



Tecnimont S.p.A.

REPSOL POLIMEROS  
SA

4274\_CONST

ALBA PROJECT-PP AND PEL PLANTS



MOD-ITP-XL_220		RELEASE OF SPOOLS FROM WORKSHOP	Report n° <b>IP-WSR-P-310-000404_RFI5388_MOD-ITP-XL_220</b>
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	<b>IP-WSR-P-310-000404_RFI5388 - IP Spool Release From Workshop</b>		

Sheet 01/01

The Present Inspection Package contains the following Elements:

7112-DMW64001-1-SP01-03094;7112-DMW64001-1-SP02-03093;2211-PCW70B06-1-SP03-01103;2211-DMW91Q01-3-SP09-03092;2121-IA91F63-7-SP16-00497;2121-IA91F63-7-SP15-00496;2121-IA91F63-7-SP14-00495;2121-IA91F63-2-SP08-00484;2121-IA91F62-6-SP14-00504;2121-IA91F62-6-SP15-00476;2121-IA91F62-5-S  
P12-00475;2121-IA91F62-5-SP11-00474;2121-IA91F62-5-SP10-00473;2121-IA91F62-4-SP03-00472;2121-IA91F62-4-SP02-00471;2121-IA91F62-4-SP01-00470;2121-IA91F62-2-SP09-00467;2121-IA91F62-1-SP13-00931;1211-PCW89017-1-SP03-00359;1211-PCW89017-1-SP02-00358;1211-PCW89017-1-SP01-00357;1211-PCW89012-2-SP03-01102;1211-PCW89012-2-SP02-01101;1211-PCW89009-1-SP01-00356;1211-LO89008-1-SP02-00343;1211-LO89008-1-SP01-00342;1211-DMW64001-2-SP03-03091;1127-LS50009-6-SP11-00807;1127-LS50009-6-SP10-00806;1126-LO32008-1-SP03-00841;1115-DMW64003-2-SP04-03090;1115-DMW64003-1-SP02-03071;1115-DMW63001-1-SP03-03076

Spool No.	Ready for destination to:  P: Painting (1) W: Wrapping F: Field	NDE Class	Check List					
			Visual Inspect	Traceability OK (2)	Pending NDE / PMI (Yes/No/NA)	PWHT / HARDNESS (Yes/No/NA)	Inside Cleaning (3) (Yes/No/NA)	Spool Identified (Yes/No/NA)

On behalf of Tecnímont / R  
Piping Supervisor  
Cristi Sandu *C. Sandu*  
21.10.2024

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	<input type="checkbox"/> Y / N	Punch List Produced
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name	Signature 			
CONTRACTOR	21-10-2024	Sergio Morales Collantes				
COMPANY						
(Free)						



Tecnimont S.p.A.

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P12-00475;2121-IA91F62-5-SP11-00474;2121-IA91F62-5-SP10-00473;2121-IA91F62-4-SP03-00472;2121-IA91F62-4-SP02-00471;2121-IA91F62-4-SP01-00470;2121-IA91F62-2-SP09-00467;2121-IA91F62-1-SP13-00931;1211-PCW89017-1-SP03-00359;1211-PCW89017-1-SP02-00358;1211-PCW89017-1-SP01-00357;1211-PCW89012-2-SP03-01102;1211-PCW89012-2-SP02-01101;1211-PCW89009-1-SP01-00356;1211-LO89008-1-SP02-00343;1211-LO89008-1-SP01-00342;1211-DMW64001-2-SP03-03091;1127-LS50009-6-SP11-00807;1127-LS50009-6-SP10-00806;1126-LO32008-1-SP03-00841;1115-DMW64003-2-SP04-03090;1115-DMW64003-1-SP02-03071;1115-DMW63001-1-SP03-03076

