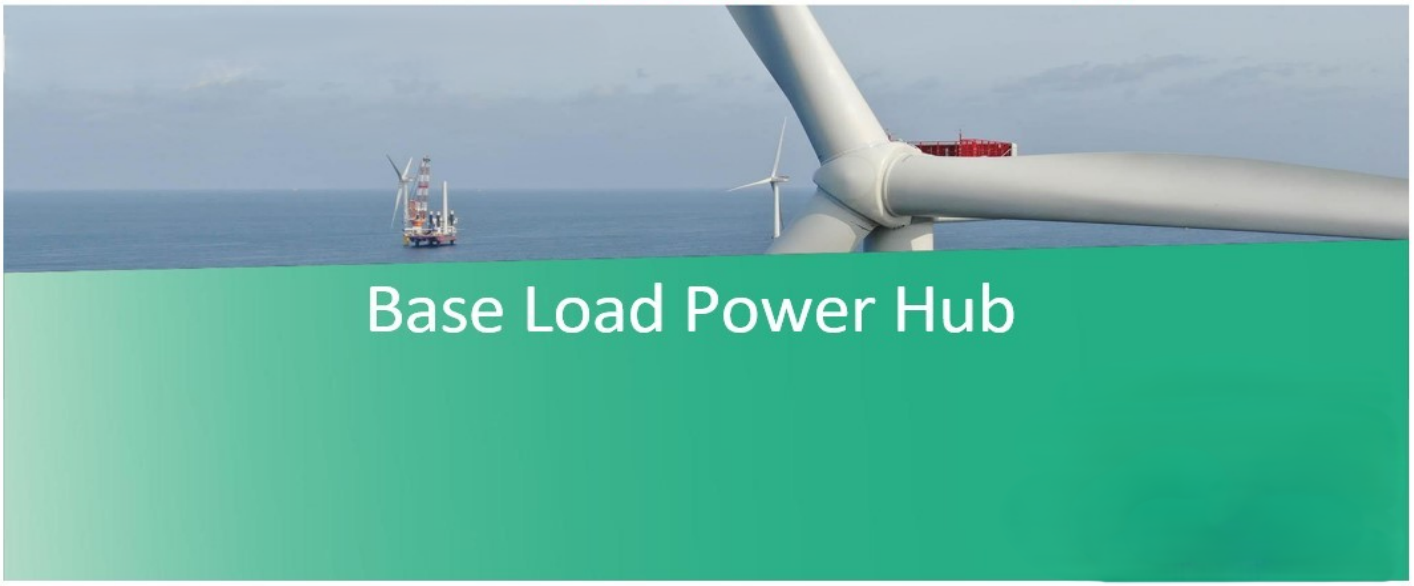
CROSSWIND

ROSETTI MARINO

PROVERLIS

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



COMMISSIONING DOSSIER (ONSHORE)

SYSTEM	25 Hydrogen Storage
SUBSYSTEM	25-07 Hydrogen Storage Vessels Header (Inlet)

CROSSWIND

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

COMMISSIONING DOSSIER INDEX

ROSETTI MARINO

Sub System N°:	25-07	**Tick as appropriate**	ONSHORE	OK
Description:	Hydrogen Storage Vessels Header (Inlet)		OFFSHORE	

1. *SUB-SYSTEM DEFINITION*	OK
1.1 Sub-System Description / Boundary Limit Drawings	
2. *READY FOR OPERATION CERTIFICATE*	OK
2.1 Achievement Of Ready for Operation Certificate (RFO)	
2.2 Exception Punch Lists (per discipline)	
2.3 “As-Commissioned” P&ID’s / SLD’s / D&ID’s / C&E’s	
3. *CONSOLIDATED PUNCH LISTS*	OK
3.1 Cleared and Residual Items (sorted by discipline)	
4. *FUNCTIONAL TESTS SHEETS*	OK
4.1 Electrical functional test sheets index	
4.2 Electrical “As-Commissioned” interconnection diagrams	
4.3 Instrumentation Functional Test Sheets Index	
4.4 Instrumentation “As-Commissioned” interconnection diagrams	
4.5 Telecommunication Functional Test Sheets Index	
4.6 Telecommunication “As-Commissioned” I.C.D. / TSLD’s	
5. *SITE / OPERATIONAL:*	OK
5.1 Operational Test Procedure	
5.2 Operational Test Certificates	
6. *PIPING AND VESSEL PREPARATION*	NA
6.1 Final Mechanical / Vessel Inspection Checks Index	
6.2 Leak Test / Drying / Inerting Test Sheets Index	
6.3 Chemical Loading & First Fill records Index	
6.4 Chemical Cleaning Reports and Records Index	
6.5 Lubrication Schedule	
7. *VENDORS*	NA
7.1 Vendor Package Summary Index	
7.2 SAT Procedure with associated punch list and reference (Front Page)	
7.3 Vendor Spares & Special Tools lists references	
7.4 Vendor Data / Operations / Maintenance Manuals References	
8. *LIST OF MODIFICATIONS*	NA
8.1 List of changes initiated during the WORKSITE Commissioning phase pertaining to the relevant Sub-System will be incorporated in this section with relevant references (with location and position of blinds/spades, isolation LO & LC valves, list of electrical isolation status, and remaining inhibits and overrides)	
9. *SUPPORTING DOCUMENTS*	NA
9.1 Other supporting documents (as applicable)	

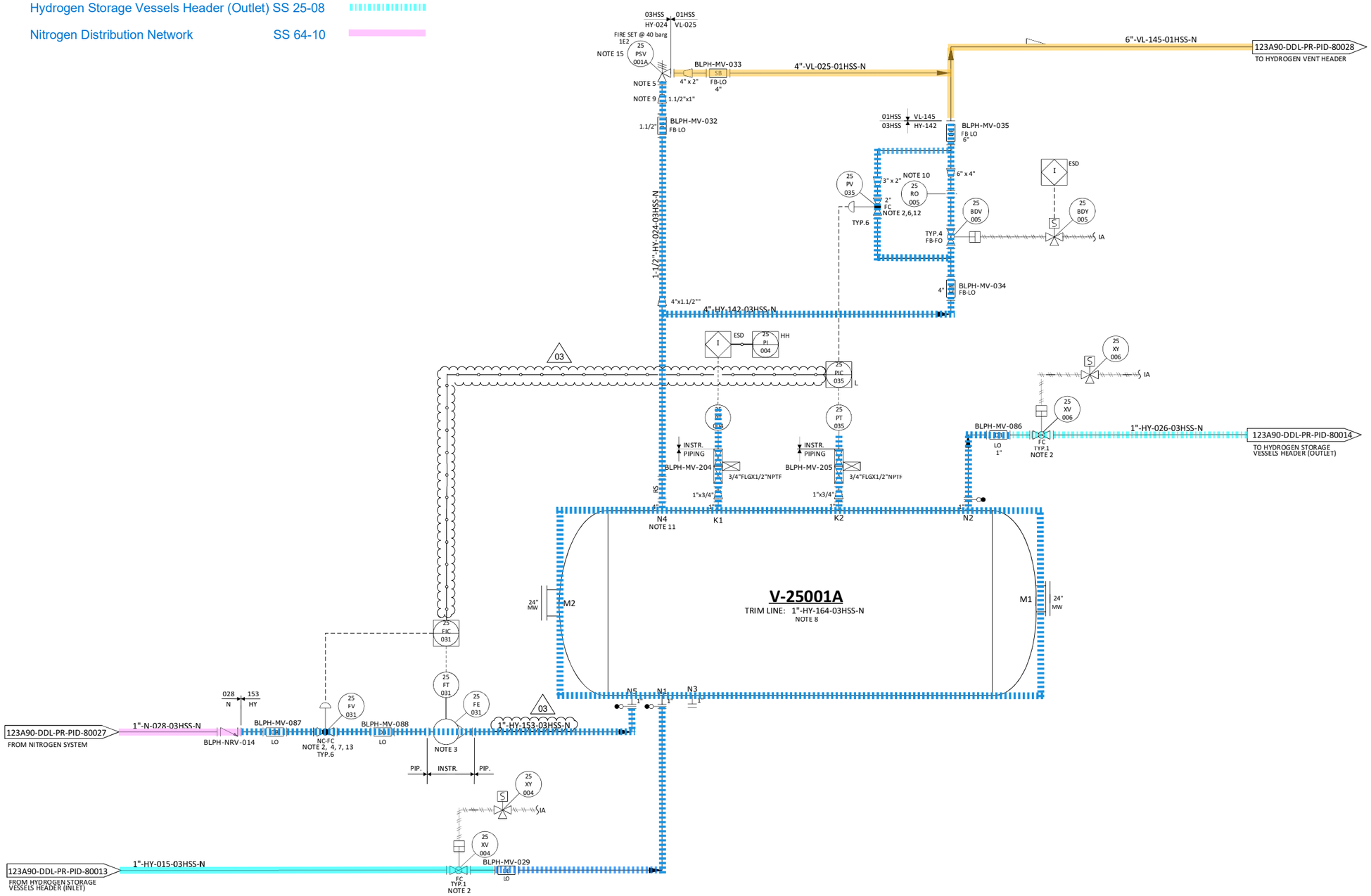
	Contractor Commissioning Site Leader	Company Commissioning Site Leader
Name	Anthony Iveson	Martin Taylor
Date	2025-05-16	2025-05-20
Signature	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-16T15:39:42.001Z	PROVERLIS Digitaly signed by Martin Taylor 2025-05-20T06:28:20.839Z

Section 1 SUB-SYSTEM DEFINITION

DRAWING_NO. DRAWING_NO.

REV. REV

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



NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL A

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80015		SHEET 001 / REV. 03

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Hydrogen Storage Vessel B (V-25001B) SS 25-02

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (inlet) SS 25-07

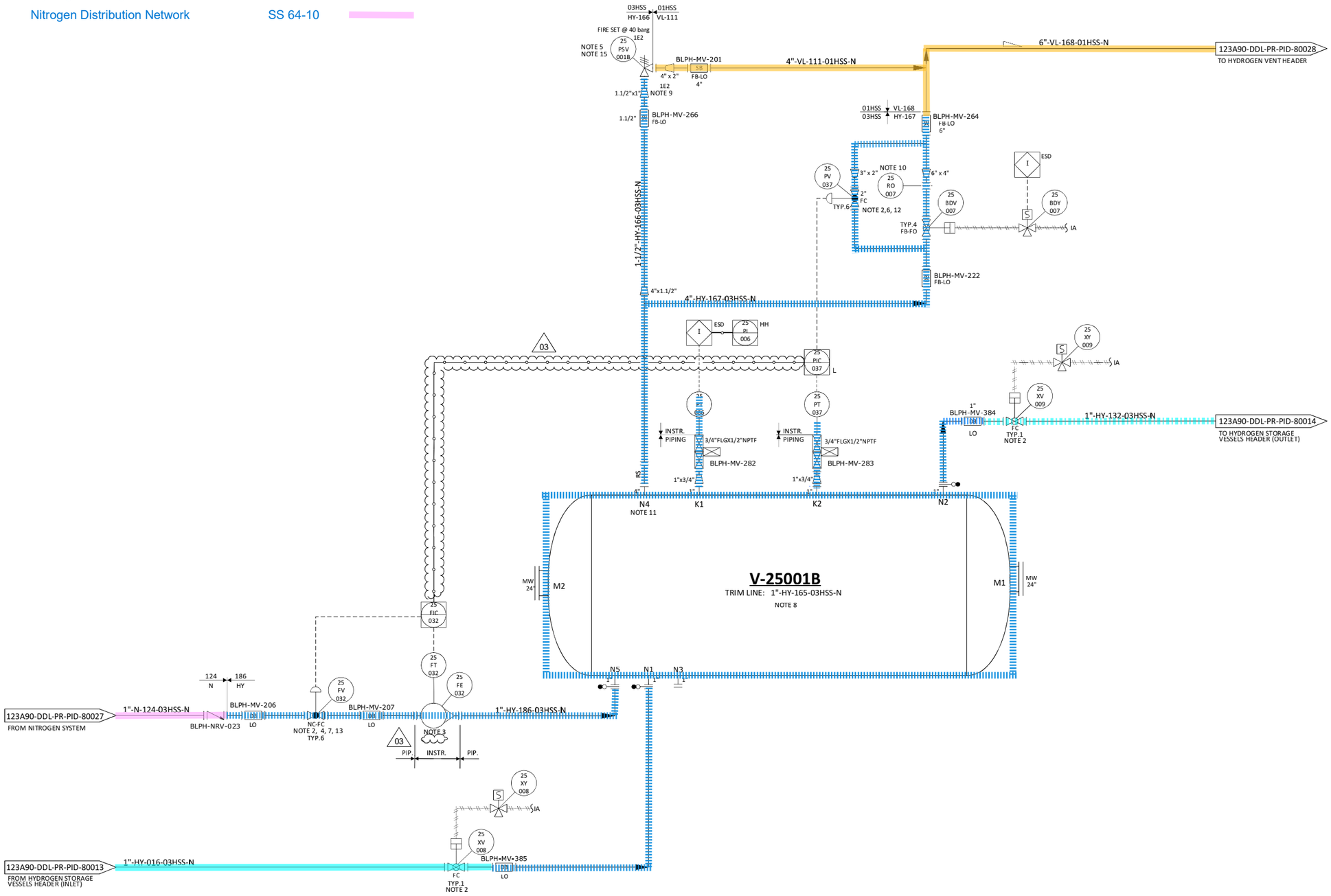
Hydrogen Storage Vessels Header (Outlet) SS 25-08

Nitrogen Distribution Network SS 64-10

V-25001 B

HYDROGEN STORAGE VESSEL

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



NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL B

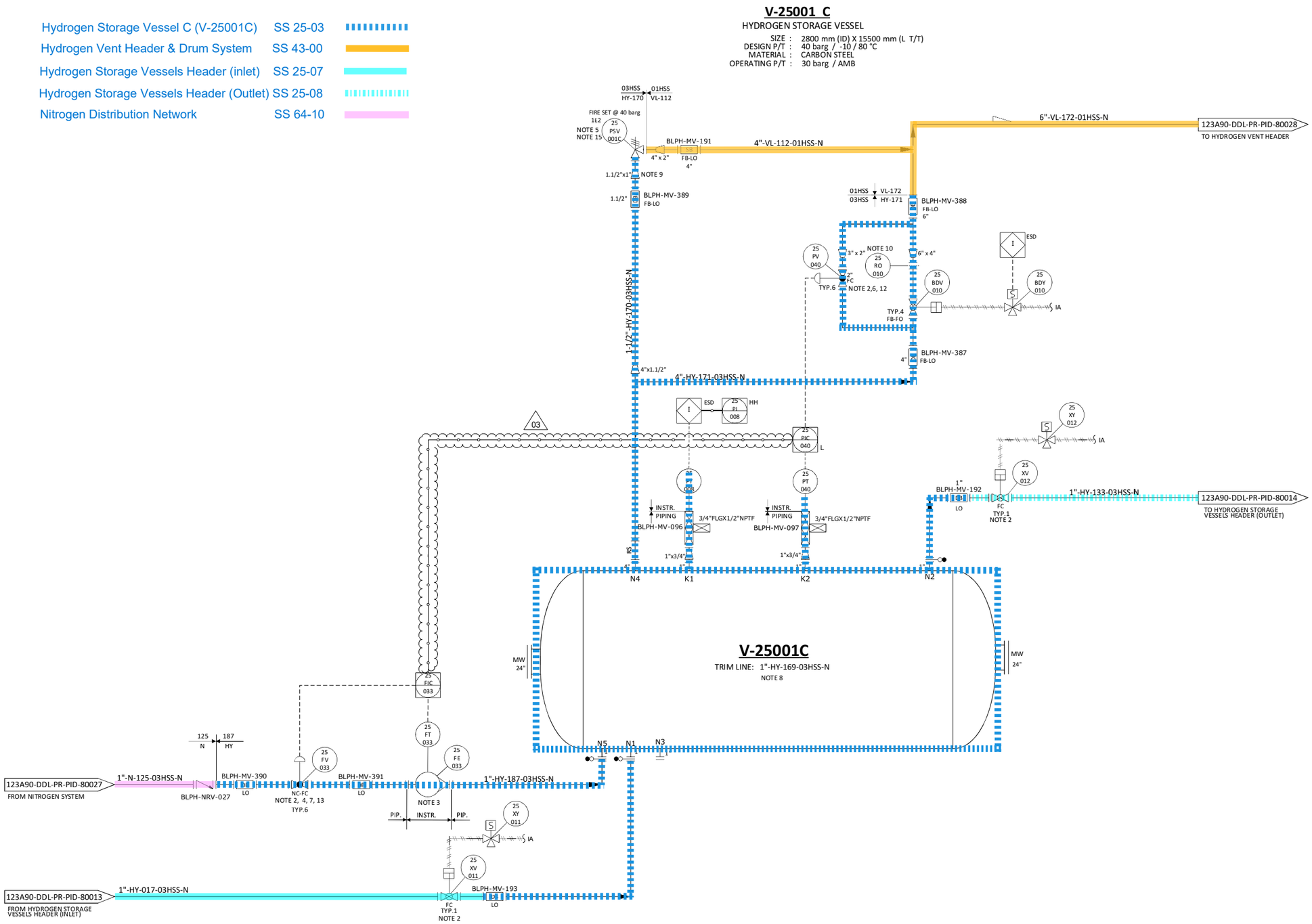
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DRAWN	CHECKED	APPROVED	DATE
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File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

Hydrogen Storage Vessel C (V-25001C)	SS 25-03
Hydrogen Vent Header & Drum System	SS 43-00
Hydrogen Storage Vessels Header (inlet)	SS 25-07
Hydrogen Storage Vessels Header (Outlet)	SS 25-08
Nitrogen Distribution Network	SS 64-10



NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL C

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE NTS
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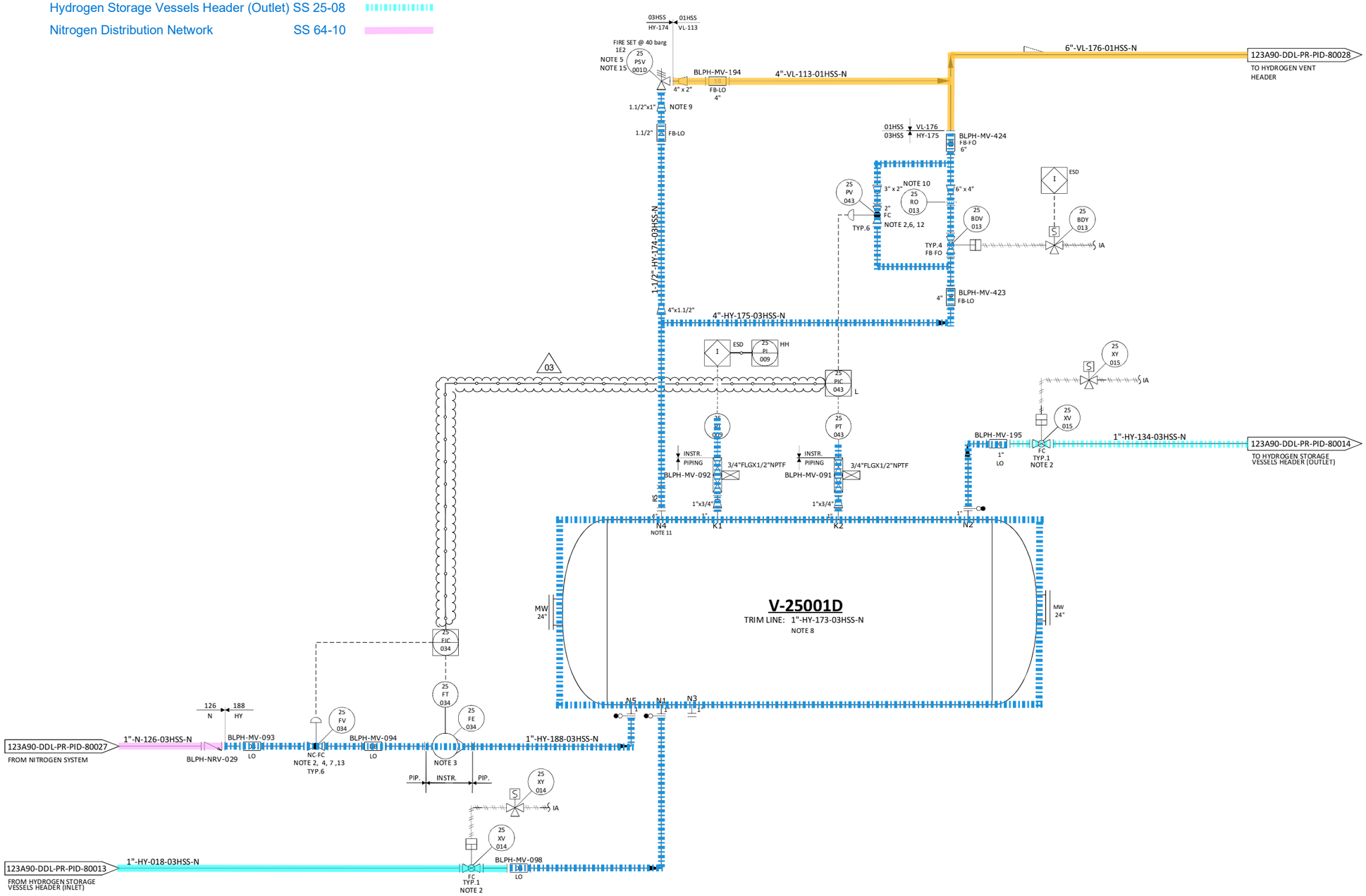
Hydrogen Storage Vessel D (V-25001D) SS 25-04

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (inlet) SS 25-07

Hydrogen Storage Vessels Header (Outlet) SS 25-08

Nitrogen Distribution Network SS 64-10



NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL D

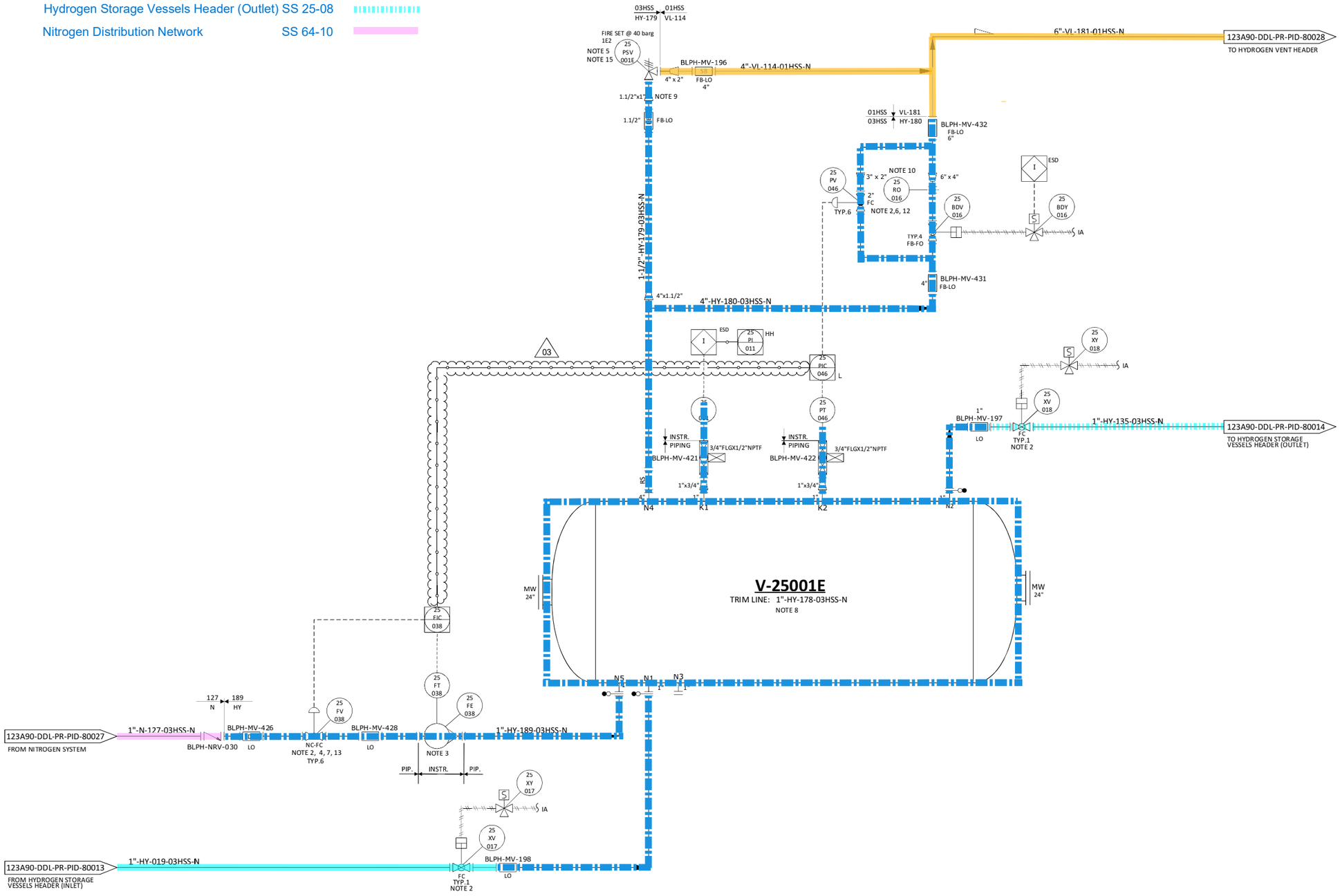
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File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV

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



NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL E

CONTRACT NO./TITLE CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE NTS
DRAWN	CHECKED	APPROVED	DATE
A1	DRAWING NO. 123A90-DDL-PR-PID-80019		SHEET 001 / REV. 03

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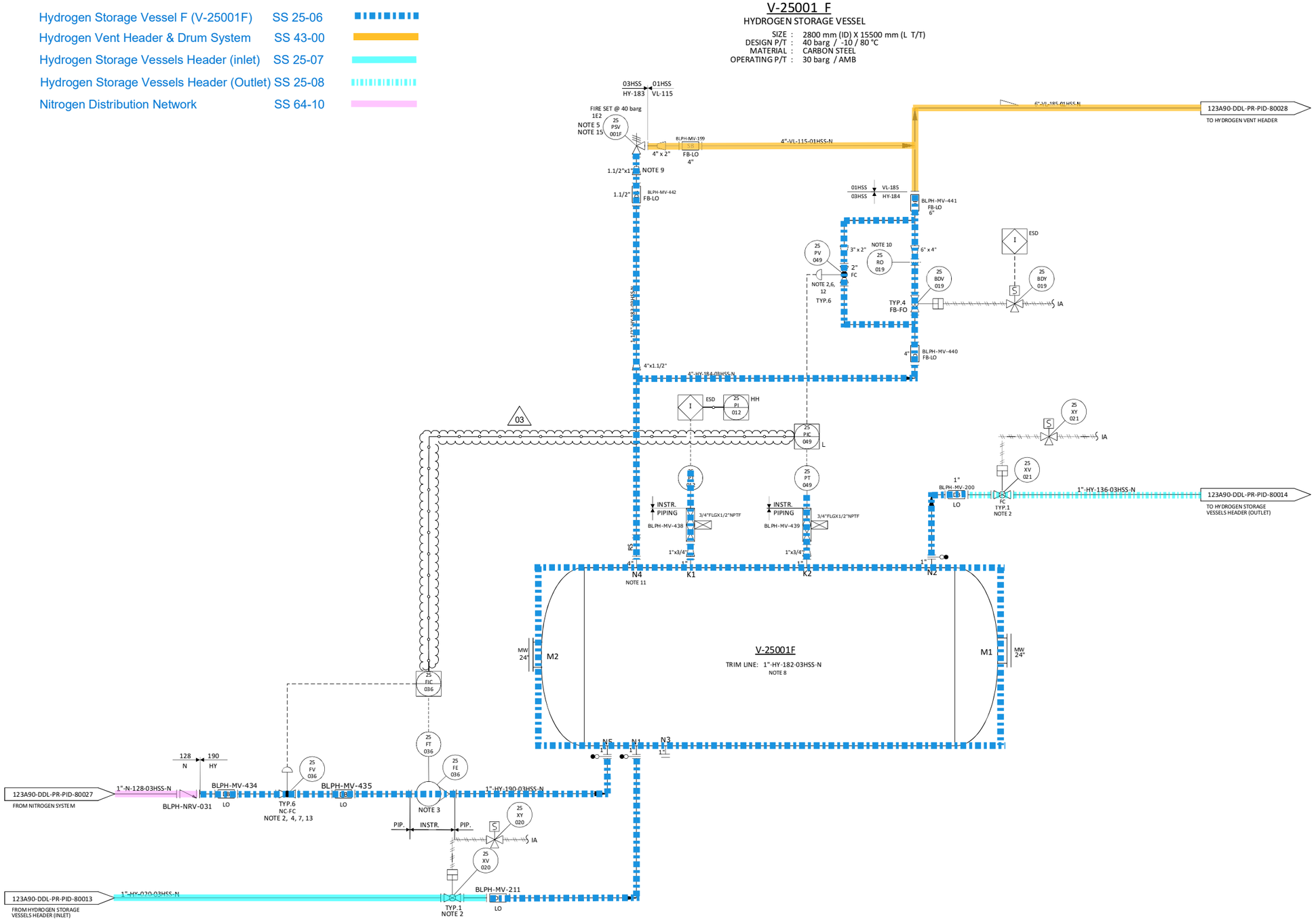
Hydrogen Storage Vessel F (V-25001F) SS 25-06

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (inlet) SS 25-07

Hydrogen Storage Vessels Header (Outlet) SS 25-08

Nitrogen Distribution Network SS 64-10



NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL F

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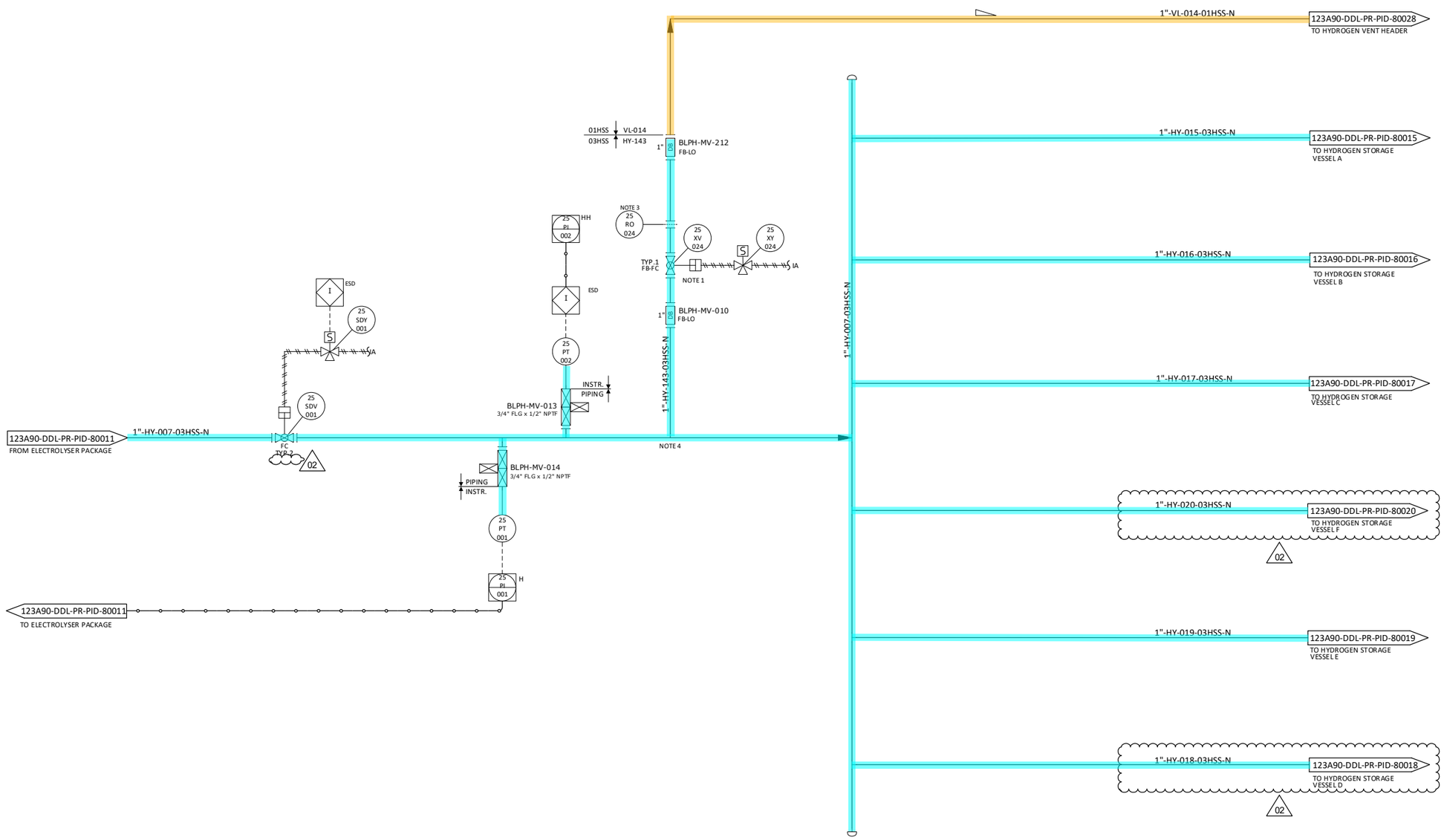
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DRAWING NO. DRAWING_NO.

REV. REV

Hydrogen Vent Header & Drum System SS 43-00

Hydrogen Storage Vessels Header (Inlet) SS 25-07



NOTES

1. TIGHT SHUT OFF XV.
2. DELETED. 02
3. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
4. PIPING CONNECTION TO 25-XV-003 SHALL BE AS CLOSE TO THE MANIFOLD AS POSSIBLE, TO ENSURE COMPLETE PURGING OF FEED LINE.

HOLDS

1. DELETED.

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

CROSSWIND

ROSETTI MARINO

TITLE :

BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSELS HEADER (INLET)

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

A1	DRAWING NO.	SHEET	REV.
	123A90-DDL-PR-PID-80013	001	02

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

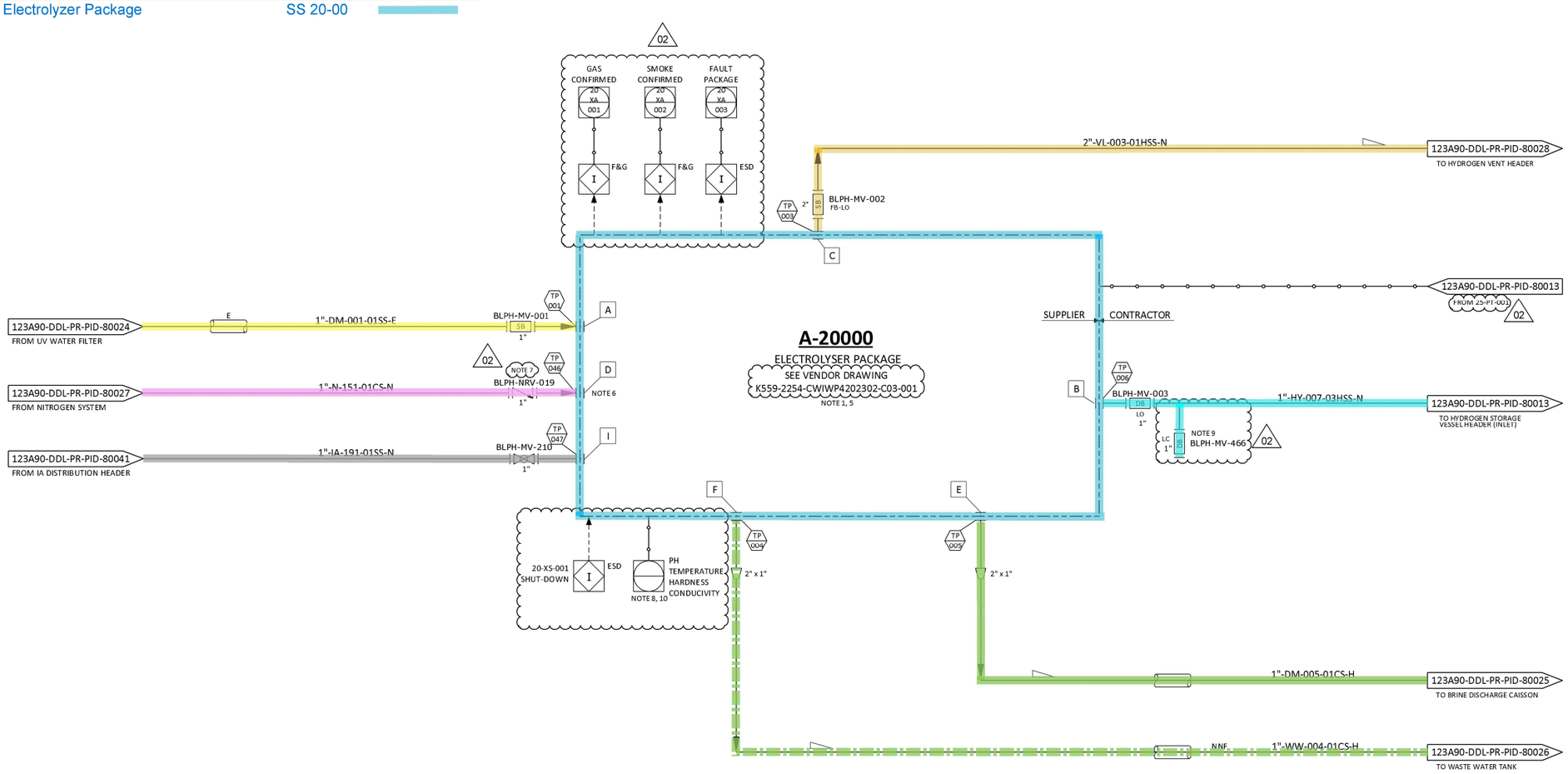
REV. REV

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

A-20000

ELECTROLYSER PACKAGE

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



NOTES

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

02

HOLDS

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
ELECTROLYSER PACKAGE

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

File Name : FILE_NAME

Section 2 READY FOR OPERATION

Section 2.1 Achievement Of Ready for Operation Certificate (RFO)

123A90 - HOLLANDSE KUST NOORD WIND PARK
BLPH Project

Ready For Operation (RFO) Certificate

COMPLETE	●	PARTIAL	

Revision:	2		Issued on:	2025-05-09	

System:	25	/	Hydrogen Storage

SubSystem:	25-07	/	Hydrogen Storage Vessels Header (Inlet)

We hereby confirm that all Mechanical Completion (MC) and Pre-Commissioning/Commissioning (Pre-Comm./Comm.) activities for the above-mentioned System/Sub-System have been successfully completed in accordance with project specifications, relevant standards and contractual requirements. The System/Sub-System has been tested and verified to ensure readiness for operation. Issuance of this Certificate shall not release CONTRACTOR from any of his obligations, responsibilities or liabilities under the CONTRACT.

Mechanical Completion: All required MC activities have been completed and approved
Pre-Commissioning & Commissioning: All required Pre-Comm. and Comm. activities and OTPs have been completed and approved (Status Index attached)
Punch List: All Punch items categorized as A and B have been cleared (PL report attached)
Documentation: As-built documentation and Commissioning dossier has been completed, reviewed and approved

PUNCH LIST	PENDING POINTS
Note: All Category "A" and "B" Items must be cleared prior to issuance of the Ready For Operation (RFO) Certificate	B: 39

REMARKS:

	CONTRACTOR Commissioning Manager	COMPANY Commissioning Lead
Name	Anthony Iveson	Gerry McCann
Date	2025-05-12	2025-05-16
Signature	PROVERLIS Digitaly signed by Anthony Iveson 2025-05-12T08:43:52.223Z	PROVERLIS Digitaly signed by Gerry McCann 2025-05-16T08:03:54.095Z

CROSSWIND

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Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 25-07 & process: COMM

Instrumental	25-07 Hydrogen Storage Vessels Header (Inlet)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
25-PT-001	Pressure Transmitter - Hyrogen to Vessels Inlet Header	ONSHORE	C10003161	FJ01A	100	2025-02-21	RFO 2
25-PT-002	Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down	ONSHORE	C10003162	FJ01A	100	2025-02-21	RFO 2
25-SDV-001	On/Off Valve - Hyrogen to Vessels Inlet Header Shut-Down	ONSHORE	C10003209	FJ01V	100	2025-03-26	RFO 2
25-XV-004	On-Off Actuated Ball Valve - Vessel V-25001A Hydrogen Inlet	ONSHORE	C10003211	FJ01V	100	2025-02-21	RFO 2
25-XV-008	On-Off Actuated Ball Valve - Vessel V-25001B Hydrogen Inlet	ONSHORE	C10003213	FJ01V	100	2025-02-21	RFO 2
25-XV-011	On/Off Valve - Vessel V-25001C Hydrogen Inlet	ONSHORE	C10003215	FJ01V	100	2025-02-21	RFO 2
25-XV-014	On/Off Valve - Vessel V-25001D Hydrogen Inlet	ONSHORE	C10003217	FJ01V	100	2025-02-21	RFO 2
25-XV-017	On/Off Valve - Vessel V-25001E Hydrogen Inlet	ONSHORE	C10003219	FJ01V	100	2025-02-21	RFO 2
25-XV-020	On/Off Valve - Vessel V-25001F Hydrogen Inlet	ONSHORE	C10003221	FJ01V	100	2025-02-21	RFO 2
25-XV-024	On/Off Valve - Hyrogen to Vessels Inlet Header Vent System	ONSHORE	C10003223	FJ01V	100	2025-02-21	RFO 2

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 25-07 & process: COMM

Miscellaneous	25-07 Hydrogen Storage Vessels Header (Inlet)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
123A90-PML-COM-PRO-03041	OTP -Hydrogen Storage and Venting Systems	ONSHORE	C10004613	5300	100	2025-04-26	-
		OFFSHORE	C10004937	5300	0	-	-

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003312	A	25-07-TP-007 C10003278	BLPH-MV-014 not istalled	.		AMancini 2025-01-30	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003313	A	25-07-TP-007 C10003278	BLPH-MV-013 not installed	.		AMancini 2025-01-30	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003112	B	25-07-TP-007 C10003277	For all supports S-211 the gap, the isolation rubber, the PTFE and the nuts shall be checked during the reinstatement phase.	.		KAlbonetti 2025-01-21	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003113	B	25-07-TP-007 C10003277	Point n.4 of the ITR has not been checked due the fact that all valves have been removed all the alignment to terminal points are uncheckable.	.		KAlbonetti 2025-01-21	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003314	B	25-07-TP-007 C10003278	Support PS-03071.1 not installed	.		AMancini 2025-01-30	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30003523	B	25-07-TP-007 C10003279	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003528	B	25-07-TP-007 C10003279	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003579	B	25-07-TP-068 C10004793	All support and standard will be check during reinstatement phase	.		LNovaga 2025-02-06	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004108	B	25-07-TP-068 C10004794	The isometric is different from the field, produce a mark up. Support PS-02136.1 is missing. There is a S-211 between EW7 and EW8, distance from	.		LNovaga 2025-02-25			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	25	Hydrogen Storage
SUBSYSTEM	25-07	Hydrogen Storage Vessels Header (Inlet)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004109	B	25-07-TP-068 C10004794	The hole on the ptfe on new support (see PL C30004108) is larger than the diameter of the washer.	.		LNovaga 2025-02-25	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004166	B	25-07-TP-068 C10004795	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-27	2025-03-21	LNovaga 2025-03-21	2025-03-21

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003280	B	C-25-XY-011/00 -JE-13002 C10000120	The bending radius is not with in the specified limits , is not fix with AISI cable ties.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003298	B	C-25-XY-017/00 -JE-13002 C10000122	The cable need a support near the valve 25-XY-017. See attached photo.	.		Gtangianu 2025-01-29	2025-02-08	AAndreani 2025-02-08	2025-02-08
C30003310	B	C-25-XV-024/00 -JE-12005 C10000102	The cable is not support .	.		APolo 2025-01-30	2025-03-05	JKrizanic 2025-03-05	2025-03-05
C30003311	B	C-25-XY-024/00 -JE-13002 C10000124	The cable is not support .	.		APolo 2025-01-30	2025-03-05	JKrizanic 2025-03-05	2025-03-05
C30003565	B	C-25-XV-017/00 -JE-12004 C10000088	The cable is not support .	.		APolo 2025-02-05	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003567	B	C-25-SDY-001/0 0-JE-23002 C10000176	the cable installed is temporary. To be replaced	.		APolo 2025-02-05	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30003602	B	C-25-PT-002/00 -JE-21002 C10000136	Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.	.		APolo 2025-02-08	2025-02-22	JKrizanic 2025-02-22	2025-02-22
C30003606	B	C-25-PT-001/00 -JE-11003 C10000048	Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.	.		APolo 2025-02-08	2025-03-01	AAndreani 2025-03-01	2025-03-01
C30003607	B	C-25-PT-001/00 -JE-11003 C10000048	Missing cable tag SS , near JB 00-JE-11003	.		APolo 2025-02-08	2025-02-21	APolo 2025-02-21	2025-02-21

CROSSWIND

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Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003287	B	25-XY-004 C10001714	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003288	B	25-XY-008 C10001716	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003293	B	25-ZSHL-008 C10001729	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003294	B	25-ZSHL-014 C10001733	document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.		Gtangianu 2025-01-29			
C30003295	B	25-ZSHL-011 C10001731	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003297	B	25-ZSHL-004 C10001727	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003299	B	25-ZSHL-020 C10001737	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.		Gtangianu 2025-01-29			
C30003300	B	25-XY-014 C10001720	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.See attached photo.	.		Gtangianu 2025-01-29			
C30003301	B	25-XY-017 C10001722	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.		Gtangianu 2025-01-29			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003302	B	25-XY-020 C10001724	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.		Gtangianu 2025-01-29			
C30003305	B	25-XY-014 C10001720	Missing tag plate SS on the solenoid valve.(25-XY-014).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003306	B	25-XY-017 C10001722	Missing tag plate SS on the solenoid valve.(25-XY-017).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003307	B	25-XY-020 C10001724	Missing tag plate SS on the solenoid valve.(25-XY-020).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003324	B	25-ZSHL-024 C10002039	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-30			
C30003325	B	25-XV-004 C10001590	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003326	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufactuer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003327	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30003328	B	25-XV-008 C10001592	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003329	B	25-XV-008 C10001592	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003330	B	25-XV-011 C10001594	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003331	B	25-XV-011 C10001594	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003332	B	25-XV-014 C10001596	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003333	B	25-XV-014 C10001596	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003334	B	25-XV-017 C10001598	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003335	B	25-XV-017 C10001598	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003336	B	25-XV-020 C10001600	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003337	B	25-XV-020 C10001600	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003338	B	25-ZSHL-001 C10001726	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-30			
C30003365	B	25-PCV-004 C10001755	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-30			
C30003367	B	25-PCV-004 C10001755	Equipment tag plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003371	B	25-PCV-004 C10001755	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003372	B	25-PCV-008 C10001757	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003375	B	25-PCV-008 C10001757	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003377	B	25-PCV-008 C10001757	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003378	B	25-PCV-011 C10001759	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003379	B	25-PCV-011 C10001759	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003380	B	25-PCV-011 C10001759	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003381	B	25-PCV-014 C10001761	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003382	B	25-PCV-014 C10001761	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003383	B	25-PCV-014 C10001761	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003385	B	25-PCV-017 C10001763	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003387	B	25-PCV-017 C10001763	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003389	B	25-PCV-017 C10001763	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003393	B	25-PCV-020 C10001765	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003394	B	25-PCV-020 C10001765	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003395	B	25-PCV-020 C10001765	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003396	B	25-PCV-004 C10001755	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30003407	B	25-XV-024 C10001602	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-22	LNovaga 2025-04-22	2025-04-22
C30003408	B	25-XV-024 C10001602	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			
C30003409	B	25-PCV-024 C10002040	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-31			
C30003410	B	25-PCV-024 C10002040	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-31	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003411	B	25-PCV-024 C10002040	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003412	B	25-SDV-001 C10001588	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003413	B	25-SDV-001 C10001588	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003414	B	25-XY-024 C10002038	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-31	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003415	B	25-XY-024 C10002038	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-31			
C30003429	B	25-PCV-001 C10001754	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-31			
C30003431	B	25-PCV-001 C10001754	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003433	B	25-PCV-001 C10001754	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-31	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003436	B	25-PG -004 C10004819	Equipment Atex label is missing	.		Lmussi 2025-01-31	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003437	B	25-PG -004 C10004819	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003440	B	25-PG -008 C10004821	Equipment Atex label is missing	.		Lmussi 2025-01-31	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003441	B	25-PG -008 C10004821	Equipment tag is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003442	B	25-PG -011 C10004823	Equipment ATEX label is missing	.		Lmussi 2025-01-31	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003443	B	25-PG -011 C10004823	Equipment tag is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003451	B	25-PG -008 C10004821	Breathing valve is missing	.		Lmussi 2025-02-01	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30003452	B	25-PG -014 C10004825	Equipment tag is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003453	B	25-PG -014 C10004825	Equipment Atex label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003454	B	25-PG -017 C10004827	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003455	B	25-PG -017 C10004827	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003456	B	25-PG -020 C10004829	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003457	B	25-PG -020 C10004829	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003458	B	25-PG -024 C10004831	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003459	B	25-PG -024 C10004831	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003460	B	25-PG-001 C10004846	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003461	B	25-PG-001 C10004846	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003470	B	25-PSV-008 C10004835	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003471	B	25-PSV-008 C10004835	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003472	B	25-PSV-008 C10004835	ATEX label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003473	B	25-PSV-008 C10004835	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003474	B	25-PSV-011 C10004837	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003475	B	25-PSV-011 C10004837	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003476	B	25-PSV-011 C10004837	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003477	B	25-PSV-011 C10004837	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003478	B	25-PSV-014 C10004839	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003479	B	25-PSV-014 C10004839	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003480	B	25-PSV-014 C10004839	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003481	B	25-PSV-014 C10004839	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003482	B	25-PSV-017 C10004841	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003483	B	25-PSV-017 C10004841	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003484	B	25-PSV-017 C10004841	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003485	B	25-PSV-017 C10004841	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003486	B	25-PSV-020 C10004843	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003487	B	25-PSV-020 C10004843	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003488	B	25-PSV-020 C10004843	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003489	B	25-PSV-020 C10004843	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003490	B	25-PSV-024 C10004845	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003491	B	25-PSV-024 C10004845	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003492	B	25-PSV-024 C10004845	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003493	B	25-PSV-024 C10004845	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003494	B	25-PSV-001 C10004849	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003495	B	25-PSV-001 C10004849	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003496	B	25-PSV-001 C10004849	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003497	B	25-PSV-001 C10004849	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003502	B	25-PSV-004 C10004833	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003503	B	25-PSV-004 C10004833	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003504	B	25-PSV-004 C10004833	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003505	B	25-PSV-004 C10004833	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003563	B	25-XY-011 C10001718	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003564	B	25-XY-011 C10001718	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003566	B	25-ZSHL-017 C10001735	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003568	B	25-SDY-001 C10001712	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003569	B	25-SDY-001 C10001712	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003603	B	25-PT-002 C10001483	Missing the drainage device (tubing).	.		APolo 2025-02-08	2025-02-22	JKrizanic 2025-02-22	2025-02-22
C30003604	B	25-PT-002 C10001483	Missing tag SS , on the instrument.	.		APolo 2025-02-08	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003605	B	25-PT-002 C10001483	Missing traffolyte tag side instrument	.		APolo 2025-02-08	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003608	B	25-PT-001 C10001482	Missing tag SS , on the instrument.	.		APolo 2025-02-08	2025-02-24	AAndreani 2025-02-24	2025-02-24

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003609	B	25-PT-001 C10001482	Missing traffolyte tag side instrument	.		APolo 2025-02-08	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003610	B	25-PT-001 C10001482	Missing the drainage device (tubing)	.		APolo 2025-02-08	2025-03-01	AAndreani 2025-03-01	2025-03-01

Section 2.2 Exception Punch Lists (per discipline)

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003293	B	25-ZSHL-008 C10001729	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003294	B	25-ZSHL-014 C10001733	document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.		Gtangianu 2025-01-29			
C30003295	B	25-ZSHL-011 C10001731	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003297	B	25-ZSHL-004 C10001727	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003299	B	25-ZSHL-020 C10001737	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.		Gtangianu 2025-01-29			
C30003300	B	25-XY-014 C10001720	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.See attached photo.	.		Gtangianu 2025-01-29			
C30003301	B	25-XY-017 C10001722	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.		Gtangianu 2025-01-29			
C30003302	B	25-XY-020 C10001724	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.		Gtangianu 2025-01-29			
C30003324	B	25-ZSHL-024 C10002039	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-30			

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SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003326	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufactuer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003328	B	25-XV-008 C10001592	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003330	B	25-XV-011 C10001594	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003333	B	25-XV-014 C10001596	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003335	B	25-XV-017 C10001598	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003337	B	25-XV-020 C10001600	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003338	B	25-ZSHL-001 C10001726	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-30			
C30003365	B	25-PCV-004 C10001755	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-30			
C30003372	B	25-PCV-008 C10001757	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			

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SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003378	B	25-PCV-011 C10001759	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003381	B	25-PCV-014 C10001761	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003385	B	25-PCV-017 C10001763	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003393	B	25-PCV-020 C10001765	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003408	B	25-XV-024 C10001602	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			
C30003409	B	25-PCV-024 C10002040	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-31			
C30003413	B	25-SDV-001 C10001588	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			
C30003415	B	25-XY-024 C10002038	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-31			
C30003429	B	25-PCV-001 C10001754	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-31			

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SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003473	B	25-PSV-008 C10004835	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003474	B	25-PSV-011 C10004837	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003479	B	25-PSV-014 C10004839	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003485	B	25-PSV-017 C10004841	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003489	B	25-PSV-020 C10004843	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003493	B	25-PSV-024 C10004845	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003497	B	25-PSV-001 C10004849	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003505	B	25-PSV-004 C10004833	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003564	B	25-XY-011 C10001718	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			

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SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX	

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003566	B	25-ZSHL-017 C10001735	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003568	B	25-SDY-001 C10001712	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			

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SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Piping									
CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004108	B	25-07-TP-068 C10004794	The isometric is different from the field, produce a mark up. Support PS-02136.1 is missing. There is a S-211 between EW7 and EW8, distance from	.		LNovaga 2025-02-25			

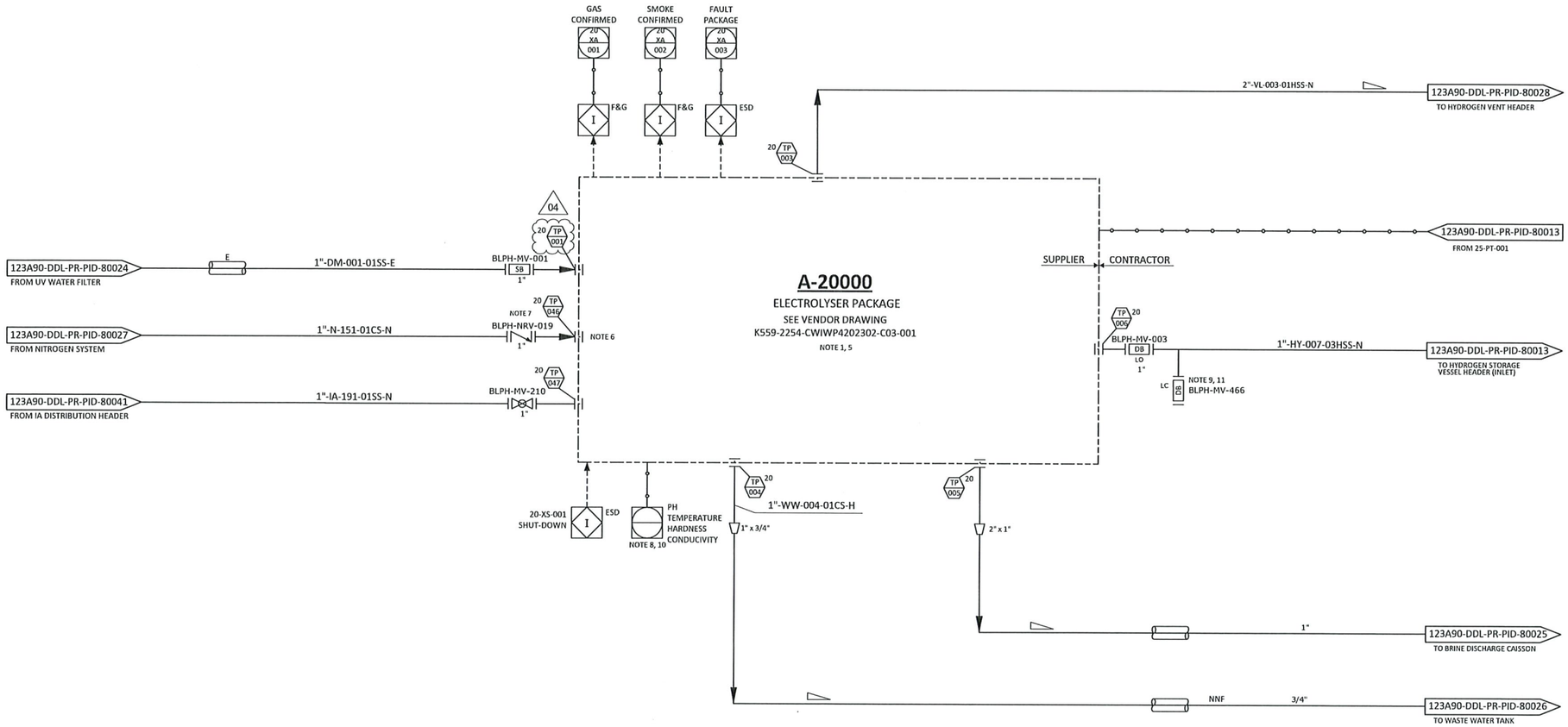
Section 2.3 “As-Commissioned” P&ID's / SLD's / D&ID's / C&E's

DRAWING NO. DRAWING_NO.

REV. REV

A-20000
ELECTROLYSER PACKAGE

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



NOTES

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

HOLDS

As Commissioning
02-04-2025
Giandomenico Del Missier

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
04	16/04/2025	CIM	RZI	CGI	ACCEPTED FOR CONSTRUCTION (AFC)
03	09/09/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
02	12/06/2024	CIM	RZI	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
01	15/02/2024	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)
00	20/10/2023	CIM	RZI	DLO	ISSUE FOR ACCEPTANCE (IFA)

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
ELECTROLYSER PACKAGE

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

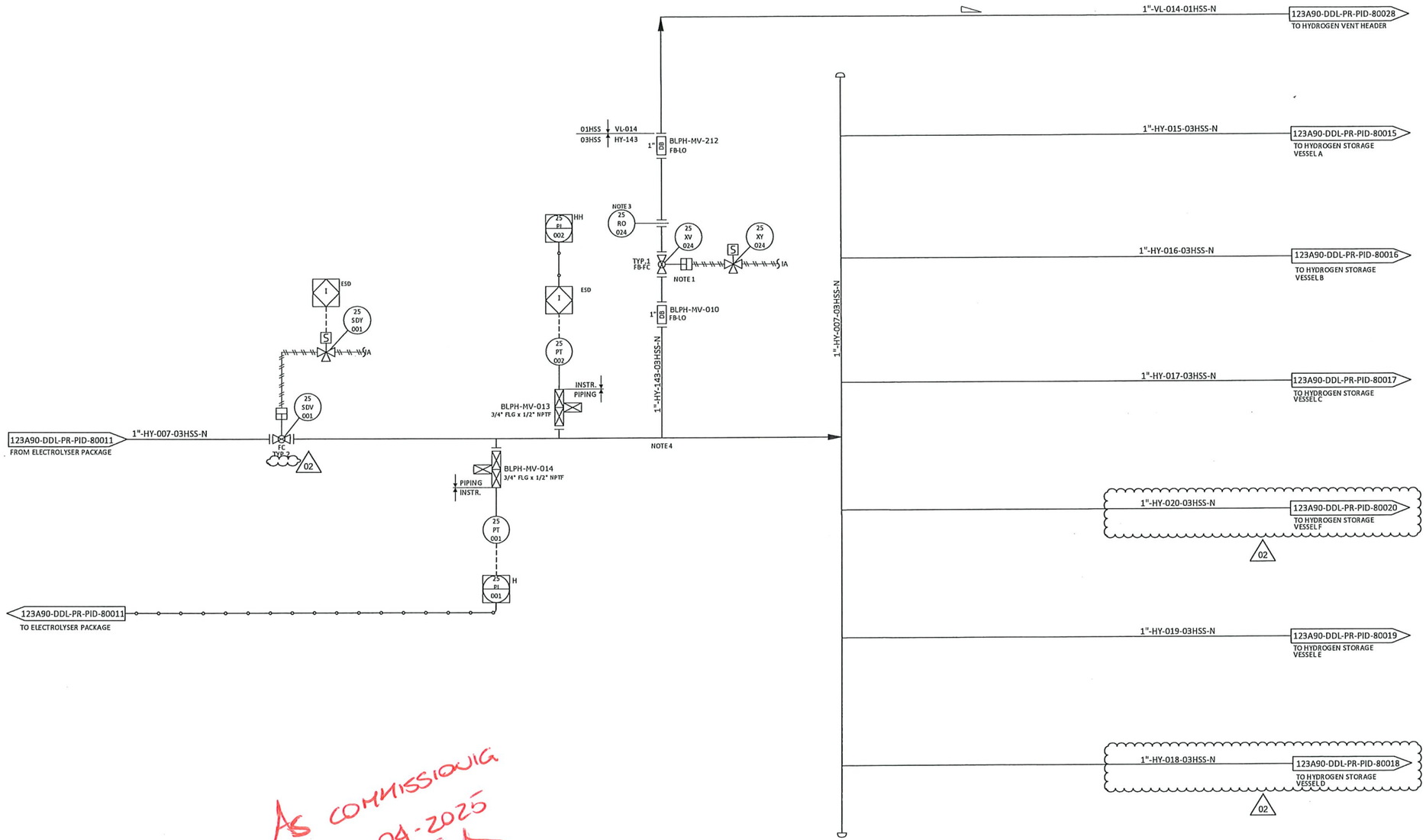
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A1 | DRAWNG NO. 123A90-DDL-PR-PID-80011 | SHEET 001 | REV. 04

File Name : FILE_NAME

DRAWING NO. DRAWING_NO.

REV. REV



NOTES

1. TIGHT SHUT OFF XV.
2. DELETED. 02
3. FOR ORIFICE DIAMETER REFERENCE SHALL BE MADE TO "RELIEF, VENT AND BLOWDOWN REPORT" DOC. N. "123A90-DDL-PR-RE-80030".
4. PIPING CONNECTION TO 25-XV-003 SHALL BE AS CLOSE TO THE MANIFOLD AS POSSIBLE, TO ENSURE COMPLETE PURGING OF FEED LINE.

