



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-310-000425_RFI5581_MOD-ITP-XL_220</b>
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	<b>IP-WSR-P-310-000425_RFI5581 - IP Spool Release From Workshop</b>		

Sheet 01/01

The Present Inspection Package contains the following Elements:

7111-IA91F42-1-SP02-00048;7111-IA91F42-1-SP01-00047;2211-PEP71A02-1-SP03-01133;2211-PEP71A02-1-SP02-00429;2211-PEP71A02-1-SP01-00428;2211-LO70B01-1-SP03-00384;2211-LO70B01-1-SP02-00383;2211-LO70B01-1-SP01-00382;2211-DMW91Q01-2-SP01-03070;2211-DMW91Q01-5-SP11-03073;2211-DMW91Q01-5-SP10-03072;2211-DMW91Q01-2-SP07-03065;2211-DMW91Q01-2-SP06-03064;2211-DMW91Q01-2-SP05-03063;2121-LO40B03-5-SP10-01005;2121-LO40B03-4-SP11-01004;2121-LO40B03-4-SP09-01003;2121-LO40B03-4-SP08-01154;2121-LO40B03-3-SP07-01002;2121-LO40B03-3-SP06-01001;2121-LO40B02-4-SP14-01152;2121-LO40B02-4-SP13-01151;2121-LO40B02-4-SP12-00507;1211-PCW89010-1-SP03-00287;1211-PCW89010-1-SP02-00286;1211-PCW89010-1-SP01-00285;1211-N81030-2-SP07-01061;1211-N81030-2-SP04-00956;1211-N81030-2-SP03-00955;1211-N81030-2-SP02-00954;1211-N81030-2-SP01-00953;1211-LS89046-2-SP03-00298;1211-LS89046-1-SP02-00297;1211-LS89046-1-SP01-00296;1211-LO89003-1-SP02-00947;1211-LO89003-1-SP01-00946;1211-DMW64001-4-SP10-03059;1211-DMW64001-4-SP09-03058;1211-DMW64001-4-SP08-03057;1127-PN52030-1-SP01-00833;1126-LO32010-1-SP04-00847;1126-LO32010-1-SP03-00846;1126-LO32010-1-SP02-00845;1126-LO32010-1-SP01-00844;1126-LO32009-1-SP02-00843;1126-LO32009-1-SP01-00842;1115-DMW63001-2-SP02-03077

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 Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
29.10.2024 C. Sandu

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y / N	Punch List Produced
			Date [DD-MMM-YYYY]	Name	Signature	
SUBCONTRACTOR	29-10-2024	Sergio Morales Collantes			 Sergio Morales Collantes Tecnicmont Industrial B-43977950	
CONTRACTOR						
COMPANY						
(Free)						



Tecnimont S.p.A.

4274\_CONST

ALBA PROJECT-PP AND PEL PLANTS



MOD-ITP-XL_220	RELEASE OF SPOOLS FROM WORKSHOP	Report n° IP-WSR-P-310-000425_RFI5581_MOD-ITP-XL_220
Rev.1		RFI Nr.: Date :
Unit	-	
Plant Area	-	
Isometric Number		
Inspection Package Number	IP-WSR-P-310-000425_RFI5581 - IP Spool Release From Workshop	

Sheet 01/01

The Present Inspection Package contains the following Elements:

7111-IA91F42-1-SP02-00048;7111-IA91F42-1-SP01-00047;2211-PEP71A02-1-SP03-01133;2211-PEP71A02-1-SP02-00429;2211-PEP71A02-1-SP01-00428;2211-LO70B01-1-SP03-00384;2211-LO70B01-1-SP02-00383;2211-LO70B01-1-SP01-00382;2211-DMW91Q02-1-SP01-03070;2211-DMW91Q01-5-SP11-03073;2211-DMW91Q01-5-SP10-03072;2211-DMW91Q01-2-SP07-03065;2211-DMW91Q01-2-SP06-03064;2211-DMW91Q01-2-SP05-03063;2121-LO40B03-5-SP10-01005;2121-LO40B03-4-SP11-01004;2121-LO40B03-4-SP09-01003;2121-LO40B03-4-SP08-01154;2121-LO40B03-3-SP07-01002;2121-LO40B03-3-SP06-01001;2121-LO40B02-4-SP14-01152;2121-LO40B02-4-SP13-01151;2121-LO40B02-4-SP12-00507;1211-PCW89010-1-SP03-00287;1211-PCV89010-1-SP02-00286;1211-PCW89010-1-SP01-00285;1211-N81030-2-SP07-01061;1211-N81030-2-SP04-00956;1211-N81030-2-SP03-00955;1211-N81030-2-SP02-00954;1211-N81030-2-SP01-00953;1211-LS89046-2-SP03-00298;1211-LS89046-1-SP02-00297;1211-LS89046-1-SP01-00296;1211-LO89003-1-SP02-00947;1211-LO89003-1-SP01-00946;1211-DMW64001-4-SP10-03059;1211-DMW64001-4-SP09-03058;1211-DMW64001-4-SP08-03057;1127-PN52030-1-SP01-00833;1126-LO32010-1-SP04-00847;1126-LO32010-1-SP03-00846;1126-LO32010-1-SP02-00845;1126-LO32010-1-SP01-00844;1126-LO32009-1-SP02-00843;1126-LO32009-1-SP01-00842;1115-DMW63001-2-SP02-03077