NOTES (\*): 4274-XH-PQ-00000001

- 1) Painting cycle to be indicated.
- 2) Refer to: **4274-LZ-PC-00000214** (COMPANY 4001008GEN-PC-214) "Management of Site Metallic Welding Activities" and **4274-LZ-PC-00000215** (COMPANY 4001008GEN-PC-215) "Procedure for Traceability of Piping Material"
- 3) Refer to: **4274-XH-SG-00000003** (COMPANY 45-L-45-000-2-00-80005) "Specification for Piping Fabrication & Erection Amendment to EC-L-51.01 and EC-L-51.02" and **4274-XH-PQ-00000001** (COMPANY 45-L-45-000-2-00-80081) "Inspection and Test Plan for Steel Piping Works"

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu C. Sandu  
21.10.2024

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input checked="" type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y / N	Punch List Produced
			Date [DD-MMM-YYYY]	Name		Signature
SUBCONTRACTOR			21-10-2024	Sergio Morales Collantes		
CONTRACTOR						
COMPANY						
(Free)						

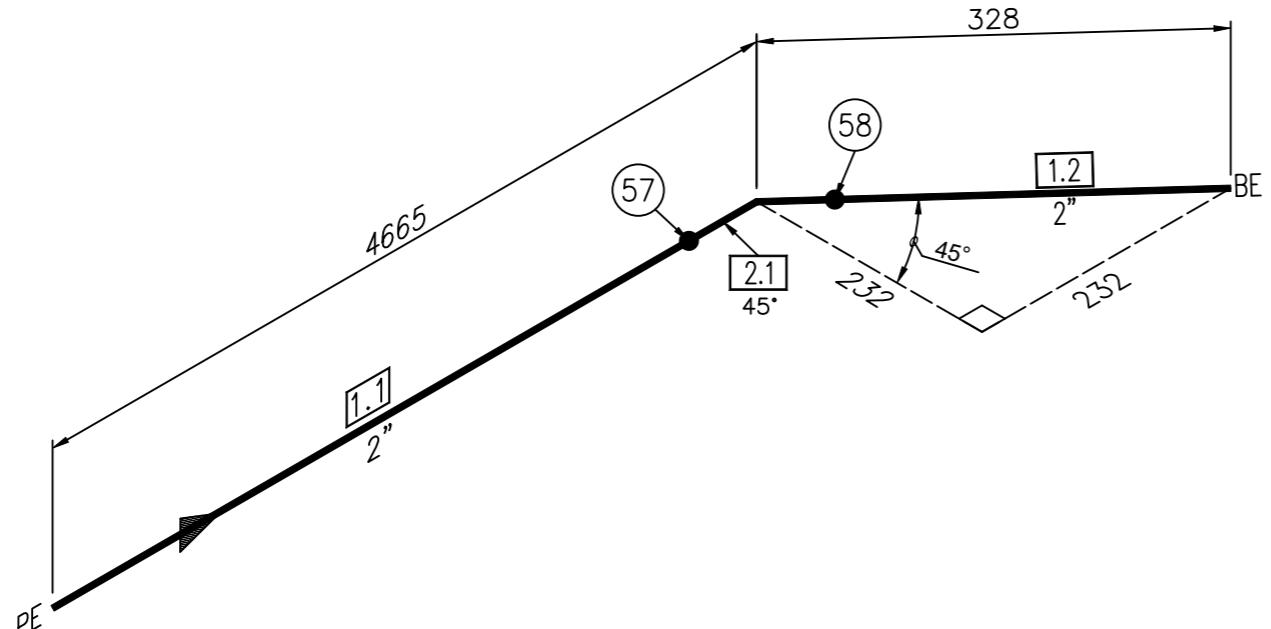
 <b>Tecnimont</b>	<p style="text-align: center;"><b>Punch List</b></p> <p style="text-align: center;"><b>PUNCH LIST</b></p>	<p style="text-align: center;"><b>IDENTIFICATION CODE</b></p>			
		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>SHEET 1 / 1</td> <td>DOC.CLASS 1</td> <td>ISSUE 01</td> </tr> </table>	SHEET 1 / 1	DOC.CLASS 1	ISSUE 01
SHEET 1 / 1	DOC.CLASS 1	ISSUE 01			
 <b>MECWIDE</b> <small>Engineering Solutions</small>	<p><b>ISO ID:</b> <a href="#">2121-IA91F62-1</a></p>				

