



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-310-000420_RFI5573_MOD-ITP-XL_220
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	IP-WSR-P-310-000420_RFI5573 - IP Spool Release From Workshop		

Sheet 01/01

The Present Inspection Package contains the following Elements:

2211-PCW71A01-1-SP12-01162;2121-LO40B03-1-SP01-00997;2121-LO40B02-2-SP05-01147;2121-IA91F62-7-SP16-00477;1122-O15011-1-SP01-00546;1121-LS50001-4-SP07-01094;2211-PCW70B04-3-SP06-00407;2121-LO40B03-1-SP03-00998;2121-LO40B02-3-SP09-01150;1121-LS50001-4-SP08-01132;1113-PN52018-1-SP02-00862;2211-PCW70B04-3-SP05-01158;2211-VA71A01-1-SP01-00442;2211-PCW71A01-2-SP04-01104;2121-LO40B02-3-SP10-00505;2121-LO40B02-2-SP07-01149;1121-LS50006-2-SP02-01129;1121-LS50002-2-SP08-01126;2211-VA71A01-1-SP02-00443;2211-PCW71A01-2-SP05-01105;2121-LO40B02-3-SP11-00506;2121-LO40B02-3-SP08-00503;1121-PR34029-3-SP03-01131;1121-LS50005-3-SP05-00192;2121-LO40B02-2-SP06-01148;2121-LO40B02-2-SP04-01146;1211-VA81004-1-SP01-01095;1127-LS50009-2-SP01-01130;2211-PCW70B04-3-SP04-00406;2121-LO40B04-1-SP02-01069;2121-LO40B04-1-SP01-01068;2121-LO40B01-1-SP01-00498;2121-IA91F63-4-SP05-00488;2211-PCW70B04-3-SP07-00409;2121-LO40B03-1-SP02-01153;2121-LO40B01-1-SP02-00499;1211-PX86033-2-SP04-01145;1121-LS50002-2-SP05-01125;2211-LS50A05-1-SP02-00385;2121-LO40B04-1-SP03-01155;2121-IA91F63-4-SP04-00487;2121-IA91F62-8-SP17-00478;1113-PN52018-1-SP01-00861

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

On behalf of Tecnímont / R
Piping Supervisor
Cristi Sandu
29.10.2024

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input checked="" type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y / N	Punch List Produced
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name	Signature			
CONTRACTOR	29-10-2024	Sergio Morales Collantes				
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-310-000420_RFI5573_MOD-ITP-XL_220
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2211-PCW71A01-1-SP12-01162;2121-LO40B03-1-SP01-00997;2121-LO40B02-2-SP05-01147;2121-IA91F62-7-SP16-00477;1122-O15011-1-SP01-00546;1121-LS50001-4-SP07-01094;2211-PCW70B04-3-SP06-00407;2121-LO40B03-1-SP03-00998;2121-LO40B02-3-SP09-01150;1121-LS50001-4-SP08-01132;1113-PN52018-1-SP02-00862;2211-PCW70B04-3-SP05-01158;2211-VA71A01-1-SP01-00442;2211-PCW71A01-2-SP04-01104;2121-LO40B02-3-SP10-00505;2121-LO40B02-2-SP07-01149;1121-LS50006-2-SP02-01129;1121-LS50002-2-SP08-01126;2211-VA71A01-1-SP02-00443;2211-PCW71A01-2-SP05-01105;2121-LO40B02-3-SP11-00506;2121-LO40B02-3-SP08-00503;1121-PR34029-3-SP03-01131;1121-LS50005-3-SP05-00192;2121-LO40B02-2-SP06-01148;2121-LO40B02-2-SP04-01146;1211-VA81004-1-SP01-01095;1127-LS50009-2-SP01-01130;2211-PCW70B04-3-SP04-00406;2121-LO40B04-1-SP02-01069;2121-LO40B04-1-SP01-01068;2121-LO40B01-1-SP01-00498;2121-IA91F63-4-SP05-00488;2211-PCW70B04-3-SP07-00409;2121-LO40B03-1-SP02-01153;2121-LO40B01-1-SP02-00499;1211-PX86033-2-SP04-01145;1121-LS50002-2-SP05-01125;2211-LS50A05-1-SP02-00385;2121-LO40B04-1-SP03-01155;2121-IA91F63-4-SP04-00487;2121-IA91F62-8-SP17-00478;1113-PN52018-1-SP01-00861

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

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

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

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input checked="" type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y/N	Punch List Produced
			Date [DD-MMM-YYYY]	Name	Signature	
SUBCONTRACTOR	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-LO40B04-1</p>				