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  
29.10.2024 C. Sandu

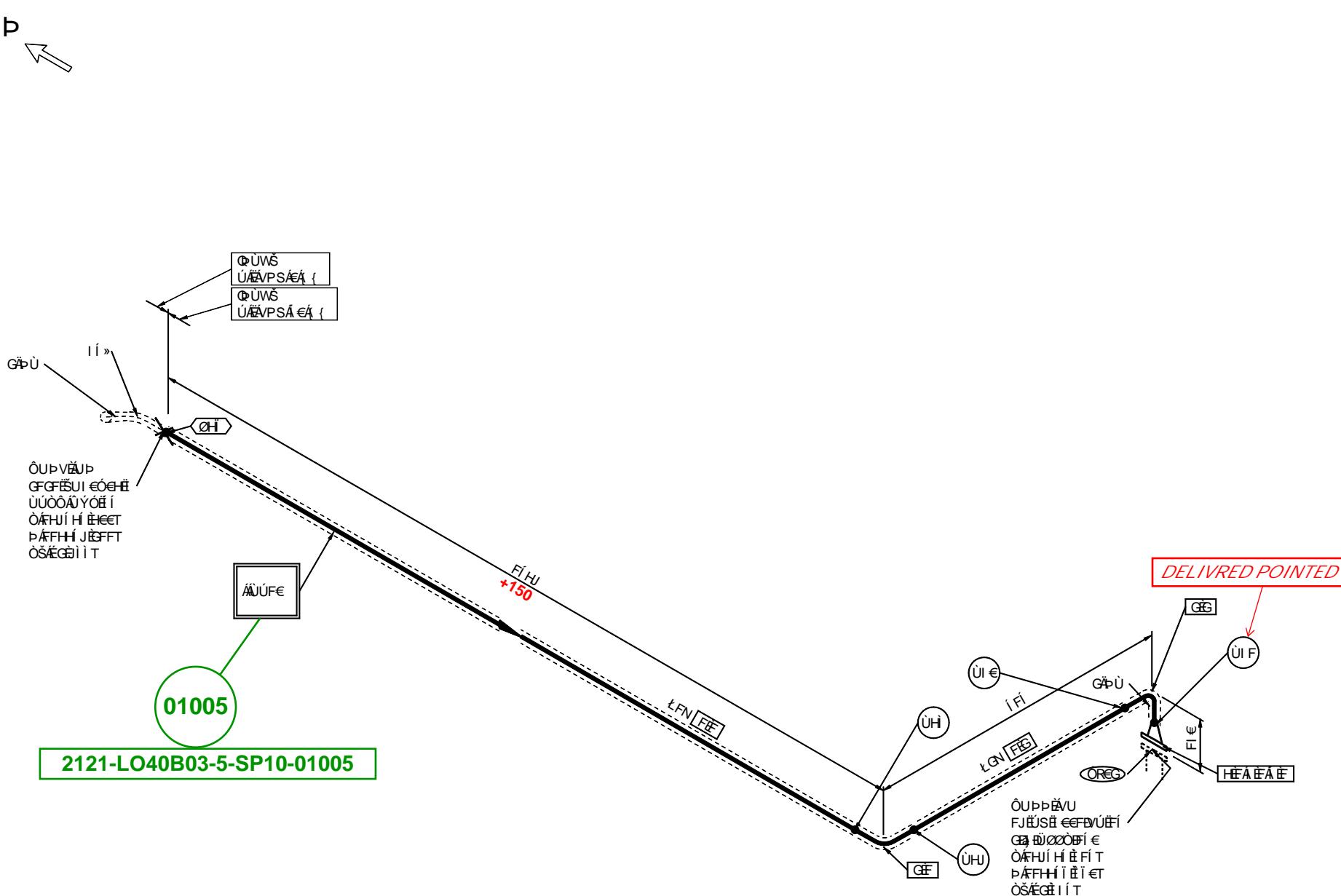
LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input checked="" type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y / N	Punch List Produced
			Date [DD-MMM-YYYY]	Name	Signature	
SUBCONTRACTOR	29-10-2024		Sergio Morales Collantes	 Sergio Morales Collantes 29.10.2024		
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-LO40B03-5</a></p>				