HOLDS

1. DELETED.

As commissioned
02-04-2025
Giandonato Del Missier

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSELS HEADER (INLET)

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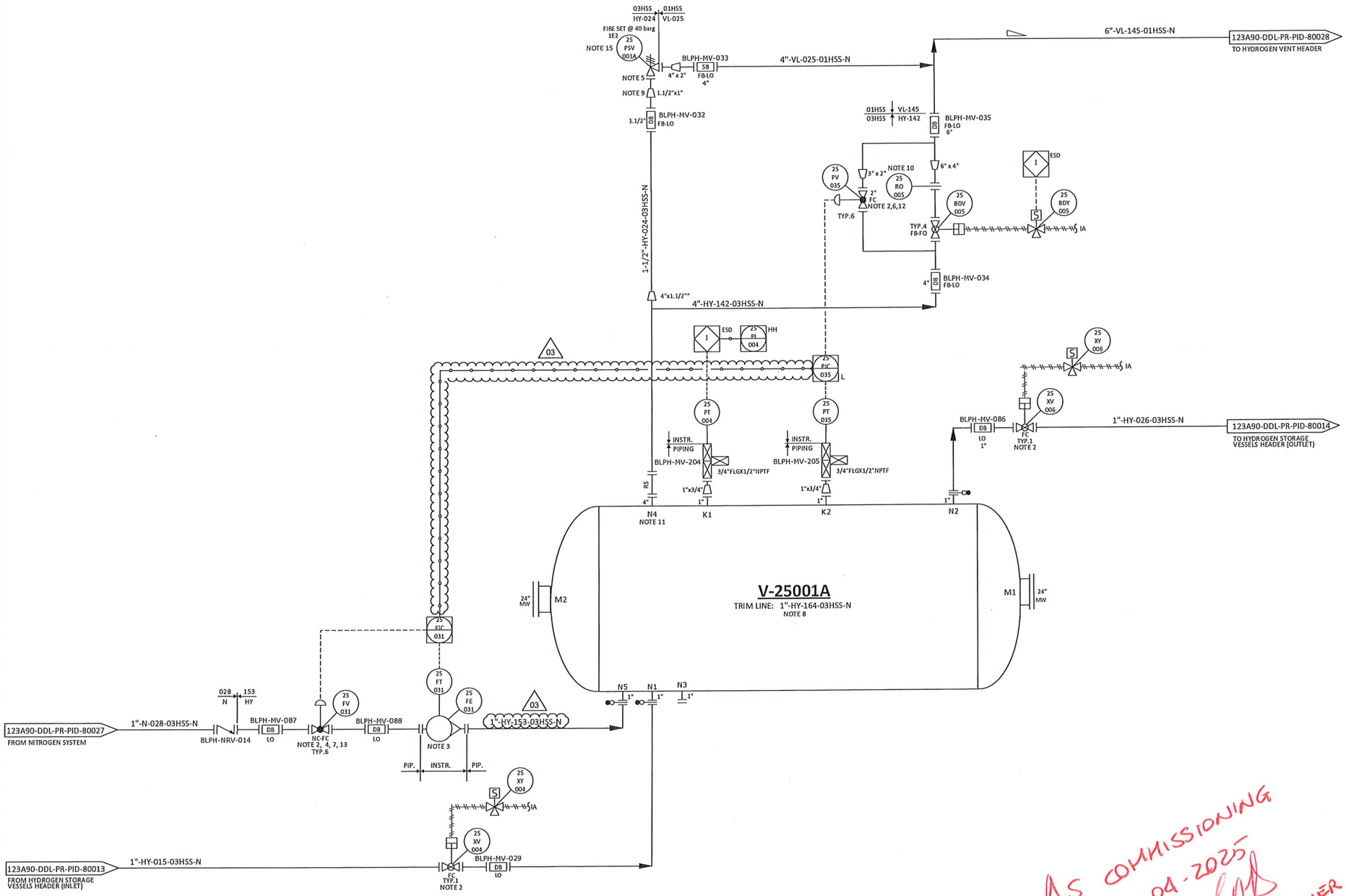
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 A

HYDROGEN STORAGE VESSEL

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



NOTES

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

HOLDS

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

AS COMMISSIONING
02-04-2025
GIANDONATO DEL MISSIER

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL A

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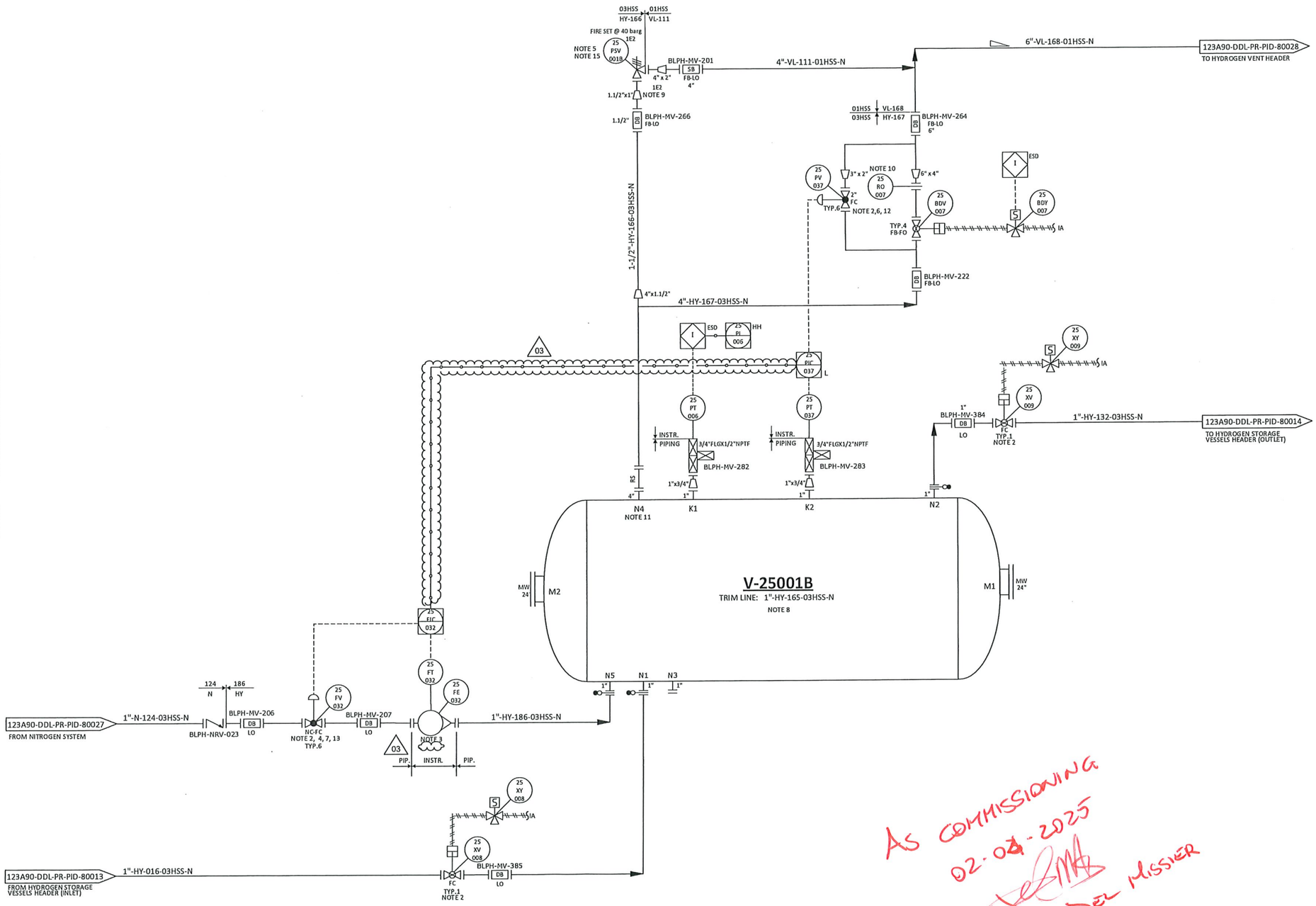
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 B

HYDROGEN STORAGE VESSEL

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



NOTES

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

HOLDS

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

AS COMMISSIONING
02-05-2025
GIANDONATO DEL MISSIER

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL B

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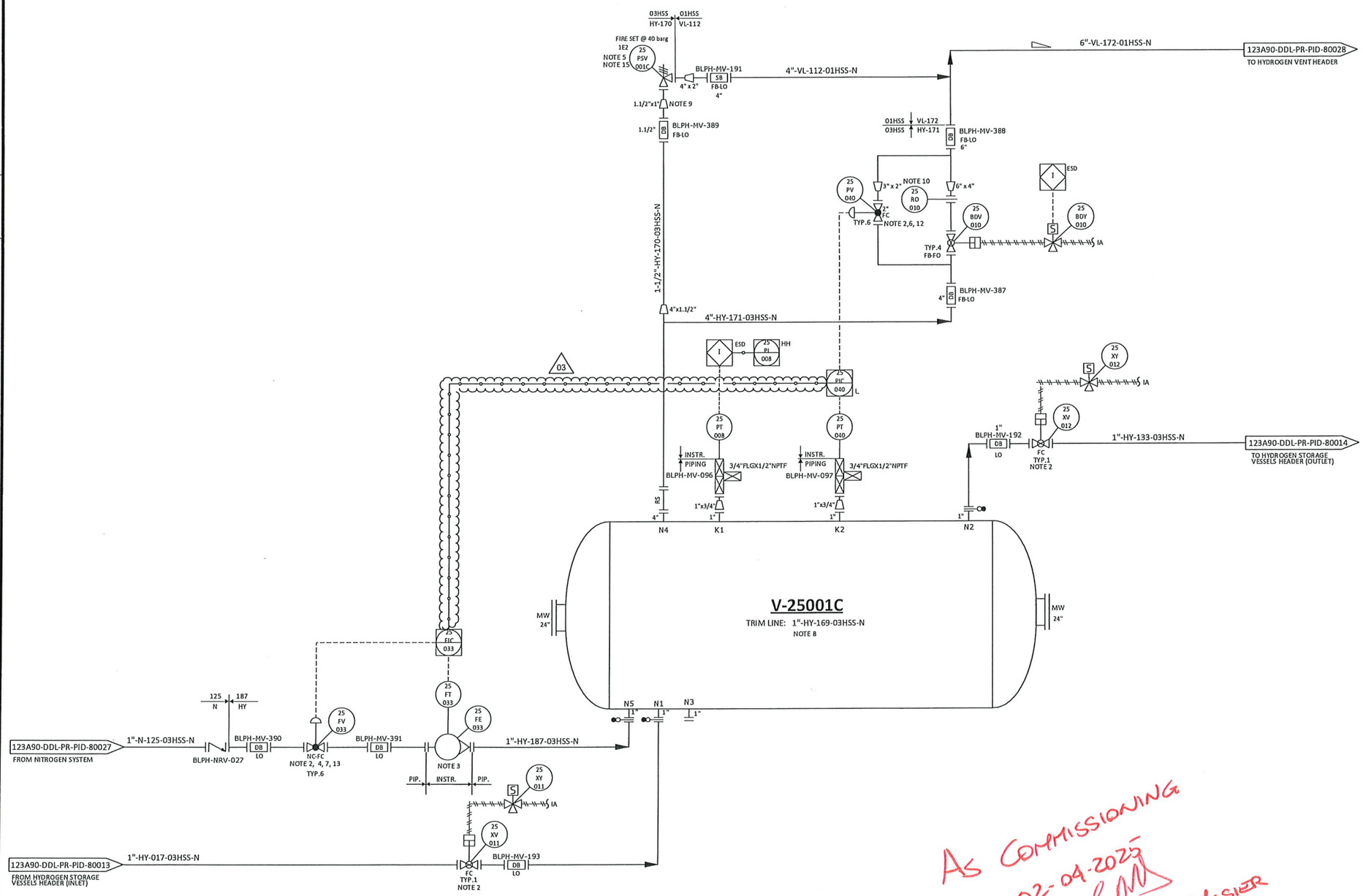
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REV. REV

V-25001_C

HYDROGEN STORAGE VESSEL

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



As Commissioning
02-09-2025
Giandonato De Missier

NOTES

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

HOLDS

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

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL C

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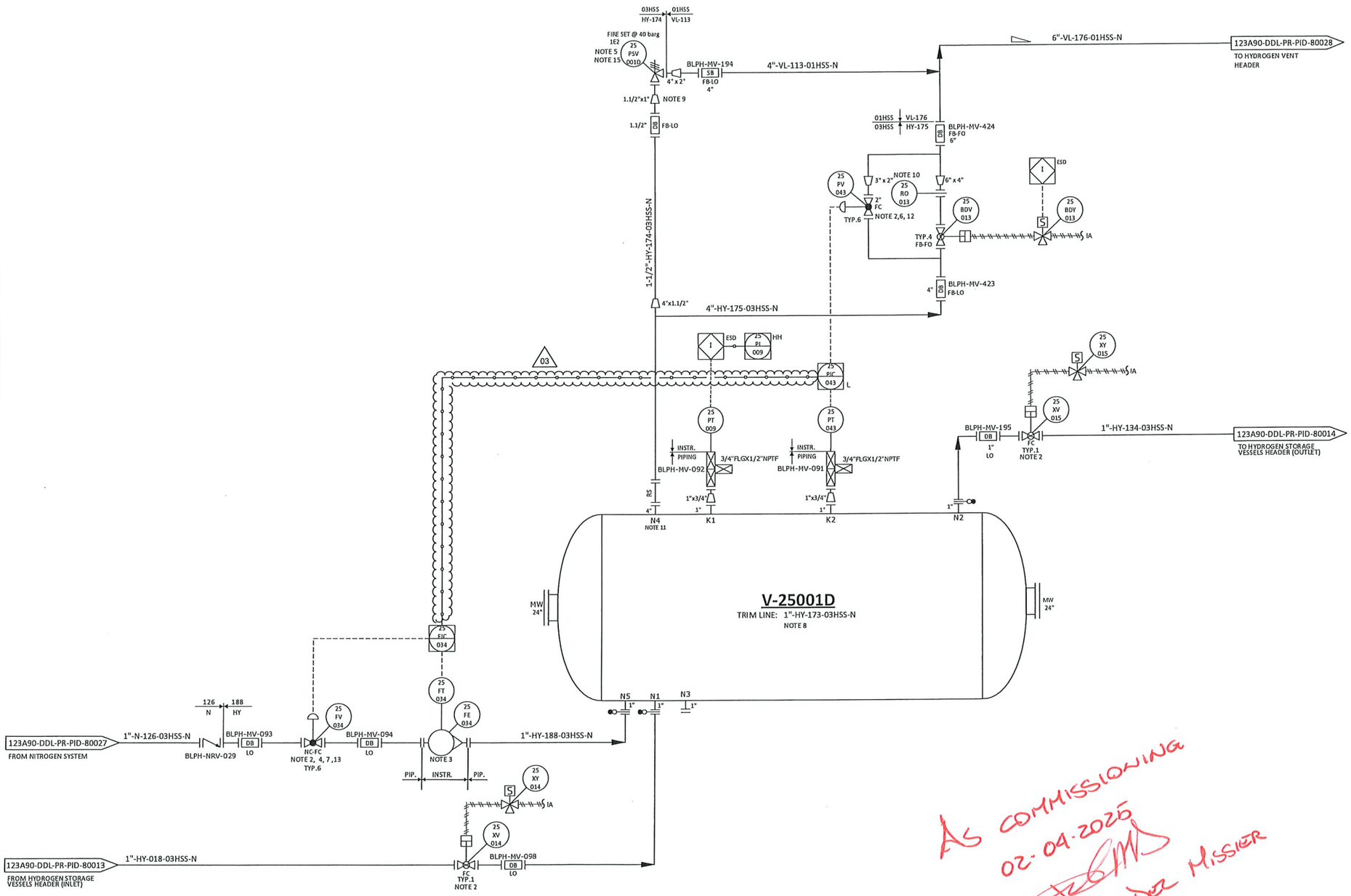
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 D

HYDROGEN STORAGE VESSEL

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



NOTES

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

HOLDS

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

As commissioning
02.09.2026
Giandonato Del Missier

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL D

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

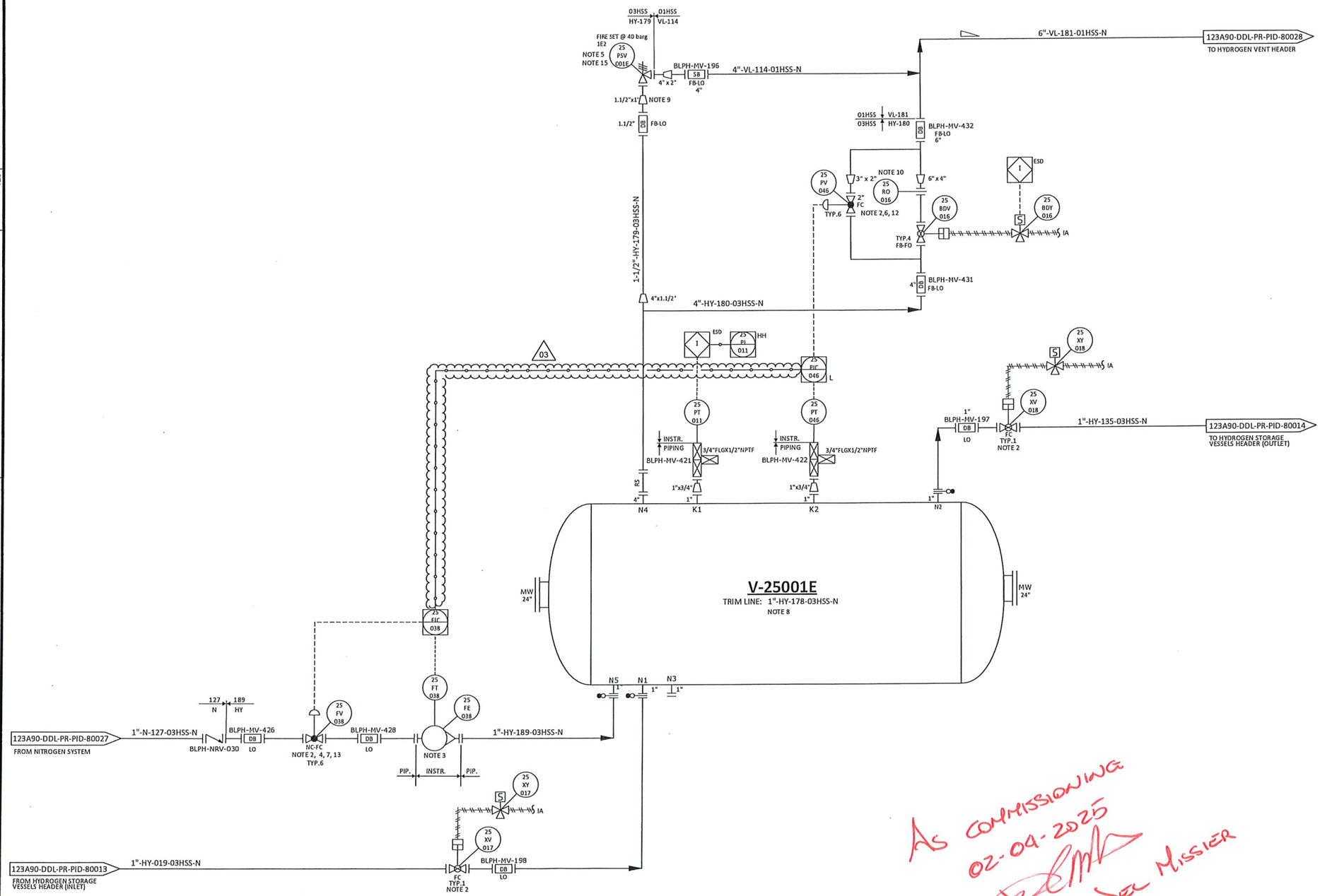
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 E

HYDROGEN STORAGE VESSEL

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



NOTES

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

HOLDS

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

As commissioning
02-09-2025
Giandonato Del Missier

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL E

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

DRAWN | CHECKED | APPROVED | DATE

A1 | DRAWING NO. 123A90-DDL-PR-PID-80019 | SHEET 001 | REV. 03

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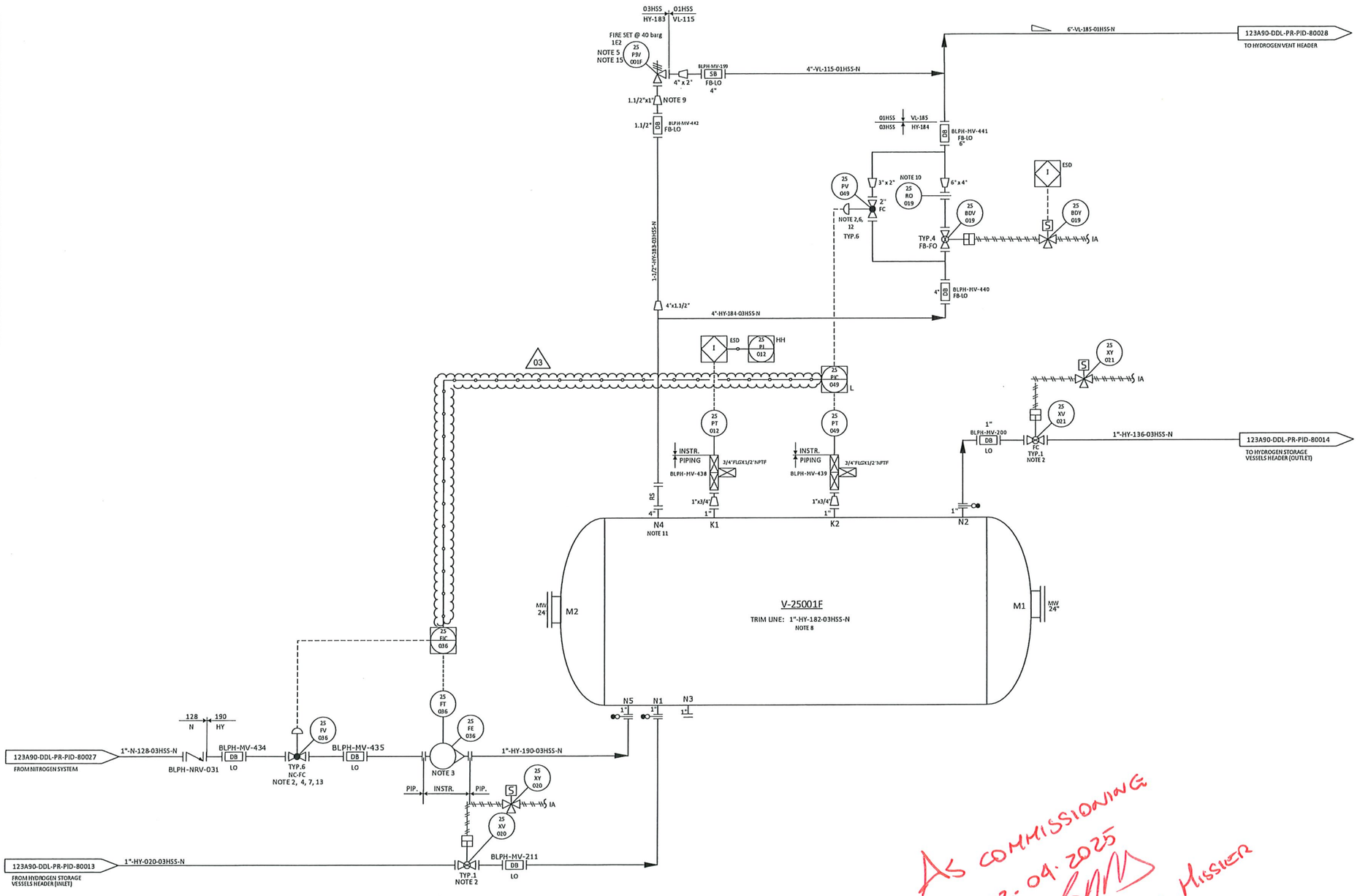
DRAWING NO. DRAWING_NO.

REV. REV

V-25001 F

HYDROGEN STORAGE VESSEL

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



NOTES

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

HOLDS

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

AS COMMISSIONING
02.09.2025
GIANDONATO DE MISSIER

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

CROSSWIND

ROSETTI MARINO

TITLE :
BLPH PIPING AND INSTRUMENTATION DIAGRAM
HYDROGEN STORAGE VESSEL F

CONTRACT NO./TITLE	CW-I-WP4-2023-05/HOLLANDSE KUST NOORD WIND PARK			SCALE	NTS
DRAWN	CHECKED	APPROVED		DATE	
A1	DRAWING NO. 123A90-DDL-PR-PID-80020			SHEET 001	REV. 03

File Name : FILE_NAME

Section 3 CONSOLIDATED PUNCH LISTS

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003312	A	25-07-TP-007 C10003278	BLPH-MV-014 not istalled	.		AMancini 2025-01-30	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003313	A	25-07-TP-007 C10003278	BLPH-MV-013 not installed	.		AMancini 2025-01-30	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003112	B	25-07-TP-007 C10003277	For all supports S-211 the gap, the isolation rubber, the PTFE and the nuts shall be checked during the reinstatement phase.	.		KAlbonetti 2025-01-21	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003113	B	25-07-TP-007 C10003277	Point n.4 of the ITR has not been checked due the fact that all valves have been removed all the alignment to terminal points are uncheckable.	.		KAlbonetti 2025-01-21	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003314	B	25-07-TP-007 C10003278	Support PS-03071.1 not installed	.		AMancini 2025-01-30	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30003523	B	25-07-TP-007 C10003279	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003528	B	25-07-TP-007 C10003279	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003579	B	25-07-TP-068 C10004793	All support and standard will be check during reinstatement phase	.		LNovaga 2025-02-06	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004108	B	25-07-TP-068 C10004794	The isometric is different from the field, produce a mark up. Support PS-02136.1 is missing. There is a S-211 between EW7 and EW8, distance from	.	Changes have been recorded on RLMUs	LNovaga 2025-02-25	RDegliEsposti 2025-06-25	RDegliEsposti 2025-06-25	2025-06-25

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM	25	Hydrogen Storage
SUBSYSTEM	25-07	Hydrogen Storage Vessels Header (Inlet)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004109	B	25-07-TP-068 C10004794	The hole on the ptfe on new support (see PL C30004108) is larger than the diameter of the washer.	.		LNovaga 2025-02-25	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004166	B	25-07-TP-068 C10004795	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-27	2025-03-21	LNovaga 2025-03-21	2025-03-21

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003280	B	C-25-XY-011/00 -JE-13002 C10000120	The bending radius is not with in the specified limits , is not fix with AISI cable ties.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003298	B	C-25-XY-017/00 -JE-13002 C10000122	The cable need a support near the valve 25-XY-017. See attached photo.	.		Gtangianu 2025-01-29	2025-02-08	AAndreani 2025-02-08	2025-02-08
C30003310	B	C-25-XV-024/00 -JE-12005 C10000102	The cable is not support .	.		APolo 2025-01-30	2025-03-05	JKrizanic 2025-03-05	2025-03-05
C30003311	B	C-25-XY-024/00 -JE-13002 C10000124	The cable is not support .	.		APolo 2025-01-30	2025-03-05	JKrizanic 2025-03-05	2025-03-05
C30003565	B	C-25-XV-017/00 -JE-12004 C10000088	The cable is not support .	.		APolo 2025-02-05	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003567	B	C-25-SDY-001/0 0-JE-23002 C10000176	the cable installed is temporary. To be replaced	.		APolo 2025-02-05	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30003602	B	C-25-PT-002/00 -JE-21002 C10000136	Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.	.		APolo 2025-02-08	2025-02-22	JKrizanic 2025-02-22	2025-02-22
C30003606	B	C-25-PT-001/00 -JE-11003 C10000048	Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.	.		APolo 2025-02-08	2025-03-01	AAndreani 2025-03-01	2025-03-01
C30003607	B	C-25-PT-001/00 -JE-11003 C10000048	Missing cable tag SS , near JB 00-JE-11003	.		APolo 2025-02-08	2025-02-21	APolo 2025-02-21	2025-02-21

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003287	B	25-XY-004 C10001714	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003288	B	25-XY-008 C10001716	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003293	B	25-ZSHL-008 C10001729	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003294	B	25-ZSHL-014 C10001733	document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Gtangianu 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003295	B	25-ZSHL-011 C10001731	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003297	B	25-ZSHL-004 C10001727	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003299	B	25-ZSHL-020 C10001737	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Gtangianu 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003300	B	25-XY-014 C10001720	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.See attached photo.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Gtangianu 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003301	B	25-XY-017 C10001722	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Gtangianu 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003302	B	25-XY-020 C10001724	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Gtangianu 2025-01-29	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003305	B	25-XY-014 C10001720	Missing tag plate SS on the solenoid valve.(25-XY-014).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003306	B	25-XY-017 C10001722	Missing tag plate SS on the solenoid valve.(25-XY-017).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003307	B	25-XY-020 C10001724	Missing tag plate SS on the solenoid valve.(25-XY-020).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003324	B	25-ZSHL-024 C10002039	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-01-30	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003325	B	25-XV-004 C10001590	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003326	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufactuer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003327	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30003328	B	25-XV-008 C10001592	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003329	B	25-XV-008 C10001592	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003330	B	25-XV-011 C10001594	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-09	RDegliEsposti 2025-06-09	2025-06-09
C30003331	B	25-XV-011 C10001594	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003332	B	25-XV-014 C10001596	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003333	B	25-XV-014 C10001596	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003334	B	25-XV-017 C10001598	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003335	B	25-XV-017 C10001598	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003336	B	25-XV-020 C10001600	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003337	B	25-XV-020 C10001600	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003338	B	25-ZSHL-001 C10001726	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-01-30	2025-06-12	RDegliEsposti 2025-06-12	2025-06-12
C30003365	B	25-PCV-004 C10001755	On ATEX register Model, SN, Atex data are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-10-06	2025-10-06	2025-10-06
C30003367	B	25-PCV-004 C10001755	Equipment tag plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003371	B	25-PCV-004 C10001755	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003372	B	25-PCV-008 C10001757	On ATEX register equipment model, SN and Atex execution are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003375	B	25-PCV-008 C10001757	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003377	B	25-PCV-008 C10001757	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003378	B	25-PCV-011 C10001759	On ATEX register equipment model, SN and Atex execution are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003379	B	25-PCV-011 C10001759	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003380	B	25-PCV-011 C10001759	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003381	B	25-PCV-014 C10001761	On ATEX register equipment model, SN and Atex execution are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003382	B	25-PCV-014 C10001761	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003383	B	25-PCV-014 C10001761	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003385	B	25-PCV-017 C10001763	On ATEX register equipment model, SN and Atex execution are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003387	B	25-PCV-017 C10001763	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003389	B	25-PCV-017 C10001763	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003393	B	25-PCV-020 C10001765	On ATEX register equipment model, SN and Atex execution are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-30	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003394	B	25-PCV-020 C10001765	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003395	B	25-PCV-020 C10001765	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003396	B	25-PCV-004 C10001755	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30003407	B	25-XV-024 C10001602	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-22	LNovaga 2025-04-22	2025-04-22
C30003408	B	25-XV-024 C10001602	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-31	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003409	B	25-PCV-024 C10002040	On ATEX register Model, SN, Atex data are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-31	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003410	B	25-PCV-024 C10002040	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-31	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003411	B	25-PCV-024 C10002040	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003412	B	25-SDV-001 C10001588	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003413	B	25-SDV-001 C10001588	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-31	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003414	B	25-XY-024 C10002038	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-31	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003415	B	25-XY-024 C10002038	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-01-31	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003429	B	25-PCV-001 C10001754	On ATEX register Model, SN, Atex data are missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-01-31	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003431	B	25-PCV-001 C10001754	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003433	B	25-PCV-001 C10001754	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-31	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003436	B	25-PG -004 C10004819	Equipment Atex label is missing	.		Lmussi 2025-01-31	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003437	B	25-PG -004 C10004819	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003440	B	25-PG -008 C10004821	Equipment Atex label is missing	.		Lmussi 2025-01-31	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003441	B	25-PG -008 C10004821	Equipment tag is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003442	B	25-PG -011 C10004823	Equipment ATEX label is missing	.		Lmussi 2025-01-31	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003443	B	25-PG -011 C10004823	Equipment tag is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003451	B	25-PG -008 C10004821	Breathing valve is missing	.		Lmussi 2025-02-01	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30003452	B	25-PG -014 C10004825	Equipment tag is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003453	B	25-PG -014 C10004825	Equipment Atex label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003454	B	25-PG -017 C10004827	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003455	B	25-PG -017 C10004827	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003456	B	25-PG -020 C10004829	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003457	B	25-PG -020 C10004829	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003458	B	25-PG -024 C10004831	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003459	B	25-PG -024 C10004831	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003460	B	25-PG-001 C10004846	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003461	B	25-PG-001 C10004846	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003470	B	25-PSV-008 C10004835	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003471	B	25-PSV-008 C10004835	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003472	B	25-PSV-008 C10004835	ATEX label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003473	B	25-PSV-008 C10004835	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003474	B	25-PSV-011 C10004837	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003475	B	25-PSV-011 C10004837	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003476	B	25-PSV-011 C10004837	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003477	B	25-PSV-011 C10004837	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003478	B	25-PSV-014 C10004839	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003479	B	25-PSV-014 C10004839	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003480	B	25-PSV-014 C10004839	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003481	B	25-PSV-014 C10004839	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003482	B	25-PSV-017 C10004841	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003483	B	25-PSV-017 C10004841	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003484	B	25-PSV-017 C10004841	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003485	B	25-PSV-017 C10004841	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003486	B	25-PSV-020 C10004843	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003487	B	25-PSV-020 C10004843	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003488	B	25-PSV-020 C10004843	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003489	B	25-PSV-020 C10004843	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003490	B	25-PSV-024 C10004845	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003491	B	25-PSV-024 C10004845	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003492	B	25-PSV-024 C10004845	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003493	B	25-PSV-024 C10004845	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003494	B	25-PSV-001 C10004849	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003495	B	25-PSV-001 C10004849	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003496	B	25-PSV-001 C10004849	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003497	B	25-PSV-001 C10004849	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003502	B	25-PSV-004 C10004833	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003503	B	25-PSV-004 C10004833	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03	2025-04-24	Gtangianu 2025-04-24	2025-04-24
C30003504	B	25-PSV-004 C10004833	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003505	B	25-PSV-004 C10004833	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	Lmussi 2025-02-03	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003563	B	25-XY-011 C10001718	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003564	B	25-XY-011 C10001718	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-02-05	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003566	B	25-ZSHL-017 C10001735	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003568	B	25-SDY-001 C10001712	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.	The ATEX Register issued by FLUITEK has been updated and now reflects the	APolo 2025-02-05	RDegliEsposti 2025-06-10	RDegliEsposti 2025-06-10	2025-06-10
C30003569	B	25-SDY-001 C10001712	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003603	B	25-PT-002 C10001483	Missing the drainage device (tubing).	.		APolo 2025-02-08	2025-02-22	JKrizanic 2025-02-22	2025-02-22
C30003604	B	25-PT-002 C10001483	Missing tag SS , on the instrument.	.		APolo 2025-02-08	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003605	B	25-PT-002 C10001483	Missing traffolyte tag side instrument	.		APolo 2025-02-08	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003608	B	25-PT-001 C10001482	Missing tag SS , on the instrument.	.		APolo 2025-02-08	2025-02-24	AAndreani 2025-02-24	2025-02-24

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003609	B	25-PT-001 C10001482	Missing traffolyte tag side instrument	.		APolo 2025-02-08	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003610	B	25-PT-001 C10001482	Missing the drainage device (tubing)	.		APolo 2025-02-08	2025-03-01	AAndreani 2025-03-01	2025-03-01

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004108

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004794	1.4 Discipline	Piping
1.2 Item	25-07-TP-068	Test Pack 25-07-TP-068	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The isometric is different from the field, produce a mark up.
Support PS-02136.1 is missing. There is a S-211 between EW7 and EW8, distance from EW7 is 945 mm. Structural support is Lbeam (60mm) 215mm x 245mm.
See attached for dimension

Name: Lorenzo Novaga
Date: 2025-02-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-25
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Changes have been recorded on RLMUs

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

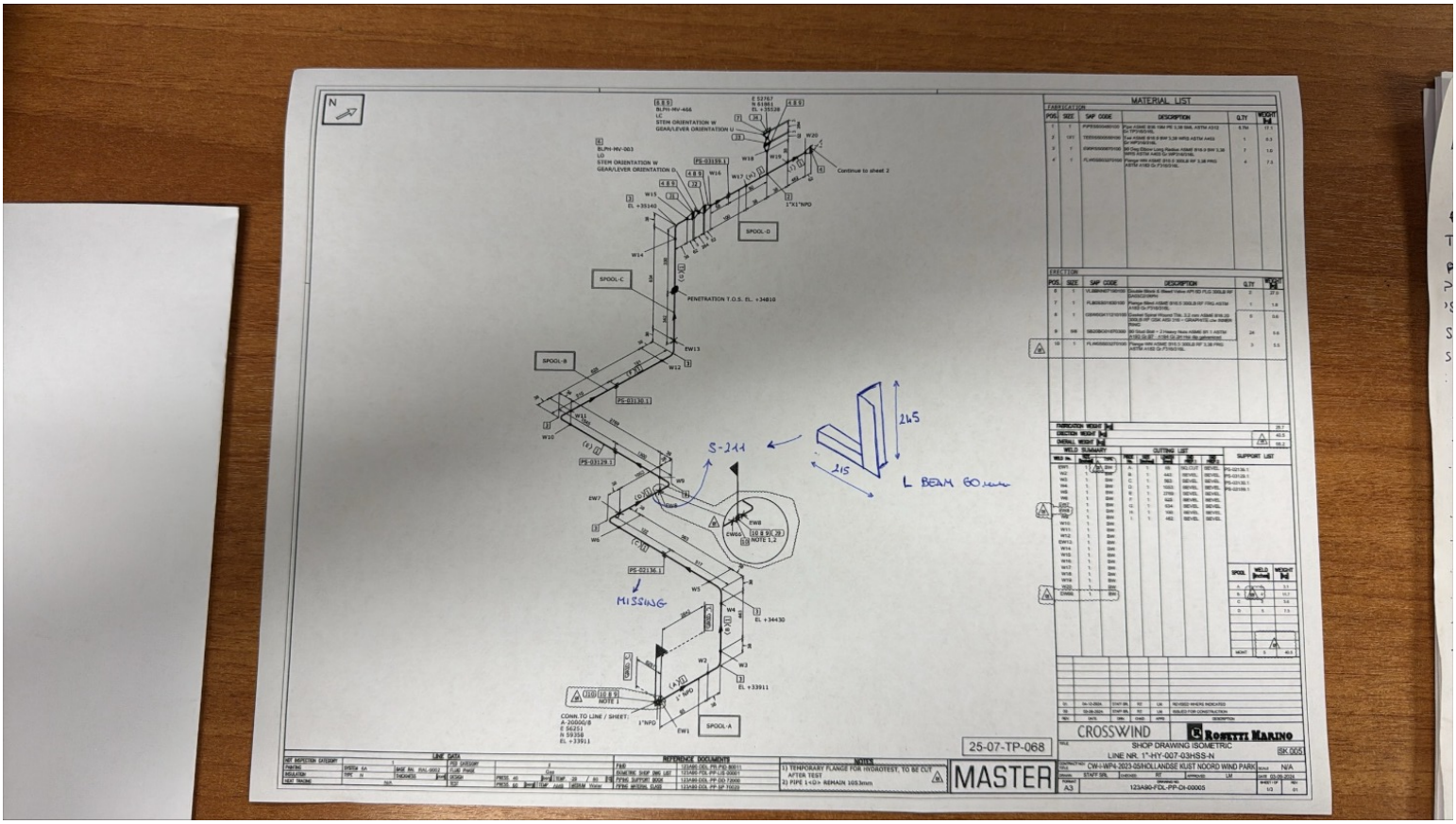
5 - CLEARANCE CHECK

"Ref. to RLMU 123A90-FDL-PP-DI-00005-01_01A"

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-25
Signature:


MATERIAL LIST
FABRICATION
ERECTION
CUTTING LIST
SUPPORT LIST
SPOOL-A
SPOOL-B
SPOOL-C
SPOOL-D
PENETRATION T.O.S. EL. +34810
S-211
245
215
L BEAM 60x6mm
MISSING
CONN.TO LINE / SHEET:
A-2000A/B
E 56251
N 59250
EL +33911
Continue to sheet 2
25-07-TP-068
MASTER
CROSSWIND
ROSKITTI MARINO
SHOP DRAWING ISOMETRIC
LINE NR. 1"-HY-007-03HSS-N
CW-HPA-3023-03HOLLANDSE KUST NOORD WIND PARK
123AS0-FDL-PP-DI-00005
LINE SPEC
REFERENCE DOCUMENTS
NOTES
1) TEMPORARY FLANGE FOR HYDROTEST, TO BE CUT AFTER TEST
2) PIPE L=<G> REMAIN 103.3mm

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004109

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004794	1.4 Discipline	Piping
1.2 Item	25-07-TP-068	Test Pack 25-07-TP-068	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The hole on the ptfe on new support (see PL C30004108) is larger than the diameter of the washer.

Name: Lorenzo Novaga
Date: 2025-02-25
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Teflon has been swapped with new drilled one. Corrected.

Name: Kangi Albonetti
Date: 2025-02-25
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30004166

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004795	1.4 Discipline	Piping
1.2 Item	25-07-TP-068	Test Pack 25-07-TP-068	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-27

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	2025-02-27
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-03-21

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-03-21

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003485

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004841	1.4 Discipline	ATEX
1.2 Item	25-PSV-017		Safety Valve - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003486

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004843	1.4 Discipline	ATEX
1.2 Item	25-PSV-020	Safety Valve - Vessel V-25001F Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003487

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004843	1.4 Discipline	ATEX
1.2 Item	25-PSV-020		Safety Valve - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003488

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004843	1.4 Discipline	ATEX
1.2 Item	25-PSV-020		Safety Valve - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003489

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004843	1.4 Discipline	ATEX
1.2 Item	25-PSV-020	Safety Valve - Vessel V-25001F Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003490

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004845	1.4 Discipline	ATEX
1.2 Item	25-PSV-024		Safety Valve - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003491

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004845	1.4 Discipline	ATEX
1.2 Item	25-PSV-024		Safety Valve - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003492

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004845	1.4 Discipline	ATEX
1.2 Item	25-PSV-024	Safety Valve - Hyrogen to Vessels Inlet Header Vent System	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003493

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004845	1.4 Discipline	ATEX
1.2 Item	25-PSV-024	Safety Valve - Hyrogen to Vessels Inlet Header Vent System	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003494

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004849	1.4 Discipline	ATEX
1.2 Item	25-PSV-001		Safety Valve - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003495

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004849	1.4 Discipline	ATEX
1.2 Item	25-PSV-001		Safety Valve - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003496

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004849	1.4 Discipline	ATEX
1.2 Item	25-PSV-001		Safety Valve - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003497

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004849	1.4 Discipline	ATEX
1.2 Item	25-PSV-001	Safety Valve - Hyrogen to Vessels Inlet Header Shut-Down	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003502

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004833	1.4 Discipline	ATEX
1.2 Item	25-PSV-004		Safety Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003503

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004833	1.4 Discipline	ATEX
1.2 Item	25-PSV-004		Safety Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003504

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004833	1.4 Discipline	ATEX
1.2 Item	25-PSV-004		Safety Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003505

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004833	1.4 Discipline	ATEX
1.2 Item	25-PSV-004		Safety Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003523

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003279	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

Name: Kangi Albonetti

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-03-21

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-03-21

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003528

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003279	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Color coding and fluid direction are missing.

Name: Kangi Albonetti

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Kangi Albonetti
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003563

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001718	1.4 Discipline	ATEX
1.2 Item	25-XY-011		Solenoid Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag SS , on Solenoid Valve.

Name: Alessio Polo

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

25-XV-011


25-XV-011

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003564

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001718	1.4 Discipline	ATEX
1.2 Item	25-XY-011	Solenoid Valve - Vessel V-25001C Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


GYJ19.1148X
IECEx BAS10.0008
KTL-12-KB480-0211
Baseefa10ATEX0026
BAS21UKEX0642
UK CA
0598
T4 T135°C(-60°C≤ Tamb ≤+90°C)
T5 T100°C(-60°C≤ Tamb ≤+55°C)
T6 T85°C(-60°C≤ Tamb ≤+40°C)
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境严禁开盖
COVER SCREW A4-70 MINIMUM
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C@T6/105°C@T5/150°C@TA
VOLTAGE./ 额定电压：
SERIAL No./ 序列号：
MODEL No./ 型号：
Bifold
英国制造
OL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003565

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000088	1.4 Discipline	Instrumental
1.2 Item	C-25-XV-017/00-JE-12004	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


AV-63002/25-XV-01
X1


AV-63002/25
ROSETTI MARINO
SYSTEM
FRAME
TAG
TORQUED
DATE
TORQUED

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003566

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001735	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-017	Limit Switch Box - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

5 - CLEARANCE CHECK

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

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


25-ZSL-017
25-ZSH-017


5A-250Vac
Batch:
Year
CML 22UKEX1685X
IIC T6-T5-T4 Gb
T85°C/100°C/135°C Db IP66-68

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003567

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000176	1.4 Discipline	Instrumental
1.2 Item	C-25-SDY-001/00-JE-23002	SOLENOID VALVE / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

the cable installed is temporary. To be replaced

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	PRE-COMM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-04-08
Signature:

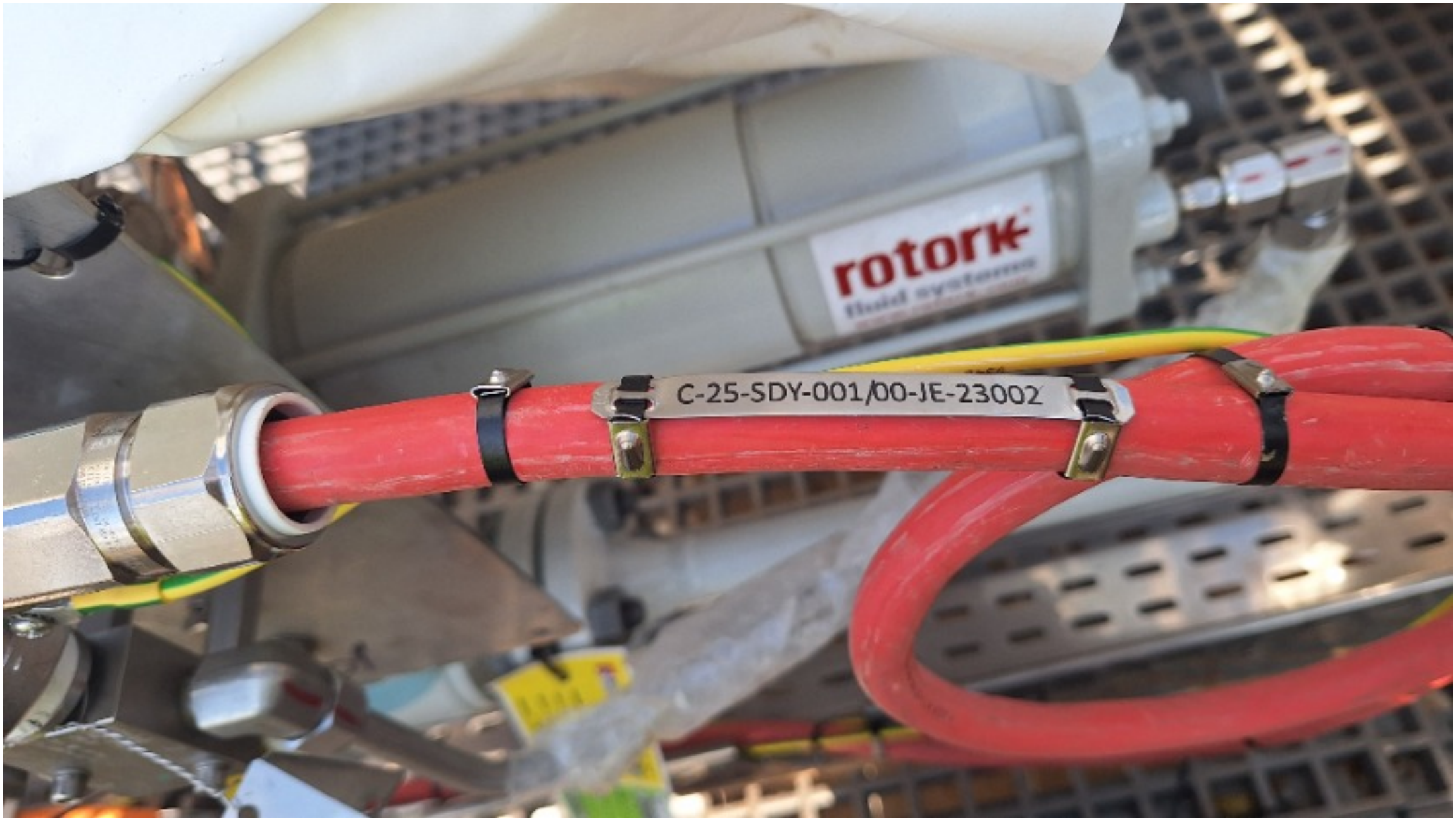
5 - CLEARANCE CHECK

THE CABLE HAS BEEN REPLACED.

Name: Giovanni Tangianu
Date: 2025-04-07
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-04-08
Signature:


rotork
fluid systems
C-25-SDY-001/00-JE-23002


rotork
fluid system
www.rotork.c

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003568

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001712	1.4 Discipline	ATEX
1.2 Item	25-SDY-001	Solenoid Valve - Hyrogen to Vessels Inlet Header Shut-Down	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


UK CA
0598
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境严禁开盖
COVER SCREW
VOLTAGE./ 额定电压：
SERIAL No./ 序列号：
MODEL No./ 型号：
英国制造
Bifold
OL9 9XA ENGLAND
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C@T6/105°C@T5/150°C@T4


UK CA
CE 0598
IECEx BAS 10.0
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境严禁开盖
COVER SCREW M4-70 MINIMUM
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C @ TA/35°C @ T5/105°C @ T4
VOLTAGE./额定电压：
SERIAL No./序列号：
MODEL No./型号：
英国制造
Bifold
OL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003569

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001712	1.4 Discipline	ATEX
1.2 Item	25-SDY-001	Solenoid Valve - Hyrogen to Vessels Inlet Header Shut-Down	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing tag SS , on Solenoid Valve.

Name: Alessio Polo

Date: 2025-02-05

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-05
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


TESTED
25-SDV-001
www.rotork.com

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003579

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004793	1.4 Discipline	Piping
1.2 Item	25-07-TP-068	Test Pack 25-07-TP-068	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

All support and standard will be check during reinstatement phase

Name: Lorenzo Novaga

Date: 2025-02-06

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Lorenzo Novaga
3.4 Activity code	MC Mechanical Completion	Date	2025-02-06
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done.

Name: Kangi Albonetti

Date: 2025-02-25

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003602

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000136	1.4 Discipline	Instrumental
1.2 Item	C-25-PT-002/00-JE-21002	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.

Name: Alessio Polo
Date: 2025-02-08
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003603

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001483	1.4 Discipline	ATEX
1.2 Item	25-PT-002		Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing the drainage device (tubing).

Name: Alessio Polo
Date: 2025-02-08
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic
Date: 2025-02-22
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003604

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001483	1.4 Discipline	ATEX
1.2 Item	25-PT-002		Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo
Date: 2025-02-08
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003605

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001483	1.4 Discipline	ATEX
1.2 Item	25-PT-002		Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-02-08

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003606

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000048	1.4 Discipline	Instrumental
1.2 Item	C-25-PT-001/00-JE-11003	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.

Name: Alessio Polo
Date: 2025-02-08
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003607

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000048	1.4 Discipline	Instrumental
1.2 Item	C-25-PT-001/00-JE-11003	PRESSURE TRANSMITTER / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing cable tag SS , near JB 00-JE-11003

Name: Alessio Polo

Date: 2025-02-08

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Alessio Polo

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003608

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001482	1.4 Discipline	ATEX
1.2 Item	25-PT-001		Pressure Transmitter - Hyrogen to Vessels Inlet Header
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag SS , on the instrument.

Name: Alessio Polo

Date: 2025-02-08

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003609

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001482	1.4 Discipline	ATEX
1.2 Item	25-PT-001	Pressure Transmitter - Hyrogen to Vessels Inlet Header	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing traffolyte tag side instrument

Name: Alessio Polo

Date: 2025-02-08

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-13

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003610

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001482	1.4 Discipline	ATEX
1.2 Item	25-PT-001	Pressure Transmitter - Hyrogen to Vessels Inlet Header	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing the drainage device (tubing)

Name: Alessio Polo
Date: 2025-02-08
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-02-08
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


ISOLATE

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003409

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002040	1.4 Discipline	ATEX
1.2 Item	25-PCV-024		Air Set Filter - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register Model, SN, Atex data are missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

Name:

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003410

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002040	1.4 Discipline	ATEX
1.2 Item	25-PCV-024		Air Set Filter - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003411

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002040	1.4 Discipline	ATEX
1.2 Item	25-PCV-024		Air Set Filter - Nitrogen to Distribution Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003412

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001588	1.4 Discipline	ATEX
1.2 Item	25-SDV-001		On/Off Valve - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date: 2025-04-09

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-09

Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003413

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001588	1.4 Discipline	ATEX
1.2 Item	25-SDV-001		On/Off Valve - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003414

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002038	1.4 Discipline	ATEX
1.2 Item	25-XY-024		Solenoid Valve - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag SS , on Solenoid Valve.

Name: Alessio Polo

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003415

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002038	1.4 Discipline	ATEX
1.2 Item	25-XY-024		Solenoid Valve - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2025-01-31
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


rotork
fluid systems
25-XV-024


GY/19 1148X
IECEx BAS10.0008
KTL-12-KB480-0213
BaseefaI0ATEX0026
BAS21UKEX0642
UK CA
T4 T135°C
T5 T100°C
T6 785°C
-60°C≤ Tamb ≤ +90°C
-60°C≤ Tamb ≤ +55°C
-60°C≤ Tamb ≤ +40°C
Ex
IEC Ex
BAS 09
NEMA 4X/IP66 IP67
0598
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境!禁开盖
COVER SCREW A4-70 MINIMUM
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C@16/105°C@15/135°C@14
VOLTAGE./ 额定电压:
SERIAL No./ 序列号:
MODEL No./ 型号:
英国制造
Bifold
OL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003429

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001754	1.4 Discipline	ATEX
1.2 Item	25-PCV-001	Air Set Filter - Hyrogen to Vessels Inlet Header Shut-Down	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

On ATEX register Model, SN, Atex data are missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003431

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001754	1.4 Discipline	ATEX
1.2 Item	25-PCV-001		Air Set Filter - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-28

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003433

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001754	1.4 Discipline	ATEX
1.2 Item	25-PCV-001		Air Set Filter - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003436

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004819	1.4 Discipline	ATEX
1.2 Item	25-PG -004		Air Set Pressure Gauge Filter - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment Atex label is missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003437

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004819	1.4 Discipline	ATEX
1.2 Item	25-PG -004		Air Set Pressure Gauge Filter - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003440

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004821	1.4 Discipline	ATEX
1.2 Item	25-PG -008		Air Set Pressure Gauge Filter - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment Atex label is missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003441

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004821	1.4 Discipline	ATEX
1.2 Item	25-PG -008		Air Set Pressure Gauge Filter - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003442

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004823	1.4 Discipline	ATEX
1.2 Item	25-PG -011	Air Set Pressure Gauge Filter - Vessel V-25001C Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment ATEX label is missing

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003443

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004823	1.4 Discipline	ATEX
1.2 Item	25-PG -011	Air Set Pressure Gauge Filter - Vessel V-25001C Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003451

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004821	1.4 Discipline	ATEX
1.2 Item	25-PG -008		Air Set Pressure Gauge Filter - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Breathing valve is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Giovanni Tangianu

Date: 2025-03-26

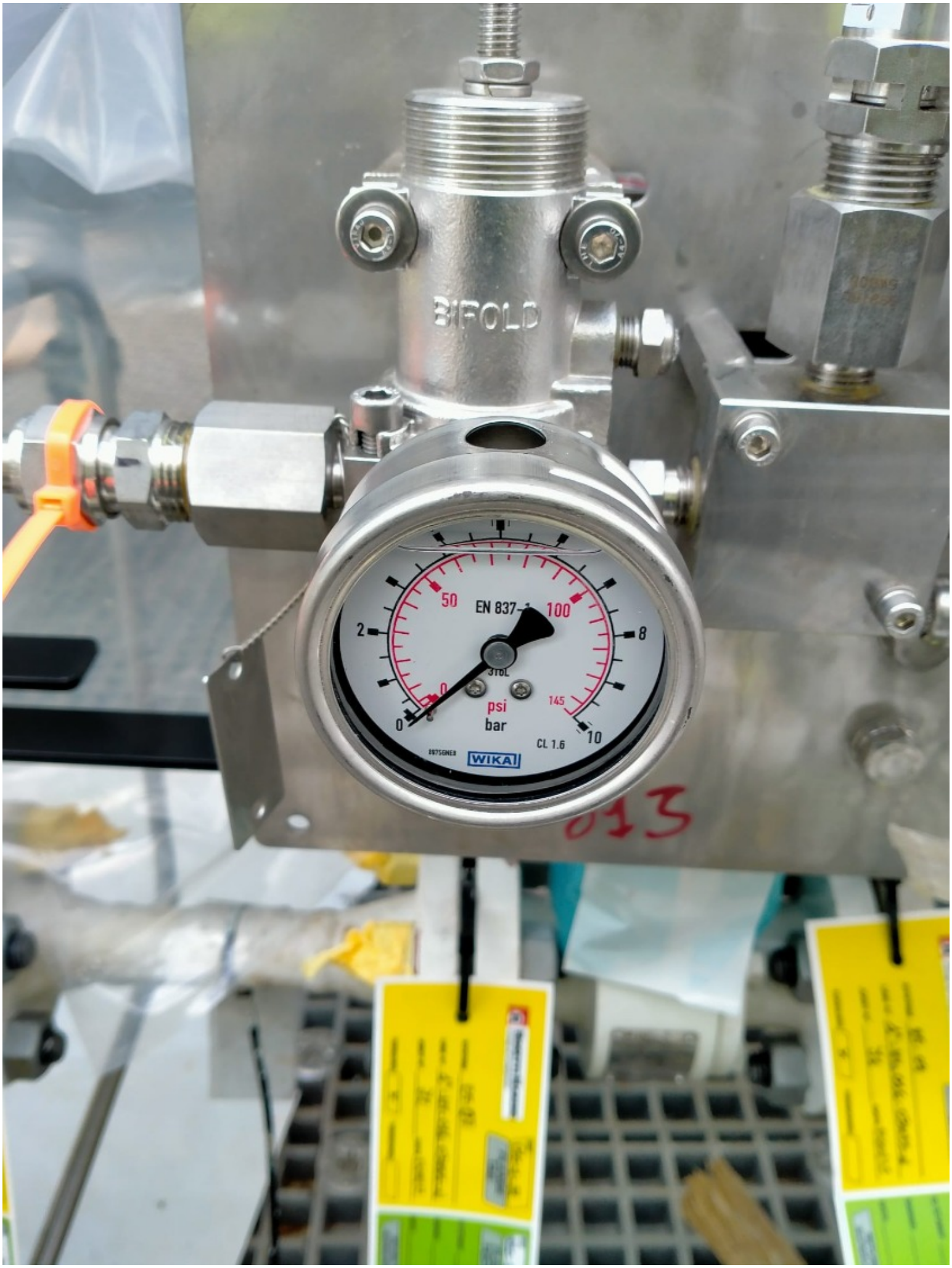
Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


BIFOLD
50
100
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psi
bar
145
10
CL 1.6
WIKA
013

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003452

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004825	1.4 Discipline	ATEX
1.2 Item	25-PG -014	Air Set Pressure Gauge Filter - Vessel V-25001D Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag is missing

Name: Luca Mussi
Date: 2025-02-01
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003453

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004825	1.4 Discipline	ATEX
1.2 Item	25-PG -014	Air Set Pressure Gauge Filter - Vessel V-25001D Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment Atex label is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003454

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004827	1.4 Discipline	ATEX
1.2 Item	25-PG -017	Air Set Pressure Gauge Filter - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003455

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004827	1.4 Discipline	ATEX
1.2 Item	25-PG -017	Air Set Pressure Gauge Filter - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment ATEX label is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003456

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004829	1.4 Discipline	ATEX
1.2 Item	25-PG -020	Air Set Pressure Gauge Filter - Vessel V-25001F Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi
Date: 2025-02-01
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003457

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004829	1.4 Discipline	ATEX
1.2 Item	25-PG -020		Air Set Pressure Gauge Filter - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment ATEX label is missing

Name: Luca Mussi
Date: 2025-02-01
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Installed.

Name: Lorenzo Novaga
Date: 2025-04-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003458

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004831	1.4 Discipline	ATEX
1.2 Item	25-PG -024	Air Set Pressure Gauge Filter - Hyrogen to Vessels Inlet Header Vent System	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment ATEX label is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003459

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004831	1.4 Discipline	ATEX
1.2 Item	25-PG -024	Air Set Pressure Gauge Filter - Hyrogen to Vessels Inlet Header Vent System	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi
Date: 2025-02-01
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003460

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004846	1.4 Discipline	ATEX
1.2 Item	25-PG-001	Air Set Pressure Gauge Filter - Hyrogen to Vessels Inlet Header Shut-Down	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment ATEX label is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003461

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004846	1.4 Discipline	ATEX
1.2 Item	25-PG-001	Air Set Pressure Gauge Filter - Hyrogen to Vessels Inlet Header Shut-Down	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-01

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003470

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004835	1.4 Discipline	ATEX
1.2 Item	25-PSV-008	Safety Valve - Vessel V-25001B Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003471

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004835	1.4 Discipline	ATEX
1.2 Item	25-PSV-008		Safety Valve - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Equipment ATEX conformity label was installed by vendor on site.

Name: Giovanni Tangianu
Date: 2025-04-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003472

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004835	1.4 Discipline	ATEX
1.2 Item	25-PSV-008		Safety Valve - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX conformity label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003473

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004835	1.4 Discipline	ATEX
1.2 Item	25-PSV-008		Safety Valve - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003474

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004837	1.4 Discipline	ATEX
1.2 Item	25-PSV-011		Safety Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003475

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004837	1.4 Discipline	ATEX
1.2 Item	25-PSV-011		Safety Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003476

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004837	1.4 Discipline	ATEX
1.2 Item	25-PSV-011		Safety Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003477

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004837	1.4 Discipline	ATEX
1.2 Item	25-PSV-011		Safety Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003478

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004839	1.4 Discipline	ATEX
1.2 Item	25-PSV-014		Safety Valve - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003479

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004839	1.4 Discipline	ATEX
1.2 Item	25-PSV-014		Safety Valve - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003480

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004839	1.4 Discipline	ATEX
1.2 Item	25-PSV-014		Safety Valve - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003481

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004839	1.4 Discipline	ATEX
1.2 Item	25-PSV-014		Safety Valve - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003482

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004841	1.4 Discipline	ATEX
1.2 Item	25-PSV-017	Safety Valve - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment ATEX identification label is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Equipment ATEX label was installed by vendor on site.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003483

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004841	1.4 Discipline	ATEX
1.2 Item	25-PSV-017		Safety Valve - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX Declaration of Conformity by Manufacturer is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Declaration of conformity has been provide by vendor.

