



Tecnimont S.p.A.

4274\_CONST

ALBA PROJECT-PP AND PEL PLANTS


**MOD-ITP-XL\_220 RELEASE OF SPOOLS FROM WORKSHOP**  
 Rev.1

Report n°

IP-WSR-P-310-000448\_RFI6152\_MOD-ITP-XL\_220

RFI Nr.:

Date :

Unit -

Plant Area -

Isometric Number

Inspection Package Number **IP-WSR-P-310-000448\_RFI6152 - IP Spool Release From Workshop**

Sheet 01/01

The Present Inspection Package contains the following Elements:

7112-DMW64001-3-SP09-03098;7112-DMW64001-3-SP08-03097;7112-DMW64001-3-SP07-03096;7112-DMW64001-2-SP06-03101;7112-DMW64001-2-SP05-03100;7112-DMW64001-2-SP04-03099;5111-A91F69-2-SP06-00922;5111-A91F69-2-SP05-00921;4222-A91F51-2-SP01-00792;4111-TEA11013-1-SP02-00911;4111-TEA1013-1-SP01-00910;4111-TEA10007-3-SP05-00909;4111-TEA10007-1-SP01-00905;3221-SWW92005-3-SP06-00689;3221-SWW92005-3-SP05-00688;3221-SWW92005-3-SP04-00687;3221-SWW92005-3-SP03-00686;3221-SWW92001-2-SP04-00671;3221-SWW92001-2-SP03-00670;3211-SWW91H17-2-SP03-01110;3211-SWW91H04-1-SP01-01080;2211-PEP71A01-1-SP02-00456;2211-VG62J02-2-SP07-00456;2211-VG62J02-2-SP06-00455;2211-VG62H01-2-SP02-01093;2211-VG62H01-2-SP01-01092;2211-PEP71A05-2-SP03-00434;2211-PEP71A01-1-SP02-00426;2211-PCW70B02-1-SP02-00985;2211-PCW70B02-1-SP01-00984;2211-LA62B03-3-SP01-00978;2211-DMW91Q01-1-SP13-03069;2211-DMW91Q01-1-SP12-03068;2131-LO52C01-1-SP02-00866;2131-LO52C01-1-SP01-00865;2121-LO40B04-2-SP06-01157;2121-LO40B04-2-SP05-01156;2121-LO40B04-2-SP07-01071;2121-LO40B04-2-SP04-01070;2121-A91F63-6-SP11-00494;2121-A91F63-6-SP10-00493;2121-A91F63-6-SP09-00492;2121-A91F63-5-SP03-00491;2121-A91F63-5-SP02-00490;2121-A91F63-5-SP01-00489;2121-A91F62-9-SP08-00479;2121-A91F13-1-SP03-01122;2121-A91F13-1-SP05-00996;2121-A91F13-1-SP04-00995;2121-A91F13-1-SP02-00994;2121-A91F13-1-SP01-00993;1211-VA89003-1-SP02-00976;1211-VA89003-1-SP01-00975;1211-LO89006-1-SP03-00355;1211-LO89006-1-SP02-00354;1211-LO89006-1-SP01-00353;1211-DMW64001-5-SP13-03062;1211-DMW64001-5-SP12-03061;1211-DMW64001-5-SP11-03060;1211-DMW64001-1-SP02-03051;1211-DMW64001-1-SP01-03050;1127-PN52028-1-SP01-00863;1127-PN52025-1-SP02-01048;1127-PN52025-1-SP01-01047;1127-PN52024-2-SP03-00829;1127-PN52024-2-SP02-00828;1127-PN52024-1-SP01-00827;1126-LO36006-1-SP04-01053;1126-LO36006-1-SP05-01052

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)

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y/N	Punch List Produced
			Date [DD-MMM-YYYY]	Name	Signature	 Sergio Morales Collantes
SUBCONTRACTOR	04-12-2024					
CONTRACTOR						
COMPANY						
(Free)	04-12-2024		Riccardo Mancino			

On behalf of Tecnimont/R  
Piping Supervisor  
R. Mancino  
04.Dec.24  




Tecnimont S.p.A.