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



3004



Sergio Morales

Date: 17-09-24



RECEIVED  
19 / 04 / 2024

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 *C. Sandu*

1

Notes. | 1 DENOTES P

PARTS LIST NO | PII  
SUP

**E A = RESTING  
ORT WHERE A W**

**SUPPORT G =**

**INDICATED THIS**

## RESTRAINT

= GUIDE + STOP

M = SPRING

**PROJECT:** ŠUY  
ØUÜ

ÓÓSÁÓÓÙQÝÁÚ  
ÜURÓÓVÆÓÓSÓÓÁÜ

YÒVP ŠÒP ÒÁJÒŠDÍE  
RÔOV

ÁÚ ŠÝ Ú Ü Ü U Ú Ý Š Ò Þ Ò Á

úD

1

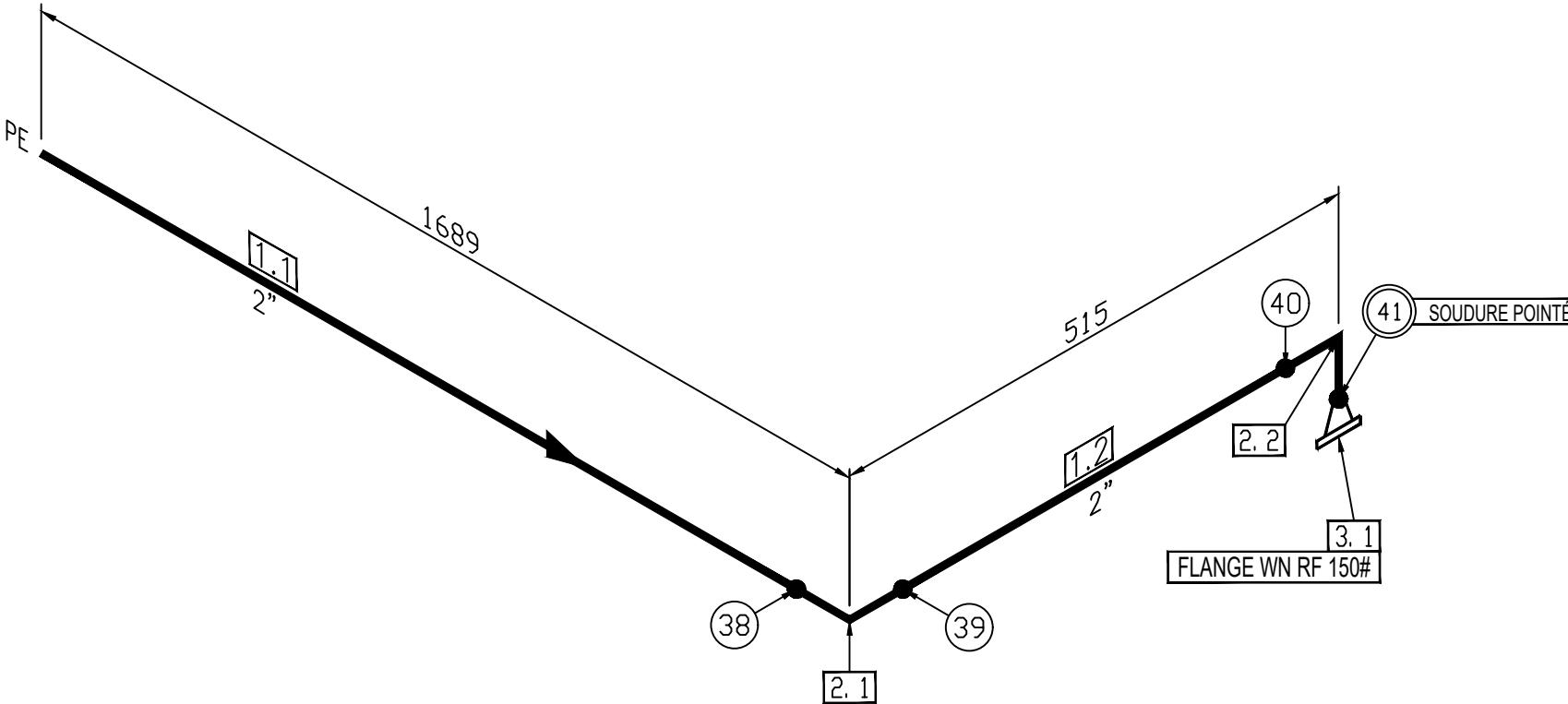
வினாக்கள் | பதினாறாம்

LÍBRÍA DE ESTOCOLMO

၁၁၁

புதுப்பிள்ளை

ЛЮБИТЕЛЬСТВО

<div style="text-align: center; padding: 10px;">    <p>On behalf of Tecnimon / R Piping Supervisor Cristi Sandu 19.09.2024 <i>C. Sandu</i></p> <table border="1" style="margin-top: 10px; 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: QXB-55-M</td> </tr> <tr> <td>01</td><td>25/04/2024</td><td>GRM</td><td>ANP</td><td>PCO</td><td>Paint System: NA</td> </tr> <tr> <td colspan="5">Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO</td><td>ID Cleaning: YES</td> </tr> <tr> <td colspan="5"></td><td>Piece Mark</td> </tr> <tr> <td colspan="5"></td><td colspan="2">Ref. Drawing</td> </tr> <tr> <td colspan="5"></td><td>Job #</td><td>Spool #</td> </tr> <tr> <td colspan="5"></td><td>P2308S</td><td>Project</td> </tr> <tr> <td colspan="5"></td><td>2121-LO40B03-5-SP10-01005</td><td>REPSOL PROJETO ALBA NERVION</td> </tr> </table> </div>	Rev.	Date	DRW	Check 1	Check 2	Marking Color: GREEN						Weld Class: QXB-55-M	01	25/04/2024	GRM	ANP	PCO	Paint System: NA	Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO					ID Cleaning: YES						Piece Mark						Ref. Drawing							Job #	Spool #						P2308S	Project						2121-LO40B03-5-SP10-01005	REPSOL PROJETO ALBA NERVION	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>BILL OF MATERIAL</b> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>PIPE</b> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ITEM</th><th>LONGUEUR</th><th>DIAMÉTRE</th><th>SCH/mm</th><th>DESCRIPTION / MATERIEL</th><th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.1</td><td>1,611</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>0,359</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> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>FLANGES</b> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ITEM</th><th>QT</th><th>DIAMÉTRE</th><th>PRESSION</th><th>SCH/mm</th><th>DESCRIPTION / MATERIEL</th><th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>3.1</td><td>1</td><td>2"</td><td>150#</td><td>S-10S</td><td>WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125 - 250 AARH</td><td>I2260686</td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <b>WELD FITTINGS</b> </div> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>ITEM</th><th>QT</th><th>DIAMETER</th><th>SCH/mm</th><th>DESCRIPTION / MATERIAL</th><th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>2.1</td><td>1</td><td>2"</td><td>S-10S</td><td>90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td><td>I2259133</td> </tr> <tr> <td>2.2</td><td>1</td><td>2"</td><td>S-10S</td><td>90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td><td>I2259133</td> </tr> </tbody> </table> <div style="text-align: right; margin-top: 20px;"> <b>P2308S 01005</b>    2121-LO40B03-5-SP10-01005 </div> <div style="text-align: right; margin-top: 20px;">   <b>boccard</b>  Alliance for success  Boccard Portugal, Lda. </div> <div style="text-align: center; margin-top: 20px;"> <b>Weld Map Sticker</b> </div>	ITEM	LONGUEUR	DIAMÉTRE	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE	1.1	1,611	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS PExBE	I3364302	1.2	0,359	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE	I3364302	ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE	3.1	1	2"	150#	S-10S	WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125 - 250 AARH	I2260686	ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	2.1	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133	2.2	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133
Rev.	Date	DRW	Check 1	Check 2	Marking Color: GREEN																																																																																																								
					Weld Class: QXB-55-M																																																																																																								
01	25/04/2024	GRM	ANP	PCO	Paint System: NA																																																																																																								
Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO					ID Cleaning: YES																																																																																																								
					Piece Mark																																																																																																								
					Ref. Drawing																																																																																																								
					Job #	Spool #																																																																																																							
					P2308S	Project																																																																																																							
					2121-LO40B03-5-SP10-01005	REPSOL PROJETO ALBA NERVION																																																																																																							
ITEM	LONGUEUR	DIAMÉTRE	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE																																																																																																								
1.1	1,611	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS PExBE	I3364302																																																																																																								
1.2	0,359	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE	I3364302																																																																																																								
ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE																																																																																																							
3.1	1	2"	150#	S-10S	WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125 - 250 AARH	I2260686																																																																																																							
ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE																																																																																																								
2.1	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133																																																																																																								
2.2	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133																																																																																																								