## NOTES AND REMARKS

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 *C. Sandu*

	DATE (dd-Mmm-YYYY)	NAME	SIGNATURE
SUBCONTRACTOR			
CONTRACTOR			
COMPANY			
(Free)			



<div style="text-align: center; padding: 10px;">    <b>N</b> </div>	<div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;"><b>BILL OF MATERIAL</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="text-align: center;">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LONGUEUR</th> <th>DIAMÉTRE</th> <th>SCH/mm</th> <th>DESCRIPTION / MATÉRIEL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.1</td> <td>4,628</td> <td>2"</td> <td>S-10s</td> <td>PIPE - A312-TP304/304L DUAL GR BE SMLS, PExBE</td> <td>I3364302</td> </tr> <tr> <td>1.2</td> <td>0,291</td> <td>2"</td> <td>S-10s</td> <td>PIPE - A312-TP304/304L DUAL GR BE SMLS, BExBE</td> <td>I3364302</td> </tr> </tbody> </table>   <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="text-align: center;">WELD FITTINGS</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMÉTRE</th> <th>SCH/mm</th> <th>DESCRIPTION / MATÉRIEL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>2.1</td> <td>1</td> <td>2"</td> <td>S-10s</td> <td>45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259145</td> </tr> </tbody> </table> </div>	PIPE					ITEM	LONGUEUR	DIAMÉTRE	SCH/mm	DESCRIPTION / MATÉRIEL	ITEM CODE	1.1	4,628	2"	S-10s	PIPE - A312-TP304/304L DUAL GR BE SMLS, PExBE	I3364302	1.2	0,291	2"	S-10s	PIPE - A312-TP304/304L DUAL GR BE SMLS, BExBE	I3364302	WELD FITTINGS					ITEM	QT	DIAMÉTRE	SCH/mm	DESCRIPTION / MATÉRIEL	ITEM CODE	2.1	1	2"	S-10s	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145
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<p>On behalf of Tecnimont / R Piping Supervisor Cristi Sandu 18.10.2024 <i>C. Sandu</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Rev.</td> <td>Date</td> <td>DRW</td> <td>Check 1</td> <td>Check 2</td> <td>Marking Color: GREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Weld Class: 6C4-M</td> </tr> <tr> <td>0</td> <td>01/03/2024</td> <td>AOM</td> <td>MCM</td> <td>PCO</td> <td>Paint System: NA</td> </tr> </table> <p style="text-align: center;"><b>Sergio Morales</b> <b>Date: 10-10-24</b></p> <p style="text-align: center;">   <b>boccard</b>          Alliance for success          Boccard Portugal, Lda.       </p>					Rev.	Date	DRW	Check 1	Check 2	Marking Color: GREEN						Weld Class: 6C4-M	0	01/03/2024	AOM	MCM	PCO	Paint System: NA	<b>Weld Map Sticker</b>																		
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# Spool Material List

Contract : P2308

Client NERVION

Job : P2308S

Project ALBA

Job	Spool	Piece Mark	Drawing	Rev			
Item No Tag No ID No	Qty	Size1 Sch1	Size2 Sch2	Description	Heat No MTR No Folder No	Unit Weight Kgs	Weight Kgs
<b>P2308S</b>	<b>00931</b>	<b>2121-IA91F62-1-SP13-00931</b>		<b>2121-IA91F62-1</b>		<b>00</b>	
1.1	4,628	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	18,19
40391							
1.2	,291	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	1,14
40391							
2.1	1	2.0000 S10S	0.0000 NA	45 ELL, SEAMLESS, A403-WP304L	2K113-E002 0408	0,24	0,24
42790							