NOTES AND REMARKS

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 *C. Sandu*

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

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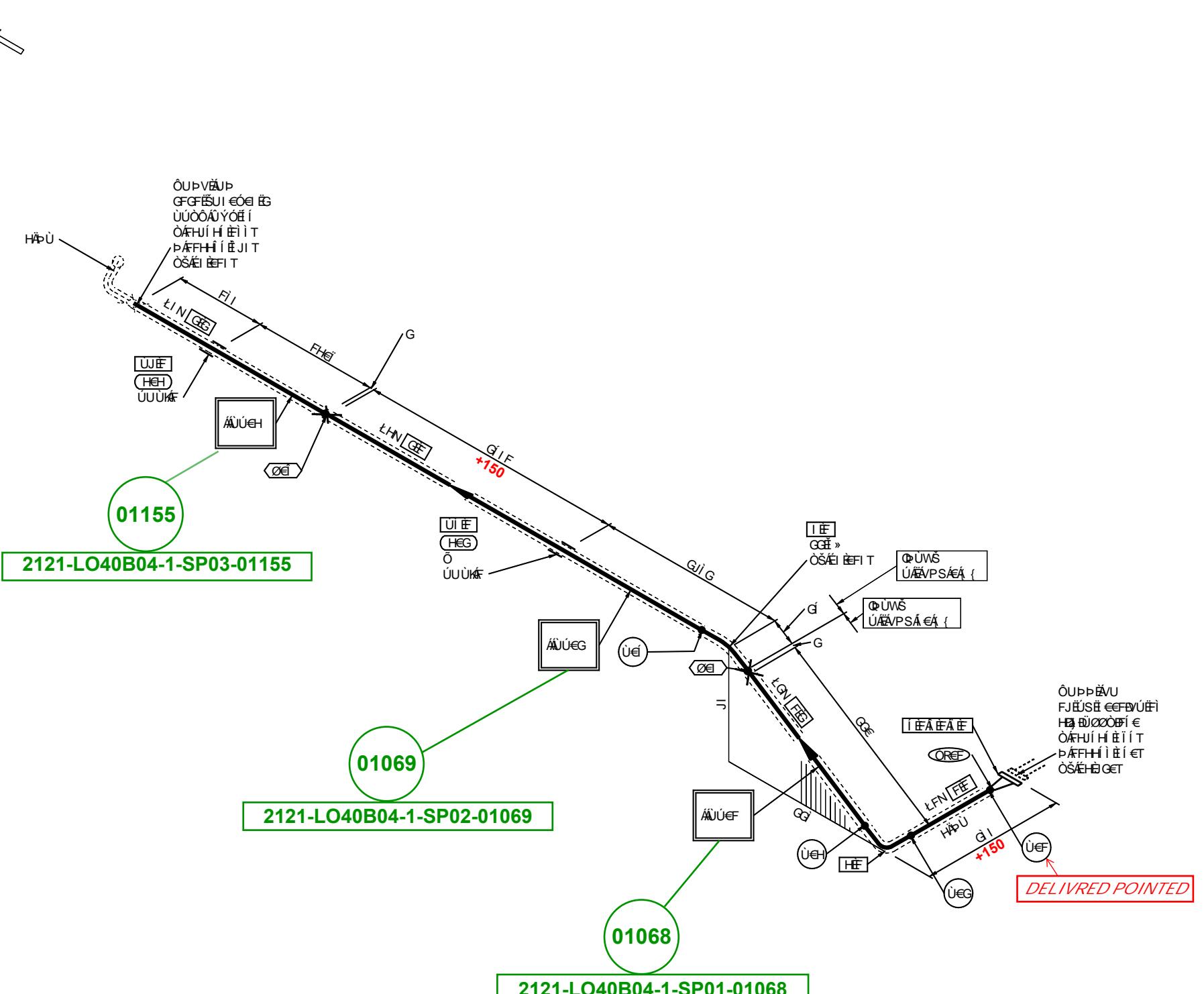
LINES 1-1/2" AND SMALLER SHALL BE SUPPORTED IN FIELD IF NOT OTHERWISE INDICATED
FOR THE COMPONENT MARKED AS FIELD WELDED, ONE WELDED FOR ADJUSTMENT OF IN-LINE COMPONENT
 FIELD WELD SYMBOL FOR ADJUSTMENT OF IN-LINE COMPONENT WHERE MARKED

ALL DIMENSION AND PROPER CONFIGURATION FOR LINES NPS 1-1/2" AND SMALLER SHALL BE CHECKED IN FIELD BEFORE CONSTRUCTION
GUSSETTING 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-10-0000-0001



REPS

ŠPÓÖÄVCE				
ŠPÓÄUÈ HÄSUÈ ÉOE ÈÝÓÉ Í ÁUD				
ŠÖ ÈÜ	PÖÄV VÜÖÄSTÖPV	ÚÖEVÖÖ ÖUÖÖ	ÜBÖÄ[È	
	Þ	ÞÜ	FJEEFJEECFEECFÁ@^AGÓ	



Sergio Morales

Date: 23-10-24

A blue rectangular logo containing a stylized orange 'B' and the text 'brooampur' in a lowercase sans-serif font, with 'brooampur' partially obscured by a diagonal line.

RECEIVED
03 / 07 / 2024

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 *C. Sandu*

1

Notes.

RTS LIST NO PIPE A = RESTING SUPPORT G = GUIDE F = AXIAL RESTRAINT B = GUIDE + STOP M = SPRING
SUPPORT WHERE A WITHOUT NUMBERING IS INDICATED THIS MEANS THAT THERE IS A REST DIRECTLY ON STEEL STRUCTURE

PROJECT: ŠUY ÄÖP ÖÖSÖÖP UÓY ÁUŠÝÖV SÖP ÖÄJÖSDÖP ÖÁUŠÝUU UÝŠÖP ÖÄJÜD
ØUÁUÙU RÖÖV AÖSÖCÖUÙU RÖÖV

សាខាអីនុយុទ្ធផល និងការបង្កើតរំភាព នៃការអនុវត្តន៍ និងការអនុវត្តន៍

	BILL OF MATERIAL								
PIPE									
ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL			ITEM CODE		
1.1	0,248	3"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExPE			I3364303		
1.2	0,104	3"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE			I3364303		
FLANGES									
ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATÉRIEL		ITEM CODE		
5.1	1	3"	150#	S-10S	FLANGE WN ASME B16.5 A182-F304/304L DUAL GR RF 125-250 AARH		I2260689		
FITTINGS									
ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL			ITEM CODE		
3.1	1	3"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS			I2259134		
							P2308S 01068  2121-LO40B04-1-SP01-01068		
Sergio Morales  Date: 23-10-24							 boccard <i>Alliance for success</i> Boccard Portugal, Lda.		
Rev.	Date	DRW	Check 1	Check 2					
					Marking Color: GREEN				
					Weld Class: QXB-55-M				
01	09/07/2024	SFA	AZA		Paint System: NR				
Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO ID Cleaning: YES Acc Criteria: ASME B31.3 % PT - YES % FE - NO PWHT: NO OD Cleaning: YES Metal Tag: YES % MT - NO % PMI - YES BHN% - NO Tolerances: ASME B31.3					Piece Mark 2121-LO40B04-1-SP01-01068	Ref. Drawing 2121-LO40B04-1	Job # P2308S	Spool # 01068	Project REPSOL PROJETO ALBA NERVION
F324-302-0									

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 01068 2121-LO40B04-1-SP01-01068		2121-LO40B04-1		01			
1.1	,248	3.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	S-20134 0090	6,45	1,60
40400							
1.2	,104	3.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	S-20134 0090	6,45	0,67
40400							
5.1	1	3.0000 S10S	0.0000 NA	WN FLG, RAISED FACE, 150#, A182-F304L	DJ771 0395	4,54	4,54
37874							
3.1	1	3.0000 S10S	0.0000 NA	90 LR ELL, SEAMLESS, A403-WP304L	M220596 0412	1,22	1,22
42972							