# 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 01005 2121-LO40B03-5-SP10-01005</b>		<b>2121-LO40B03-5</b>		<b>01</b>			
1.2	,359 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	1,41
40391							
1.1	1,611 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	6,33
40391							
3.1	1 2.0000 S10S	0.0000 NA		WN FLG, RAISED FACE, 150#, A182-F304L	N230210AT03 0146	2,72	2,72
37867							
2.1	1 2.0000 S10S	0.0000 NA		90 LR ELL, SEAMLESS, A403-WP304L	M220696 0410	0,49	0,49
42965							
2.2	1 2.0000 S10S	0.0000 NA		90 LR ELL, SEAMLESS, A403-WP304L	M220696 0410	0,49	0,49
42965							

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 C. Sandu

Number of Items : 5

Total Weight : 11,44

Signature	QA	Client
		Sergio Morales Date: 17-09-24
Date	2024-09-12 08:51:08	

<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

# Inspection Certificate(EN 10204-3.1)

Page: 12/21

Shanxi Baolongda Forging Co.,Ltd.

Customer : CHERO PIPING S.P.A.

Cont No:265/2023/OF

Certificate No : BLD-25-0525-012

Article: Hot forging temperature 850°C-1150°C

Melting process :LF+LD

Date of report : 2023.05.25

Specifications compliance: ASTM A182/A182M-21

Work No : T230525

Material : A182F304/304L

Heat Batch No : ZJJ230502

Heat treatment : Solution:1040+10°C /Water

Mark of Manufacturer:

**Content of delivery:**

Item No.	Quantity	Description/Artical					Heat No.		Specimen No	
940	1	FLANGE SW 600 RF Sch.40S 11/2"					N230210AT03		23Y0340	
1030	20	FLANGE WN 150 RF Sch.10S 2"					N230210AT03		23Y0340	
1040	7	FLANGE WN 150 RF Sch.10S 3"					N230210AT03		23Y0340	
1050	9	FLANGE WN 150 RF SCH.10S 4"					N230210AT03		23Y0340	
1060	6	FLANGE WN 150 RF Sch.10S 6"					N230210AT03		23Y0340	
1410	1	FLANGE WN 150 RF SCH.40S 1"					N230210AT03		23Y0340	
1420	14	FLANGE WN 150 RF Sch.40S 3"					N230210AT03		23Y0340	
1430	3	FLANGE WN 150 RF Sch.40S 4"					N230210AT03		23Y0340	
1440	3	FLANGE WN 300 LT 125AARH MAX S80S 1/2"					N230210AT03		23Y0340	
1450	1	FLANGE WN 300 LT 125AARH MAX SCH.40S 2"					N230210AT03		23Y0340	
1460	4	FLANGE WN 300 RF Sch.10S 2"					N230210AT03		23Y0340	
1470	3	FLANGE WN 300 RF Sch.10S 3"					N230210AT03		23Y0340	
1480	1	FLANGE WN 300RF SCH.10S 4"					N230210AT03		23Y0340	
1760	1	FLANGE WN 300 RF SCH.40S 1/2"					N230210AT03		23Y0340	
1770	5	FLANGE WN 300 RF SCH.40S 2"					N230210AT03		23Y0340	
1780	6	FLANGE WN 300 RF SCH.40S 4"					N230210AT03		23Y0340	
1800	6	FLANGE WN 600 LG 125AARH MAX SCH.80S 1/2"					N230210AT03		23Y0340	
1810	12	FLANGE WN 600 LT 125AARH MAX SCH.80S 1/2"					N230210AT03		23Y0340	
1820	5	FLANGE WN 600 LT 125AARH MAX SCH.80S 1"					N230210AT03		23Y0340	
1970	28	FLANGE WN 600RF125AARH S40S 2"					N230210AT03		23Y0340	

**Chemical Analysis: (%)**

Heat No.	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%	Ti%	Al%	N%	Cu%	V%	Nb%	CE%
A182-F304	0.08	1.00	2.00	0.045	0.030	18.00		8.00			0.10				
	0.03	1.00	2.00	0.045	0.030	20.00		11.00							
Min						18.00		8.00							
Max						20.00		13.00			0.10				
N230210AT03	0.019	0.449	1.33	0.038	0.0011	18.13		8.13			0.058				

