



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° 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-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.

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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		
CONTRACTOR						
COMPANY						
(Free)						

 Tecnimont	<p style="text-align: center;">Punch List</p> <p style="text-align: center;">PUNCH LIST</p>	<p style="text-align: center;">IDENTIFICATION CODE</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			
 MECWIDE <small>Engineering Services</small>	<p>ISO ID:2121-LO40B03-4</p>				

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

LINES 1 1/2" AND SMALLER SHALL BE SUPPORTED IN FIELD IF NOT OTHERWISE INDICATED
 FOR THE COMPONENT MARKED AS FIELD WELDED ONE WELDED FOR ADJUSTMENT OF IN-LINE COMPONENT
 FIELD WELD SYMBOL FOR ADJUSTMENT OF IN-LINE COMPONENT WHERE MARKED

ALL DIMENSION AND PROPER CONFIGURATION FOR LINES NPS 1 1/2" AND SMALLER SHALL BE CHECKED IN FIELD BEFORE CONSTRUCTION
 TOLERANCE TO BE IMPLEMENTED BY MECHANICAL SUBCONTRACTOR AS PER SPECIFICATION 4048-XH-SG-00000000004
 FOR LINE DATA AND TESTING CONDITIONS REFER TO LINE LIST 4048-XH-LL-10-0000-00001

Notes:

1 DENOTES PARTS LIST NO PIPE SUPPORT A = RESTING SUPPORT G = GUIDE F = AXIAL RESTRAINT

B = GUIDE + STOP M = SPRING

RECEIVED
19 / 04 / 2024

On behalf of Tecnimont / R
Piping Supervisor

Cristi Sandu

29.10.2024 C. Sandu

ÖWFPUÜØØÁUÜÅUPÙVÜWÔVØP
ÜØØÅÅUÜÅUPÙVÜWÔVØPØÅÅUÜÅÅØXØVÅÅØPØÅÅ

LEGENDS

JOINT TYPE	HMEI TYPE OF JOINT								
BW	G	SW	S	LET	LET	SOB	B		
FW	S	SIB	B	LF	RF	SOF	S		
L4	RF	SLW	S	MTW	M	THD	TH		

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<p style="text-align: center;">N</p> <p>On behalf of Tecnimont / R Piping Supervisor Cristi Sandu 29.10.2024 C. Sandu</p> <table border="1" style="margin-top: 10px; border-collapse: collapse;"> <tr> <th>Rev.</th> <th>Date</th> <th>DRW</th> <th>Check 1</th> <th>Check 2</th> <th>Marking Color:</th> <th>GREEN</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <th>Weld Class:</th> <td>QXB-55-M</td> </tr> <tr> <td>01</td> <td>25/04/2024</td> <td>GRM</td> <td>ANP</td> <td>PCO</td> <th>Paint System:</th> <td>NA</td> </tr> </table> <p>Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO ID Cleaning: YES Piece Mark Ref. Drawing Job # Spool # Project</p> <p>Acc Criteria: ASME B31.3 % PT - YES % FE - NO PWHT: NO OD Cleaning: YES 2121-LO40B03-4-SP09-01003 2121-LO40B03-4 P2308S 01003 REPSOL PROJETO ALBA NERVION</p> <p>Metal Tag: YES % MT - NO % PMI - YES BHN% - NO Tolerances: ASME B31.3</p>	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	<p style="text-align: center;">BILL OF MATERIAL</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LONGUEUR</th> <th>DIAMETRE</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIEL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.4</td> <td>6,220</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE</td> <td>I3364302</td> </tr> <tr> <td>1.5</td> <td>3,426</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE</td> <td>I3364302</td> </tr> <tr> <td>2.1</td> <td>0,138</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> <p style="text-align: center;">WELD FITTINGS</p> <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>4.1</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> <tr> <td>4.2</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 style="text-align: right; margin-top: 20px;"> P2308S 01003 2121-LO40B03-4-SP09-01003 </div> <div style="text-align: right; margin-top: 20px;"> boccard Alliance for success Boccard Portugal, Lda. </div>	PIPE					ITEM	LONGUEUR	DIAMETRE	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE	1.4	6,220	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE	I3364302	1.5	3,426	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE	I3364302	2.1	0,138	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE	I3364302	ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	4.1	1	2"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145	4.2	1	2"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145
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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
P2308S 01003 2121-LO40B03-4-SP09-01003		2121-LO40B03-4		01			
1.4	6,22 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	24,44
40391							
2.1	,138 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	0,54
40391							
1.5	3,426 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	13,46
40391							
4.2	1 2.0000 S10S	0.0000 NA		45 ELL, SEAMLESS, A403-WP304L	2K113-E002 0408	0,24	0,24
42790							
4.1	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*
29.10.2024

Number of Items : 5

Total Weight : 38,93

Signature	QA	Client
	Date	
	 QA / QC	Sergio Morales Date: 21-10-24 

CTA Group	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**

Customer: Commerciale Tubi Acciaio S.P.A.	T.C No : 680	Date: 26.03.2022
Product : Austenitic S.S Seamless Cold Finish,Solution Annealed,Pickled & Passivated Pipes.	P.O.No : OS-0000175	Date: 14.10.2021
	W.O.No : 2122/OEP400035	Date: 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%
1	0.020	1.26	0.45	0.003	0.023	18.51	8.21			
2										
3										
4										
5										