On behalf of Tecnimont / R  
 Piping Supervisor  
 Cristi Sandu *C. Sandu*  
 18.10.2024

Number of Items : 3

Total Weight : 19,57

<b>Signature</b>	<b>QA</b> 	<b>Client</b>  Sergio Morales Date: 10-10-24
	<b>Date</b> 2024-09-11 16:42:54	

<b>CTA Group</b>	Kg 1138	Mt 305,57	Pz No.: 49
This document is reproduced by a computerized system and is conform to the original	Heat No.: S-23594	Cta's job: OC0000319	Date: 29/02/2024
Customer : TECNIMONT SPA AFC	P.O. No.: PO:		Item: I3364302

12

7500118753 N.PRO: 4274 - PP+PE SINES (PORTUGAL) EPC

**SURAJ** LIMITED(AN ISO 9001 : 2015 COMPANY)  
(AN ISO 14001 : 2015 COMPANY)

(AN ISO 45001 : 2018 COMPANY)

(AN PED 2014/68/EU APPROVED COMPANY)

**WORKS :**Survey No. 779/A, Thol, Kadi - Sanand Highway,  
Tal.-Kadi, Dist. Mehsana, Gujarat (India)  
Tel. : (02764) 274216 / 27417 Fax : (02764) 274419  
Email : quality@surajgroup.com  
Visit us at www.surajgroup.com**F / QA / 24****REV. NO. 10**

REGD. OFFICE :  
'Suraj House',  
Opp. Usmanpura Garden, Ashram Road,  
Ahmedabad - 380 014, Gujarat (INDIA)  
Tel. : 0091-79-2754 0720 / 2754 0721  
Fax : 0091-79-2754 0722  
Email : suraj@surajgroup.com

**INSPECTION CERTIFICATE****In Accordance with EN 10204/3.1**

<b>Customer:</b> Commerciale Tubi Acciaio S.P.A.	<b>T.C No :</b> 680	<b>Date:</b> 26.03.2022
<b>Product :</b> Austenitic S.S Seamless Cold Finish,Solution Annealed,Pickled & Passivated Pipes.	<b>P.O.No :</b> OS-0000175	<b>Date:</b> 14.10.2021
	<b>W.O.No :</b> 2122/OEP400035	<b>Date:</b> 16.10.2021

Sr. No	Specification	Grade	Heat No.	Dimensions		Quantity			Hydro Test Pressure (Psi)
				NPS	SCH	Length Mtr	Pcs	Total Meter	
27	ASTM A-312 Ed.2019 SA-312 of ASME Sec.II Part "A" Ed.2019 ASME B36.19, EN 10216-5 TC1 NACE MR 0175/ISO 15156, NACE MR 0103	TP 304/304L 1.4301/ 1.4307	S-23594	2	10S	RL	171	1075.220	1400

**Chemical Analysis %**

Heat No.	Required	C	Mn	P	S	Si	Cr	Ni	Mo	N	Ti
	Min	--	--	--	--	--	18.00	8.00	--	--	--
	Max	0.030	2.00	0.040	0.015	1.00	19.50	10.00	--	0.100	--
S-23594	Heat Analysis	0.025	1.72	0.038	0.008	0.41	18.20	8.08	--	0.079	--

**Mechanical Test**

Heat No.	Required			Gauge Width	Flattening Test	Hardness Test	Impact Test			IGC Test				
	Tensile strength Mpa	Yield strength					Max-90 HRB	100 Joule Min.(AVG)	N/A	ASTM A-262 Practice"E" & ISO 3651-2 Method "A"				
		Rp0.2% Mpa	Rp1 % Mpa							Satisfactory				
MAX	690	--	--	--										
MIN	515	205	230	40										
S-23594	624.31	316.22	322.57	55.21	25.40	Satisfactory	76-78							
	623.05	315.91	320.42	54.89			73-75							

Heat Treatment : Solution annealing conducted at 1045-1060°C temperature and rapid water quenching after final cold process.

