



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-310-000380_RFI5034_MOD-ITP-XL_220
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	IP-WSR-P-310-000380_RFI5034 - IP Spool Release From Workshop		

Sheet 01/01

The Present Inspection Package contains the following Elements:

7111-IA00D01-4-SP19-00010;7111-IA00D01-4-SP17-00008;2211-VG62J02-1-SP03-00452;2211-VG62J02-1-SP01-00450;1126-LO36005-1-SP01-00848;1121-P40027-1-SP01-00207;1115-DMW64003-4-SP07-03085;7111-IA91F10-1-SP01-00041;7111-IA00D01-11-SP32-00033;7111-IA00D01-11-SP31-00032;1211-N81031-1-SP04-00960;1211-N81031-1-SP03-00959;1121-LS50049-4-SP01-00941;1115-DMW64003-4-SP08-03086;7111-IA00D01-9-SP29-00025;7111-IA00D01-9-SP27-00023;2121-LO40B02-1-SP03-00502;2121-LO40B02-1-SP01-00500;1211-N81031-1-SP01-00957;1211-N80024-1-SP01-00950;7111-IA00D01-9-SP26-00022;7111-IA00D01-4-SP18-0009;2211-VG62J02-1-SP04-00453;2121-IA91F63-3-SP07-00486;1211-N81031-1-SP06-00184;1126-LO36005-1-SP02-00849;7111-IA00D01-9-SP25-00021;7111-IA00D01-6-SP21-00018;2211-LS50A06-1-SP01-00387;2211-LO70A01-1-SP01-00371;1211-DMW64001-3-SP06-03055;1127-DMW63009-1-SP02-03075;7111-IA00D01-9-SP28-00024;7111-IA00D01-6-SP19-00016;7111-IA00D01-11-SP33-00034;2211-VG62J02-1-SP02-00451;2121-LO40B02-1-SP02-00501;1211-DMW64001-3-SP07-03056;1126-LO32003-1-SP03-00834;1115-DMW64003-4-SP06-03084;7111-IA91F10-1-SP02-00042;7111-IA00D01-11-SP30-00031;2211-VG62J02-1-SP05-00454;2121-IA19F63-3-SP06-00485;1211-N81031-1-SP05-00961;1211-N81031-1-SP02-00958;1121-LS50004-2-SP04-00188;1121-LS50004-2-SP03-00187;7111-IA00D01-6-SP22-00019;7111-IA00D01-6-SP20-00017;2211-LO70A01-1-SP02-00372;2121-LO40B05-1-SP01-01006;1211-DMW64001-3-SP05-03054;1127-DMW63009-1-SP01-03074

Spool No.	Ready for destination to: P: Painting (1) W: Wrapping	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)
	F: Field							

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
02.10.2024 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	 C. B. 48977056
SUBCONTRACTOR	02-10-2024	Sergio Morales Collantes				
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-310-000380_RFI5034_MOD-ITP-XL_220
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	IP-WSR-P-310-000380_RFI5034 - IP Spool Release From Workshop		

Sheet 01/01

The Present Inspection Package contains the following Elements:

7111-IA00D01-4-SP19-00010;7111-IA00D01-4-SP17-00008;2211-VG62J02-1-SP03-00452;2211-VG62J02-1-SP01-00450;1126-LO36005-1-SP01-00848;1121-P40027-1-SP01-00207;1115-DMW64003-4-SP07-03085;7111-IA91F10-1-SP01-00041;7111-IA00D01-11-SP32-00033;7111-IA00D01-11-SP31-00032;1211-N81031-1-SP04-00960;1211-N81031-1-SP03-00959;1121-LS50049-4-SP01-00941;1115-DMW64003-4-SP08-03086;7111-IA00D01-9-SP29-00025;7111-IA00D01-9-SP27-00023;2121-LO40B02-1-SP03-00502;2121-LO40B02-1-SP01-00500;1211-N81031-1-SP01-00957;1211-N80024-1-SP01-00950;7111-IA00D01-9-SP26-00022;7111-IA00D01-4-SP18-0009;2211-VG62J02-1-SP04-00453;2121-IA91F63-3-SP07-00486;1211-N81031-1-SP06-00184;1126-LO36005-1-SP02-00849;7111-IA00D01-9-SP25-00021;7111-IA00D01-6-SP21-00018;2211-LS50A06-1-SP01-00387;2211-LO70A01-1-SP01-00371;1211-DMW64001-3-SP06-03055;1127-DMW63009-1-SP02-03075;7111-IA00D01-9-SP28-00024;7111-IA00D01-6-SP19-00016;7111-IA00D01-11-SP33-00034;2211-VG62J02-1-SP02-00451;2121-LO40B02-1-SP02-00501;1211-DMW64001-3-SP07-03056;1126-LO32003-1-SP03-00834;1115-DMW64003-4-SP06-03084;7111-IA91F10-1-SP02-00042;7111-IA00D01-11-SP30-00031;2211-VG62J02-1-SP05-00454;2121-IA19F63-3-SP06-00485;1211-N81031-1-SP05-00961;1211-N81031-1-SP02-00958;1121-LS50004-2-SP04-00188;1121-LS50004-2-SP03-00187;7111-IA00D01-6-SP22-00019;7111-IA00D01-6-SP20-00017;2211-LO70A01-1-SP02-00372;2121-LO40B05-1-SP01-01006;1211-DMW64001-3-SP05-03054;1127-DMW63009-1-SP01-03074

NOTES (*) : 4274-XH-PQ-000000001

- 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
02.10.2024 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	02-10-2024		Sergio Morales Collantes			
CONTRACTOR						
COMPANY						
(Free)						