Name: Giovanni Tangianu

Date: 2025-04-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003484

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10004841	1.4 Discipline	ATEX
1.2 Item	25-PSV-017	Safety Valve - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-02-03

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-16

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003314

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003278	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Support PS-03071.1 not installed

Name: Andrea Mancini

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Andrea Mancini
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Support Installed

Name: Lorenzo Novaga

Date: 2025-02-11

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003324

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10002039	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-024		Limit Switch Box - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

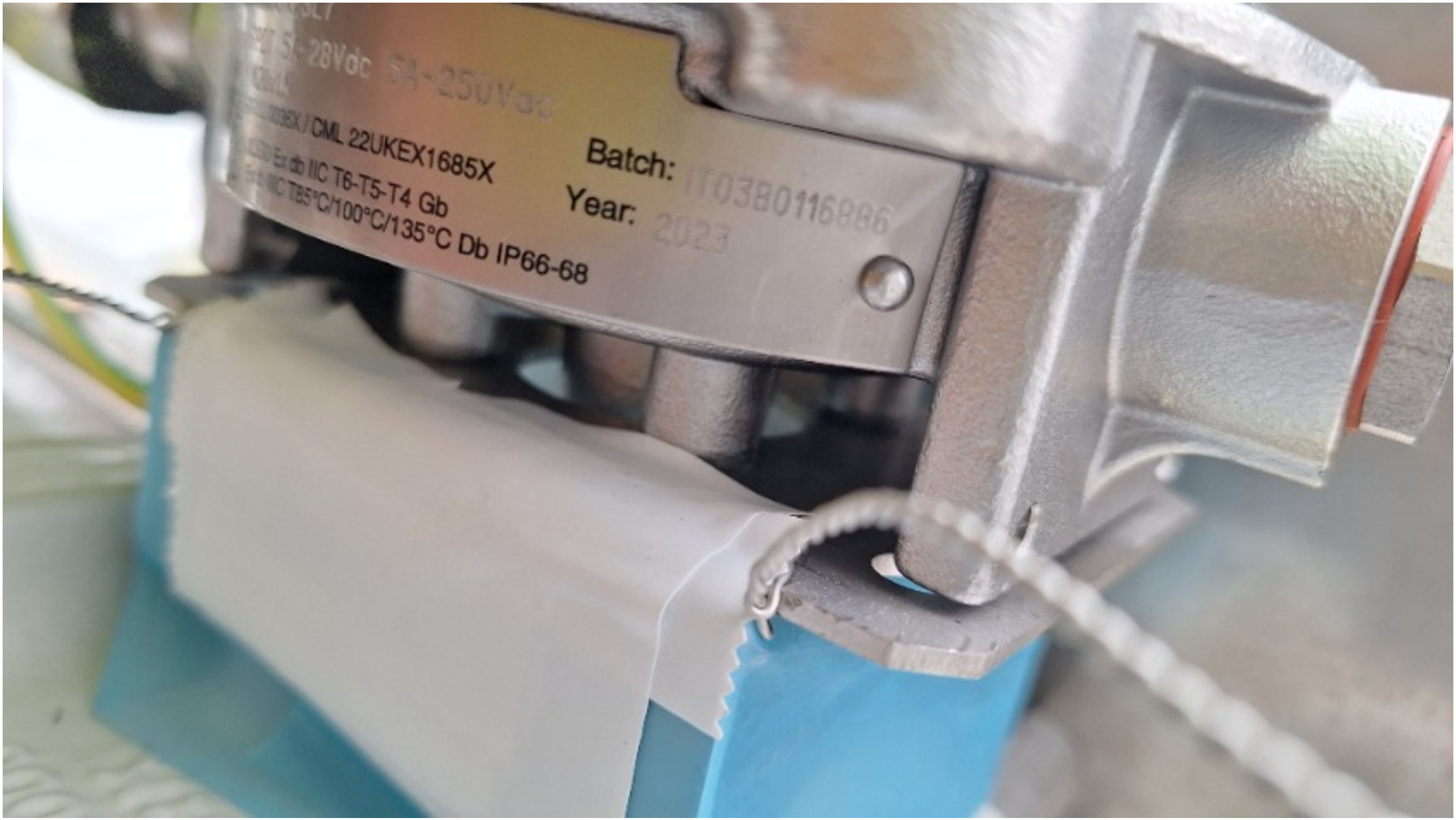
5 - CLEARANCE CHECK

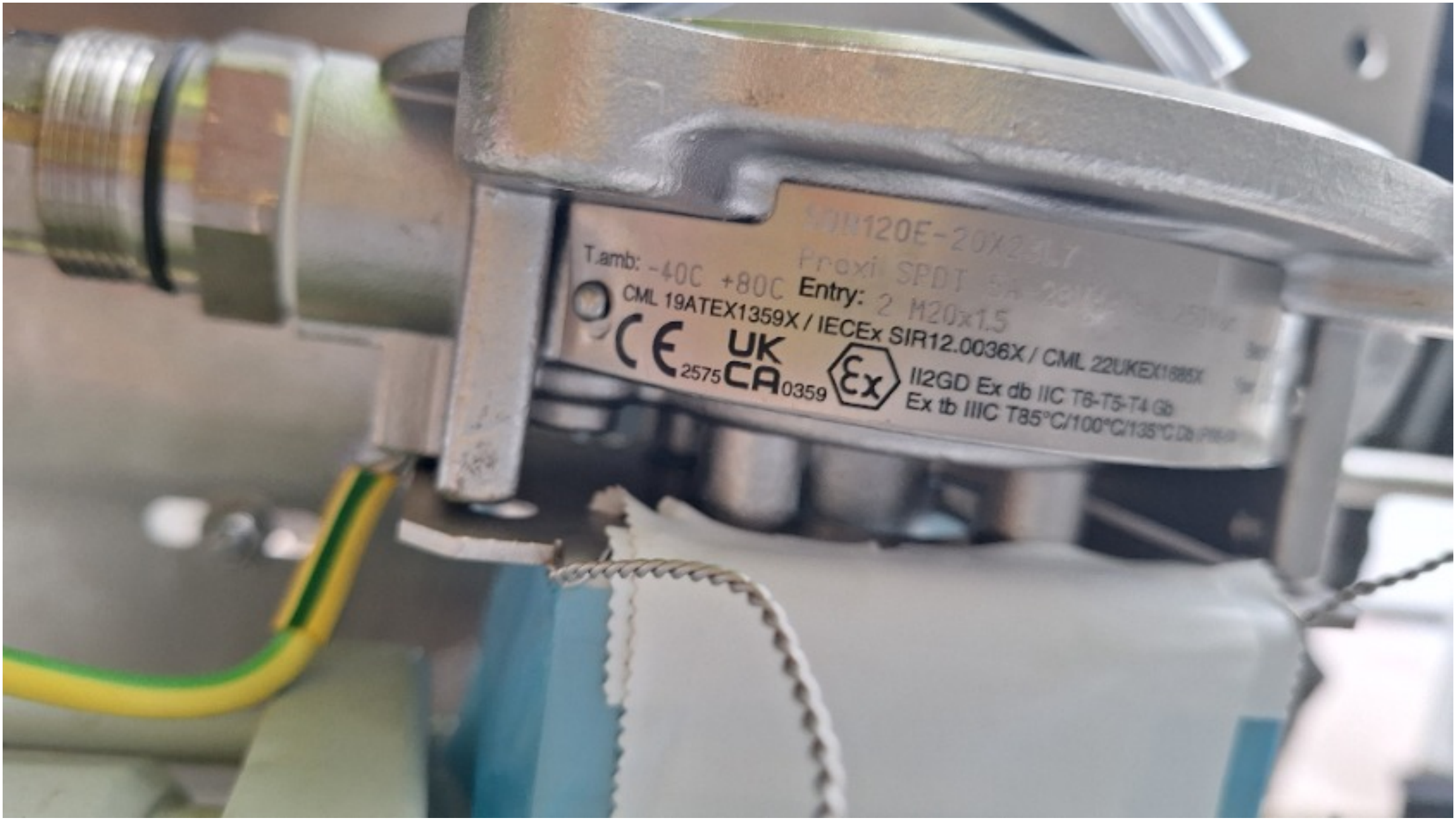
-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


28Vdc 5A-250Vac
CML 22UKEX1685X
Batch:
Year:
2023
Ex db IIC T6-T5-T4 Gb
IIIC T85°C/100°C/135°C Db IP66-68


T.amb: -40C +80C
Entry: 2 M20x1.5
CML 19ATEX1359X / IECEx SIR12.0036X / CML 22UKEX1885X
CE 2575
UK CA 0359
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003325

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001590	1.4 Discipline	ATEX
1.2 Item	25-XV-004		On-Off Actuated Ball Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-09

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

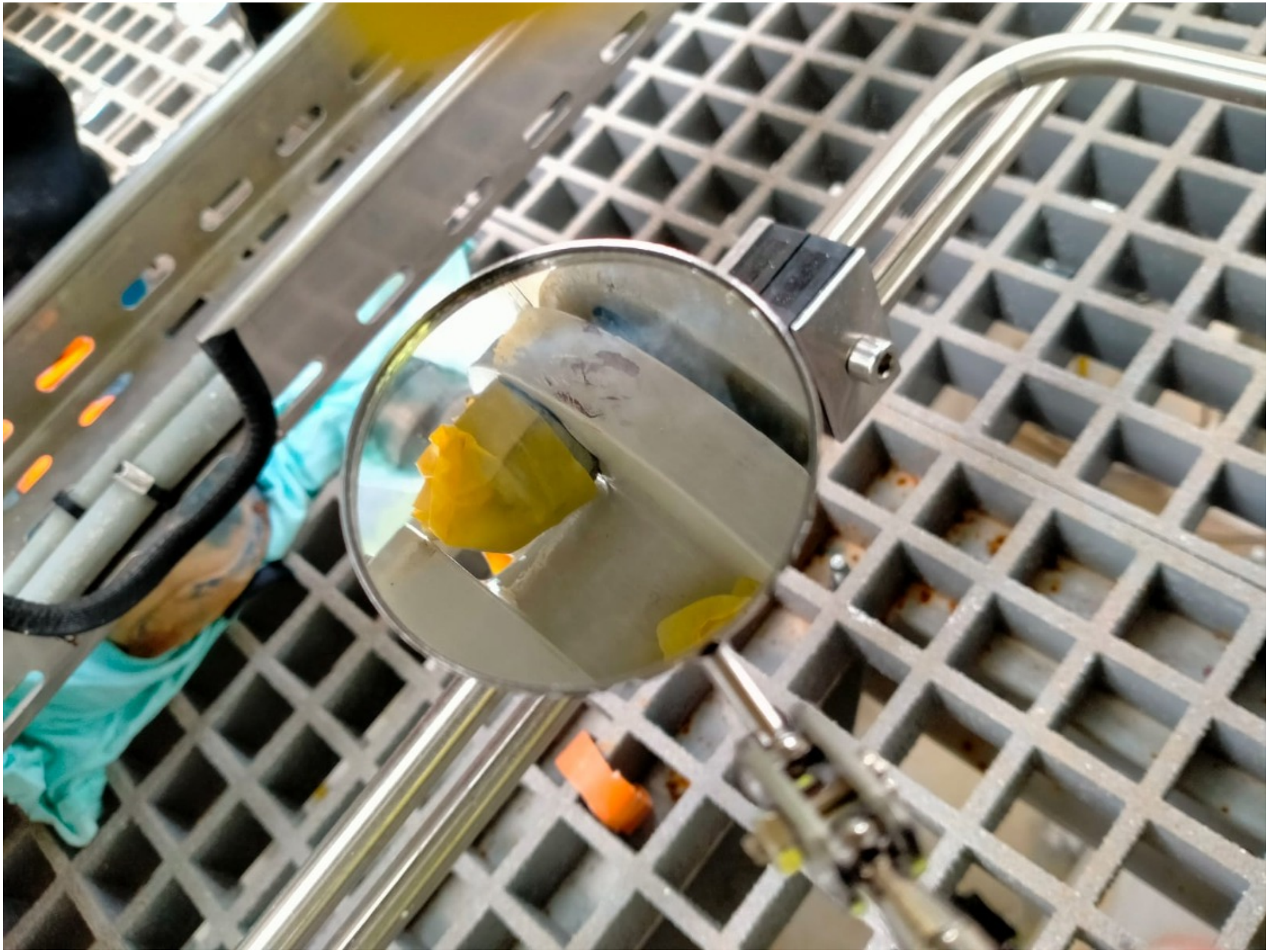
6- CLEARANCE APPROVAL

Name:

Date: 2025-04-09

Signature:





ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003326

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001590	1.4 Discipline	ATEX
1.2 Item	25-XV-004		On-Off Actuated Ball Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufactuer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003327

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001590	1.4 Discipline	ATEX
1.2 Item	25-XV-004		On-Off Actuated Ball Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Refer to punch C30003326

Name: Lorenzo Novaga
Date: 2025-03-06
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003328

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001592	1.4 Discipline	ATEX
1.2 Item	25-XV-008		On-Off Actuated Ball Valve - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

5 - CLEARANCE CHECK

.

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003329

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001592	1.4 Discipline	ATEX
1.2 Item	25-XV-008		On-Off Actuated Ball Valve - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-09

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-09

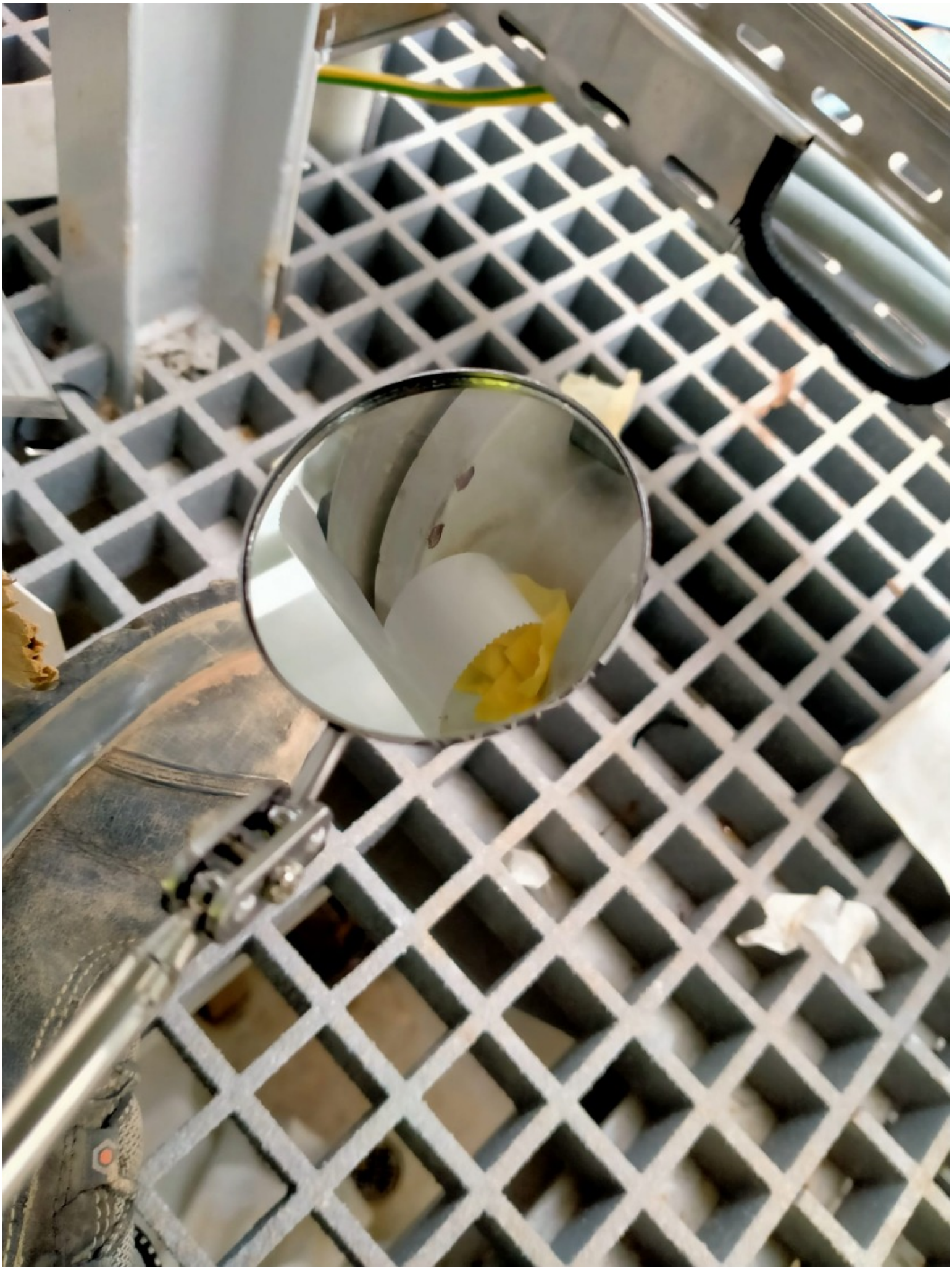
Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-09

Signature:





Flutek
Valves

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003330

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001594	1.4 Discipline	ATEX
1.2 Item	25-XV-011		On/Off Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003331

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001594	1.4 Discipline	ATEX
1.2 Item	25-XV-011		On/Off Valve - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-04-09

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-04-09

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-09

Signature:

TAG
011-1-31
FLANGE TAG
MARINO
25-02
1"-HY-012-03H88-N
Fluitek Valves

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003332

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001596	1.4 Discipline	ATEX
1.2 Item	25-XV-014		On/Off Valve - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-20
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-20
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003333

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001596	1.4 Discipline	ATEX
1.2 Item	25-XV-014		On/Off Valve - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003334

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001598	1.4 Discipline	ATEX
1.2 Item	25-XV-017		On/Off Valve - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:
Date: 2025-03-20
Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga
Date: 2025-03-20
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-03-20
Signature:



ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003335

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001598	1.4 Discipline	ATEX
1.2 Item	25-XV-017		On/Off Valve - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003336

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001600	1.4 Discipline	ATEX
1.2 Item	25-XV-020		On/Off Valve - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date: 2025-03-20

Signature:

5 - CLEARANCE CHECK

Done.

Name: Lorenzo Novaga

Date: 2025-03-20

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-03-20

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003337

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001600	1.4 Discipline	ATEX
1.2 Item	25-XV-020		On/Off Valve - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003338

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001726	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-001		Limit Switch Box - Hyrogen to Vessels Inlet Header Shut-Down
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

Name: Alessio Polo
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-12
Signature:

5 - CLEARANCE CHECK

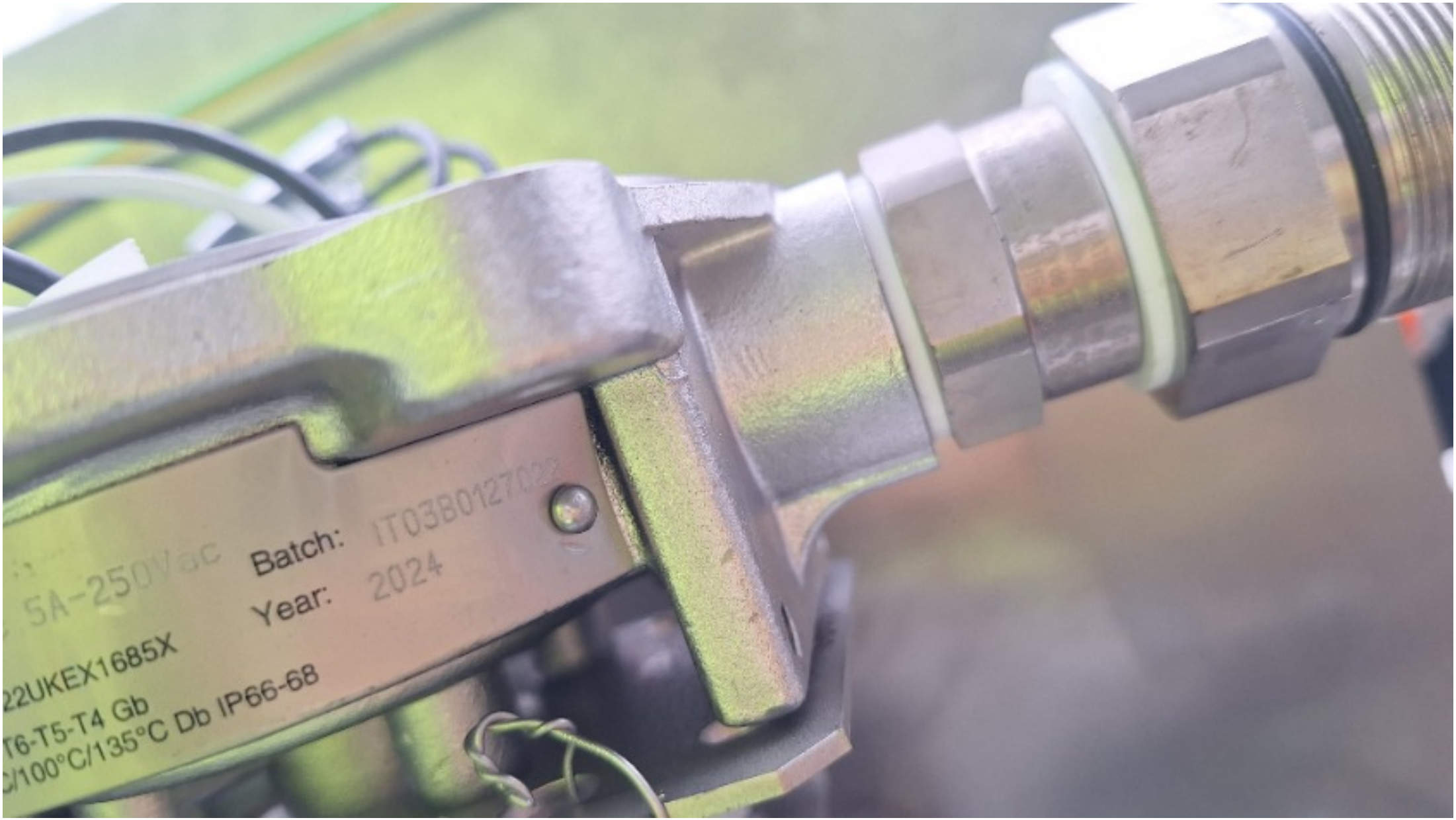
Valve was installed during reinstatement phase.

Name: Raffaele Degli Esposti
Date: 2025-06-12
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-12
Signature:


SQN120E-20X
Proxi SPDT 5A-28
T.amb: +80C Entry: 2 M20x1.5
CML 19ATEX1359X / IECEx SIR12.00 6X / CML 22UKEX1
2575 UK CA 0359
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C


SA-250V ac
Batch: IT03B0127022
Year: 2024
22UKEX1685X
T6-T5-T4 Gb
C/100°C/135°C Db IP66-68

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003365

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001755	1.4 Discipline	ATEX
1.2 Item	25-PCV-004	Air Set Filter - Vessel V-25001A Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

On ATEX register Model, SN, Atex data are missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 10/06/202052
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003367

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001755	1.4 Discipline	ATEX
1.2 Item	25-PCV-004	Air Set Filter - Vessel V-25001A Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Equipment tag plate is missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi

Date: 2025-02-28

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003371

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001755	1.4 Discipline	ATEX
1.2 Item	25-PCV-004		Air Set Filter - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi
Date: 2025-02-05
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003372

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001757	1.4 Discipline	ATEX
1.2 Item	25-PCV-008		Air Set Filter - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register equipment model, SN and Atex execution are missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

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

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003375

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001757	1.4 Discipline	ATEX
1.2 Item	25-PCV-008		Air Set Filter - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003377

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001757	1.4 Discipline	ATEX
1.2 Item	25-PCV-008		Air Set Filter - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment data plate is missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-16
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003378

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001759	1.4 Discipline	ATEX
1.2 Item	25-PCV-011	Air Set Filter - Vessel V-25001C Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

On ATEX register equipment model, SN and Atex execution are missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-06-10

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003379

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001759	1.4 Discipline	ATEX
1.2 Item	25-PCV-011		Air Set Filter - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003380

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001759	1.4 Discipline	ATEX
1.2 Item	25-PCV-011		Air Set Filter - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment data plate is missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003381

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001761	1.4 Discipline	ATEX
1.2 Item	25-PCV-014	Air Set Filter - Vessel V-25001D Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

On ATEX register equipment model, SN and Atex execution are missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-06-10

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003382

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001761	1.4 Discipline	ATEX
1.2 Item	25-PCV-014		Air Set Filter - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003383

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001761	1.4 Discipline	ATEX
1.2 Item	25-PCV-014		Air Set Filter - Vessel V-25001D Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment data plate is missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003385

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001763	1.4 Discipline	ATEX
1.2 Item	25-PCV-017	Air Set Filter - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

On ATEX register equipment model, SN and Atex execution are missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti

Date: 2025-06-10

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003387

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001763	1.4 Discipline	ATEX
1.2 Item	25-PCV-017		Air Set Filter - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003389

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001763	1.4 Discipline	ATEX
1.2 Item	25-PCV-017		Air Set Filter - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment data plate is missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003393

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001765	1.4 Discipline	ATEX
1.2 Item	25-PCV-020		Air Set Filter - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register equipment model, SN and Atex execution are missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003394

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001765	1.4 Discipline	ATEX
1.2 Item	25-PCV-020		Air Set Filter - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

ATEX D.o.C. by Manufacturer is missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

D.o.C. provided and attached to ITR

Name: Luca Mussi

Date: 2025-02-05

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Document Reference: - D of C Baseefa14ATEX0223DR_01

EU Declaration of Conformity

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

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

Product Type (Object of the Declaration):

Type SH, ASH & SC Filter Regulator

Declaration statement:

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

Limitation on the validity of the Declaration of Conformity:

None

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2 Gb Db Ex c IIC T6

Bifold Technical File Reference:

DF-FP_SH_20140627114952

Technical File lodged with Notified Body:

SGS Fimko Oy 0598 Helsinki, Finland

SGS Baseefa Technical File Reference:

Baseefa14ATEX0223DR

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

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

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

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

Paul Barrow
Quality Manager

4th November 2020

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003395

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001765	1.4 Discipline	ATEX
1.2 Item	25-PCV-020		Air Set Filter - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Equipment data plate is missing

Name: Luca Mussi
Date: 2025-01-30
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	VND Vendor	Signature	

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

Done

Name: Luca Mussi
Date: 2025-02-28
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003396

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001755	1.4 Discipline	ATEX
1.2 Item	25-PCV-004		Air Set Filter - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register equipment model, SN and Atex execution are missing

Name: Luca Mussi

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Luca Mussi
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Refer to punch C30003365.

Name: Lorenzo Novaga

Date: 2025-03-06

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003407

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001602	1.4 Discipline	ATEX
1.2 Item	25-XV-024		On/Off Valve - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Scratch on painting, general touch-up to be performed

Name: Luca Mussi

Date: 2025-01-31

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date: 2025-04-22

Signature:

5 - CLEARANCE CHECK

Done

Name: Lorenzo Novaga

Date: 2025-04-22

Signature:

6- CLEARANCE APPROVAL

Name:

Date: 2025-04-22

Signature:


CAUTION
PRODUCT CONTAINS COMPRESSED SPRING
REFER TO OPERATING + MAINTENANCE INSTRUCTIONS
WWW.ROTORK.COM


25-XV-024
rotork
fluid systems

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003408

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001602	1.4 Discipline	ATEX
1.2 Item	25-XV-024		On/Off Valve - Hyrogen to Vessels Inlet Header Vent System
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

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

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

5 - CLEARANCE CHECK

-

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

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003112

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003277	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

For all supports S-211 the gap, the isolation rubber, the PTFE and the nuts shall be checked during the reinstatement phase.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003113

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003277	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Point n.4 of the ITR has not been checked due the fact that all valves have been removed all the alignment to terminal points are uncheckable.

Name: Kangi Albonetti

Date: 2025-01-21

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Activity done.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003280

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000120	1.4 Discipline	Instrumental
1.2 Item	C-25-XY-011/00-JE-13002	SOLENOID VALVE / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The bending radius is not with in the specified limits , is not fix with AISI cable ties.

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:

rotork
fluid systems
www.rotork.com

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003287

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001714	1.4 Discipline	ATEX
1.2 Item	25-XY-004		Solenoid Valve - Vessel V-25001A Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag SS , on Solenoid Valve.

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:
Date:
Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani
Date: 2025-02-24
Signature:

6- CLEARANCE APPROVAL

Name:
Date:
Signature:


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fluid systems

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003288

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001716	1.4 Discipline	ATEX
1.2 Item	25-XY-008		Solenoid Valve - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag SS , on Solenoid Valve.

Name: Alessio Polo

Date: 2025-01-29

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-24

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


rotork
fluid systems

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003293

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001729	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-008		Limit Switch Box - Vessel V-25001B Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

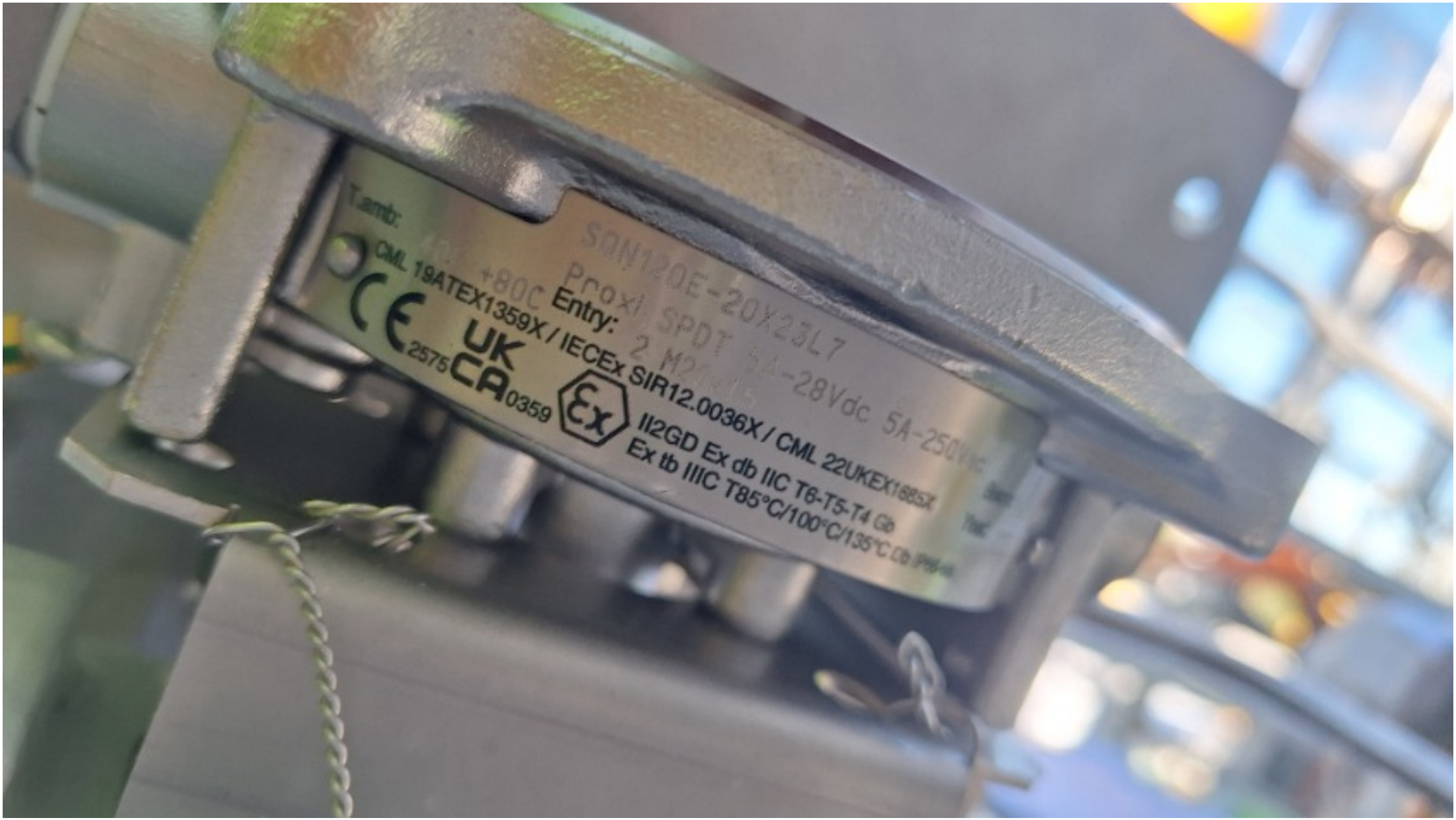
5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


T amb:
+80C
Entry:
CML 19ATEX1359X / IECEx SIR12.0036X / CML 22UKEX1685X
UK
CA
2575
0359
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db


Batch: IT03B0127022
Year: 2024
SIR12.0036X / CML 22UKEX1685X
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db IP66-68

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003294

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001733	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-014	Limit Switch Box - Vessel V-25001D Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.

See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-29
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

5 - CLEARANCE CHECK

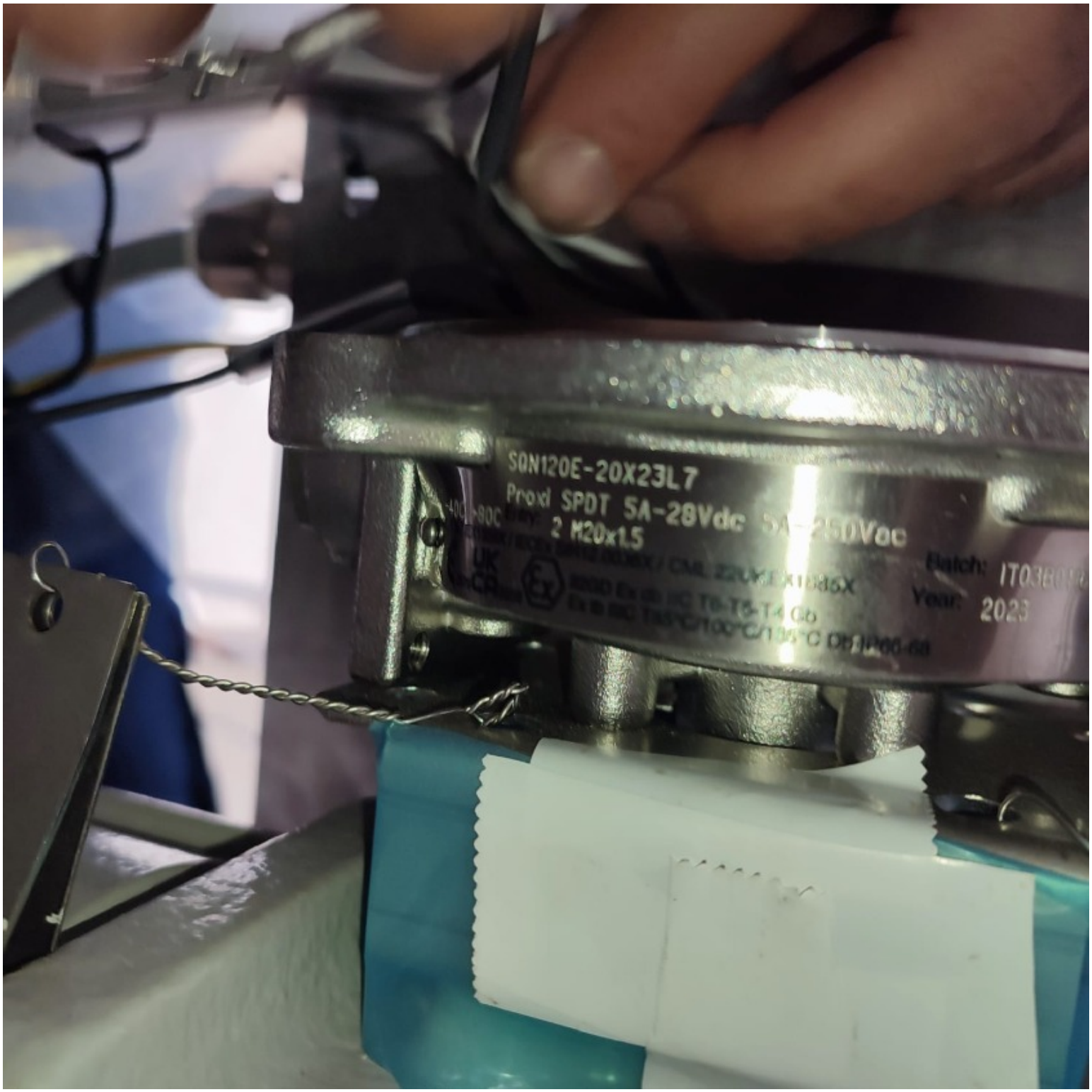
-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


-20X23L7
SPDT 5A-28Vdc 5A-250Vac
M20x1.5
Batch: JT03B0116129
Year: 2023


SQN120E-20X23L7
Proxi SPDT 5A-28Vdc 5A-250Vac
2 M20x1.5
Year: 2023

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003295

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001731	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-011		Limit Switch Box - Vessel V-25001C Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

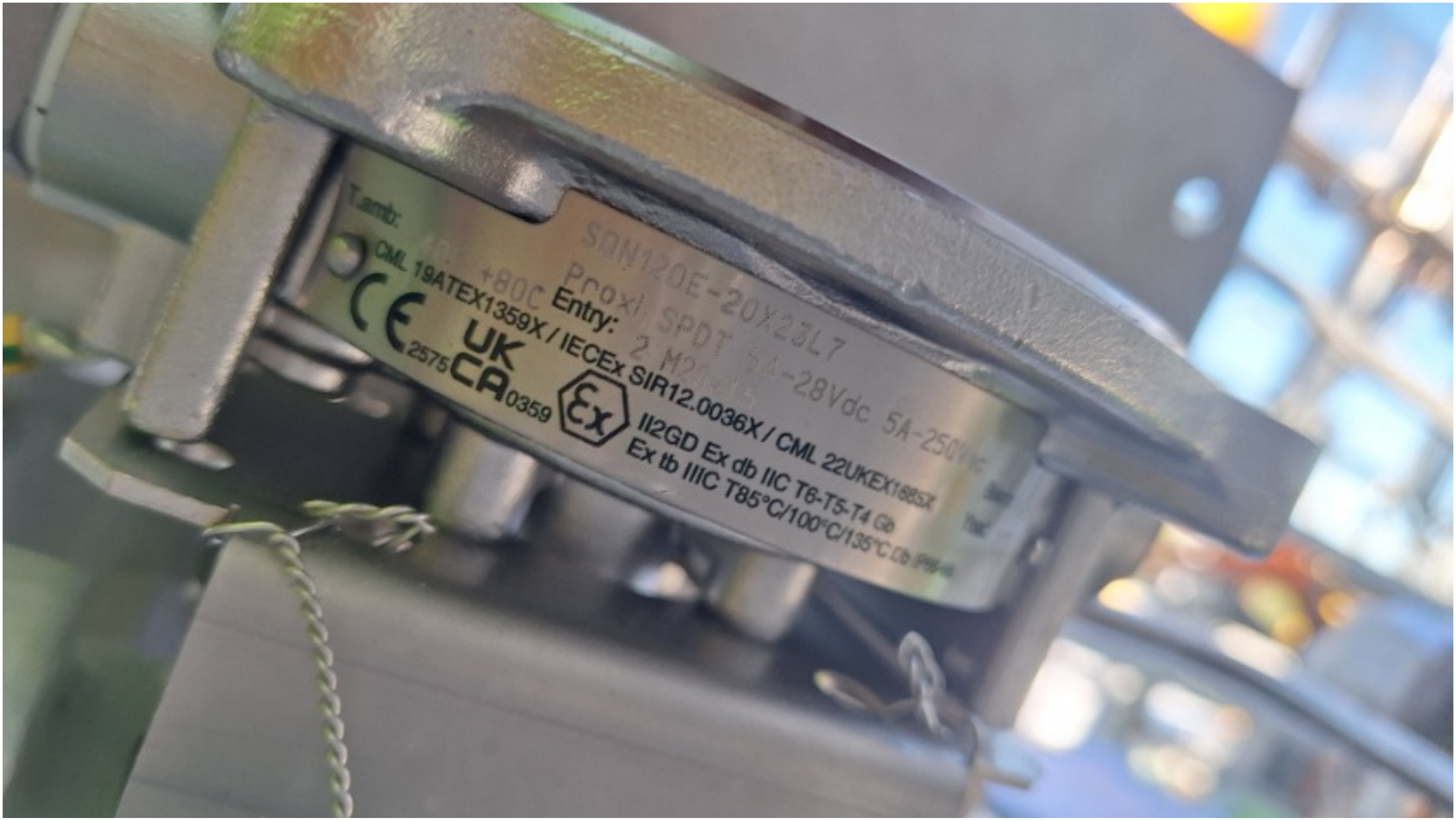
5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


T amb:
+80C
Entry:
CML 19ATEX1359X / IECEx SIR12.0036X / CML 22UKEX1685X
UK
CA
2575
0359
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db


Entry:
CML 19ATEX1359X / IECEx SIR12.0036X / CML 22UKEX1685X
UK
2575 CA 0359
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db IP66-65
Batch:
Year: 2023

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003297

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001727	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-004	Limit Switch Box - Vessel V-25001A Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

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

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

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

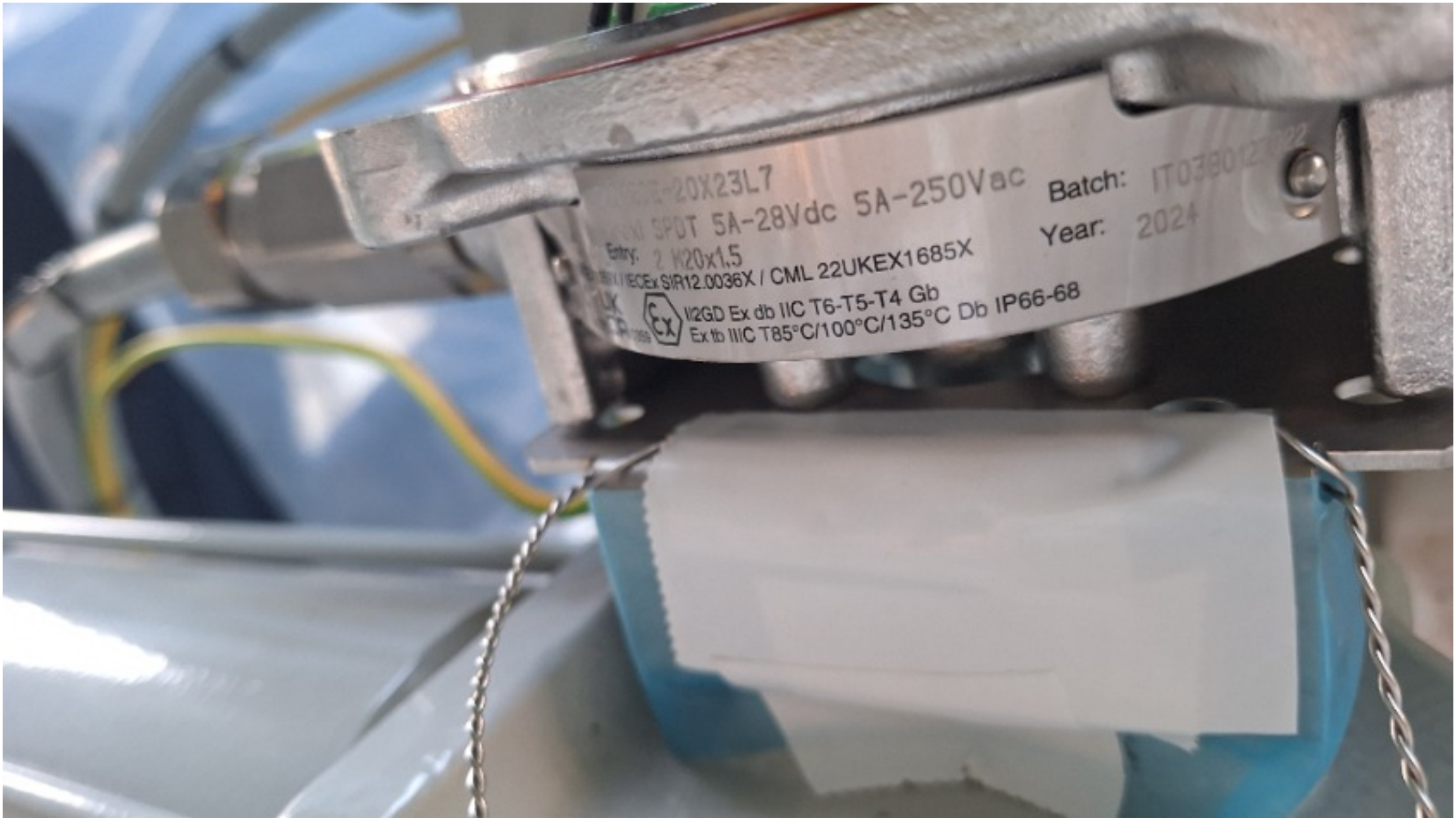
5 - CLEARANCE CHECK

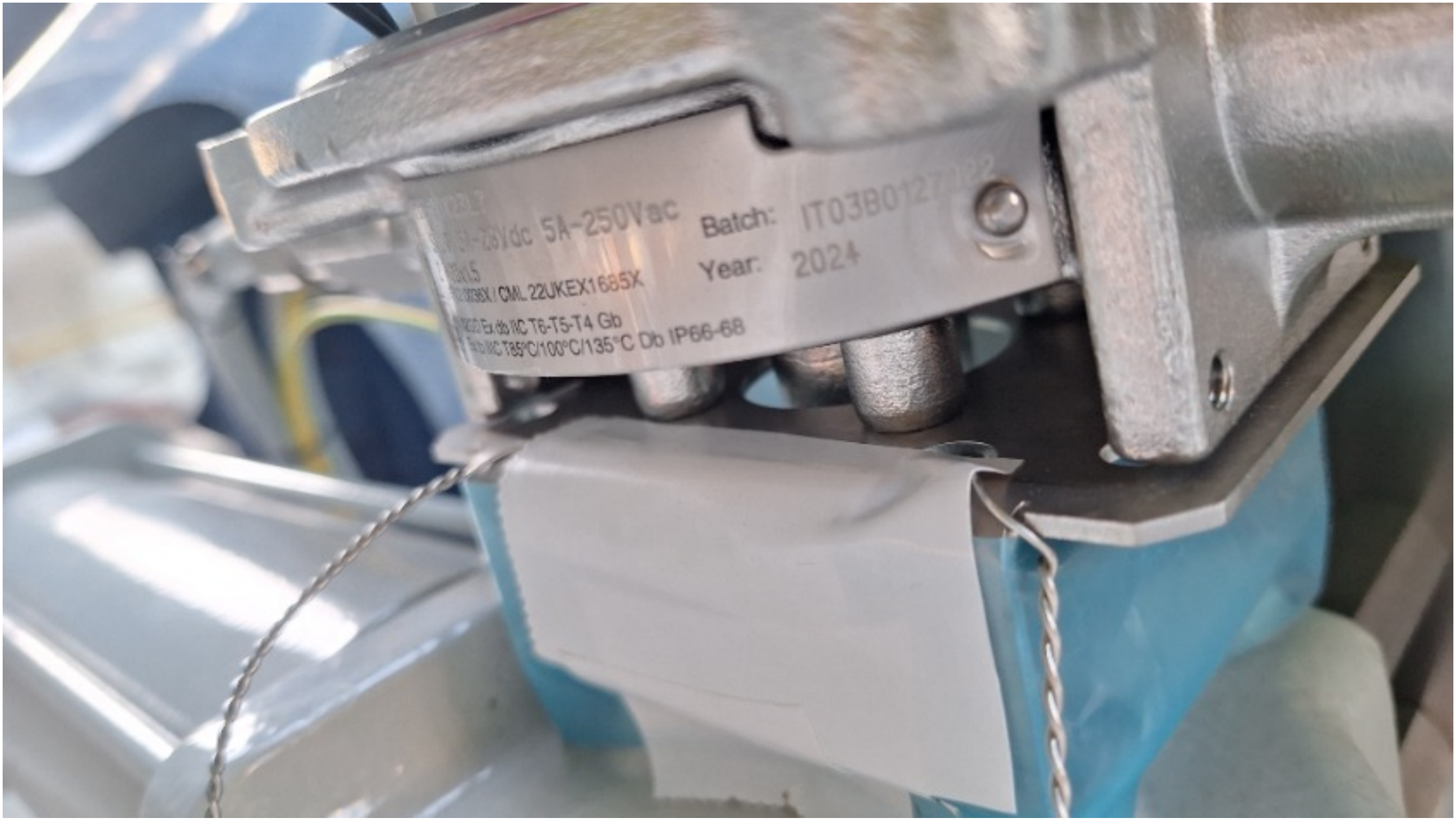
-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


-20X23L7
SPDT 5A-28Vdc 5A-250Vac
Batch:
Year: 2024
Entry: 2 M20x1.5
IECEx SIR12.0036X / CML 22UKEX1685X
II2GD Ex db IIC T6-T5-T4 Gb
Ex tb IIIC T85°C/100°C/135°C Db IP66-68


5A-250Vac
Batch:
Year: 2024
CML 22UKEX1685X
T6-T5-T4 Gb
T85°C/100°C/135°C Db IP66-68

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003298

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000122	1.4 Discipline	Instrumental
1.2 Item	C-25-XY-017/00-JE-13002	SOLENOID VALVE / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The cable need a support near the valve 25-XY-017. See attached photo.

Name: Giovanni Tangianu

Date: 2025-01-29

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:


rotary
fluid systems
25-XV-017

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003299

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001737	1.4 Discipline	ATEX
1.2 Item	25-ZSHL-020		Limit Switch Box - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-29
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

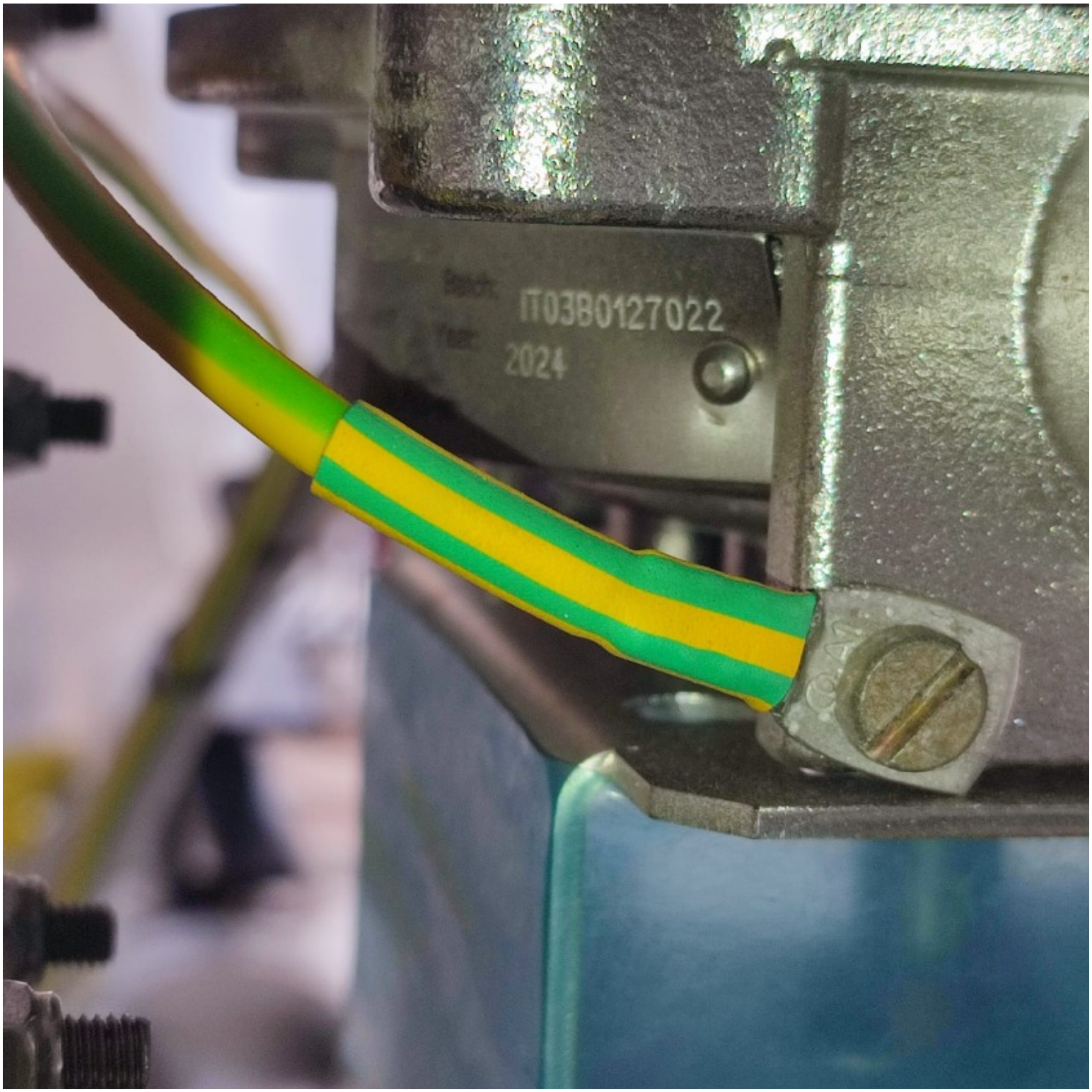
5 - CLEARANCE CHECK

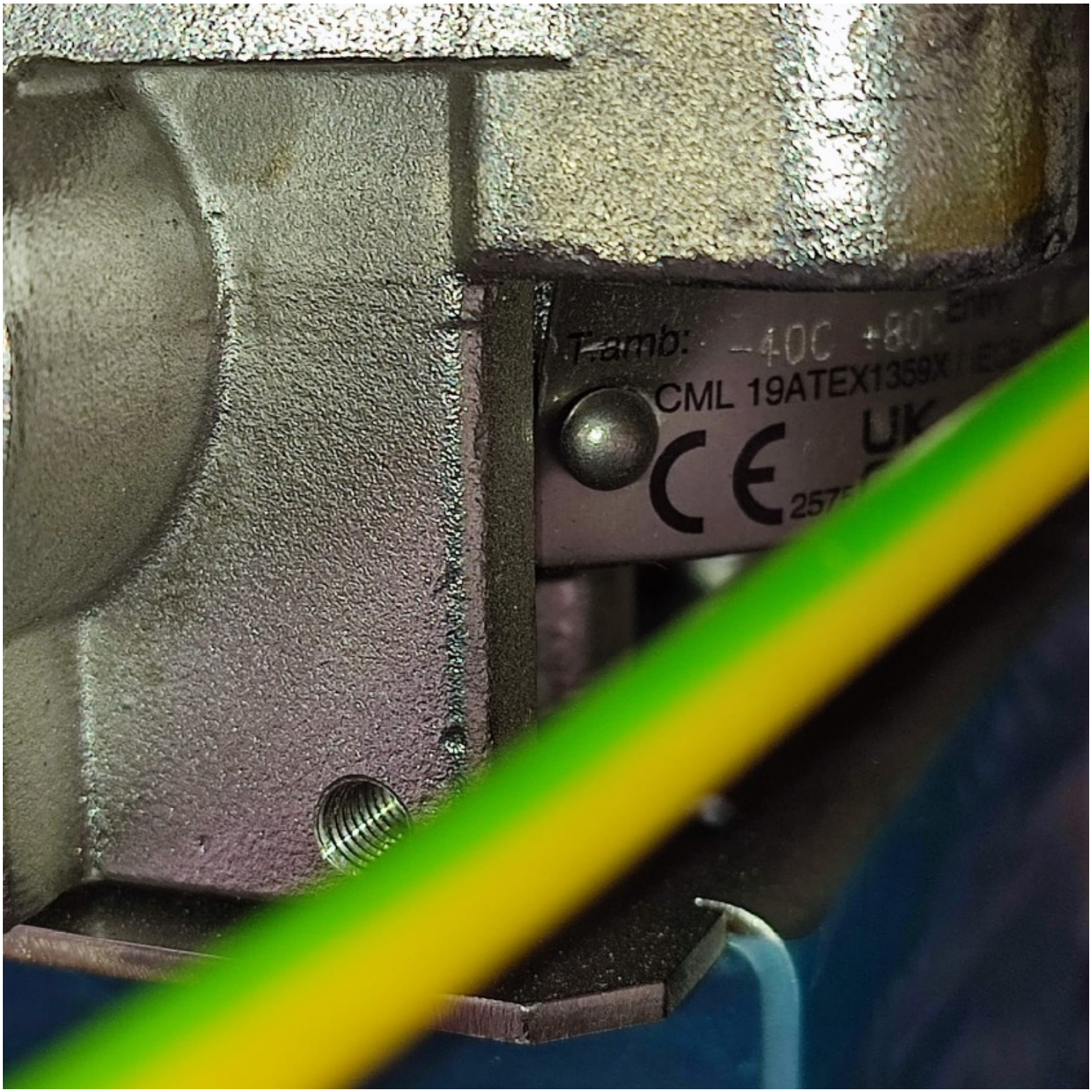
-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


IT03B0127022
2024


T.amb: -40C
CML 19ATEX1359X
UK

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003300

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001720	1.4 Discipline	ATEX
1.2 Item	25-XY-014	Solenoid Valve - Vessel V-25001D Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-29
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


GYJ19.1148X
IECEx BAS10.0008
KTL-12-KB4B0-0213
Baseefa10ATEX0026
BAS21UKEX0642
UK CA 1180
T4 T135°C (-60°C≤ Tamb ≤ +90°C)
T5 T100°C (-60°C≤ Tamb ≤ +55°C)
T6 T85°C (-60°C≤ Tamb ≤ +40°C)
Ex db IIC Gb
Ex tb IIIC Db
0598
NEMA 4X/IP66 IP67
II 2 GD
IEC Ex BAS 963
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境时禁开盖
COVER SCREW 44-70 MINIMUM
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C@T6/105°C@T5/150°C@T4
VOLTAGE./额定电压：
SERIAL No./序列号：
MODEL No./型号：
英国制造
Bifold
OL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003301

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001722	1.4 Discipline	ATEX
1.2 Item	25-XY-017	Solenoid Valve - Vessel V-25001E Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-29
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

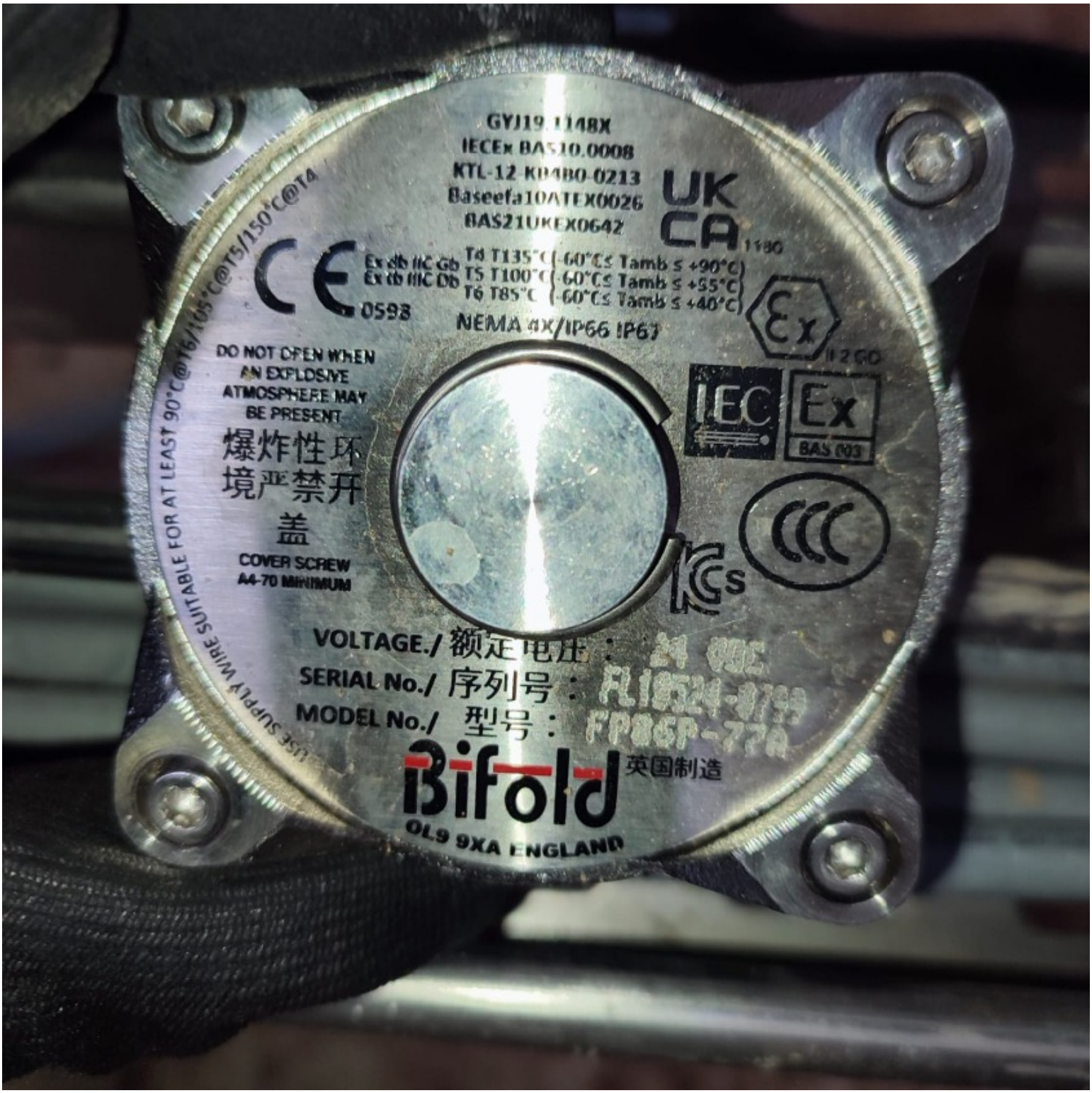
5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


GYJ19 1148X
IECEx BAS10.0008
KTL-12-KD480-0213
Baseefa10ATEX0026
BAS21UKEX0642
UK CA
1180
Ex db IIC Gb
Ex tb IIIC Db
T4 T135°C (-60°C≤ Tamb ≤ +90°C)
T5 T100°C (-60°C≤ Tamb ≤ +55°C)
T6 T85°C (-60°C≤ Tamb ≤ +40°C)
0598
NEMA 4X/IP66 IP67
II 2 GD
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境严禁开盖
COVER SCREW A4-70 MINIMUM
USE SUPPLY WIRE SUITABLE FOR AT LEAST 90°C@T6/105°C@T5/150°C@T4
IEC Ex
BAS 03
VOLTAGE./ 额定电压：
SERIAL No./ 序列号：
MODEL No./ 型号：
FP66P-77A
Bifold
英国制造
OL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003302

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001724	1.4 Discipline	ATEX
1.2 Item	25-XY-020		Solenoid Valve - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.

See attached photo.

Name: Giovanni Tangianu
Date: 2025-01-29
Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Giovanni Tangianu
3.4 Activity code	MC Mechanical Completion	Date	2025-01-29
3.5 Action by	ENG Engineering	Signature	

4 - PERFORMED ACTION

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

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

5 - CLEARANCE CHECK

-

Name: Raffaele Degli Esposti
Date: 2025-06-09
Signature:

6- CLEARANCE APPROVAL

Name:
Date: 2025-06-10
Signature:


T4 T135°C -60°C≤ Tamb ≤ +90°C
T5 T100°C -60°C≤ Tamb ≤ +55°C
T6 T85°C -50°C≤ Tamb ≤ +40°C
0598
II 2 GD
IEC Ex
BAS 003
DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT
爆炸性环境严禁开盖
COVER SCREW A4-70 MINIMUM
VOLTAGE./ 额定电压：
SERIAL No./ 序列号：
MODEL No./ 型号：
Bifold
英国制造
OL9 9XA ENGLAND

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003305

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001720	1.4 Discipline	ATEX
1.2 Item	25-XY-014	Solenoid Valve - Vessel V-25001D Hydrogen Inlet	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

Missing tag plate SS on the solenoid valve.(25-XY-014).

Name: Giovanni Tangianu

Date: 2025-01-29

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003306

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001722	1.4 Discipline	ATEX
1.2 Item	25-XY-017		Solenoid Valve - Vessel V-25001E Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag plate SS on the solenoid valve.(25-XY-017).

Name: Giovanni Tangianu

Date: 2025-01-29

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003307

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10001724	1.4 Discipline	ATEX
1.2 Item	25-XY-020		Solenoid Valve - Vessel V-25001F Hydrogen Inlet
1.3 Subsystem	25-07		Hydrogen Storage Vessels Header (Inlet)

2 - OBSERVATION

Missing tag plate SS on the solenoid valve.(25-XY-020).