Marking on pipes: **SURAJ LTD SPECIFICATION GRADE SIZE**CFD EN 10216-5 TC1 **EN GRADE SL NO. \_\_\_\_\_ HEAT NO. \_\_\_\_\_ P O NO. \_\_\_\_\_****Remarks:**

- \* 100% Hydro test done at required pressure for 10 second holding time found satisfactory without any leakage.
- \* 100% Visual, Dimensions(OD/THK/LENGTH) & Product Marking checked-satisfy the requirement of specification.
- \* 100% Positive Material Identification (PMI) done by SL & conforming to grade as per specification.
- \* Intergranular Corrosion Test (IGC) Conducted as per ASTM A262 Pr"E" & ISO 3651-2 method-A-No crack observed on bend portion at 20X.
- \* Pickling and Passivation Conducted as per ASTM A-380.
- \* "Approved acc.to AD 2000-MERKBLATT W0 and certified acc.to PED (2014/68/EU) by certification body for pressure equipment of TUV NORD SYSTEMS (NOTIFIED BODY,REG NO.;0045)"
- \* Tensile test piece taken from the same lot as certified and tested in longitudinal direction.
- \* Melting process:EIF+AOD & Material is free of mercury & radioactive contamination.

Prepared by

**COMMERCIALE TUBI ACCIAIO S.P.A.****QUALITY CONTROL DEPARTMENT**

For, Suraj Limited.  
C.I.Nayak  
Dept,Head Quality

Page no. 01 of 12

We hereby certify that the material described herein are in accordance with the specification and results comply with the requirements of the purchase order.

**APPLUS OBO TCM**  
28 03 24



Zhejiang Yuli Pipeline Industry Co Ltd

**Mill Test Certificate**

BAJA INDUSTRIAL ZONE SHACHEN TOWN, LONGWAN DISTRICT, WENZHOU, ZHEJIANG, CHINA

Certificate: EN10204/3.1

Certificate-No: MC-TYF-S-20080627003

Page 3 of 200

L/C NO.:32390CI003798/08

Customer: [REDACTED]	Marking:
Order No.: YL006	• Manufacture's Mark
Description: Seamless stainless steel BW fittings	• Dimension & Schedule
Specification: ANSI/ASTM B16.9, B16.25	• Material S(Seamless)orW(Welded)
Material: ASTM A403/ASME SA403-WPS-3041/3041(2005)	• Heat Number & Standard
Workmanship: Cold forming	
Heat Treatment: Solution annealing and quenched	

## Extend of material delivery:

Item No.	Description	Dimension	Quantity	Heat No.	Base Cert.No.	Remarks
1	ELB 45L/R	2" SCH10S	70	2K113-E002	200805087276014	
2						
3						
4						
5						

## Inspection Results (The requirements are fulfilled as listed in Annex):

## A. Chemical Analysis:

Heat No.	C%	Mn%	Si%	S%	P%	Cr%	Ni%	Mo%	Cu%	Ti%
	0.020	1.26	0.45	0.003	0.023	18.51	8.21			
1	2K113-E002									
2										
3										
4										
5										

## B. Mechanical Properties &amp; Tensile Inspection :

Heat No.	Yield Strength		Tensile Strength	Elongation	Hardness	Charpy Impact			
	0.2%	1%							
1	280		620	57	76				
2									
3									
4									
5									

## C. Inspection and Related Data Verify:

Dimensional check	OK	Hydrostatic pressure test	/
Surface quality inspection	OK	Radiography Examination	/
Pencuntion examination	OK	IC to ASTM A262 "E"	OK
PMI	OK	HT to NACE MR-0175	OK

## D. Remarks:

Work inspector:	
	2008.04.27

Customer:

TECNIMONT S.p.A.