Tecnímont

Punch List

PUNCH LIST

IDENTIFICATION CODE

SHE
1

ET | DOC.CLAS
1 | 1

ISSUE
01



MECWIDE
TECHNOLOGY & SERVICES

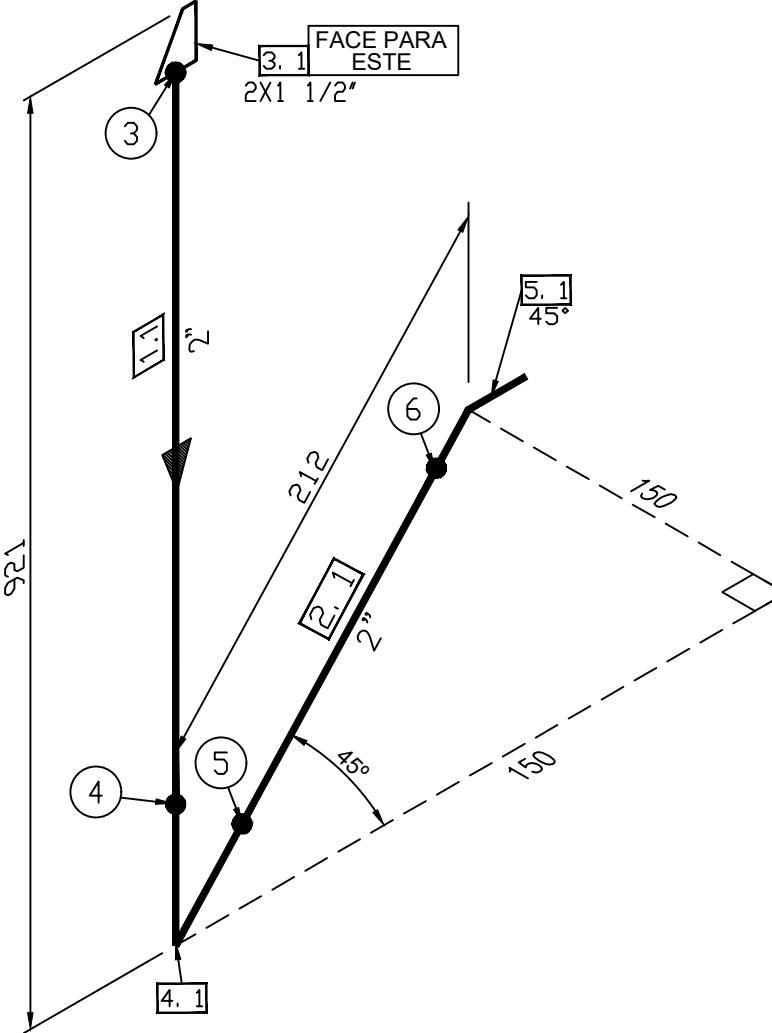
WITSPRO

ISO ID: 2121-LO40B02-1

NOTES AND REMARKS

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 *C. Sandu*

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

 	BILL OF MATERIAL <table border="1"> <thead> <tr> <th colspan="6">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LENGTH</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.1</td> <td>0,765</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> <tr> <td>2.1</td> <td>0,097</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> </tbody> </table> WELD FITTINGS <table border="1"> <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>3.1</td> <td>1</td> <td>2" x 1 1/2"</td> <td>S-10S x S-40S</td> <td>ECCENTRIC REDUCER ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2373875</td> </tr> <tr> <td>4.1</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>5.1</td> <td>1</td> <td>2"</td> <td>S-10S</td> <td>45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259145</td> </tr> </tbody> </table> <p>P2308S 00500</p>  <p>2121-LO40B02-1-SP01-00500</p> <p>Weld Map Sticker</p> <p></p> <p>F324-302-0</p>	PIPE						ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	1.1	0,765	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	2.1	0,097	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	3.1	1	2" x 1 1/2"	S-10S x S-40S	ECCENTRIC REDUCER ASME B16.9 A403-WP304/304L DG BE SMLS	I2373875	4.1	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133	5.1	1	2"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145
PIPE																																																	
ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE																																												
1.1	0,765	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302																																												
2.1	0,097	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302																																												
ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE																																												
3.1	1	2" x 1 1/2"	S-10S x S-40S	ECCENTRIC REDUCER ASME B16.9 A403-WP304/304L DG BE SMLS	I2373875																																												
4.1	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133																																												
5.1	1	2"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145																																												
<p>On behalf of Tecnimont / R Piping Supervisor Cristi Sandu 01.10.2024 C. Sandu</p> <table border="1"> <tr> <td>Rev.</td> <td>Date</td> <td>DRW</td> <td>Check 1</td> <td>Check 2</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></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>00</td> <td>04/03/2024</td> <td>ANP</td> <td>LRG</td> <td>PCO</td> <td>Paint System: NR</td> </tr> </table> <p>Sergio Morales</p> <p>Date: 30-09-24</p> <p></p>						Rev.	Date	DRW	Check 1	Check 2							Marking Color: GREEN						Weld Class: QXB-55-M	00	04/03/2024	ANP	LRG	PCO	Paint System: NR	<p>ID Cleaning: YES Piece Mark</p> <p>OD Cleaning: YES</p> <p>Tolerances: ASME B31.3</p> <p>2121-LO40B02-1-SP01-00500</p> <p>Ref. Drawing</p> <p>Job #</p> <p>Spool #</p> <p>Project</p> <p>2121-LO40B02-1</p> <p>P2308S</p> <p>00500</p> <p>REPSOL PROJETO ALBA NERVION</p>																			
Rev.	Date	DRW	Check 1	Check 2																																													
					Marking Color: GREEN																																												
					Weld Class: QXB-55-M																																												
00	04/03/2024	ANP	LRG	PCO	Paint System: NR																																												

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	00500	2121-LO40B02-1-SP01-00500		2121-LO40B02-1		00	
1.1	,765 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	3,01
40391							
2.1	,097 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	0,38
40391							
5.1	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		90 LR ELL, SEAMLESS, A403-WP304L	M220696 0410	0,49	0,49
42965							
3.1	1 2.0000 S10S	1.5000 S40S		ECCENTRIC RED, SEAMLESS, A403-WP304L	2K113-E002 0421	0,41	0,41
83718							

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Number of Items : 5

Total Weight : 4,53

Signature	QA	Client
		Sergio Morales Date: 30-09-24
Date	2024-09-23 14:39:09	

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



F / QA / 24

REV. NO. 10

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

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)	ASTM A-262 Practice"E" & ISO 3651-2 Method "A"					
		Rp0.2% Mpa	Rp1 % Mpa						N/A					
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

SURAJ LTD
THOL
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



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-6-20080627059

Page 59 of 200

L/C NO.:32390CI003798/08

Customer: [REDACTED]	Marking:
Order No.: YL 006	• Manufacturer'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-304/304L(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	RED ECC	2" *11/2" SCH40S	30	2K113-E002	200805087276014	
2						
3						
4						
5						

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

A. Chemical Analysis:

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

B. Mechanical Properties & Tensile Inspection :

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

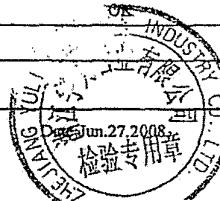
C. Inspection and Related Data Verify:

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

D. Remarks:

[Large empty box for remarks]

Work inspector: 梅森
MEI SEN





Contract : P2300

Drawing : 2121-LO40B02-1

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00500

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B02-1-SP01-00500

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
0003	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000785	09-08-2024				000978	22-08-2024										
0004	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000785	09-08-2024				000978	22-08-2024										
0005	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000785	09-08-2024				000978	22-08-2024										
0006	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000785	09-08-2024				000978	22-08-2024								000255	17-08-2024	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Notes:

Boccard Portugal QC	Client
	Sergio Morales Date: 30-09-24
23-09-2024 14:39:09	

Signature

Date



Shop QC Inspection Report

P2308-000809

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

Job number: P2308S
Spool N°: 00500
Piece Mark: 2121-LO40B02-1-SP01-00500

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

Control Date: 09-08-2024

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	X	<input type="checkbox"/>	X
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: 09-08-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 23-09-2024 14:39:09 Signature 	Customer Inspection: Sergio Morales Date: 30-09-24 
--	---	--

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Visual Examination Report (Welds)

P2308-000785

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00500

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

Project : ALBA

Piece Mark: 2121-LO40B02-1-SP01-00500

Testing Date: 09-08-2024

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.								
0003	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AE	30	X			Direct	
0004	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AE	30	X			Direct	
0005	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AE	30	X			Direct	
0006	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AE	30	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: 09-08-2024			Date: 23-09-2024 14:39:09			Signature: Sergio Morales		Signature: 01.10.2024	
Signature: 			Signature: 						

On behalf of Tecnimon / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000978

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00500

Piece Mark: 2121-LO40B02-1-SP01-00500

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			
0003	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	99	0	0	0	9	69	1	19	0	0	0	X		
0004	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	100	0	0	0	8	70	1	18	0	0	0	X		
0005	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	101	0	0	0	8	70	1	19	0	0	0	X		
0006	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	102	0	0	0	8	69	1	19	0	0	0	X		
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	97	0	0	0	7	71	1	18	0	0	0	X		
2.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	95	0	0	0	7	72	1	17	0	0	0	X		
3.1	2.0000 S10S 1.5000 S40S ECCENTRIC RED, SEAMLESS, A403-WP304L (2K113-E002)	98	0	0	0	8	70	1	18	0	0	0	X		
4.1	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	96	0	0	0	7	71	1	17	0	0	0	X		
5.1	2.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (2K113-E002)	94	0	0	0	8	70	1	18	0	0	0	X		

On behalf of Tecnimon / R
 Piping Supervisor
 Cristi Sandu
 01.10.2024 C. Sandu

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

Customer Inspection:

Sergio Morales

Date: 22-08-2024

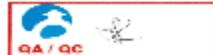
Date: 23-09-2024 14:39:09

Date:

Signature



Signature



Signature Date: 30-09-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	99
Mode	ALLOY
Time	2024-08-22 14:45
Duration	8.46
Sequence	Final
Alloy1	304SS : 0.42
Alloy2	No Match : 1.76
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.041
Sn	< LOD	:	0.054
Pd	< LOD	:	0.037
Ag	< LOD	:	0.185
Al	< LOD	:	80.000
Mo	0.062	±	0.010
Nb	< LOD	:	0.007
Zr	< LOD	:	0.004
Bi	< LOD	:	0.008
Pb	< LOD	:	0.019
Se	< LOD	:	0.014
W	< LOD	:	0.094
Zn	< LOD	:	0.029
Cu	0.219	±	0.092
Ni	9.053	±	0.329
Co	< LOD	:	0.530
Fe	69.484	±	0.491
Mn	1.477	±	0.220
Cr	19.181	±	0.289
V	< LOD	:	0.151
Ti	< LOD	:	0.176