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu *C. Sandu*
25.10.2024

Number of Items : 4

Total Weight : 8,03

Signature	QA	Client
	Date	Date
	 QA / QC	Sergio Morales  Date: 23-10-24



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Customer : TECNIMONT SPA AFC

28

Kg 597 Mt 86,16 Pz No.: 14
Heat No.: S-20134 Cta's job: OC0001890 Date: 10/08/2023
P.O. No.: PO: Item: I3364303

7500110798 AMD.1 AMD: 1 DTD: 20230623 N.PRO: 4274 - PP+PE SINES (PORTUGAL)

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@suraljgroup.com



F / QA / 24 REV. NO. 10
WORKS :
Survey No. 779/A, Thol, Kadi - Sanand Highway,
Tel-Kadi, Dist. Mehsana, Gujarat (India)
Tel. : (02764) 274216 / 274717 Fax : (02764) 274419
Email : quality@suraljgroup.com
Visit us at www.suraljgroup.com

INSPECTION CERTIFICATE

In Accordance with EN 10204/3.1

Customer: Commerciale Tubi Acciaio S.P.A.	T.C No : 356	Date: 07.01.2023
Product : Austenitic S.S Seamless Cold Finish,Solution Annealed,Pickled & Passivated Pipes.	P.O.No : OS-0000123 Rev. 0	Date: 26.09.2022
	W.O.No : 2223/OEP400034	Date: 26.09.2022

Sr. No	Specification	Grade	Heat No.	Dimensions		Quantity			Hydro Test Pressure (Psi)
				NPS	SCH	Length Mtr	Pcs	Total Meter	
37	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-20134	3	10S	RL	85	528.250	1100

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-20134	Heat Analysis	0.024	1.70	0.040	0.009	0.38	18.22	8.18	--	0.087	--

Mechanical Test

Heat No.	Required				Gauge Width	Flattening Test	Hardness Test	IGC Test				
	Tensile strength Mpa	Yield strength		Elongation %				Impact Test	ASTM A-262 Practice"E" & ISO 3651-2 Method "A"			
		Rp0.2% Mpa	Rp 1 % Mpa	GL 50 mm 5.65VA					Max-90 HRB	100 Joule Min.(AVG)		
MAX	680	--	--	--	25.40	Satisfactory	75-78	N/A			Satisfactory	
MIN	515	205	230	35 40								
S-20134	619.57	316.46	333.21	54.86 55.39								

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

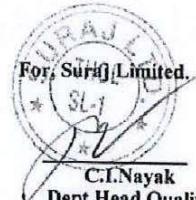
Marking on pipes: SURAJ LTD SPECIFICATION GRADE SIZE

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:EAF+AOD & Material is free of mercury & radioactive contamination.

Prepared by



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

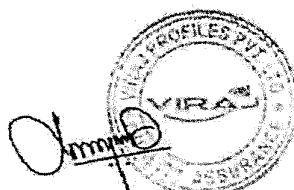
APPLUS QBO TCM
11 09 23

COMMERCIALE ACCIAIO S.p.A.
QUALITY CONTROL DEPARTMENT



VIRAJ PROFILES PRIVATE LIMITED (formerly, Viraj Profiles Limited)(Forgings Div)
Survey No-140/1 & G-75 MIDC, Tungarpur Ind. Area, Boisar, Dist. Palghar, Maharashtra-401506, INDIA
Email-vfqc@viraj.com, web www.viraj.com(A01)

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1												
(A06) CUSTOMER : M/S. RACCORDUBI SPA VIALLE DE GASPERI 194 I-20010 MARCALLO CON CASONE MI Italy				Manufacturer's Symbol (A04)	(A03) MTR NO.	100028548 / 14 REV.1						
					INVOICE NUMBER							
					(Z02) DATE	23.12.2023						
					MATERIAL SPEC	ASTM A182/A182M-23 / ASME SA182/SA182M-23						
(B01) STAINLESS STEEL FORGED FLANGES <small>ISO 9001:2015-TÜV NORD REG NO-04100031210-05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT WD & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE (PED) 2014/68/EU, CERTIFYING BODY-TÜV NORD SYSTEMS (NOTIFIED BODY REGISTRATION NO. 06-95)</small>				(B02) GRADE	F304/304L							
				DIMENSIONAL SPEC	ASME B16.5-2020							
(B04) DELIVERY CONDITION : HOT FORGED & FULLY MACHINED												
(A07) ORDER NO. 245				(A08) Sales Order No.	100028548 / 140			(A09) Article No:		14		
(B09-B11) ITEM DESCRIPTION 3" WNRF S105 150#							(B05) QUANTITY(PCS)		(B07) HEAT NUMBER			
(C71-C92) CHEMICAL ANALYSIS												
ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N			
MIN						18.00	8.00	-				
MAX	0.030	2.00	1.00	0.030	0.045	20.00	11.00	-	0.1000			
HEAT	0.018	1.65	0.27	0.024	0.036	18.40	8.09	-	0.0850			
PROD	0.017	1.65	0.23	0.013	0.036	18.41	8.07	-	0.0870			
MECHANICAL PROPERTIES												
Test Specification ASTM - A370												
(C01) Sample location: Mid thickness-forging		(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Specimen Shape - Round	ASTM E10							
Test values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C32) Hardness			(C40) Charpy V-Notch 10x10x55mm (Values in Joules)			
		$R_{p0.2}$	$R_p = 1\%$			$BHN-1$	$BHN-2$	AVG	1	2	3	AVG
Ref	515 MIN	305 MIN		50 MIN								
T	576.33	294.46	336.03	62.00	67.21	156	158	157	174	168	196	
Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015 & MATERIAL CONFORMS TO W2/W9/W10												
Melting Process : Induction furnace/Argon Oxygen Decarburation (AOD-IRS), Concast												
Heat Treatment Solution Annealed at 1080°C and water Quenched												
Dimension Conform with the specification (100% inspected)												
Surface quality Satisfactory Roughness Value - RA 3.2 TO 6.3 µm / I25 TO 250 ARIH												
PMI Test No objection (100% tested with mobile spectra)												
Inter Granular Corrosion Test Passed IGC test in accordance with ASTM A262 practice E												
Radioactivity Test All the above material is tested for Radioactivity and found with in the limit of background radiation.												
Liquid penetrant test No objection(test method-ASTM E 165 & accepted as per ASME Sec VIII division 1 appendix 8)												
HS Code: 73072100 The material is manufactured/melted in Viraj Profiles Private Limited Steel Mill and is of Indian Origin. Material does not contain steel products originating in Russia mentioned The Russia (Sanctions (EU Exit) (Amendment) Regulations 2023 Regulation 461A and 461B and Annex XVII to the (EU) Regulation No 833/2014 and further amendment.												