Name: Giovanni Tangianu

Date: 2025-01-29

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

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

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Andrea Andreani

Date: 2025-02-21

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003310

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000102	1.4 Discipline	Instrumental
1.2 Item	C-25-XV-024/00-JE-12005	PROXIMITY SWITCH / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-05

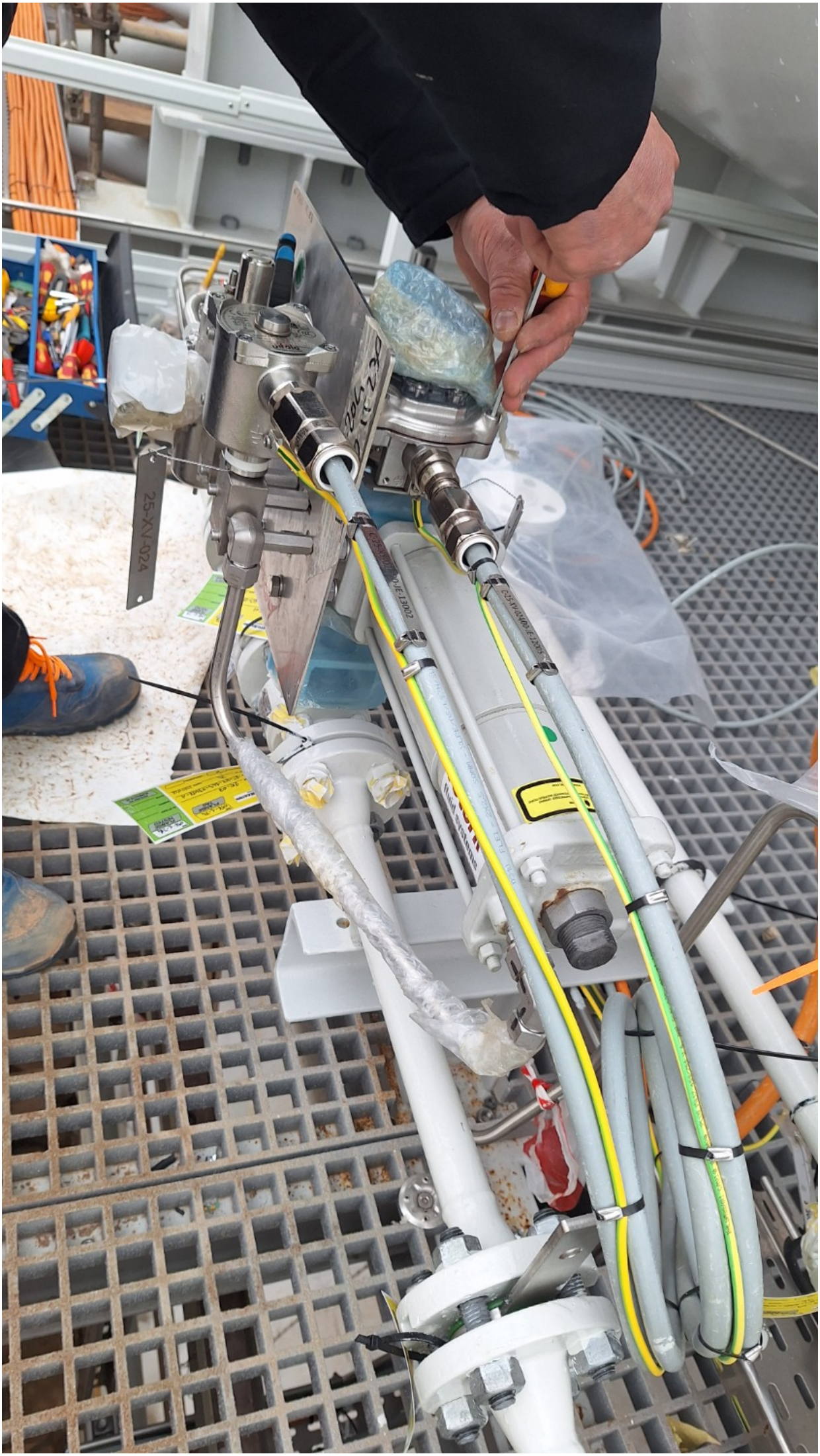
Signature:

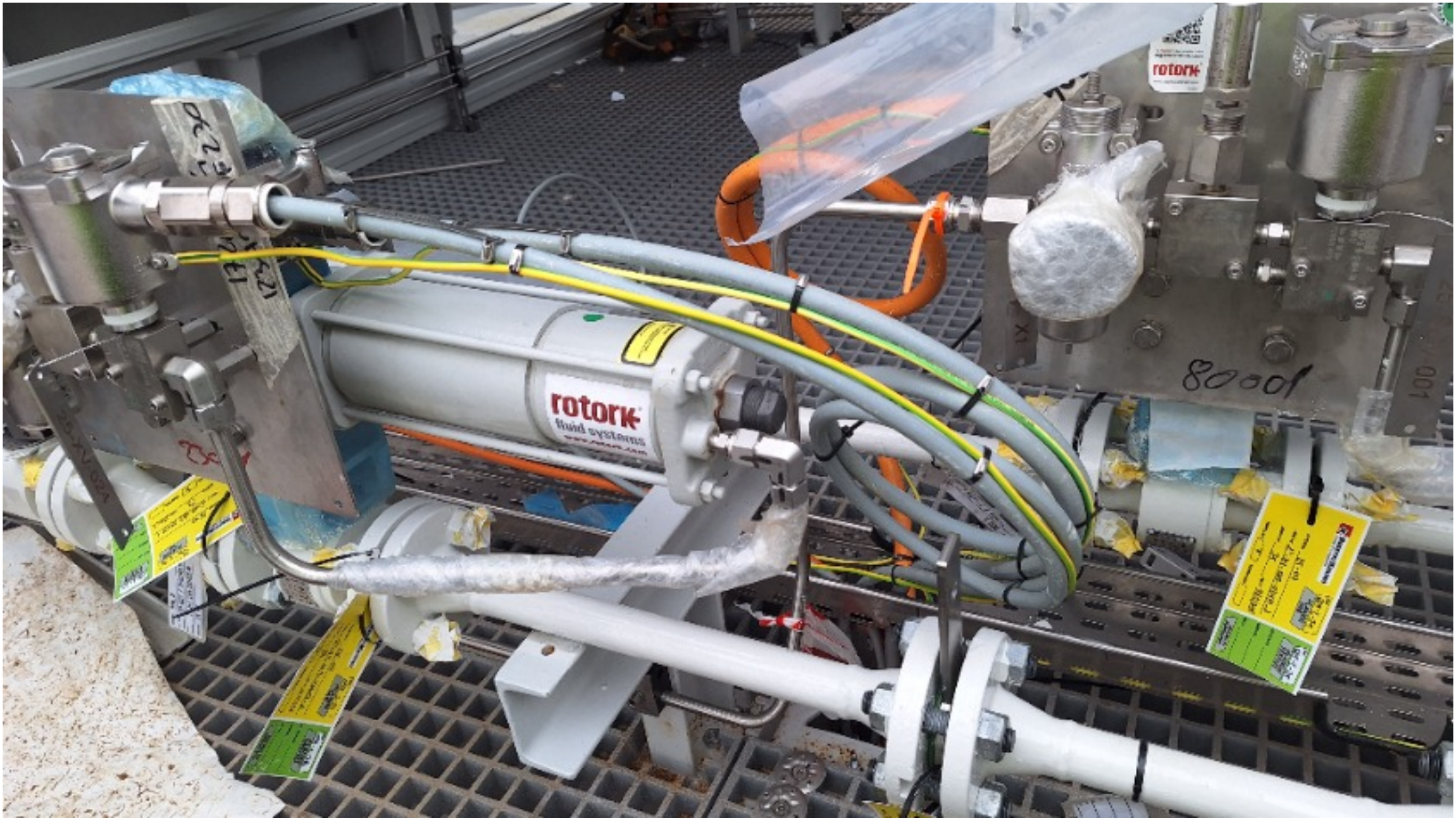
6- CLEARANCE APPROVAL

Name:

Date:

Signature:


25-XV-024


rotork
fluid systems
rotork

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003311

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10000124	1.4 Discipline	Instrumental
1.2 Item	C-25-XY-024/00-JE-13002	SOLENOID VALVE / MARSHALLING PCS	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

The cable is not support .

Name: Alessio Polo

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	B PL B	Name	Alessio Polo
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

DONE

Name: Josip Krizanic

Date: 2025-03-05

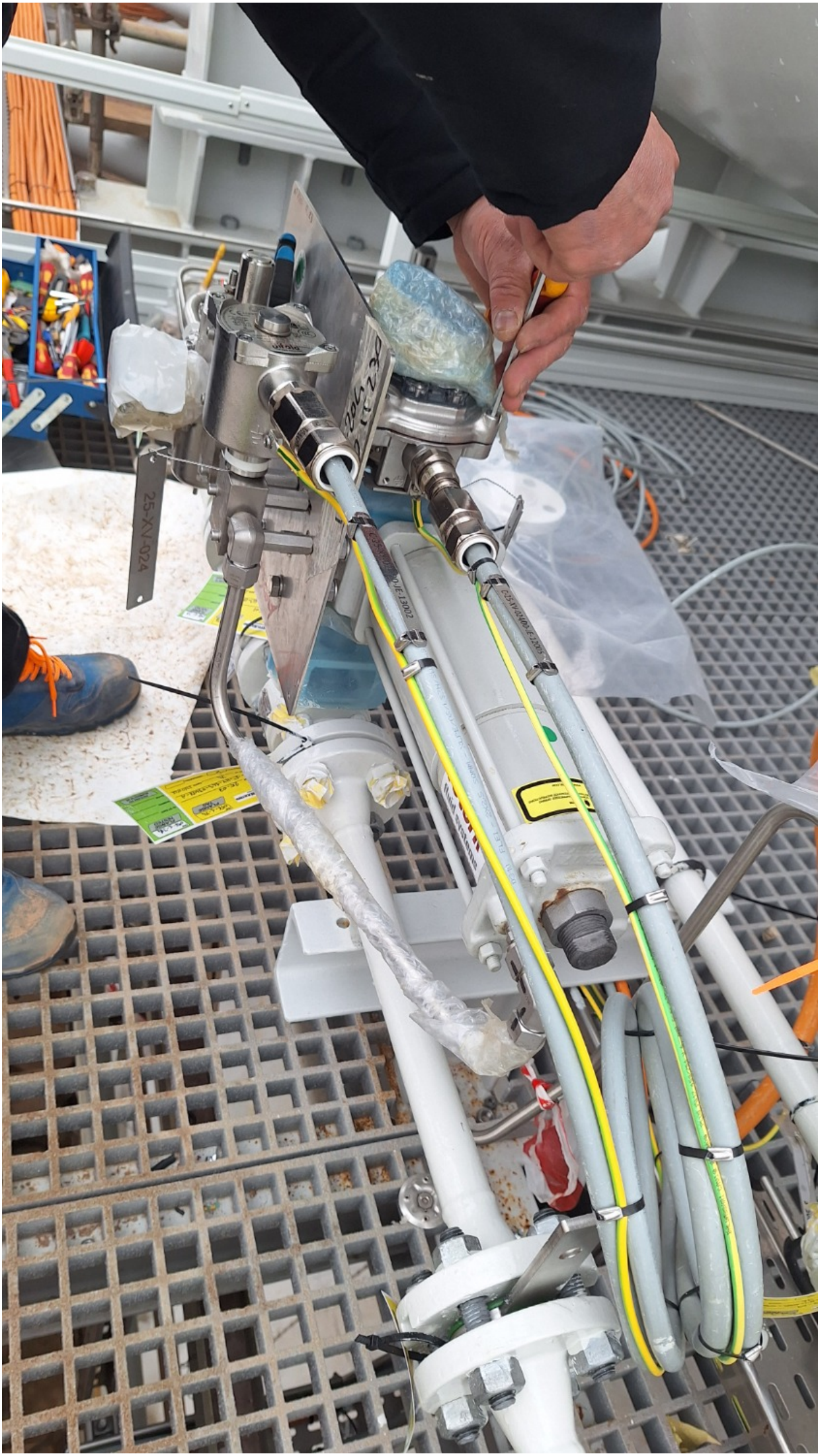
Signature:

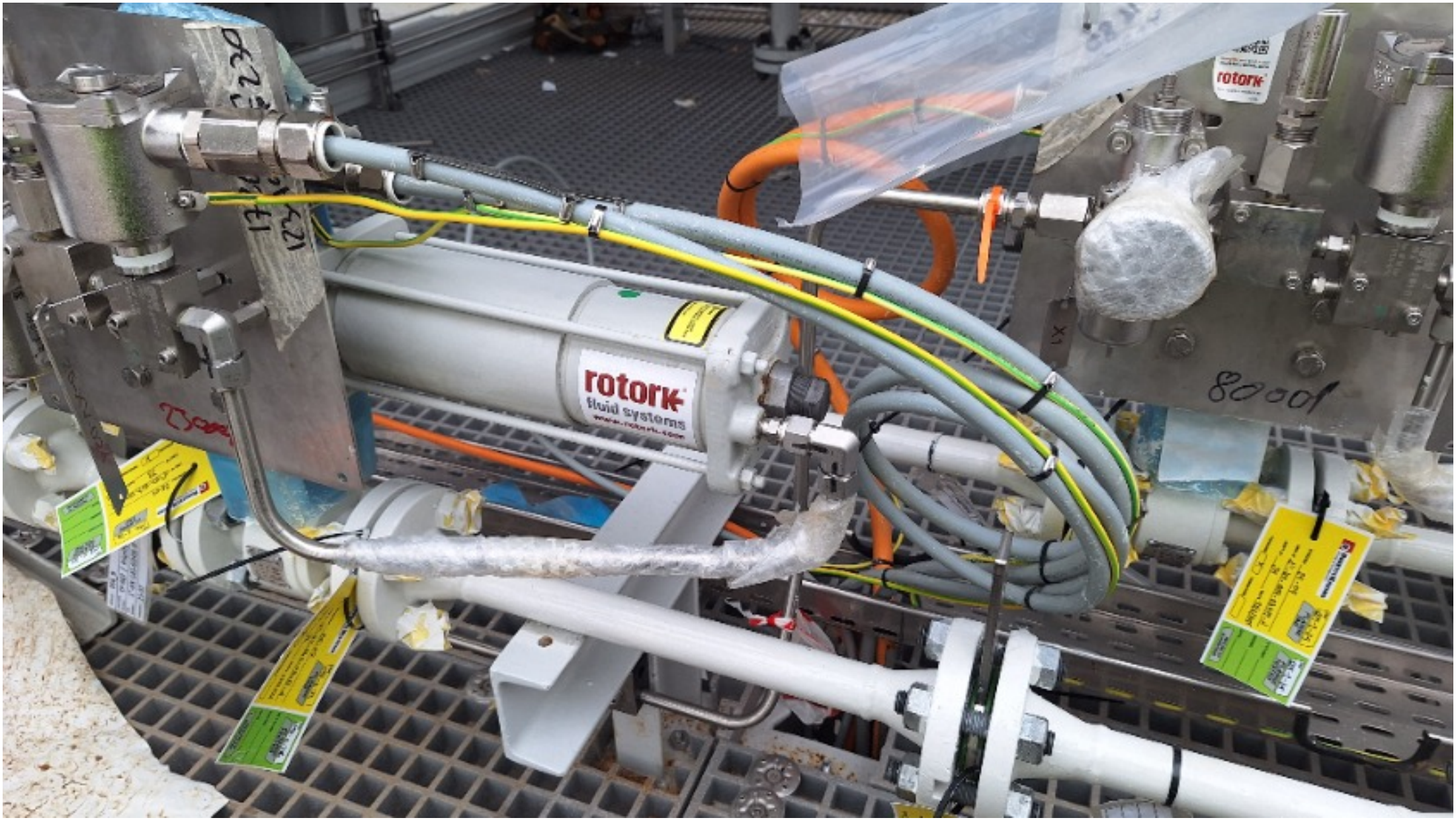
6- CLEARANCE APPROVAL

Name:

Date:

Signature:


25-XV-024


rotork
fluid systems
rotork

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003312

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003278	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

BLPH-MV-014 not istalled

Name: Andrea Mancini

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Mancini
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

ROSETTI MARINO
CROSSWIND

PUNCH ITEM ENTRY / CLEARANCE FORM

C30003313

PROVERLIS

1 -ELEMENT IDENTIFICATION

1.1 Task	C10003278	1.4 Discipline	Piping
1.2 Item	25-07-TP-007	Test Pack 25-07-TP-007	
1.3 Subsystem	25-07	Hydrogen Storage Vessels Header (Inlet)	

2 - OBSERVATION

BLPH-MV-013 not installed

Name: Andrea Mancini

Date: 2025-01-30

Signature:

3 - DEFECT ASSESSMENT

.

3.1 Corrective action proposal

3.2 Material required

3.3 Priority	A PL A	Name	Andrea Mancini
3.4 Activity code	MC Mechanical Completion	Date	2025-01-30
3.5 Action by	RM_CONSTR RM	Signature	

4 - PERFORMED ACTION

Name:

Date:

Signature:

5 - CLEARANCE CHECK

Valve was installed during reinstatement phase.

Name: Lorenzo Novaga

Date: 2025-02-07

Signature:

6- CLEARANCE APPROVAL

Name:

Date:

Signature:

Section 4 FUNCTIONAL TESTS SHEETS

Section 4.1 Electrical functional test sheets index

NOT APPLICABLE

Section 4.2 Electrical
“As-Commissioned” interconnection diagrams

NOT APPLICABLE

Section 4.3 Instrumentation functional test sheets index

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 25-07 & discipline : I

Instrumental	25-07 Hydrogen Storage Vessels Header (Inlet)

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
25-PT-001	Pressure Transmitter - Hyrogen to Vessels Inlet Header	ONSHORE	C10003161	FJ01A	100	2025-02-21	RFO 2
25-PT-002	Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down	ONSHORE	C10003162	FJ01A	100	2025-02-21	RFO 2
25-SDV-001	On/Off Valve - Hyrogen to Vessels Inlet Header Shut-Down	ONSHORE	C10003209	FJ01V	100	2025-03-26	RFO 2
25-XV-004	On-Off Actuated Ball Valve - Vessel V-25001A Hydrogen Inlet	ONSHORE	C10003211	FJ01V	100	2025-02-21	RFO 2
25-XV-008	On-Off Actuated Ball Valve - Vessel V-25001B Hydrogen Inlet	ONSHORE	C10003213	FJ01V	100	2025-02-21	RFO 2
25-XV-011	On/Off Valve - Vessel V-25001C Hydrogen Inlet	ONSHORE	C10003215	FJ01V	100	2025-02-21	RFO 2
25-XV-014	On/Off Valve - Vessel V-25001D Hydrogen Inlet	ONSHORE	C10003217	FJ01V	100	2025-02-21	RFO 2
25-XV-017	On/Off Valve - Vessel V-25001E Hydrogen Inlet	ONSHORE	C10003219	FJ01V	100	2025-02-21	RFO 2
25-XV-020	On/Off Valve - Vessel V-25001F Hydrogen Inlet	ONSHORE	C10003221	FJ01V	100	2025-02-21	RFO 2
25-XV-024	On/Off Valve - Hyrogen to Vessels Inlet Header Vent System	ONSHORE	C10003223	FJ01V	100	2025-02-21	RFO 2

ROSETTI MARINO | CROSSWIND

ITEM	Tag	25-PT-001 : Pressure Transmitter - Hyrogen to Vessels Inlet Header	Dwg	123A90-DDL-IN-DS-40039	
	S/Sys	25-07 : Hydrogen Storage Vessels Header (Inlet)	Module	UD	
TASK	code	C10003161	Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01A		Analog Loop

LOOP DATA

Loop TAG	25-PT-001			TSLD	123A90-FDL-IN-DG-40014 rev. 1A		
IO Type	Input	Yes	Output	No	Energy by transmitter	No	Energy by system	Yes
Marshalling	B400-PCS-001	Terminal	13A/13B	Slot	03	Rack	01	Chanel	13

LOOP TEST

1	Check earth isolation of the loop									OK
2	Connect loop to terminal									OK
3	Confirm Process Scale	Unit	bar	Min	0	Max	40			OK

LOOP RANGE			0%	25%	50%	75%	100%	
4	Physical value applied for test	Unit mA	4	8	12	16	20	
5	Control System Display	Unit bar	0	10	20	30	40	

LOOP SERVICE

		Value	Trip	Gen Alarm	DCS Alarm	SOE	DCS display	
6	Threshold 1	33 bar	No	Yes	Yes	NA	OK	OK
7	Threshold 2		NA	NA	NA	NA	NA	NA
8	Threshold 3		NA	NA	NA	NA	NA	NA
9	Threshold 4		NA	NA	NA	NA	NA	NA
10	Checking of line monitoring		No	No	No	NA	OK	OK
11	Checking of Maintenance Inhibition		NA	NA	NA	NA	NA	NA
12	Associated safety Level / bar							
13	Associated outputs							

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MERIAM HART COMMUNICATOR	1948000038		

LOOP DOCUMENTATION

14	Loop diagram is marked up and attached to this test sheet	OK
15	Cause and effect chart is highlighted accordingly	
16	Any defect is recorded for punch list issuance	

Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	Digitaly signed by Laurentiu Grozavu 2025-02-17T10:19:53.317Z	Digitaly signed by Giandonato Delmissier 2025-02-17T15:01:34.175Z	Digitaly signed by John Mackillop 2025-02-21T10:56:41.875Z

ABR SERVICE S.r.l.
Via Manlio Monti, 40 – 48123 RAVENNA
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C.F. Part. IVA 02764420390

Plant	CROSSWIND	Description	H2 FROM ELECTR.(A-20000) TO H2 STORAGE VESSELS	Instrument Tag	25-PT-001
Area	N.P.	Loop Tag	25-PI-001	Report N°	001
Type of verification	periodic	Calibration range	0,00 ÷ 40,00 bar	Reference procedure data sheet	123A90-PML-QHSE-PRO-00122 Page N°8
Type of instrument	Pressure meter	Max uncertainty required	± 0,070 % s.r.		

UNDER EXAMINATION INSTRUMENT 'S DATA

Tag	Manufacture	Model	S/N
25-PT-001	SPRIANO	SST76	SE240634

USED REFERENCE SAMPLE 'S DATA

Manufacture	Model	S/N	n° of certification and calibration center	uncertainty (u.m.)	Date of issue
BEAMEX	MC5-IS	20177766	0639/MP/2024 _ LAT 150	± 0,001 c.s.	24/04/2024
BEAMEX	EXT600	64024	0639/MP/2024 _ LAT 150	± 0,001 c.s.	24/04/2024

environment temperature at the time of check 25 °C

Value indicated before starting the check 0 bar

CHECK RESULT: *as found*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
bar	mA	mA	mA	
0,00	4,00	4,000	+0,000	+0,000
10,00	8,00	8,002	+0,002	+0,013
20,00	12,00	11,998	-0,002	-0,013
30,00	16,00	15,995	-0,005	-0,031
40,00	20,00	19,999	-0,001	-0,006
30,00	16,00	15,996	-0,004	-0,025
20,00	12,00	11,999	-0,001	-0,006
10,00	8,00	8,001	+0,001	+0,006
0,00	4,00	4,000	+0,000	+0,000
		max error detected %		0,031

Check: PASSED

Verification activation of blocks/threshold alarms

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

Blocks/alarms check:

Corrective action

CHECK RESULT: *as left*

Verification functionality loop check

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

Check:

Verification activation of blocks/threshold alarms

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

Blocks/alarms check:

Value indicated after the check 0 bar

Note:

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

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

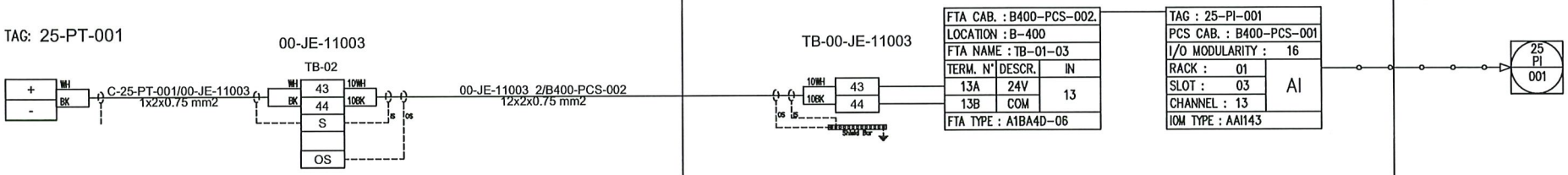
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Tel. 0544 685411
C.F. e P.IVA 02764420390

GENERAL	1	Tag Number		25-PT-001	
	2	Service		H2 FROM ELECTR. (A-20000) TO H2 STORAGE VESSELS	
	3	P&ID Number	Location	123A90-DDL-PR-PID-80013	1"-HY-007-03HSS-N
	4	Function		PRESSURE MEASUREMENT	
	5	Mounting		DIRECT ON-LINE	
	6	Area Classification		ATEX Zone2 - IIC (IIB+H2) T1	
	7	Ambient Temperature		Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.	
PROCESS CONDITIONS	8	Fluid		HYDROGEN	
	9	Pressure Des.	Oper. [barg]	40	4(Min.) / 30(Max)
	10	Temperature Des.	Oper. [°C]	-10 / + 80 °C	5(Min.) / 65(Max.)
	11	Oper. Spec. Gravity	Oper. Viscosity	-	-
	12	Flow Rate	Allowable Temp.	-	-
TRANSMITTER	13	Instrument Range Min.	Max. [barg]	0	100
	14	Calibration Range Min.	Max. [barg]	0	40
	15	Elevation	Suppression	-	-
	16	Element Type		Diaphragm	
	17	Element Material		SS AISI 316/316L GOLD PLATED	
	18	Body Material	Body Rating	SS AISI 316/316L	200 bar
	19	Process Connection		1/2" NPT-M	
	20	Wetted O-Rings Material		-	
	21	Fill Fluid		-	
	22	Bolts	Housing	Manifold/Instrument assembly	SS AISI 316/316L
	23	Paint		N/A	
	24	ATEX Certification	Ingress Protection	ATEX Ex II 2G Ex db IIC T5	IP66
	25	Process Connection	Electrical Connection	1/2" NPT-M	2 X M20X1.5
	26	Accuracy		0.07% of Nominal Range	
	27	SIL Certification	PED Certification	-	Required
DIAPHRAGM SEAL	28	Process Connection & Rating		-	
	29	Diaphragm Material	Housing Material	-	-
	30	Fill Fluid	Capillary Material	-	-
	31	Capillary Type	Capillary Length	-	-
	32	Flushing Connection		-	
OPTIONS	33	Integral Meter	Scale	Required	-
	34	Hydrostatic Testing	Cleaning	Required	-
	35	Mounting Brackets	Manifold Model No	Required	MAN2-R6
	36	Lightning Protection	Barrier Manuf./Model	-	-
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type	HART 6	4-20mA Loop Powered 24 Vdc
	38	D D Revision	CFF Revision	-	-
	39	Device Tag	Hart Tag	-	-
	40	Internal Diagnostics	Capacitance	-	-
	41	Segment	Device Address	-	-
	42	Device Class	Simulate	-	-
	43	Nominal Current	Operating Voltage	-	-
PURCHASE	44	Manufacturer		TERRANOVA SRL	
	45	Model		SST76-H-7-L-2-9-2-1-4 + MAN2-R6	
	46	Purchase Order Number		4718_OS	

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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD	ITER – B400	CENTRAL CONTROL ROOM
	PROCESS CONTROL SYSTEM	OPERATOR CONSOLE



NO MARK UP

14/02/25

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV: 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-PI-001
HYDROGEN TO VESSELS INLET HEADER

CONTRACT NO./TITLE CONTRACT_NO.			SCALE 1:1
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE 23/10/2024
A3	DRAWING NO. 123A90-DDL-IN-DG-40014	SHEET 009	REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	25-PT-002	: Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down	Dwg	123A90-DDL-IN-DS-40039		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003162	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity FTS	Discipline	Instrumental	Form FJ01A	Analog Loop

LOOP DATA

Loop TAG	25-PT-002			TSLD	123A90-FDL-IN-DG-40014 rev. 1A		
IO Type	Input Yes		Output No	Energy by transmitter	No	Energy by system	Yes
Marshalling	B400-SIS-001	Terminal	07A/07B	Slot	01	Rack 01	Chanel 07

LOOP TEST

1	Check earth isolation of the loop								OK
2	Connect loop to terminal								OK
3	Confirm Process Scale	Unit	bar	Min	0	Max	40		OK

LOOP RANGE			0%	25%	50%	75%	100%	
4	Physical value applied for test	Unit mA	4	8	12	16	20	
5	Control System Display	Unit bar	0	10	20	30	40	

LOOP SERVICE

		Value	Trip	Gen Alarm	DCS Alarm	SOE	DCS display	
6	Threshold 1	36 bar	Yes	Yes	Yes	Yes	OK	OK
7	Threshold 2		NA	NA	NA	NA	NA	NA
8	Threshold 3		NA	NA	NA	NA	NA	NA
9	Threshold 4		NA	NA	NA	NA	NA	NA
10	Checking of line monitoring		No	No	No	NA	OK	OK
11	Checking of Maintenance Inhibition		NA	NA	NA	NA	NA	NA
12	Associated safety Level / bar		PSD					OK
13	Associated outputs							

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MERIAM HART COMMUNICATOR	1948000038		

LOOP DOCUMENTATION

14	Loop diagram is marked up and attached to this test sheet	OK
15	Cause and effect chart is highlighted accordingly	
16	Any defect is recorded for punch list issuance	

Comments:

Page 1/1	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM.	
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	Digitaly signed by Laurentiu Grozavu 2025-02-17T10:20:28.387Z	Digitaly signed by Giandonato Delmissier 2025-02-17T14:58:16.272Z	Digitaly signed by John Mackillop 2025-02-21T10:57:04.274Z

ABR SERVICE S.r.l.
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C.F. Part. IVA 02764420390

Plant	CROSSWIND	Description	H2 FROM ELECTR.(A-20000) TO H2 STORAGE VESSEL			Instrument Tag	25-PT-002
Area	N.P.	Loop Tag	25-PI-002			Report N°	002
Type of verification	periodic	Calibration range	0,00	+ 40,00	bar	Reference procedure data sheet	123A90-PML-QHSE-PRO-00122 Page N°8
Type of Instrument	Pressure meter	Max uncertainty required		± 0,070	% s.r.		

UNDER EXAMINATION INSTRUMENT 'S DATA

Tag	Manufacture	Model	S/N
25-PT-002	SPRIANO	SST76	SE240635

USED REFERENCE SAMPLE 'S DATA

Manufacture	Model	S/N	n° of certification and calibration center	uncertainty (u.m.)	Date of issue
BEAMEX	MC5-IS	20177766	0639/MP/2024 _ LAT 150	± 0,001 c.s.	24/04/2024
BEAMEX	EXT600	64024	0639/MP/2024 _ LAT 150	± 0,001 c.s.	24/04/2024

environment temperature at the time of check 25 °C

Value indicated before starting the check 0 bar

CHECK RESULT: *as found*

Verification functionality loop check

Generated value	Expected value	Read value	Error	Error % on s.r.
bar	mA	mA	mA	
0,00	4,00	4,000	+0,000	+0,000
10,00	8,00	7,998	-0,002	-0,012
20,00	12,00	11,995	-0,005	-0,031
30,00	16,00	15,993	-0,007	-0,044
40,00	20,00	19,996	-0,004	-0,025
30,00	16,00	15,994	-0,006	-0,038
20,00	12,00	11,994	-0,006	-0,038
10,00	8,00	7,999	-0,001	-0,006
0,00	4,00	4,001	+0,001	+0,006
		max error detected %		0,044

Check: PASSED

Verification activation of blocks/threshold alarms

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

Blocks/alarms check:

Corrective action

CHECK RESULT: *as left*

Verification functionality loop check

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

Check:

Verification activation of blocks/threshold alarms

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

Blocks/alarms check:

Value indicated after the check 0 bar

Note:

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

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

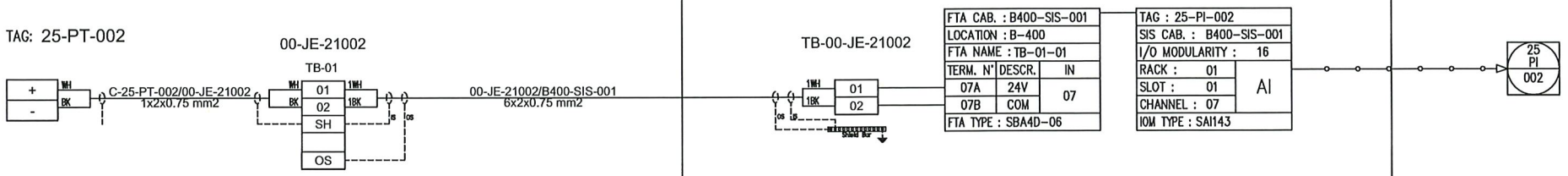
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Via M. Monti, 40 - 48123 RAVENNA
Tel. 0544 685411
C.F. e P.IVA 02764420390

GENERAL	1	Tag Number		25-PT-002	
	2	Service		H2 FROM ELECTR. (A-20000) TO H2 STORAGE VESSELS	
	3	P&ID Number	Location	123A90-DDL-PR-PID-80013	1"-HY-007-03HSS-N
	4	Function		PRESSURE MEASUREMENT	
	5	Mounting		DIRECT ON-LINE	
	6	Area Classification		ATEX Zone2 - IIC (IIB+H2) T1	
	7	Ambient Temperature		Min: -8.4 °C, Norm: 10.5 °C, Max: +25.0 °C.	
PROCESS CONDITIONS	8	Fluid		HYDROGEN	
	9	Pressure Des.	Oper. [barg]	40	4(Min.) / 30(Max)
	10	Temperature Des.	Oper. [°C]	-10 / + 80 °C	5(Min.) / 65(Max.)
	11	Oper. Spec. Gravity	Oper. Viscosity	-	-
	12	Flow Rate	Allowable Temp.	-	-
TRANSMITTER	13	Instrument Range Min.	Max. [barg]	0	100
	14	Calibration Range Min.	Max. [barg]	0	40
	15	Elevation	Suppression	-	-
	16	Element Type		Diaphragm	
	17	Element Material		SS AISI 316/316L GOLD PLATED	
	18	Body Material	Body Rating	AISI 316 SS	200 bar
	19	Process Connection		1/2" NPT-M	
	20	Wetted O-Rings Material		-	
	21	Fill Fluid		-	
	22	Bolts	Housing	Manifold/Instrument assembly	SS AISI 316/316L
	23	Paint		N/A	
	24	ATEX Certification	Ingress Protection	ATEX Ex II 2G Ex db IIC T5	IP66
	25	Process Connection	Electrical Connection	1/2" NPT-M	2 X M20X1.5
	26	Accuracy		0.07% of Nominal Range	
	27	SIL Certification	PED Certification	SIL2	Required
DIAPHRAGM SEAL	28	Process Connection & Rating		-	
	29	Diaphragm Material	Housing Material	-	-
	30	Fill Fluid	Capillary Material	-	-
	31	Capillary Type	Capillary Length	-	-
	32	Flushing Connection		-	
OPTIONS	33	Integral Meter	Scale	Required	-
	34	Hydrostatic Testing	Cleaning	Required	-
	35	Mounting Brackets	Manifold Model No	Required	MAN2-R6
	36	Lightning Protection	Barrier Manuf./Model	-	-
COMMUNICATION AND SOFTWARE	37	Communication Type	Signal Type	HART 6	4-20mA Loop Powered 24 Vdc
	38	D D Revision	CFF Revision	-	-
	39	Device Tag	Hart Tag	-	-
	40	Internal Diagnostics	Capacitance	-	-
	41	Segment	Device Address	-	-
	42	Device Class	Simulate	-	-
	43	Nominal Current	Operating Voltage	-	-
PURCHASE	44	Manufacturer		TERRANOVA SRL	
	45	Model		SST76-H-7-L-2-9-2-1-4 + MAN2-R6	
	46	Purchase Order Number		4718_OS	

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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD	ITER – B400	CENTRAL CONTROL ROOM
	SAFETY INSTRUMENTED SYSTEM	OPERATOR CONSOLE



NO MARK UP
Langam
14/02/25

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV: 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-PI-002
HYDROGEN TO VESSELS INLET HEADER SHUT-DOWN

CONTRACT NO./TITLE CONTRACT_NO.			SCALE 1:1
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE 23/10/2024
A3	DRAWING NO. 123A90-DDL-IN-DG-40014	SHEET 079	REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO — CROSSWIND

ITEM	Tag	25-SDV-001	: On/Off Valve - Hyrogen to Vessels Inlet Header Shut-Down	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003209	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity FTS	Discipline	Instrumental	Form FJ01V	ON/OFF Valve

Data

Loop TAG: 25-SDV-001 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test				Associated Tag	Comment	Result
Local reset						NA
Remote command : Solenoid valve 1 energized				25-SDY-001		OK
Remote command : Solenoid valve 2 energized						NA
Local indication of the valve position						OK
Open limit switch				25-ZSH-001		OK
Closed limit switch				25-ZSL-001		OK
Pressure transmitter on control line						NA
Local closing command						NA
Local opening command						NA
Opening time	1 sec	Restriction adjusted	No			OK
Closing time	1 sec	Restriction adjusted	No			OK
Interlock function						NA
Fail safe position on loss of electrical signal				CLOSE		OK
Fail safe position on loss of power fluid				CLOSE		OK
Timer checking					4 SEC.	OK
Number of operations on accumulator						NA
ESD signal and solenoid valve test facility						OK
Solenoid valve override indication on ICS						OK
Local indication of the solenoid valve deenergization						NA
Partial stroke cheching						NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 17140769	7715/24	10/07/2025

Comments:

	Performed by	☑ WITNESS ☐ REVIEW	☑ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CROSSWIND
Name	Laurentiu Grozavu	Giandonato Delmissier	Gerry McCann
Date	2025-03-20	2025-03-20	2025-03-26
Signature	Digitaly signed by Laurentiu Grozavu 2025-03-20T08:25:26.301Z	Digitaly signed by Giandonato Delmissier 2025-03-20T13:07:25.987Z	Digitaly signed by Gerry McCann 2025-03-26T09:47:50.768Z

GENERAL	1	Tag Number	Location			25-SDV-001		25
	2	Service				HYDROGEN TO STORAGE TANKS		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80013		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-007-03HSS-N		
	5	Line Size and Schedule	Inlet		Outlet	1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/AA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-SDY-001 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-001 (9, 17) - Soldo SS		25-ZSH-001 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-		-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

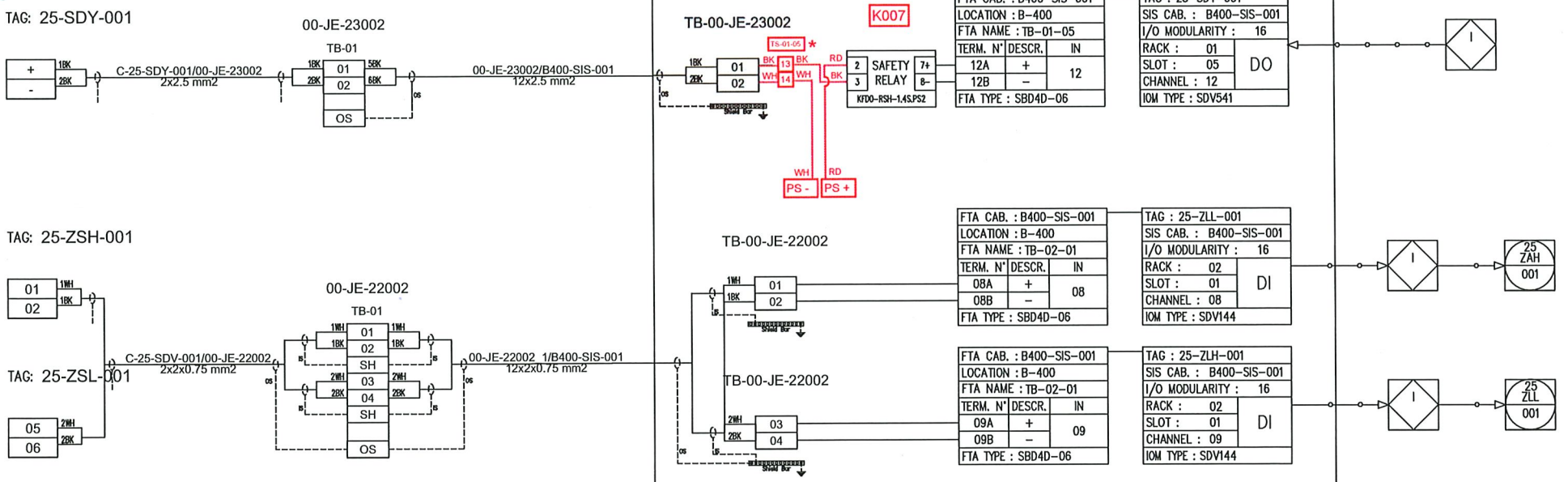
ROSETTI MARINO

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

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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD	ITER – B400	CENTRAL CONTROL ROOM
	SAFETY INSTRUMENTED SYSTEM	OPERATOR CONSOLE



AS BUILT
25/02/25

* ALL NEGATIVE TERMINALS ON TB-01-05 ARE FUSABLE TERMINAL

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV: 1_A DATE: 20/12/24 SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND | ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-SDV-001
HYDROGEN TO VESSELS INLET HEADER SHUT-DOWN

CONTRACT NO./TITLE CONTRACT_NO.			SCALE 1:1
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE 23/10/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40014	SHEET 100	REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	25-XV-004	: On/Off Valve - Vessel V-25001A Hydrogen Inlet	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003211	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01V	ON/OFF Valve

Data

Loop TAG: 25-XV-004 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-004		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							OK
Open limit switch					25-ZSH-004		OK
Closed limit switch					25-ZSL-004		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking						4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☉ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	PROVERLIS Digitaly signed by Laurentiu Grozavu 2025-02-17T10:18:34.291Z	PROVERLIS Digitaly signed by Giandonato Delmissier 2025-02-17T14:59:05.049Z	PROVERLIS Digitaly signed by John Mackillop 2025-02-21T10:57:22.640Z

GENERAL	1	Tag Number	Location			25-XV-004		25
	2	Service				HYDROGEN STORAGE TANK V-25001A INLET		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80015		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-015-03HSS-N		
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-004 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-004 (9, 17) - Soldo SS		25-ZSH-004 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-		-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 16 of 33

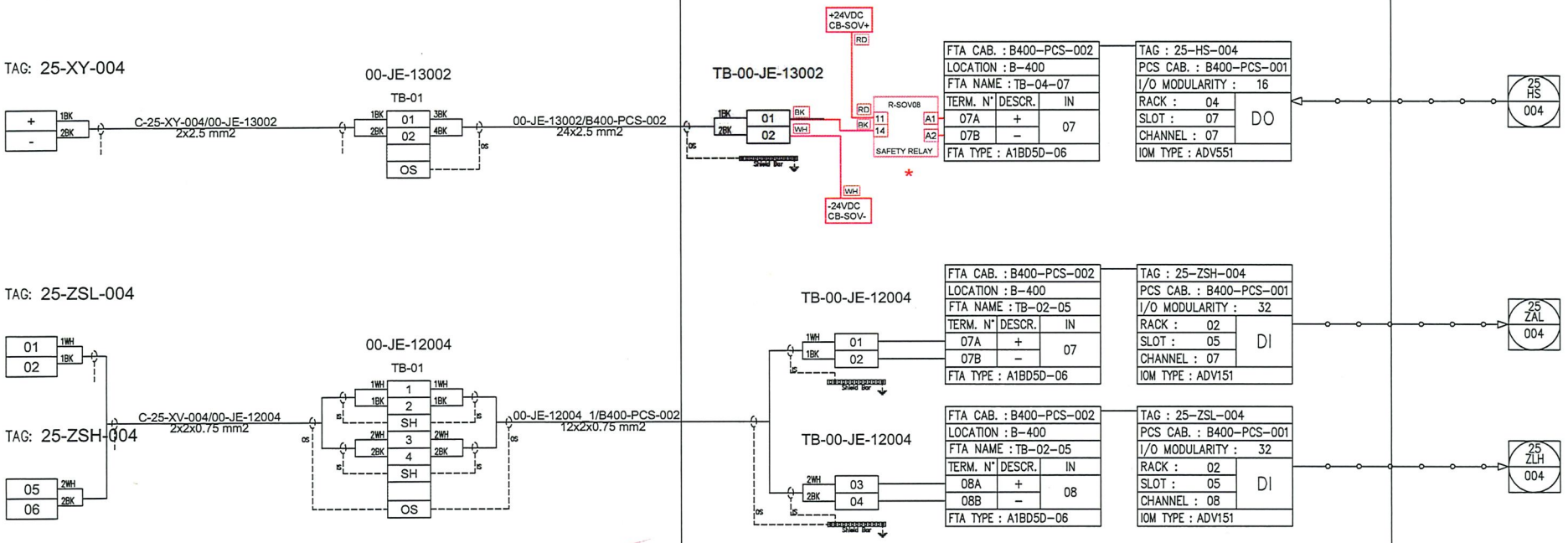
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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV.: 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-XV-004
VESSEL V-25001A HYDROGEN INLET

CONTRACT NO./TITLE CONTRACT_NO. | SCALE 1:1

DRAWN: VBA | CHECKED: LCA | APPROVED: DLO | DATE 23/10/2024

A3 | DRAWING NO. 123A90-DDL-IN-DG-40014 | SHEET 042 | REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO | PROVERLIS | CROSSWIND

ITEM	Tag	25-XV-008	: On/Off Valve - Vessel V-25001B Hydrogen Inlet	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003213	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01V	ON/OFF Valve

Data

Loop TAG: 25-XV-008 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-008		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							OK
Open limit switch					25-ZSH-008		OK
Closed limit switch					25-ZSL-008		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking						4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

Page 1/1

	Performed by	☉ WITNESS ☐ REVIEW	☉ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	PROVERLIS Digitaly signed by Laurentiu Grozavu 2025-02-17T10:17:24.946Z	PROVERLIS Digitaly signed by Giandonato Delmissier 2025-02-17T14:59:26.143Z	PROVERLIS Digitaly signed by John Mackillop 2025-02-21T10:57:45.364Z

GENERAL	1	Tag Number	Location			25-XV-008		25
	2	Service				HYDROGEN STORAGE TANK V-25001B INLET		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80016		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-016-03HSS-N		
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-008(9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-008 (9, 17) - Soldo SS		25-ZSH-008 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-		-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

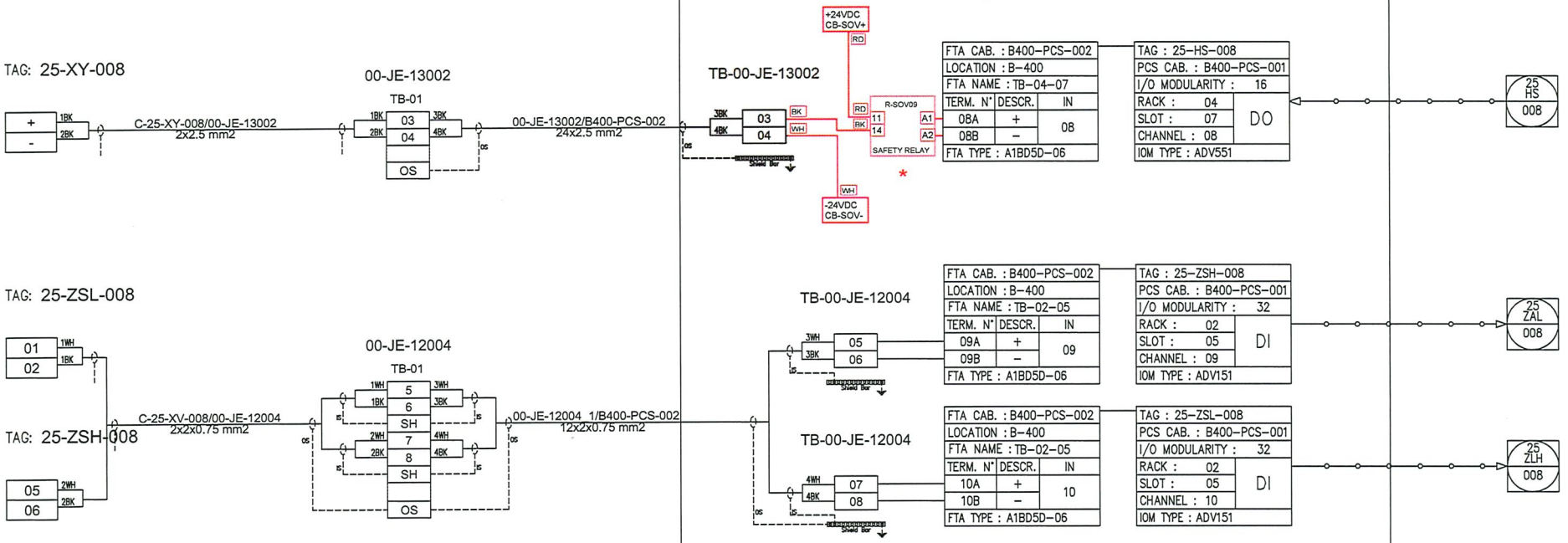
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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV. 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-XV-008
VESSEL V-25001B HYDROGEN INLET

CONTRACT NO./TITLE CONTRACT_NO. | SCALE 1:1

DRAWN: VBA | CHECKED: LCA | APPROVED: DLO | DATE 23/10/2024

A3 | DRAWING NO. 123A90-DDL-IN-DG-40014 | SHEET 044 | REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	25-XV-011	: On/Off Valve - Vessel V-25001C Hydrogen Inlet			Dwg	123A90-DDL-IN-LIS-40088
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)			Module	UD
TASK	code	C10003215		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	PRE-COMM	Activity FTS	Discipline	Instrumental	Form	FJ01V ON/OFF Valve

Data

Loop TAG: 25-XV-011 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-011		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							OK
Open limit switch					25-ZSH-011		OK
Closed limit switch					25-ZSL-011		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking					4 SEC	4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☉ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	PROVERLIS Digitaly signed by Laurentiu Grozavu 2025-02-17T10:16:30.867Z	PROVERLIS Digitaly signed by Giandonato Delmissier 2025-02-17T14:59:51.700Z	PROVERLIS Digitaly signed by John Mackillop 2025-02-21T10:58:04.374Z

GENERAL	1	Tag Number	Location			25-XV-011		25
	2	Service				HYDROGEN STORAGE TANK V-25001C INLET		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80017		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-017-03HSS-N		
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-011 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-011 (9, 17) - Soldo SS		25-ZSH-011 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	-	-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

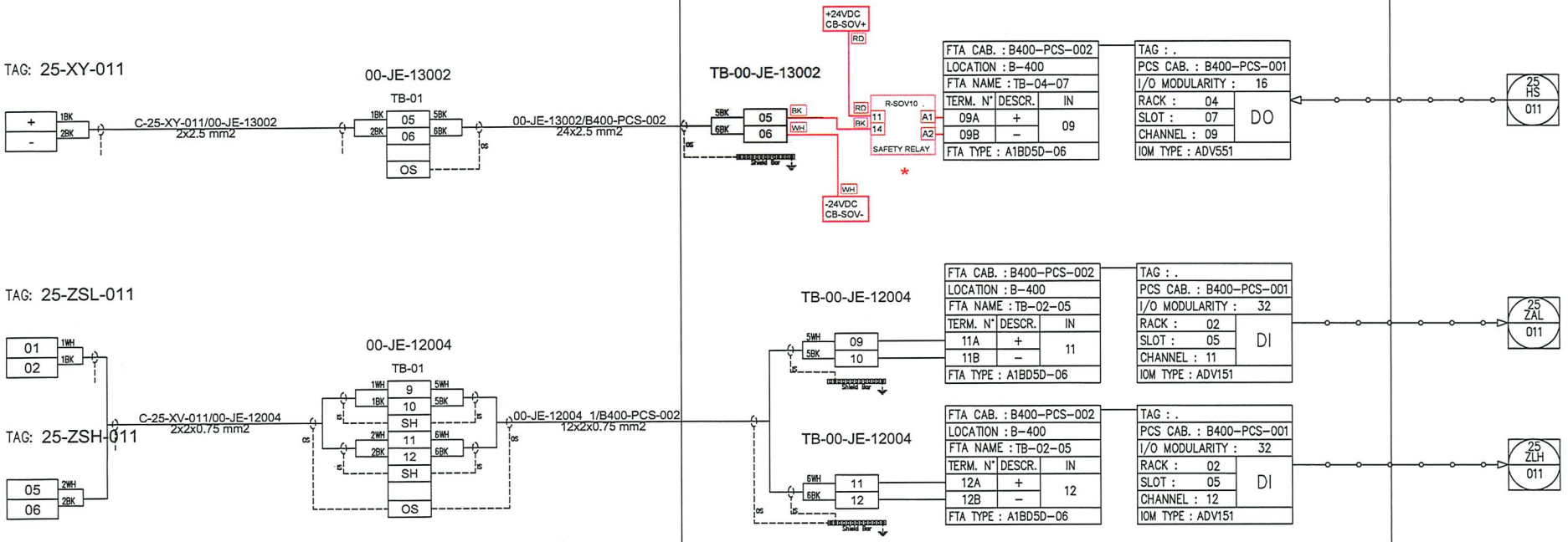
Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV. 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25–XV–011
VESSEL V–25001C HYDROGEN INLET

CONTRACT NO./TITLE CONTRACT_NO. | SCALE 1:1

DRAWN: VBA | CHECKED: LCA | APPROVED: DLO | DATE 23/10/2024

A3 | DRAWING NO. 123A90–DDL–IN–DG–40014 | SHEET 046 | REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO — CROSSWIND

ITEM	Tag	25-XV-014	: On/Off Valve - Vessel V-25001D Hydrogen Inlet	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003217	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01V	ON/OFF Valve

Data

Loop TAG: 25-XV-014 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-014		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							OK
Open limit switch					25-ZSH-014		OK
Closed limit switch					25-ZSL-014		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking						4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☉ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	Digitaly signed by Laurentiu Grozavu 2025-02-17T10:15:10.019Z	Digitaly signed by Giandonato Delmissier 2025-02-17T15:00:18.800Z	Digitaly signed by John Mackillop 2025-02-21T10:58:26.127Z

GENERAL	1	Tag Number	Location			25-XV-014		25
	2	Service				HYDROGEN STORAGE TANK V-25001D INLET		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80018		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-018-03HSS-N		
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-014 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-014 (9, 17) - Soldo SS		25-ZSH-014 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-		-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 22 of 33

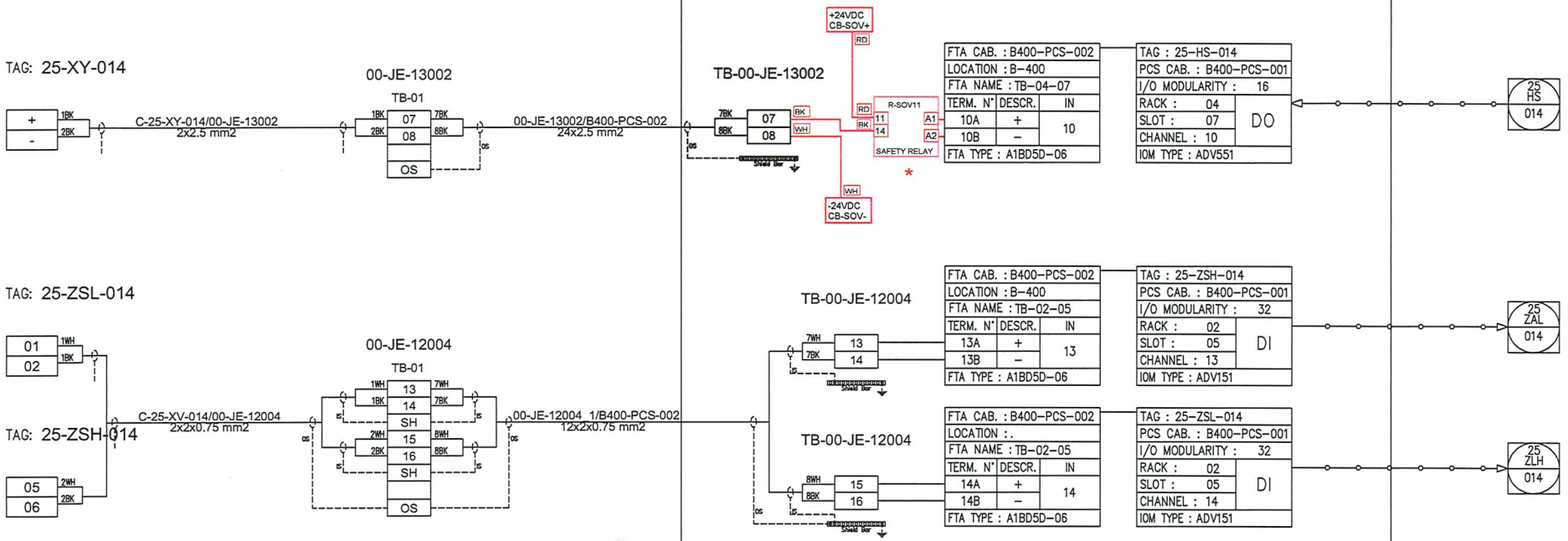
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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV. 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-XV-014
VESSEL V-25001D HYDROGEN INLET

CONTRACT NO./TITLE CONTRACT_NO. | SCALE 1:1

DRAWN: VBA | CHECKED: LCA | APPROVED: DLO | DATE 23/10/2024

A3 | DRAWING NO. 123A90-DDL-IN-DG-40014 | SHEET 048 | REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV01

ROSETTI MARINO — PROVERLIS — CROSSWIND

ITEM	Tag	25-XV-017	: On/Off Valve - Vessel V-25001E Hydrogen Inlet	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003219	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01V	ON/OFF Valve

Data

Loop TAG: 25-XV-017 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-017		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							NA
Open limit switch					25-ZSH-017		OK
Closed limit switch					25-ZSL-017		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking						4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

	Performed by	☉ WITNESS ☐ REVIEW	☉ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	PROVERLIS Digitaly signed by Laurentiu Grozavu 2025-02-17T09:58:17.117Z	PROVERLIS Digitaly signed by Giandonato Delmissier 2025-02-17T15:00:36.055Z	PROVERLIS Digitaly signed by John Mackillop 2025-02-21T10:58:47.722Z

GENERAL	1	Tag Number	Location			25-XV-017		25
	2	Service				HYDROGEN STORAGE TANK V-25001E INLET		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80019		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-019-03HSS-N		
	5	Line Size and Schedule	Inlet		Outlet	1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-017 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-017 (9, 17) - Soldo SS		25-ZSH-017 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	-	-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

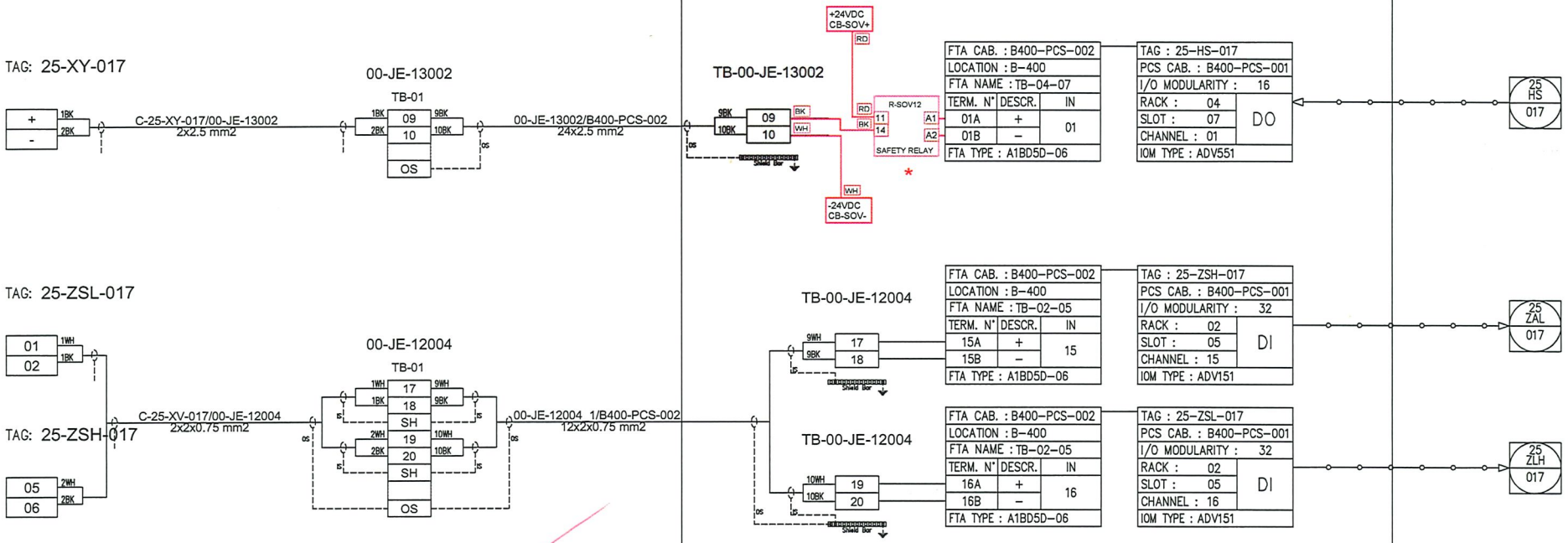
Code : Dwg. No.: 123A90-DDL-IN-DS-40030 Rev.03

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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV. 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-XV-017
VESSEL V-25001E HYDROGEN INLET

CONTRACT NO./TITLE CONTRACT_NO. | SCALE 1:1

DRAWN: VBA | CHECKED: LCA | APPROVED: DLO | DATE 23/10/2024

A3 | DRAWING NO. 123A90-DDL-IN-DG-40014 | SHEET 050 | REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV01

ROSETTI MARINO — CROSSWIND

ITEM	Tag	25-XV-020	: On/Off Valve - Vessel V-25001F Hydrogen Inlet	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003221	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01V	ON/OFF Valve

Data

Loop TAG: 25-XV-020 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-020		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							OK
Open limit switch					25-ZSH-020		OK
Closed limit switch					25-ZSL-020		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking						4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

	Performed by	☑ WITNESS ☐ REVIEW	☑ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	Digitaly signed by Laurentiu Grozavu 2025-02-17T10:05:33.692Z	Digitaly signed by Giandonato Delmissier 2025-02-17T15:00:55.590Z	Digitaly signed by John Mackillop 2025-02-21T10:59:06.544Z

GENERAL	1	Tag Number	Location			25-XV-020		25
	2	Service				HYDROGEN STORAGE TANK V-25001F INLET		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80020		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-020-03HSS-N		
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-020 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-020 (9, 17) - Soldo SS		25-ZSH-020 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	-	-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

No.	Date	By	Chkd	Appr	Description
03	06/12/24	VBA	LCA	DLO	Accepted for Construction (AFC)
02	28/08/24	VBA	LCA	DLO	Accepted for Construction (AFC)
01	20/12/23	VBA	LCA	DLO	Issued for Review (IFR)
00	06/11/23	VBA	LCA	DLO	Issued for Review (IFR)

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

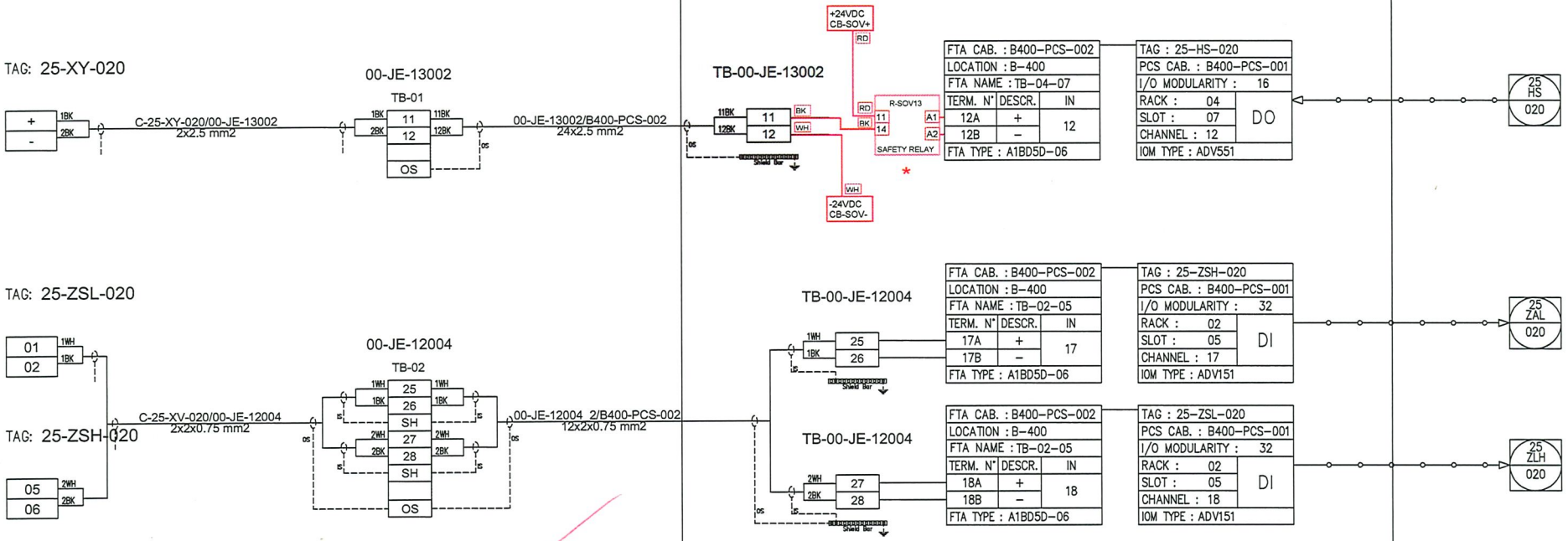
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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV. 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-XV-020
VESSEL V-25001F HYDROGEN INLET