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	100
Mode	ALLOY
Time	2024-08-22 14:45
Duration	7.66
Sequence	Final
Alloy1	304SS : 0.20
Alloy2	No Match : *2.11
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.045
Sn	< LOD	:	0.055
Pd	< LOD	:	0.045
Ag	< LOD	:	0.129
Al	< LOD	:	80.000
Mo	0.052	±	0.010
Nb	< LOD	:	0.009
Zr	< LOD	:	0.004
Bi	< LOD	:	0.005
Pb	< LOD	:	0.017
Se	< LOD	:	0.010
W	< LOD	:	0.090
Zn	< LOD	:	0.046
Cu	< LOD	:	0.182
Ni	8.886	±	0.345
Co	< LOD	:	0.561
Fe	70.277	±	0.516
Mn	1.874	±	0.238
Cr	18.465	±	0.298
V	< LOD	:	0.138
Ti	< LOD	:	0.149

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	101
Mode	ALLOY
Time	2024-08-22 14:45
Duration	6.86
Sequence	Final
Alloy1	321SS : 1.20
Alloy2	304SS : 1.64
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.048
Sn	< LOD	:	0.065
Pd	< LOD	:	0.046
Ag	< LOD	:	0.179
Al	< LOD	:	80.000
Mo	0.035	±	0.009
Nb	< LOD	:	0.010
Zr	< LOD	:	0.007
Bi	< LOD	:	0.002
Pb	< LOD	:	0.021
Se	< LOD	:	0.010
W	< LOD	:	0.089
Zn	< LOD	:	0.038
Cu	< LOD	:	0.184
Ni	8.329	±	0.363
Co	< LOD	:	0.596
Fe	70.444	±	0.557
Mn	1.660	±	0.254
Cr	19.022	±	0.327
V	< LOD	:	0.159
Ti	< LOD	:	0.217

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	102
Mode	ALLOY
Time	2024-08-22 14:45
Duration	7.87
Sequence	Final
Alloy1	304SS : 0.18
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.045
Sn	< LOD	:	0.060
Pd	< LOD	:	0.044
Ag	< LOD	:	0.145
Al	< LOD	:	80.000
Mo	0.049	±	0.009
Nb	< LOD	:	0.009
Zr	< LOD	:	0.004
Bi	< LOD	:	0.009
Pb	0.033	±	0.015
Se	< LOD	:	0.011
W	< LOD	:	0.109
Zn	< LOD	:	0.030
Cu	< LOD	:	0.175
Ni	8.532	±	0.340
Co	< LOD	:	0.566
Fe	69.784	±	0.518
Mn	1.792	±	0.237
Cr	19.190	±	0.304
V	< LOD	:	0.130
Ti	< LOD	:	0.167

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	97
Mode	ALLOY
Time	2024-08-22 14:44
Duration	8.66
Sequence	Final
Alloy1	304SS : 1.58
Alloy2	No Match : *2.22
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.045
Sn	< LOD	:	0.054
Pd	< LOD	:	0.039
Ag	< LOD	:	0.200
Al	< LOD	:	80.000
Mo	0.035	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.015
Pb	< LOD	:	0.003
Se	< LOD	:	0.008
W	< LOD	:	0.102
Zn	< LOD	:	0.027
Cu	< LOD	:	0.176
Ni	7.829	±	0.320
Co	< LOD	:	0.543
Fe	71.725	±	0.499
Mn	1.171	±	0.219
Cr	18.628	±	0.291
V	< LOD	:	0.155
Ti	< LOD	:	0.158

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	95
Mode	ALLOY
Time	2024-08-22 14:44
Duration	6.87
Sequence	Final
Alloy1	301SS : 1.04
Alloy2	No Match : 2.21
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.047
Sn	< LOD	:	0.066
Pd	< LOD	:	0.047
Ag	< LOD	:	0.146
Al	< LOD	:	80.000
Mo	< LOD	:	0.007
Nb	< LOD	:	0.006
Zr	< LOD	:	0.005
Bi	< LOD	:	0.015
Pb	< LOD	:	0.016
Se	< LOD	:	0.009
W	< LOD	:	0.089
Zn	< LOD	:	0.043
Cu	< LOD	:	0.174
Ni	7.820	±	0.358
Co	< LOD	:	0.614
Fe	72.226	±	0.557
Mn	1.470	±	0.248
Cr	17.840	±	0.318
V	< LOD	:	0.155
Ti	< LOD	:	0.169

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	98
Mode	ALLOY
Time	2024-08-22 14:45
Duration	7.07
Sequence	Final
Alloy1	304SS : 0.41
Alloy2	No Match : *2.13
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.048
Sn	< LOD	:	0.066
Pd	< LOD	:	0.043
Ag	< LOD	:	0.194
Al	< LOD	:	80.000
Mo	0.181	±	0.017
Nb	< LOD	:	0.010
Zr	< LOD	:	0.004
Bi	< LOD	:	0.017
Pb	< LOD	:	0.034
Se	< LOD	:	0.009
W	< LOD	:	0.101
Zn	< LOD	:	0.048
Cu	0.535	±	0.119
Ni	8.242	±	0.355
Co	< LOD	:	0.587
Fe	70.706	±	0.545
Mn	1.159	±	0.240
Cr	18.855	±	0.319
V	< LOD	:	0.156
Ti	< LOD	:	0.177

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	96
Mode	ALLOY
Time	2024-08-22 14:44
Duration	8.88
Sequence	Final
Alloy1	301SS : 1.79
Alloy2	321SS : 1.81
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.047
Sn	< LOD	:	0.054
Pd	< LOD	:	0.043
Ag	< LOD	:	0.147
Al	< LOD	:	80.000
Mo	0.104	±	0.012
Nb	< LOD	:	0.009
Zr	< LOD	:	0.008
Bi	< LOD	:	0.018
Pb	< LOD	:	0.023
Se	< LOD	:	0.010
W	< LOD	:	0.125
Zn	< LOD	:	0.040
Cu	0.276	±	0.094
Ni	7.898	±	0.321
Co	0.551	±	0.273
Fe	71.730	±	0.502
Mn	1.328	±	0.217
Cr	17.541	±	0.283
V	< LOD	:	0.155
Ti	< LOD	:	0.205

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	94
Mode	ALLOY
Time	2024-08-22 14:44
Duration	8.65
Sequence	Final
Alloy1	321SS : 1.24
Alloy2	304SS : 1.39
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.046
Sn	< LOD	:	0.062
Pd	< LOD	:	0.046
Ag	< LOD	:	0.172
Al	< LOD	:	80.000
Mo	0.125	±	0.014
Nb	< LOD	:	0.006
Zr	< LOD	:	0.004
Bi	< LOD	:	0.002
Pb	< LOD	:	0.021
Se	< LOD	:	0.008
W	< LOD	:	0.124
Zn	< LOD	:	0.056
Cu	0.526	±	0.115
Ni	8.120	±	0.343
Co	< LOD	:	0.578
Fe	70.605	±	0.530
Mn	1.432	±	0.235
Cr	18.334	±	0.306
V	< LOD	:	0.158
Ti	< LOD	:	0.204

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Contract : P2308
Client : NERVION
Project : ALBA

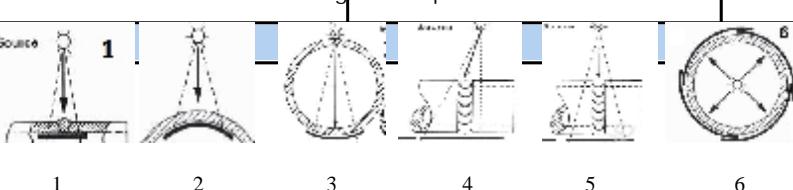
Spool N°: P2308S-00500
Isometric N°: 2121-LO40B02-1
Piece Mark: 2121-LO40B02-1-SP01-00500

Procedure/ Instruction:

Acceptance Criteria:

Testing Date:

Material:

4274-LZ-VD-FW31010370QAC02 - RevA\$ME B.31.3 – Table 341.3.2		17-08-2024		Stainless Steel 304, 316, 317																															
Equipment		Normal Fluid Film		IQI																															
Type: G-RAY		Brand: FUJI		Type: ASTM-1A																															
Source Equip: Ir192		Type: IX50		Position: Film Side																															
Source Dim: 2x1.4		Class: C3		Sensitivity: 4																															
Activity (Ci): 35		Lead Sheets: 0,5		Ø of visible wire/hole 0,0063(0,16)																															
Films/Casette:Single		Testing Technique		Indication Codes (ISO 6520)																															
		<table border="1"> <tr> <td>BB-Back Bevel</td> <td>EP-Excess Penetration (504)</td> <td>SB-Suck Back</td> </tr> <tr> <td>FA-Film Artifact</td> <td>ST-Sugared Tack</td> <td></td> </tr> <tr> <td>BW-Back Weld</td> <td>GR-Grind Repair</td> <td>SU-Surface</td> </tr> <tr> <td>BT-Burn Through (510)</td> <td>HL-Hi-LO</td> <td>T-Tungsten</td> </tr> <tr> <td>C-Cap</td> <td>LC-Lack of Cleanup</td> <td>UC-Undercut (5011)</td> </tr> <tr> <td>CP-Clustered Porosity (2012)</td> <td>LF-Lack of Fusion (401)</td> <td>UP-Unformity Porosity (2013)</td> </tr> <tr> <td>CL-Cold Lap</td> <td>LP-Lack of Penetration (402)</td> <td>V-Valley in Cap</td> </tr> <tr> <td>CR-Crack</td> <td>P-Porosity (2011)</td> <td>W-Wire</td> </tr> <tr> <td>CC-Crater Crack (104)</td> <td>R-Root</td> <td>WH-Worm Hole (2016)</td> </tr> <tr> <td>DI-Dimensional</td> <td>S-Slag (301)</td> <td>XN-Xray Film Non-Conform</td> </tr> </table>		BB-Back Bevel	EP-Excess Penetration (504)	SB-Suck Back	FA-Film Artifact	ST-Sugared Tack		BW-Back Weld	GR-Grind Repair	SU-Surface	BT-Burn Through (510)	HL-Hi-LO	T-Tungsten	C-Cap	LC-Lack of Cleanup	UC-Undercut (5011)	CP-Clustered Porosity (2012)	LF-Lack of Fusion (401)	UP-Unformity Porosity (2013)	CL-Cold Lap	LP-Lack of Penetration (402)	V-Valley in Cap	CR-Crack	P-Porosity (2011)	W-Wire	CC-Crater Crack (104)	R-Root	WH-Worm Hole (2016)	DI-Dimensional	S-Slag (301)	XN-Xray Film Non-Conform		
BB-Back Bevel	EP-Excess Penetration (504)	SB-Suck Back																																	
FA-Film Artifact	ST-Sugared Tack																																		
BW-Back Weld	GR-Grind Repair	SU-Surface																																	
BT-Burn Through (510)	HL-Hi-LO	T-Tungsten																																	
C-Cap	LC-Lack of Cleanup	UC-Undercut (5011)																																	
CP-Clustered Porosity (2012)	LF-Lack of Fusion (401)	UP-Unformity Porosity (2013)																																	
CL-Cold Lap	LP-Lack of Penetration (402)	V-Valley in Cap																																	
CR-Crack	P-Porosity (2011)	W-Wire																																	
CC-Crater Crack (104)	R-Root	WH-Worm Hole (2016)																																	
DI-Dimensional	S-Slag (301)	XN-Xray Film Non-Conform																																	
General Remarks		Notations / Symbology																																	
The results refer to the controlled items		- Good / Acceptable + Repair = Good after Repair																																	
		x Acceptable after Repair SFD = Source Film Distance SOD = Source Object Distance																																	

Weld No.	Weld Desc. (WPS)	Welder	Position	SFD	SOD	Weld Reinf	Testing Technique	Exposure Time	Density	IQI	Indication Code	Decision Remarks
0006	2.0000 S10S BW (MW.26_BW)	AE	A	500	440	NA	4	360	3.9	W4	-	RX347
0006	2.0000 S10S BW (MW.26_BW)	AE	B	500	440	NA	4	360	-	XN	-	RF
0006	2.0000 S10S BW (MW.26_BW)	AE	B	500	440	NA	4	360	3.6	W4	-	RX347

Contract : P2308
Client : NERVION
Project : ALBA

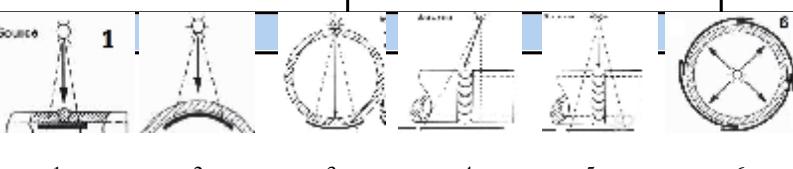
Spool N°: P2308S-00500
Isometric N°: 2121-LO40B02-1
Piece Mark: 2121-LO40B02-1-SP01-00500

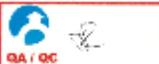
Procedure/ Instruction:

Acceptance Criteria:

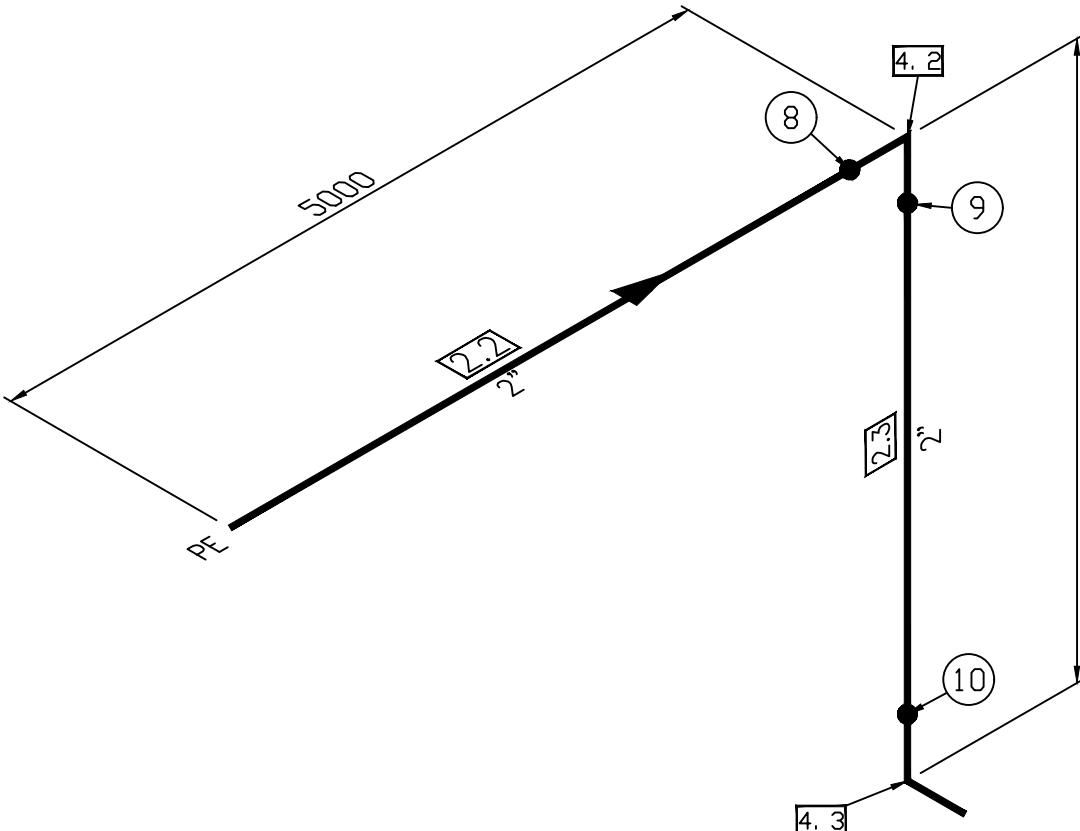
Testing Date:

Material:

4274-LZ-VD-FW31010370QAC02 - RevA\$ME B.31.3 – Table 341.3.2		17-08-2024		Stainless Steel 304, 316, 317	
Equipment		Normal Fluid Film		IQI	
Type: G-RAY		Brand: FUJI		Type: ASTM-1A	
Source Equip: Ir192		Type: IX50		Position: Film Side	
Source Dim: 2x1.4		Class: C3		Sensitivity: 4	
Activity (Ci): 35		Lead Sheets: 0,5		Ø of visible wire/hole 0,0063(0,16)	
Films/Casette:Single		Testing Technique		Indication Codes (ISO 6520)	
		BB-Back Bevel BW-Back Weld BT-Burn Through (510) C-Cap CP-Clusterd Porosity (2012) CL-Cold Lap CR-Crack CC-Crater Crack (104) DI-Dimensional		EP-Excess Penetration (504) FA-Film Artifact BB-Back Bevel GR-Grind Repair HL-Hi-Lo LC-Lack of Cleanup LF-Lack of Fusion (401) LP-Lack of Penetration (402) P-Porosity (2011) R-Root S-Slag (301)	
Source		SU-Surface T-Tungsten UC-Undercut (5011) UP-Uniformity Porosity (2013) V-Valley in Cap W-Wire WH-Worm Hole (2016) XN-Xray Film Non-Conform		ST-Sugared Tack 	
General Remarks		Notations / Symbology			
The results refer to the controlled items		- Good / Acceptable + Repair = Good after Repair		x Acceptable after Repair SFD = Source Film Distance SOD = Source Object Distance	

Weld No.	Weld Desc. (WPS)	Welder	Position	SFD	SOD	Weld Reinf	Testing Technique	Exposure Density	Time	IQI	Indication	Decision	Remarks Code
	Performed by:	Examined by:						QA/QC Inspection:				Customer Inspection:	
Name:	GONCALVES(QA), J. (N2 PT/RT)	FIGUEIRAS(QA), RUI (N2 PT/RT)						RAIMUNDO, MARIANA					
Date:	17-08-2024		17-08-2024					23-09-2024 14:39:09					
Signature:											Sergio Morales	Date: 30-09-24	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

<div style="text-align: center; padding: 10px;">  N </div>	<div style="border: 1px solid black; padding: 10px;"> <p>BILL OF MATERIAL</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LENGTH</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>2.2</td> <td>4,922</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, PExBE</td> <td>I3364302</td> </tr> <tr> <td>2.3</td> <td>0,114</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">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> </thead> <tbody> <tr> <td>4.2</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>4.3</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>	PIPE						ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	2.2	4,922	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, PExBE	I3364302	2.3	0,114	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	WELD FITTINGS						ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	4.2	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133	4.3	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133
PIPE																																																	
ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE																																												
2.2	4,922	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, PExBE	I3364302																																												
2.3	0,114	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302																																												
WELD FITTINGS																																																	
ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE																																												
4.2	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133																																												
4.3	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133																																												
					<p>P2308S 00501</p> <div style="display: flex; align-items: center;">  2121-LO40B02-1-SP02-00501 </div> <div style="margin-top: 10px;"> <p>Weld Map Sticker</p> </div>																																												
<p>Sergio Morales</p> <p>Date: 30-09-24</p> <div style="text-align: center;">  </div>					<p>boccard Alliance for success Boccard Portugal, Lda.</p>																																												
Rev.	Date	DRW	Check 1	Check 2																																													
					Marking Color: GREEN Weld Class: QXB-55-M																																												
00	04/03/2024	ANP	LRG	PCO	Paint System: NR																																												
Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO Acc Criteria: ASME B31.3 % PT - YES % FE - NO PWHT: NO Metal Tag: YES % MT - NO % PMI - YES BHN% - NO					ID Cleaning: YES OD Cleaning: YES Tolerances: ASME B31.3																																												
Piece Mark 2121-LO40B02-1-SP02-00501					Ref. Drawing 2121-LO40B02-1 Job # P2308S Spool # 00501 Project REPSOL PROJETO ALBA NERVION																																												

Spool Material List

Contract : P2308

Client NERVION

Job : P2308S

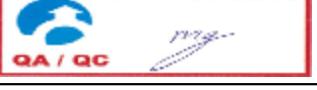
Project ALBA

Job	Spool	Piece Mark	Drawing	Rev						
Item No	Qty	Size1	Sch1	Size2	Sch2	Description	Heat No	Unit	Weight	Kgs
Tag No							MTR No			
ID No							Folder No			
P2308S	00501	2121-LO40B02-1-SP02-00501	2121-LO40B02-1	00						
2.2	4,922	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	S-23594	3,93	19,34	
40391							0357			
2.3	,114	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	S-23594	3,93	0,45	
40391							0357			
4.3	1	2.0000	S10S	0.0000	NA	90 LR ELL, SEAMLESS, A403-WP304L	M220696	0,49	0,49	
42965							0410			
4.2	1	2.0000	S10S	0.0000	NA	90 LR ELL, SEAMLESS, A403-WP304L	M220696	0,49	0,49	
42965							0410			

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 01.10.2024 *C. Sandu*

Number of Items : 4

Total Weight : 20,77

Signature	QA	Client
		Sergio Morales
	Date: 30-09-24	
Date	2024-08-23 15:43:41	

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

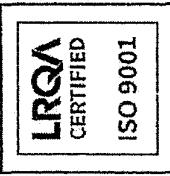
COMMERCIALE TUBI ACCIAIO S.P.A.**QUALITY CONTROL DEPARTMENT**

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.

TECNIMONT S.p.A.

Order No.: 22TEC003
(注文番号)

P.O. No. : 000000150 S

Chemical Composition of Pipe (Raw Material) %

* Raw Pipe Heat No.	(試験結果)						Type of Specimen (試験片)	YS Mpa (屈力) ($\times 10^3$)	TS Mpa (引張強さ) ($\times 10^3$)	EL% (伸び) (GL:50mm) ($\times 10^3$)	Flattening Test (へん平試験) ($\times 10^3$)	HT Mpa (水圧試験) ($\times 10^3$)	Hardness Test HRB
	C $\times 100$	Si $\times 100$	Mn $\times 100$	P $\times 1000$	S $\times 1000$	Ni $\times 100$	Cr $\times 100$	Mo $\times 100$					
1 L220330	2.3	35.8	138	38	1	804	1817		230	540	56	GOOD	79
Specification	MAX 3.0	MAX 100	MAX 200	MAX 45	MAX 30	MAX 1100	MAX 2000		800	1800	MIN 205	MIN 515	MIN 28

BENTONVILLE, ARKANSAS 72716 U.S.A. 1-800-334-4333 FAX 479-636-1111 E-MAIL: BENTONVILLE@AOL.COM

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3:2015, MRL 01/03-2015
INTERGRANULAR CORROSION TEST (ASTM A362(E)-OK, PIN/CHICK GOOD, ISO 9001 / EN 10204-3.1 PED 2014/68/EU ANNEX I SECTION 4.3

HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER WITHIN 1 MINUTES TO BELOW 40°C.
MATERIAL WAS MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH INDICATED SPECIFICATIONS AND WAS FOUND TO MEET THE REQUIREMENTS. NO
WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR.
MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.