REPSOL POLIMEROS  
SA

4274\_CONST

ALBA PROJECT-PP AND PEL PLANTS

MOD-ITP-XL\_220 RELEASE OF SPOOLS FROM WORKSHOP  
Rev.1Report n°  
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NOTES (\*) : 4274-XH-PQ-00000001

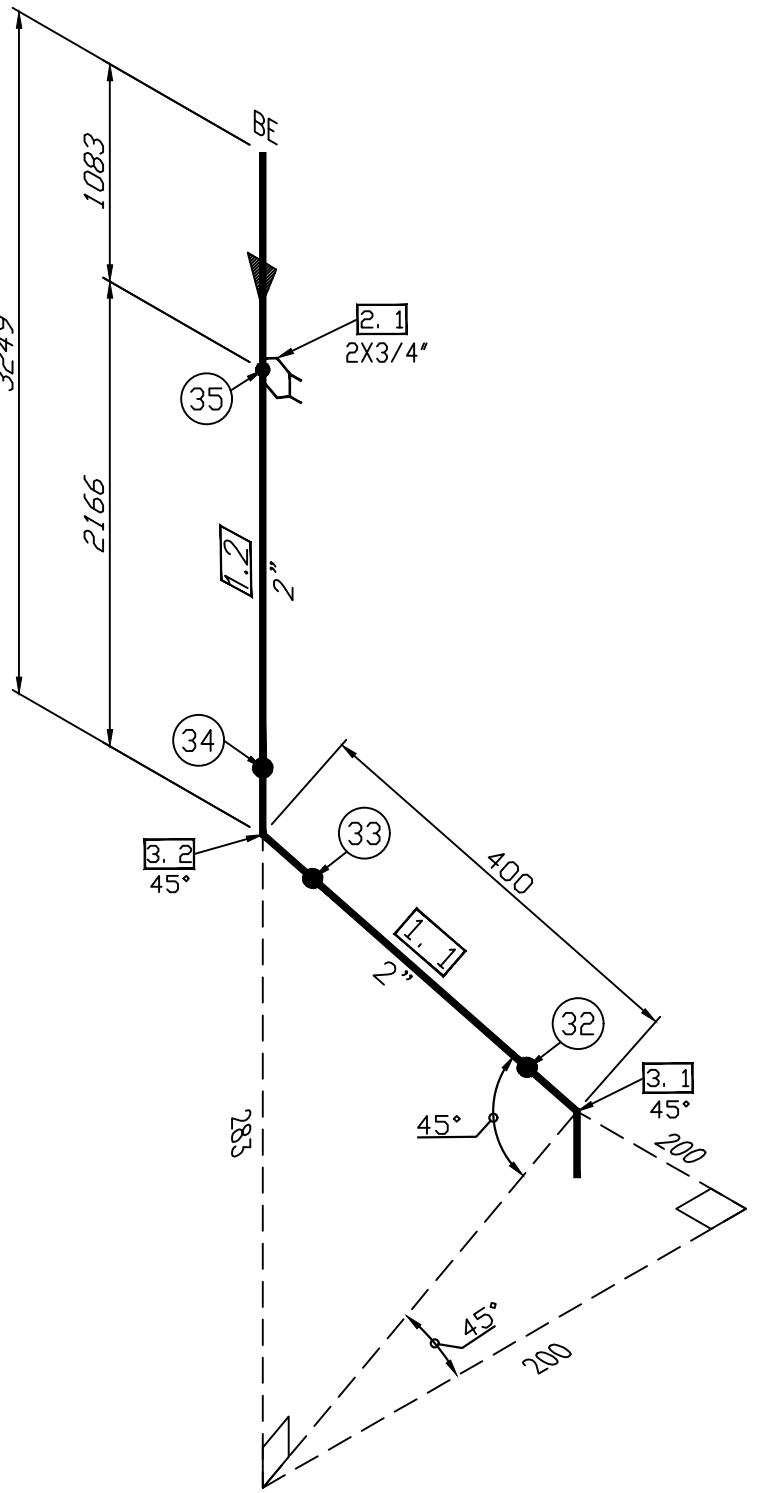
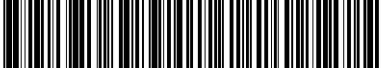
1) Painting cycle to be indicated.

