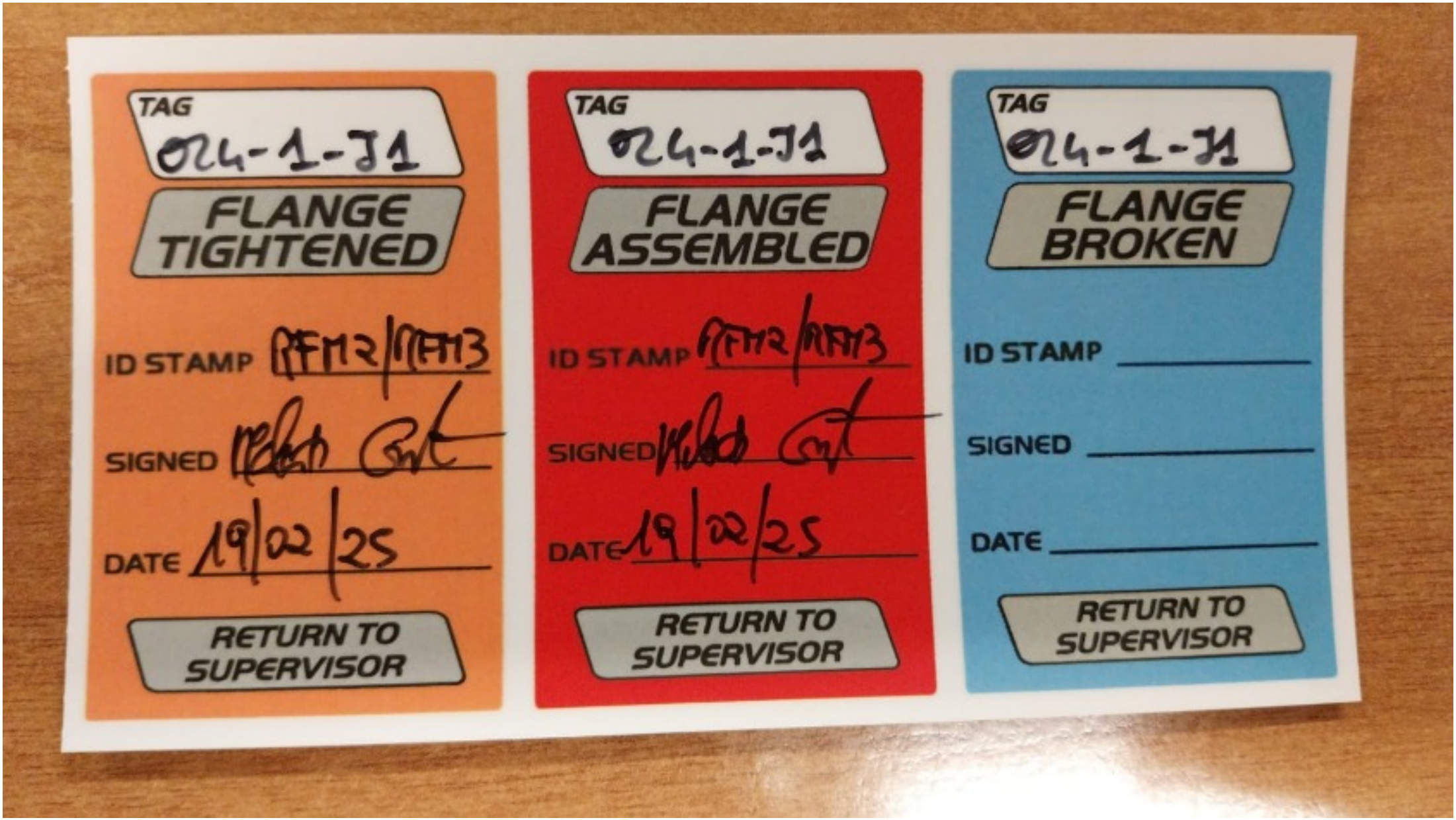
LINE DATA									
NDT INSPECTION CATEGORY	N/A			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]			
HEAT TRACING	Yes			TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80021
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