B. Mechanical Properties & 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:	
Date: 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-LO40B03-4

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Spool : 01003

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B03-4-SP09-01003

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
0033	BW	2	S10S	MW.26_BW	AY	19-07-2024	4712055	AY	19-07-2024	4712055			000799	12-08-2024				000866	07-09-2024										
0034	BW	2	S10S	MW.26_BW	AY	19-07-2024	4712055	AY	19-07-2024	4712055			000799	12-08-2024				000866	07-09-2024										
0035	BW	2	S10S	MW.26_BW	AY	19-07-2024	4712055	AY	19-07-2024	4712055			000799	12-08-2024				000866	07-09-2024										
0036	BW	2	S10S	MW.26_BW	AY	19-07-2024	4712055	AY	19-07-2024	4712055			000799	12-08-2024				000866	07-09-2024										

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu 
29.10.2024

Notes:

Boccard Portugal QC	Client
	Sergio Morales Date: 21-10-24
12-09-2024 08:49:23	



Shop QC Inspection Report

P2308-000824

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

Job number: P2308S
 Spool N°: 01003
 Piece Mark: 2121-LO40B03-4-SP09-01003

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

Comments:

Performed by: MATOS, MARCO (N2 VT/PT) Date: 12-08-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 12-09-2024 08:49:23 Signature 	Customer Inspection: Sergio Morales Date: 21-10-24 
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On behalf of Tecnimon / R
 Piping Supervisor
 Cristi Sandu
 29.10.2024 

Visual Examination Report (Welds)

P2308-000799

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01003

Procedure & Instructions: 4274-LZ-VF-WF31010370QAC04 - Rev: 1

Project : ALBA

Piece Mark: 2121-LO40B03-4-SP09-01003

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			Welder	Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
Weld No.	Weld Desc.								
0033	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AY	28	X			Direct	
0034	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AY	28	X			Direct	
0035	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AY	28	X			Direct	
0036	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AY	28	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

Date: 12-09-2024 08:49:23

Sergio Morales

Signature



Signature



Date: 21-10-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000866

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01003

Piece Mark: 2121-LO40B03-4-SP09-01003

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			
0033	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	588	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0034	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	586	0	0	0	8	70	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0035	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	584	0	0	0	9	69	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0036	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	582	0	0	0	8	69	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.4	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	589	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.5	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	587	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	583	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1	2.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (2K113-E002)	585	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.2	2.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (2K113-E002)	581	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 29.10.2024 

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

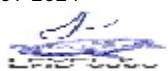
Customer Inspection:

Sergio Morales

Date: 07-09-2024

Date: 12-09-2024 08:49:23

Date:

Signature Signature 

Signature

Date: 21-10-24

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

Certificate of PMI Reading

XL3t-32735

Reading No	588
Mode	ALLOY
Time	2024-09-07 11:22
Duration	7.06
Sequence	Final
Alloy1	304SS : 0.16
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.051
Sn	< LOD	:	0.066
Pd	< LOD	:	0.042
Ag	< LOD	:	0.212
Al	< LOD	:	80.000
Mo	0.065	±	0.011
Nb	< LOD	:	0.010
Zr	< LOD	:	0.005
Bi	< LOD	:	0.008
Pb	< LOD	:	0.011
Se	< LOD	:	0.008
W	< LOD	:	0.116
Zn	< LOD	:	0.033
Cu	< LOD	:	0.191
Ni	8.472	±	0.367
Co	< LOD	:	0.610
Fe	70.344	±	0.558
Mn	1.797	±	0.256
Cr	18.449	±	0.323
V	0.203	±	0.092
Ti	< LOD	:	0.182

Sergio Morales



Date: 21-10-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	586
Mode	ALLOY
Time	2024-09-07 11:21
Duration	5.49
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.07
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.067
Sn	< LOD	:	0.080
Pd	< LOD	:	0.060
Ag	< LOD	:	0.125
Al	< LOD	:	80.000
Mo	0.084	±	0.015
Nb	< LOD	:	0.012
Zr	< LOD	:	0.006
Bi	< LOD	:	0.024
Pb	< LOD	:	0.030
Se	< LOD	:	0.016
W	< LOD	:	0.130
Zn	< LOD	:	0.051
Cu	< LOD	:	0.241
Ni	8.742	±	0.450
Co	< LOD	:	0.733
Fe	70.043	±	0.680
Mn	1.663	±	0.309
Cr	19.013	±	0.397
V	< LOD	:	0.194
Ti	< LOD	:	0.213

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 *C. Sandu*

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

Certificate of PMI Reading

XL3t-32735

Reading No	584
Mode	ALLOY
Time	2024-09-07 11:21
Duration	7.63
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.044
Sn	< LOD	:	0.059
Pd	< LOD	:	0.042
Ag	< LOD	:	0.189
Al	< LOD	:	80.000
Mo	0.054	±	0.010
Nb	< LOD	:	0.010
Zr	< LOD	:	0.003
Bi	< LOD	:	0.007
Pb	< LOD	:	0.012
Se	< LOD	:	0.011
W	< LOD	:	0.100
Zn	< LOD	:	0.029
Cu	< LOD	:	0.183
Ni	9.065	±	0.352
Co	< LOD	:	0.565
Fe	69.889	±	0.524
Mn	1.580	±	0.236
Cr	18.955	±	0.306
V	< LOD	:	0.153
Ti	< LOD	:	0.172