CONTRACT NO./TITLE CONTRACT_NO. | SCALE 1:1

DRAWN: VBA | CHECKED: LCA | APPROVED: DLO | DATE 23/10/2024

A3 | DRAWING NO. 123A90-DDL-IN-DG-40014 | SHEET 052 | REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV.01

ROSETTI MARINO — CROSSWIND

ITEM	Tag	25-XV-024	: On/Off Valve - Hyrogen to Vessels Inlet Header Vent System	Dwg	123A90-DDL-IN-LIS-40088		
	S/Sys	25-07	: Hydrogen Storage Vessels Header (Inlet)	Module	UD		
TASK	code	C10003223	Location	Onshore Activities	User	Rosetti Marino Quality Control	
FORM	Process	PRE-COMM	Activity	FTS	Discipline	Instrumental	Form	FJ01V	ON/OFF Valve

Data

Loop TAG: 25-XV-024 — TDSL Rev: 123A90-FDL-IN-DG-40014 rev.1A — Valve type: ON/OFF VALVE

Functional Test					Associated Tag	Comment	Result
Local reset							NA
Remote command : Solenoid valve 1 energized					25-XY-024		OK
Remote command : Solenoid valve 2 energized							NA
Local indication of the valve position							OK
Open limit switch					25-ZSH-024		OK
Closed limit switch					25-ZSL-024		OK
Pressure transmitter on control line							NA
Local closing command							NA
Local opening command							NA
Opening time	1	sec	Restriction adjusted	No			OK
Closing time	1	sec	Restriction adjusted	No			OK
Interlock function							NA
Fail safe position on loss of electrical signal					CLOSE		OK
Fail safe position on loss of power fluid					CLOSE		OK
Timer checking						4 SEC.	OK
Number of operations on accumulator							NA
ESD signal and solenoid valve test facility							NA
Solenoid valve override indication on ICS							OK
Local indication of the solenoid valve deenergization							NA
Partial stroke cheching							NA

TESTING & MEASUREMENT INSTRUMENT USED

Type	Serial N.	Calibration Certificate	Validity
MULTIMETER FLUKE 175	AW1/018 (17140769)	7715/24	10/07/2025

Comments:

	Performed by	☑ WITNESS ☐ REVIEW	☑ WITNESS ☐ REVIEW
Company	RM COMM	RM COMM	CW
Name	Laurentiu Grozavu	Giandonato Delmissier	John Mackillop
Date	2025-02-17	2025-02-17	2025-02-21
Signature	Digitaly signed by Laurentiu Grozavu 2025-02-17T10:13:56.882Z	Digitaly signed by Giandonato Delmissier 2025-02-17T15:01:15.371Z	Digitaly signed by John Mackillop 2025-02-21T10:59:22.753Z

GENERAL	1	Tag Number	Location			25-XV-024		25
	2	Service				HYDROGEN TO STORAGE TANKS DEPRESS.		
	3	P&ID Number	Area Classification			123A90-DDL-PR-PID-80013		Zone 2, Gas Group IIC (or IIB+H2), Class T1
PIPELINE	4	Line Number				1"-HY-143-03HSS-N		
	5	Line Size and Schedule	Inlet	Outlet		1" / 3.38 mm		1" / 3.38 mm
	6	Line Material	Line Insulation			ASTM A312/TP316/316L		NOT INSUL. (PAINTED) (35)
PROCESS DATA	7	Fluid				HYDROGEN		
	8	Fluid State	Phase			GAS		GAS
	9	Operating Pressure Norm/Min/Max			[barg]	-	7.5	30
	10	Design Pressure	Full Vacuum		[barg]	40		
	11	Operating Temperature Norm/Min/Max			[°C]	-	5	65
	12	Design Temperature	Minimum	Maxi	[°C]	-29		80
	13	Max. Diff. Pressure for Actuator Size			[bar]	40		
	14							
	15							
	16	Speed of	Design			Close : (12)		Open : (12)
	17	Operation (seconds)	Actual			Close : 0.3 minimum		Open : -
	18							
	19							
VALVE BODY (34)	20	Body Type				BALL VALVE (FLOATING BALL) - SPLIT BODY (BS03C01RFH)		
	21	Body Size	Body Form			1"		FULL BORE
	22	Body Material	Bonnet Type			ASTM A182 F316/316L		(*)
	23	Connections	Rating			FLANGED ASME B16.5		#300
	24	Flange Finish	Gasket Material			RF		Inside the valve (*) (38)
	25	Packing	Lubrication & Isolation			A479 Tp. 316'(33)		(*)
	26	Bolting				A193 B8M / A194 Gr. 8M		
	27	Trim Material	Ball	Stem	Seat	A182 F316 / 316L	API 6A CRA UNS N07718	RPTFE
	28	Leakage Class				(1, 3) TSO		
	29	Fire Safe				(2)		
ACTUATOR	30	Manufacturer	Type			Rotork		Spring Return
	31	Model No.	Size			CP/S		035-100A/BA
	32	Actuator Orientation	Actuator Form			Horizontal		Cylinder
	33	Ingress Protection	Certification			IP-66		II 2 G Ex h IIC T5 Gb
	34	Air Supply	Min	Max	Design	4 barg	10 barg	11 barg
	35	Action on Air Failure	Action on Power Failure			CLOSE		CLOSE
	36	Fireproofing				NOT APPLICABLE		
	37	Solenoid Valve				25-XY-024 (9, 14, 15, 16) - Bifold FP06P		
	38	Limit Switch Closed	Limit Switch Open			25-ZSL-024 (9, 17) - Soldo SS		25-ZSH-024 (9, 17) - Soldo SS
	39	Elect. Reset Pushbutton (Actuator mounted)				NOT REQUIRED		
	40	Air Set	Handwheel			(*)		NOT REQUIRED
	41	Mounting Position				HORIZONTAL		
	42	Partial Stroke Test Facility				NOT REQUIRED		
	43	Control Type				-		
	44	Electrical Connection	Electrical Class			No. (*) / M20		H
EMERGENCY A/S VESSEL	45	Capacity	Fabrication Code			-	-	-
	46	No of Strokes Per Capacity				-		
	47	Safety Valve	Model			-		-
	48	Check Valve	Mounting			-		-
PURCHASE	49	Manufacturer				FLUITEK		
	50	Model				FB3		
	51	Purchase Order Number				1724000204		

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

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

INSTRUMENT DATASHEET

SDV/BDV and Tight Shut-Off XV Valves

CROSSWIND

ROSETTI MARINO

Sheet 28 of 33

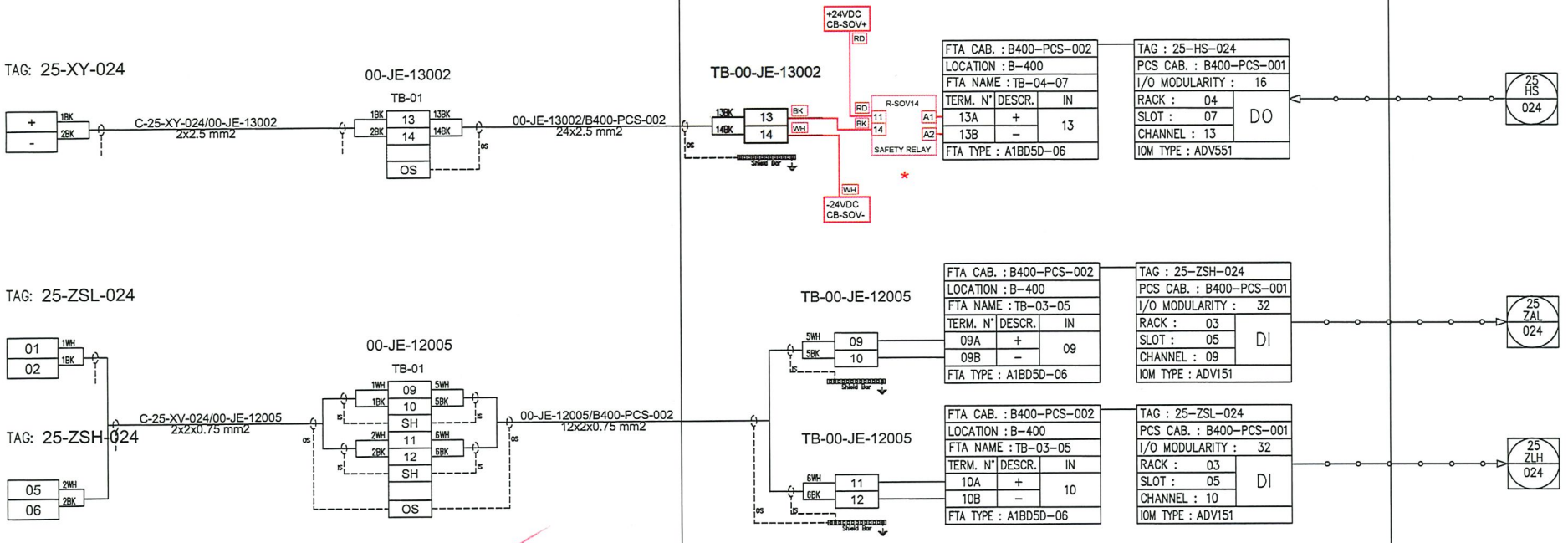
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DRAWING NO. 123A90-DDL-IN-DG-40014 REV. 01

FIELD | ITER – B400 | CENTRAL CONTROL ROOM

PROCESS CONTROL SYSTEM | OPERATOR CONSOLE



AS BUILT
15/03/2025

* RELAY SOVxx
PLC-RSC-24DC/21

REV.	DATE	DRN	CHKD	APPD	DESCRIPTION
01	06/12/2024	VBA	LCA	DLO	ACCEPTED FOR CONSTRUCTION (AFC)
00	23/10/2024	VBA	LCA	DLO	ISSUE FOR REVIEW (IFR)

VALID FOR CONSTRUCTION
FDL DWG: 123A90-FDL-IN-DG-40014
REV.: 1_A | DATE: 20/12/24 | SIGNATURE: C.Pilato
ROSETTI MARINO SpA

CROSSWIND

ROSETTI MARINO

TITLE : INSTRUMENT LOOP DIAGRAM
25-XV-024
HYDROGEN TO VESSELS INLET HEADER VENT SYSTEM

CONTRACT NO./TITLE CONTRACT_NO.			SCALE 1:1
DRAWN: VBA	CHECKED: LCA	APPROVED: DLO	DATE 23/10/2024

A3	DRAWING NO. 123A90-DDL-IN-DG-40014	SHEET 054	REV. 01

File Name : 123A90-DDL-IN-DG-40014_REV01

Section 4.4 Instrumentation “As-Commissioned” interconnection diagrams

NOT APPLICABLE

Section 4.5 Telecommunication functional test sheets index

NOT APPLICABLE

Section 4.6 Telecommunication
“As-Commissioned” I.C.D. / TSLD's

NOT APPLICABLE

Section 5 SITE / OPERATIONAL

Section 5.1 Operational Test Procedure

Section 5.2 Operational Test Certificates

CROSSWIND

ROSETTI MARINO

Project CROSSWIND

STATUS INDEX DETAIL

Filtered on subsystem: 25-07

Miscellaneous	25-07 Hydrogen Storage Vessels Header (Inlet)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
123A90-PML-COM-PRO-03041	OTP -Hydrogen Storage and Venting Systems	ONSHORE	C10004613	5300	100	2025-04-26	-
		OFFSHORE	C10004937	5300	0	-	-

ITEM	Tag	123A90-PML-COM-PRO-03041 : OTP -Hydrogen Storage and Venting Systems				Dwg	123A90-PML-COM-PRO-03041
	S/Sys	25-07 : Hydrogen Storage Vessels Header (Inlet)				Module	
TASK	code	C10004613		Location	Onshore Activities	User	Rosetti Marino Quality Control
FORM	Process	COMM	Activity OTS	Discipline	Miscellaneous Form 5300		Operational Test Procedure

OTP - OPERATIONAL TEST PROCEDURE

Attached procedure number: 12390-PLM-COM-PRO-03041

Associated subsystems: 25-01/25-02/25-03/25-04/25-05/25-06/25-07/25-08

Completion date: 24/04/2025

Comments/Remarks:

	Performed by	● WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
	COMMISSIONING DISCIPLINE LEAD	RM COMMISSIONING MANAGER	CPY COMMISSIONING MANAGER
Name	Giandonato Delmissier	Anthony Iveson	Gerry McCann
Date	2025-04-24	2025-04-24	2025-04-26
Signature	PROVERLIS Digitaly signed by Giandonato Delmissier 2025-04-24T16:11:54.716Z	PROVERLIS Digitaly signed by Anthony Iveson 2025-04-24T16:21:04.940Z	PROVERLIS Digitaly signed by Gerry McCann 2025-04-26T06:20:54.280Z

Base Load Power Hub (BLPH)

OTP – HYDROGEN STORAGE & VENTING SYSTEMS

Document Number: 123A90-PML-COM-PRO-03041

Document Class: 2

01	25/02/2025	Accepted for Construction (AFC)	G.DEL MISSIER	A.IVESON	M.BRUNELLI
00	09/12/2024	Issue for Review (IFR)	G.DEL MISSIER	A.IVESON	M.BRUNELLI
Rev.	Date	Description	Prepared	Reviewed	Approved

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00	Issue for Review (IFR)
01	Accepted for Construction (AFC)

HOLDS LIST

No.	Description
1	
2	
3	
4	

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List of Attachments

- Not applicable

1. INTRODUCTION

1.1 Project Overview

Crosswind, a Shell and Eneco joint venture, was awarded the tender to develop the offshore Hollandse Kust Noord (HKN) wind farm, located 18.5km off the coast of Netherlands near the town of Egmond aan Zee. The consortium plans to have HKN operational in 2023 with an installed capacity of 759MW generating at least 3.3TWh per year. This is sufficient renewable power to supply more than 1 million Dutch households with green electricity.

Offshore wind farms produce intermittent electricity and balancing these dips and peaks and integrating this electricity into the national energy system requires new technologies. For this reason, the offshore wind farm will include several new technologies that could be implemented at full-scale in the future. The new technologies being explored include a floating solar park, a short-duration battery storage as well as long-term storage via green hydrogen produced by water electrolysis and subsequently consumed in a fuel cell. The combination of these individual measures, herein referred to as the Base Load Power Hub (BLPH) will ensure a continuous power supply regardless of the wind situation.

1.2 Project Location

The Hollandse Kust Noord (HKN) wind farm is located 18.5km off the coast of the Netherlands near the town of Egmond aan Zee.



Figure 1 - HOLLANDSE KUST NOORD WIND PARK Location Map



Figure 2 - *Wind Park Details*

The wind farm will consist of No. 69 x 11.5MW wind turbine generators each to be installed on a dedicated monopile structure. A 70th monopile is located on coordinates E 590719.1, N 5841602.3 and is reserved for installing the platform accommodating the BLPH. The monopile structure was designed and installed by Van Oord Offshore Wind (VooW) and therefore not part of the BLPH scope.

1.3 Project Concept

All components included in the BLPH will be integrated onshore on a topsides and installed in an offshore location within the boundaries of the HKN wind farm. At its simplest, the BLPH will store energy during periods of high electricity generation from renewable sources (a wind turbine generator and the floating solar PV farm) and release it during periods of low generation. In practice. It is expected that the energy stored will supplement generation from renewable sources to ensure that at least 1.0MW of power is exported to the electrical grid regardless of wind/solar availability.

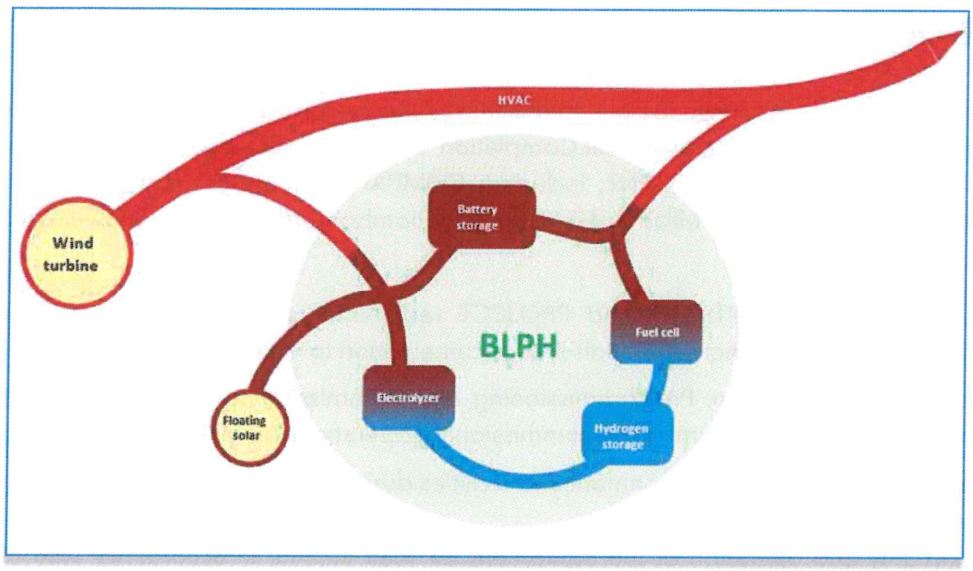


Figure 3 – BLPH Concept

Electricity in the BLPH will be stored in the form of electrons in a battery energy storage system (BESS) as well as converted into green hydrogen via water electrolysis. When the power output from the connecting wind turbine drops below 1 MWe, the BLPH will return its stored energy to supplement the remaining power output. This will be by discharging the BESS, while stored hydrogen will be converted back into electricity using a fuel cell to extend the discharge duration.

The purpose of the BLPH is to function as a testbed for the integration of energy storage technologies with renewable generation. It is expected that equipment installed on the BLPH will operate as Normally Unmanned Installation for at least two (2) years with no or minimal maintenance and it will have its own independent control room with the ability to communicate with Crosswind's control room.

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2. DOCUMENT SCOPE

The purpose of this document is to describe the methodology and the planned actions to be implemented for the preparation and execution of Mechanical Completion, Pre-commissioning, Commissioning & Start-Up activities to be performed on the PLANT, including COMPANY PROVIDED ITEMS, at the onshore premises of CONTRACTOR located in Milan (Italy) offices and Piomboni yard - Marina di Ravenna (Italy).

CONTRACTOR, pursuant to CONTRACT and PROJECT requirements, shall implement an exacting methodology, complete with a distinct set of tools and documentation to meet the following key objectives:

Perform the Mechanical Completion, Pre-commissioning and Commissioning on the WORKSITE to the maximum extent possible so as to minimize the commissioning operations on SITE.

- Ensure safety for the people, environment and facilities during the execution of the Commissioning activities at WORKSITE,
- Ensure integrity and operation of the equipment for their lifetime in accordance with PROJECT design and specifications,
- Plan a smooth and flawless execution of the Commissioning activities avoiding unforeseen downtimes and delays.

Achievement of the above objectives shall be obtained by:

- Defining and prioritizing a predetermined sequence of the Mechanical Completion checks, Pre-commissioning and Commissioning tests and tasks,
- Checking, testing systematically and exhaustively all the components of PLANT in compliance with PROJECT approved procedures and CONTRACT terms, managed by a dedicated team of inspectors, technicians and field engineers who will perform the Mechanical Completion, Pre-commissioning, Commissioning and Start-Up tasks and subsequently record the results via discipline specific check, inspection and test sheets (ITR's) & where applicable via discrete Operational Test Procedures (OTP's).
- Ensuring full traceability of the performed checks and tests, through implementation of a dedicated Project Completions Management System (CMS) containing individual references to all tagged items.

3. OTP SUMMARY

3.1 Test Objective

The operating test of the Hydrogen Storage & Venting Systems is executed to ensure that the system is started up in a safe and controlled manner and to verify the correct operation according to the project requirements.

The scope of this document is to explain the principal procedure for inspection and test the Hydrogen Storage & Venting Systems.

3.2 System Boundary Limits

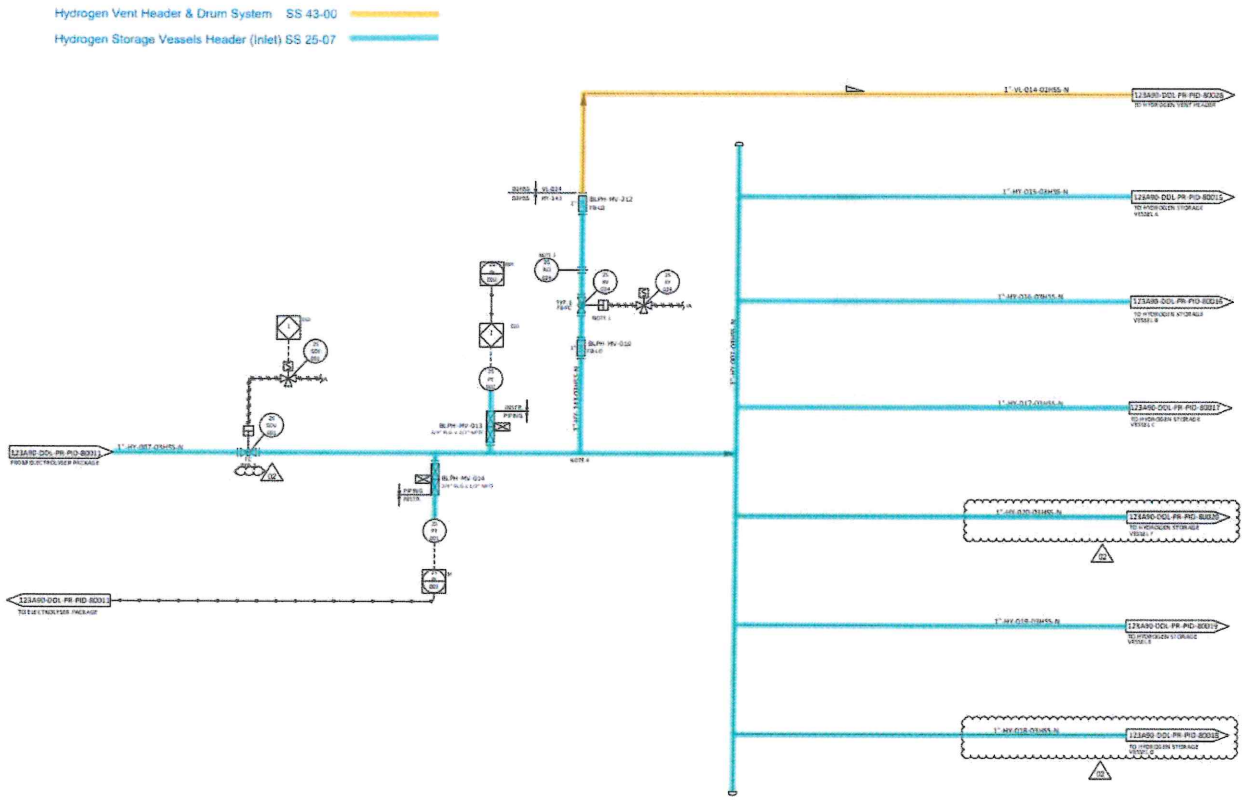


Figure 4 - System Boundary Limits [HYDROGEN STORAGE VESSELS HEADER (INLET)]

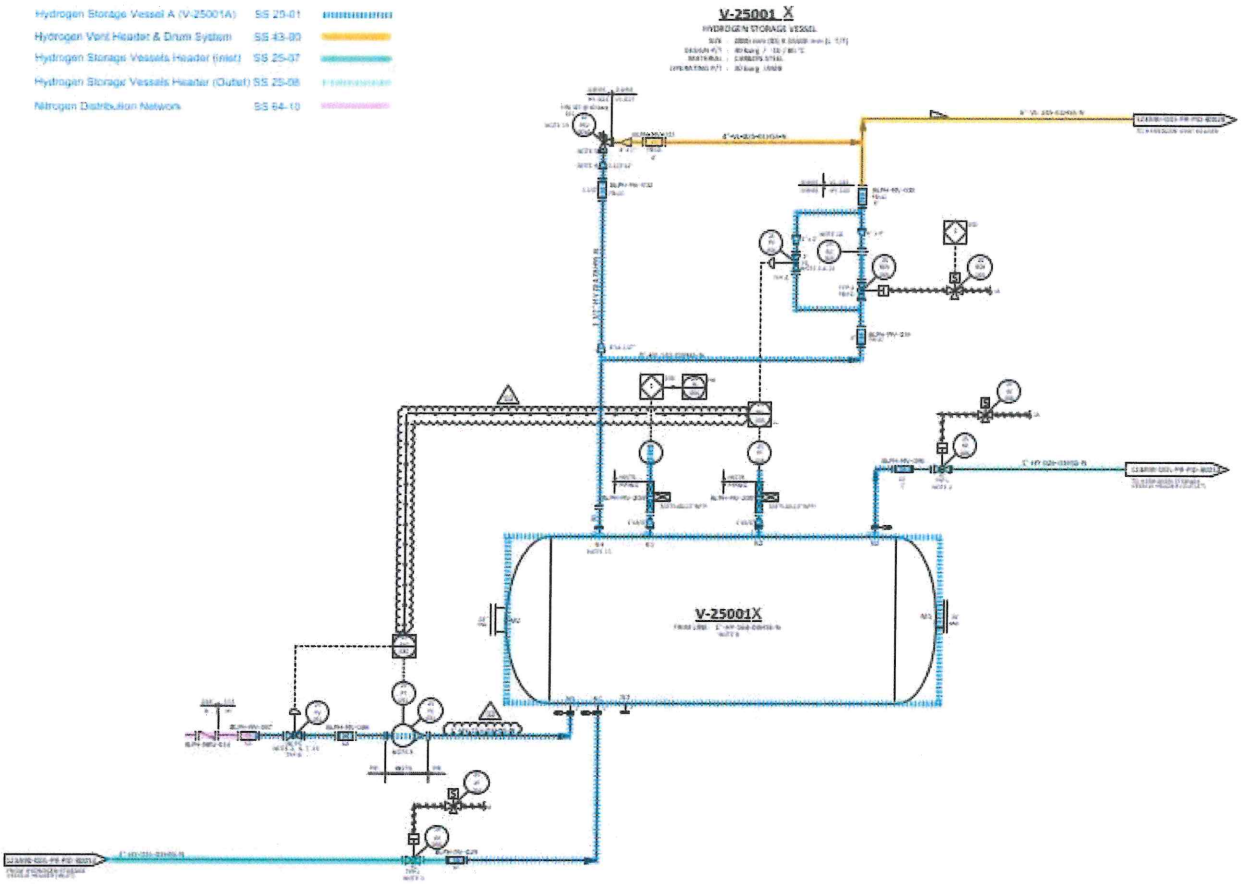


Figure 5 – System Boundary Limits [HYDROGEN STORAGE VESSEL (V-25001A/B/C/D/E/F)]

- N.B. Figure 5 is a typical representation for all six Vessels and consequently applies to Hydrogen Storage System Vessel V-25001A/B/C/D/E/F.

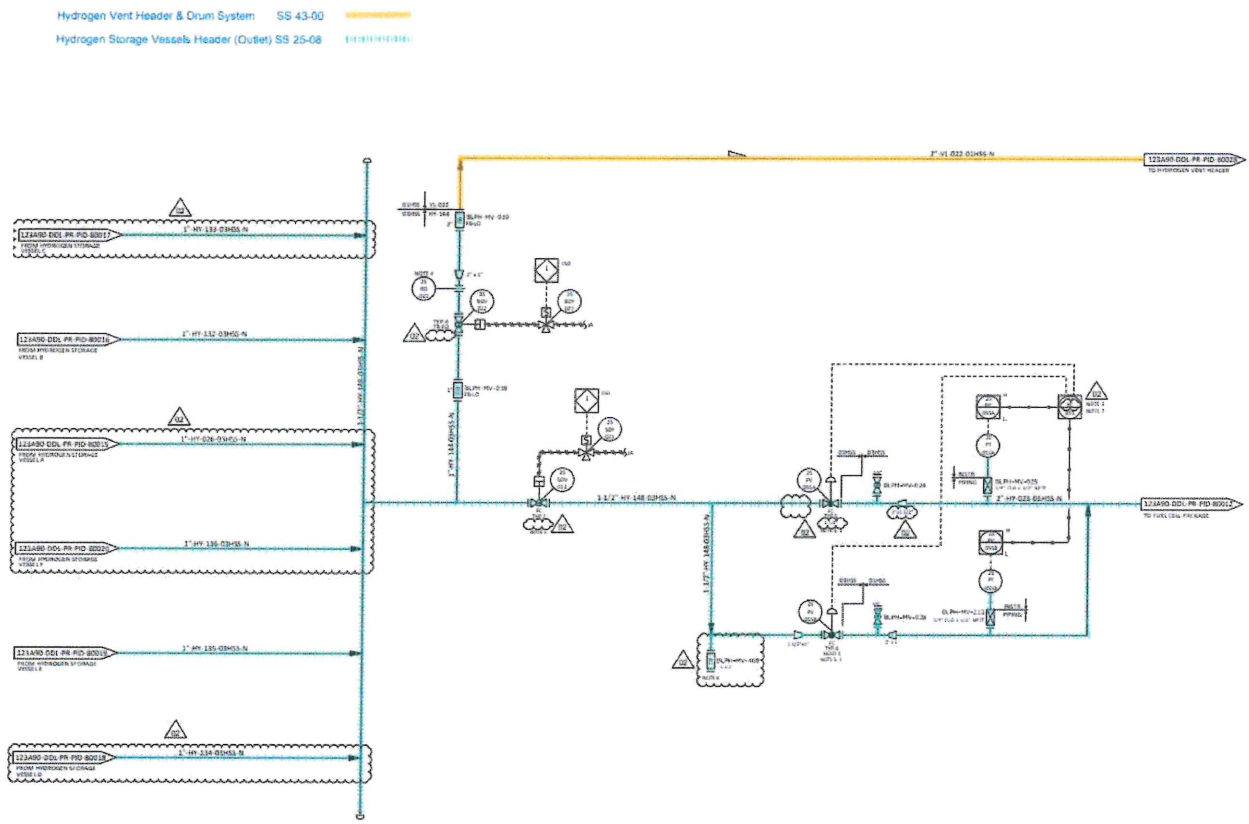


Figure 6 – System Boundary Limits [HYDROGEN STORAGE VESSELS HEADER (OUTLET)]

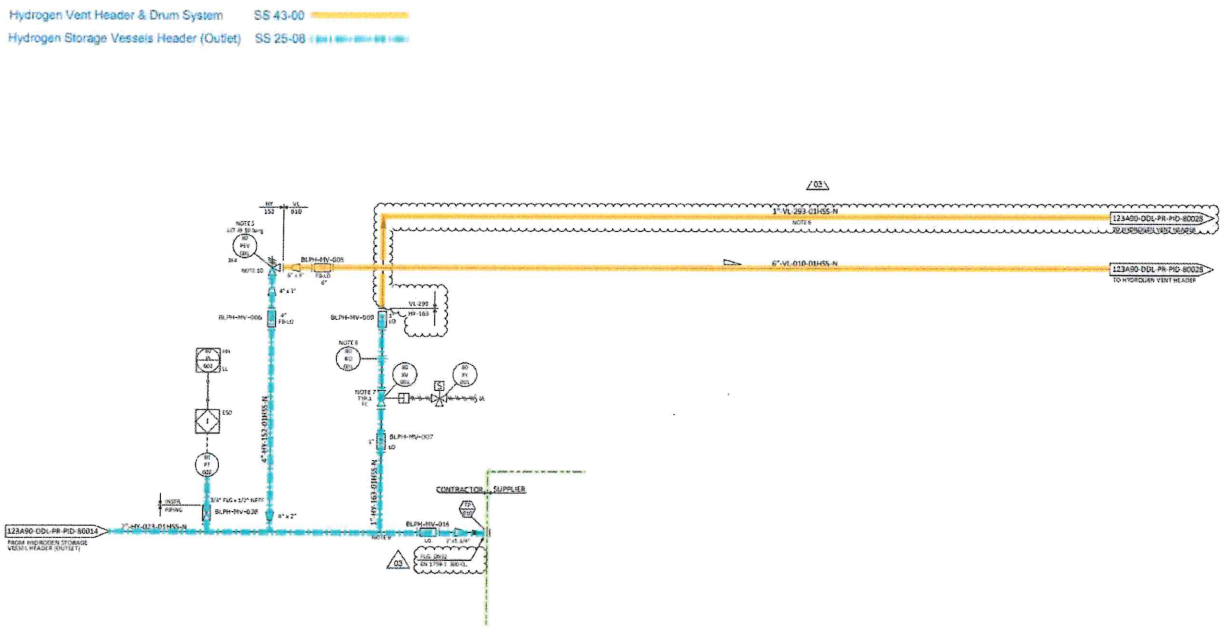


Figure 7 – *System Boundary Limits* [FROM HYDROGEN STORAGE VESSEL HEADER (OUTLET)]

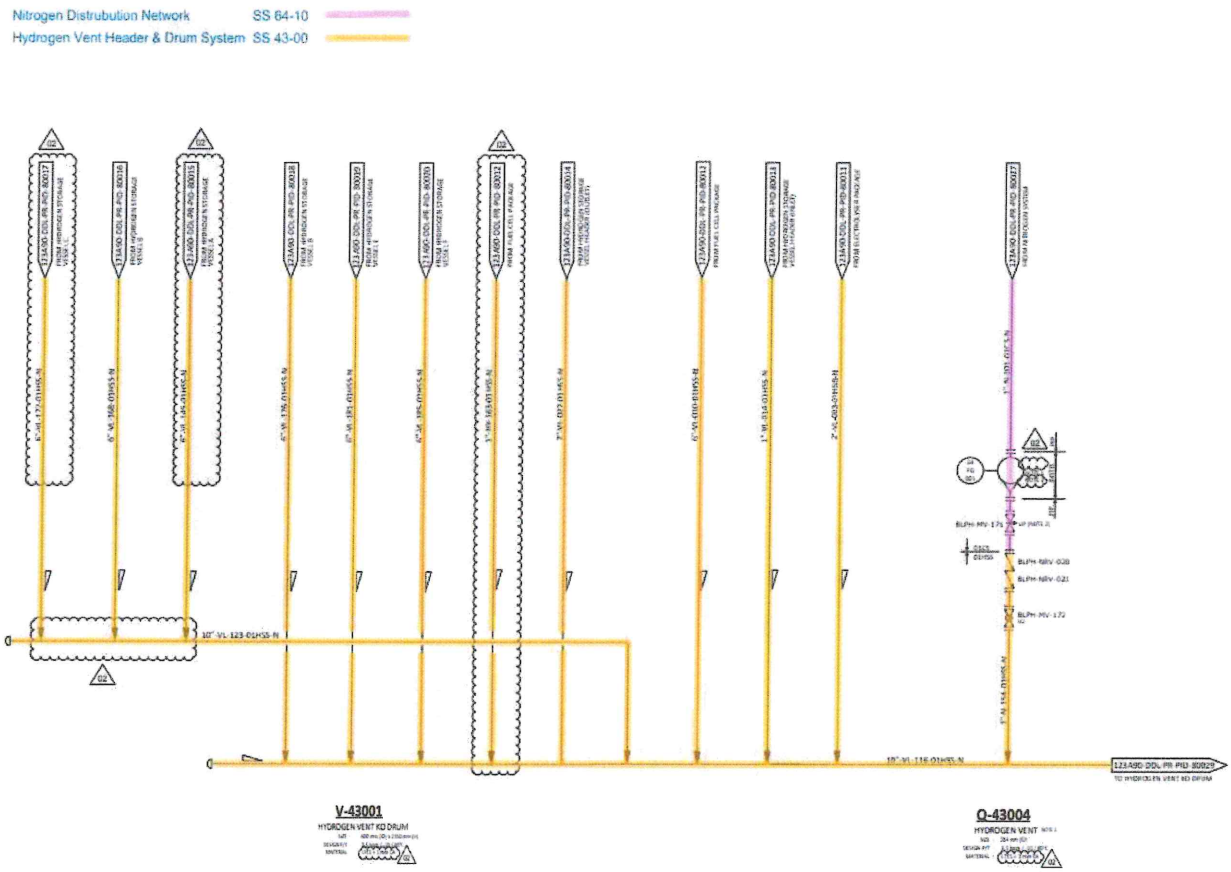


Figure 8 – System Boundary Limits [HYDROGEN VENT HEADER]

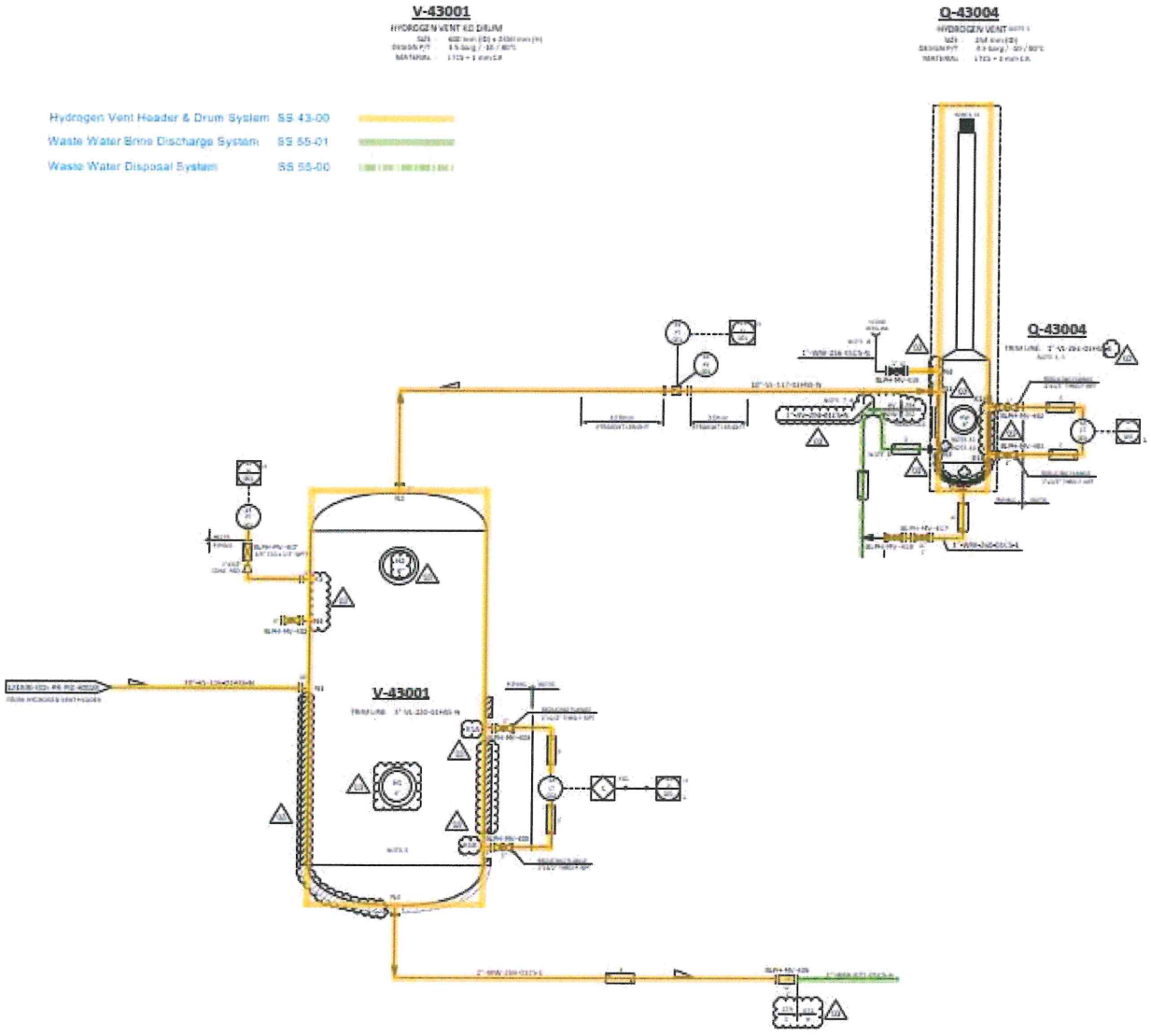


Figure 9 – System Boundary Limits [HYDROGEN VENT DRUM]

3.3 Test and System Description

This document is specifically related to the following system:

- SS 25-00 Hydrogen Storage
- SS 43-00 Hydrogen Vent Header & Drum System

All equipment must be properly installed according to vendor documents 123A90-DDL-PR-PID-80012 to 80020 and 123A90DDL-PR-PID-80029.
The limits of the system are defined in document 123A90-DDL-PR-PID-80012 to 80020 and 123A90DDL-PR-PID-80029.

These parts of the system shall be tested on worksite and on site.

The Instrument Hydrogen Storage & venting System data are the following
GENERAL CHARACTERISTICS CLIMATIC CONDITION:

Hydrogen Storage Vessel
- Design Pressure: 40 barg
- Design Temperature: -20°C / 80°C
- Operating Pressure: 30 barg
- Operating Temperature: 20°C

Hydrogen Vent KO Drum
- Design Pressure 3.5 barg
- Design Temperature: -29°C to 80°C

Piping material class 01HSS
- Design Pressure 10 barg
- Design Temperature 100°C

Piping material class 03HSS
- Design Pressure 40 barg
- Design Temperature 80°C

3.4 Safety Devices

- Appropriate Personnel Protective Equipment (PPE) and safety equipment e.g., safety shoes, hand gloves, helmet, earplugs etc. are available and must be used in line with the site requirements.
- Warning safety signs are to be posted with restricted access to essential personnel only.
- Adequate firefighting equipment.

3.5 HSE Management

All necessary safety precautions must be taken to avoid any risk for personnel injury.

- All personnel involved in this operational test shall be competent for the tasks they will be required to undertake.
- Place safety / warning signs and segregate the entire area with barrier tapes (safety barriers) of a color distinguished (blue and white) from those used for construction activities.
- Restrict access into area only to authorized personnel.
- Conduct "Toolbox Talk" with all personnel prior to starting test work.
- Appropriate Personnel Protective Equipment (PPE) and safety equipment e.g. safety shoes, safety glasses, hand gloves, helmet, earplugs etc. are available and must be used in line with the site requirements.
- All activities carried out on the project shall be performed in accordance with the "Permit to Work" system Doc. PRO-HSE-23.
- Electrical and mechanical isolations are to be assured as per Doc. PRO-HSE-08 and "Commissioning and start-up operation" procedure.
- Observe and enforce all international codes and regulations to safeguard personnel, plant and environment.
- Ensure that the working area is clean, tidy, well illuminated and that access and escape routes are free from obstructions.

Before starting work on any of the activities in this OTP it is the responsibility of the persons performing the work to:

- Familiarize themselves with the plant/equipment to be worked on.
- Ensure they are aware of all other work activities that are taking place, or due to take place.
- If necessary, re-plan any situation/activity.
- Ensure proper communication between parties involved in the execution of the OTP.
- Read the relevant Vendor documentation for the equipment covered by this OTP and observe any special requirements and limitations recommended or imposed by Vendor.
- Verify that all personnel involved in the implementation of this procedure are familiar with its content as well as the associated safety requirements (Toolbox Talk).

3.6 Acceptance Criteria

Before commissioning the systems:
Visual inspection and verification are a crucial step to identify any obvious issues with the installation, such as loose connections, missing components, or damage to the equipment.
Cross-checking the installation with engineering documentation ensures that the installation is done correctly. These steps can help identify any missing or incorrect components and connections.

- Verify the hardwired connection to SIS System
- Verify the hardwired connection to PCS System
- Verify the loop check from SIS
- Verify the loop check from PCS
- Validate control loops & logic

Performing the steps in this OTP as per engineering documents is crucial to ensure that the equipment is operating correctly and that it meets the desired design specifications. Observing the results will help identify any issues that may arise during the operation.

Overall, following these steps shall provide a comprehensive and effective way to verify the equipment installation and functionality.

4. DOCUMENTS REFERENCES AND ABBREVIATIONS

4.1 Reference Document

4.1.1 Company Documents and Standards

Document ID	Document Title
[1] K559-2254-CG-PHI-001	Commissioning Philosophy
[2] K559-2254-EL-ELL-002	BLPH Electrical Load List (CCS MODE 2(A) 'HOT STANDBY')
[3] K559-2254-EL-ELL-003	BLPH Electrical Load List (CCS MODE 3(C) 'DISCHARGING')
[4] K559-2254-EL-ELL-004	BLPH Electrical Load List (CCS MODE 4(A) 'COLD STANDBY')
[5] K559-2254-EL-ELL-005	BLPH Electrical Load List (CCS MODE 4A(D) 'EMERGENCY MODE (Island))
[6] K559-2254-EL-ELL-006	BLPH Electrical Load List (CCS MODE 5(D) 'POWER OUT (Blackout))
[7] K559-2254-PR-PHI-001	Main process control philosophy

Table 1: company Documentation and Standards

4.1.2 Project Documents

	Document Title
[1] 123A90-PML-PM-LIS-01001	Master Document Register
[2] 123A90-PML-PM-PL-00001	Project Execution Plan
[3] 123A90-PML-QHSE-PL-00001	Project HSE Plan
[4] 123A90-PRO-HSE-23	RM Yard Permit To Work Procedure
[5] 123A90-PML-COM-PL-03002	Mechanical Completion & Commissioning Execution Plan
[6] 123A90-PML-COM-LIS-03011	System/Sub-Systems List
[7] 123A90-PML-COM-LIS-03012	System/Sub-System Boundary Limit Diagrams
[8] 123A90-PML-COM-PRO-03038	Leak Test Procedure
[9] 123A90-PML-COM-SP-03032	Pre-Commissioning Functional Test Sheet Template Collection (ITR-B)
[10] 123A90-PML-COM-SP-03014	Commissioning TDS - Temporary Equipment & Facilities
[11] 123A90-PML-COM-PRO-03019	OTP – Onshore Performance & Integrated Test Procedure
[12] 123A90-PML-COM-LIS-03034	Inhibit-Override Register
[13] 123A90-PML-COM-LIS-03035	PSV Calibration Register

	Document Title
[14] 123A90-PML-COM-PRO-03036	OTP - Black Start Procedure
[15] 123A90-PML-COM-LIS-03024	Commissioning Spare Parts and Consumables List
[16] 123A90-PML-COM-PRO-03022	Initial offshore START-UP procedures
[17] 123A90-PML-COM-SP-03057	Worksite WEF (Work Execution Flow Scheme)
[18] 123A90-PML-COM-SP-03058	Site WEF (Work Execution Flow Scheme)
[19] 123A90-PML-COM-RE-03001	Commissioning Final Dossier (ITR-B)
[20] 123A90-PML-QHSE-PRO-00116	Flushing and Cleaning Procedures
[21] 123A90-PML-QHSE-SP-00118	Mechanical Completion Check Sheet Template Collection (ITR-A)
[22] 123A90-PML-QHSE-RE-00115	Mechanical Completion Final Dossier (ITR-A)
[23] 123A90-PML-QHSE-PRO-00117	Punch list Management Procedure
[24] 123A90- 123A90-PML-COM-PRO-03041	OTP - Hydrogen Storage & Venting Systems
[25] 123A90- 123A90-PML-COM-PRO-03042	OTP - Sea Water Intake & Fresh Water Treatment Systems
[26] 123A90- 123A90-PML-COM-PRO-03043	OTP - Instrument Air System
[27] 123A90- 123A90-PML-COM-PRO-03055	OTP - Nitrogen Generation System
[28] 123A90- 123A90-PML-COM-PRO-03044	OTP - HVAC Systems
[29] 123A90- 123A90-PML-COM-PRO-03045	OTP - HV Switchgear & 66 kV Transformer Systems
[30] 123A90- 123A90-PML-COM-PRO-03046	OTP - MV Switchgear & 6.6 kV Transformer Systems
[31] 123A90- 123A90-PML-COM-PRO-03047	OTP - LV Switch Boards & LV Distribution Board Systems
[32] 123A90- 123A90-PML-COM-PRO-03048	OTP - Lighting & Small Power Systems
[33] 123A90- 123A90-PML-COM-PRO-03049	OTP - Electrical Heat Tracing Systems
[34] 123A90- 123A90-PML-COM-PRO-03050	OTP - DC UPS System 10KVA UP-200F1
[35] 123A90- 123A90-PML-COM-PRO-03051	OTP - Data Network Systems
[36] 123A90- 123A90-PML-COM-PRO-03052	OTP - Telecom & Surveillance Systems
[37] 123A90- 123A90-PML-COM-PRO-03053	OTP - Navaid System
[38] 123A90- 123A90-PML-COM-PRO-03054	OTP - F&G and ESD C&E Logics
[39] 123A90-PML-QHSE-PRO-00120	Proverlis Management Procedure

	Document Title
[40] 123A90-PML-COM-PRO-03056	OTP – Document Template

Table 2: Project Documents

4.1.3 Vendor Documents (Hydrogen KO Drum)

Document ID	Document Title
[1] 1724000163-MD-LIS-00001	SUPPLIER MASTER INDEX REGISTER (SMIR)
[2] 1724000163-QC-ITP-00002	INSPECTION AND TEST PLAN
[3] 1724000163-MAC-CA-00003	MECHANICAL CALCULATION
[4] 1724000163-MAC-DA-00004	GENERAL ARRANGEMENT DRAWINGS AND FOUNDATION LOADING DIAGRAM AND SUPPORT DETAILS (INCL NOZZLE LOADS) and INCLUDING NAMEPLATE DRAWINGS
[5] 1724000163-MAC-DD-00005	DETAILED DRAWING INCLUDING CROSS SECTION/EXPLODED VIEW DRAWING WITH PART LIST
[6] 1724000163-MAC-DS-00006	EQUIPMENT DATA SHEETS INCLUDING WEIGHT DATA SHEETS
[7] 1724000163-MAT-PRO-00007	PAINTING PROCEDURE (including surface preparation)
[8] 1724000163-NDT-PRO-00008	NON-DESTRUCTIVE EXAMINATIONS PROCEDURES (NDE) INCLUDING PMI
[9] 1724000163-NDT-LIS-00009	NDE OPERATORS LIST AND QUALIFICATIONS
[10] 1724000163-QC-PRO-00010	HYDROSTATIC TEST PROCEDURES and PNEUMATIC TEST PROCEDURE (FAT PROCEDURE)
[11] 1724000163-WEL-LIS-00011	WELDING PROCEDURE SPECIFICATION (WPS) AND QUALIFICATIONS (PQR) RECORDS, WELDING OPERATORS LIST and WELDER QUALIFICATIONS RECORDS (WPQ) and WELDING MAP
[12] 1724000163-QC-LIS-00012	EQUIPMENT MANUFACTURERS RECORD BOOK (FINAL DOSSIER) - INDEX
[13] 1724000163-QC-DB-00013	EQUIPMENT MANUFACTURERS RECORD BOOK – COMPLETE
[14] 1724000163-COM-LIS-00014	SPARE PART INDEX REGISTER (COMMISSIONING, OPERATION)
[15] 1724000163-MAC-MAN-00015	INSTALLATION AND OPERATING MAINTENANCE MANUAL (IOM)
[16] 1724000163-QC-PRO-00016	SHIPPING, PACKING, HANDLING AND STORAGE and PRESERVATIONS, PROCEDURES

Table 3: Vendor Documents (Hydrogen KO Drum)

4.1.4 Vendor Documents (Hydrogen Vent)

Document ID	Document Title
[1] 1724000888-MD-LIS-00001	SUPPLIER MASTER INDEX REGISTER (SMIR) - HYDROGEN VENT
[2] 1724000887-QC-ITP-00002	INSPECTION AND TEST PLAN - HYDROGEN VENT

[3] 1724000887-MAC-CA-00003	GENERAL ARRANGEMENTS DRAWINGS, INCLUDING FOUNDATION LOADS-HYDROGEN VENT
[4] 1724000887-MAC-DA-00004	MECHANICAL CALCULATION - HYDROGEN VENT
[5] 1724000887-MAC-DD-00005	DETAILED DRAWING WITH PART LIST - HYDROGEN VENT
[6] 1724000887-MAC-DS-00006	EQUIPMENT DATA SHEETS - HYDROGEN VENT
[7] 1724000887-MAC-DG-00007	WIRING DIAGRAM (JB AND HT) - HYDROGEN VENT
[8] 1724000887-NDT-PRO-00008	NON-DESTRUCTIVE EXAMINATIONS PROCEDURES (NDE) AND OPERATORS LIST AND QUALIFICATIONS
[9] 1724000887-QC-PRO-00009	HYDROSTATIC TEST PROCEDURES -HYDROGEN VENT
[10] 1724000887-MAT-PRO-00010	PAINTING PROCEDURE- HYDROGEN VENT
[11] 1724000887-WEL-PRO-00011	WELD PROCEDURE SPECIFICATION (WPS) WLED LOCATION PLAN (WLP) AND QUALIFICATIONS RECORDS (PQR) WELD OPERATORS LIST and WELDER QUALIFICATIONS RECORDS (WPQ)
[12] 1724000887-QC-LIS-00012	ATEX REGISTER - HYDROGEN VENT
[13] 1724000887-MAC-LIS-00013	ATEX CERTIFICATION - HYDROGEN VENT
[14] 1724000887-QC-DB-00014	EQUIPMENT MANUFACTURERS RECORD BOOK – COMPLETE - HYDROGEN VENT
[15] 1724000887-QC-LIS-00015	EQUIPMENT MANUFACTURERS RECORD BOOK (FINAL DOSSIER) - INDEX - HYDROGEN VENT
[16] 1724000887-COM-LIS-00016	SPARE PART INDEX REGISTER (SPIR) - HYDROGEN VENT
[17] 1724000887-MAC-MAN-00017	INSTALLATION OPERATING AND MAINTENANCE MANUAL (IOM)
[18] 1724000887-QC-PRO-00018	PACKING, SHIPPING HANDLING AND STORAGE PROCEDURES
[19] 1724000887-MAC-DD-00019	LIFTING DRAWINGS - HYDROGEN VENT

Table 4: Vendor Documents (Hydrogen Vent)

4.1.5 Vendor Documents (Hydrogen Storage Vessel)

Document ID	Document Title
[1] 1723001756-MD-LIS00001	SUPPLIER MASTER INDEX REGISTER (SMIR)
[2] 1723001756-QC-ITP00002	INSPECTION AND TEST PLAN
[3] 1723001756-MACCAL-00003	PRESSURE VESSEL MECHANICAL CALCULATION
[4] 1723001756-MAC-DA00004	GENERAL ARRANGEMENTS DRAWINGS AND FOUNDATION LOADING DIAGRAM AND SUPPORT DETAILS (INCL NOZZLE LOADS)
[5] 1723001756-MAC-DD00005	DETAILED DRAWING INCLUDING CROSS SECTION/EXPLODED VIEW DRAWING WITH PART LIST
[6] 1723001756-MAC-DD00006	NAMEPLATE DRAWING
[7] 1723001756-MAC-DS00007	EQUIPMENT DATA SHEETS INCLUDING WEIGHT DATA SHEETS

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[8] 1723001756-MATPRO-00008	PAINTING PROCEDURE (including surface preparation)
[9] 1723001756-NDTPRO-00009	NON-DESTRUCTIVE EXAMINATIONS PROCEDURES (NDE)
[10] 1723001756-NDT-LIS00010	NDE OPERATORS LIST AND QUALIFICATIONS
[11] 1723001756-QC-PRO00011	HEAT TREATMENT PROCEDURES (inc. PWHT)
[12] 1723001756-QC-PRO00012	HYDROSTATIC TEST PROCEDURES (FAT PROCEDURE)
[13] 1723001756-WELPRO-00013	WELDING PROCEDURE SPECIFICATION (WPS) AND QUALIFICATIONS (PQR) RECORDS
[14] 1723001756-WEL-DD00014	WELDING DETAIL DRAWINGS
[15] 1723001756-WEL-LIS00015	WELDING OPERATORS LIST and WELDER QUALIFICATIONS RECORDS (WPQ)
[16] 1723001756-QC-LIS00016	EQUIPMENT MANUFACTURERS RECORD BOOK (FINAL DOSSIER) - INDEX
[17] 1723001756-QC-DB00017	EQUIPMENT MANUFACTURERS RECORD BOOK – COMPLETE
[18] 1723001756-COM-LIS00018	SPARE PART INDEX REGISTER (COMMISSIONING, OPERATION)
[19] 1723001756-MACMAN-00019	INSTALLATION AND OPERATING MAINTENANCE MANUAL (PED)
[20] 1723001756-QC-PRO00020	SHIPPING, PACKING, HANDLING AND STORAGE and PRESERVATIONS, PROCEDURES
[21] 1723001756-TI-DD00021	TRANSPORTATION DRAWINGS
[22] 1723001756MAC-DD00022	LIFTING ARRANGEMENT DRAWINGS

***Table 5**: Vendor Documents (Hydrogen Storage Vessel)*

4.2 Acronyms and Abbreviations

Acronyms and Abbreviations	Description
BDV	Blowdown Valve
BESS	Battery Energy Storage System
BLPH	Base Load Power HUB
CCR	Central Control Room
CCS	Central Control System
DP	Differential Pressure
E&I	Electrical & Instrumentation
EMCS	Electrical Monitoring & Control System
ESD	Emergency Shut Down
FIC	Flow Integration Controller
F&G	Fire & Gas
HKN	Hollandse Kust Noord

Acronyms and Abbreviations	Description
HMI	Human Machine Interface
HV	High Voltage
HSE	Health, Safety, & Environment
ITR	Inspection & Test Record
LC	Locked Closed
LOTO	Lock-Out / Tag-Out
LUN	Livening Up Notification
MC	Mechanical Completion
NDE	Non-Destructive Examination
OER	Onshore Equipment Room
OTP	Operational Test Procedure (Commissioning)
ORR	Operations Readiness Review
PCS	Process Control System
PIC	Pressure Integration Controller
PID (P&ID)	Piping and Instrumentation Diagram
PPE	Personnel Protective Equipment
PQR	Procedure Qualifications Records
PT	Pressure Transmitter
PV	Pressure Valve
PWHT	Post Weld Heat Treatment
RFC	Ready for Commissioning
RFO	Ready for Operation
SAT	Site Acceptance test
SDV	Shut Down Valve
SIS	Safety Instrumented System
SMIR	Supplier Master Information Register
SoF	Statement of Fitness
SPIR	Spare Part Index Register
UPS	Uninterruptible Power Supply
VooW	Van Oord Offshore Wind
WEF	Work Execution Flow Scheme
WLP	Weld Location Plan
WPQ	Weld Procedure Qualification
WPS	Weld Procedure Specification

***Table 6**: Acronyms and Abbreviations*

5. OTP TEST REQUIREMENTS – ONSHORE WORKSITE

This chapter refers to the activities at the Contractor worksite (construction yard).

5.1 Planning and manpower

5.1.1 Planned Tasks with Estimated Manpower

Estimated manpower for the entire duration of the Test:

- 1 E&I commissioning superintendent from Contractor.
- 1 E&I commissioning supervisor from Contractor.
- 1 E&I commissioning technicians from Contractor.
- 1 MECH commissioning superintendent from Contractor
- 1 MECH commissioning technicians from Contractor
- 1 Operator workstation field engineer.

5.1.2 Test Duration Estimate

The test duration is forecast as follows:

- 8 days Functional Test

If necessary, the estimated time can be extended in order to complete all required pre-commissioning and commissioning activities.

5.1.3 Vendor assistance

- Not Applicable

5.1.4 Items Postponed C&E OTP

- Not Applicable

5.1.5 Summary of HARDWARE items to be Tested

Signal tag:	Signal description:
25-FT-031	Flow Transmitter - Nitrogen to V-25001A Vessel
25-PT-004	Pressure Transmitter - Vessel V-25001A Hydrogen Vent System
25-PT-035	Pressure Transmitter - Vessel V-25001A Pressure Control
25-BDV-005	On/Off Valve - Vessel V-25001A Hydrogen Vent System
25-FIC-031	Nitrogen to V-25001A vessel
25-PIC-035	Vessel V-25001A pressure control
25-PV-035	Control Valve - Vessel V-25001A Pressure Control
25-FV-031	Control Valve - Nitrogen to V-25001A Vessel

25-FT-032	Flow Transmitter - Nitrogen to V-25001B Vessel
25-PT-006	Pressure Transmitter - Vessel V-25001B Hydrogen Vent System
25-PT-037	Pressure Transmitter - Vessel V-25001B Pressure Control
25-BDV-007	On/Off Valve - Vessel V-25001B Hydrogen Vent System
25-FIC-032	Nitrogen to V-25001B vessel
25-PIC-037	Vessel V-25001B pressure control
25-FV-032	Control Valve - Nitrogen to V-25001B Ves
25-PV-037	Control Valve - Vessel V-25001B Pressure Control
25-FT-033	Flow Transmitter - Nitrogen to V-25001C Vessel
25-PT-008	Pressure Transmitter - Vessel V-25001C Hydrogen Vent System
25-PT-040	Pressure Transmitter - Vessel V-25001C Pressure Control
25-BDV-010	On/Off Valve - Vessel V-25001C Hydrogen Vent System
25-FIC-033	Nitrogen to V-25001C vessel
25-PIC-040	Vessel V-25001C pressure control
25-FV-033	Control Valve - Vessel V-25001C Pressure Control
25-PV-040	Control Valve - Vessel V-25001C Pressure Control
25-FT-034	Flow Transmitter - Nitrogen to V-25001D Vessel
25-PT-009	Pressure Transmitter - Vessel V-25001D Hydrogen Vent System
25-PT-043	Pressure Transmitter - Vessel V-25001D Pressure Control
25-BDV-013	On/Off Valve - Vessel V-25001D Hydrogen Vent System
25-FIC-034	Nitrogen to V-25001D vessel
25-PIC-043	Vessel V-25001D pressure control
25-FV-034	Control Valve - Nitrogen to V-25001D Vessel
25-PV-043	Control Valve - Vessel V-25001D Pressure Control
25-FT-038	Flow Transmitter - Nitrogen to V-25001E Vessel
25-PT-011	Pressure Transmitter - Vessel V-25001E Hydrogen Vent System
25-PT-046	Pressure Transmitter - Vessel V-25001E Pressure Control
25-BDV-016	On/Off Valve - Vessel V-25001E Hydrogen Vent System
25-FIC-038	Nitrogen to V-25001E vessel
25-PIC-046	Vessel V-25001E pressure control
25-FV-036	Control Valve - Nitrogen to V-25001F Vessel
25-PV-046	Control Valve - Vessel V-25001E Pressure Control
25-FT-036	Flow Transmitter - Nitrogen to V-25001F Vessel
25-PT-012	Pressure Transmitter - Vessel V-25001F Hydrogen Vent System
25-PT-049	Pressure Transmitter - Vessel V-25001F Pressure Control

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25-BDV-019	On/Off Valve - Vessel V-25001F Hydrogen Vent System
25-FIC-036	Nitrogen to V-25001F vessel
25-PIC-049	Vessel V-25001F pressure control
25-FV-038	Control Valve - Nitrogen to V-25001E Vessel
25-PV-049	Control Valve - Vessel V-25001F Pressure Control
25-PT-001	Pressure Transmitter - Hydrogen to Vessels Inlet Header
25-PT-002	Pressure Transmitter - Hydrogen to Vessels Inlet Header Shut-Down
25-SDV-001	On/Off Valve - Hydrogen to Vessels Inlet Header Shut-Down
25-XV-004	On/Off Valve - Vessel V-25001A Hydrogen Inlet
25-XV-008	On/Off Valve - Vessel V-25001B Hydrogen Inlet
25-XV-011	On/Off Valve - Vessel V-25001C Hydrogen Inlet
25-XV-014	On/Off Valve - Vessel V-25001D Hydrogen Inlet
25-XV-017	On/Off Valve - Vessel V-25001E Hydrogen Inlet
25-XV-020	On/Off Valve - Vessel V-25001F Hydrogen Inlet
25-XV-024	On/Off Valve - Hydrogen to Vessels Inlet Header Vent System
25-PT-055A	Pressure Transmitter - hydrogen from Vessels Outlet Header Pressure Control
25-PT-055B	Pressure Transmitter - Hydrogen from Vessels Outlet Header Pressure Control
80-PT-002	Pressure Transmitter - Hydrogen Storage to A-80000 Package
25-BDV-022	On/Off Valve - Hydrogen from Vessels Outlet Header Vent System
25-SDV-023	On/Off Valve - Hydrogen from Vessels Outlet Header Shut-Down
25-XV-006	On/Off Valve - Vessel V-25001A Hydrogen Outlet
25-XV-009	On/Off Valve - Vessel V-25001B Hydrogen Outlet
25-XV-012	On/Off Valve - Vessel V-25001C Hydrogen Outlet
25-XV-015	On/Off Valve - Vessel V-25001D Hydrogen Outlet
25-XV-018	On/Off Valve - Vessel V-25001E Hydrogen Outlet
25-XV-021	On/Off Valve - Vessel V-25001F Hydrogen Outlet
80-XV-001	On/Off Valve - Hydrogen Storage to A-80000 Package Vent System
25-PIC-055A	Hydrogen from vessels outlet header pressure control
25-HS-055	Hydrogen Storage Vessel Header (OUTLET) Press Control Loop Selection
25-PIC-055B	Hydrogen from vessels outlet header pressure control
25-PV-055A	Control Valve - hydrogen from Vessels Outlet Header Pressure Control
25-PV-055B	Control Valve - hydrogen from Vessels Outlet Header Pressure Control
43-FT-001	Flow Transmitter - Hydrogen from KO DRUM V-43001 to vent stack Q-43004
43-PT-001	Pressure Transmitter - KO Drum V-43001 Pressure

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43-LT-001	Level DP Transmitter - KO Drum V-43001 High/Low Level
43-LT-003	Level DP Transmitter - H2 Vent Q-43004 Low Level

Table 7: Summary of Items HARDWARE to be Tested

5.2 OTP TEST REQUIREMENT – ONSHORE WORKSITE

5.2.1 Pre-Commissioning Achievement

Prior to the commissioning operation starts, the relevant pre-commissioning ITR-B's should be fully signed.