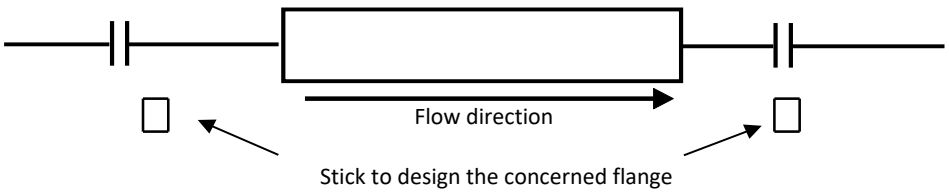
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	03-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00024		SHEET / OF 1/1	REV. 00


TAG
024-1-J1
FLANGE TIGHTENED
ID STAMP RFH12/RFH13
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
024-1-J1
FLANGE ASSEMBLED
ID STAMP RFH12/RFH13
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
024-1-J1
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	024-1-J2	: Joint 024-1-J2			Dwg	123A90-FDL-PP-DI-00024-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004340		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27		Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
1	5	15	5	9	15
2	5	15	5	9	15
3	5	15	5	9	15
4	5	15	5	9	15
5			5	9	15
6			5	9	15
7			5	9	15
8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1 **Clear Bore Inspection:** Pipe and Valve clear of debris/contamination. Yes

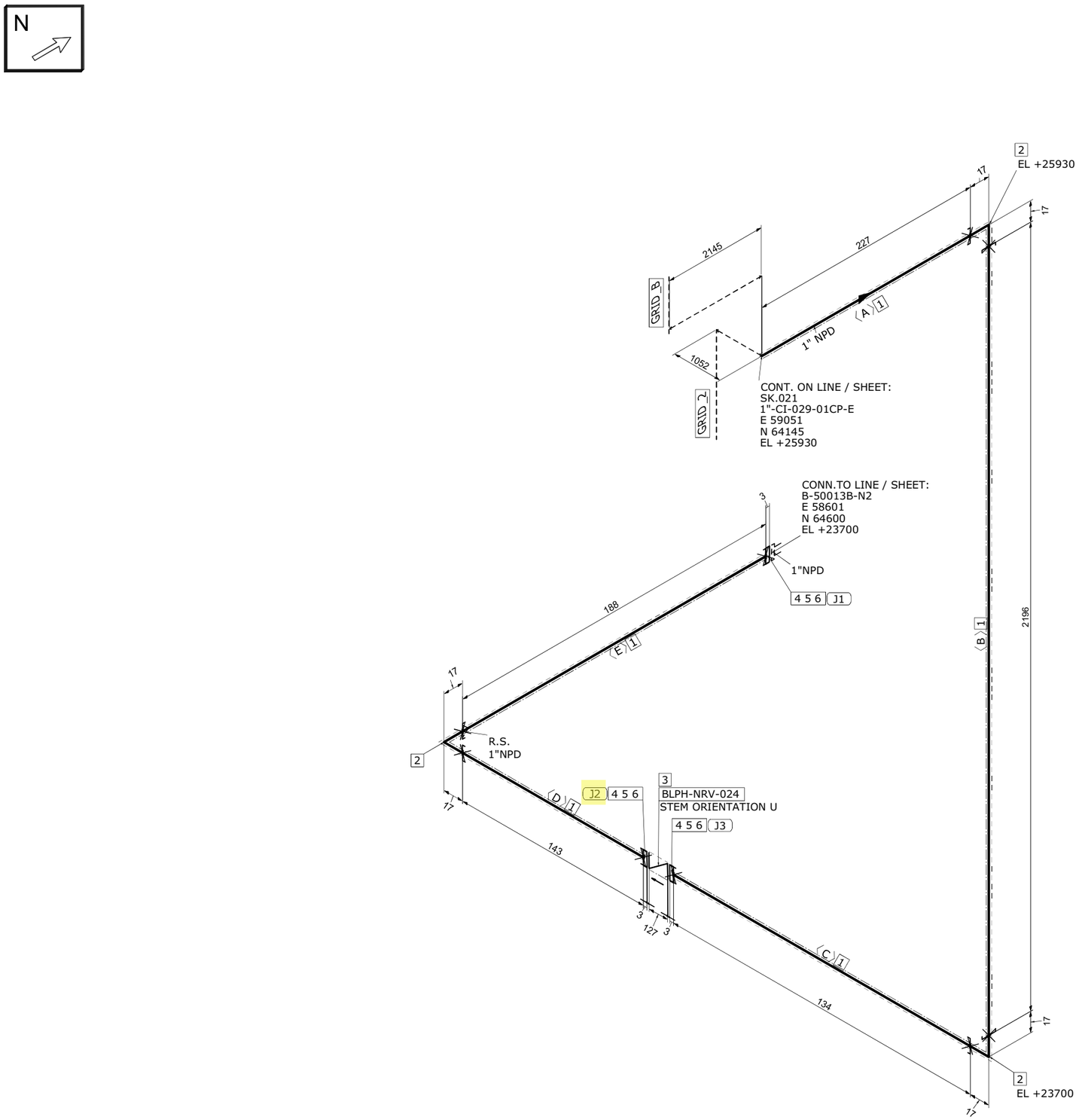
2 **Flange Face Check:** Both flanges clean and free from damage. Yes