**Mechanical Properties :**

Heat No:N230210AT03

Specimen No	Dim. Of specimen	Sampling of specimen			Test temp	ASTM A370-2021					ASTM A370-21						
						Yield strength	Yield strength	Tensile Strength	Elongation	Reduction of area	Hardness	Energy of impact test (ISO-V specimen) Charpy size 10mm×10mm×55mm					
		Thickne ss	Width	Location	Direction	Position	R <sub>p0.2</sub> N/mm <sup>2</sup>	R <sub>p1.0</sub> N/mm <sup>2</sup>	R <sub>m</sub> N/mm <sup>2</sup>	A %	Z %	HB	Joule				
A182-F304	mm	mm			T		≥205		≥515	≥30	≥50						
A182-F304L							≥170		≥485	≥30	≥50		1	2	3	Σ/N	
23Y0340	Φ12.5					20	274		540	52	76	156/157					

T : top, B : bottom, L : longitudinal, Tr : transverse, RT : room temperature

Visual inspection

Dimensional check

Surface crack inspection

Renew by zhangchen  
PM&L obo Teckmone  
2024.5.27

Without Complaint  
Without Complaint  
Without Complaint

We hereby certify that the materials described herein have been manufactured,inspected and tested in accordance with the customer's specification(s),and that they satisfy the requirements.

Date:

2023/5/25

Manufacturer's Authorized Inspection Representative





Contract : P2300

Drawing : 2121-LO40B03-5

## Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Spool : 01005

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B03-5-SP10-01005

## Weld data

## Welding

## Control

Weld No.	Type	Dia	Sch	Weld /Thk	Proc.	1st Pass	1st MTR	Final Pass	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	
0038	BW	2	S10S	MW.26_BW	AE	09-07-2024	4712055	AE	09-07-2024	4712055			000802	19-08-2024				000888	07-09-2024											
0039	BW	2	S10S	MW.26_BW	AE	09-07-2024	4712055	AE	09-07-2024	4712055			000802	19-08-2024				000888	07-09-2024											
0040	BW	2	S10S	MW.26_BW	AE	09-07-2024	4712055	AE	09-07-2024	4712055			000802	19-08-2024				000888	07-09-2024											
0041	TW	2	S10S										000802	19-08-2024																

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 *C. Sandu*

Notes:

---



---



---



---

Signature	Boccard Portugal QC	Client
	Sergio Morales  Date: 17-09-24	
Date	12-09-2024 08:51:08	



# Shop QC Inspection Report

P2308-000827

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

Job number: P2308S  
 Spool N°: 01005  
 Piece Mark: 2121-LO40B03-5-SP10-01005

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

Control Date: 19-08-2024

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	X		X
Spool Barcode label printed	X		X
Spool is identified with the metal tag	X		X
Spool stencil required (hard stamp low stress)		X	
Joint preparation & cleanliness / spool dimensions checked	X		X
Level, plumb, Two holes, flanges and internal alignment, Squareness	X		X
Material checked (type of material, rate, heat numbers, filler material, etc.)	X		X
Welders list match with actual welder stencil / Id. on pipe	X		X
PWHT- Spool identified as per Procedure / Instruction for PWHT		X	
HT ( Hardness Test)- Welds identified as per Procedure / Instruction		X	
MT - Welds identified as per Procedure / Instruction		X	
PT - Welds identified as per Procedure / Instruction		X	
PMI - Welds identified as per Procedure / Instruction	X		X
FE (Ferrite test) - Welds identified as per Procedure / Instruction		X	
RT - Welds identified as per Procedure / Instruction		X	
UT - Welds identified as per Procedure / Instruction		X	
Spool identified (by marker) as per Procedure / Instruction (Job number, sheet number and Paint type if required)	X		X
Hydro - Spool identified as per Procedure / Instruction		X	
Cleanliness - Cleaned inside free of slag, scale, sand, weld spatter, cutting chips, etc. and blow out by compressed air	X		X

Comments:

Performed by: MATOS, MARCO (N2 VT/PT)  Date: 19-08-2024  Signature 	QA/QC Inspection: RAIMUNDO, MARIANA  Date: 12-09-2024 08:51:08  Signature 	Customer Inspection:  <b>Sergio Morales</b>  Date: 17-09-24  
--	---	--

On behalf of Tecnímont / R  
 Piping Supervisor  
 Cristi Sandu  
 19.09.2024 

# Visual Examination Report (Welds)

P2308-000802

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01005

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

Project : ALBA

Piece Mark: 2121-LO40B03-5-SP10-01005

Testing Date: 19-08-2024

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

Weld No.	Weld Desc.	Welder	Temp. (°F/°C)	Technique Used			Comments
				Accepted	Rejected	Defect	
0038	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	25	X			Direct
0039	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	25	X			Direct
0040	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	25	X			Direct
0041	2.0000 S10S TW-Tack Weld ()		25	X			Direct