5.2.2 Commissioning Achievement

The commissioning achievement will be the successful operation, functionality of Hydrogen Storage & Venting Systems, installed and put in operation during the WORKSITE phase:

- SS 25-00 Hydrogen Storage
- SS 43-00 Hydrogen Vent Header & Drum System

5.2.3 Status of associated Subsystems

Subsystems required RFC for Commissioning of Nitrogen Storage & Venting Systems:

- SS 87-10 PCS System
- SS 79-00 SIS (ESD)
- SS 87-00 EMCS
- SS 88-00 Earthing System
- SS 25-01: V-25001 A
- SS 25-02: V-25001 B
- SS 25-03: V-25001 C
- SS 25-04: V-25001 D
- SS 25-05: V-25001 E
- SS 25-06: V-25001 F
- SS-25-07: Hydrogen Storage Vessel Header (Inlet)
- SS-25-08: Hydrogen Storage Vessel Header (Outlet)
- SS 43-00: Hydrogen Vent Header & Drum System
- SS 63-00: Instrument Air Package
- SS 63-30: Instrumentation Air Distribution Network
- SS 64-00: Nitrogen Generation Package
- SS 64-10: Nitrogen Distribution Network

5.2.4 Special Tools & Test Equipment

The following special tools and Test Equipment are required:

- Continuity tester (Multimeter)
- Toolbox
- Hart Communicator
- Fluke 725

- Portable radios (2 pcs + 1 per Technical Room)

TESTING & MEASUREMENT INSTRUMENT USED			
Type	Serial N.	Calibration certificate	Validity
HART COMMUN. HERIAN	1918000038		

5.2.5 Consumable List

- Not applicable

5.2.6 Commissioning Spare Part

- See reference doc. N. 1724000887-COM-LIS-0016 Hydrogen Vent.
- See reference doc. N. 1724000163-COM-LIS-0014 Hydrogen KO Drum.
- See reference doc. N. 1723001756-COM-LIS-00018 H2 Storage Vessel.

5.2.7 Temporary Facilities

- Not applicable

5.3 OTP DESCRIPTION – ONSHORE WORKSITE

5.3.1 OTP Test Preparation

Step	Description	Result	Verified by	Date
1.	System Ready for Commissioning Certificate (RFC) is issued and approved.	OK		27-03-2025
2.	No Mechanical Completion or Pre-commissioning punch list 'A' items are outstanding against the system to be commissioned.	OK		27-03-2025
3.	Factory Acceptance Test Procedures have been carried out successfully (Hydrogen KO Drum refer to Doc. 1724000163-QC-PRO-PRO-00010 and Hydrogen Vent refer to Doc. 1724000887-QC-PRO-00010 and H2 Storage Vessel 1723001756-QCPRO-00012).	OK		27-03-2025

4.	All personnel involved in the implementation of this procedure are familiar with its content as well as with associated safety requirements (Toolbox Talk to be conducted before initiation of activities).	OK		27-03-2025
5.	A final walkdown of the system has been completed, to ensure that the system and the area are ready for commissioning.	OK		27-03-2025
6.	Check that areas are free for work and escape routes are clear of any obstructions.	OK		27-03-2025
7.	All safety barriers and warning signs have been installed.	OK		27-03-2025
8.	Ensure that proper communications have been established between parties involved in the implementation of the procedure.	OK		27-03-2025
9.	Verify availability of test equipment as per section 5.2.4.	OK		27-03-2025
10.	System(s) (de)isolations as per LOTO procedure defined within HSSE Permits to Work and Commissioning procedures duly prepared and approved.	OK		27-03-2025
11.	All yard personnel have been duly notified by dedicated LUN (Livening Up Notification) that the system(s) is ready for commissioning.	OK		27-03-2025

5.3.2 Electrical Preparation

Step	Description	Result	Verified by	Date
1.	Check related punch list 'B' items and confirm acceptability for start of commissioning activities.	OK		27-03-2025
2.	Verify that all relevant associated systems / subsystems are completed.	OK		27-03-2025

5.3.3 Mechanical Preparation

Step	Description	Result	Verified by	Date
1.	Check the correct flow direction of the valves.	OK		27-03-2025
2.	Visual Check.	OK		27-03-2025
3.	Instrument Air Package A-63000 up and running.	OK		27-03-2025
4.	N2 generation package A-64000 up and running.	OK		27-03-2025
5.	Confirm leak testing is complete and documented.	OK		27-03-2025
6.	Confirm mechanical alignment of all package pumps & equipment.	OK		27-03-2025

7.	Ensure package PSV setpoints are correct for the designed operating pressure.	OK		27-03-2025
8.	Ensure all unnecessary isolation are removed and vent system is ready to receive hydrogen.	OK		27-03-2025

5.3.4 Instrument Preparation

Step	Description	Result	Verified by	Date
1.	Check related punch list 'B' items and confirm acceptability for start of commissioning activities.	OK		27-03-2025
2.	Verify that all relevant associated systems / subsystems are ready.	OK		27-03-2025
3.	Verify that relevant equipment/ components are available and in operation for start of commissioning activities.	OK		27-03-2025
4.	Verify availability of test equipment as per section 5.2.4.	OK		27-03-2025
5.	Check of overrides and interlocks.	OK		27-03-2025

5.3.5 Piping Preparation

Step	Description	Result	Verified by	Date
1.	Verify the completion of piping in conformity with system battery limit.	OK		27-03-2025
2.	Gross air leak test successfully performed.	OK		27-03-2025
3.	Review Rosetti flange management and confirm all interface connections have been torqued and leak tested with details recorded and signed for.	OK		27-03-2025
4.	Ensure blind flange positive isolation is in place at test boundary.	OK		27-03-2025

5.3.6 Additional Discipline Preparation

- Not applicable

5.4 OTP TEST STEPS – ONSHORE WORKSITE

In the following steps the functionality of the Hydrogen Storage & Venting Systems shall be tested:

- SS 25-00 Hydrogen Storage
- SS 43-00 Hydrogen Vent Header & Drum System

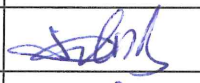
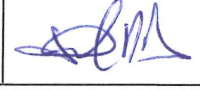
5.4.1 Test Preparation

Need to Verify:

- SS 87-10 PCS System
- SS 79-00 SIS (ESD)
- SS 87-00 EMCS
- SS 88-00 Earthing System
- SS 25-01: V-25001 A
- SS 25-02: V-25001 B
- SS 25-03: V-25001 C
- SS 25-04: V-25001 D
- SS 25-05: V-25001 E
- SS 25-06: V-25001 F
- SS-25-07: Hydrogen Storage Vessel Header (Inlet)
- SS-25-08: Hydrogen Storage Vessel Header (Outlet)
- SS 43-00: Hydrogen Vent Header & Drum System
- SS 63-00: Instrument Air Package
- SS 63-30: Instrumentation Air Distribution Network
- SS 64-00: Nitrogen Generation Package
- SS 64-10: Nitrogen Distribution Network

All systems and subsystems involved in this procedure must be ready for commissioning and available.

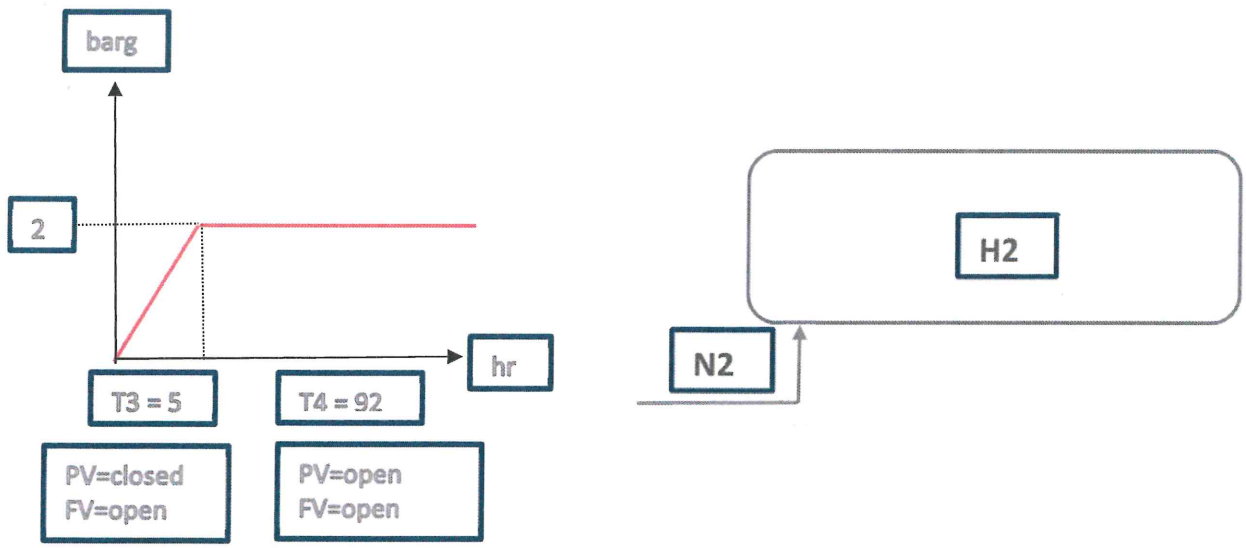
5.4.2 Test Steps

Step	Description	Result	Verified by	Date
SS 25-00 Hydrogen Storage. SS 43-00 Hydrogen Vent Header & Drum System.				
Verify related ITR-B for Systems SS 25-00 / SS 43-00 are completed.				
1	Verify loop check from workstation located in temporary yard CCR. with reference doc. 123A90-DDL-IN-DG-40014.	OK		27-03-2025
2	Verify alarm setting from workstation located in temporary yard CCR. with reference doc. 123A90-DDL-IN-DG-40014.with reference doc. 123A90-DDL-IN–LIS-40089.	OK		27-03-2025
3	Verify the Cause & Effect from workstation located in temporary yard CCR. with reference doc. 123A90-DDL-IN-DG-40014 and with reference doc. 123A90-DDL-IN-CE-40000 sheets 6-8.	OK		27-03-2025
4	Confirmed the steps from 1 to 3 let's proceed with the Control Logics.	OK		27-03-2025
5	The Control Logic steps are listed below: • Purging mode after Shutdown (for H2 displacement).	OK		27-03-2025

Step	Description	Result	Verified by	Date
	• Purging mode after maintenance (Air displacement). • Process Start-up Charging mode. • Fully Charged Status (indication on HMI). • Discharging. • Process Empty Status (indication on HMI). • Process Charging mode.	OK		27-03-2025
6	Since this test is performed with nitrogen instead of H2, Vessels A/B/C/D/E/F will be pressurized up to 6 barg consequently related set-points will be temporarily modified. When the test has been successfully completed, all set-points and simulations will be restored and checked.	OK		27-03-2025
7	**PURGING MODE AFTER SHUTDOWN (H2 DISPLACEMENT)** <u>SYSTEM PREPARATION WITH VALVES ALIGNMENT READY FOR PURGING.</u> During this procedure the nitrogen used for purging will be produced by the Nitrogen Generation System A-64000. On the outlet line of the Nitrogen system (A-64000) a pressure control is provided, in order to guarantee and maintain a pressure of 7 barg. The control loop is identified with: • 64-PIC-031A/B • 64-PT-031A/B • 64-PV-031A/B The operator, through a software push button on HMI will activate the purging after shutdown for H2 displacement. This push button will be active only in electrical "Research MODE 7". All the XV valves shall be managed with an automatic sequence. The sequence shall be the following: Close the valves on the inlet line 25-XV-004/008/011/014/017/020 **(time to close 3 seconds)** and verify the feedback 25-ZSL-004/008/011/014/017/020. When the feedback status is active, close the valve on the outlet line 25-XV-006/009/012/015/018/021 **(time to close 3 seconds)** and verify the feedback 25-ZSL-006/009/012/015/018/021. When the feedback status is active the controllers 25-FIC-031/032/033/034/038/036 will force the output signal to 0% automatically.	OK		02-09-2025

Step	Description	Result	Verified by	Date
	Close the valve on the inlet line 25-FV-031 /032/033/034/038/036 **(time to close 20 seconds).** Verify the feedback 25-ZSL-031/032/033/034/ 038/036. When all feedback status is active the controllers 25-PIC-035/037/040/043/046/049 will force the output signal to 0% automatically. Close all valves on the outlet lines 25-PV-035/ 037/040/043/046/049 **(time to close 20 seconds).** Verify the feedback 25-ZSL-035/037/040/043/ 046/049. When all feedback status is active the valve 64-SDV-001 will open, installed on the nitrogen line. The 64-SDV-001 valve is normally closed and through a software push button is permitted to open/closed remotely on HMI. A software interlock controls the operation of the valve which is only permitted during purging modes **(time to open 8 seconds).** 64-SDV-001 t=.....8..... Second Verify the feedback status 64-ZSH-001.	ok		02-04-2025

PURGING MODE AFTER SHUTDOWN (H2 DISPLACEMENT)



Step	Description	Result	Verified by	Date

ITEM	TAG. SIGNAL	PERMANENT SET-POINT	TEMP. TEST SET-POINT	DATA	RESTORED SET-POINT	DATA
1.	T3A (Tag. T3A refers to H2 storage tank V-25001)	5 hr.	1 hr. 8 ..... hr.	02/04/25	5 hr	12-04-25
2.	T4A (below)	92 hr.	1 hr. 30 min ..... hr.	02/04/25	92 hr.	12-04-25

8	**H2 Vessel V-25001 A** Before starting the Purging mode after shutdown (H2 displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-035 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-035 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-031 and assign the set point to 42 Nm³/hr. 25-FIC-031 SP=.....42..... Nm³/hr.	ok ok ok		02.04.2025

Step	Description	Result	Verified by	Date
	Verify the timer required to pressurize V-25001A T3A = 1 hr. (TEMP.) and the flow totalizer 25-FQ-031 and pressure gradient calculation. T3A t=.....2..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-035 < 2 barg when timer is expired an alarm T3AAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-031, stop and reset the flow totalizer 25-FQ-031and the logic sequence will automatically proceed with VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-031, stop and reset the Flow Totalizer 25-FQ-031and the logic sequence will automatically proceed with VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. Once the pressure 25-PT-035 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-035 and assign the set point to 2 barg. Consequently valve 25-PV-035 will operate and release the Nitrogen gas to the vent	OK OK OK OK		02-04-2025

Step	Description	Result	Verified by	Date
	system while maintaining a constant pressure 2 barg. Verify the timer required to purging T4A = 1 hr. (TEMP.) Vessel V-25001A. T4A t=..... 15 min ..... ~~hr.~~ The logic sequence is not achieved as per designed when: • if the pressure 25-PT-035 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-035 and 25-FIC-031, stop and reset the flow totalizer 25-FQ-031 and the logic sequence will automatically proceed with VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-035 ≥ 1.5 barg (during all T4A). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-031 and 25-PIC 035. The valves 25-FV-031 and 25-PV-035 close. Time to close 20 seconds. 25-ZSL-031 t=..... 20 ..... second. 25-ZSL-035 t=..... 20 ..... second. With feedback status 25-ZSL-031 and 25-ZSL-035 valves closed, the logic sequence will automatically proceed with the purging of VESSEL B.	OK OK OK		02-04-2025

Step	Description	Result	Verified by	Date
9	**H2 Vessel V-25001 B** Before starting the Purging MODE after shutdown (H2 displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-037 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-037 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-032 and assign the set point to 42 Nm³/hr. **25-FIC-032 SP=**.....42..... Nm³/hr. Verify the timer required to pressurize V-25001B T3B = 1 hr. (TEMP.) and the flow totalizer 25-FQ-032 and pressure gradient calculation. **T3B t=**.....2..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-037 < 2 barg when timer is expired an alarm T3BAH will alert the operator, the automatic sequence will override the force output 0% of the	ok ok ok		

Step	Description	Result	Verified by	Date
	controller 25-FIC-032, stop and reset the flow totalizer 25-FQ-032 and the logic sequence will automatically proceed with VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-032, stop and reset the Flow Totalizer 25-FQ-032 and the logic sequence will automatically proceed with VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. Once the pressure 25-PT-037 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-037 and assign the set point to 2 barg. Consequently valve 25-PV-037 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T4B = 1 hr. (TEMP.) Vessel V-25001B. T4B t=.....45 min.....hr. The logic sequence is not achieved as per designed when: • if the pressure 25-PT-037 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-037 and 25-FIC-	ok OK ok OK ok		02-04-2025

Step	Description	Result	Verified by	Date
	032, stop and reset the flow totalizer 25-FQ-032 and the logic sequence will automatically proceed with VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-037 ≥ 1.5 barg (during all T4B). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-032 and 25-PIC 037. The valves 25-FV-032 and 25-PV-037 close. Time to close 20 seconds. **25-ZSL-032** t=.....20..... second. **25-ZSL-037** t=.....20..... second. With feedback status 25-ZSL-032 and 25-ZSL-037 valves closed, the logic sequence will automatically proceed with the purging of VESSEL C.	OK OK OK		02-04-2025
10	**H2 Vessel V-25001 C** Before starting the Purging MODE after shutdown (H2 displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-040 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable ≤ 8 barg and confirm the above sequence.	OK		02-04-2025

Step	Description	Result	Verified by	Date
	Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-040 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-033 and assign the set point to 42 Nm³/hr. 25-FIC-033 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001C T3C = 1 hr. (TEMP.) and the flow totalizer 25-FQ-033 and pressure gradient calculation. T3C t=.....2..... hr.	OK		
	The logic sequence is not achieved as per designed when: • If the pressure 25-PT-040 < 2 barg when timer is expired an alarm T3CAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-033, stop and reset the flow totalizer 25-FQ-033 and the logic sequence will automatically proceed with VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	• If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic			

Step	Description	Result	Verified by	Date
	sequence will override the force output 0% of the controller 25-FIC-033, stop and reset the Flow Totalizer 25-FQ-033 and the logic sequence will automatically proceed with VESSEL D.	OK		
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	Once the pressure 25-PT-040 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-040 and assign the set point to 2 barg. Consequently valve 25-PV-040 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T4C = 1 hr. (TEMP.) Vessel V-25001C. T4C t=..... 15 min ..... hr.	OK		02-04-2025
	The logic sequence is not achieved as per designed when: • if the pressure 25-PT-040 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-040 and 25-FIC-033, stop and reset the flow totalizer 25-FQ-033 and the logic sequence will automatically proceed with VESSEL D.			
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	The logic sequence will proceed as per designed when:			

Step	Description	Result	Verified by	Date
	• If 25-PT-040 ≥ 1.5 barg (during all T4C). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-033 and 25-PIC 040. The valves 25-FV-033 and 25-PV-040 close. Time to close 20 seconds. 25-ZSL-033 t=.....20..... second. 25-ZSL-040 t=.....20..... second. With feedback status 25-ZSL-033 and 25-ZSL-040 valves closed, the logic sequence will automatically proceed with the purging of VESSEL D.	OK		02-04-2025
11	**H2 Vessel V-25001 D** . Before starting the Purging MODE after shutdown (H2 displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-043 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-043 internal Vessel, the automatic sequence will override the forced output	OK OK OK		02-04-2025

Step	Description	Result	Verified by	Date
	0% of the controller 25-FIC-034 and assign the set point to 42 Nm³/hr. 25-FIC-034 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001D T3D= 1 hr. (TEMP.) and the flow totalizer 25-FQ-034 and pressure gradient calculation. T3D t=.....2..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-043 < 2 barg when timer is expired an alarm T3DAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-034, stop and reset the flow totalizer 25-FQ-034and the logic sequence will automatically proceed with VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-04, stop and reset the Flow Totalizer 25-FQ-034 and the logic sequence will automatically proceed with VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK OK		02-04-2025

Step	Description	Result	Verified by	Date
	Once the pressure 25-PT-043 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-043 and assign the set point to 2 barg. Consequently valve 25-PV-043 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T4D = 1 hr. (TEMP.) Vessel V-25001D. T4D t=.....15min..... ~~hr.~~ The logic sequence is not achieved as per designed when: • if the pressure 25-PT-043 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-043 and 25-FIC-034, stop and reset the flow totalizer 25-FQ-034 and the logic sequence will automatically proceed with VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-043 ≥ 1.5 barg (during all T4D). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-034 and 25-PIC 043. The valves 25-FV-034 and 25-PV-043 close. Time to close 20 seconds. 25-ZSL-034 t=.....20..... second. 25-ZSL-043 t=.....20..... second.	OK OK OK		02.04.2025

Step	Description	Result	Verified by	Date
	With feedback status 25-ZSL-034 and 25-ZSL-043 valves closed, the logic sequence will automatically proceed with the purging of VESSEL E.	OK		02.04.2025
12	**H2 Vessel V-25001 E** Before starting the Purging MODE after shutdown (H2 displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-046 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-046 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-038 and assign the set point to 42 Nm³/hr. 25-FIC-038 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001E T3E = 1 hr. (TEMP.) and the flow totalizer 25-FQ-038 and pressure gradient calculation. T3E t=.....2..... hr.	OK OK OK		02.04.2025

Step	Description	Result	Verified by	Date
	The logic sequence is not achieved as per designed when: • If the pressure 25-PT-046 < 2 barg when timer is expired an alarm T3EAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-038, stop and reset the flow totalizer 25-FQ-038 and the logic sequence will automatically proceed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-038, stop and reset the Flow Totalizer 25-FQ-038 and the logic sequence will automatically proceed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. Once the pressure 25-PT-046 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-046 and assign the set point to 2 barg. Consequently valve 25-PV-046 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T4E = 1 hr. (TEMP.) Vessel V-25001E. T4E t=.....15 min..... ~~hr.~~	OK OK OK OK		02-04-2025

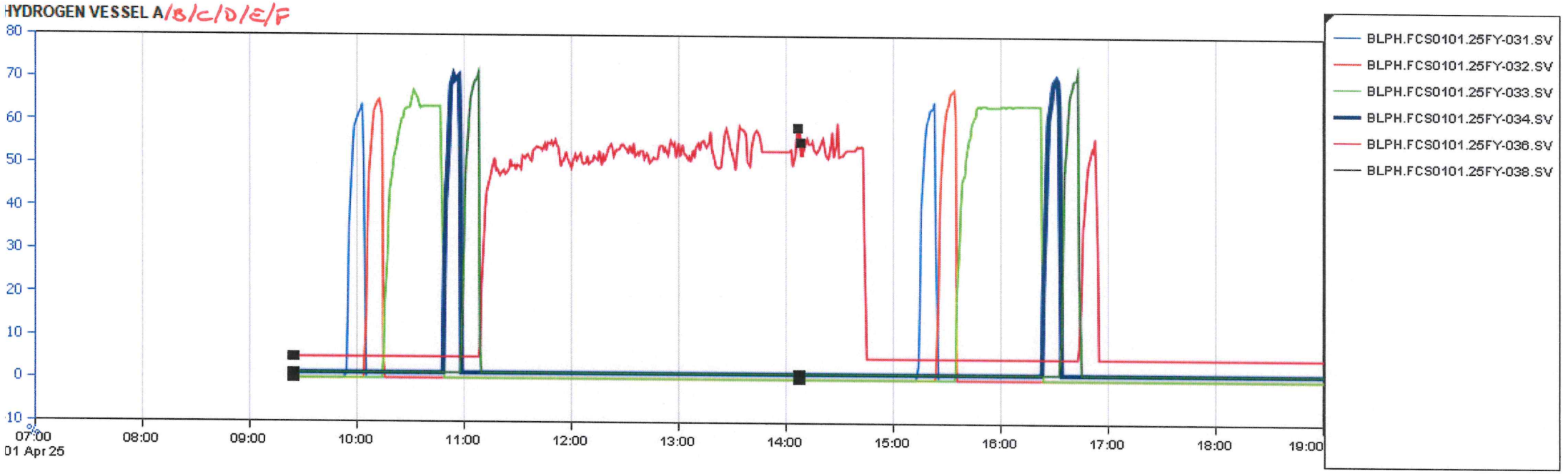
Step	Description	Result	Verified by	Date
	The logic sequence is not achieved as per designed when: • if the pressure 25-PT-046 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-046 and 25-FIC-038, stop and reset the flow totalizer 25-FQ-038 and the logic sequence will automatically proceed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-046 ≥ 1.5 barg (during all T4E). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-038 and 25-PIC 046. The valves 25-FV-038 and 25-PV-046 close. Time to close 20 seconds. **25-ZSL-038** t=.....20..... second. **25-ZSL-046** t=.....20..... second. With feedback status 25-ZSL-038 and 25-ZSL-046 valves closed, the logic sequence will automatically proceed with the purging of VESSEL F.	OK OK OK		02-04-2025
13	**H2 Vessel V-25001 F** Before starting the Purging MODE after shutdown (H2 displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-	OK		02-04-2025

Step	Description	Result	Verified by	Date
	PT-049 internal Vessel, the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-049 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-036 and assign the set point to 42 Nm³/hr. 25-FIC-036 SP=.....42.....Nm³/hr. Verify the timer required to pressurize V-25001F T3F = 1 hr. (TEMP.) and the flow totalizer 25-FQ-036 and pressure gradient calculation. T3F t=.....2..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-049 < 2 barg when timer is expired an alarm T3FAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-036, stop and reset the flow totalizer 25-FQ-036 and the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve	OK	[signature]	02.04.2025

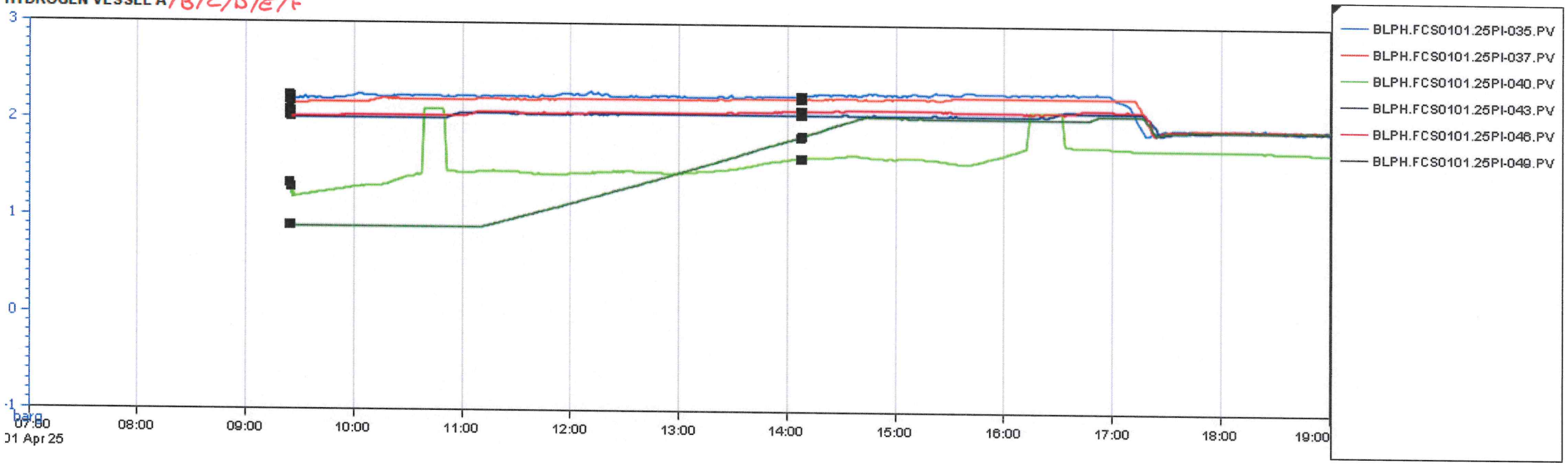
Step	Description	Result	Verified by	Date
	process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok		
	• If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-036, stop and reset the Flow Totalizer 25-FQ-036 and the logic sequence will automatically proceed with EXIT.	ok		
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok		
	Once the pressure 25-PT-049 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-049 and assign the set point to 2 barg. Consequently valve 25-PV-049 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T4F = 1 hr. (TEMP.) Vessel V-25001F. T4F t=..... 15 min ..... ~~hr.~~			02-04-2025
	The logic sequence is not achieved as per designed when: • if the pressure 25-PT-049 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-049 and 25-FIC-036, stop and reset the flow totalizer 25-FQ-036 and the logic sequence will automatically proceed with VESSEL B.	OK		
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve			

PURGING MODE AFTER SHUTDOWN (H2 DISPLACEMENT)

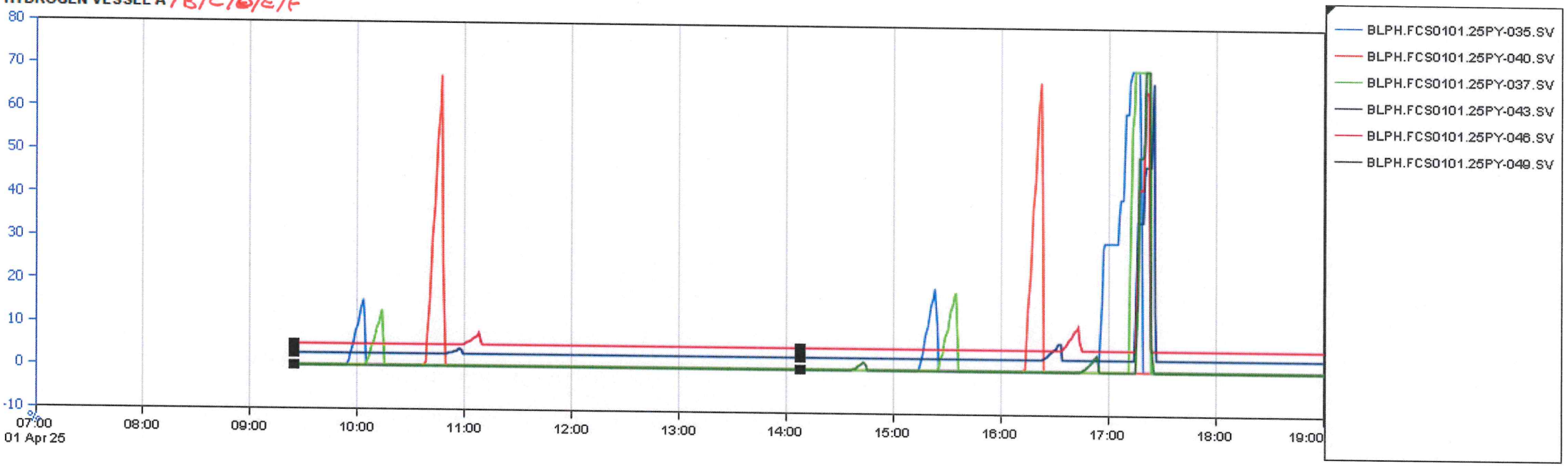
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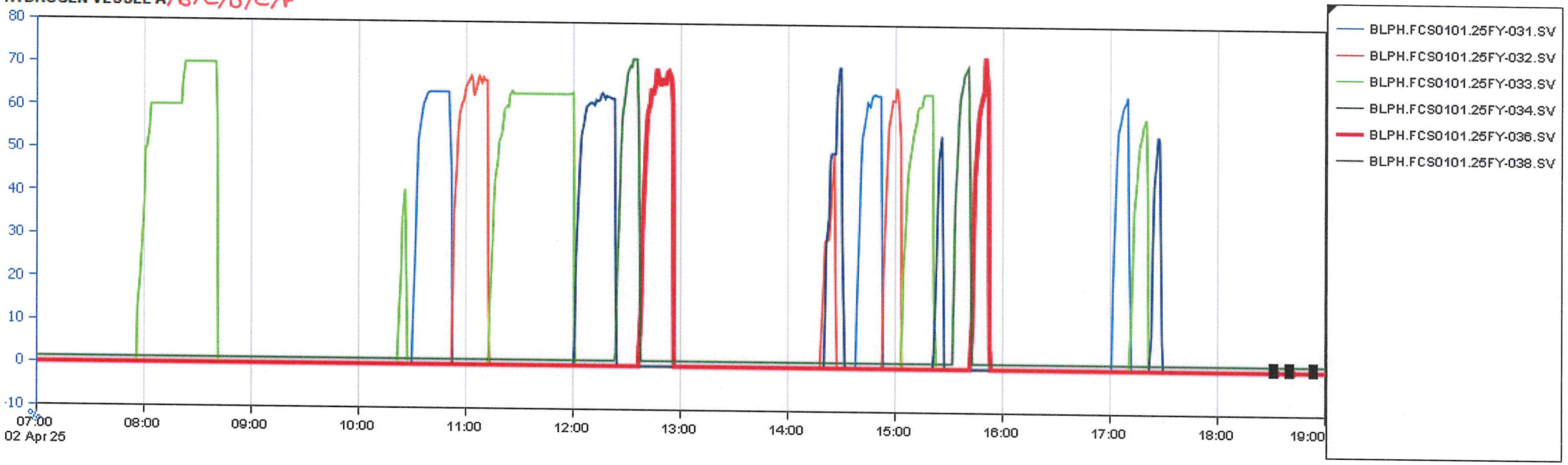
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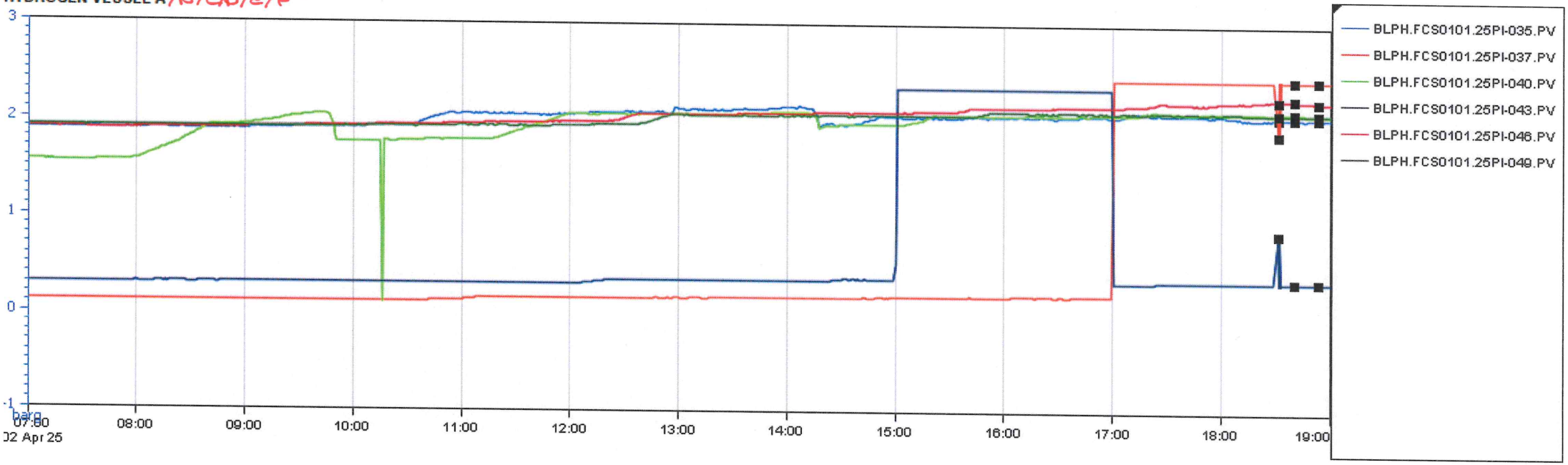
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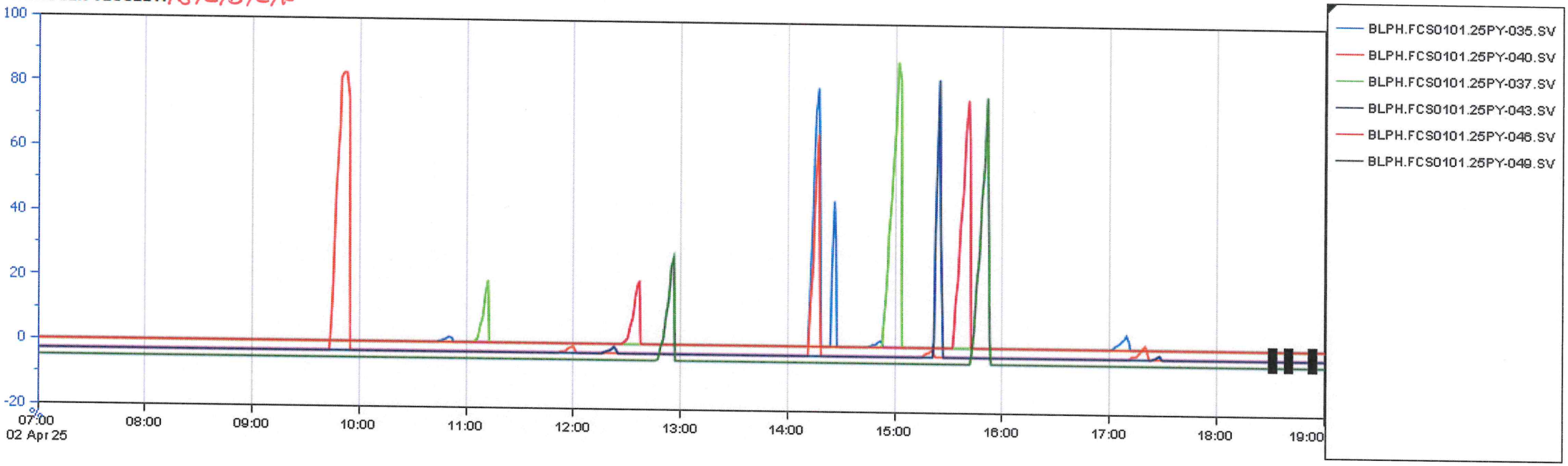
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HYDROGEN VESSEL A/B/C/D/E/F



HYDROGEN VESSEL A/B/C/D/E/F

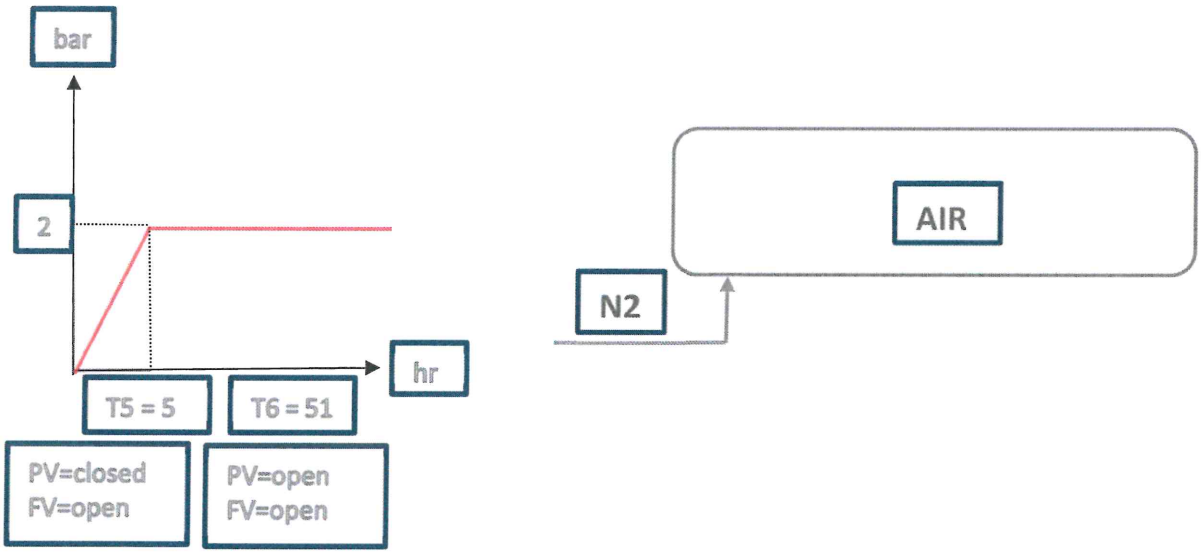


Step	Description	Result	Verified by	Date
	process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-049 ≥ 1.5 barg (during all T4F). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-036 and 25-PIC 049. The valves 25-FV-036 and 25-PV-049 close. Time to close 20 seconds. 25-ZSL-036 t=.....20..... second. 25-ZSL-049 t=.....20..... second. With feedback status 25-ZSL-036 and 25-ZSL-049 valves closed, the logic sequence will automatically proceed with EXIT.	ok ok		02-04-2025
14	As soon as the flow totalizers are stopped (25-FQ-031/032/033/034/038/036) the PCS will compare the value with the expected value FQH. Total flow expected for purging after shutdown (H2 displacement). FQH =.....1.420.....Nm³/hr.	ok		02.04.2025
15	**PURGING MODE AFTER MAINTENANCE (AIR DISPLACEMENT)** SYSTEM PREPARATION WITH VALVES ALIGNMENT READY FOR PURGING. During this procedure the nitrogen used for purging will be produced by the Nitrogen Generation System A-64000. On the outlet line of the Nitrogen system (A-64000) a pressure control is provided, in order to guarantee and maintain a pressure of 7 barg. The control loop is identified with: • 64-PIC-031A/B • 64-PT-031A/B • 64-PV-031A/B	ok		02-04-2025

Step	Description	Result	Verified by	Date
	The operator through a software push button on HMI will activate the "Purging mode". This push button will be active only in "Research MODE 7". All the XV valves shall be managed with an automatic sequence. The sequence shall be the following: Close the valves on the inlet line 25-XV-004/008/011/014/017/020 **(time to close 3 seconds)** and verify the feedback 25-ZSL-004/008/011/014/017/020. When the feedback status is active, close the valve on the outlet line 25-XV-006/009/012/015/018/021 **(time to close 3 seconds)** and verify the feedback 25-ZSL-006/009/012/015/018/021. When the feedback status is active the controllers 25-FIC-031/032/033/034/038/036 will force the output signal to 0% automatically. Close the valve on the inlet line 25-FV-031/032/033/034/038/036 **(time to close 20 seconds).** Verify the feedback 25-ZSL-031 /032/033/034/038/036. When all feedback status is active the controllers 25-PIC-035/037/040/043/046/049 will force the output signal to 0% automatically. Close all valves on the outlet lines 25-PV-035/037/040/043/046/049 **(time to close 20 seconds).** Verify the feedback 25-ZSL-035 /037/040/043/046/049. When all feedback status is active the valve 64-SDV-001 will open, installed on the nitrogen line. The 64-SDV-001 valve is normally closed and through a software push button is permitted to open/closed remotely on HMI. A software interlock controls the operation of the valve which is only permitted during purging modes **(time to open 8 seconds).** **64-SDV-001 t=**.....8..... Second Verify the feedback status 64-ZSH-001.	OK		02-04-2025

Step	Description	Result	Verified by	Date

PURGING MODE AFTER MAINTENANCE (AIR DISPLACEMENT)



ITEM	TAG. SIGNAL	PERMANENT SET-POINT	TEMP. TEST SET-POINT	DATA	RESTORED SET-POINT	DATA
3.	T5A (Tag. T5A refers to H2 storage tank V-25001A)	5 hr.	1 hr. ..... 2 ..... hr.	11-04-25	5 hr	12-04-25
4.	T6A (below)	51 hr.	1 hr. ..... 1/2 ..... hr.	11-04-2025	51 hr	12-04-25

16	H2 VESSEL V-25001A Before starting the Purging mode after maintenance (air displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-035 internal Vessel, the logic sequence	ok		11-04-2025

Step	Description	Result	Verified by	Date
	will automatically proceed with purging of VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-035 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-031 and assign the set point to 42 Nm³/hr. 25-FIC-031 SP=.....42.....Nm³/hr. Verify the timer required to pressurize V-25001A T5A = 1 hr. (TEMP.) and the flow totalizer 25-FQ-031 and pressure gradient calculation. T5A t=.....1.....hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-035 < 2 barg when timer is expired an alarm T5AAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-031, stop and reset the flow totalizer 25-FQ-031and the logic sequence will automatically proceed with VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 2 barg and confirm the above sequence.	ok ok		11-09-2025

Step	Description	Result	Verified by	Date
	Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	• If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-031, stop and reset the Flow Totalizer 25-FQ-031and the logic sequence will automatically proceed with VESSEL B.	OK		
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	Once the pressure 25-PT-035 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-035 and assign the set point to 2 barg. Consequently valve 25-PV-035 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T6A = 1 hr. (TEMP.) Vessel V-25001A.	OK		
	T6A t=..... 1/2 ..... hr.			22-04-2025
	The logic sequence is not achieved as per designed when:			
	• if the pressure 25-PT-035 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-035 and 25-FIC-031, stop and reset the flow totalizer 25-FQ-031 and the logic sequence will automatically proceed with VESSEL B.			
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK		

Step	Description	Result	Verified by	Date
	The logic sequence will proceed as per designed when: • If 25-PT-035 ≥ 1.5 barg (during all T6A). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-031 and 25-PIC 035. The valves 25-FV-031 and 25-PV-035 close. Time to close 20 seconds. **25-ZSL-031** t=.....20..... second. **25-ZSL-035** t=.....20..... second. With feedback status 25-ZSL-031 and 25-ZSL-035 valves closed, the logic sequence will automatically proceed with the purging of VESSEL B.	OK		11-04-2025
17	**H2 VESSEL V-25001B** Before starting the Purging mode after maintenance (air displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-037 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-	OK OK		11-04-2025

Step	Description	Result	Verified by	Date
	PT-037 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-031 and assign the set point to 42 Nm³/hr. 25-FIC-032 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001B T5B = 1 hr. (TEMP.) and the flow totalizer 25-FQ-032 and pressure gradient calculation. T5B t=.....7..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-037 < 2 barg when timer is expired an alarm T5BAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-032, stop and reset the flow totalizer 25-FQ-032 and the logic sequence will automatically proceed with VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-032, stop and reset the Flow Totalizer 25-FQ-032 and the logic sequence will automatically proceed with VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 1 barg and confirm the above sequence.	OK OK OK		11-04-2025

Step	Description	Result	Verified by	Date
	Restore normal operating parameters and disconnect the HART COMMUNICATOR. Once the pressure 25-PT-037 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-035 and assign the set point to 2 barg. Consequently valve 25-PV-037 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T6B = 1 hr. (TEMP.) Vessel V-25001B. T6B t=.....1/2..... hr. The logic sequence is not achieved as per designed when: • if the pressure 25-PT-037 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-037 and 25-FIC-032, stop and reset the flow totalizer 25-FQ-032 and the logic sequence will automatically proceed with VESSEL C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-037 ≥ 1.5 barg (during all T6B). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-032 and 25-PIC 037. The valves 25-FV-032 and 25-PV-037 close. Time to close 20 seconds. 25-ZSL-032 t=.....20..... second.	ok ok ok		11.09.2025

Step	Description	Result	Verified by	Date
	25-ZSL-037 t=.....20..... second. With feedback status 25-ZSL-032 and 25-ZSL-037 valves closed, the logic sequence will automatically proceed with the purging of VESSEL C.	ok		11-09-2025
18	**H2 Vessel V-25001 C** Before starting the Purging mode after maintenance (air displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-040 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-040 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-033 and assign the set point to 42 Nm³/hr. 25-FIC-033 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001C T5C = 1 hr. (TEMP.) and the flow totalizer 25-FQ-033 and pressure gradient calculation. T5C t=.....7..... hr.	ok ok ok		11-09-2025

Step	Description	Result	Verified by	Date
	The logic sequence is not achieved as per designed when: • If the pressure 25-PT-040 < 2 barg when timer is expired an alarm T5CAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-033, stop and reset the flow totalizer 25-FQ-033 and the logic sequence will automatically proceed with VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-033, stop and reset the Flow Totalizer 25-FQ-033 and the logic sequence will automatically proceed with VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. Once the pressure 25-PT-040 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-040 and assign the set point to 2 barg. Consequently valve 25-PV-040 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T6C = 1 hr. (TEMP.) Vessel V-25001C. T6C t= 1/2 ..... hr.	ok ok ok ok ok		11-04-2025

Step	Description	Result	Verified by	Date
	The logic sequence is not achieved as per designed when: • if the pressure 25-PT-040 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-040 and 25-FIC-033, stop and reset the flow totalizer 25-FQ-033 and the logic sequence will automatically proceed with VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-040 ≥ 1.5 barg (during all T6C). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-033 and 25-PIC 040. The valves 25-FV-033 and 25-PV-040 close. Time to close 20 seconds. **25-ZSL-033** t=.....20..... second. **25-ZSL-040** t=.....20..... second. With feedback status 25-ZSL-033 and 25-ZSL-040 valves closed, the logic sequence will automatically proceed with the purging of VESSEL D.	OK OK OK		11-04-2025
19	**H2 Vessel V-25001 D** Before starting the Purging mode after maintenance (air displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-043 internal Vessel, the logic sequence	OK		11-04-2025

Step	Description	Result	Verified by	Date
	will automatically proceed with purging of VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-043 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-034 and assign the set point to 42 Nm³/hr. 25-FIC-034 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001D T5AD= 1 hr. (TEMP.) and the flow totalizer 25-FQ-034 and pressure gradient calculation. T5D t=.....1..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-043 < 2 barg when timer is expired an alarm T5DAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-034, stop and reset the flow totalizer 25-FQ-034and the logic sequence will automatically proceed with VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable < 2 barg and confirm the above sequence.	OK		11-04-2025

Step	Description	Result	Verified by	Date
	Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	• If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-04, stop and reset the Flow Totalizer 25-FQ-034 and the logic sequence will automatically proceed with VESSEL E.	OK		
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		
	Once the pressure 25-PT-043 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-043 and assign the set point to 2 barg. Consequently valve 25-PV-043 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T6D = 1 hr. (TEMP.) Vessel V-25001D. T6D t=..... 1/2 ..... hr.			11 - 04 - 2025
	The logic sequence is not achieved as per designed when:	OK		
	• if the pressure 25-PT-043 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-043 and 25-FIC-034, stop and reset the flow totalizer 25-FQ-034 and the logic sequence will automatically proceed with VESSEL E.			
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		

Step	Description	Result	Verified by	Date
	The logic sequence will proceed as per designed when: • If 25-PT-043 ≥ 1.5 barg (during all T6D). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-034 and 25-PIC 043. The valves 25-FV-034 and 25-PV-043 close. Time to close 20 seconds. 25-ZSL-034 t=.....20..... second. 25-ZSL-043 t=.....20..... second. With feedback status 25-ZSL-034 and 25-ZSL-043 valves closed, the logic sequence will automatically proceed with the purging of VESSEL E.	ok		11.04.2025
20	**H2 Vessel V-25001 E** Before starting the Purging mode after maintenance (air displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-046 internal Vessel, the logic sequence will automatically proceed with purging of VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-046 internal Vessel, the automatic	ok ok		11.04.2025

Step	Description	Result	Verified by	Date
	sequence will override the forced output 0% of the controller 25-FIC-038 and assign the set point to 42 Nm³/hr. 25-FIC-038 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001E T5E = 1 hr. (TEMP.) and the flow totalizer 25-FQ-038 and pressure gradient calculation. T5E t=.....1..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-046 < 2 barg when timer is expired an alarm T5EAH will alert the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-038, stop and reset the flow totalizer 25-FQ-038 and the logic sequence will automatically proceed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-038, stop and reset the Flow Totalizer 25-FQ-038 and the logic sequence will automatically proceed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK OK		25-02-25

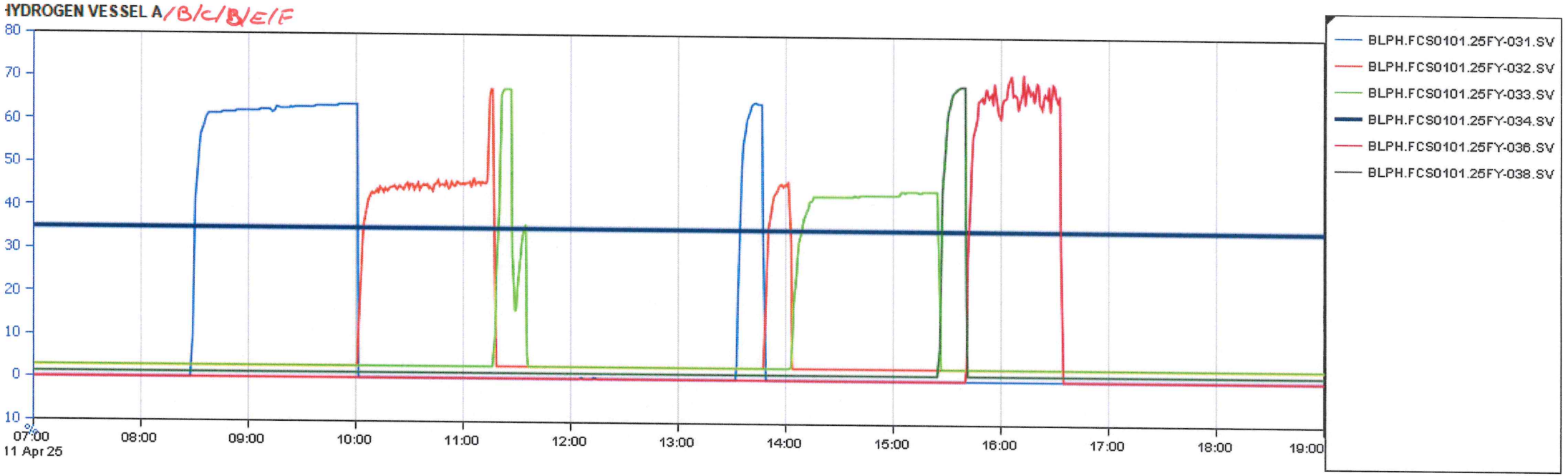
Step	Description	Result	Verified by	Date
	Once the pressure 25-PT-046 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-046 and assign the set point to 2 barg. Consequently valve 25-PV-046 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T6E = 1 hr. (TEMP.) Vessel V-25001E. T6E t=..... 1/2 ..... hr. The logic sequence is not achieved as per designed when: • if the pressure 25-PT-046 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-046 and 25-FIC-038, stop and reset the flow totalizer 25-FQ-038 and the logic sequence will automatically proceed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-046 ≥ 1.5 barg (during all T6E). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-038 and 25-PIC 046. The valves 25-FV-038 and 25-PV-046 close. Time to close 20 seconds. 25-ZSL-038 t=..... 20 ..... second. 25-ZSL-046 t=..... 20 ..... second.	ok ok ok		12.09.2025

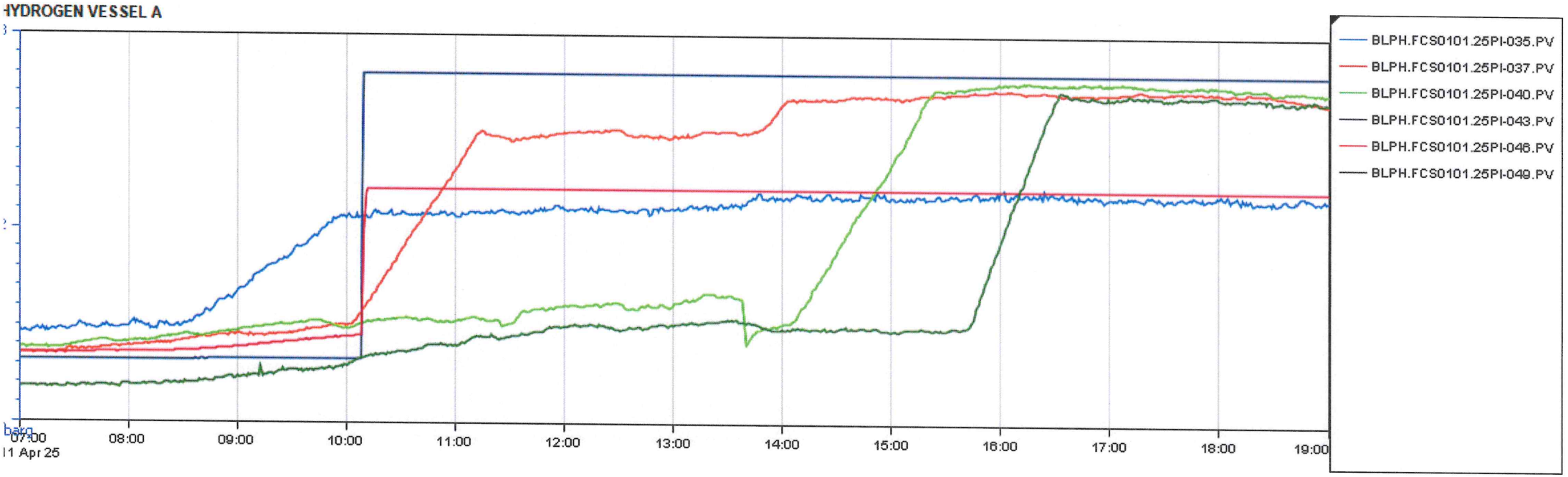
Step	Description	Result	Verified by	Date
	With feedback status 25-ZSL-038 and 25-ZSL-046 valves closed, the logic sequence will automatically proceed with the purging of VESSEL F.			
21	**H2 Vessel V-25001 F** Before starting the Purging mode after maintenance (air displacement) cycle the logic sequence will verify: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is ≤ that of the 25-PT-049 internal Vessel, the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable ≤ 8 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure measured by 64-PT-031A/B (depends on the control valve 64-PV-031A/B that is working) is > that of the 25-PT-049 internal Vessel, the automatic sequence will override the forced output 0% of the controller 25-FIC-036 and assign the set point to 42 Nm³/hr. 25-FIC-036 SP=.....42..... Nm³/hr. Verify the timer required to pressurize V-25001F T5F = 1 hr. (TEMP.) and the flow totalizer 25-FQ-036 and pressure gradient calculation. T5F t=.....7..... hr. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-049 < 2 barg when timer is expired an alarm T5FAH will alert	ok ok ok		14.04.2025

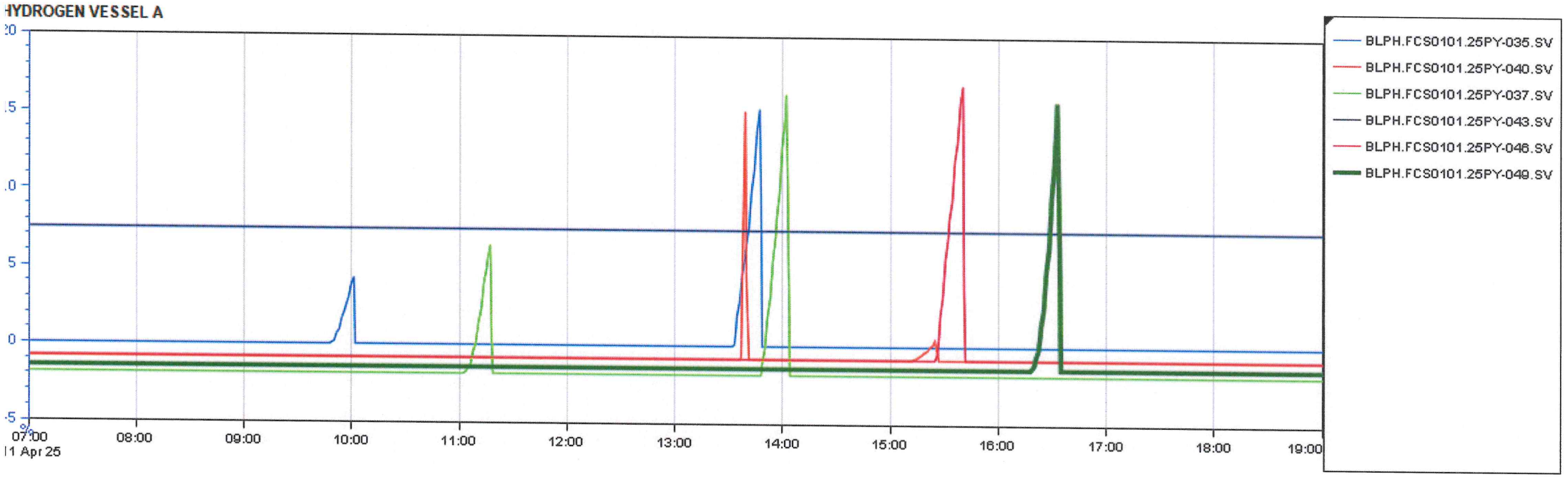
Step	Description	Result	Verified by	Date
	the operator, the automatic sequence will override the force output 0% of the controller 25-FIC-036, stop and reset the flow totalizer 25-FQ-036 and the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. (TEMP.), the automatic sequence will override the force output 0% of the controller 25-FIC-036, stop and reset the Flow Totalizer 25-FQ-036 and the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. Once the pressure 25-PT-049 ≥ 2 barg the automatic sequence will override the forced output 0% of the controller 25-PIC-049 and assign the set point to 2 barg. Consequently valve 25-PV-049 will operate and release the Nitrogen gas to the vent system while maintaining a constant pressure 2 barg. Verify the timer required to purging T6F = 1 hr. (TEMP.) Vessel V-25001F. T6F t=1/2 hr. The logic sequence is not achieved as per designed when:	OK OK OK		11-04-2025

PURGING MODE AFTER MAINTENANCE (AIR DISPLACEMENT)