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

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y / N	Punch List Produced
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name		Signature		 Sergio Morales Collantes CIF B-46877995
CONTRACTOR	04-12-2024					
COMPANY						
(Free)	04-12-2024	Riccardo Mancino				

On behalf of Tecnimont/R  
Piping Supervisor  
R. Mancino  
04.Dec.24  




 	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">BILL OF MATERIAL</th> </tr> </thead> <tbody> <tr> <td colspan="6">PIPE</td> </tr> <tr> <th>ITEM</th> <th>LENGTH</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> <tr> <td>1.1</td> <td>0,326</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> <tr> <td>1.2</td> <td>3,212</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> <tr> <td colspan="6">WELD FITTINGS</td> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> <tr> <td>3.1</td> <td>1</td> <td>2"</td> <td>S-10S</td> <td>45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259145</td> </tr> <tr> <td>3.2</td> <td>1</td> <td>2"</td> <td>S-10S</td> <td>45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259145</td> </tr> <tr> <td colspan="6">FORGINGS</td> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/PRESS.</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> <tr> <td>2.1</td> <td>1</td> <td>2" x 3/4"</td> <td>3000#</td> <td>REDUCING SOCKOLET MSS-SP-97 3000# A182-F304/304L DUAL GR BE SWE</td> <td>I2258338</td> </tr> </tbody> </table> <p style="text-align: center;">Weld Map Sticker</p> <p style="text-align: right;">P2308S 00479    2121-IA91F62-9-SP08-00479</p> <p style="text-align: right;">  <b>boccard</b>  Alliance for success  Boccard Portugal, Lda.</p>	BILL OF MATERIAL						PIPE						ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	1.1	0,326	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	1.2	3,212	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	WELD FITTINGS						ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	3.1	1	2"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145	3.2	1	2"	S-10S	45 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259145	FORGINGS						ITEM	QT	DIAMETER	SCH/PRESS.	DESCRIPTION / MATERIAL	ITEM CODE	2.1	1	2" x 3/4"	3000#	REDUCING SOCKOLET MSS-SP-97 3000# A182-F304/304L DUAL GR BE SWE	I2258338
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					Ref. Drawing: 2121-IA91F62-9 Job #: P2308S Spool #: 00479 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
<b>P2308S</b>	<b>00479</b>	<b>2121-IA91F62-9-SP08-00479</b>		<b>2121-IA91F62-9</b>		<b>00</b>	
1.2	3,212	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	12,62
40391							
1.1	,326	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	1,28
40391							
3.1	1	2.0000 S10S	0.0000 NA	45 ELL, SEAMLESS, A403-WP304L	2K113-E002 0408	0,24	0,24
42790							
3.2	1	2.0000 S10S	0.0000 NA	45 ELL, SEAMLESS, A403-WP304L	2K113-E002 0408	0,24	0,24
42790							
2.1	1	2.0000 NA	0.7500 NA	SOCKOLET, 3000#, A182-F304L	N220606AV04 0297	0,15	0,15
88696							

On behalf of Tecnimont/R

Piping Supervisor

R. Mancino

02-12-24



Number of Items : 5

Total Weight :

14,54

Signature	QA	Client
		Sergio Morales Date: 11-11-24
Date	2024-11-04 15:52:10	

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

12

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

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

(AN ISO 45001 : 2018 COMPANY)

(AN PED 2014/68/EU APPROVED COMPANY)

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

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

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

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

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

**Chemical Analysis %**

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

**Mechanical Test**

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

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

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

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

Prepared by

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

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

Page no. 01 of 12

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

**APPLUS OBO TCM**  
28 03 24



Zhejiang Yuli Pipeline Industry Co Ltd

**Mill Test Certificate**

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

Certificate: EN10204/3.1

Certificate-No: MC-TYF-S-20080627003

Page 3 of 200

L/C NO.:32390CI003798/08

Customer: [REDACTED]	Marking:
Order No.: YL006	• Manufacture's Mark
Description: Seamless stainless steel BW fittings	• Dimension & Schedule
Specification: ANSI/ASTM B16.9, B16.25	• Material S(Seamless)orW(Welded)
Material: ASTM A403/ASME SA403-WPS-3041/304L(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	ELB 45L/R	2" SCH10S	70	2K113-E002	200805087276014	
2						
3						
4						
5						

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

## A. Chemical Analysis:

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

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

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

## C. Inspection and Related Data Verify:

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

## D. Remarks:

Work inspector:	
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



Zongnan Heavy Industries

江阴中南重工有限公司

Jiangyin Zhongnan Heavy Industries Co.,Ltd.