3 **Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique. Yes

4 **Alignment:** Check alignment according to code. Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:27:54.709Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:44:30.608Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
2	1	E90PPV00360100	90 Deg Elbow - Plastic ASTM F439 SOCKET 10 Bar PLT CPVC	3	0.3
3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	134	SQ.CUT	SQ.CUT
D	1	143	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-032-01CP-E

SK.024

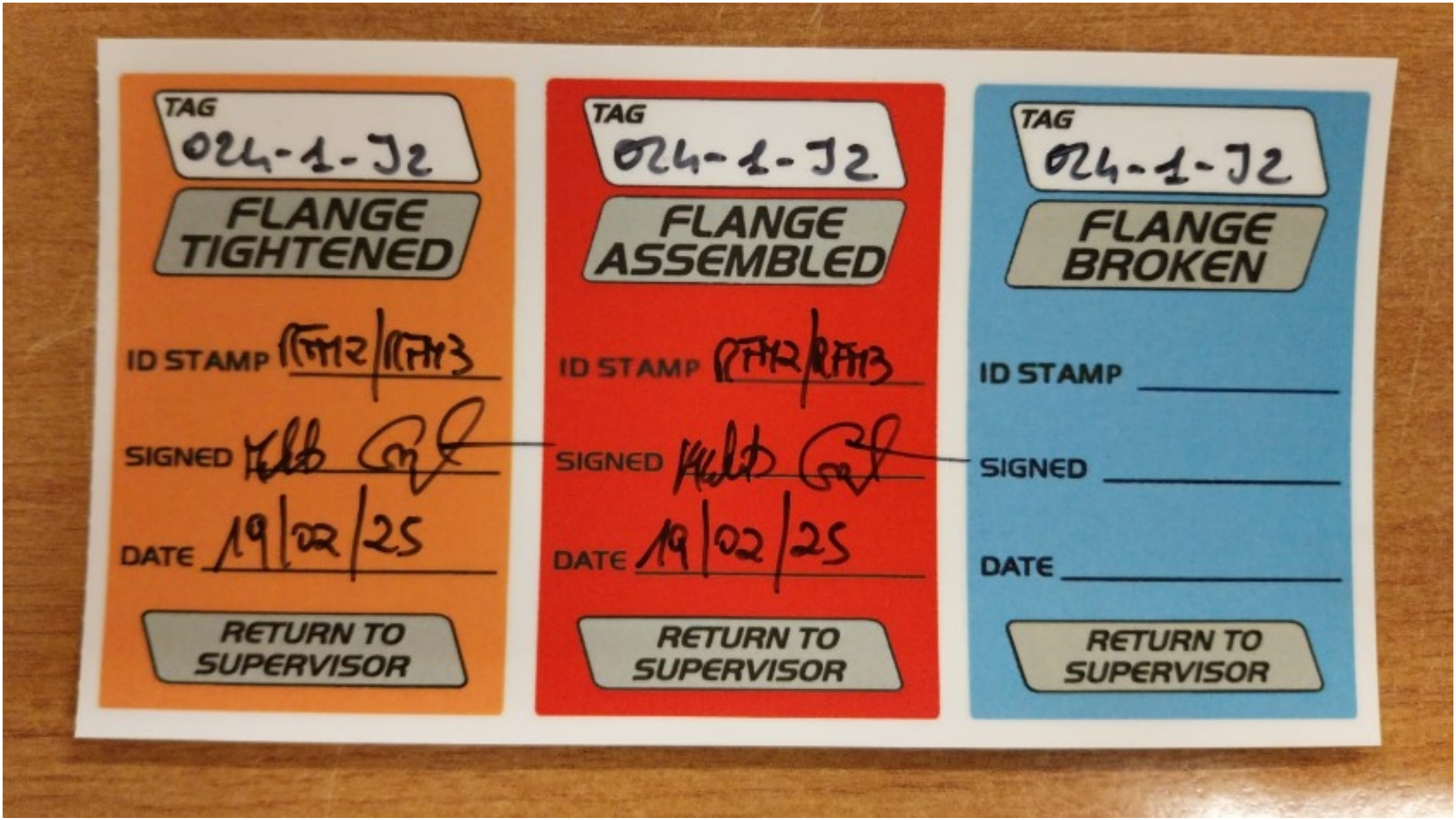
LINE DATA									
NDT INSPECTION CATEGORY	N/A			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]			
HEAT TRACING	Yes			TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80021
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