Sketch / Photo:

Defects							
Clustered Porosity	CP	Porosity	P	Cap	C	Lack of Cleanup	LC
Unibmly Porosity	UP	Slag	S	Undercut	UC	Crack	CR

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

QA/QC Inspection: RAIMUNDO, MARIANA

Customer Inspection:

Date: 19-08-2024

Date: 12-09-2024 08:51:08

Sergio Morales

Signature



Signature



Date: 17-09-24


On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 C. Sandu



# Positive Material Identification Report (PMI)

P2308-000888

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01005

Piece Mark: 2121-LO40B03-5-SP10-01005

Material: Stainless Steel 304, 316, 317

Procedure / Instruction reference: 4274-LZ-VF-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			
0038	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	112	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0039	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	110	0	0	0	8	70	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0040	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	108	0	0	0	8	69	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	113	0	0	0	7	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	109	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	111	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	107	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1	2.0000 S10S WN FLG, RAISED FACE, 150#, A182-F304L (N230210AT03)	103	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 *C. Sandu*

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

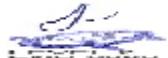
Customer Inspection:

Date: 07-09-2024

Date: 12-09-2024 08:51:08

Date: Sergio Morales

Signature



Signature



Signature

Date: 17-09-24



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

## Certificate of PMI Reading

XL3t-32735

Reading No	112
Mode	ALLOY
Time	2024-09-07 06:34
Duration	9.47
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.051
Pd	< LOD	:	0.040
Ag	< LOD	:	0.144
Al	< LOD	:	80.000
Mo	0.031	±	0.007
Nb	< LOD	:	0.008
Zr	< LOD	:	0.004
Bi	< LOD	:	0.012
Pb	< LOD	:	0.017
Se	< LOD	:	0.008
W	< LOD	:	0.094
Zn	< LOD	:	0.030
Cu	< LOD	:	0.154
Ni	8.767	±	0.314
Co	< LOD	:	0.507
Fe	70.570	±	0.473
Mn	1.482	±	0.212
Cr	18.880	±	0.276
V	< LOD	:	0.130
Ti	< LOD	:	0.158

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 *C. Sandu*

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

## Certificate of PMI Reading

XL3t-32735

---

Reading No	110
Mode	ALLOY
Time	2024-09-07 06:33
Duration	9.46
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.053
Pd	< LOD	:	0.036
Ag	< LOD	:	0.166
Al	< LOD	:	80.000
Mo	0.037	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.004
Bi	< LOD	:	0.012
Pb	< LOD	:	0.002
Se	< LOD	:	0.008
W	< LOD	:	0.097
Zn	< LOD	:	0.032
Cu	< LOD	:	0.163
Ni	8.681	±	0.310
Co	< LOD	:	0.508
Fe	70.212	±	0.468
Mn	1.334	±	0.208
Cr	19.124	±	0.275
V	< LOD	:	0.140
Ti	< LOD	:	0.149

---

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024

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

## Certificate of PMI Reading

XL3t-32735

---

Reading No	108
Mode	ALLOY
Time	2024-09-07 06:33
Duration	9.65
Sequence	Final
Alloy1	304SS : 0.11
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.053
Pd	< LOD	:	0.039
Ag	< LOD	:	0.172
Al	< LOD	:	80.000
Mo	0.052	±	0.009
Nb	< LOD	:	0.008
Zr	< LOD	:	0.004
Bi	< LOD	:	0.021
Pb	< LOD	:	0.024
Se	< LOD	:	0.007
W	< LOD	:	0.094
Zn	< LOD	:	0.032
Cu	< LOD	:	0.158
Ni	8.724	±	0.309
Co	< LOD	:	0.511
Fe	69.444	±	0.469
Mn	1.705	±	0.214
Cr	19.377	±	0.276
V	< LOD	:	0.132
Ti	< LOD	:	0.144