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	582
Mode	ALLOY
Time	2024-09-07 11:20
Duration	5.29
Sequence	Final
Alloy1	304SS : 0.46
Alloy2	No Match : 1.76
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.055
Sn	< LOD	:	0.075
Pd	< LOD	:	0.055
Ag	< LOD	:	0.201
Al	< LOD	:	80.000
Mo	0.059	±	0.013
Nb	< LOD	:	0.012
Zr	< LOD	:	0.005
Bi	< LOD	:	0.020
Pb	< LOD	:	0.020
Se	< LOD	:	0.010
W	< LOD	:	0.124
Zn	< LOD	:	0.035
Cu	< LOD	:	0.239
Ni	8.680	±	0.431
Co	< LOD	:	0.711
Fe	69.645	±	0.653
Mn	1.867	±	0.301
Cr	18.867	±	0.381
V	< LOD	:	0.198
Ti	< LOD	:	0.230

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	589
Mode	ALLOY
Time	2024-09-07 11:22
Duration	7.11
Sequence	Final
Alloy1	304SS : 0.67
Alloy2	No Match : 2.44
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.054
Sn	< LOD	:	0.059
Pd	< LOD	:	0.047
Ag	< LOD	:	0.113
Al	< LOD	:	80.000
Mo	0.043	±	0.009
Nb	< LOD	:	0.006
Zr	< LOD	:	0.006
Bi	< LOD	:	0.014
Pb	< LOD	:	0.003
Se	< LOD	:	0.010
W	< LOD	:	0.109
Zn	< LOD	:	0.035
Cu	0.269	±	0.102
Ni	8.122	±	0.350
Co	< LOD	:	0.593
Fe	71.289	±	0.539
Mn	1.373	±	0.238
Cr	18.162	±	0.310
V	< LOD	:	0.156
Ti	< LOD	:	0.182

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	587
Mode	ALLOY
Time	2024-09-07 11:21
Duration	9.14
Sequence	Final
Alloy1	304SS : 0.73
Alloy2	No Match : 2.14
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.050
Sn	< LOD	:	0.054
Pd	< LOD	:	0.043
Ag	< LOD	:	0.127
Al	< LOD	:	80.000
Mo	0.147	±	0.014
Nb	< LOD	:	0.008
Zr	< LOD	:	0.005
Bi	< LOD	:	0.006
Pb	< LOD	:	0.020
Se	< LOD	:	0.008
W	< LOD	:	0.102
Zn	< LOD	:	0.035
Cu	0.221	±	0.091
Ni	8.086	±	0.320
Co	< LOD	:	0.542
Fe	71.119	±	0.494
Mn	1.568	±	0.221
Cr	18.018	±	0.283
V	0.164	±	0.078
Ti	< LOD	:	0.171

Sergio Morales



Date: 21-10-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	583
Mode	ALLOY
Time	2024-09-07 11:20
Duration	6.30
Sequence	Final
Alloy1	304SS : 0.18
Alloy2	No Match : 2.19
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.057
Sn	< LOD	:	0.058
Pd	< LOD	:	0.053
Ag	< LOD	:	0.146
Al	< LOD	:	80.000
Mo	0.040	±	0.010
Nb	< LOD	:	0.010
Zr	< LOD	:	0.005
Bi	< LOD	:	0.029
Pb	< LOD	:	0.016
Se	< LOD	:	0.007
W	< LOD	:	0.123
Zn	< LOD	:	0.052
Cu	0.241	±	0.113
Ni	8.094	±	0.392
Co	< LOD	:	0.658
Fe	71.652	±	0.605
Mn	1.349	±	0.267
Cr	18.115	±	0.348
V	< LOD	:	0.180
Ti	< LOD	:	0.208

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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Constância, Portugal 2250-999

Certificate of PMI Reading

XL3t-32735

Reading No	585
Mode	ALLOY
Time	2024-09-07 11:21
Duration	7.57
Sequence	Final
Alloy1	304SS : 0.04
Alloy2	No Match : *2.08
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.051
Sn	< LOD	:	0.069
Pd	< LOD	:	0.052
Ag	< LOD	:	0.159
Al	< LOD	:	80.000
Mo	0.125	±	0.015
Nb	< LOD	:	0.009
Zr	< LOD	:	0.005
Bi	< LOD	:	0.006
Pb	< LOD	:	0.030
Se	< LOD	:	0.009
W	< LOD	:	0.137
Zn	< LOD	:	0.043
Cu	0.582	±	0.128
Ni	8.418	±	0.373
Co	< LOD	:	0.612
Fe	71.271	±	0.567
Mn	1.113	±	0.244
Cr	18.019	±	0.324
V	< LOD	:	0.157
Ti	< LOD	:	0.192

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	581
Mode	ALLOY
Time	2024-09-07 11:20
Duration	5.52
Sequence	Final
Alloy1	304SS : 0.52
Alloy2	No Match : 1.76
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