Order: 7500118979 - 26.01.24 - Item n.: 67 - Project: 4274 - PP+PE Sines (Portugal) EPC - Our ref.: OCVEIT202400000474

Description:

CURVE 45° LR 2" SCH.10/S SEAMLESS  
I2259145

Heat num. or Pcs. marking: 2K113-E002 - Qty:22,00

Protocol: CTCERC202400003104 \* CERTIFIED TRUE COPY

\* Issued 03-04-2024



Contract : P2300

Drawing : 2121-IA91F62-1

## Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00931

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-1-SP13-00931

Weld data				Welding												Control														
Weld No.	Type	Dia	Sch	Weld /Thk	Proc.	1st Pass	1st MTR	Final Pass	Final MTR	Final MTR	Dim	Date DIM	Visual	Date Visual	PT	Date PT	MT	Date MT	PMI	Date PMI	Ferite	Date Ferrite	PWHT	Date PWHT	BHN	Date BHN	Ultra	Date UT	Xray	Date Xray
0057	BW	2	S10S	MW.26_BW	AE	09-07-2024	4712055	AE	09-07-2024	4712055			000793	12-08-2024					000861	07-09-2024										
0058	BW	2	S10S	MW.26_BW	AE	09-07-2024	4712055	AE	09-07-2024	4712055			000793	12-08-2024					000861	07-09-2024										

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 C. Sandu

Notes:

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Signature	Boccard Portugal QC	Client
		Sergio Morales Date: 10-10-24
Date	11-09-2024 16:42:54	



# Shop QC Inspection Report

P2308-000817

Client : NERVION  
 Contract : P2308 / Project : ALBA  
 Material: Stainless Steel 304, 316, 317

Job number: P2308S  
 Spool N°: 00931  
 Piece Mark: 2121-IA91F62-1-SP13-00931

Procedure / Instruction reference: 20.2 IT 011 MF 324 - Rev: A

Control Date: 12-08-2024

Remarks: The results refer to the controlled items

Actions / Tasks List	Required		Done/ Identified
	Yes	No	
Welder / weld list labels printed and pasted on the spool sheet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spool Barcode label printed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spool is identified with the metal tag	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spool stencil required (hard stamp low stress)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Joint preparation & cleanliness / spool dimensions checked	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Level, plumb, Two holes, flanges and internal alignment, Squareness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Material checked (type of material, rate, heat numbers, filler material, etc.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Welders list match with actual welder stencil / Id. on pipe	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PWHT- Spool identified as per Procedure / Instruction for PWHT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HT ( Hardness Test)- Welds identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PMI - Welds identified as per Procedure / Instruction	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FE ( Ferrite test) - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
UT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spool identified (by marker) as per Procedure / Instruction (Job number, sheet number and Paint type if required)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hydro - Spool identified as per Procedure / Instruction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Cleanliness - Cleaned inside free of slag, scale, sand, weld spatter, cutting chips, etc. and blow out by compressed air	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments:

Performed by: MATOS, MARCO (N2 VT/PT)  Date: 12-08-2024  Signature 	QA/QC Inspection: RAIMUNDO, MARIANA  Date: 11-09-2024 16:42:54  Signature 	Customer Inspection: <b>Sergio Morales</b>  Date: 10-10-24  
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On behalf of Tecnimont / R  
 Piping Supervisor  
 Cristi Sandu  
 18.10.2024 *C. Sandu*

# Visual Examination Report (Welds)

P2308-000793

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00931

Procedure &amp; Instructions: 4274-LZ-VF-W31010370QAC04 - Rev: 1

Project : ALBA

Piece Mark: 2121-IA91F62-1-SP13-00931

Testing Date: 12-08-2024

Remarks: The results refer to the controlled items

Unacceptable indications for welding

ACCEPTANCE CRITERIA : ASME B31.3

Weld reinforcement greater than specified in project procedure

The illumination of the surface must be at least 500 lux. However, a value of 1000lux is recommended

Any linear indications greater than specified in project procedure, surface porosity with rounded indications having a dimension greater than specified project procedure

Indications of lack of fusion open to the surface / Cracks located on external surfaces