产品品质证明书 Quality Certificate EN10204-3.1

用户(Purchaser): (印度)TECNIMONT S.P.A

订单号:PO 7500110919

质量证明书编号 (Certificate No.): 2023-03-225-71

表号: ZNHI/W400-34-1  
修订号: 0

材质(Material): ASTM A182-2021 F304/304L DUL GR												化学成分 Chemical Composition (%)												机械性能 Mechanical Properties											
生产批号 Batch No.	品名 Designation	规格型号 Dimension	单位 Unit	数量 Qty	炉号 Heat No.	C	Si	Mn	P	Cr	Ni	T	Mo	V	Cu	Nb	Al	N	CE	R <sub>0.2</sub> R <sub>u</sub> (Mpa)	屈服强度 R <sub>u0.2</sub> R <sub>u</sub> (Mpa)	延伸 率 A%	断面 收缩 率 Z%	冲击试验(J) Impact Test Report 0°C (10*10*55mm)	硬度 HBW	PO item No.	备注 Remark								
2023-03-225-306	SOCKOLET SWE	SIZE:1.2 SIZE:2.0:0.5 2"0.5"**3000LB	件	5	N220606AV04	0.023	0.35	1.30	0.002	0.029	18.19	8.08							0.047	61.5	309	54.5	77	-	-	172/169/174	306	Ident Code: 2258337							
2023-03-225-307	SOCKOLET SWE	SIZE:1.2 SIZE:2.0:0.75 2"0.75"**3000LB	件	5	N220606AV04	0.023	0.35	1.30	0.002	0.029	18.19	8.08							0.047	61.5	309	54.5	77	-	-	172/169/174	307	Ident Code: 2258338							
2023-03-225-308	SOCKOLET SWE	SIZE:1.3 SIZE:2.0:0.75 3"0.75"**3000LB	件	10	N220606AV04	0.023	0.35	1.30	0.002	0.029	18.19	8.08							0.047	61.5	309	54.5	77	-	-	172/169/174	308	Ident Code: 2258415							
2023-03-225-309	SOCKOLET SWE	SIZE:1.3 SIZE:2.1 3"1"**3000LB	件	5	N220606AV04	0.023	0.35	1.30	0.002	0.029	18.19	8.08							0.047	61.5	309	54.5	77	-	-	172/169/174	309	Ident Code: 2258416							
2023-03-225-310	SOCKOLET SWE	SIZE:1.4 SIZE:2.0:0.75 4"0.75"**3000LB	件	5	N220606AV04	0.023	0.35	1.30	0.002	0.029	18.19	8.08							0.047	61.5	309	54.5	77	-	-	172/169/174	310	Ident Code: 2258477							
2023-03-225-311	SOCKOLET SWE	SIZE:1.6 SIZE:2.0:0.75 6"0.75"**3000LB	件	5	N220606AV04	0.023	0.35	1.30	0.002	0.029	18.19	8.08							0.047	61.5	309	54.5	77	-	-	172/169/174	311	Ident Code: 2258518							
其他检测结果(Other examination and test)																																			
尺寸检查 Dimension Inspection	外观检查 Visual Inspection	硬度 Hardness (H13W≤201)	无损检测(NDT) MT	磁粉 MT	着色 PT	超声波 UT	X射线 RT	晶间腐蚀 Intergranular Corrosion Test	备注 Remark	交货状态 Delivery condition												兹证明上述产品制造、检验和试验，符合上述标准规定及合同要求。 We hereby certify that the products described above have manufactured, inspected and tested in accordance with the specified standards and the contract requirements.													
合格 OK	合格 OK	合格 OK	-	合格 OK	-	-	-	合格 OK	PMI OK	固溶 Solution Annealing												1.1 Heat treatment: Solution Annealing 1050°C in the water cooling.													
检验员(Inspector): 华洋	质检工程师(QA Engineer): 陈晓	签发日期(Date of issue): 2023.05.29												电话(Tel): 0510-8696009 传真(Fax): 0510-8696035												质量部门 Stamp of Quality Department 检验专用章									