REF. SHEET. N. 69

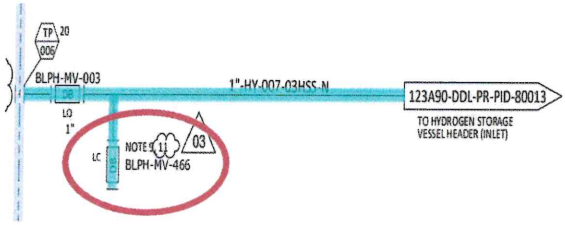



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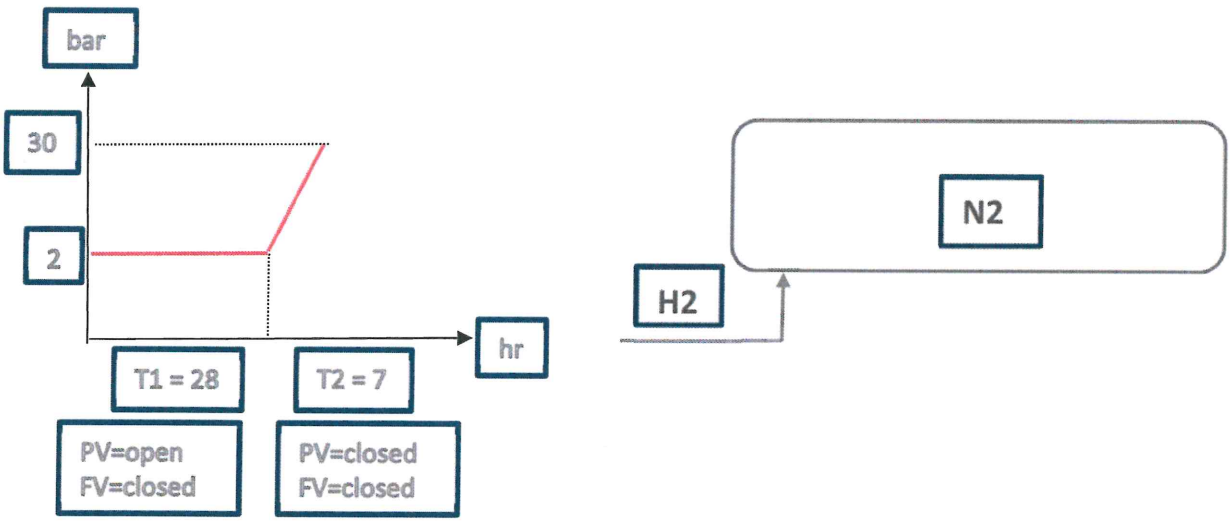

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BLPH.FCS0101.25PY-049.SV

Step	Description	Result	Verified by	Date
	• if the pressure 25-PT-049 < 1.5 barg a low-pressure alarm is activated. The automatic sequence will override the force output 0% of the controller 25-PIC-049 and 25-FIC-036, stop and reset the flow totalizer 25-FQ-036 and the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-049 ≥ 1.5 barg (during all T6F). When the timer is expired, the logic sequence will force output to 0% for both the controller 25-FIC-036 and 25-PIC 049. The valves 25-FV-036 and 25-PV-049 close. Time to close 20 seconds. **25-ZSL-036** t=.....20..... second. **25-ZSL-049** t=.....20..... second. With feedback status 25-ZSL-036 and 25-ZSL-049 valves closed, the logic sequence will automatically proceed with EXIT.	OK OK		11-04-2025
22	As soon as the flow totalizers are stopped (25-FQ-031/032/033/034/038/036) the PCS will compare the value with the expected value FQA. Total flow expected for purging after maintenance (Air displacement). FQA =.....1.420.....Nm³/hr.	OK		11.04.2025
23	**PROCESS START-UP CHARGING MODE** SYSTEM PREPARATION WITH VALVES ALIGNMENT READY FOR CHARGING	OK		03.04.2025

Step	Description	Result	Verified by	Date
	All BDV valves 25-BDV-005/007/010/013/016/019 (installed between Hydrogen Vessels and vent system) and 25-BDV-022 (Hydrogen vessels outlet header system) are in closed position, the feedback statuses are 25-ZSL-005/007/010/013/016/019 /022. The inlet and outlet hydrogen header shutdown valves 25-SDV-001 and 25-SDV-023 are in open position, the feedback statuses are 25-ZSH-001 and 25-ZSH-023. On-Off valve 25-XV-024 (Hydrogen to vessels inlet header vent system) and 80-XV-001 (installed on outlet manifold) are in closed position, the feedback statuses are 25-ZSL-024 and 80-ZSL-001. Shutdown valve 64-SDV-001 (installed on the nitrogen line) is in closed position, the feedback status is 64-ZSL-001. The procedure can be activated only if pressure in the H2 Vessels ≥ 2 barg. All valves shall be managed with an automatic sequence. The sequence shall be the following: The controllers 25-FIC-031/032/033/034/038/036 will force the output signal to 0% automatically. Verify closure of the valves on the inlet line 25-FV-031/032/033/034/038/036 **(time to close 20 seconds).** When the valves closed feedback status is active 25-ZSL-031/032/033/034/038/036 the controllers 25-PIC-035/037/040/043/046/049 in auto mode will force the output to 0%. Verify closure of the valves on outlet lines 25-PV-035/037/040/043/046/049 **(time to close 20 seconds).** When the valves closed feedback status is active 25-ZSL-035/037/040/043/046/049 the sequence closes all valves installed on the inlet line of each H2 storage Vessel 25-XV-004/008/011/014/017/020 **(time to close 3 seconds).** When the valves closed feedback status is active 25-ZSL-004/008/011/014/017/020 the sequence close all valves installed on the outlet line of each H2 storage Vessel 25-XV-006/009/012/015/018/021 **(time to close 3 seconds).** Verify the feedback statuses 25-ZSL-006/009/012/015/018/021. Vessels V-25001A/B/C/D/E/F are now completely isolated.	OK		03-04-2025

Step	Description	Result	Verified by	Date
24	Since this test is performed with nitrogen instead of H2, the vessels will be pressurized up to 6 barg with the gas from the nitrogen generation package connected to the BLPH-MV-466 insertion point. 	OK		03-04-2025

PROCESS STRAT-UP CHARGING MODE



ITEM	TAG. SIGNAL	PERMANENT SET-POINT	TEMP. TEST SET-POINT	DATA	RESTORED SET-POINT	DATA
1.	T1A (below)	28 hr.	1 hr. 5min ~~hr.~~	03-04-2025	28hr.	12-04-25
2.	T2A (charging)	7 hr.	80 min. 5hr ~~min.~~	03-04-2025	7 hr.	12-04-25
3.	25-PT-035	30 barg	5 barg 6 barg	03-04-2025	30barg	12-04-25

Step	Description	Result	Verified by	Date
25	**H2 Vessel V-25001A** Before starting the H2 charging cycle the logic sequence will verify that the internal vessel pressure is ≥ 2 barg. . • If 25-PT-035 < 2 barg the logic sequence will automatically proceed with Vessel B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 2 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel A pressure is ≥ 2 barg. • If 25-PT-035 ≥ 2 barg, the automatic sequence will open the valve 25-XV-004 **(time to open 8 seconds).** **25-ZSH-004** t=.....8.....second. When the feedback status 25-ZSH-004 is active the automatic sequence will override the forced output 0% of the controller 25-PIC-035 and assigned the set point to 2 barg. Verify the timer required to displacement V-25001A T1A= 1 hr. (TEMP.) **T1A** t=.....5 min..... ~~hr.~~ During the nitrogen displacement sequence the internal Vessel pressure must not fall below 1.5 barg. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-035 < 1.5 barg, low pressure alarm activates, the controller 25-PIC-035 will be forced to 0%, the inlet valve 25-XV-004 will close, the logic sequence will automatically proceed with charging of Vessel B.	OK OK	[signature]	04.04.2025

Step	Description	Result	Verified by	Date
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If the pressure 25-PT-035 ≥ 1.5 barg, when the time is expired the automatic sequence will override the forced output 0% of the controller 25-PIC-035 and the valve 25-PV-035 will close **(time to close 20 seconds).** **25-ZSL-035 t=**.....20.....second. When the feedback status 25-ZSL-037 is active start the timer T2B= 80 min. (TEMP.) **T2A t=**.....5..... hr. During the time if the pressure 25-PT-035 ≥ 5 barg (TEMP.) the automatic sequence will finish and the valve 25-XV-004 will close **(time to close 3 seconds).** **25-ZSL-004 t=**.....3.....second. When the feedback status 25-SZL-004 is active proceed with VESSEL B. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-035 < 5 barg (TEMP.) and timer is expired, the valve 25-XV-004 will close **(time to close 3 seconds).** When the feedback status 25-ZSL-004 is active, the operator is alerted with alarm "Process Start-up Charging Sequence Vessel A not completed" and proceed with Vessel B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve	AK OK		04.03.2025

Step	Description	Result	Verified by	Date
	process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-004. When the feedback 25-ZSL-004 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel A not completed" and proceed with Vessel B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok ok		04.04.2025
26	**H2 VESSEL V-25001 B** Before starting the H2 charging cycle the logic sequence will verify that the internal vessel pressure is ≥ 2 barg. • If 25-PT-037 < 2 barg the logic sequence will automatically proceed with Vessel C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 2barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 2 barg. • If 25-PT-037 ≥ 2 barg open the valve 25-XV-008 **(time to open 8 seconds).** **25-ZSH-008** t=.....8.....second. When the feedback status 25-ZSH-008 is active the automatic sequence will override the forced output 0% of the controller 25-PIC-037 and assign the set point to 2 barg. Start the timer T1B= 1 hr. (TEMP.)	OK ok		03.04.2025

Step	Description	Result	Verified by	Date
	T1B t=.....5 min.....hr. During the nitrogen displacement sequence the internal Vessel B pressure must not fall below 1.5 barg. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-037 < 1.5 barg, low pressure alarm activates, the controller 25-PIC-037 will be forced to 0%, the inlet valve 25-XV-008 will close, the logic sequence will automatically proceed with charging of Vessel C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel B pressure is > 1.5 barg. • If the pressure 25-PT-037 ≥ 1.5 barg, when the time is expired the automatic sequence will override the forced output 0% of the controller 25-PIC-037 and the valve 25-PV-037 will close **(time to close 20 seconds).** 25-ZSL-037 t=.....20.....second. When the feedback status 25-ZSL-037 is active start the timer T2B= 80 min. (TEMP.) T2B t=.....5..... hr. During the time if the pressure 25-PT-037 ≥ 5 barg (TEMP.) the automatic sequence will finish and the valve 25-XV-008 will close **(time to close 3 seconds).** 25-ZSL-008 t=.....3.....second.	ok ok ok		03.04.2025

Step	Description	Result	Verified by	Date
	When the feedback status 25-SZL-008 is active proceed with VESSEL C. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-037 < 5 barg (TEMP.) and timer is expired, the valve 25-XV-008 will close **(time to close 3 seconds).** When the feedback status 25-ZSL-008 is active, the operator is alerted with alarm "Process Start-up Charging Sequence Vessel B not completed" and proceed with Vessel C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-008. When the feedback 25-ZSL-008 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel B not completed" and proceed with Vessel C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK OK OK		03.04.2025
27	**H2 VESSEL V-25001 C** Before starting the H2 charging cycle the logic sequence will verify that the internal vessel pressure is ≥ 2 barg. • If 25-PT-040 < 2 barg the logic sequence will automatically proceed with Vessel D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 2barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK		03.04.2025

Step	Description	Result	Verified by	Date
	The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 2 barg. • If 25-PT-040 ≥ 2 barg open the valve 25-XV-011 **(time to open 8 seconds).** 25-ZSH-011 t=.....8.....second. When the feedback status 25-ZSH-011 is active the automatic sequence will override the forced output 0% of the controller 25-PIC-040 and assign the set point to 2 barg. Start the timer T1C= 1 hr. (TEMP.) T1C t=.....5 min.....hr. During the nitrogen displacement sequence the internal Vessel pressure must not fall below 1.5 barg. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-040 < 1.5 barg, low pressure alarm activates, the controller 25-PIC-040 will be forced to 0%, the inlet valve 25-XV-011 will close, the logic sequence will automatically proceed with charging of Vessel D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is > 1.5 barg. • If the pressure 25-PT-040 ≥ 1.5 barg, when the time is expired the automatic sequence will override the forced output 0% of the controller 25-PIC-040 and the valve 25-PV-040 will close **(time to close 20 seconds).**	OK OK OK		03.04.2025

Step	Description	Result	Verified by	Date
	25-ZSL-040 t=.....20.....second. When the feedback status 25-ZSL-040 is active start the timer T2C= 80 min. (TEMP.) T2C t=.....5 hr..... hr. During the time if the pressure 25-PT-040 ≥ 5 barg (TEMP.) the automatic sequence will finish and the valve 25-XV-011 will close **(time to close 3 seconds).** 25-ZSL-008 t=.....3.....second. When the feedback status 25-SZL-011 is active proceed with VESSEL D. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-040 < 5 barg (TEMP.) and timer is expired, the valve 25-XV-011 will close **(time to close 3 seconds).** When the feedback status 25-ZSL-011 is active, the operator is alerted with alarm "Process Start-up Charging Sequence Vessel C not completed" and proceed with Vessel D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-011. When the feedback 25-ZSL-011 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel C not completed" and proceed with Vessel D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK OK OK	03.04.2025

Step	Description	Result	Verified by	Date
28	**H2 VESSEL V-25001 D** Before starting the H2 charging cycle the logic sequence will verify that the internal vessel pressure is ≥ 2 barg. • If 25-PT-043 < 2 barg the logic sequence will automatically proceed with Vessel E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable < 2barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 2 barg. • If 25-PT-043 ≥ 2 barg open the valve 25-XV-014 **(time to open 8 seconds).** **25-ZSH-014 t=**.....8.....second. When the feedback status 25-ZSH-014 is active the automatic sequence will override the forced output 0% of the controller 25-PIC-043 and assign the set point to 2 barg. Start the timer T1D= 1 hr. (TEMP.) **T1D t=**.....5min..... hr. During the nitrogen displacement sequence the internal Vessel pressure must not fall below 1.5 barg. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-043 < 1.5 barg, low pressure alarm activates, the controller 25-PIC-043 will be forced to 0%, the inlet valve 25-XV-014 will close, the logic sequence will automatically proceed with charging of Vessel E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve	OK OK	04.04.2025	04.04.2025

Step	Description	Result	Verified by	Date
	process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is > 1.5 barg. • If the pressure 25-PT-043 ≥ 1.5 barg, when the time is expired the automatic sequence will override the forced output 0% of the controller 25-PIC-043 and the valve 25-PV-037 will close **(time to close 20 seconds).** **25-ZSL-043 t=**.....20.....second. When the feedback status 25-ZSL-043 is active start the timer T2D= 80 min. (TEMP.) **T2D t=**.....5 min..... ~~hr.~~ During the time if the pressure 25-PT-043 ≥ 5 barg (TEMP.) the automatic sequence will finish and the valve 25-XV-014 will close **(time to close 3 seconds).** **25-ZSL-014 t=**.....3.....second. When the feedback status 25-SZL-014 is active proceed with VESSEL E. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-043 < 5 barg (TEMP.) and timer is expired, the valve 25-XV-014 will close **(time to close 3 seconds).** When the feedback status 25-ZSL-014 is active, the operator is alerted with alarm "Process Start-up Charging Sequence Vessel D not completed" and proceed with Vessel E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok ok ok		04.04.2025

Step	Description	Result	Verified by	Date
	• If the pressure gradient becomes negative for a time 5 min. close the 25-XV-014. When the feedback 25-ZSL-014 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel D not completed" and proceed with Vessel E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK		04.04.2025
29	**H2 VESSEL V-25001 E** Before starting the H2 charging cycle the logic sequence will verify that the internal vessel pressure is ≥ 2 barg. • If 25-PT-046 < 2 barg the logic sequence will automatically proceed with Vessel F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 2barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 2 barg. • If 25-PT-046 ≥ 2 barg open the valve 25-XV-017 **(time to open 8 seconds).** **25-ZSH-017 t=**.....8.....**second.** When the feedback status 25-ZSH-017 is active the automatic sequence will override the forced output 0% of the controller 25-PIC-046 and assign the set point to 2 barg. Start the timer T1E= 1 hr. (TEMP.) **T1E t=**.....5min.....**hr.** During the nitrogen displacement sequence the internal Vessel pressure must not fall below 1.5 barg.	OK OK		03.04.2025

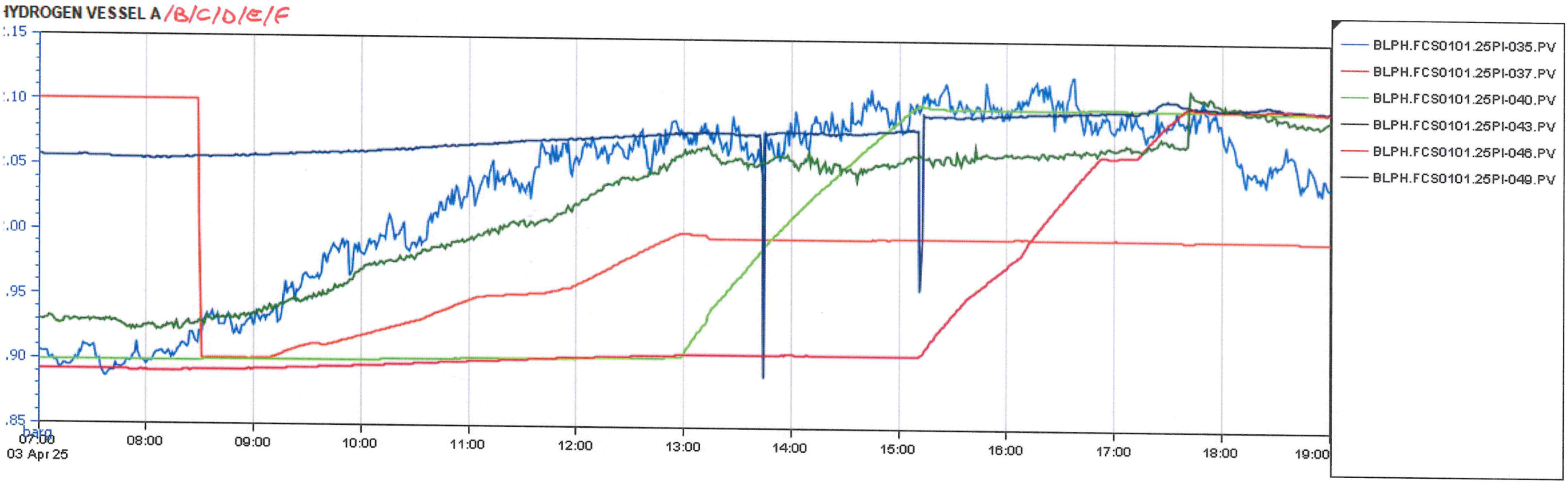
Step	Description	Result	Verified by	Date
	The logic sequence is not achieved as per designed when: • If the pressure 25-PT-046 < 1.5 barg, low pressure alarm activates, the controller 25-PIC-046 will be forced to 0%, the inlet valve 25-XV-017 will close, the logic sequence will automatically proceed with charging of Vessel F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is > 1.5 barg. • If the pressure 25-PT-046 ≥ 1.5 barg, when the time is expired the automatic sequence will override the forced output 0% of the controller 25-PIC-046 and the valve 25-PV-046 will close **(time to close 20 seconds).** **25-ZSL-046 t=**.....20.....second. When the feedback status 25-ZSL-046 is active start the timer T2E= 80 min. (TEMP.) **T2E t=**.....5..... hr. During the time if the pressure 25-PT-046 ≥ 5 barg (TEMP.) the automatic sequence will finish and the valve 25-XV-017 will close **(time to close 3 seconds).** **25-ZSL-017 t=**.....3.....second. When the feedback status 25-SZL-017 is active proceed with VESSEL F. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-046 < 5 barg (TEMP.) and timer is expired, the valve 25-XV-017	OK OK	03.04.2025

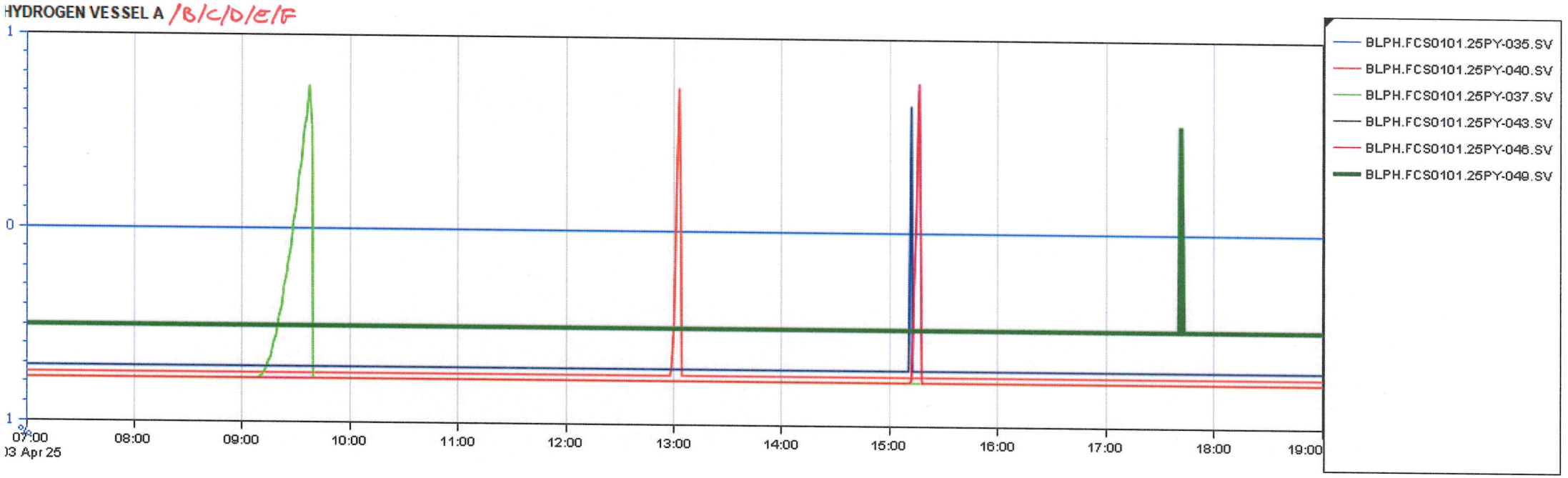
Step	Description	Result	Verified by	Date
	will close **(time to close 3 seconds).** When the feedback status 25-ZSL-017 is active, the operator is alerted with alarm "Process Start-up Charging Sequence Vessel E not completed" and proceed with Vessel F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-017. When the feedback 25-ZSL-017 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel E not completed" and proceed with Vessel F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok ok		03.04.2025
30	**H2 VESSEL V-25001 F** Before starting the H2 charging cycle the logic sequence will verify that the internal vessel pressure is ≥ 2 barg. • If 25-PT-049 < 2 barg the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable < 2barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 2 barg. • If 25-PT-049 ≥ 2 barg open the valve 25-XV-020 **(time to close 8 seconds).** 25-ZSH-020 t=.....8.....second.	ok ok		04.04.2025

Step	Description	Result	Verified by	Date
	When the feedback status 25-ZSH-020 is active the automatic sequence will override the forced output 0% of the controller 25-PIC-049 and assign the set point to 2 barg. Start the timer T1F= 1 hr. (TEMP.) T1F t=.....5min..... ~~hr.~~ During the nitrogen displacement sequence the internal Vessel pressure must not fall below 1.5 barg. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-049 < 1.5 barg, low pressure alarm activates, the controller 25-PIC-049 will be forced to 0%, the inlet valve 25-XV-020 will close, the logic sequence will automatically proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable < 1.5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is > 1.5 barg. • If the pressure 25-PT-049 ≥ 1.5 barg, when the time is expired the automatic sequence will override the forced output 0% of the controller 25-PIC-049 and the valve 25-PV-049 will close **(time to close 20 seconds).** 25-ZSL-049 t=.....20.....second. When the feedback status 25-ZSL-040 is active start the timer T2F= 80 min. (TEMP.) T2F t=.....5..... hr.	ok ok ok		04.04.2025

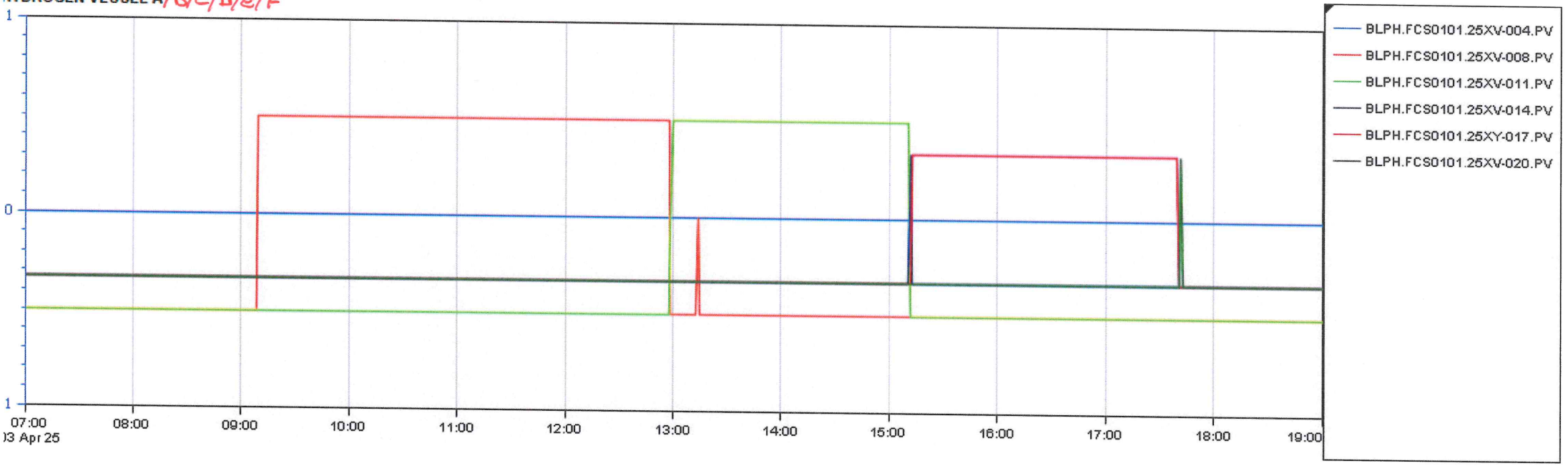
PROCESS START-UP CHARGING MODE

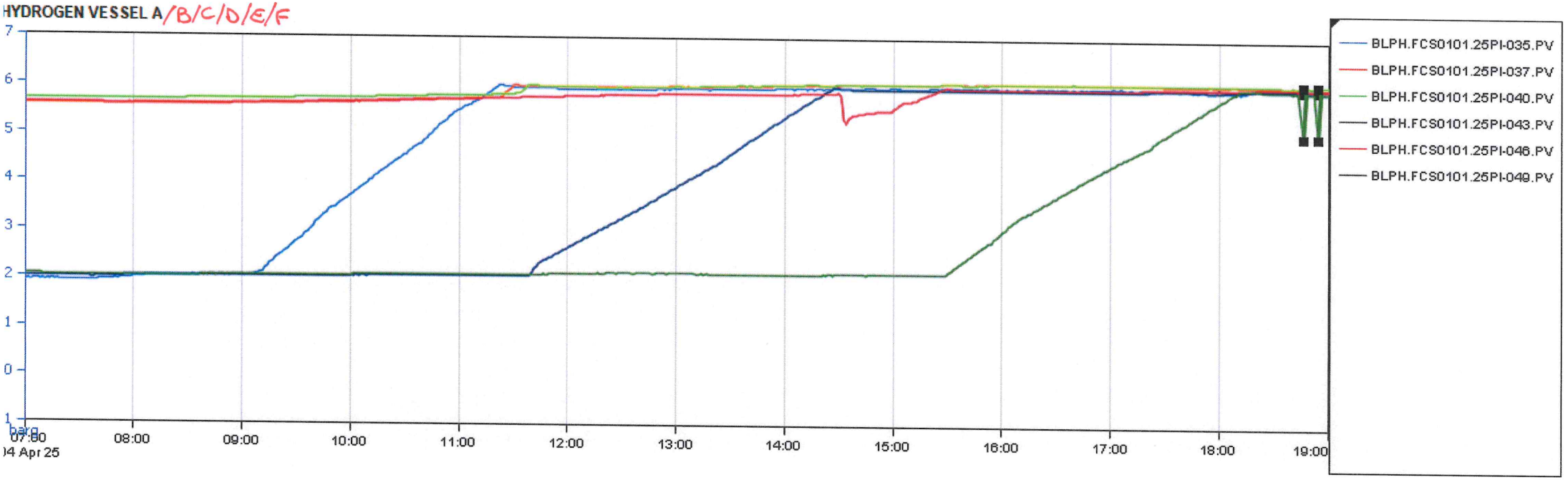
REF. SHEET N: 85



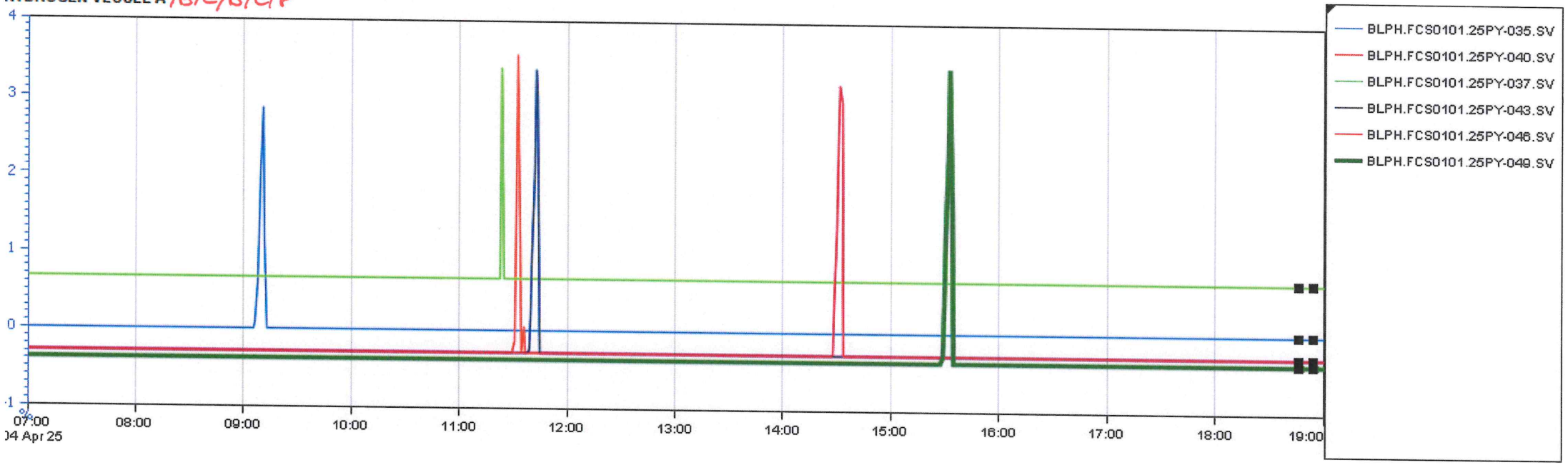

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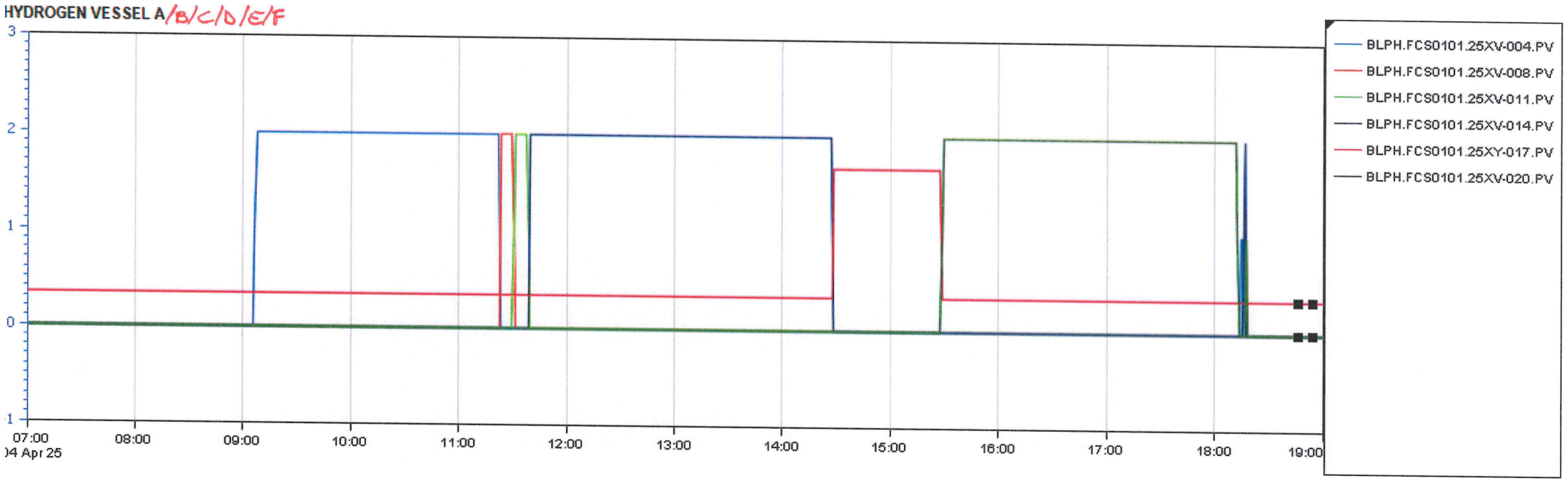
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HYDROGEN VESSEL A/B/C/D/E/F
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Step	Description	Result	Verified by	Date
	During the time if the pressure 25-PT-049 ≥ 5 barg (TEMP.) the automatic sequence will finish and the valve 25-XV-020 will close **(time to close 3 seconds).** **25-ZSL-020 t=**.....3.....second. When the feedback status 25-SZL-020 is active proceed with EXIT. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-049 < 5 barg (TEMP.) and timer is expired, the valve 25-XV-020 will close **(time to close 3 seconds).** When the feedback status 25-ZSL-020 is active, the operator is alerted with alarm "Process Start-up Charging Sequence Vessel F not completed" and proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-020. When the feedback 25-ZSL-020 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel F not completed" and proceed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok ok ok		04.04.2025
31	**FULLY CHARGED STATUS (Indication on HMI)** When all the vessels have reached maximum operating pressure (PCS sends the "Process Fully charged Status" status to EMCS) the flag indication on HMI shall indicate that the "Process Fully charged Status" is active.	ok		04.04.2025
32	**DISCHARGING MODE** SYSTEM PREPARATION WITH VALVES ALIGNMENT READY FOR DISCHARGING	ok		04.04.2025

Step	Description	Result	Verified by	Date
	All BDV valves 25-BDV-005/007/010/013/016/019 (installed Vessels Hydrogen vent system) and 25-BDV-022 (Hydrogen from vessels outlet header vent systemin) are in closed position, the feedback statuses are 25-ZSL-005/007/010/013/016/019/022. The inlet and outlet hydrogen streams across the hydrogen storage vessels to do shutdown valves 25-SDV-001 and 25-SDV-023 in open position, the feedback statuses are 25-ZSH-001 and 25-ZSH-023. On-Off valves 25-XV-024 (Hydrogen to vessels inlet header vent system) and 80-XV-001 (installed on outlet manifold) are in closed position, the feedback statuses are 25-ZSL-024 and 80-ZSL-001. Shutdown valve 64-SDV-001 (installed on the nitrogen line) is in closed position, the feedback status is 64-ZSL-001. Control Loop 25-PV-055A/B inlet to Fuel Cell package. During Fuel Cell operation, only one valve (25-PV-055 A or B) will be used, while the other one will be fully closed. Pressure control valves 25-PV-055A/B working in split range. • pressure controllers: 25-PIC-055A/B. • pressure transmitters: 25-PT-055A/B. (Process Variable, PV). • final elements: 25-PV-055A/B. • SP value: normal 6 barg. Put the EMCS in "Research mode" and verify the enabling of the corresponding push button in HMI. Verify that the same push button is disabled in every other electrical mode. The vessel's discharging order is A to F. Verify that all valves on the inlet line 25-FV-031 /032 /033/034/038/036 are closed **(time to close 20 second).** Put the controllers 25-FIC-031/032/033/034/ 038/036 in auto mode and force the output to 0%. When the feedback statuses 25-ZSL-031/032/033/034/038/036 are active, put the controllers 25-PIC-035/037/040/043/046/049 in auto mode and force the output to 0%. Close all valves on the outlet lines 25-PV-035/037/040/043/046/049 **(time to close 20 second).** When the feedback statuses 25-ZSL-035/037/040/043/046/049 are active close all valves installed on	OK		07.04.2025

Step	Description	Result	Verified by	Date
	the inlet line of each H2 storage Vessel 25-XV-004/008/011/014/017/020 **(time to close 3 second).** When the feedback statuses 25-ZSL-004/008/011/014/017/020 are active close all valves installed on the outlet line of each H2 storage Vessel 25-XV-006/009/012/015/018/021 **(time to close 3 second).** When the feedback statuses 25-ZSL-006/009/012/015/018/021 are active check the pressure in V-25001A. Vessels V-25001A/B/C/D/E/F are now ready for discharging.	ok		07-04-2025
33	**H2 VESSEL V-25001A** Before starting the H2 discharging cycle the logic sequence will verify that the internal Vessel A pressure is < 5 barg (TEMP.). • If 25-PT-035 < 5 barg (TEMP.) the logic sequence will automatically proceed with Vessel B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel A pressure is ≥ 6 barg (TEMP.). • If the pressure ≥ 6 barg (TEMP.) open the valve 25-XV-006 installed on the outlet of the Vessel A **(time to open 8 second).** **25-ZSH-006** t=.....8.....second. Close the valves 25-XV-009/012/015/018/021. When the feedback status 25-ZSH-006 and 25-ZSL-009/012/015/018/021 are activated wait until the pressure inside the Vassel A is ≤ 4.5 barg (pressure indicator 25-PT-035, installed on the Vessel A). When the pressure 25-P-035 is ≤ 4.5 barg the logic sequence will automatically proceed with Vessel B.	ok ok		07-04-2025

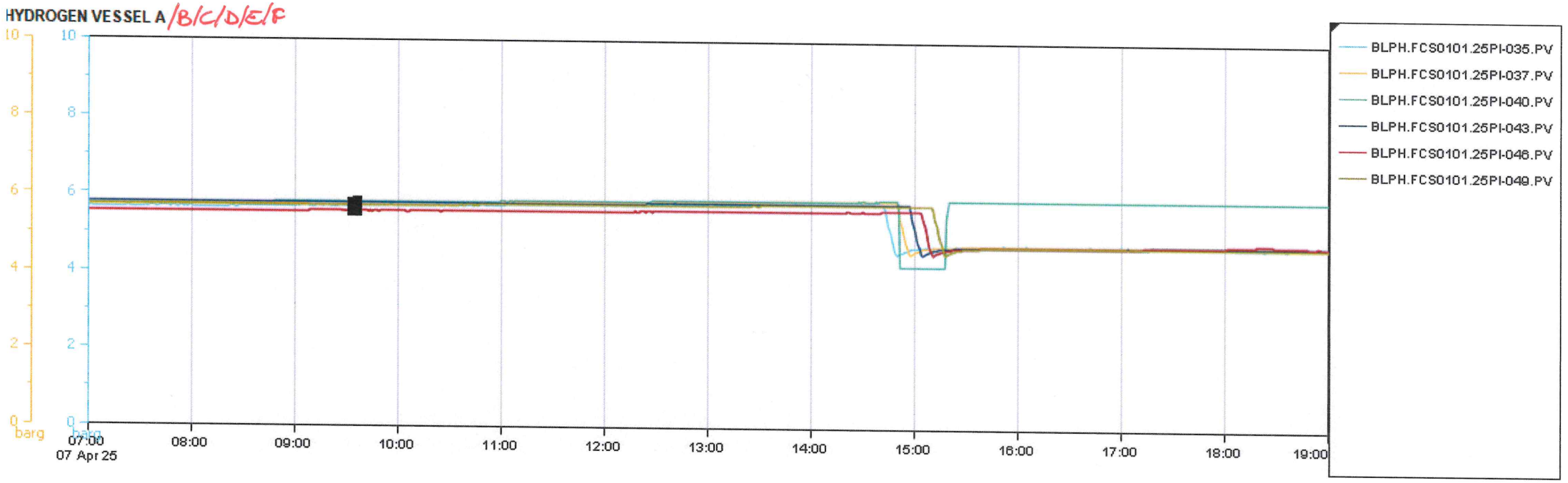
Step	Description	Result	Verified by	Date
34	**H2 VESSEL V-25001B** Before starting the H2 discharging cycle the logic sequence will verify that the internal Vessel B pressure is < 5 barg (TEMP.). • If 25-PT-037 < 5 barg (TEMP.) the logic sequence will automatically proceed with Vessel C. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel B pressure is ≥ 6 barg (TEMP.). • If the pressure ≥ 6 barg (TEMP.) open the valve 25-XV-009 installed on the outlet of the Vessel B **(time to open 8 seconds).** **25-ZSH-009 t=**.....8.....second. Close the valve 25-XV-006/012/015/018/021 installed on the outlet of the Vessel V-25001A/C/D/E/F **(time to close 3 seconds).** When the feedback status 25-ZSH-009 and 25-ZSL-006/012/015/018/020 are activated wait until the pressure inside the Vessel B is ≤ 4.5 barg (pressure indicator 25-PT-037, installed on the Vessel B). When the pressure 25-PT-037 is ≤ 4.5 barg the logic sequence will automatically proceed with Vessel C.	OK OK		07.04.2025
35	**H2 VESSEL V-25001C** Before starting the H2 discharging cycle the logic sequence will verify that the internal vessel pressure is < 5 barg (TEMP.). • If 25-PT-040 < 5 the logic sequence will automatically proceed with Vessel D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 5 barg and confirm the above sequence.	OK		07.04.2025

Step	Description	Result	Verified by	Date
	Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 6 barg (TEMP.). • If the pressure ≥ 6 barg open the valve 25-XV-012 installed on the outlet of the Vessel C **(time to open 8 seconds).** 25-ZSH-012 t=.....8.....second. Close the valve 25-XV-006/009/015/018/021 installed on the outlet of the Vessel V-25001A/B/D/E/F **(time to close 3 seconds).** When the feedback status 25-ZSH-012 and 25-ZSL-006/009/015/018/021 are activated wait until the pressure inside the Vessel C is ≤ 4.5 barg (pressure indicator 25-PT-040, installed on the Vessel C). When the pressure 25-PT-040 is ≤ 4.5 barg the logic sequence will automatically proceed with Vessel D.	OK		07.04.2025
36	**H2 VESSEL V-25001D** Before starting the H2 discharging cycle the logic sequence will verify that the internal vessel pressure is < 5 barg (TEMP.). • If 25-PT-043 < 5 the logic sequence will automatically proceed with Vessel E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 6 barg (TEMP.). • If the pressure ≥ 6 barg open the valve 25-XV-015 installed on the outlet of the Vessel D **(time to open 8 seconds).**	OK		07.04.2025

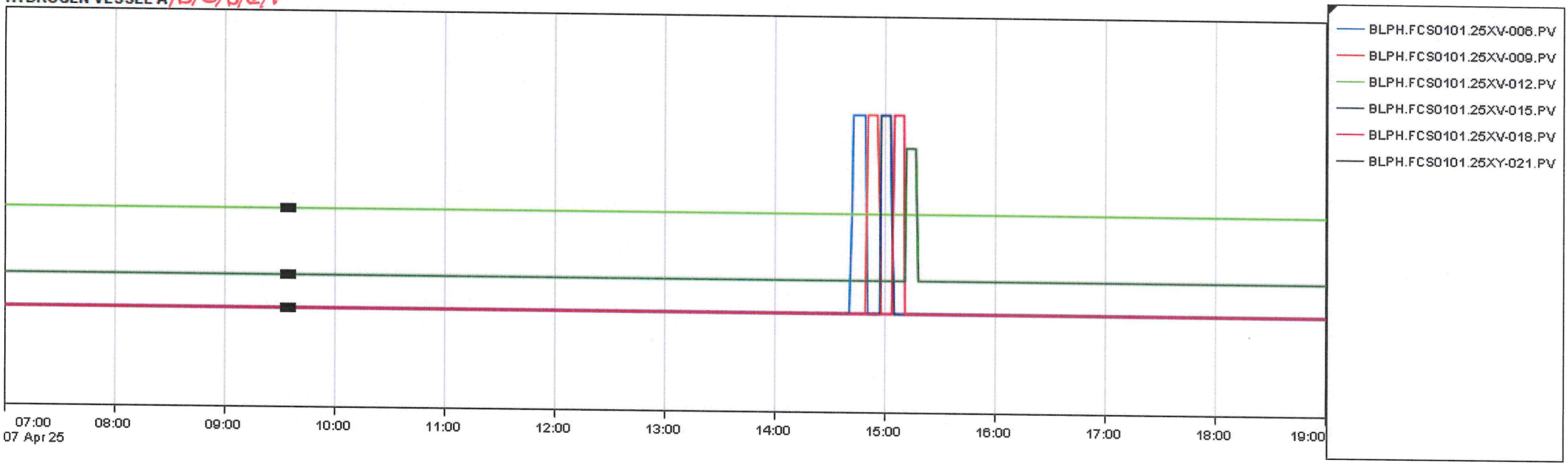
Step	Description	Result	Verified by	Date
	25-ZSH-015 t=.....8.....second. Close the valve 25-XV-006/009/012/018/021 installed on the outlet of the Vessel V-25001A/B/C/E/F **(time to close 3 seconds).** When the feedback status 25-ZSH-015 and 25-ZSL-006/009/012/018/021 are activated wait until the pressure inside the Vessel D is ≤ 4.5 barg (pressure indicator 25-PT-043, installed on the Vessel D). When the pressure 25-PT-043 is ≤ 4.5 barg the logic sequence will automatically proceed with Vessel E.	ok		07-04-2025
37	**H2 VESSEL V-25001E** Before starting the H2 discharging cycle the logic sequence will verify that the internal vessel pressure is < 5 barg (TEMP.). • If 25-PT-046 < 5 the logic sequence will automatically proceed with Vessel E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 6 barg (TEMP.). • If the pressure ≥ 6 barg open the valve 25-XV-018 installed on the outlet of the Vessel F **(time to open 8 seconds).** 25-ZSH-012 t=.....8.....second. Close the valve 25-XV-006/009/012/015/021 installed on the outlet of the Vessel V-25001A/B/C/D/F **(time to close 3 seconds).** When the feedback status 25-ZSH-018 and 25-ZSL-006/009/012/015/021 are activated wait until the pressure inside the Vessel E is ≤ 4.5 barg (pressure indicator 25-PT-046, installed on the Vessel E).	ok ok		07-04-2025

DISCHARGING MODE

REF. SHEET N. 91

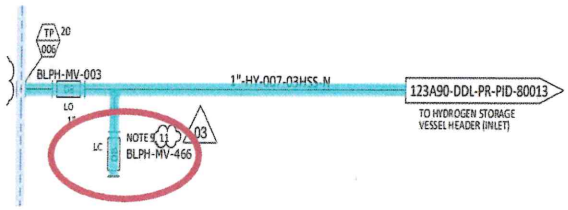


HYDROGEN VESSEL A/B/C/D/E/F

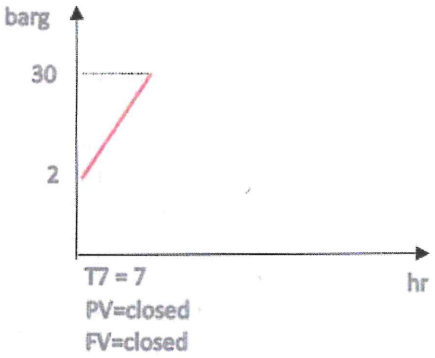


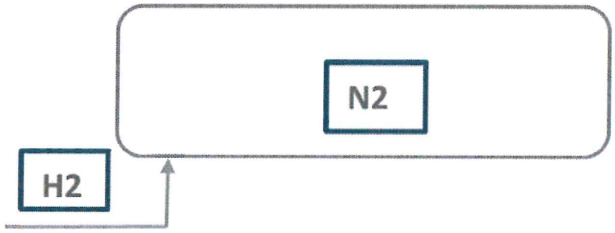
Step	Description	Result	Verified by	Date
	When the pressure 25-PT-046 is ≤ 4.5 barg the logic sequence will automatically proceed with Vessel F.	OK		
38	**H2 VESSEL V-25001F** Before starting the H2 discharging cycle the logic sequence will verify that the internal vessel pressure is < 5 barg (TEMP.). • If 25-PT-049 < 5 the logic sequence goes in "Process Empty Status". Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable < 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when the internal Vessel pressure is ≥ 6 barg (TEMP.). • If the pressure ≥ 5 barg open the valve 25-XV-021 installed on the outlet of the Vessel E **(time to open 8 seconds).** **25-ZSH-021 t=**.....8.....**second.** Close the valve 25-XV-006/009/012/015/018 installed on the outlet of the Vessel V-25001A/B/C/D/E **(time to close 3 seconds).** When the feedback status 25-ZSH-021 and 25-ZSL-006/009/012/015/018 are activated wait until the pressure inside the Vessel F is ≤ 4.5 barg (pressure indicator 25-PT-049, installed on the Vessel F). When the pressure 25-PT-039 is ≤ 4.5 barg the logic sequence goes in "Process Empty Status".	OK OK		07-04-2025
39	**PROCESS EMPTY STATUS (Indication on HMI)** When all the vessels have reached minimum operating pressure (PCS sends the "Process Empty Status" status to EMCS) the flag indication on HMI shall indicate that the "Process Empty Status" is active.	OK		07.04.2025
40	**CHARGING MODE** All BDV valves 25-BDV-005/007/010/013/016/019 (installed Vessels Hydrogen vent system) and 25-BDV-022 (Hydrogen from vessels outlet header vent	Ok		04-2025

Step	Description	Result	Verified by	Date
	system) are in closed position, the feedback statuses are 25-ZSL-005/007/010/013/016/019/022. The inlet and outlet hydrogen streams across the hydrogen storage vessels to do shutdown valves 25-SDV-001 and 25-SDV-023 in open position, the feedback statuses are 25-ZSH-001 and 25-ZSH-023. On-Off valves 25-XV-024 (Hydrogen to vessels inlet header vent system) and 80-XV-001 (installed on outlet manifold) are in closed position, the feedback statuses are 25-ZSL-024 and 80-ZSL-001. Shutdown valve 64-SDV-001 (installed on the nitrogen line) is in closed position, the feedback status is 64-ZSL-001. Put the EMCS in "Research mode" and verify the enabling of the corresponding push button in HMI. Verify that the same push button is disabled in every other electrical mode. The vessel's charging order is A to F. The "Process Charging mode" can be activated only if pressure in the H2 Storage Vessels 25-PT-035/037/ 040/043/046/049≥ 2 barg. The sequence shall be the following: Verify that all valves on the inlet line 25-FV-031 /032 /033/034/038/036 are closed **(time to close 20 second)**. Put the controllers 25-FIC-031/032/033/034/ 038/ 036 in auto mode and force the output to 0%. When the feedback statuses 25-ZSL-031/032/ 033/034/038/036 are active, put the controllers 25-PIC-035/037/040/043/046/049 in auto mode and force the output to 0%. Close all valves on the outlet lines 25-PV-035/ 037/040/043/046/049 **(time to close 20 second).** When the feedback statuses 25-ZSL-035/037/040/ 043/046/049 are active close all valves installed on the inlet line of each H2 storage Vessel 25-XV-004/008/011/014/017/020 **(time to close 3 second).** When the feedback statuses 25-ZSL-004/008/ 011/014/017/020 are active, close all valves installed on the outlet line of each H2 storage Vessel 25-XV-006/009/012/015/018/021 **(time to close 3 second).** When the feedback statuses 25-ZSL-006/009/012/ 015/018/021 are active, check the pressure in Vessel A.	OK		04-2025
41	Since this test is performed with nitrogen instead of H2, the vessels will be pressurized up to 6 barg with the gas from the nitrogen generation package connected to the BLPH-MV-466 insertion point.	OK		04-2025

Step	Description	Result	Verified by	Date
		OK		07-04-2025

CHARGING MODE





REPLACED

ITEM	TAG. SIGNAL	PERMANENT SET-POINT	TEMP. TEST SET-POINT	DATA	RESTORED SET-POINT	DATA
1.	T7A (below)	7 hr.	1 hr. 3 hr.	08-04-25	7hr.	12-04-25
2.	25-PT-035	30 barg	5 barg 6 barg	08-04-25	30barg	12-04-25

Step	Description	Result	Verified by	Date
42	**H2 VESSEL V-25001A** Before starting the H2 charging cycle the logic sequence will verify the internal Vessel A pressure 25-PT-035. • If 25-PT-035 ≥ 5 barg (TEMP.) the logic sequence will proceed as per designed with VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable ≥ 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If 25-PT-035 < 2 barg (TEMP.) the logic sequence will proceed as per designed with VESSEL B. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-035 < 5 and ≥ 2 barg open the valve 25-XV-004 **(time to open 8 seconds).** 25-ZSH-004 t=.....8.....second. When feedback status 25-ZSH-004 is active start the timer T7A= 7 hr. T7A t=.....3..... hr. During the time: • If the pressure 25-PT-035 ≥ 5 barg (TEMP.) close the valve 25-XV-004 **(time to close 3 seconds).** 25-ZSL-004 t=.....3.....second.	ok ok ok		08.04.2025

Step	Description	Result	Verified by	Date
	When the feedback status 25-SZL-004 is active the logic sequence will proceed as per designed with VESSEL B. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-035 < 5 barg (TEMP.) and timer is expired, close the valve 25-XV-004 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback status 25-ZSL-004 is active received the alert operator with (T7AAH) alarm "Process Start-up Charging Sequence Vessel A not completed" and proceed with Vessel B. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-004 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-035 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback 25-ZSL-004 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel A not completed" and proceed with Vessel B.	ok ok		08-04-2025
43	**H2 VESSEL V-25001B** Before starting the H2 charging cycle the logic sequence will verify the internal Vessel B pressure 25-PT-037. • If 25-PT-037 ≥ 5 barg (TEMP.) the logic sequence will proceed as per designed with VESSEL C.	ok		08-04-2025

Step	Description	Result	Verified by	Date
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable ≥ 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If 25-PT-037 < 2 barg the logic sequence will proceed as per designed with VESSEL C.	ok		
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok		
	The logic sequence will proceed as per designed when: • If 25-PT-037 < 5 and ≥ 2 barg.			
	Open the valve 25-XV-008 **(time to open 8 seconds)** and close the valve 25-XV-004/011/014/017/020 installed on the Vessel A/C/D/E/F. **(time to close 3 seconds).** 25-ZSH-008 t=.....3.....second.			08.04.2025
	When feedback status 25-ZSH-008 is active start the timer T7B= 7 hr. T7B t=.....3..... hr.	ok		
	During the time: • If the pressure 25-PT-037 ≥ 5 barg (TEMP.) close the valve 25-XV-008 **(time to close 3 seconds).** 25-ZSL-008 t=.....3.....second.			
	When the feedback status 25-SZL-008 is active the logic sequence will proceed as per designed with VESSEL C.			

Step	Description	Result	Verified by	Date
	The logic sequence is not achieved as per designed when: • If the pressure 25-PT-037 < 5 barg (TEMP.) and timer is expired, close the valve 25-XV-008 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback status 25-ZSL-008 is active received the alert operator with (T7BAH) alarm "Process Start-up Charging Sequence Vessel B not completed" and proceed with Vessel C. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-008 **(time to close 3 sec).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-037 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback 25-ZSL-008 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel B not completed" and proceed with Vessel C.	ok ok ok ok		08.04.2025
44	**H2 VESSEL V-25001C** Before starting the H2 charging cycle the logic sequence will verify the internal Vessel C pressure 25-PT-040. • If 25-PT-040 ≥ 5 barg (TEMP.) the logic sequence will proceed as per designed with VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable ≥ 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	ok ok		08.04.2025

Step	Description	Result	Verified by	Date
	• If 25-PT-040 < 2 barg the logic sequence will proceed as per designed with VESSEL D. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-040 < 5 and ≥ 2 barg. Open the valve 25-XV-011 **(time to open 8 seconds)** and close the valve 25-XV-004/008/014/017/020 installed on the Vessel A/B/D/E/F. **(time to close 3 seconds).** **25-ZSH-011 t=**.....3.....**second.** When feedback status 25-ZSH-011 is active start the timer T7C= 7 hr. T7C t=.....3..... hr. During the time: • If the pressure 25-PT-040 ≥ 5 barg (TEMP.) close the valve 25-XV-011 **(time to close 3 seconds).** **25-ZSL-011 t=**.....3.....**second.** When the feedback status 25-SZL-011 is active the logic sequence will proceed as per designed with VESSEL D.. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-040 < 5 barg (TEMP.) and timer is expired, close the valve 25-XV-011 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve	ok ok ok	[signature]	08.04.2025

Step	Description	Result	Verified by	Date
	process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback status 25-ZSL-011 is active received the alert operator with (T7CAH) alarm "Process Start-up Charging Sequence Vessel C not completed" and proceed with Vessel D. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-011 **(time to close 3 sec).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback 25-ZSL-011 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel C not completed" and proceed with Vessel D.	OK OK OK		08.04.2025
45	**H2 VESSEL V-25001D** Before starting the H2 charging cycle the logic sequence will verify the internal Vessel D pressure 25-PT-043. • If 25-PT-043 ≥ 5 barg (TEMP.) the logic sequence will proceed as per designed with VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable ≥ 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If 25-PT-043 < 2 barg the logic sequence will proceed as per designed with VESSEL E. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-040 to achieve process variable 1 barg and confirm the above sequence.	OK OK OK		08.04.2025

Step	Description	Result	Verified by	Date
	Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-040 < 5 and ≥ 2 barg. Open the valve 25-XV-014 **(time to open 8 seconds)** and close the valve 25-XV-004/008/011/017/020 installed on the Vessel A/B/C/E/F. **(time to close 3 seconds).** **25-ZSH-014** t=.....3.....second. When feedback status 25-ZSH-014 is active start the timer T7D= 7 hr. T7D t=.....3..... hr. During the time: • If the pressure 25-PT-043 ≥ 5 barg (TEMP.) close the valve 25-XV-014 **(time to close 3 seconds).** **25-ZSL-014** t=.....3.....second. When the feedback status 25-SZL-014 is active the logic sequence will proceed as per designed with VESSEL E. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-043 < 5 barg (TEMP.) and timer is expired, close the valve 25-XV-014 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback status 25-ZSL-014 is active received the alert operator with (T7DAH) alarm	OK OK		08.04.2025

Step	Description	Result	Verified by	Date
	"Process Start-up Charging Sequence Vessel D not completed" and proceed with Vessel E. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-014 **(time to close 3 sec).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-043 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback 25-ZSL-014 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel D not completed" and proceed with Vessel E.	OK OK		08.04.2025
46	**H2 VESSEL V-25001E** Before starting the H2 charging cycle the logic sequence will verify the internal Vessel E pressure 25-PT-046. • If 25-PT-046 ≥ 5 barg (TEMP.) the logic sequence will proceed as per designed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable ≥ 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If 25-PT-046 < 2 barg the logic sequence will proceed as per designed with VESSEL F. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-046 < 5 and ≥ 2 barg.	OK OK OK OK		08.04.2025

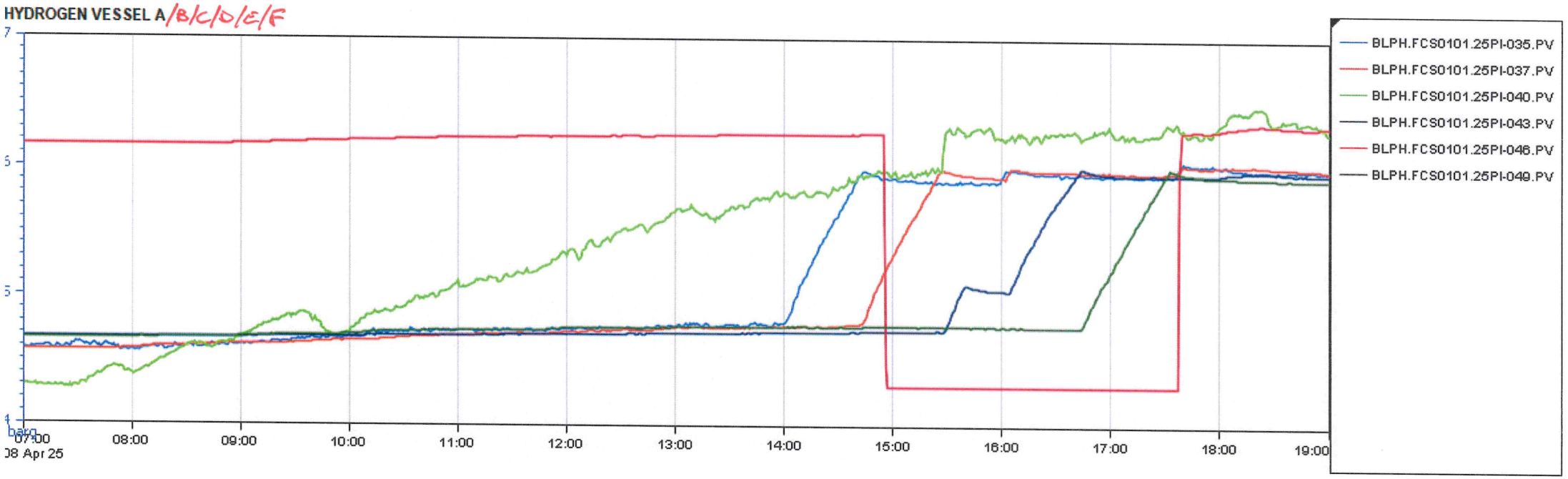
Step	Description	Result	Verified by	Date
	Open the valve 25-XV-017 **(time to open 8 seconds)** and close the valve 25-XV-004/008/011/014/020 installed on the Vessel A/B/C/D/F. **(time to close 3 seconds).** 25-ZSH-017 t=.....3.....second. When feedback status 25-ZSH-017 is active start the timer T7E= 7 hr. T7E t=.....3..... hr. During the time: • If the pressure 25-PT-046 ≥ 5 barg (TEMP.) close the valve 25-XV-017 **(time to close 3 seconds).** 25-ZSL-017 t=.....3.....second. When the feedback status 25-SZL-017 is active the logic sequence will proceed as per designed with VESSEL F. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-046 < 5 barg (TEMP.) and timer is expired, close the valve 25-XV-017 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback status 25-ZSL-017 is active received the alert operator with (T7EAH) alarm "Process Start-up Charging Sequence Vessel E not completed" and proceed with Vessel F. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-017 **(time to close 3 sec).**	ok ok		08-04-2025

Step	Description	Result	Verified by	Date
	Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-046 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback 25-ZSL-017 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel E not completed" and proceed with Vessel F.	ok		08.04.2025
47	**H2 VESSEL V-25001F** Before starting the H2 charging cycle the logic sequence will verify the internal Vessel F pressure 25-PT-049. • If 25-PT-049 ≥ 5 barg (TEMP.) the logic sequence will proceed as per designed with Exit. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable ≥ 5 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. • If 25-PT-049 < 2 barg the logic sequence will proceed as per designed with EXIT. Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable 1 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. The logic sequence will proceed as per designed when: • If 25-PT-049 < 5 and ≥ 2 barg. Open the valve 25-XV-020 **(time to open 8 seconds)** and close the valve 25-XV-004/008/011/014/ 017 installed on the Vessel A/B/C/D/E. **(time to open 3 seconds).** **25-ZSH-020 t=**.....3.....**second.**	ok ok ok ok		08.04.2025

Step	Description	Result	Verified by	Date
	When feedback status 25-ZSH-020 is active start the timer T7F= 7 hr. T7F t=.....3..... hr. During the time: • If the pressure 25-PT-049 ≥ 5 barg (TEMP.) close the valve 25-XV-020 **(time to close 3 seconds).** 25-ZSL-020 t=.....3.....second. When the feedback status 25-SZL-020 is active the logic sequence will proceed as per designed with EXIT. The logic sequence is not achieved as per designed when: • If the pressure 25-PT-040 < 5 barg (TEMP.) and timer is expired, close the valve 25-XV-020 **(time to close 3 seconds).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR. When the feedback status 25-ZSL-020 is active received the alert operator with (T7FAH) alarm "Process Start-up Charging Sequence Vessel F not completed" and proceed with EXIT. • If the pressure gradient becomes negative for a time 5 min. close the 25-XV-020 **(time to close 3 sec).** Proceed to connect a HART COMMUNICATOR to force the 4-20mA signal from 25-PT-049 to achieve process variable 4 barg and confirm the above sequence. Restore normal operating parameters and disconnect the HART COMMUNICATOR.	OK OK		08.04.2025

CHARGING MODE

REF. SHEET N. 105

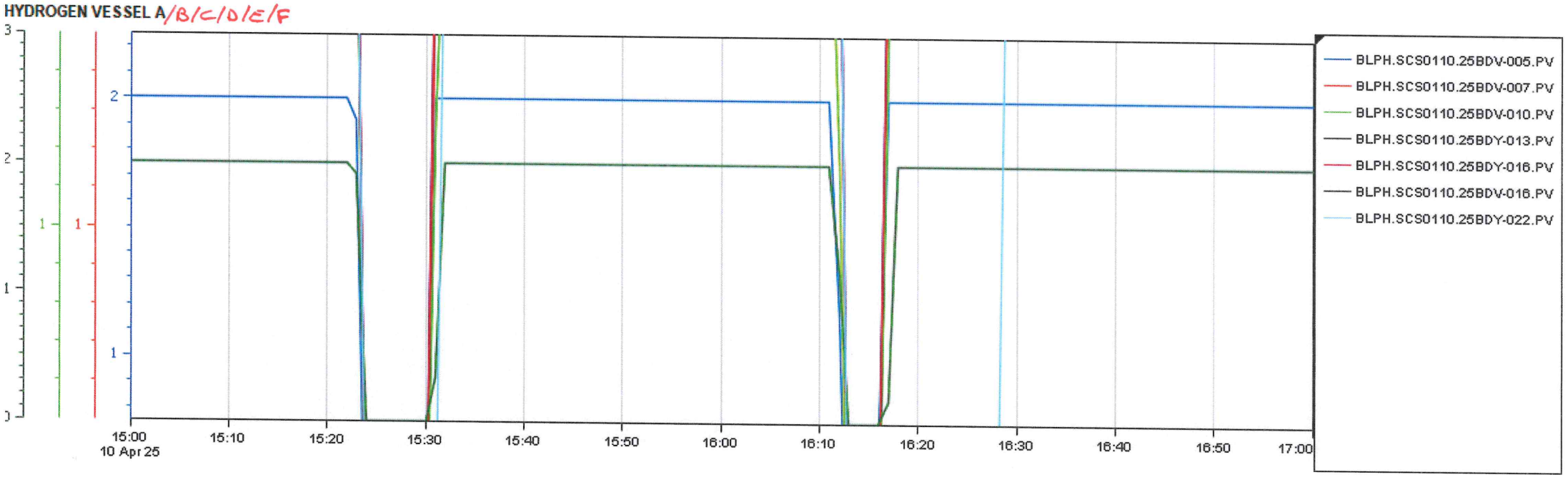


Step	Description	Result	Verified by	Date
	When the feedback 25-ZSL-020 is active, the operator is alerted with the alarm "Process Start-up Charging Sequence Vessel F not completed" and proceed with EXIT.	ok		08.04.2025
48	**FULLY CHARGED STATUS (Indication on HMI)** When all the vessels have reached maximum operating pressure (PCS sends the "Process Fully charged Status" status to EMCS) the flag indication on HMI shall indicate that the "Process Fully charged Status" is active.	ok		08-04-2025
49	**HYDROGEN VENT HEADER & DRUM SYSTEM** the Vent network is continuously purged with nitrogen in order to keep it slightly pressurized and inert. The hydrogen KO drum V-43001 is equipped with the following transmitters: • 43-PT-001 as remote pressure indicator to PCS and High alarm threshold 43-PAH-001. • 43-LT-001 as remote level indicator, providing high- and low-level alarm to SIS (43-LAH-001 and 43-LAL-001). • 43-FT-001 ultrasonic flow transmitter with High alarm threshold (43-FAH-001) to monitor the flowrate towards the stack. The Hydrogen Vent Stack Q-43004 is simply equipped with a level transmitter. • 43-LT-003 as remote level indicator that allows to monitor the liquid level inside the bottom, providing a low level alarm to PCS (43-LAL-003). The gas line must be kept submerged in a hydraulic seal to prevent the ingress of air into the system.	ok		10.04.2025
50	**SHUTDOWN WITH DEPRESSURIZATION** In order to test the depressurization of Hydrogen Storage, it is necessary to cause a ESD-1D. The more practical way to achieve that without having a full ASD is to configure a temporary push button in HMI to activate the ESD-1D without having all the effects that the ASD will initiate. The ESD-1D will have the following effects: • 25-BDY-005 – open 25-BDV-005 on V-25001A. • 25-BDY-007 – open 25-BDV-007 on V-25001B. • 25-BDY-010 – open 25-BDV-010 on V-25001C.	ok		10-04-2025

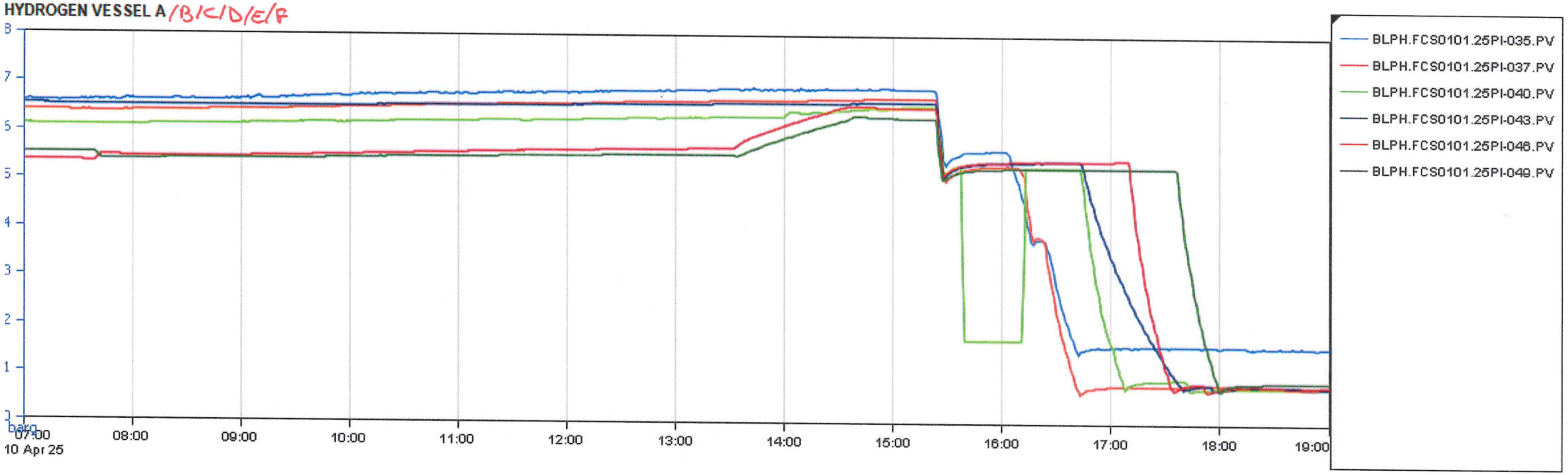
Step	Description	Result	Verified by	Date
	• 25-BDY-013 – open 25-BDV-013 on V-25001D. • 25-BDY-016 – open 25-BDV-016 on V-25001E. • 25-BDY-019 – open 25-BDV-019 on V-25001F. • 25-BDY-022 – open 25-BDV-022 on outlet H2 header to Fuel Cell package. • 64-SDY-01 – close 64-SDV-001 nitrogen to H2 storage tanks. • 25-SDY-023 – close 25-SDV-023 on outlet H2 header to Fuel Cell package. • 25-SDY-001 – close 25-SDV-001 on H2 header to storage tanks. Other effects of ESD-1D which are not required for this test, and thus will be bypassed, are the following: • 79-XS-010 – elect. isolation soft. cables communication cat 6A. • 83-XS-001A – shutdown seawater lift pump P-50001A. • 83-XS-001B – shutdown seawater lift pump P-50001B. Once the ESD-1D is activated, the Hydrogen lines and vessels will be isolated and vented.	OK		10.04.2025

SHUTDOWN WITH DEPRESSURIZATION

REF. SHEET N. 106



HYDROGEN VESSEL A/B/C/D/E/F



5.4.3 OTP Worksite Test Notes and Remark

- UPON CONCLUSION OF THE OTP IT HAD BEEN DECIDED BETWEEN BOTH PARTIES TO PERFORM AN "ACCELERATED" TEST IN ORDER TO FOCUS ON THE CONTROL LOGICS WITHOUT WAITING FOR THE STANDARD TIMING SEQUENCES.