VIJAY KUMAR PILLAI (PRESIDENT)

Customer: TECNIMONT S.p.A.

Order: 7500118979 - 26.01.24 - Item n.: 185 - Project: 4274 - PP+PE Sines (Portugal) EPC - Our ref.: OCVEIT202400000475

Description: W.N. 3" S.150 RF SCH.10/S
I2260689

Heat num. or Pcs. marking: DJ771 - Qty:8.00

Protocol: CTCERC202400003069 * CERTIFIED TRUE COPY

* Issued 14-03-2024



Contract : P2300

Drawing : 2121-LO40B04-1

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Spool : 01068

Spec : QXB-55-M

Project : ALBA

Piece Mark : 2121-LO40B04-1-SP01-01068

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
0001	TW	3	S10S									001035	02-10-2024																
0002	BW	3	S10S	MW.26_BW	AY	06-08-2024	4712055	AY	06-08-2024	4712055		001035	02-10-2024				001041	07-10-2024											
0003	BW	3	S10S	MW.26_BW	AY	06-08-2024	4712055	AY	06-08-2024	4712055		001035	02-10-2024				001041	07-10-2024											

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu *C. Sandu*
25.10.2024

Notes:

Signature	Boccard Portugal QC	Client
		Sergio Morales Date: 23-10-24 
Date	08-10-2024 16:01:14	



Shop QC Inspection Report

P2308-001069

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

Job number: P2308S
 Spool N°: 01068
 Piece Mark: 2121-LO40B04-1-SP01-01068

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

Control Date: 02-10-2024

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: 02-10-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 08-10-2024 16:01:14 Signature 	Customer Inspection: Sergio Morales Date: 23-10-24 
--	---	--

On behalf of Tecnimon / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024 

Visual Examination Report (Welds)

P2308-001035

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01068

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

Project : ALBA

Piece Mark: 2121-LO40B04-1-SP01-01068

Testing Date: 02-10-2024

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

Weld No.	Weld Desc.	Welder	Identification		Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
			Cap	C						
0001	3.0000 S10S TW-Tack Weld ()		18	X					Direct	
0002	3.0000 S10S BW-Buttweld Straight (MW.26_BW)	AY	18	X					Direct	
0003	3.0000 S10S BW-Buttweld Straight (MW.26_BW)	AY	18	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: 02-10-2024

Date: 08-10-2024 16:01:14

Sergio Morales

Signature



Signature



Date: 23-10-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-001041

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01068

Piece Mark: 2121-LO40B04-1-SP01-01068

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: 07-10-2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0002	3.0000 S10S BW-Buttweld Straight (MW.26_BW)	427	0	0	0	9	69	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0003	3.0000 S10S BW-Buttweld Straight (MW.26_BW)	426	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.1	3.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-20134)	425	0	0	0	7	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.2	3.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-20134)	424	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1	3.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220596)	423	0	0	0	7	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1	3.0000 S10S WN FLG, RAISED FACE, 150#, A182-F304L (DJ771)	422	0	0	0	7	70	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024

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

Customer Inspection:

Date: 07-10-2024

Date: 08-10-2024 16:01:14

Date: Sergio Morales

Signature

Signature

Signature

Date: 23-10-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	427
Mode	ALLOY
Time	2024-10-07 13:10
Duration	8.89
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.046
Sn	< LOD	:	0.050
Pd	< LOD	:	0.039
Ag	< LOD	:	0.173
Al	< LOD	:	80.000
Mo	0.063	±	0.010
Nb	< LOD	:	0.009
Zr	< LOD	:	0.003
Bi	< LOD	:	0.008
Pb	< LOD	:	0.011
Se	< LOD	:	0.009
W	< LOD	:	0.099
Zn	< LOD	:	0.033
Cu	< LOD	:	0.169
Ni	9.024	±	0.322
Co	< LOD	:	0.523
Fe	69.432	±	0.482
Mn	1.679	±	0.219
Cr	19.159	±	0.283
V	< LOD	:	0.142
Ti	< LOD	:	0.162

Sergio Morales
Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	426
Mode	ALLOY
Time	2024-10-07 13:10
Duration	11.80
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.052
Pd	< LOD	:	0.040
Ag	< LOD	:	0.172
Al	< LOD	:	80.000
Mo	0.061	±	0.009
Nb	< LOD	:	0.009
Zr	< LOD	:	0.004
Bi	< LOD	:	0.013
Pb	< LOD	:	0.015
Se	< LOD	:	0.009
W	< LOD	:	0.090
Zn	< LOD	:	0.030
Cu	< LOD	:	0.156
Ni	8.734	±	0.294
Co	< LOD	:	0.480
Fe	70.016	±	0.443
Mn	1.689	±	0.201
Cr	18.932	±	0.258
V	< LOD	:	0.120
Ti	< LOD	:	0.150

Sergio Morales

Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	425
Mode	ALLOY
Time	2024-10-07 13:09
Duration	10.84
Sequence	Final
Alloy1	304SS : 1.71
Alloy2	No Match : *2.16
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.034
Sn	< LOD	:	0.045
Pd	< LOD	:	0.034
Ag	< LOD	:	0.172
Al	< LOD	:	80.000
Mo	0.037	±	0.007
Nb	< LOD	:	0.007
Zr	< LOD	:	0.004
Bi	< LOD	:	0.012
Pb	< LOD	:	0.007
Se	< LOD	:	0.007
W	< LOD	:	0.095
Zn	< LOD	:	0.035
Cu	< LOD	:	0.146
Ni	7.795	±	0.277
Co	< LOD	:	0.471
Fe	71.766	±	0.433
Mn	1.395	±	0.192
Cr	18.384	±	0.251
V	< LOD	:	0.131
Ti	< LOD	:	0.150