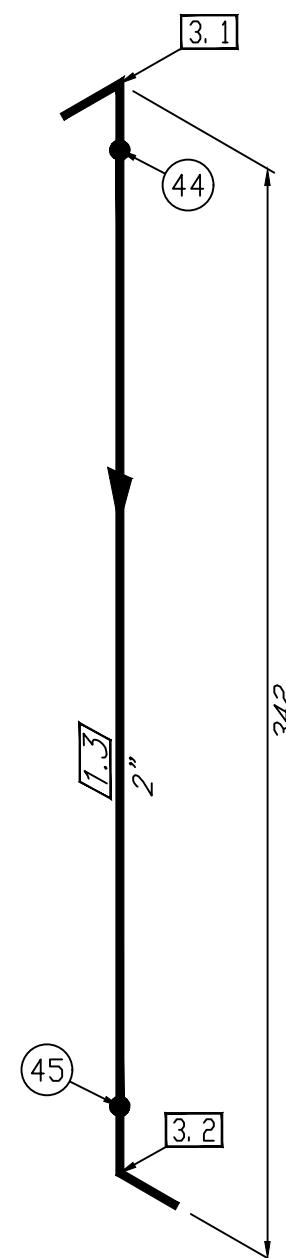
	%	±	Error
Sb	< LOD	:	0.072
Sn	< LOD	:	0.084
Pd	< LOD	:	0.062
Ag	< LOD	:	0.144
Al	< LOD	:	80.000
Mo	0.128	±	0.019
Nb	< LOD	:	0.011
Zr	< LOD	:	0.007
Bi	< LOD	:	0.033
Pb	< LOD	:	0.033
Se	< LOD	:	0.019
W	< LOD	:	0.128
Zn	< LOD	:	0.043
Cu	0.654	±	0.158
Ni	8.215	±	0.444
Co	< LOD	:	0.737
Fe	70.946	±	0.682
Mn	1.339	±	0.302
Cr	18.244	±	0.393
V	< LOD	:	0.198
Ti	< LOD	:	0.241

Sergio Morales



Date: 21-10-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

<div style="text-align: center; padding: 10px;">   </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6" style="text-align: center;">BILL OF MATERIAL</th> </tr> <tr> <th colspan="6" style="text-align: center;">PIPE</th> </tr> <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>1.3</td> <td>0,186</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE</td> <td>I3364302</td> </tr> <tr> <td colspan="6" style="height: 100px;"></td> </tr> <tr> <th colspan="6" style="text-align: center;">WELD FITTINGS</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> <tr> <td>3.1</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>3.2</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> <tr> <td colspan="6" style="height: 100px;"></td> </tr> </tbody> </table> <div style="text-align: right; margin-top: 10px;"> P2308S 01004  2121-LO40B03-4-SP11-01004 </div> <div style="text-align: right; margin-top: 10px;">  </div>	BILL OF MATERIAL						PIPE						ITEM	LONGUEUR	DIAMÉTRE	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE	1.3	0,186	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE	I3364302							WELD FITTINGS						ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	3.1	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133	3.2	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133						
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Spool Material List

Contract : P2308

Client NERVION

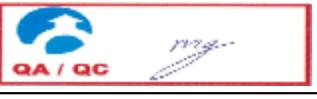
Job : P2308S

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
P2308S	01004	2121-LO40B03-4-SP11-01004		2121-LO40B03-4		01	
1.3	,186 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	0,73
40391							
3.2	1 2.0000 S10S	0.0000 NA		90 LR ELL, SEAMLESS, A403-WP304L	M220696 0410	0,49	0,49
42965							
3.1	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 *C. Sandu*
 29.10.2024

Number of Items : 3 Total Weight : 1,71

Signature	QA	Client
		Sergio Morales Date: 21-10-24
Date	2024-08-26 16:19:53	

CTA Group	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**

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

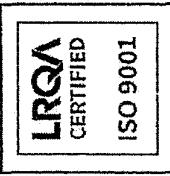
COMMERCIALE TUBI ACCIAIO S.P.A.**QUALITY CONTROL DEPARTMENT**

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



Approve No:1509001-00400
RCO Cert No:0343/P/2014/UW/101007/3

INSPECTION CERTIFICATE



RACCORDI TUBI S.P.A.

Order No.: 22TEC003
(注文番号)

P.O. No. : 000000150 S

Chemical Composition of Pipe (Raw Material) %

Remarks * Hardiness acc to NACE MR0175 / ISO 15156-3: 2015. MR0103:2015

UNITED PACIFIC AD CORROSION TEST (ASTM A1262/EN) - ON BMU CHECK GOOD ISO 9001 / EN 10204-3 PED 2014/68/EU ANNEX I SECTION 1.3

INUKTUK AND LARSEN ISLANDS (AS1) SET OUT IN THE CHARTS OF THE 1:250,000 MAPS 1001 AND 1002, 1:100,000 MAP 1001, AND 1:50,000 MAP 1002.

HEAT TREATMENT 1030 DEGREES CELSIUS QUENCHED IN WATER WILL PREVENT SPALLATION.