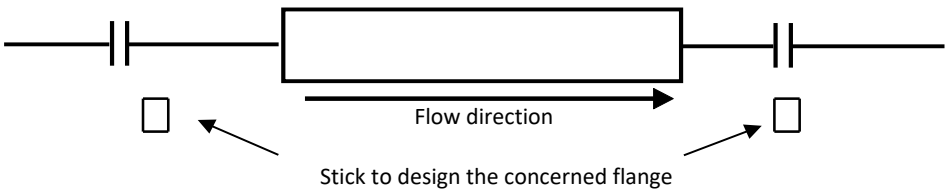
CONTRACT NO./ TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK		SCALE	N/A
DRAWN STAFF SRL	CHECKED RT	APPROVED LM	DATE	03-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00024		SHEET / OF 1/1	REV. 00


TAG
024-1-J2
FLANGE TIGHTENED
ID STAMP
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
024-1-J2
FLANGE ASSEMBLED
ID STAMP
SIGNED
DATE 19/02/25
RETURN TO SUPERVISOR
TAG
024-1-J2
FLANGE BROKEN
ID STAMP
SIGNED
DATE
RETURN TO SUPERVISOR

ITEM	Tag	024-1-J3	: Joint 024-1-J3			Dwg	123A90-FDL-PP-DI-00024-01
	S/Sys	50-11	: Non-Oxidant Biocide			Module	LD
TASK	code	C10004341		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	MC	Activity PIP	Discipline	Piping	Form	TMX27 Bolt tensioning / torquing