(上記の製品は、当社規格及び、下記の要件に適合するところを明記する。)

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
（上記の製品は、当該規格及び、下記文の要件に適合するところを証明します。）

Head of QA/QC Dept
质量/品管经理

Protocol: CTCERC202400003104 * CERTIFIED TRUE COPY

* Issued 03-04-2024



Contract : P2300

Drawing : 2121-LO40B02-1

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00501

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B02-1-SP02-00501

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
0008	BW	2	S10S	MW.26_BW	AE	12/07/2024	4712055	AE	12/07/2024	4712055			000786	09/08/2024				000779	22/08/2024										
0009	BW	2	S10S	MW.26_BW	AE	12/07/2024	4712055	AE	12/07/2024	4712055			000786	09/08/2024				000779	22/08/2024										
0010	BW	2	S10S	MW.26_BW	AE	12/07/2024	4712055	AE	12/07/2024	4712055			000786	09/08/2024				000779	22/08/2024								000236	09/08/2024	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Notes:

Signature	Boccard Portugal QC	Client
	 	Sergio Morales Date: 30-09-24
Date	23/08/2024 15:43:41	



Shop QC Inspection Report

P2308-000810

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

Job number: P2308S
 Spool N°: 00501
 Piece Mark: 2121-LO40B02-1-SP02-00501

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

Control Date: 09/08/2024

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		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: 09/08/2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 23/08/2024 15:43:41 Signature 	Customer Inspection: Sergio Morales Date: 30-09-24 
--	---	---

On behalf of Tecnimon / R
 Piping Supervisor
 Cristi Sandu
 01.10.2024 

Visual Examination Report (Welds)

P2308-000786

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00501

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

Project : ALBA

Piece Mark: 2121-LO40B02-1-SP02-00501

Testing Date: 09/08/2024

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	
0008	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	30	X			Direct
0009	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	30	X			Direct
0010	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	30	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: 09/08/2024

Date: 23/08/2024 15:43:41

Sergio Morales

Signature



Signature



Date: 30-09-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000779

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00501

Piece Mark: 2121-LO40B02-1-SP02-00501

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			
0008	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	208	0	0	0	8	69	1	19	0	0	0	X		
0009	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	207	0	0	0	8	69	1	19	0	0	0	X		
0010	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	206	0	0	0	8	70	1	18	0	0	0	X		
2.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	202	0	0	0	7	71	1	18	0	0	0	X		
2.3	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	204	0	0	0	7	71	1	18	0	0	0	X		
4.2	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	203	0	0	0	7	71	1	18	0	0	0	X		
4.3	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	205	0	0	0	8	71	1	17	0	0	0	X		

On behalf of Tecnicont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Date: 22/08/2024

Signature



Date: 23/08/2024 15:43:41

Signature



Customer Inspection:

Sergio Morales

Date:



Signature Date: 30-09-24

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

Certificate of PMI Reading

XL3t-32735

Reading No	208
Mode	ALLOY
Time	2024-08-22 15:59
Duration	10.24
Sequence	Final
Alloy1	304SS : 0.29
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.052
Pd	< LOD	:	0.035
Ag	< LOD	:	0.154
Al	< LOD	:	80.000
Mo	0.046	±	0.008
Nb	0.010	±	0.004
Zr	< LOD	:	0.006
Bi	< LOD	:	0.009
Pb	< LOD	:	0.008
Se	< LOD	:	0.007
W	< LOD	:	0.074
Zn	< LOD	:	0.030
Cu	< LOD	:	0.152
Ni	8.857	±	0.299
Co	< LOD	:	0.489
Fe	69.536	±	0.451
Mn	1.633	±	0.204
Cr	19.252	±	0.265
V	< LOD	:	0.137
Ti	< LOD	:	0.160

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	207
Mode	ALLOY
Time	2024-08-22 15:58
Duration	11.01
Sequence	Final
Alloy1	304SS : 0.38
Alloy2	No Match : *2.14
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.047
Pd	< LOD	:	0.033
Ag	< LOD	:	0.166
Al	< LOD	:	80.000
Mo	0.057	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.003
Bi	< LOD	:	0.011
Pb	< LOD	:	0.016
Se	< LOD	:	0.007
W	< LOD	:	0.079
Zn	< LOD	:	0.032
Cu	0.159	±	0.075
Ni	8.509	±	0.278
Co	< LOD	:	0.463
Fe	69.758	±	0.424
Mn	1.661	±	0.192
Cr	19.125	±	0.248
V	< LOD	:	0.123
Ti	< LOD	:	0.147

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	206
Mode	ALLOY
Time	2024-08-22 15:58
Duration	8.18
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	:	0.050
Pd	< LOD	:	0.040
Ag	< LOD	:	0.201
Al	< LOD	:	80.000
Mo	0.029	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.013
Pb	< LOD	:	0.021
Se	< LOD	:	0.007
W	< LOD	:	0.090
Zn	< LOD	:	0.030
Cu	< LOD	:	0.169
Ni	8.823	±	0.333
Co	< LOD	:	0.544
Fe	70.404	±	0.502
Mn	1.578	±	0.225
Cr	18.582	±	0.290
V	< LOD	:	0.152
Ti	< LOD	:	0.163

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	202
Mode	ALLOY
Time	2024-08-22 15:57
Duration	9.17
Sequence	Final
Alloy1	301SS : 1.39
Alloy2	304SS : 1.82
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.054
Pd	< LOD	:	0.039
Ag	< LOD	:	0.159
Al	< LOD	:	80.000
Mo	0.046	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.013
Pb	< LOD	:	0.018
Se	< LOD	:	0.009
W	< LOD	:	0.087
Zn	< LOD	:	0.030
Cu	< LOD	:	0.159
Ni	7.752	±	0.302
Co	< LOD	:	0.520
Fe	71.883	±	0.472
Mn	1.372	±	0.208
Cr	18.037	±	0.271
V	0.153	±	0.074
Ti	< LOD	:	0.160

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	204
Mode	ALLOY
Time	2024-08-22 15:58
Duration	9.76
Sequence	Final
Alloy1	304SS : 1.89
Alloy2	301SS : 2.38
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.052
Pd	< LOD	:	0.040
Ag	< LOD	:	0.131
Al	< LOD	:	80.000
Mo	0.044	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.006
Bi	< LOD	:	0.020
Pb	< LOD	:	0.019
Se	< LOD	:	0.008
W	< LOD	:	0.098
Zn	< LOD	:	0.040
Cu	0.232	±	0.085
Ni	7.877	±	0.296
Co	0.541	±	0.255
Fe	71.503	±	0.461
Mn	1.332	±	0.203
Cr	18.167	±	0.265
V	< LOD	:	0.137
Ti	< LOD	:	0.138

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	203
Mode	ALLOY
Time	2024-08-22 15:57
Duration	9.45
Sequence	Final
Alloy1	304SS : 1.71
Alloy2	301SS : 2.06
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.052
Pd	< LOD	:	0.038
Ag	< LOD	:	0.188
Al	< LOD	:	80.000
Mo	0.074	±	0.010
Nb	< LOD	:	0.008
Zr	< LOD	:	0.006
Bi	< LOD	:	0.002
Pb	< LOD	:	0.004
Se	< LOD	:	0.013
W	< LOD	:	0.093
Zn	< LOD	:	0.033
Cu	0.299	±	0.092
Ni	7.879	±	0.308
Co	< LOD	:	0.524
Fe	71.449	±	0.480
Mn	1.408	±	0.213
Cr	18.157	±	0.277
V	< LOD	:	0.147
Ti	< LOD	:	0.178

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	205
Mode	ALLOY
Time	2024-08-22 15:58
Duration	11.83
Sequence	Final
Alloy1	304SS : 1.20
Alloy2	No Match : *2.04
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.046
Pd	< LOD	:	0.036
Ag	< LOD	:	0.198
Al	< LOD	:	80.000
Mo	< LOD	:	0.007
Nb	< LOD	:	0.006
Zr	< LOD	:	0.003
Bi	< LOD	:	0.014
Pb	< LOD	:	0.012
Se	< LOD	:	0.006
W	< LOD	:	0.086
Zn	< LOD	:	0.031
Cu	< LOD	:	0.137
Ni	8.139	±	0.272
Co	< LOD	:	0.457
Fe	71.901	±	0.416
Mn	1.237	±	0.182
Cr	17.957	±	0.239
V	0.163	±	0.065
Ti	< LOD	:	0.125

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Contract : P2308
Client : NERVION
Project : ALBA

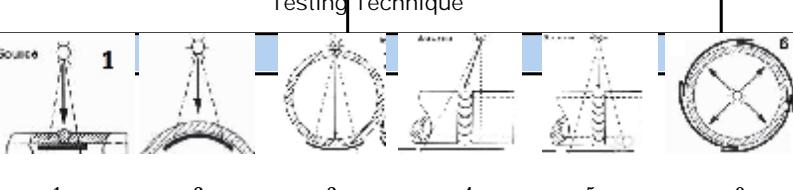
Spool Nº: P2308S-00501
Isometric Nº: 2121-LO40B02-1
Piece Mark: 2121-LO40B02-1-SP02-00501

Procedure/ Instruction:

Acceptance Criteria:

Testing Date:

Material:

4274-LZ-VD-FW31010370QAC02 - RevA\$ME B.31.3 – Table 341.3.2		09/08/2024		Stainless Steel 304, 316, 317																																
Equipment		Normal Fluid Film		IQI																																
Type:	X-RAY	Brand:	FUJI	Type:	ASTM-1A																															
Source Equip:	Ir192	Type:	IX50	Position:	Film Side																															
Source Dim:	2x1.4	Class:	C3	Sensitivity:	4																															
Activity (Ci):	37,8	Lead Sheets:	0,5	Ø of visible wire/hole	0,0063(0,16)																															
Films/Casette:Single		Indication Codes (ISO 6520)																																		
		<table border="1"> <tr> <td>BB-Back Bevel</td> <td>EP-Excess Penetration (504)</td> <td>SB-Suck Back</td> </tr> <tr> <td>FA-Film Artifact</td> <td>GR-Grind Repair</td> <td>SU-Surface</td> </tr> <tr> <td></td> <td>HL-Hi-LO</td> <td>T-Tungsten</td> </tr> <tr> <td></td> <td>LC-Lack of Cleanup</td> <td>UC-Undercut (5011)</td> </tr> <tr> <td></td> <td>CP-Clustered Porosity (2012)</td> <td>UP-Unformity Porosity (2013)</td> </tr> <tr> <td></td> <td>CL-Cold Lap</td> <td>V-Valley in Cap</td> </tr> <tr> <td></td> <td>CR-Crack</td> <td>P-Porosity (2011)</td> </tr> <tr> <td></td> <td>CC-Crater Crack (104)</td> <td>W-Wire</td> </tr> <tr> <td></td> <td>DI-Dimensional</td> <td>WH-Worm Hole (2016)</td> </tr> <tr> <td></td> <td></td> <td>S-Slag (301)</td> </tr> <tr> <td></td> <td></td> <td>XN-Xray Film Non-Conform</td> </tr> </table>		BB-Back Bevel	EP-Excess Penetration (504)	SB-Suck Back	FA-Film Artifact	GR-Grind Repair	SU-Surface		HL-Hi-LO	T-Tungsten		LC-Lack of Cleanup	UC-Undercut (5011)		CP-Clustered Porosity (2012)	UP-Unformity Porosity (2013)		CL-Cold Lap	V-Valley in Cap		CR-Crack	P-Porosity (2011)		CC-Crater Crack (104)	W-Wire		DI-Dimensional	WH-Worm Hole (2016)			S-Slag (301)			XN-Xray Film Non-Conform
BB-Back Bevel	EP-Excess Penetration (504)	SB-Suck Back																																		
FA-Film Artifact	GR-Grind Repair	SU-Surface																																		
	HL-Hi-LO	T-Tungsten																																		
	LC-Lack of Cleanup	UC-Undercut (5011)																																		
	CP-Clustered Porosity (2012)	UP-Unformity Porosity (2013)																																		
	CL-Cold Lap	V-Valley in Cap																																		
	CR-Crack	P-Porosity (2011)																																		
	CC-Crater Crack (104)	W-Wire																																		
	DI-Dimensional	WH-Worm Hole (2016)																																		
		S-Slag (301)																																		
		XN-Xray Film Non-Conform																																		
General Remarks		Notations / Symbology																																		
The results refer to the controlled items		- Good / Acceptable + Repair = Good after Repair		x Acceptable after Repair SFD = Source Film Distance SOD = Source Object Distance																																

Weld No.	Weld Desc. (WPS)	Welder	Position	SFD	SOD	Weld Reinf	Testing Technique	Exposure Time	Density	IQI	Indication Code	Decision Remarks
0010	2.0000 S10S BW (MW.26_BW)	AE	A	500	0	NA	4	290	3.3	4		-
0010	2.0000 S10S BW (MW.26_BW)	AE	B	500	0	NA	4	290	3.2	4		-

Contract : P2308
Client : NERVION
Project : ALBA

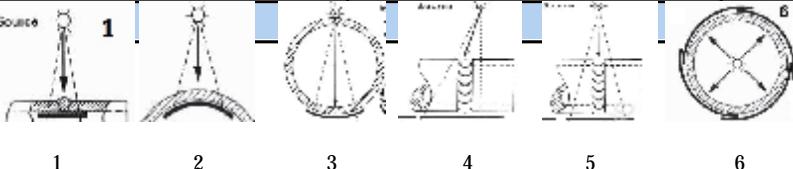
Spool Nº: P2308S-00501
Isometric Nº: 2121-LO40B02-1
Piece Mark: 2121-LO40B02-1-SP02-00501

Procedure/ Instruction:

Acceptance Criteria:

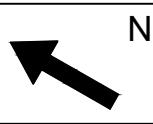
Testing Date:

Material:

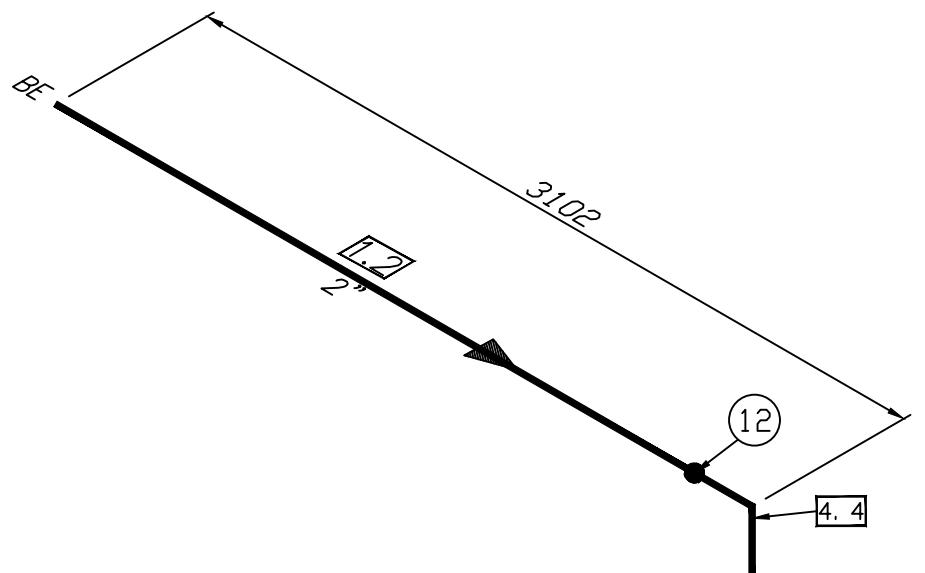
4274-LZ-VD-FW31010370QAC02 - RevA\$ME B.31.3 – Table 341.3.2		09/08/2024		Stainless Steel 304, 316, 317	
Equipment		Normal Fluid Film		IQI	
Type:	X-RAY	Brand:	FUJI	Type:	ASTM-1A
Source Equip:	Ir192	Type:	IX50	Position:	Film Side
Source Dim:	2x1.4	Class:	C3	Sensitivity:	4
Activity (Ci):	37,8	Lead Sheets:	0,5	Ø of visible wire/hole	0,0063(0,16)
Films/Casette:Single		Testing Technique		Indication Codes (ISO 6520)	
		BB-Back Bevel BW-Back Weld BT-Burn Through (510) C-Cap CP-Clustered Porosity (2012) CL-Cold Lap CR-Crack CC-Crater Crack (104) DI-Dimensional		EP-Excess Penetration (504) FA-Film Artifact SB-Suck Back ST-Sugared Tack GR-Grind Repair HL-Hi-Lo LC-Lack of Cleanup LF-Lack of Fusion (401) LP-Lack of Penetration (402) P-Porosity (2011) R-Root S-Slag (301)	
General Remarks		Notations / Symbology		x Acceptable after Repair SFD = Source Film Distance SOD = Source Object Distance	
The results refer to the controlled items	- Good / Acceptable + Repair = Good after Repair				