Surface finish that could interfere with other testing required

Incomplete penetration of welds / Indications of undercut on surfaces which are greater than specified in project procedure

Misalignment greater than specified in applicable code or poor fit up of weld joints

## Identification

Weld No.	Weld Desc.	Welder	Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
0057	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	26	X			Direct	
0058	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	26	X			Direct	

Sketch / Photo:

## Defects

Clustered Porosity	CP	Porosity	P	Cap	C	Lack of Cleanup	LC	Hollow in Cap	W
Unibmly Porosity	UP	Slag	S	Undercut	UC	Crack	CR	Surface	SU

Test Performed by: MATOS, MARCO (N2 VT/PT)

QA/QC Inspection: RAIMUNDO, MARIANA

Customer Inspection:

Date: 12-08-2024

Sergio Morales



Signature



Signature



Date: 10-10-24

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 C. Sandu



# Positive Material Identification Report (PMI)

P2308-000861

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00931

Piece Mark: 2121-IA91F62-1-SP13-00931

Material: Stainless Steel 304, 316, 317

Procedure / Instruction reference: 4274-LZ-VD-FW31010370QAC11 - Rev: 1

PMI Equipment : Niton XL3t800 Serial N° 32735 (FP01)

Equipment Deviation : + - 5%

Testing Date: 07-09-2024

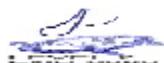
Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0057	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	690	0	0	0	8	69	1	19	0	0	0	X		
0058	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	688	0	0	0	9	69	2	18	0	0	0	X		
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	691	0	0	0	8	71	1	18	0	0	0	X		
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	687	0	0	0	8	71	1	17	0	0	0	X		
2.1	2.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (2K113-E002)	689	0	0	0	8	70	2	18	0	0	0	X		

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 C. Sandu

Test Performed by: GONCALVES(QA), J. (N2 PT/RT) QA/QC Inspection: RAIMUNDO, MARIANA

Date: 07-09-2024

Signature



Date: 11-09-2024 16:42:54

Signature



Customer Inspection:

Sergio Morales

Date:

Signature Date: 10-10-24



Boccard Portugal, Lda  
Zona Industrial de Montalvo, Lote 3  
Constância, Portugal 2250-999

## Certificate of PMI Reading

XL3t-32735

Reading No	690
Mode	ALLOY
Time	2024-09-07 13:13
Duration	6.06
Sequence	Final
Alloy1	304SS : 0.12
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.050
Sn	< LOD	:	0.067
Pd	< LOD	:	0.048
Ag	< LOD	:	0.162
Al	< LOD	:	80.000
Mo	0.049	±	0.011
Nb	< LOD	:	0.009
Zr	< LOD	:	0.004
Bi	< LOD	:	0.029
Pb	< LOD	:	0.027
Se	< LOD	:	0.011
W	< LOD	:	0.145
Zn	< LOD	:	0.037
Cu	< LOD	:	0.198
Ni	8.985	±	0.401
Co	< LOD	:	0.642
Fe	69.574	±	0.600
Mn	1.826	±	0.277
Cr	19.137	±	0.352
V	< LOD	:	0.185
Ti	< LOD	:	0.184

Sergio Morales

Date: 10-10-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 C. Sandu

Boccard Portugal, Lda  
Zona Industrial de Montalvo, Lote 3  
Constância, Portugal 2250-999

## Certificate of PMI Reading

XL3t-32735

Reading No	688
Mode	ALLOY
Time	2024-09-07 13:13
Duration	6.06
Sequence	Final
Alloy1	304SS : 0.92
Alloy2	No Match : *2.30
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.048
Sn	< LOD	:	0.072
Pd	< LOD	:	0.051
Ag	< LOD	:	0.172
Al	< LOD	:	80.000
Mo	0.047	±	0.011
Nb	< LOD	:	0.012
Zr	< LOD	:	0.005
Bi	< LOD	:	0.025
Pb	< LOD	:	0.026
Se	< LOD	:	0.016
W	< LOD	:	0.134
Zn	< LOD	:	0.041
Cu	< LOD	:	0.198
Ni	9.048	±	0.405
Co	< LOD	:	0.651
Fe	69.679	±	0.603
Mn	2.006	±	0.281
Cr	18.767	±	0.351
V	< LOD	:	0.184
Ti	< LOD	:	0.193