Test Pack N.: TP-002

EQUIPMENT TAG



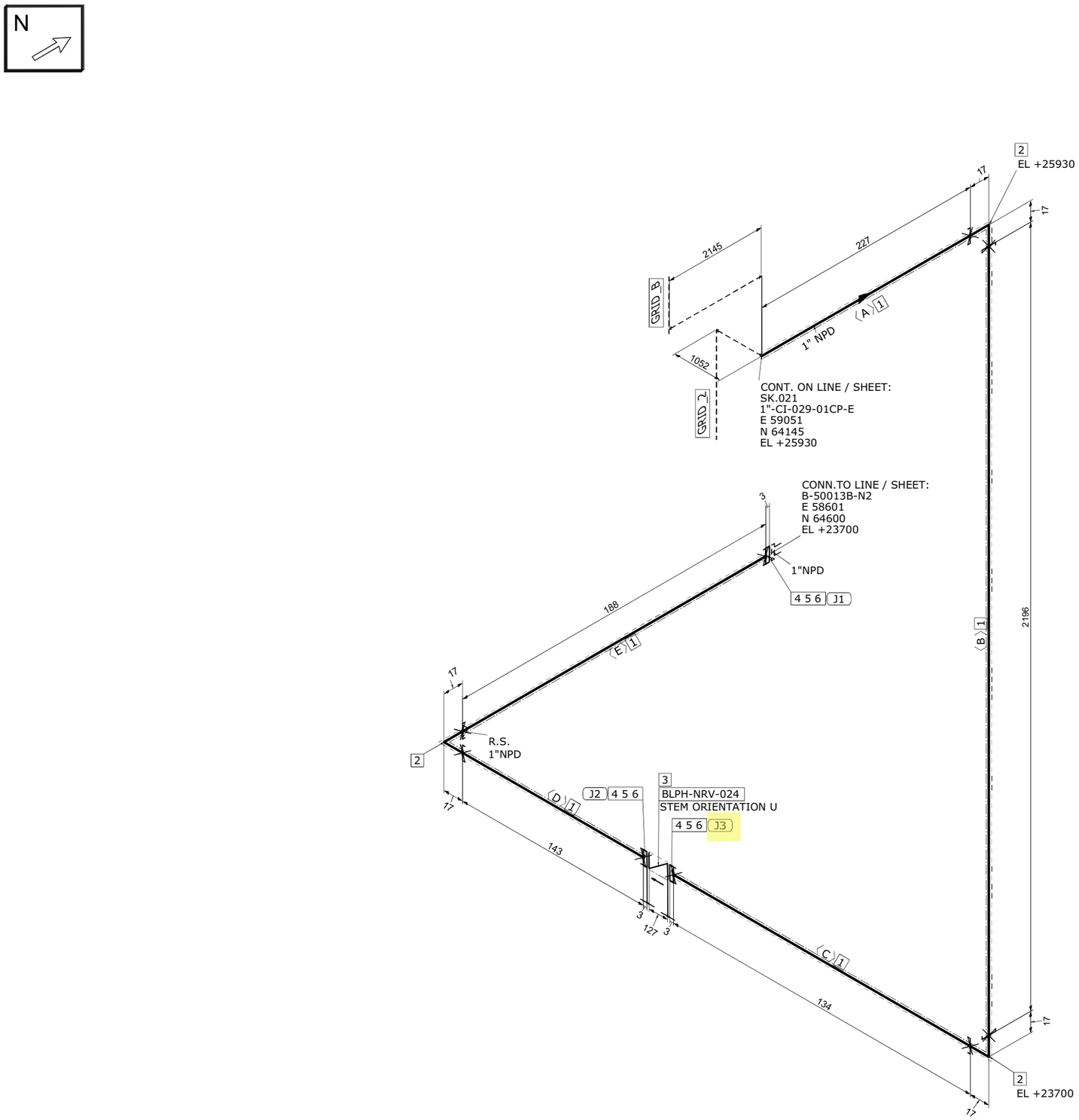
Flange Type	150LB	**Lubricant**	Yes
Flange Size	1"	**Lubricant Type**	MOLYKOTE 1000 PASTE
Gasket Type	Gasket Flat Thk. 3 mm	**Used tools**	
Bolt tensioning/Torquing value	15		