Contract : P2300

Drawing : 2121-IA91F62-9

## Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00479

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-9-SP08-00479

Weld data				Welding												Control												
Weld No.	Type	Dia /Thk	Sch	Weld 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
0032	BW	2	S10S	MW.26_BW	BC	27-08-2024	4712055	BC	27-08-2024	4712055			001183	29-10-2024				001229	31-10-2024									
0033	BW	2	S10S	MW.26_BW	BC	27-08-2024	4712055	BC	27-08-2024	4712055			001183	29-10-2024				001229	31-10-2024									
0034	BW	2	S10S	MW.26_BW	BC	27-08-2024	4712055	BC	27-08-2024	4712055			001183	29-10-2024				001229	31-10-2024									
0035	SOL	0.75	S10S	MW.26_SBR	BC	21-08-2024	4712055	BC	21-08-2024	4712055			001183	29-10-2024	000231	29-10-2024		001229	31-10-2024									

02/12/2024

On behalf of Tecnimont  
QC Welding InspectorGiovanni Bozzetto  
*Giovanni Bozzetto*  
ISO 9001:2015  
VTP/NAT/RIV/07/2024/000231

(R)

Notes:

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Signature

Date

Boccard Portugal QC	Client
	Sergio Morales Date: 11-11-24
04-11-2024 15:52:10	



# Shop QC Inspection Report

P2308-001227

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

Job number: P2308S  
Spool N°: 00479  
Piece Mark: 2121-IA91F62-9-SP08-00479

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

Control Date: 29-10-2024

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

Comments:

Performed by: MATOS, MARCO (N2 VT/PT) Date: 29-10-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 04-11-2024 15:52:10 Signature 	Customer Inspection: <b>Sergio Morales</b> Date: 11-11-24 
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02/12/2024 On behalf of Tecnimont  
QC Welding Inspector  
GABRIEL HENRIQUE (R)  
ISO EN 9712 Certified Inspector  
VTPI/TM/TY/TD/TD

# Visual Examination Report (Welds)

P2308-001183

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00479

Procedure &amp; Instructions: 4274-LZ-VF31010370QAC04 - Rev: 1

Project : ALBA

Piece Mark: 2121-IA91F62-9-SP08-00479

Testing Date: 29-10-2024

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
0035	0.7500 S10S SOL-Socklet to Header Weld (MW.26_SBR)	BC	17	X			Direct	
0032	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	17	X			Direct	
0033	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	17	X			Direct	
0034	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	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: 29-10-2024

Date: 04-11-2024 15:52:10

Sergio Morales

Signature



Signature



Date: 11-11-24


 02/12/2024 On behalf of Tecnimont  
QC Welding Inspector

 GABRIEL BONFANTE  
INTEGRISYS INSPECTION SERVICES LTD  
ISO EN 9712 Certified Inspector Level 2  
VT/PT/MT/UT/UT/TOFD - PA  
(R)



# Liquid Penetrant Examination Report

P2308-000231

Client : NERVION  
 Contract : P2308 / Project : ALBA  
 Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00479

Piece Mark: 2121-IA91F62-9-SP08-00479

Material: Stainless Steel 304, 316, 317

Procedure / Instruction reference: 4274-LZ-VD-FW31010370QAC03

Testing Date: 29-10-2024

Steps	Penetrant	Cleaner	Developer	Lighting Equipment
Brand	Mr Chemie (MR68-NF)	Mr Chemie (MR85)	Mr Chemie (MR70)	Artificial > 500 lux
Type	II	C	e	-
Batch/Serial Number	*080323 (03/2026)	*150124 (01/2027)	*300124 (01/2027)	-

Weld / Item No.	Identification Description	Welder	Tem (°F/C)	Dwell Time (min)				Examin Time	Accepted yes	No Indication	Remarks
				Penetrant	Cleaner	Developer	Lighting				
0035	0.7500 S10S SOL-Socket to Header Weld (MW.26_SBR)	BC	17	20 m	-	10 m	-	-	X	<input type="checkbox"/>	

Sketch / Photo:



## Defects

Clustered Porosity	CP	Cap	C	Undercut	UC	Surface	SU	Crack	CR
Porosity	P	Slag	S	Lack of Cleanup	LC	Crater Crack	CC		

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

QA/QC Inspection: RAIMUNDO, MARIANA

Customer Inspection:

Date: 29-10-2024

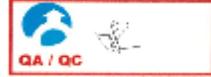
Date: 29-10-2024

Sergio Morales

Signature



Signature



Date: 11-11-24



On behalf of Tecnimont  
 02/12/2024 QC Welding Inspector

GABRIEL bretto  
 1978/1979 P  
 ISO EN 9609-1  
 VTP/IMTR/UT-T-TOFG-PA  
 Level 2  
 (R)



# Positive Material Identification Report (PMI)

P2308-001229

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00479

Piece Mark: 2121-IA91F62-9-SP08-00479

Material: Stainless Steel 304, 316, 317

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

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

Equipment Deviation : + - 5%

Testing Date: 31-10-2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0032	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	64	0	0	0	9	69	1	19	0	0	0	X		
0033	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	63	0	0	0	9	69	1	19	0	0	0	X		
0034	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	62	0	0	0	9	69	1	19	0	0	0	X		
0035	0.7500 S10S SOL-Sockolet to Header Weld (MW.26_SBR)	61	0	0	0	9	69	1	19	0	0	0	X		
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	57	0	0	0	7	71	1	18	0	0	0	X		
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	59	0	0	0	8	71	1	17	0	0	0	X		
2.1	2.0000 NA 0.7500 NA SOCKOLET, 3000#, A182-F304L (N220606AV04)	60	0	0	0	8	70	1	18	0	0	0	X		
3.1	2.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (2K113-E002)	56	0	0	0	8	70	1	18	0	0	0	X		
3.2	2.0000 S10S 45 ELL, SEAMLESS, A403-WP304L (2K113-E002)	58	0	0	0	8	71	2	18	0	0	0	X		

On behalf of Tecnimont  
QC Welding Inspector

GABRIEL BORGES  
Welding Inspector  
ISO EN 9613-2  
VT/P/MTR/TGT-TDFD-P  
(R)

02/12/2024

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

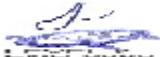
Customer Inspection:

Date: 31-10-2024

Date: 04-11-2024 15:52:10

Date: Sergio Morales

Signature



Signature



Signature

Date: 11-11-24



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

## Certificate of PMI Reading

XL3t-32735

Reading No	64
Mode	ALLOY
Time	2024-10-31 11:38
Duration	12.04
Sequence	Final
Alloy1	304SS : 0.05
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.046
Pd	< LOD	:	0.034
Ag	< LOD	:	0.202
Al	< LOD	:	80.000
Mo	0.057	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.002
Pb	< LOD	:	0.013
Se	< LOD	:	0.007
W	< LOD	:	0.089
Zn	< LOD	:	0.033
Cu	0.188	±	0.076
Ni	9.112	±	0.277
Co	< LOD	:	0.449
Fe	69.319	±	0.413
Mn	1.652	±	0.187
Cr	19.050	±	0.241
V	< LOD	:	0.118
Ti	< LOD	:	0.132

02/12/2024

Sergio Morales



Date: 11-11-24

On behalf of Tecnimont  
QC Welding Inspector

GABRIEL BOCCARD  
ISO 9001:2015 Certified Quality System Level 2  
VT/PT/MT/RT/OT-TOD-PAS  
(R)

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

## Certificate of PMI Reading

XL3t-32735

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Reading No 63  
Mode ALLOY  
Time 2024-10-31 11:38  
Duration 12.32  
Sequence Final  
Alloy1 304SS : 0.00  
Alloy2 No Match : \*2.10  
Flags  
SAMPLE  
HEAT  
LOT  
BATCH  
MISC  
NOTE

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	%	±	Error
Sb	< LOD	:	0.037
Sn	0.066	±	0.025
Pd	< LOD	:	0.033
Ag	< LOD	:	0.191
Al	< LOD	:	80.000
Mo	0.058	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.003
Bi	< LOD	:	0.008
Pb	< LOD	:	0.017
Se	< LOD	:	0.008
W	< LOD	:	0.081
Zn	< LOD	:	0.036
Cu	< LOD	:	0.142
Ni	9.390	±	0.276
Co	< LOD	:	0.437
Fe	69.079	±	0.407
Mn	1.821	±	0.187
Cr	19.175	±	0.239
V	< LOD	:	0.121
Ti	< LOD	:	0.135