Sergio Morales

Date: 23-10-24



On behalf of Tecnicont / R
Piping Supervisor
Cristi Sandu *C. Sandu*
25.10.2024

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

Certificate of PMI Reading

XL3t-32735

Reading No	424
Mode	ALLOY
Time	2024-10-07 13:09
Duration	15.03
Sequence	Final
Alloy1	321SS : 0.77
Alloy2	No Match : 1.93
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.034
Sn	< LOD	:	0.044
Pd	< LOD	:	0.033
Ag	< LOD	:	0.170
Al	< LOD	:	80.000
Mo	0.038	±	0.006
Nb	< LOD	:	0.004
Zr	0.007	±	0.003
Bi	< LOD	:	0.006
Pb	< LOD	:	0.002
Se	< LOD	:	0.006
W	< LOD	:	0.071
Zn	< LOD	:	0.027
Cu	0.226	±	0.068
Ni	8.032	±	0.239
Co	0.486	±	0.202
Fe	71.326	±	0.371
Mn	1.508	±	0.164
Cr	17.849	±	0.212
V	< LOD	:	0.111
Ti	0.266	±	0.080

Sergio Morales

Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	423
Mode	ALLOY
Time	2024-10-07 13:09
Duration	12.44
Sequence	Final
Alloy1	304SS : 1.24
Alloy2	No Match : 2.00
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.033
Sn	< LOD	:	0.045
Pd	< LOD	:	0.033
Ag	< LOD	:	0.143
Al	< LOD	:	80.000
Mo	0.148	±	0.012
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.005
Pb	< LOD	:	0.014
Se	< LOD	:	0.006
W	< LOD	:	0.095
Zn	< LOD	:	0.031
Cu	0.268	±	0.075
Ni	7.943	±	0.258
Co	< LOD	:	0.439
Fe	71.569	±	0.400
Mn	1.358	±	0.177
Cr	18.047	±	0.230
V	0.124	±	0.060
Ti	< LOD	:	0.118

Sergio Morales

Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	422
Mode	ALLOY
Time	2024-10-07 13:09
Duration	12.37
Sequence	Final
Alloy1	304SS : 1.60
Alloy2	301SS : 1.92
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

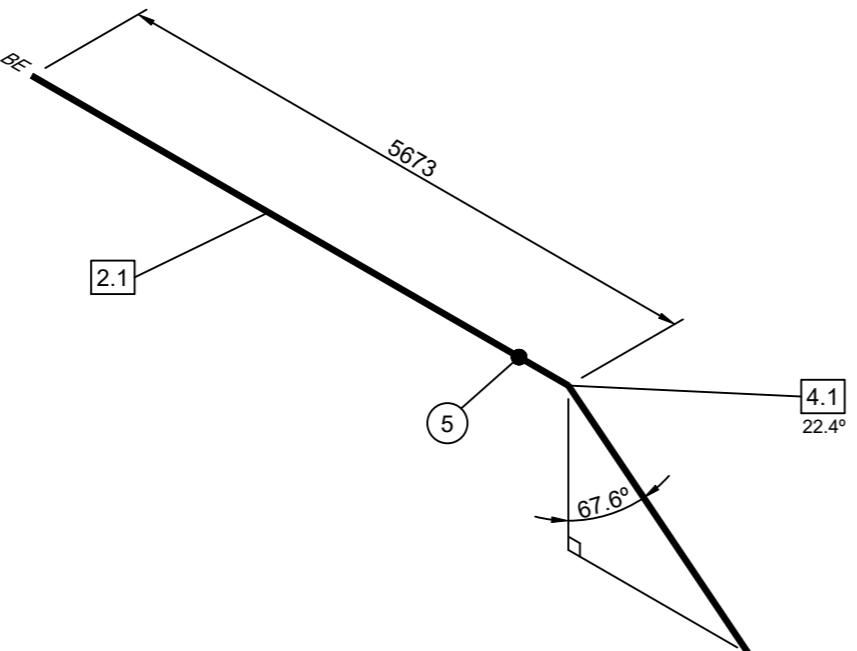
	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.048
Pd	< LOD	:	0.034
Ag	< LOD	:	0.148
Al	< LOD	:	80.000
Mo	0.563	±	0.023
Nb	0.012	±	0.005
Zr	< LOD	:	0.004
Bi	< LOD	:	0.005
Pb	< LOD	:	0.002
Se	< LOD	:	0.007
W	< LOD	:	0.080
Zn	< LOD	:	0.033
Cu	0.598	±	0.093
Ni	7.973	±	0.269
Co	< LOD	:	0.456
Fe	70.372	±	0.418
Mn	1.808	±	0.191
Cr	17.958	±	0.240
V	0.144	±	0.065
Ti	< LOD	:	0.141