Sergio Morales

Date: 10-10-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 C. Sandu

Boccard Portugal, Lda  
Zona Industrial de Montalvo, Lote 3  
Constância, Portugal 2250-999

## Certificate of PMI Reading

XL3t-32735

Reading No	691
Mode	ALLOY
Time	2024-09-07 13:14
Duration	6.65
Sequence	Final
Alloy1	304SS : 0.89
Alloy2	No Match : 2.49
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.056
Sn	< LOD	:	0.066
Pd	< LOD	:	0.048
Ag	< LOD	:	0.232
Al	< LOD	:	80.000
Mo	0.034	±	0.009
Nb	< LOD	:	0.009
Zr	< LOD	:	0.007
Bi	< LOD	:	0.014
Pb	< LOD	:	0.021
Se	< LOD	:	0.007
W	< LOD	:	0.126
Zn	< LOD	:	0.038
Cu	< LOD	:	0.211
Ni	8.113	±	0.376
Co	< LOD	:	0.636
Fe	71.037	±	0.580
Mn	1.560	±	0.261
Cr	18.328	±	0.335
V	< LOD	:	0.164
Ti	< LOD	:	0.194

Sergio Morales

Date: 10-10-24



On behalf of Tecnimont / R  
Piping Supervisor  
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18.10.2024 C. Sandu

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Constância, Portugal 2250-999

## Certificate of PMI Reading

XL3t-32735

Reading No	687
Mode	ALLOY
Time	2024-09-07 13:13
Duration	6.52
Sequence	Final
Alloy1	304SS : 1.60
Alloy2	No Match : *2.13
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.063
Sn	< LOD	:	0.074
Pd	< LOD	:	0.059
Ag	< LOD	:	0.128
Al	< LOD	:	80.000
Mo	< LOD	:	0.014
Nb	< LOD	:	0.010
Zr	< LOD	:	0.004
Bi	< LOD	:	0.014
Pb	< LOD	:	0.014
Se	< LOD	:	0.013
W	< LOD	:	0.169
Zn	< LOD	:	0.050
Cu	< LOD	:	0.207
Ni	8.248	±	0.420
Co	< LOD	:	0.710
Fe	71.246	±	0.644
Mn	1.731	±	0.291
Cr	17.905	±	0.367
V	< LOD	:	0.187
Ti	< LOD	:	0.205

Sergio Morales

Date: 10-10-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
18.10.2024 C. Sandu

Boccard Portugal, Lda  
Zona Industrial de Montalvo, Lote 3  
Constância, Portugal 2250-999

## Certificate of PMI Reading

XL3t-32735

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Reading No	689
Mode	ALLOY
Time	2024-09-07 13:13
Duration	11.62
Sequence	Final
Alloy1	304SS : 1.19
Alloy2	No Match : *2.42
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

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	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.049
Pd	< LOD	:	0.036
Ag	< LOD	:	0.140
Al	< LOD	:	80.000
Mo	0.074	±	0.009
Nb	< LOD	:	0.007
Zr	< LOD	:	0.004
Bi	< LOD	:	0.016
Pb	< LOD	:	0.016
Se	< LOD	:	0.007
W	< LOD	:	0.090
Zn	< LOD	:	0.030
Cu	0,187	±	0.078
Ni	8.202	±	0.283
Co	< LOD	:	0.473
Fe	70.881	±	0.434
Mn	2.019	±	0.201
Cr	18.110	±	0.250
V	< LOD	:	0.128
Ti	< LOD	:	0.155

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Sergio Morales

Date: 10-10-24



On behalf of Tecnimont / R  
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