			Torque (Design Value)		
Sequence	Pre tension/torque	Final tension/torque	30%	60%	100%
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4	5	15	5	9	15
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8			5	9	15
9			5	9	15
10			5	9	15
11			5	9	15
12			5	9	15
13			5	9	15
14			5	9	15
15			5	9	15
16			5	9	15
17			5	9	15
18			5	9	15
19			5	9	15
20			5	9	15

1	**Clear Bore Inspection:** Pipe and Valve clear of debris/contamination.	Yes
2	**Flange Face Check:** Both flanges clean and free from damage.	Yes
3	**Gaskets and Bolts:** Gaskets and Bolts checked for correctness to specification, any damage and for correct length technique.	Yes
4	**Alignment:** Check alignment according to code.	Yes

Comments:

Page 1/1	Performed by	☑ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RODEO	RM (ROSETTI MARINO)	
Name	Emanuele Delfino	Massimo Bruschi	
Date	2025-02-07	2025-02-19	
Signature	PROVERLIS Digitaly signed by Emanuele Delfino 2025-02-07T13:27:40.013Z	PROVERLIS Digitaly signed by Massimo Bruschi 2025-02-19T15:44:41.039Z	



MATERIAL LIST

FABRICATION

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

ERECTION

POS.	SIZE	SAP CODE	DESCRIPTION	Q.TY	WEIGHT [kg]
1	1	PIPPPV00160100	Pipe - Plastic ASTM F441 PE 4,55 PLT CPVC	2.9M	1.1
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3	1	VDRNNN02640100	Check Valve Piston Manuf.s STD FLG 150LB FF CH01P01KT	1	0.0
4	1	FLAPPV00010100	Flange - Plastic Flanged as per ASME B16.5 SOCKET 150LB FF PLT CPVC	3	0.6
5	1	GFL3GK13690100	Gasket Flat Thk. 3 mm ASME B16.21 150LB FF GSK NITRILE RUBBER	3	0.2
6	1/2	SB2WBO00010200	65 Stud Bolt + 2 Heavy Nuts & Washers ASME B1.1 ASTM A193 Gr.B7 - A194 Gr.2H Hot dip galvanized	12	1.5

FABRICATION WEIGHT [kg]	0.0
ERECTION WEIGHT [kg]	3.7
OVERALL WEIGHT [kg]	3.7

WELD SUMMARY

WELD No.	SIZE [inches]	TYPE

CUTTING LIST

PIECE No.	SIZE [inches]	LENGTH [mm]	END PREP.1	END PREP.2
A	1	228	SQ.CUT	SQ.CUT
B	1	2196	SQ.CUT	SQ.CUT
C	1	134	SQ.CUT	SQ.CUT
D	1	143	SQ.CUT	SQ.CUT
E	1	188	SQ.CUT	SQ.CUT