---

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 C. Sandu

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

## Certificate of PMI Reading

XL3t-32735

Reading No	113
Mode	ALLOY
Time	2024-09-07 06:34
Duration	11.27
Sequence	Final
Alloy1	304SS : 1.06
Alloy2	No Match : 2.30
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.037
Sn	< LOD	:	0.048
Pd	< LOD	:	0.033
Ag	< LOD	:	0.187
Al	< LOD	:	80.000
Mo	< LOD	:	0.007
Nb	< LOD	:	0.006
Zr	< LOD	:	0.003
Bi	< LOD	:	0.012
Pb	< LOD	:	0.009
Se	< LOD	:	0.005
W	< LOD	:	0.087
Zn	< LOD	:	0.025
Cu	< LOD	:	0.133
Ni	7.980	±	0.274
Co	< LOD	:	0.463
Fe	71.985	±	0.424
Mn	1.232	±	0.185
Cr	18.134	±	0.244
V	0.134	±	0.065
Ti	< LOD	:	0.150

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 

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

## Certificate of PMI Reading

XL3t-32735

Reading No	109
Mode	ALLOY
Time	2024-09-07 06:33
Duration	11.16
Sequence	Final
Alloy1	304SS : 1.25
Alloy2	No Match : *2.18
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.037
Sn	< LOD	:	0.051
Pd	< LOD	:	0.038
Ag	< LOD	:	0.134
Al	< LOD	:	80.000
Mo	0.048	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.004
Bi	< LOD	:	0.004
Pb	< LOD	:	0.026
Se	< LOD	:	0.007
W	< LOD	:	0.087
Zn	< LOD	:	0.030
Cu	0.212	±	0.081
Ni	8.159	±	0.289
Co	< LOD	:	0.488
Fe	71.351	±	0.443
Mn	1.505	±	0.198
Cr	17.975	±	0.254
V	< LOD	:	0.132
Ti	< LOD	:	0.138

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 *C. Sandu*

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

## Certificate of PMI Reading

XL3t-32735

Reading No	111
Mode	ALLOY
Time	2024-09-07 06:33
Duration	8.68
Sequence	Final
Alloy1	304SS : 1.18
Alloy2	No Match : 1.88
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.047
Sn	< LOD	:	0.054
Pd	< LOD	:	0.042
Ag	< LOD	:	0.165
Al	< LOD	:	80.000
Mo	< LOD	:	0.008
Nb	< LOD	:	0.006
Zr	< LOD	:	0.004
Bi	< LOD	:	0.018
Pb	< LOD	:	0.018
Se	< LOD	:	0.008
W	< LOD	:	0.105
Zn	< LOD	:	0.034
Cu	< LOD	:	0.159
Ni	8.092	±	0.317
Co	< LOD	:	0.537
Fe	71.730	±	0.487
Mn	1.533	±	0.218
Cr	17.953	±	0.279
V	< LOD	:	0.135
Ti	< LOD	:	0.128

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 *C. Sandu*

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

## Certificate of PMI Reading

XL3t-32735

---

Reading No	107
Mode	ALLOY
Time	2024-09-07 06:32
Duration	25.12
Sequence	Final
Alloy1	304SS : 0.46
Alloy2	No Match : *2.11
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.030
Sn	< LOD	:	0.038
Pd	< LOD	:	0.028
Ag	< LOD	:	0.151
Al	< LOD	:	80.000
Mo	0.095	±	0.008
Nb	< LOD	:	0.005
Zr	< LOD	:	0.005
Bi	< LOD	:	0.009
Pb	< LOD	:	0.009
Se	< LOD	:	0.007
W	< LOD	:	0.068
Zn	< LOD	:	0.025
Cu	0.257	±	0.062
Ni	8.484	±	0.226
Co	< LOD	:	0.344
Fe	70.639	±	0.337
Mn	1.515	±	0.147
Cr	18.443	±	0.269
V	< LOD	:	0.100
Ti	< LOD	:	0.107

---

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 C. Sandu

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

## Certificate of PMI Reading

XL3t-32735

---

Reading No	103
Mode	ALLOY
Time	2024-09-07 06:31
Duration	9.46
Sequence	Final
Alloy1	304SS : 0.53
Alloy2	No Match : 2.45
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.054
Pd	< LOD	:	0.040
Ag	< LOD	:	0.162
Al	< LOD	:	80.000
Mo	0.069	±	0.010
Nb	< LOD	:	0.006
Zr	< LOD	:	0.004
Bi	< LOD	:	0.013
Pb	< LOD	:	0.003
Se	< LOD	:	0.009
W	< LOD	:	0.095
Zn	< LOD	:	0.032
Cu	0.174	±	0.083
Ni	8.060	±	0.302
Co	< LOD	:	0.509
Fe	71.524	±	0.466
Mn	1.353	±	0.206
Cr	18.204	±	0.269
V	< LOD	:	0.144
Ti	< LOD	:	0.164

---

Sergio Morales

Date: 17-09-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
19.09.2024 C. Sandu