Weld No.	Weld Desc. (WPS)	Welder	Position	SFD	SOD	Weld Reinf	Testing Technique	Exposure	Density	IQI	Indication	Decision	Remarks Code
	Performed by:	Examined by:									QA/QC Inspection:		Customer Inspection:
Name:	GONCALVES(QA), J. (N2 PT/RT)	GONCALVES(QA), J. (N2 PT/RT)									GIL, MIGUEL		
Date:	09/08/2024		09/08/2024					23/08/2024	15:43:41				
Signature:											Sergio Morales	Date: 30-09-24	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu



N



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 *C. Sandu*

Rev.	Date	DRW	Check 1	Check 2	
					Marking Color: GREEN
					Weld Class: QXB-55-M
00	04/03/2024	ANP	LRG	PCO	Paint System: NR

Sergio Morales

Date: 30-09-24



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-LO40B02-1-SP03-00502	2121-LO40B02-1	P2308S	00502	REPSOL PROJETO ALBA NERVION
Metal Tag:	YES	% MT -	NO	% PMI -	YES	BHN% -	NO	Tolerances:	ASME B31.3					

F324-302-0

BILL OF MATERIAL

PIPE

ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE
1.2	3,024	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302

WELD FITTINGS

ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE
1-1	1	3"	S-16S	304L D.F. 1PC ROW ASME B16.9 A105 WPS201/204L DG PE SMLS C	J02561402

P2308S 00502



2121-LO40B02-1-SP03-00502



Spool Material List

Contract : P2308

Client NERVION

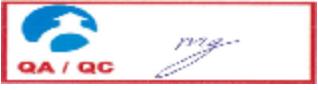
Job : P2308S

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	00502	2121-LO40B02-1-SP03-00502	2121-LO40B02-1	00					
1.2	3,024	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	11,88
40391									
4.4	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
 01.10.2024 *C. Sandu*

Number of Items : 2 Total Weight : 12,37

Signature	QA	Client
	 <i>[Signature]</i>	Sergio Morales Date: 30-09-24
Date	2024-09-18 11:09:42	

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)	ASTM A-262 Practice"E" & ISO 3651-2 Method "A"					
		Rp0.2% Mpa	Rp1 % Mpa											
MAX	690	--	--	--										
MIN	515	205	230	40										
S-23594	624.31	316.22	322.57	55.21	25.40	Satisfactory	76-78	73-75	N/A		Satisfactory			
	623.05	315.91	320.42	54.89										

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

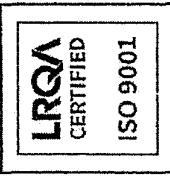
COMMERCIALE TUBI ACCIAIO S.p.A.**QUALITY CONTROL DEPARTMENT**

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.

TECNIMONT S.p.A.

Order No.: 22TEC003
(注文番号)

P.O. No. : 000000150 S

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

Customer:

TECNIMONT S.p.A.

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

Remarks * Hardness acc. to NACE MR0175 / ISO 15156-3: 2015, MRO103:2015

INTERGRANULAR CORROSION TEST (ASTM A262/B) - OK. PMI CHECK GOOD. ISO 9001 / EN 10204-3.1 PED 2014/68/EU ANNEX I SECTION 1.3 HEAT TREATMENT 1050 DEGREE CELCIUS QUENCHED IN WATER WITHIN 1 MINUTES TO BELOW 40°C. MATERIAL WAS MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH INDICATED SPECIFICATIONS AND WAS FOUND TO MEET THE REQUIREMENTS. N

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
WELD REPAIR WAS PERFORMED AND ALL ITEMS SUPPLIED ARE FREE OF WELD REPAIR.
MATERIAL IS FREE OF MERCURY CONTAMINATION AND RADIOACTIVITY.

Head of QAVQC Dept.

We herewith certify that the above products meet the requirements of the relevant standard and of the customer order.
（上記の製品は、当該規格及びご注文の要件に適合するとして承認する。）



Contract : P2300

Drawing : 2121-LO40B02-1

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00502

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B02-1-SP03-00502

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	
0012	BW	2	S10S	MW.26_BW	AE	12-07-2024	4712055	AE	12-07-2024	4712055				000787	09-08-2024				000921	14-09-2024										

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

Notes:

Boccard Portugal QC	Client
 	Sergio Morales Date: 30-09-24
18-09-2024 11:09:42	



Shop QC Inspection Report

P2308-000811

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

Job number: P2308S
 Spool N°: 00502
 Piece Mark: 2121-LO40B02-1-SP03-00502

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

Control Date: 09-08-2024

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: 09-08-2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 18-09-2024 11:09:42 Signature 	Customer Inspection: Sergio Morales Date: 30-09-24 
--	--	--

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 01.10.2024 

Visual Examination Report (Welds)

P2308-000787

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00502

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

Project : ALBA

Piece Mark: 2121-LO40B02-1-SP03-00502

Testing Date: 09-08-2024

Remarks: The results refer to the controlled items

Unacceptable indications for welding

ACCEPTANCE CRITERIA : ASME B31.3

Weld reinforcement greater than specified in project procedure

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

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

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

Surface finish that could interfere with other testing required

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

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

Identification

Weld No.	Weld Desc.	Welder	Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
0012	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	30	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: 09-08-2024

Date: 18-09-2024 11:09:42

Sergio Morales

Signature



Date: 30-09-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000921

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00502

Piece Mark: 2121-LO40B02-1-SP03-00502

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: 14-09-2024

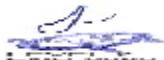
Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0012	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	393	0	0	0	8	70	1	18	0	0	0	X		
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	394	0	0	0	8	71	1	17	0	0	0	X		
4.4	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	392	0	0	0	8	71	1	18	0	0	0	X		

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Date: 14-09-2024

Signature



Date: 18-09-2024 11:09:42

Signature



Customer Inspection:

Sergio Morales

Date:

Signature

Date: 30-09-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	393
Mode	ALLOY
Time	2024-09-14 10:33
Duration	6.86
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.08
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.047
Sn	< LOD	:	0.060
Pd	< LOD	:	0.044
Ag	< LOD	:	0.116
Al	< LOD	:	80.000
Mo	0.046	±	0.010
Nb	< LOD	:	0.010
Zr	< LOD	:	0.007
Bi	< LOD	:	0.007
Pb	< LOD	:	0.029
Se	< LOD	:	0.009
W	< LOD	:	0.094
Zn	< LOD	:	0.043
Cu	< LOD	:	0.189
Ni	8.826	±	0.368
Co	< LOD	:	0.591
Fe	70.367	±	0.552
Mn	1.547	±	0.249
Cr	18.803	±	0.322
V	< LOD	:	0.175
Ti	< LOD	:	0.178

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	394
Mode	ALLOY
Time	2024-09-14 10:33
Duration	8.54
Sequence	Final
Alloy1	304SS : 1.30
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.046
Sn	< LOD	:	0.055
Pd	< LOD	:	0.039
Ag	< LOD	:	0.152
Al	< LOD	:	80.000
Mo	0.040	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.006
Bi	< LOD	:	0.017
Pb	< LOD	:	0.016
Se	< LOD	:	0.009
W	< LOD	:	0.096
Zn	< LOD	:	0.038
Cu	< LOD	:	0.177
Ni	8.317	±	0.324
Co	< LOD	:	0.540
Fe	71.317	±	0.494
Mn	1.516	±	0.220
Cr	17.987	±	0.283
V	< LOD	:	0.143
Ti	< LOD	:	0.170

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	392
Mode	ALLOY
Time	2024-09-14 10:32
Duration	6.07
Sequence	Final
Alloy1	304SS : 0.25
Alloy2	No Match : 2.28
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.060
Sn	< LOD	:	0.066
Pd	< LOD	:	0.053
Ag	< LOD	:	0.136
Al	< LOD	:	80.000
Mo	0.065	±	0.013
Nb	< LOD	:	0.010
Zr	< LOD	:	0.008
Bi	< LOD	:	0.031
Pb	< LOD	:	0.011
Se	< LOD	:	0.013
W	< LOD	:	0.137
Zn	< LOD	:	0.044
Cu	< LOD	:	0.229
Ni	8.112	±	0.410
Co	< LOD	:	0.692
Fe	71.570	±	0.631
Mn	1.262	±	0.277
Cr	18.160	±	0.364
V	< LOD	:	0.201
Ti	< LOD	:	0.195

Sergio Morales

Date: 30-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
01.10.2024 C. Sandu