WE HEREBY CERTIFY THAT THE ABOVE PRODUCTS MEET THE REQUIREMENTS STATED ON THE REVERSE SIDE OF THIS CARD. WE HAVE MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH INDICATED SPECIFICATIONS AND WAS FOUND TO MEET THE REQUIREMENTS. NO WELDING WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR. MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

(上記の般品は、当該規格及び、注文の要件に適合することを証明します。)

Head of QAV UC Dept

Head of QA/QC Dept

Customer:

TECNIMONT S.p.A.

Order: 7500118979 - 26.01.24 - Item n.: 61 - Project: 4274 - PP+PE Sines (Portugal) EPC - Our ref.: OCVEIT202400000474

Description:

CURVE 90° LR 2" SCH.10/S SEAMLESS
I2259133

raccortubi

Heat num. or Pcs. marking: M220696 - Qty:71,00

Protocol: CTCERC202400003104 * CERTIFIED TRUE COPY
* Issued 03-04-2024



Contract : P2300

Drawing : 2121-LO40B03-4

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Spool : 01004

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B03-4-SP11-01004

Weld data

Welding

Control

Weld No.	Type	Dia	Sch	Weld /Thk	1st Proc.	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
0044	BW	2	S10S	MW.26_BW	AE	08/07/2024	4712055	AE	08/07/2024	4712055			000801	19/08/2024				000796	22/08/2024										
0045	BW	2	S10S	MW.26_BW	AE	08/07/2024	4712055	AE	08/07/2024	4712055			000801	19/08/2024				000796	22/08/2024										

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 *C. Sandu*

Notes:

Boccard Portugal QC	Client
 <i>my</i>	Sergio Morales Date: 21-10-24 
26/08/2024 16:19:53	

Signature

Date



Shop QC Inspection Report

P2308-000826

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

Job number: P2308S
 Spool N°: 01004
 Piece Mark: 2121-LO40B03-4-SP11-01004

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

Comments:

Performed by: MATOS, MARCO (N2 VT/PT) Date: 19/08/2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 26/08/2024 16:19:53 Signature 	Customer Inspection: Sergio Morales Date: 21-10-24 
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On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 29.10.2024 

Visual Examination Report (Welds)

P2308-000801

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01004

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

Project : ALBA

Piece Mark: 2121-LO40B03-4-SP11-01004

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.	Identification		Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
		Welder							
0044	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	25	X				Direct	
0045	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	25	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: GIL, MIGUEL

Customer Inspection:

Date: 19/08/2024

Date: 26/08/2024 16:19:53

Sergio Morales

Signature



Signature



Date: 21-10-24


On behalf of Tecnimon / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000796

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01004

Piece Mark: 2121-LO40B03-4-SP11-01004

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: 22/08/2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0044	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	106	0	0	0	8	70	1	19	0	0	0	X		
0045	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	107	0	0	0	8	69	1	18	0	0	0	X		
1.3	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	104	0	0	0	8	71	1	18	0	0	0	X		
3.1	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	103	0	0	0	8	71	1	17	0	0	0	X		
3.2	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	105	0	0	0	8	71	1	18	0	0	0	X		

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Customer Inspection:

Date: 22/08/2024

Sergio Morales



Signature



Date: 26/08/2024 16:19:53

Signature



Date:

Sergio Morales

Signature Date: 21-10-24

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

Certificate of PMI Reading

XL3t-32735

Reading No	106
Mode	ALLOY
Time	2024-08-22 14:48
Duration	7.31
Sequence	Final
Alloy1	304SS : 0.22
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.044
Sn	< LOD	:	0.058
Pd	< LOD	:	0.046
Ag	< LOD	:	0.124
Al	< LOD	:	80.000
Mo	0.040	±	0.009
Nb	< LOD	:	0.009
Zr	< LOD	:	0.004
Bi	< LOD	:	0.009
Pb	< LOD	:	0.017
Se	< LOD	:	0.008
W	< LOD	:	0.091
Zn	< LOD	:	0.044
Cu	< LOD	:	0.182
Ni	8.447	±	0.354
Co	< LOD	:	0.593
Fe	70.066	±	0.542
Mn	1.621	±	0.246
Cr	19.141	±	0.318
V	< LOD	:	0.158
Ti	< LOD	:	0.169

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	107
Mode	ALLOY
Time	2024-08-22 14:48
Duration	8.10
Sequence	Final
Alloy1	304SS : 0.31
Alloy2	No Match : 1.77
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.058
Pd	< LOD	:	0.043
Ag	< LOD	:	0.185
Al	< LOD	:	80.000
Mo	0.047	±	0.009
Nb	< LOD	:	0.010
Zr	< LOD	:	0.004
Bi	< LOD	:	0.016
Pb	< LOD	:	0.016
Se	< LOD	:	0.009
W	< LOD	:	0.107
Zn	< LOD	:	0.043
Cu	< LOD	:	0.170
Ni	8.989	±	0.348
Co	< LOD	:	0.565
Fe	69.775	±	0.521
Mn	1.731	±	0.237
Cr	18.797	±	0.303
V	< LOD	:	0.161
Ti	< LOD	:	0.185