SUPPORT LIST

SPOOL	WELD [inches]	WEIGHT [kg]
MONT		3.7

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

CROSSWIND

ROSETTI MARINO

TITLE: SHOP DRAWING ISOMETRIC
LINE NR. 1"-CI-032-01CP-E

SK.024

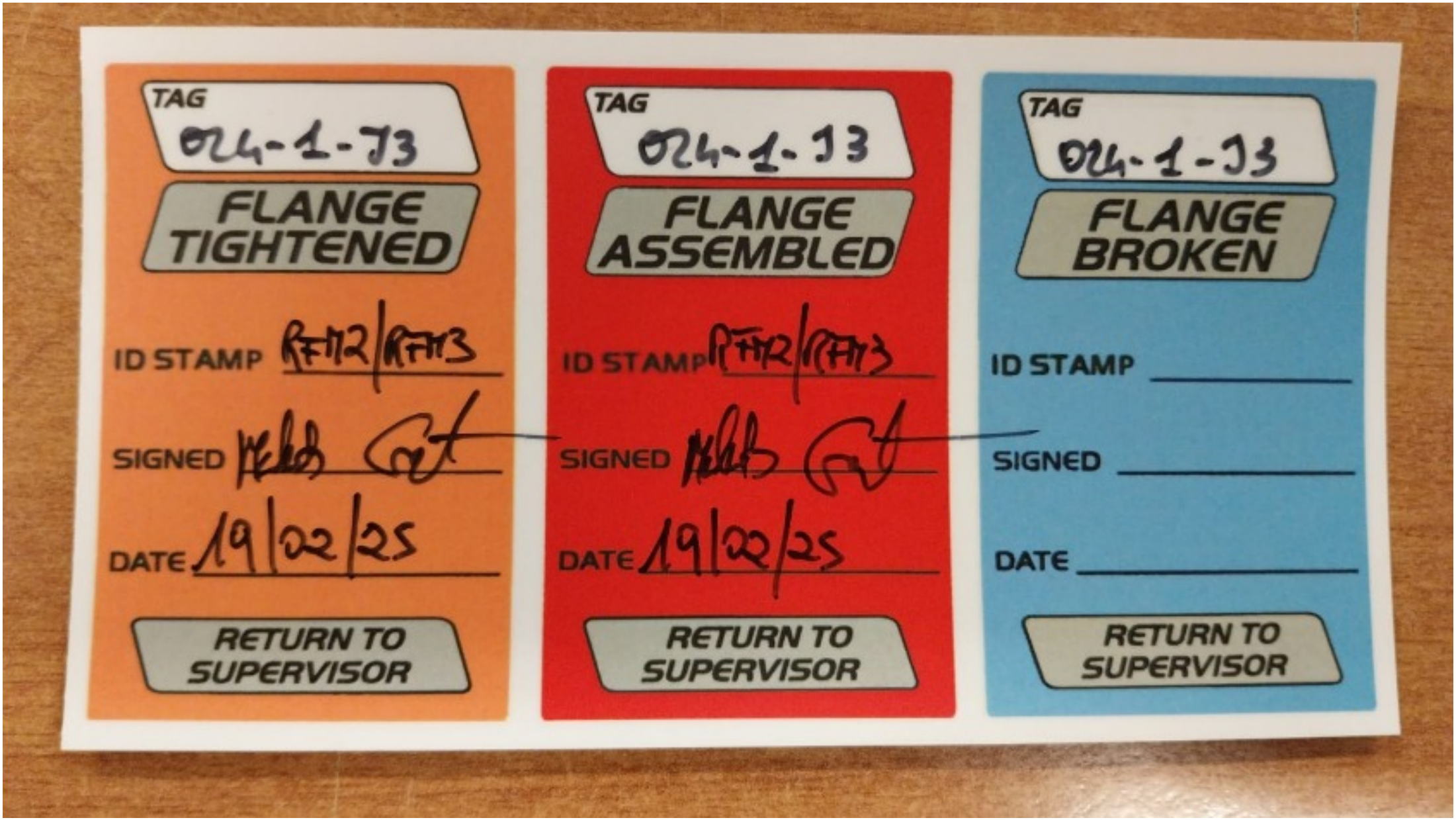
LINE DATA									
NDT INSPECTION CATEGORY	N/A			PED CATEGORY	Art. 4, par. 3				
PAINTING	SYSTEM N/A		BASE RAL N/A	FLUID PHASE	Liquid				
INSULATION	TYPE H		THICKNESS 20 [mm]	DESIGN	PRESS. 4.5 [barg]	TEMP. 5 / 50 [°C]			
HEAT TRACING	Yes			TEST	PRESS. 6.75 [barg]	TEMP. AMB	MEDIUM Water		

REFERENCE DOCUMENTS	
P&ID	123A90-DDL-PR-PID-80021
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 03-09-2024
FORMAT A3	DRAWING NO. 123A90-FDL-PP-DI-00024	SHEET / OF 1/1	REV. 00


TAG
024-1-73
FLANGE TIGHTENED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
024-1-13
FLANGE ASSEMBLED
ID STAMP RFH2/RFH3
SIGNED
DATE 19/22/25
RETURN TO SUPERVISOR
TAG
024-1-13
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