Sergio Morales

Date: 23-10-24



On behalf of Tecnímont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

 N	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="7" style="text-align: right; padding: 2px;">BILL OF MATERIAL</th> </tr> <tr> <th colspan="7" style="text-align: center; background-color: #cccccc;">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LENGTH</th> <th>DIAMETER</th> <th>SCH/mm</th> <th colspan="2">DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>2.1</td> <td>5,646</td> <td>3"</td> <td>S-10S</td> <td colspan="2">PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE</td> <td>I3364303</td> </tr> <tr> <td colspan="7" style="height: 100px;"></td> </tr> <tr> <th colspan="7" style="text-align: center; background-color: #cccccc;">FITTINGS</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/mm</th> <th colspan="2">DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> <tr> <td>4.1</td> <td>1</td> <td>3"</td> <td>S-10S</td> <td colspan="2">45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259146</td> </tr> <tr> <td colspan="7" style="height: 100px;"></td> </tr> <tr> <td colspan="7" style="text-align: right; padding: 2px;">P2308S 01069</td> <td colspan="3" rowspan="2" style="vertical-align: top;">  2121-LO40B04-1-SP02-01069 Weld Map Sticker </td> </tr> <tr> <td colspan="7" style="text-align: right; padding: 2px;">2024-10-23</td> </tr> <tr> <td colspan="10" style="text-align: right; padding: 2px;">  boccard Alliance for success Boccard Portugal, Lda. </td> </tr> <tr> <td colspan="10" style="text-align: right; padding: 2px;">F324-302-0</td> </tr> </tbody> </table>										BILL OF MATERIAL							PIPE							ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL		ITEM CODE	2.1	5,646	3"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS BExBE		I3364303								FITTINGS							ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL		ITEM CODE	4.1	1	3"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS		I2259146								P2308S 01069							 2121-LO40B04-1-SP02-01069 Weld Map Sticker			2024-10-23							 boccard Alliance for success Boccard Portugal, Lda.										F324-302-0									
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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	01069	2121-LO40B04-1-SP02-01069	2121-LO40B04-1	01					
2.1	5,646	3.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	S-20134 0090	6,45	36,42
40400									
4.1	1	3.0000	S10S	0.0000	NA	45 ELL, SEAMLESS, A403-WP304L	JSG2310019 0458	0,61	0,61
42796									

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024 *C. Sandu*

Number of Items : 2 Total Weight : 37,03

Signature	QA	Client
		Sergio Morales Date: 23-10-24 
Date	2024-09-24 09:23:34	



CTA Group
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Customer : TECNIMONT SPA AFC

28

Kg 597 Mt 86,16 Pz No.: 14
Heat No.: S-20134 Cta's job: OC0001890 Date: 10/08/2023
P.O. No.: PO: Item: I3364303

7500110798 AMD.1 AMD: 1 DTD: 20230623 N.PRO: 4274 - PP+PE SINES (PORTUGAL)

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@suraljgroup.com



F / QA / 24 REV. NO. 10
WORKS :
Survey No. 779/A, Thol, Kadi - Sanand Highway,
Tel-Kadi, Dist. Mehsana, Gujarat (India)
Tel. : (02764) 274216 / 274717 Fax : (02764) 274419
Email : quality@suraljgroup.com
Visit us at www.suraljgroup.com

INSPECTION CERTIFICATE

In Accordance with EN 10204/3.1

Customer: Commerciale Tubi Acciaio S.P.A.	T.C No : 356	Date: 07.01.2023
Product : Austenitic S.S Seamless Cold Finish,Solution Annealed,Pickled & Passivated Pipes.	P.O.No : OS-0000123 Rev. 0	Date: 26.09.2022
	W.O.No : 2223/OEP400034	Date: 26.09.2022

Sr. No	Specification	Grade	Heat No.	Dimensions		Quantity			Hydro Test Pressure (Psi)
				NPS	SCH	Length Mtr	Pcs	Total Meter	
37	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-20134	3	10S	RL	85	528.250	1100

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-20134	Heat Analysis	0.024	1.70	0.040	0.009	0.38	18.22	8.18	--	0.087	--

Mechanical Test

Heat No.	Required				Gauge Width	Flattening Test	Hardness Test	IGC Test				
	Tensile strength Mpa	Yield strength		Elongation %				Impact Test	ASTM A-262 Practice"E" & ISO 3651-2 Method "A"			
		Rp0.2% Mpa	Rp 1 % Mpa	GL 50 mm 5.65VA					Max-90 HRB	100 Joule Min.(AVG)		
MAX	680	--	--	--	25.40	Satisfactory	75-78	N/A				
MIN	515	205	230	35 40								
S-20134	619.57	316.46	333.21	54.86 55.39								

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

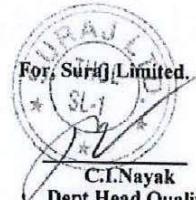
Marking on pipes: SURAJ LTD SPECIFICATION GRADE SIZE

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:EAF+AOD & Material is free of mercury & radioactive contamination.

Prepared by



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 QBO TCM
11 09 23

COMMERCIALE ACCIAIO S.p.A.
QUALITY CONTROL DEPARTMENT

MATERIAL TEST CERTIFICATE

EN10204 3.1

MANUFACTURER: Yingkou Guangming Pipeline Industry Co.,Ltd

MATERIAL: ASTM A403 WP304/304L P.O NO: 1179/2023/OF

DIMENSION: ASME B16.9 WORK NO: GMPCFP2312363

CUSTOMER: Chero Piping S.p.A.

DATE: April.10th,2024

PAGE NO: 17/29

NO. No.	POS .No.	CHERO CODE	COMMESA COMMISSIONA	PRODUCT & SIZE	QUANTITY PCS	MFG NO. (HEAT NO.)	CHEMICAL COMPOSITION%							
							MIN	C	Si	Mn	P	S	Ni	Cr
62	130	C45LRB1XB 0001.ZZW	OC/2023/90 3/1110	SIZE: 2 - SCHED.S-10S 45 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	5	JSG2310018	0.030	1.00	2.00	0.045	0.030	8.00	18.00	-
63	140	C45LRB1XB 000N.ZZW	OC/2023/90 3/1120	SIZE: 3 - SCHED.S-10S 45 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	5	JSG2310019	0.024	0.51	1.24	0.025	0.012	8.17	18.45	-
64	150	C45LRB1XB 000R.ZZW	OC/2023/90 3/1140	SIZE: 6 - SCHED.S-10S 45 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	7	JSG2312024	0.027	0.47	1.24	0.028	0.013	8.26	18.41	-
65	160	C45LRB1XB 000W- ZZW	OC/2023/90 3/1420	SIZE: 14 - SCHED.S-10S 45 LR ELBOW A403- WP304/304LWX DG BE - ASME B16.9	3	JSB2312106	0.025	0.44	1.40	0.023	0.003	8.02	18.40	-