Sergio Morales



Date: 21-10-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	104
Mode	ALLOY
Time	2024-08-22 14:47
Duration	9.11
Sequence	Final
Alloy1	304SS : 0.60
Alloy2	No Match : 1.75
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.046
Sn	< LOD	:	0.054
Pd	< LOD	:	0.041
Ag	< LOD	:	0.143
Al	< LOD	:	80.000
Mo	0.040	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.006
Bi	< LOD	:	0.019
Pb	< LOD	:	0.020
Se	< LOD	:	0.010
W	< LOD	:	0.110
Zn	< LOD	:	0.034
Cu	0.235	±	0.090
Ni	8.136	±	0.316
Co	< LOD	:	0.532
Fe	71.219	±	0.487
Mn	1.477	±	0.217
Cr	18.166	±	0.281
V	< LOD	:	0.146
Ti	< LOD	:	0.176

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	103
Mode	ALLOY
Time	2024-08-22 14:47
Duration	10.00
Sequence	Final
Alloy1	304SS : 0.99
Alloy2	No Match : *1.94
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.042
Sn	< LOD	:	0.051
Pd	< LOD	:	0.039
Ag	< LOD	:	0.158
Al	< LOD	:	80.000
Mo	0.117	±	0.012
Nb	< LOD	:	0.008
Zr	< LOD	:	0.004
Bi	< LOD	:	0.016
Pb	< LOD	:	0.002
Se	< LOD	:	0.008
W	< LOD	:	0.090
Zn	< LOD	:	0.032
Cu	0.280	±	0.085
Ni	8.085	±	0.289
Co	< LOD	:	0.484
Fe	71.576	±	0.443
Mn	1.432	±	0.197
Cr	17.986	±	0.255
V	< LOD	:	0.127
Ti	< LOD	:	0.156

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	105
Mode	ALLOY
Time	2024-08-22 14:48
Duration	7.88
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.044
Sn	< LOD	:	0.059
Pd	< LOD	:	0.042
Ag	< LOD	:	0.208
Al	< LOD	:	80.000
Mo	< LOD	:	0.009
Nb	< LOD	:	0.006
Zr	< LOD	:	0.004
Bi	< LOD	:	0.017
Pb	< LOD	:	0.016
Se	< LOD	:	0.010
W	< LOD	:	0.085
Zn	< LOD	:	0.031
Cu	< LOD	:	0.166
Ni	8.338	±	0.338
Co	< LOD	:	0.560
Fe	71.755	±	0.515
Mn	1.136	±	0.224
Cr	18.328	±	0.297
V	< LOD	:	0.143
Ti	< LOD	:	0.158

Sergio Morales

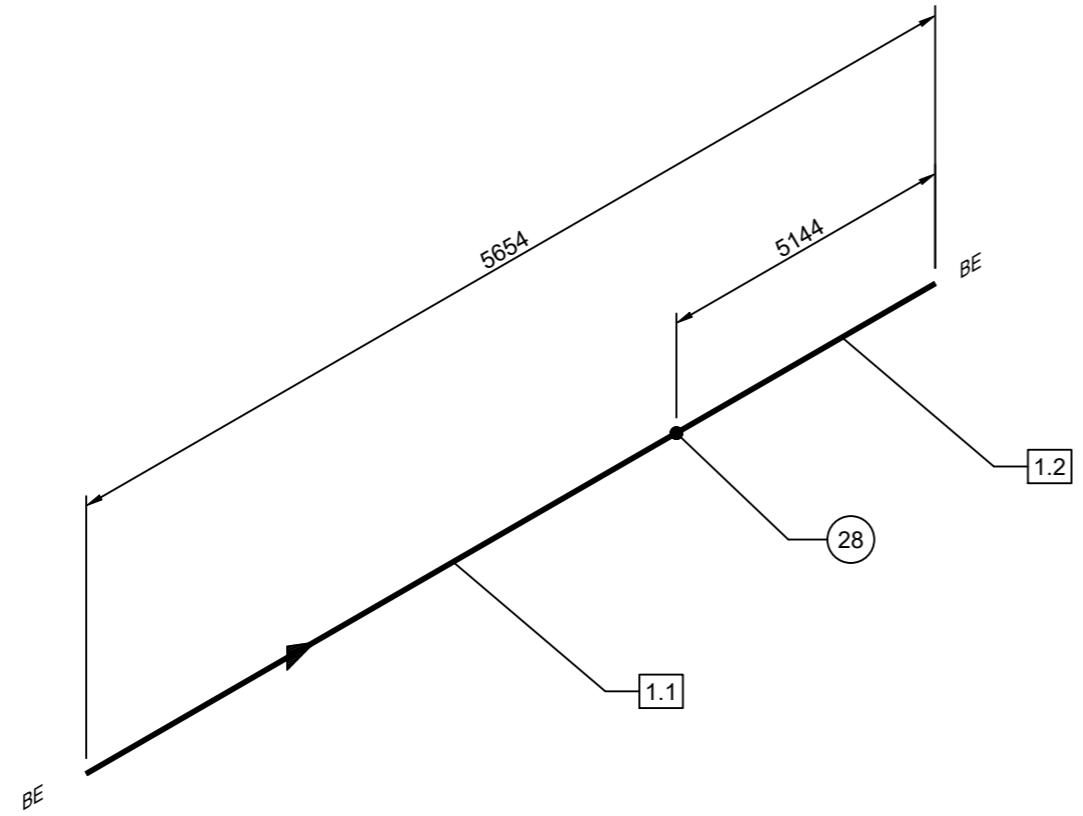
Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu



M



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 *C. Sandu*

Rev.	Date	DRW	Check 1	Check 2	
					Marking Color: GREEN
					Weld Class: QXB-55-M
01	01/10/2024	RHA	AZA		Paint System: NR

Sergio Morales

Date: 21-10-24

Weld Map Sticker

P2308S 01154



2121-LO40B03-4-SP08-01154



Construction Code:	ASME B31.3	% RT -	YES	% UT -	NO	Hydro:	NO	ID Cleaning:	YES	Piece Mark	Ref. Drawing	Job #	Spool #	Project
Acc Criteria:	ASME B31.3	% PT -	YES	% FE -	NO	PWHT:	NO	OD Cleaning:	YES	2121-LO40B03-4-SP08-01154	2121-LO40B03-4	P2308S	01154	REPSOL PROJETO ALBA NERVION
Metal Tag:	YES	% MT -	NO	% PMI -	YES	BHN% -	NO	Tolerances:	ASME B31.3					

Spool Material List

Contract : P2308

Client NERVION

Job : P2308S

Project ALBA

Job	Spool	Piece Mark	Drawing	Rev					
Item No	Qty	Size1	Sch1	Size2	Sch2	Description	Heat No	Unit	Weight
Tag No							MTR No		Kgs
ID No							Folder No		
P2308S	01154	2121-LO40B03-4-SP08-01154	2121-LO40B03-4	01					
1.1	,508	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15	3,93	2,00
40391							0391		
1.2	5,144	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15	3,93	20,22
40391							0391		

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 29.10.2024 C. Sandu

Number of Items : 2 Total Weight : 22,21

Signature	QA	Client
		Sergio Morales Date: 21-10-24
Date	2024-10-15 15:00:39	

 Stainless Steel Experience				 DNV GL GROUP				CERTIFICATO DI COLLAUDO WORK TEST CERTIFICATE EN 10204/3.1 DIN 50049/3.1 NR. BD24016251 DEL 11/06/24												Delivery Note NR. BD24016251 DEL 11/06/24				CLIENTE: PANTALONE S.R.L. CUSTOMER VIA DON PRIMO MAZZOLARI, 21 - Z.I. SELVAIEZZI 66100 CHIETI (CHIETI SCALO) CH							
RIF. DDT BD24016251																															

ANALISI CHIMICA - CHEMICAL COMPOSITION

COLATA	QTA'	CODICE	DESCRIZIONE	MATERIALE	C%	Si%	Mn%	S%	P%	Ni%	Cr%	Mo%	Al%	Cu%	Ti%	N%
HEAT NO.	Q.TY	CODE	DESCRIPTION	MATERIAL	C%	Si%	Mn%	S%	P%	Ni%	Cr%	Mo%	Al%	Cu%	Ti%	N%
			Ns. Ordine Cliente Nr. OC24017381 del 11/06/24													
			Vs. Ordine Cliente Nr. 2024-BOF-0001035 del 11/06/24													
NY231216AS1 5	134,40	946#200010304	TUBO SMLS ASTM/ASME A/SA312/A999 2" (60.3) SCH10S (2.77) AISI 304/304L	TP304/304L-1.4301/1.4307	0,022	0,4	1,37	0,001	0,035	8,03	18,34					0,076
NY231216AS1 5	106,40	946#200010304	TUBO SMLS ASTM/ASME A/SA312/A999 2" (60.3) SCH10S (2.77) AISI 304/304L	TP304/304L-1.4301/1.4307	0,022	0,4	1,37	0,001	0,035	8,03	18,34					0,076

Note - Notes

Firma
Signature

I dati dell'analisi chimica e delle prove meccaniche corrispondono fedelmente al certificato inviato dal fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove. I certificati sono conservati nel nostro archivio.
 The chemical analysis and mechanical properties fully comply with the certificate issued by the manufacturer of the basic material and/or by the laboratory carrying out test. The certificates are kept in our archives.

 TECNICATRE Stainless Steel Experience TECNICA TRE s.r.l. 36061 BASSANO DEL GR. -VI- Via delle Viole, 16 - Tel. +39 0424 Fax: Sede legale: Via delle Viole, 16 36061 BASSANO DEL GR. -VI- Partita Iva 02523320246 - R.I. VI-1996-149	CERTIFICATO DI COLLAUDO WORK TEST CERTIFICATE EN 10204/3.1 DIN 50049/3.1 NR. BD24016251 DEL 11/06/24	Delivery Note NR. BD24016251 DEL 11/06/24	CLIENTE: PANTALONE S.R.L. CUSTOMER VIA DON PRIMO MAZZOLARI, 21 - Z.I. SELVAIEZZI 66100 CHIETI (CHIETI SCALO) CH
			RIF. DDT BD24016251

CARATTERISTICHE MECCANICHE - MECHANICAL TEST

COLATA Heat no.	SNERVAMENTO yield point - N/mm ²	ROTTURA tensile - N/mm ²	ALLUNGAMENTO elongation - %	CONTRAZIONE red of area - %	DUREZZA hardness - %
NY231216AS15	320,0	545,0	44,5	0,0	0,0
NY231216AS15	320,0	545,0	44,5	0,0	0,0

Note - Notes

Firma
Signature

I dati dell'analisi chimica e delle prove meccaniche corrispondono fedelmente al certificato inviato dal fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove. I certificati sono conservati nel nostro archivio.
The chemical analysis and mechanical properties fully comply with the certificate issued by the manufacturer of the basic material and/or by the laboratory carrying out test. The certificates are kept in our archives.