SEE N.31 PAGES INSERTED BETWEEN SHEET 107 AND 108.

Purging mode after Shutdown (for H2 displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATE
SHEET 33/34	64-PT-031A/B (outlet line of the Nitrogen)	7 barg	✓	7barg				GIANDOMENICO DEL MISSIER	JAMIE MCALLISTER	16-04-2025
	25-XV-004/008/011/014/017/020	CLOSE	✓							
	25-XV-006/009/012/015/018 /021	CLOSE	✓							
	25-FV-031/032/033/034/038/036	CLOSE	✓							
	25-PV-035/ 037/040/043/046/049	CLOSE	✓							
	64-SDV-001 (installed on the nitrogen line)	OPEN	✓							
	H2 Vessel V-25001 A									
SHEET 35	64-PT-031A/B ≤ 25-PT-035 (proceed with VESSEL B).		✓	7barg						
SHEET 36	64-PT-031A/B > 25-PT-035 (25-FIC-031 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001A (T3A)	5hr.	✓	5hr.	8hr.	5min.	5hr.			
	25-PT-035 < 2barg (timer is expired proceed with VESSEL B. Force output 0% of the controller 25-FIC-031). 25-FV-031	CLOSE	✓							
	25-PT-035 ≥ 2 barg (25-PIC-035 set point to 2 barg)		✓	2barg						
	25-PV-035 (will operate and release the Nitrogen gas to the vent)									
SHEET 37	timer required to purging T4A	92hr.	✓	92hr.	30min.	5min.	92 hr			
	25-PT-035 < 2 barg (the controller 25-PIC-035 and 25-FIC-031 proceed with VESSEL B).		✓							
	25-PT-035 ≥ 2 (the controller 25-FIC-031 and 25-PIC 035 output to 0% the valves 25-FV-031 and 25-PV-035). Closed	CLOSE	✓	2barg						
	The valves 25-FV-031 and 25-PV-035 closed. proceed with the VESSEL B.	CLOSE	✓							
SHEET 36	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL B.		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Shutdown (for H2 displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M.	CW	DATA
H2 Vessel V-25001 B								GIANDONATO DEL VISSIER	JAMIE M'ALLISTER	16-04-2025
SHEET 38	64-PT-031A/B ≤ 25-PT-037 (proceed with VESSEL C).		✓	7barg						
	64-PT-031A/B > 25-PT-037 (25-FIC-032 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001B (T3B)	5hr.	✓	5hr.	8hr.	5min.	5hr.			
	25-PT-037 < 2barg (timer is expired proceed with VESSEL C. Force output 0% of the controller 25-FIC-032). 25-FV-031	CLOSE	✓							
SHEET 39/40	25-PT-037 ≥ 2 barg (25-PIC-037 set point to 2 barg)		✓	2barg						
	25-PV-037 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T4B	92hr.	✓	92hr.	30min.	5min.	92hr.			
	25-PT-037 < 2 barg (the controller 25-PIC-037 and 25-FIC-032 proceed with VESSEL C).		✓							
	25-PT-037 ≥ 2 (the controller 25-FIC-032 and 25-PIC 037 output to 0% the valves 25-FV-032 and 25-PV-037). Closed	CLOSE	✓	2barg						
	The valves 25-FV-032 and 25-PV-037 closed. proceed with the VESSEL C.	CLOSE	✓							
SHEET 39	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL C.		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Shutdown (for H2 displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M.	CW	DATA
H2 Vessel V-25001 C										
SHEET 40	64-PT-031A/B ≤ 25-PT-040 (proceed with VESSEL D).		✓	7barg						
SHEET 41	64-PT-031A/B > 25-PT-040 (25-FIC-033 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001C (T3C)	5hr.	✓	5hr.	8hr.	5min.	5hr.			
	25-PT-040 < 2barg (timer is expired proceed with VESSEL D. Force output 0% of the controller 25-FIC-033). 25-FV-033	CLOSE	✓							
SHEET 42/43	25-PT-040 ≥ 2 barg (25-PIC-040 set point to 2 barg)		✓	2barg						
	25-PV-040 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T4C	92hr.		92hr.	30min	5min.	92hr.			
	25-PT-040 < 2 barg (the controller 25-PIC-040 and 25-FIC-033 proceed with VESSEL D).		✓							
	25-PT-040 ≥ 2 (the controller 25-FIC-033 and 25-PIC 040 output to 0% the valves 25-FV-033 and 25-PV-040). Closed	CLOSE	✓	2barg						
	The valves 25-FV-033 and 25-PV-040 closed. proceed with the VESSEL D.	CLOSE	✓							
SHEET 42	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL D.		✓	1hr.	5min.	5min.	1hr.			

GIANDONATO DEL MISSIER

JAMIE MCALLISTER

17.04.2025

Purging mode after Shutdown (for H2 displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M.	CW	DATA
H2 Vessel V-25001 D										
SHEET 43	64-PT-031A/B ≤ 25-PT-043 (proceed with VESSEL E).		✓	7barg						
	64-PT-031A/B > 25-PT-043 (25-FIC-033 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001D (T3D)	5hr.	✓	5hr.	8hr	5min.	5hr.			
SHEET 44/45	25-PT-040 < 2barg (timer is expired proceed with VESSEL E. Force output 0% of the controller 25-FIC-034). 25-FV-034	CLOSE	✓							
	25-PT-043 ≥ 2 barg (25-PIC-043 set point to 2 barg)		✓	2barg						
	25-PV-043 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T4D	92hr.	✓	92hr.	30min	5min.	92hr.			
	25-PT-043 < 2 barg (the controller 25-PIC-043 and 25-FIC-034 proceed with VESSEL E).		✓							
	25-PT-043 ≥ 2 (the controller 25-FIC-034 and 25-PIC 043 output to 0% the valves 25-FV-034 and 25-PV-043). Closed	CLOSE	✓	2barg						
	The valves 25-FV-034 and 25-PV-043 closed. proceed with the VESSEL E.	CLOSE	✓							
SHEET 44	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL E.		✓	1hr.	5min.	5min.	1hr.			

GIANDONATO DE MISSIER

JAMIE MCALLISTER

17-09-2025

Purging mode after Shutdown (for H2 displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M.	CW	DATA
	H2 Vessel V-25001 E							GIANDONATO DEE MISSIER	JAMIE MCALLISTER	17.09.2025
SHEET 46	64-PT-031A/B ≤ 25-PT-046 (proceed with VESSEL F).		✓	7barg						
	64-PT-031A/B > 25-PT-046 (25-FIC-038 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001E (T3E)	5hr.	✓	5hr.	8hr.	5min.	5hr.			
SHEET 47/48	25-PT-046 < 2barg (timer is expired proceed with VESSEL F. Force output 0% of the controller 25-FIC-038). 25-FV-038	CLOSE	✓							
	25-PT-046 ≥ 2 barg (25-PIC-046 set point to 2 barg)		✓	2barg						
	25-PV-046 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T4E	92hr.	✓	92hr.	30min.	5min.	92hr.			
	25-PT-046 < 2 barg (the controller 25-PIC-046 and 25-FIC-038 proceed with VESSEL F).		✓							
	25-PT-046 ≥ 2 (the controller 25-FIC-038 and 25-PIC 046 output to 0% the valves 25-FV-084 and 25-PV-046). Closed	CLOSE	✓	2barg						
	The valves 25-FV-038 and 25-PV-046 closed. proceed with the VESSEL F.	CLOSE	✓							
SHEET 47	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME' 1hr. PROCEED WITH VESSEL F		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Shutdown (for H2 displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M.	CW	DATA
H2 Vessel V-25001 F										
SHEET 49	64-PT-031A/B ≤ 25-PT-049 (proceed with EXIT).		✓	7barg				GIANDONATO DEL MISSIER	JAMIE M'ALLISTER	17.09.2025
	64-PT-031A/B > 25-PT-049 (25-FIC-036 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001F (T3F)	5hr.	✓	5hr.	8hr.	5min.	5hr.			
	25-PT-049 < 2barg (timer is expired proceed with EXIT. Force output 0% of the controller 25-FIC-036). 25-FV-036	CLOSE	✓							
SHEET 50/51	25-PT-049 ≥ 2 barg (25-PIC-049 set point to 2 barg)		✓	2barg						
	25-PV-049 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T4F	92hr.	✓	92hr.	30min	5min.	92hr.			
	25-PT-049 < 2 barg (the controller 25-PIC-049 and 25-FIC-036 proceed with EXIT).		✓							
	25-PT-049 ≥ 2 (the controller 25-FIC-036 and 25-PIC 049 output to 0% the valves 25-FV-036 and 25-PV-049). Closed	CLOSE	✓	2barg						
	The valves 25-FV-036 and 25-PV-049 closed. proceed with the EXIT.	CLOSE	✓							
SHEET 50	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH EXIT		✓	1hr	5min.	5min.	1hr.			

Discharging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 86/87								GIANDONATO Jessica	Jamie M'Allister	17-04-2025
	25-XV-004/008/011/014/017/020	CLOSE	✓							
	25-XV-006/009/012/015/018 /021	CLOSE	✓							
	25-SDV-001 and 25-SDV-023	OPEN	✓							
	25-PV-055A/B.	OPEN	✓							
H2 Vessel V-25001 A										
SHEET 87	25-PT-035 <4.5barg proceed with Vessel B.		✓	4.5barg						
	25-PT-035 ≥ 30barg the valve 25-XV-008	OPEN	✓	30barg	6barg		30barg			
	25-PT-035 is ≤ 4.5barg proceed with Vessel B.		✓	4.5barg						
	25-XV-008 closed.	CLOSE	✓							

Discharging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 B										
SHEET 88	25-PT-037 <4.5barg proceed with Vessel C.		✓	4.5barg						
	25-PT-037 ≥ 30barg the valve 25-XV-009	OPEN	✓	30barg	6barg		3			
	25-PT-037 is ≤ 4.5barg proceed with Vessel C.		✓	4.5barg						
	25-XV-009 closed.	CLOSE	✓							

Discharging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 C										
SHEET 88/89	25-PT-040 <4.5barg proceed with Vessel D.		✓	4.5barg						
	25-PT-040 ≥ 30barg the valve 25-XV-012	OPEN	✓	30barg	6barg					
	25-PT-040 is ≤ 4.5barg proceed with Vessel D.		✓	4.5barg						
	25-XV-012 closed.	CLOSE	✓							

Discharging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 D										
SHEET 89/90	25-PT-043 <4.5barg proceed with Vessel E.		✓	4.5barg						
	25-PT-043 ≥ 30barg the valve 25-XV-015	OPEN	✓	30barg	6barg					
	25-PT-043 is ≤ 4.5barg proceed with Vessel E.		✓	4.5barg						
	25-XV-015 closed.	CLOSE	✓							

Discharging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 E										
SHEET 90	25-PT-046 <4.5barg proceed with Vessel F.		✓	4.5barg				GIANDONATO DEL MISSIER		17-09-2025
	25-PT-046 ≥ 30barg the valve 25-XV-018	OPEN	✓	30barg	6barg					
	25-PT-046 is ≤ 4.5barg proceed with Vessel F.		✓	4.5barg						
	25-XV-018 closed.	CLOSE	✓							

Discharging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 F										
SHEET 91	25-PT-049 <4.5barg proceed with EXIT.		✓	4.5barg						
	25-PT-049≥ 30barg the valve 25-XV-021	OPEN	✓	30barg	6barg					
	25-PT-049 is ≤ 4.5barg proceed with EXIT.		✓	4.5barg						
	25-XV-021 closed.	CLOSE	✓							

Shutdown with depressurization				ROSETTI M	CW	DATA
SHEET 105/106	The ESD-1D will have the following effects		✓	GIANDOMENICO DEL MISSIER	JAMIE MCALLISTER	17.04.2025
	25-BDV-005 OPEN on V2001A	OPEN	✓			
	25-BDV-007 OPEN on V2001B	OPEN	✓			
	25-BDV-010 OPEN on V2001C	OPEN	✓			
	25-BDV-013 OPEN on V2001D	OPEN	✓			
	25-BDV-0016 OPEN on V2001E	OPEN	✓			
	25-BDV-019 OPEN on V2001F	OPEN	✓			
	25-BDV-022 OPEN on outlet H2 storage tanks	OPEN	✓			
	25-SDV-023 CLOSEon outlet H2 header to Fuel Cell package.	CLOSE	✓			
	25-SDV-001 CLOSE on H2 header to storage tanks.	CLOSE	✓			
	83-XS-001A – shutdown seawater lift pump P-50001A.		✓			
	83-XS-001B – shutdown seawater lift pump P-50001B.		✓			

Purging mode after Maintenance (Air displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M.	CW	DATA
SHEET 33/34	64-PT-031A/B (outlet line of the Nitrogen)	7 barg	✓	7barg				GIANDOMENICO DE MISSIER	JAMIE MCALLISTER	17.04.2025
	25-XV-004/008/011/014/017/020	CLOSE	✓							
	25-XV-006/009/012/015/018 /021	CLOSE	✓							
	25-FV-031/032/033/034/038/036	CLOSE	✓							
	25-PV-035/ 037/040/043/046/049	CLOSE	✓							
	64-SDV-001 (installed on the nitrogen line)	OPEN	✓							
	H2 Vessel V-25001 A									
SHEET 53	64-PT-031A/B ≤ 25-PT-035 (proceed with VESSEL B).		✓	7barg						
SHEET 54	64-PT-031A/B > 25-PT-035 (25-FIC-031 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001A (T5A)	5hr.	✓	5hr.	2hr.	5min.	5hr.			
	25-PT-035 < 2barg (timer is expired proceed with VESSEL B. Force output 0% of the controller 25-FIC-031). 25-FV-031	CLOSE	✓							
SHEET 55/56	25-PT-035 ≥ 2 barg (25-PIC-035 set point to 2 barg)		✓	2barg						
	25-PV-035 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T6A	51hr.	✓	51hr.	15min	5min.	51hr.			
	25-PT-035 < 2 barg (the controller 25-PIC-035 and 25-FIC-031 proceed with VESSEL B).		✓							
	25-PT-035 ≥ 2 (the controller 25-FIC-031 and 25-PIC 035 output to 0% the valves 25-FV-031 and 25-PV-035). Closed	CLOSE	✓	2barg						
	The valves 25-FV-031 and 25-PV-035 closed. proceed with the VESSEL B.	CLOSE	✓							
SHEET 55	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL B		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Maintenance (Air displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 B										
SHEET 56	64-PT-031A/B ≤ 25-PT-037 (proceed with VESSEL C).		✓	7barg				GIANDOMENICO DEL MISSIER	JAMIE MCALLISTER	17-04-2025
	64-PT-031A/B > 25-PT-037 (25-FIC-032 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001B (T5B)	5hr.	✓	5hr.	2hr.	5min.	5hr.			
	25-PT-037 < 2barg (timer is expired proceed with VESSEL C. Force output 0% of the controller 25-FIC-032). 25-FV-031	CLOSE	✓							
SHEET 57	25-PT-037 ≥ 2 barg (25-PIC-037 set point to 2 barg)		✓	2barg						
	25-PV-037 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T6B	51hr.	✓	51hr.	15min.	5min.	51hr.			
	25-PT-037 < 2 barg (the controller 25-PIC-037 and 25-FIC-032 proceed with VESSEL C).		✓							
SHEET 58	25-PT-037 ≥ 2 (the controller 25-FIC-032 and 25-PIC 037 output to 0% the valves 25-FV-032 and 25-PV-037). Closed	CLOSE	✓	2barg						
	The valves 25-FV-032 and 25-PV-037 closed. proceed with the VESSEL C.	CLOSE	✓							
SHEET 57	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL C.		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Maintenance (Air displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
	H2 Vessel V-25001 C									
SHEET 59	64-PT-031A/B ≤ 25-PT-040 (proceed with VESSEL D).		✓	7barg				GIANDONATO DEL MISSIER	JAMIE MCALLISTER	17.04.2025
	64-PT-031A/B > 25-PT-040 (25-FIC-033 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001C (T5C)	5hr.	✓	5hr.	2hr.	5min.	5hr.			
SHEET 60/61	25-PT-040 < 2barg (timer is expired proceed with VESSEL D. Force output 0% of the controller 25-FIC-033). 25-FV-033	CLOSE	✓							
	25-PT-040 ≥ 2 barg (25-PIC-040 set point to 2 barg)		✓	2barg						
	25-PV-040 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T6C	51hr.	✓	51hr.	15min.	5min.	51hr.			
	25-PT-040 < 2 barg (the controller 25-PIC-040 and 25-FIC-033 proceed with VESSEL D).		✓							
	25-PT-040 ≥ 2 (the controller 25-FIC-033 and 25-PIC 040 output to 0% the valves 25-FV-033 and 25-PV-040). Closed	CLOSE	✓	2barg						
	The valves 25-FV-033 and 25-PV-040 closed. proceed with the VESSEL D.	CLOSE	✓							
SHEET 60	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL D.		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Maintenance (Air displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 D										
SHEET 61	64-PT-031A/B ≤ 25-PT-043 (proceed with VESSEL E).		✓	7barg						
SHEET 62	64-PT-031A/B > 25-PT-043 (25-FIC-033 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001D (T5D)	5hr.	✓	5hr.	2hr.	5min.	5hr.			
	25-PT-040 < 2barg (timer is expired proceed with VESSEL E. Force output 0% of the controller 25-FIC-034). 25-FV-034	CLOSE	✓							
SHEET 63/64	25-PT-043 ≥ 2 barg (25-PIC-043 set point to 2 barg)		✓	2barg						
	25-PV-043 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T6D	51hr.	✓	51hr.	15min.	5min.	51hr.			
	25-PT-043 < 2 barg (the controller 25-PIC-043 and 25-FIC-034 proceed with VESSEL E).		✓							
	25-PT-043 ≥ 2 (the controller 25-FIC-034 and 25-PIC 043 output to 0% the valves 25-FV-034 and 25-PV-043). Closed	CLOSE	✓	2barg						
	The valves 25-FV-034 and 25-PV-043 closed. proceed with the VESSEL E.	CLOSE	✓							
SHEET 62	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL E		✓	1hr.	5min.	5min.	1hr.			

GIANDONATO DEL MISSIER

JAMIE M'ALLISTER

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Purging mode after Maintenance (Air displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
	H2 Vessel V-25001 E							GIANDONATO DEL NISSIER	JAMIE MCALLISTER	17.09.2025
SHEET 64	64-PT-031A/B ≤ 25-PT-046 (proceed with VESSEL F).		✓	7barg						
	64-PT-031A/B > 25-PT-046 (25-FIC-038 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001E (T5E)	5hr.	✓	5hr.	2hr.	5min.	5hr.			
SHEET 65/66	25-PT-046 < 2barg (timer is expired proceed with VESSEL F. Force output 0% of the controller 25-FIC-038). 25-FV-038	CLOSE	✓							
	25-PT-046 ≥ 2 barg (25-PIC-046 set point to 2 barg)			2barg						
	25-PV-046 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T6E	51hr.	✓	51hr.	15min.	5min.	51hr.			
	25-PT-046 < 2 barg (the controller 25-PIC-046 and 25-FIC-038 proceed with VESSEL F).		✓							
	25-PT-046 ≥ 2 (the controller 25-FIC-038 and 25-PIC 046 output to 0% the valves 25-FV-084 and 25-PV-046). Closed	CLOSE	✓	2barg						
	The valves 25-FV-038 and 25-PV-046 closed. proceed with the VESSEL F.	CLOSE	✓							
SHEET 65	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH VESSEL F		✓	1hr.	5min.	5min.	1hr.			

Purging mode after Maintenance (Air displacement)				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
	H2 Vessel V-25001 F							GIANDONATO DE MISSIER	JAMIE MCALLISTER	17.04.2025
SHEET 67	64-PT-031A/B ≤ 25-PT-049 (proceed with EXIT).		✓	7barg						
	64-PT-031A/B > 25-PT-049 (25-FIC-036 point to 42 Nm³/hr.)									
	Verify the timer required to pressurize V-25001F (T5F)	5hr.		5hr.	2hr.	5min.	5hr.			
SHEET 68/69	25-PT-049 < 2barg (timer is expired proceed with EXIT. Force output 0% of the controller 25-FIC-036). 25-FV-036	CLOSE	✓							
	25-PT-049 ≥ 2 barg (25-PIC-049 set point to 2 barg)		✓	2barg						
	25-PV-049 (will operate and release the Nitrogen gas to the vent)									
	timer required to purging T6F	51hr.	✓	51hr.	15min.	5min.	51hr.			
	25-PT-049 < 2 barg (the controller 25-PIC-049 and 25-FIC-036 proceed with EXIT).		✓							
	25-PT-049 ≥ 2 (the controller 25-FIC-036 and 25-PIC 049 output to 0% the valves 25-FV-036 and 25-PV-049). Closed	CLOSE	✓	2barg						
	The valves 25-FV-036 and 25-PV-049 closed. proceed with the EXIT.	CLOSE	✓							
SHEET 68	IF THE PRESSURE GRADIENT BECOMES NEGATIVE FOR A TIME 1hr. PROCEED WITH ~~RESET~~ EXIT		✓	1hr.	5min.	5min.	1hr.			

Charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 91/92	25-XV-004/008/011/014/017/020	CLOSE	✓					Giandonato Del Rosso	Jamie McAllister	18-04-2025
	25-XV-006/009/012/015/018 /021	CLOSE	✓							
	25-FV-031/032/033/034/038/036	CLOSE	✓							
	25-PV-035/ 037/040/043/046/049	CLOSE	✓							
	25-SDV-001 and 25-SDV-023	OPEN	✓							
H2 Vessel V-25001 A										
SHEET 94	25-PT-035 ≥ 30barg proceed with VESSEL B		✓							
	25-PT-035 < 30 and ≥ 2 barg, 25-XV-004 open	OPEN	✓	4.5barg						
	Start the timer T7A.	7hr.	✓	7hr.	5hr.	5min.	7hr			
SHEET 95	25-PT-035 < 30barg the timer is expired, 25-XV-004 will close and proceed with Vessel B	CLOSE	✓							
	25-PT-035 ≥ 30barg, 25-XV-004 will close and proceed with VESSEL B	CLOSE	✓	30barg						
	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel B.		✓	1hr.	5min.	5min.	1hr.			

Charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
H2 Vessel V-25001 E										
SHEET 101/102	25-PT-046 ≥ 30barg proceed with VESSEL F		✓					GIANDOMENICO DEL MISSIER	JAMIE MCALLISTER	18-04-2025
	25-PT-046 < 30 and ≥ 2 barg, 25-XV-017 open	OPEN	✓	4.5barg						
	Start the timer T7E.	7hr.	✓	7hr.	5hr.	5min.	7hr.			
	25-PT-046 < 30barg the timer is expired, 25-XV-017 will close and proceed with Vessel E	CLOSE	✓							
	25-PT-046 ≥ 30barg, 25-XV-017 will close and proceed with VESSEL F	CLOSE	✓	30barg						
	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel F.		✓	1hr.	5min.	5min	1hr.			

Process start-up charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
	25-XV-004/008/011/014/017/020	CLOSE	✓							
	25-XV-006/009/012/015/018 /021	CLOSE	✓							
	25-PV-035/ 037/040/043/046/049	CLOSE	✓							
	25-SDV-001	OPEN	✓							
H2 Vessel V-25001 A										
SHEET 72	25-PT-035 < 2barg proceed with Vessel B.		✓		1.5barg	1.5barg				
	25-PT-035 ≥ 2barg the valve 25-XV-004	OPEN	✓							
	25-PIC-035 set point to 2barg.		✓	2barg						
	Verify the timer required to displacement V-25001A (T1A).	28hr.	✓	28hr.	5min.	5min	28hr.			
	25-PT-035 < 2barg (the 25-PIC-035 will be forced to 0%), the inlet valve 25-XV-004 close, proceed withVessel B.	CLOSE	✓							
SHEET 73	25-PT-035 ≥ 2barg (the valve 25-PV-035 will close)	CLOSE	✓	2barg						
	Start the timer T2A	7hr.	✓	7hr.	5hr.	5min.	7hr.			
	25-PT-035 < 30barg the timer is expired, 25-XV-004 will close and proceed with Vessel B	CLOSE	✓							
	25-PT-035 ≥ 30barg, 25-XV-004 will close and proceed with VESSEL B	CLOSE	✓	30barg	6barg					
	25-PT-035 < 30barg timer is expired 25-XV-004 will close proceed with Vessel B.	CLOSE	✓							
SHEET 74	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel B.		✓	1hr.	5min.	5min.	1hr.			

Process start-up charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 74/75/76	25-PT-037 < 2barg proceed with Vessel C.		✓		1.5barg	1.5barg		Giovanizzo Serpiccia	Jamie McAllister	18.04.2025
	25-PT-037 ≥ 2barg the valve 25-XV-006	OPEN								
	25-PIC-037 set point to 2barg.		✓	2barg						
	Verify the timer required to displacement V-25001B (T1B).	28hr.	✓	28hr.	5min.	5min	23hr.			
	25-PT-037 < 2barg (the 25-PIC-037 will be forced to 0%), the inlet valve 25-XV-006 close, proceed withVessel C.	CLOSE	✓							
	25-PT-037 ≥ 2barg (the valve 25-PV-037 will close)	CLOSE	✓	2barg						
	Start the timer T2B	7hr.	✓	7hr.	5hr.	5min.	7hr.			
	25-PT-037 < 30barg the timer is expired, 25-XV-006 will close and proceed with Vessel C	CLOSE	✓							
	25-PT-037 ≥ 30barg, 25-XV-006 will close and proceed with VESSEL C	CLOSE	✓	30barg	6barg					
	25-PT-037 < 30barg timer is expired 25-XV-006 will close proceed with Vessel C.	CLOSE	✓							
	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel C.		✓	1hr.	5min.	5min.	1hr.			

Process start-up charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 77/78	25-PT-040 < 2barg proceed with Vessel D.		✓		1.5barg	1.5barg		GIANDOMENICO DE MISSION	JAMIE MCALLISTER	18-04-2025
	25-PT-040 ≥ 2barg the valve 25-XV-011	OPEN	✓							
	25-PIC-040 set point to 2barg.		✓	2barg						
	Verify the timer required to displacement V-25001C (T1C).	28hr.	✓	28hr.	5min.	5min	28hr.			
	25-PT-040 < 2barg (the 25-PIC-037 will be forced to 0%), the inlet valve 25-XV-011 close, proceed withVessel D.	CLOSE	✓							
	25-PT-040 ≥ 2barg (the valve 25-PV-040 will close)	CLOSE	✓	2barg						
	Start the timer T2C		✓	7hr.	5hr.	5min.	7hr.			
	25-PT-040 < 30barg the timer is expired, 25-XV-011 will close and proceed with Vessel D.	CLOSE	✓							
	25-PT-040 ≥ 30barg, 25-XV-011 will close and proceed with VESSEL D	CLOSE	✓	30barg	6barg					
	25-PT-040 < 30barg timer is expired 25-XV-011 will close proceed with Vessel D.	CLOSE	✓							
	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel D.		✓	1hr.	5min.	5min.	1hr.			

Process start-up charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 79/80	25-PT-043 < 2barg proceed with Vessel E.		✓		1.5barg	1.5barg		Giandomenico Di Nisio	Jamie McAllister	18-04-2025
	25-PT-043 ≥ 2barg the valve 25-XV-014	OPEN	✓							
	25-PIC-043 set point to 2barg.		✓	2barg						
	Verify the timer required to displacement V-25001D (T1D).	28hr.	✓	28hr.	5min.	5min	28hr.			
	25-PT-043 < 2barg (the 25-PIC-033 will be forced to 0%), the inlet valve 25-XV-014 close, proceed withVessel D.	CLOSE	✓							
	25-PT-043 ≥ 2barg (the valve 25-PV-043 will close)	CLOSE	✓	2barg						
	Start the timer T2D	7hr.	✓	7hr.	5hr.	5min.	7hr.			
	25-PT-043 < 30barg the timer is expired, 25-XV-014 will close and proceed with Vessel E.	CLOSE	✓							
	25-PT-043 ≥ 30barg, 25-XV-014 will close and proceed with VESSEL E	CLOSE	✓	30barg	6barg					
	25-PT-043 < 30barg timer is expired 25-XV-014 will close proceed with Vessel E.	CLOSE	✓							
	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel E.		✓	1hr.	5min.	5min.	1hr.			

Process start-up charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 81/82/83	25-PT-046 < 2barg proceed with Vessel F.		✓		1.5barg	1.5barg		Gianpaolo Del Missier	JAMIE M'ALLISTER	18.04.2025
	25-PT-046 ≥ 2barg the valve 25-XV-017	OPEN	✓							
	25-PIC-046 set point to 2barg.		✓	2barg						
	Verify the timer required to displacement V-25001E (T1E).	28hr.	✓	28hr.	5min.	5min	28hr.			
	25-PT-046 < 2barg (the 25-PIC-046 will be forced to 0%), the inlet valve 25-XV-017 close, proceed withVessel E.	CLOSE	✓							
	25-PT-046 ≥ 2barg (the valve 25-PV-046 will close)	CLOSE	✓	2barg						
	Start the timer T2E	7hr.	✓	7hr.	5hr.	5min.	7hr			
	25-PT-046 < 30barg the timer is expired, 25-XV-017 will close and proceed with Vessel F.	CLOSE	✓							
	25-PT-046 ≥ 30barg, 25-XV-017 will close and proceed with VESSEL F	CLOSE	✓	30barg	6barg					
	25-PT-046 < 30barg timer is expired 25-XV-017 will close proceed with Vessel E.	CLOSE	✓							
	If the pressure gradient becomes negative for a time 1hr. proceed with Vessel F.		✓	1hr.	5min.	5min.	1hr.			

Process start-up charging mode				PERMANENT SET POINT	OTP SET POINT VALEUS	TEST SET POINT	RESTORED SET POINT	ROSETTI M	CW	DATA
SHEET 83/84/85	25-PT-049 < 2barg proceed with EXIT.		✓		1.5barg	1.5barg		GIANFRANCO DE VISION	JAMIE MCALLISTER	18.09.2025
	25-PT-049 ≥ 2barg the valve 25-XV-020	OPEN	✓							
	25-PIC-049 set point to 2barg.		✓	2barg						
	Verify the timer required to displacement V-25001F (T1F).	28hr.	✓	28hr.	5min.	5min	28 hr.			
	25-PT-049 < 2barg (the 25-PIC-049 will be forced to 0%), the inlet valve 25-XV-020 close, proceed with EXIT.	CLOSE	✓							
	25-PT-049 ≥ 2barg (the valve 25-PV-049 will close)	CLOSE	✓	2barg						
	Start the timer T2F	7hr.	✓	7hr.	5hr.	5min.	7hr.			
	25-PT-049 < 30barg the timer is expired, 25-XV-020 will close and proceed with EXIT.	CLOSE	✓							
	25-PT-049 ≥ 30barg, 25-XV-020 will close and proceed with EXIT	CLOSE	✓	30barg	6barg					
	25-PT-049 < 30barg timer is expired 25-XV-020 will close proceed with EXIT.	CLOSE	✓							
	If the pressure gradient becomes negative for a time 1hr. proceed with EXIT.		✓	1hr.	5min.	5min.	1hr.			

5.4.4 OTP Worksite Test Certifying Authority Table Attendances

Name and Surname	Certifying Authority	Position	Signature

5.4.5 OTP Worksite Test Final Signature and Company Acceptance

Name and Surname	Company Representative	Position	Signature
Anthony Ivison	Rosetti Marino	Comm. MGR.	
Jamie M'Allister	Crosswind	Comm ENG	

5.5 POST TEST CONDITION

The previous chapters are successfully performed.

- All necessary tests are performed and accepted for that system.
- All Communication Cables are tested and completed.
- All panels are in normal operation and no alarm pending.

5.6 REINSTATEMENT AND PRESERVATION TASKS

- All the electrical contacts which were disconnected for the testing purposes must be reconnected.
- After functional tests have been completed, system / sub-systems are left in safe condition and that they are operational.
- All preservation routines identified and required will be included in relevant Preservation ITR within the Proverlis Completions System.

6. OTP AT OFFSHORE SITE

6.1 PLANNING AND MANPOWER

6.1.1 Offshore Site Test Overview

The purpose of this test is to recheck the good condition of all equipment and the commissioning of:

- SS 25-00 Hydrogen Storage.
- SS 43-00 Hydrogen Vent Header & Drum System

6.1.2 Planned Tasks with Estimated Manpower

Estimated manpower for the entire duration of the Test:

- 1 E&I commissioning supervisor from Contractor.
- 1 E&I commissioning technician from Contractor.
- 1 Operator workstation field engineer.

6.1.3 Test Duration Estimate

The test duration should be as follows:

- 6 days

If necessary, the estimated time can be extended in order to complete all required pre-commissioning and commissioning activities.

6.2 OTP TEST REQUIREMENT – OFFSHORE SITE

6.2.1 Pre-Commissioning Achievement

- Not applicable

6.2.2 Commissioning Achievement

- Not applicable

6.2.3 Status of Required Associated Subsystems

Subsystems required for Commissioning of Hydrogen Storage & Venting Systems:

- SS 87-10 PCS System
- SS 79-00 SIS (ESD)
- SS 87-00 EMCS
- SS 88-00 Earthing System
- SS 25-01: V-25001 A
- SS 25-02: V-25001 B
- SS 25-03: V-25001 C
- SS 25-04: V-25001 D
- SS 25-05: V-25001 E

- SS 25-06: V-25001 F
- SS-25-07: Hydrogen Storage Vessel Header (Inlet)
- SS-25-08: Hydrogen Storage Vessel Header (Outlet)
- SS 43-00: Hydrogen Vent Header & Drum System
- SS 20-00: Electrolyser Package
- SS 80-00: Fuel Cell Package
- SS 63-00: Instrumentation Air Package
- SS 63-30: Instrumentation Air Distribution Network
- SS 64-00: Nitrogen Generation Package
- SS 64-10: Nitrogen Distribution Network

6.2.4 Special Tools & Test Equipment

The following special tool and Test Equipment are required:

- Continuity tester (Multimeter)
- Hart communicator
- Toolbox
- Portable radios (2 pcs + 1 per Technical Room)

TESTING & MEASUREMENT INSTRUMENT USED			
Type	Serial N.	Calibration certificate	Validity

6.2.5 Consumable List

- Not applicable

6.2.6 Commissioning Spare Parts

- See reference doc. N. 1724000887-COM-LIS-0016 Hydrogen Vent
- See reference doc. N. 1724000163-COM-LIS-0014 Hydrogen KO Drum
- See reference doc. N. 1723001756-COM-LIS-00018 H2 Storage Vessel

6.3 OTP DESCRIPTION – OFFSHORE WORKSITE

6.3.1 OTP Test Preparation

Step	Description	Result	Verified by	Date
1.	System Ready for Commissioning Certificate (RFC) is issued and approved.			

2.	All personnel involved in the implementation of this procedure are familiar with its content as well as with associated safety requirements (Toolbox Talk to be conducted before initiation of activities).			
3.	A final walkdown of the system has been completed, to ensure that the system and the area are ready for start-up.			
4.	Check that areas are free for work and escape routes are clear of any obstructions.			
5.	All safety barriers and warning signs have been installed.			
6.	Verify availability of test equipment as per section 6.2.4.			

6.3.2 Electrical Preparation

Step	Description	Result	Verified by	Date
1.	Verify that all relevant associated systems / subsystems are ready.			

6.3.3 Mechanical Preparation

Step	Description	Result	Verified by	Date
1.	Visual Check			

6.3.4 Instrument Preparation

Step	Description	Result	Verified by	Date
1.	Verify that all relevant associated systems / subsystems are ready.			
2.	Verify that relevant equipment/ components are available and in operation for start of commissioning activities.			
3.	Verify availability of test equipment as per section 6.2.4.			

6.3.5 Piping Preparation

- Not applicate

6.3.6 Additional Discipline Preparation

- Not applicable

6.4 OTP TEST STEPS – OFFSHORE WORKSITE

6.4.1 Test Preparation

Need to Verify:

- SS 87-10 PCS System
- SS 79-00 SIS (ESD)
- SS 87-00 EMCS
- SS 25-01: V-25001 A
- SS 25-02: V-25001 B
- SS 25-03: V-25001 C
- SS 25-04: V-25001 D
- SS 25-05: V-25001 E
- SS 25-06: V-25001 F
- SS-25-07: Hydrogen Storage Vessel Header (Inlet)
- SS-25-08: Hydrogen Storage Vessel Header (Outlet)
- SS 43-00: Hydrogen Vent Header & Drum System
- SS 20-00: Electrolyser Package
- SS 80-00: Fuel Cell Package

All systems and subsystems involved in this procedure must be ready and available.

6.4.2 Test Steps

Step	Description	Result	Verified by	Date
SS 25-00 Hydrogen Storage. SS 43-00 Hydrogen Vent Header & Drum System.				
Systems SS 25-00 / SS 43-00 are completed.				
1.	Check and verify that control systems (PCS, SIS, EMCS) are up and running			
2.	Check and confirm the systems Electrolyser Package and Fuel Cell Package are up and running			
3.	Check and verify that OER/CCR are operational, and communication is functioning.			
4.	Check and verify that all instrumentation is functioning. All valves are opened and closed from OER/CCR to verify proper operation.			

Step	Description	Result	Verified by	Date
	All transmitters are simulated with HART Communicator to verify proper operation.			
5.	Confirmed the steps from 1 to 3 the SS 25-00 / SS 43-00 are ready for start-up.			

6.4.3 OTP Site Tests Notes and Remarks

6.4.4 OTP Site Tests Certifying Authority Table of Attendances

Name and Surname	Certifying Authority	Position	Signature

6.4.5 OTP Site Tests Final Signature and Company Acceptance

Name and Surname	Company Representative	Position	Signature

6.5 POST TEST CONDITIONS

- The previous chapters are successfully performed.
- The systems are in normal operation and no alarm pending.

6.6 REINSTATEMENT AND PRESERVATION TASKS

- After the tests are completed, the systems are left in a safe condition and it is operational.

7. APPENDICES

7.1 Vendor SAT Procedure (where applicable)

7.2 Proverlis Summary System Reports

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STATUS INDEX DETAIL

Filtered on subsystem: 25-07 & process: COMM

Instrumental	25-07 Hydrogen Storage Vessels Header (Inlet)

ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
25-PT-001	Pressure Transmitter - Hyrogen to Vessels Inlet Header	ONSHORE	C10003161	FJ01A	100	2025-02-21	-
25-PT-002	Pressure Transmitter - Hyrogen to Vessels Inlet Header Shut-Down	ONSHORE	C10003162	FJ01A	100	2025-02-21	-
25-SDV-001	On/Off Valve - Hyrogen to Vessels Inlet Header Shut-Down	ONSHORE	C10003209	FJ01V	100	2025-03-26	-
25-XV-004	On-Off Actuated Ball Valve - Vessel V-25001A Hydrogen Inlet	ONSHORE	C10003211	FJ01V	100	2025-02-21	-
25-XV-008	On-Off Actuated Ball Valve - Vessel V-25001B Hydrogen Inlet	ONSHORE	C10003213	FJ01V	100	2025-02-21	-
25-XV-011	On/Off Valve - Vessel V-25001C Hydrogen Inlet	ONSHORE	C10003215	FJ01V	100	2025-02-21	-
25-XV-014	On/Off Valve - Vessel V-25001D Hydrogen Inlet	ONSHORE	C10003217	FJ01V	100	2025-02-21	-
25-XV-017	On/Off Valve - Vessel V-25001E Hydrogen Inlet	ONSHORE	C10003219	FJ01V	100	2025-02-21	-
25-XV-020	On/Off Valve - Vessel V-25001F Hydrogen Inlet	ONSHORE	C10003221	FJ01V	100	2025-02-21	-
25-XV-024	On/Off Valve - Hyrogen to Vessels Inlet Header Vent System	ONSHORE	C10003223	FJ01V	100	2025-02-21	-

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STATUS INDEX DETAIL

Filtered on subsystem: 25-07 & process: COMM

Miscellaneous	25-07 Hydrogen Storage Vessels Header (Inlet)						
ITEM		TASK					
Code	Description	Location	Code	Form	Progress	Date	Certificate
123A90-PML-COM-PRO-03041	OTP -Hydrogen Storage and Venting Systems	ONSHORE	C10004613	5300	99	-	-
		OFFSHORE	C10004937	5300	0	-	-

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ROSETTI MARINO

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003312	A	25-07-TP-007 C10003278	BLPH-MV-014 not istalled	.		AMancini 2025-01-30	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003313	A	25-07-TP-007 C10003278	BLPH-MV-013 not installed	.		AMancini 2025-01-30	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003112	B	25-07-TP-007 C10003277	For all supports S-211 the gap, the isolation rubber, the PTFE and the nuts shall be checked during the reinstatement phase.	.		KAlbonetti 2025-01-21	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003113	B	25-07-TP-007 C10003277	Point n.4 of the ITR has not been checked due the fact that all valves have been removed all the alignment to terminal points are uncheckable.	.		KAlbonetti 2025-01-21	2025-02-07	LNovaga 2025-02-07	2025-02-07
C30003314	B	25-07-TP-007 C10003278	Support PS-03071.1 not installed	.		AMancini 2025-01-30	2025-02-11	LNovaga 2025-02-11	2025-02-11
C30003523	B	25-07-TP-007 C10003279	General touch up do to, especially near the supports of the piping line.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003528	B	25-07-TP-007 C10003279	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-05	2025-03-21	LNovaga 2025-03-21	2025-03-21
C30003579	B	25-07-TP-068 C10004793	All support and standard will be check during reinstatement phase	.		LNovaga 2025-02-06	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004108	B	25-07-TP-068 C10004794	The isometric is different from the field, produce a mark up. Support PS-02136.1 is missing. There is a S-211 between EW7 and EW8, distance from	.		LNovaga 2025-02-25			

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Piping

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30004109	B	25-07-TP-068 C10004794	The hole on the ptfe on new support (see PL C30004108) is larger than the diameter of the washer.	.		LNovaga 2025-02-25	2025-02-25	KAlbonetti 2025-02-25	2025-02-25
C30004166	B	25-07-TP-068 C10004795	Color coding and fluid direction are missing.	.		KAlbonetti 2025-02-27	2025-03-21	LNovaga 2025-03-21	2025-03-21

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

Instrumental

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003280	B	C-25-XY-011/00 -JE-13002 C10000120	The bending radius is not with in the specified limits , is not fix with AISI cable ties.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003298	B	C-25-XY-017/00 -JE-13002 C10000122	The cable need a support near the valve 25-XY-017. See attached photo.	.		Gtangianu 2025-01-29	2025-02-08	AAndreani 2025-02-08	2025-02-08
C30003310	B	C-25-XV-024/00 -JE-12005 C10000102	The cable is not support .	.		APolo 2025-01-30	2025-03-05	JKrizanic 2025-03-05	2025-03-05
C30003311	B	C-25-XY-024/00 -JE-13002 C10000124	The cable is not support .	.		APolo 2025-01-30	2025-03-05	JKrizanic 2025-03-05	2025-03-05
C30003565	B	C-25-XV-017/00 -JE-12004 C10000088	The cable is not support .	.		APolo 2025-02-05	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003567	B	C-25-SDY-001/0 0-JE-23002 C10000176	the cable installed is temporary. To be replaced	.		APolo 2025-02-05	2025-04-08	Gtangianu 2025-04-08	2025-04-08
C30003602	B	C-25-PT-002/00 -JE-21002 C10000136	Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.	.		APolo 2025-02-08	2025-02-22	JKrizanic 2025-02-22	2025-02-22
C30003606	B	C-25-PT-001/00 -JE-11003 C10000048	Missing the "side slot" on the cable tray (for cable passage) so that the cable is not in crash with the piping.	.		APolo 2025-02-08	2025-03-01	AAndreani 2025-03-01	2025-03-01
C30003607	B	C-25-PT-001/00 -JE-11003 C10000048	Missing cable tag SS , near JB 00-JE-11003	.		APolo 2025-02-08	2025-02-21	APolo 2025-02-21	2025-02-21

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003287	B	25-XY-004 C10001714	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003288	B	25-XY-008 C10001716	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-29	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003293	B	25-ZSHL-008 C10001729	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003294	B	25-ZSHL-014 C10001733	document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.		Gtangianu 2025-01-29			
C30003295	B	25-ZSHL-011 C10001731	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003297	B	25-ZSHL-004 C10001727	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-29			
C30003299	B	25-ZSHL-020 C10001737	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.		Gtangianu 2025-01-29			
C30003300	B	25-XY-014 C10001720	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field.See attached photo.	.		Gtangianu 2025-01-29			
C30003301	B	25-XY-017 C10001722	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field . See attached photo.	.		Gtangianu 2025-01-29			

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003302	B	25-XY-020 C10001724	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field. See attached photo.	.		Gtangianu 2025-01-29			
C30003305	B	25-XY-014 C10001720	Missing tag plate SS on the solenoid valve.(25-XY-014).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003306	B	25-XY-017 C10001722	Missing tag plate SS on the solenoid valve.(25-XY-017).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003307	B	25-XY-020 C10001724	Missing tag plate SS on the solenoid valve.(25-XY-020).	.		Gtangianu 2025-01-29	2025-02-21	AAndreani 2025-02-21	2025-02-21
C30003324	B	25-ZSHL-024 C10002039	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-30			
C30003325	B	25-XV-004 C10001590	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003326	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufactuer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003327	B	25-XV-004 C10001590	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30003328	B	25-XV-008 C10001592	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003329	B	25-XV-008 C10001592	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003330	B	25-XV-011 C10001594	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003331	B	25-XV-011 C10001594	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003332	B	25-XV-014 C10001596	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003333	B	25-XV-014 C10001596	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003334	B	25-XV-017 C10001598	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003335	B	25-XV-017 C10001598	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			
C30003336	B	25-XV-020 C10001600	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-30	2025-03-20	LNovaga 2025-03-20	2025-03-20
C30003337	B	25-XV-020 C10001600	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-30			

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003338	B	25-ZSHL-001 C10001726	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-30			
C30003365	B	25-PCV-004 C10001755	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-30			
C30003367	B	25-PCV-004 C10001755	Equipment tag plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003371	B	25-PCV-004 C10001755	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003372	B	25-PCV-008 C10001757	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003375	B	25-PCV-008 C10001757	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003377	B	25-PCV-008 C10001757	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003378	B	25-PCV-011 C10001759	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003379	B	25-PCV-011 C10001759	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05

Project CROSSWIND

PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003380	B	25-PCV-011 C10001759	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003381	B	25-PCV-014 C10001761	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003382	B	25-PCV-014 C10001761	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003383	B	25-PCV-014 C10001761	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003385	B	25-PCV-017 C10001763	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003387	B	25-PCV-017 C10001763	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003389	B	25-PCV-017 C10001763	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003393	B	25-PCV-020 C10001765	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30			
C30003394	B	25-PCV-020 C10001765	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-30	2025-02-05	Lmussi 2025-02-05	2025-02-05

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PUNCH LIST REPORT

SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003395	B	25-PCV-020 C10001765	Equipment data plate is missing	.		Lmussi 2025-01-30	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003396	B	25-PCV-004 C10001755	On ATEX register equipment model, SN and Atex execution are missing	.		Lmussi 2025-01-30	2025-03-06	LNovaga 2025-03-06	2025-03-06
C30003407	B	25-XV-024 C10001602	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-22	LNovaga 2025-04-22	2025-04-22
C30003408	B	25-XV-024 C10001602	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 8) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			
C30003409	B	25-PCV-024 C10002040	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-31			
C30003410	B	25-PCV-024 C10002040	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-31	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003411	B	25-PCV-024 C10002040	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003412	B	25-SDV-001 C10001588	Scratch on painting, general touch-up to be performed	.		Lmussi 2025-01-31	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003413	B	25-SDV-001 C10001588	On ATEX register (123A90-DDL-EL-LIS-20094 sheet 7) Manufacturer, Atex certificate, SN, Atex marking etc. are missing or wrong.	.		Lmussi 2025-01-31			

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003414	B	25-XY-024 C10002038	Missing tag SS , on Solenoid Valve.	.		APolo 2025-01-31	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003415	B	25-XY-024 C10002038	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-01-31			
C30003429	B	25-PCV-001 C10001754	On ATEX register Model, SN, Atex data are missing	.		Lmussi 2025-01-31			
C30003431	B	25-PCV-001 C10001754	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003433	B	25-PCV-001 C10001754	ATEX D.o.C. by Manufacturer is missing	.		Lmussi 2025-01-31	2025-02-05	Lmussi 2025-02-05	2025-02-05
C30003436	B	25-PG -004 C10004819	Equipment Atex label is missing	.		Lmussi 2025-01-31			
C30003437	B	25-PG -004 C10004819	Equipment tag plate is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003440	B	25-PG -008 C10004821	Equipment Atex label is missing	.		Lmussi 2025-01-31			
C30003441	B	25-PG -008 C10004821	Equipment tag is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003442	B	25-PG -011 C10004823	Equipment ATEX label is missing	.		Lmussi 2025-01-31			
C30003443	B	25-PG -011 C10004823	Equipment tag is missing	.		Lmussi 2025-01-31	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003451	B	25-PG -008 C10004821	Breathing valve is missing	.		Lmussi 2025-02-01	2025-03-26	Gtangianu 2025-03-26	2025-03-26
C30003452	B	25-PG -014 C10004825	Equipment tag is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003453	B	25-PG -014 C10004825	Equipment Atex label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003454	B	25-PG -017 C10004827	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003455	B	25-PG -017 C10004827	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09
C30003456	B	25-PG -020 C10004829	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003457	B	25-PG -020 C10004829	Equipment ATEX label is missing	.		Lmussi 2025-02-01	2025-04-09	LNovaga 2025-04-09	2025-04-09

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003458	B	25-PG -024 C10004831	Equipment ATEX label is missing	.		Lmussi 2025-02-01			
C30003459	B	25-PG -024 C10004831	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-03-01	Lmussi 2025-03-01	2025-03-01
C30003460	B	25-PG-001 C10004846	Equipment ATEX label is missing	.		Lmussi 2025-02-01			
C30003461	B	25-PG-001 C10004846	Equipment tag plate is missing	.		Lmussi 2025-02-01	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003470	B	25-PSV-008 C10004835	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003471	B	25-PSV-008 C10004835	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003472	B	25-PSV-008 C10004835	ATEX label is missing	.		Lmussi 2025-02-03			
C30003473	B	25-PSV-008 C10004835	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003474	B	25-PSV-011 C10004837	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003475	B	25-PSV-011 C10004837	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003476	B	25-PSV-011 C10004837	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003477	B	25-PSV-011 C10004837	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003478	B	25-PSV-014 C10004839	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003479	B	25-PSV-014 C10004839	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003480	B	25-PSV-014 C10004839	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003481	B	25-PSV-014 C10004839	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003482	B	25-PSV-017 C10004841	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003483	B	25-PSV-017 C10004841	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003484	B	25-PSV-017 C10004841	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003485	B	25-PSV-017 C10004841	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003486	B	25-PSV-020 C10004843	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003487	B	25-PSV-020 C10004843	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003488	B	25-PSV-020 C10004843	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003489	B	25-PSV-020 C10004843	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003490	B	25-PSV-024 C10004845	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003491	B	25-PSV-024 C10004845	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003492	B	25-PSV-024 C10004845	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003493	B	25-PSV-024 C10004845	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003494	B	25-PSV-001 C10004849	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003495	B	25-PSV-001 C10004849	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003496	B	25-PSV-001 C10004849	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003497	B	25-PSV-001 C10004849	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			
C30003502	B	25-PSV-004 C10004833	Equipment ATEX identification label is missing	.		Lmussi 2025-02-03			
C30003503	B	25-PSV-004 C10004833	ATEX Declaration of Conformity by Manufacturer is missing	.		Lmussi 2025-02-03			
C30003504	B	25-PSV-004 C10004833	Equipment tag plate is missing	.		Lmussi 2025-02-03	2025-02-16	Lmussi 2025-02-16	2025-02-16
C30003505	B	25-PSV-004 C10004833	On ATEX register (123A90-DDL-EL-LIS-20094) equipment is missing	.		Lmussi 2025-02-03			

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SYSTEM 25 Hydrogen Storage
SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003563	B	25-XY-011 C10001718	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003564	B	25-XY-011 C10001718	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003566	B	25-ZSHL-017 C10001735	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003568	B	25-SDY-001 C10001712	Doc: document 123A90-DDL-EL-LIS-20094 does not report what was installed in the field (see picture)	.		APolo 2025-02-05			
C30003569	B	25-SDY-001 C10001712	Missing tag SS , on Solenoid Valve.	.		APolo 2025-02-05	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003603	B	25-PT-002 C10001483	Missing the drainage device (tubing).	.		APolo 2025-02-08	2025-02-22	JKrizanic 2025-02-22	2025-02-22
C30003604	B	25-PT-002 C10001483	Missing tag SS , on the instrument.	.		APolo 2025-02-08	2025-02-24	AAndreani 2025-02-24	2025-02-24
C30003605	B	25-PT-002 C10001483	Missing traffolyte tag side instrument	.		APolo 2025-02-08	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003608	B	25-PT-001 C10001482	Missing tag SS , on the instrument.	.		APolo 2025-02-08	2025-02-24	AAndreani 2025-02-24	2025-02-24

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SYSTEM 25 Hydrogen Storage

SUBSYSTEM 25-07 Hydrogen Storage Vessels Header (Inlet)

ATEX

CODE	CAT	ITEM	DEFECT DESCRIPTION	CORRECTIVE ACTION	PERFORMED ACTION	ISSUED	CARRIED	CHECKED	APPROVED
C30003609	B	25-PT-001 C10001482	Missing traffolyte tag side instrument	.		APolo 2025-02-08	2025-02-13	AAndreani 2025-02-13	2025-02-13
C30003610	B	25-PT-001 C10001482	Missing the drainage device (tubing)	.		APolo 2025-02-08	2025-03-01	AAndreani 2025-03-01	2025-03-01

7.3 Equipment Relates Technical Queries (where applicable)

7.4 As Built Documentation (where applicable)

7.5 Management of Changes – Summary Table of tasks and Details of Affected related Documentation (where applicable)

ITEM	Tag	123A90-PML-COM-PRO-03041 : OTP -Hydrogen Storage and Venting Systems				Dwg	123A90-PML-COM-PRO-03041
	S/Sys	25-07 : Hydrogen Storage Vessels Header (Inlet)				Module	
TASK	code	C10004937		Location	Offshore Activities	User	Rosetti Marino Quality Control
FORM	Process	COMM	Activity OTS	Discipline	Miscellaneous Form 5300		Operational Test Procedure

OTP - OPERATIONAL TEST PROCEDURE

Attached procedure number:

Associated subsystems:

Completion date:

Comments/Remarks:

	Performed by	☐ WITNESS ☐ REVIEW	☐ WITNESS ☐ REVIEW
	COMMISSIONING DISCIPLINE LEAD	RM COMMISSIONING MANAGER	CPY COMMISSIONING MANAGER
Name			
Date			
Signature			

Section 6 PIPING AND VESSEL PREPARATION

Section 6.1 Final Mechanical / Vessel Inspection Checks Index

NOT APPLICABLE

Section 6.2 Leak Test / Drying / Inerting Test Sheets Index

NOT APPLICABLE

Section 6.3 Chemical Loading & First Fill records Index

NOT APPLICABLE

Section 6.4 Chemical Cleaning Reports and Records Index

NOT APPLICABLE

Section 6.5 Lubrication Schedule

NOT APPLICABLE

Section 7 VENDOR

Section 7.1 Vendor Package Summary Index

NOT APPLICABLE

Section 7.2 SAT Procedure with associated punch list and reference (Front Page)

NOT APPLICABLE

Section 7.3 Vendor Spares & Special Tools lists references

NOT APPLICABLE

Section 7.4 Vendor Data / Operations / Maintenance Manuals References

NOT APPLICABLE

Section 8 LIST OF MODIFICATIONS

NOT APPLICABLE

Section 8.1 List of changes

NOT APPLICABLE

Section 9 SUPPORTING DOCUMENTS

NOT APPLICABLE