PHYSICAL TEST

NO. No.	POS .No.	CHERO CODE	COMMESA COMMISSIONA	CHARGE NO	STANDARD	YIELD STRENGTH MPA(N/mm ²)	TENSILE STRENGTH MPA(N/mm ²)	ELONGATION	HARDNESS HB	VISUAL INSPECTION	DIMENSION INSPECTION	PMI TESTING	
					MIN	170	485	28	—				
62	130	C45LRB1XB 0001.ZZW	OC/2023/90 3/1110	JSG2310018	250	660	52	—	GOOD	GOOD	OK		
63	140	C45LRB1XB 000N.ZZW	OC/2023/90 3/1120	JSG2310019	256	665	54	—	GOOD	GOOD	OK		
64	150	C45LRB1XB 000R.ZZW	OC/2023/90 3/1140	JSG2312024	273	674	62	—	GOOD	GOOD	OK		
65	160	C45LRB1XB 000W- ZZW	OC/2023/90 3/1420	JSB2312106	279	638	56	Yuan Yuan	GOOD	GOOD	OK		

NOTE:

1. HEAT TREATMENT: SOLUTION ANNEALED TEMPERATURE 1050°C X0.5HR, COOLING IN WATER.

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT AND WE CONFIRM THAT P.M.I HAS BEEN DONE.

Prime 4 030 TCN

2024.04.17

THE TEST RESULTS SHOWN HEREIN ARE CORRECT AND WE CONFIRM THAT P.M.I HAS BEEN DONE.

CHIEF OF INSPECTION DEPARTMENT





Contract : P2300

Drawing : 2121-LO40B04-1

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Project : ALBA

Piece Mark : 2121-LO40B04-1-SP02-01069

Spec : QXB-55-M

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	
0005	BWC	3	S10S	MW.26_BW	BC	10-08-2024	4712055	BC	10-08-2024	4712055				000906	06-09-2024			000947	14-09-2024											

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024 *C. Sandu*

Notes:

Boccard Portugal QC	Client
 Sergio Morales	Date: 23-10-24 
24-09-2024 09:23:34	



Shop QC Inspection Report

P2308-000939

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

Job number: P2308S
 Spool N°: 01069
 Piece Mark: 2121-LO40B04-1-SP02-01069

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

Control Date: 06-09-2024

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: 06-09-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 24-09-2024 09:23:34 Signature 	Customer Inspection: Sergio Morales Date: 23-10-24 
--	---	--

On behalf of Tecnicont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024 

Visual Examination Report (Welds)

P2308-000906

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01069

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

Project : ALBA

Piece Mark: 2121-LO40B04-1-SP02-01069

Testing Date: 06-09-2024

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
0005	3.0000 S10S BWC-Miter / Angle / Trim weld >0,5° (MW.26_BW)	BC	26	X			Direct	

Sketch / Photo:

Defects

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

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

Date: 06-09-2024

Signature



QA/QC Inspection: RAIMUNDO, MARIANA

Date: 24-09-2024 09:23:34

Signature



Customer Inspection:

Sergio Morales

Date: 23-10-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000947

Client : NERVION
 Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01069

Piece Mark: 2121-LO40B04-1-SP02-01069

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			
0005	3.0000 S10S BWC-Miter / Angle / Trim weld >0,5° (MW.26_BW)	202	0	0	0	8	70	1	18	0	0	0	X		
2.1	3.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-20134)	204	0	0	0	8	71	1	17	0	0	0	X		
4.1	3.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (JSG2310019)	201	0	0	0	8	71	1	18	0	0	0	X		

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024

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

Customer Inspection:

Date: 14-09-2024

Date: 24-09-2024 09:23:34

Date: Sergio Morales

Signature

Signature

Signature Date: 23-10-24



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	2024-09-14 07:38
Duration	7.06
Sequence	Final
Alloy1	304SS : 0.07
Alloy2	No Match : *2.08
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.045
Sn	< LOD	:	0.060
Pd	< LOD	:	0.043
Ag	< LOD	:	0.179
Al	< LOD	:	80.000
Mo	0.074	±	0.012
Nb	< LOD	:	0.010
Zr	< LOD	:	0.005
Bi	< LOD	:	0.010
Pb	< LOD	:	0.020
Se	< LOD	:	0.008
W	< LOD	:	0.116
Zn	< LOD	:	0.043
Cu	0.204	±	0.100
Ni	8.483	±	0.361
Co	< LOD	:	0.600
Fe	70.023	±	0.552
Mn	1.720	±	0.251
Cr	18.954	±	0.321
V	< LOD	:	0.151
Ti	< LOD	:	0.184

Sergio Morales

Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 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	2024-09-14 07:39
Duration	23.11
Sequence	Final
Alloy1	304SS : 1.69
Alloy2	No Match : *2.01
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.030
Sn	0.055	±	0.020
Pd	< LOD	:	0.029
Ag	< LOD	:	0.161
Al	< LOD	:	80.000
Mo	0.054	±	0.006
Nb	< LOD	:	0.005
Zr	< LOD	:	0.003
Bi	< LOD	:	0.011
Pb	< LOD	:	0.003
Se	< LOD	:	0.009
W	< LOD	:	0.066
Zn	< LOD	:	0.024
Cu	0.234	±	0.061
Ni	8.314	±	0.246
Co	0.447	±	0.174
Fe	71.337	±	0.409
Mn	1.485	±	0.150
Cr	17.730	±	0.440
V	0.194	±	0.097
Ti	< LOD	:	0.127

Sergio Morales

Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	201
Mode	ALLOY
Time	2024-09-14 07:38
Duration	12.83
Sequence	Final
Alloy1	304SS : 0.80
Alloy2	No Match : 1.76
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.035
Sn	< LOD	:	0.043
Pd	< LOD	:	0.033
Ag	< LOD	:	0.162
Al	< LOD	:	80.000
Mo	0.052	±	0.007
Nb	< LOD	:	0.006
Zr	< LOD	:	0.003
Bi	< LOD	:	0.007
Pb	< LOD	:	0.017
Se	< LOD	:	0.006
W	< LOD	:	0.082
Zn	< LOD	:	0.026
Cu	0.139	±	0.068
Ni	8.052	±	0.254
Co	< LOD	:	0.428
Fe	71.573	±	0.393
Mn	1.344	±	0.173
Cr	18.187	±	0.227
V	0.120	±	0.059
Ti	< LOD	:	0.143