Contract : P2300

Drawing : 2121-LO40B03-4

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Spool : 01154

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B03-4-SP08-01154

Weld data				Welding												Control														
Weld No.	Type	Dia /Thk	Sch	Weld Proc.	1st Pass	1st MTR	Final Pass	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	
0028	BW	2	S10S	MW.26_BW	CA	10-10-2024	4712055	CA	10-10-2024	4712055				001135	11-10-2024				001178	14-10-2024										

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 *C. Sandu*

Notes:

Signature	Boccard Portugal QC	Client
		Sergio Morales Date: 21-10-24
Date	15-10-2024 15:00:39	



Shop QC Inspection Report

P2308-001177

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

Job number: P2308S
 Spool N°: 01154
 Piece Mark: 2121-LO40B03-4-SP08-01154

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

Control Date: 11-10-2024

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

Comments:

Performed by: MATOS, MARCO (N2 VT/PT) Date: 11-10-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 15-10-2024 15:00:39 Signature 	Customer Inspection: Sergio Morales Date: 21-10-24 
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On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 29.10.2024 

Visual Examination Report (Welds)

P2308-001135

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01154

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

Project : ALBA

Piece Mark: 2121-LO40B03-4-SP08-01154

Testing Date: 11-10-2024

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
0028	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	CA	20	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)

Date: 11-10-2024

Signature



QA/QC Inspection: RAIMUNDO, MARIANA

Date: 15-10-2024 15:00:39

Signature



Customer Inspection:

Sergio Morales

Date: 21-10-24


On behalf of Tecnimon / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-001178

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01154

Piece Mark: 2121-LO40B03-4-SP08-01154

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: 14-10-2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0028	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	14	0	0	0	8	69	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	13	0	0	0	7	72	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	12	0	0	0	8	72	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024

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

Customer Inspection:

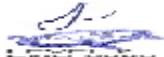
Sergio Morales

Date: 14-10-2024

Date: 15-10-2024 15:00:39

Date:

Signature



Signature



Signature

Date: 21-10-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	14
Mode	ALLOY
Time	2024-10-14 09:03
Duration	10.26
Sequence	Final
Alloy1	304SS : 0.60
Alloy2	No Match : *2.19
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.056
Pd	< LOD	:	0.046
Ag	< LOD	:	0.162
Al	< LOD	:	80.000
Mo	0.089	±	0.012
Nb	< LOD	:	0.010
Zr	< LOD	:	0.005
Bi	< LOD	:	0.014
Pb	< LOD	:	0.013
Se	< LOD	:	0.007
W	< LOD	:	0.107
Zn	< LOD	:	0.029
Cu	< LOD	:	0.167
Ni	8.612	±	0.327
Co	< LOD	:	0.543
Fe	69.929	±	0.496
Mn	1.823	±	0.227
Cr	18.728	±	0.288
V	< LOD	:	0.151
Ti	< LOD	:	0.158

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	13
Mode	ALLOY
Time	2024-10-14 09:02
Duration	9.70
Sequence	Final
Alloy1	301SS : 1.51
Alloy2	No Match : *2.34
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.041
Sn	< LOD	:	0.055
Pd	< LOD	:	0.040
Ag	< LOD	:	0.192
Al	< LOD	:	80.000
Mo	< LOD	:	0.011
Nb	< LOD	:	0.007
Zr	< LOD	:	0.004
Bi	< LOD	:	0.007
Pb	< LOD	:	0.023
Se	< LOD	:	0.008
W	< LOD	:	0.092
Zn	< LOD	:	0.039
Cu	< LOD	:	0.143
Ni	7.937	±	0.302
Co	< LOD	:	0.513
Fe	72.181	±	0.467
Mn	1.598	±	0.209
Cr	17.538	±	0.265
V	0.177	±	0.074
Ti	< LOD	:	0.143

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	12
Mode	ALLOY
Time	2024-10-14 09:02
Duration	12.80
Sequence	Final
Alloy1	301SS : 1.74
Alloy2	No Match : *1.98
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.044
Pd	< LOD	:	0.031
Ag	< LOD	:	0.148
Al	< LOD	:	80.000
Mo	0.024	±	0.006
Nb	< LOD	:	0.003
Zr	< LOD	:	0.003
Bi	< LOD	:	0.002
Pb	0.025	±	0.010
Se	< LOD	:	0.006
W	< LOD	:	0.080
Zn	< LOD	:	0.031
Cu	< LOD	:	0.128
Ni	8.010	±	0.255
Co	< LOD	:	0.430
Fe	72.341	±	0.393
Mn	1.254	±	0.171
Cr	17.627	±	0.224
V	< LOD	:	0.115
Ti	< LOD	:	0.139

Sergio Morales

Date: 21-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
29.10.2024 C. Sandu