Sergio Morales

Date: 23-10-24



On behalf of Tecnicont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu

Spool Material List

Contract : P2308

Client NERVION

Job : P2308S

Project ALBA

Job	Spool	Piece Mark	Drawing	Rev				
Item No	Qty	Size1	Sch1	Size2	Description	Heat No	Unit	Weight
Tag No						MTR No	Weight	Kgs
ID No						Folder No		
P2308S	01155	2121-LO40B04-1-SP03-01155	2121-LO40B04-1	01				
2.2	1,491	3.0000	S10S	0.0000	NA PIPE, SEAMLESS, A312-TP304L	N01392 0530	6,45	9,62
40400								

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024 *C. Sandu*

Number of Items : 1 Total Weight : 9,62

Signature	QA	Client
		Sergio Morales Date: 23-10-24 
Date	2024-10-16 16:23:56	



CTA Group
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Customer : TECNIMONT SPA AFC

13

Kg 141 Mt 22,13 Pz No.: 4
Heat No.: N01392 Cta's job: OC0000319 Date: 29/02/2024
P.O. No.: PO: Item: I3364303

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

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



WORKS :
Survey No. 779/A, Thol, Kadi - Sanand Highway,
Tal-Kadi, Dist. Mehsana, Gujarat (India)
Tel. : (02764) 274216 / 27417 Fax : (02764) 274419
Email : quality@suryajgroup.com
Visit us at www.suryajgroup.com

INSPECTION CERTIFICATE

In Accordance with EN 10204/3.1

F / QA / 24 REV. NO. 10

Customer: Commerciale Tubi Acciaio S.P.A.	T.C No : 252	Date: 30.09.2023
Product : Austenitic S.S Seamless Cold Finish, Solution Annealed, Pickled & Passivated Pipes.	P.O.No : OS-0000037 REV 0	Date: 26.09.2023
	W.O.No : 2324/OEP40004	Date: 17.04.2023

Sr. No.	Specification	Grade	Heat No.	Dimensions		Quantity			Hydro Test Pressure (Psi)
				NPS	SCH	Length Mtr	Pcs	Total Meter	
14	ASTM A-312 Ed.2021 SA-312 of ASME Sec.II Part "A" Ed.2021 ASME B36.19, EN 10216-5 TC1 NACE MR 0175/ISO 15156, NACE MR 0103	TP 304/304L 1.4301/ 1.4307	N01392	3	10S	RL	76	430.300	1100

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	--
N01392	Heat Analysis	0.028	1.05	0.035	0.010	0.45	18.09	8.06	--	0.076	--

Mechanical Test

Heat No.	Required					Gauge Width	Flattening Test	Hardness Test	Impact Test		IGC Test			
	Tensile strength Mpa	Yield strength		Elongation %					Max-90 HRB	100 Joule				
		Rp0.2% Mpa	Rp1 % Mpa	GL 50 mm	GL 5.65VA					Min.(AVG)	ASTM A-262 Practice "E" & ISO 3651-2 Method "A"			
MAX	680	--	--	--	--				Max-90 HRB	100 Joule				
MIN	515	205	230	35	40					Min.(AVG)				
N01392	621.53	318.24	334.87	54.96	55.23	25.40	Satisfactory	76-78		N/A	Satisfactory			

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 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:EAF+AOD & Material is free of mercury & radioactive contamination.

Prepared by



For, Suraj Limited.

C.I.Nayak

Page no. 03 of 12

Dept,Head Quality

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



Contract : P2300

Drawing : 2121-LO40B04-1

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 01

Project : ALBA

Piece Mark : 2121-LO40B04-1-SP03-01155

Spec : QXB-55-M

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
0006	SP	3	S10S																										

001115 | 11-10-2024

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024

Notes:

Boccard Portugal QC	Client
 Sergio Morales	Date: 23-10-24 
16-10-2024 16:23:56	



Shop QC Inspection Report

P2308-001159

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

Job number: P2308S
 Spool N°: 01155
 Piece Mark: 2121-LO40B04-1-SP03-01155

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

Comments:

Performed by: MATOS, MARCO (N2 VT/PT) Date: 11-10-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 16-10-2024 16:23:56 Signature 	Customer Inspection: Sergio Morales Date: 23-10-24 
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On behalf of Tecmimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024 

Visual Examination Report (Welds)

P2308-001115

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 01155

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

Project : ALBA

Piece Mark: 2121-LO40B04-1-SP03-01155

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
0006	3.0000 S10S SP-Pipe/Fitting Without Weld ()		17	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: 11-10-2024

Date: 16-10-2024 16:23:56

Sergio Morales

Signature



Signature



Date: 23-10-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-001179

Client : NERVION
 Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 01155

Piece Mark: 2121-LO40B04-1-SP03-01155

Material:

Procedure / Instruction reference: 4274-LZ-VD-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			
2.2	3.0000 S10S PIPE, SEAMLESS, A312-TP304L (N01392)	161	0	0	0	8	70	1	17	0	0	0	X		

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 25.10.2024

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

Customer Inspection:

Date: 14-10-2024

Date: 16-10-2024 16:23:56

Date: Sergio Morales

Signature



Signature



Signature Date: 23-10-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	161
Mode	ALLOY
Time	2024-10-14 10:33
Duration	12.11
Sequence	Final
Alloy1	304SS : 1.31
Alloy2	No Match : *2.03
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.036
Sn	0.054	±	0.025
Pd	< LOD	:	0.034
Ag	< LOD	:	0.144
Al	< LOD	:	80.000
Mo	0.260	±	0.015
Nb	< LOD	:	0.008
Zr	< LOD	:	0.005
Bi	< LOD	:	0.002
Pb	< LOD	:	0.004
Se	< LOD	:	0.009
W	< LOD	:	0.101
Zn	< LOD	:	0.028
Cu	0.406	±	0.084
Ni	8.092	±	0.266
Co	< LOD	:	0.449
Fe	70.901	±	0.410
Mn	1.599	±	0.184
Cr	17.941	±	0.235
V	0.138	±	0.063
Ti	< LOD	:	0.140

Sergio Morales

Date: 23-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
25.10.2024 *C. Sandu*