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Sergio Morales



Date: 11-11-24

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

## Certificate of PMI Reading

XL3t-32735

Reading No	62
Mode	ALLOY
Time	2024-10-31 11:38
Duration	12.05
Sequence	Final
Alloy1	304SS : 0.17
Alloy2	No Match : *2.11
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.034
Sn	< LOD	:	0.048
Pd	< LOD	:	0.034
Ag	< LOD	:	0.160
Al	< LOD	:	80.000
Mo	0.071	±	0.009
Nb	< LOD	:	0.008
Zr	< LOD	:	0.003
Bi	< LOD	:	0.012
Pb	< LOD	:	0.014
Se	< LOD	:	0.006
W	< LOD	:	0.068
Zn	< LOD	:	0.030
Cu	< LOD	:	0.144
Ni	9.105	±	0.275
Co	< LOD	:	0.443
Fe	69.274	±	0.408
Mn	1.893	±	0.189
Cr	19.070	±	0.240
V	0.133	±	0.063
Ti	< LOD	:	0.132

02/12/2024

Sergio Morales



Date: 11-11-24

On behalf of Tecnimont  
QC Welding Inspector

GABRIEL BONET ALBU  
ISO EN 9712 Certified Inspector Level 2  
NPT/T/MT/RT/UT/TOFD - PA  
(R)

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

## Certificate of PMI Reading

XL3t-32735

Reading No	61
Mode	ALLOY
Time	2024-10-31 11:37
Duration	12.82
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.037
Sn	< LOD	:	0.047
Pd	< LOD	:	0.035
Ag	< LOD	:	0.170
Al	< LOD	:	80.000
Mo	0.057	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.005
Bi	< LOD	:	0.016
Pb	< LOD	:	0.018
Se	< LOD	:	0.007
W	< LOD	:	0.092
Zn	< LOD	:	0.032
Cu	< LOD	:	0.143
Ni	9.267	±	0.280
Co	< LOD	:	0.448
Fe	69.073	±	0.414
Mn	1.765	±	0.189
Cr	19.284	±	0.243
V	< LOD	:	0.115
Ti	< LOD	:	0.131

02/12/2024

Sergio Morales  
Date: 11-11-24



On behalf of Techimont  
QC Welding Inspector

GABRIEL BONFIM (R)  
ISO EN 9712 Certified Welder  
VTP/TM/TUT-TGFD PA  
Level 2

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

## Certificate of PMI Reading

XL3t-32735

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Reading No	57
Mode	ALLOY
Time	2024-10-31 11:36
Duration	11.04
Sequence	Final
Alloy1	304SS : 1.16
Alloy2	No Match : 1.83
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

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	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.048
Pd	< LOD	:	0.037
Ag	< LOD	:	0.182
Al	< LOD	:	80.000
Mo	0.090	±	0.010
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.013
Pb	< LOD	:	0.002
Se	< LOD	:	0.007
W	< LOD	:	0.095
Zn	< LOD	:	0.041
Cu	0.185	±	0.077
Ni	7.953	±	0.279
Co	< LOD	:	0.474
Fe	71.699	±	0.433
Mn	1.419	±	0.192
Cr	18.005	±	0.249
V	0.142	±	0.066
Ti	< LOD	:	0.129

02/12/2024

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Sergio Morales



Date: 11-11-24

On behalf of Tecnimont  
QC Welding Inspector

GABRIEL BONFIM (R)  
ISO EN 9712 certified technician Level 2  
VTPT/MT/TDT-TDFD PA

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

## Certificate of PMI Reading

XL3t-32735

Reading No	59
Mode	ALLOY
Time	2024-10-31 11:37
Duration	12.17
Sequence	Final
Alloy1	304SS : 1.60
Alloy2	No Match : *1.95
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.036
Sn	< LOD	:	0.047
Pd	< LOD	:	0.031
Ag	< LOD	:	0.236
Al	< LOD	:	80.000
Mo	0.194	±	0.013
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.013
Pb	< LOD	:	0.015
Se	< LOD	:	0.007
W	< LOD	:	0.074
Zn	< LOD	:	0.042
Cu	0.227	±	0.074
Ni	8.263	±	0.262
Co	< LOD	:	0.434
Fe	71.250	±	0.399
Mn	1.544	±	0.179
Cr	17.871	±	0.229
V	0.149	±	0.063
Ti	< LOD	:	0.139

02/12/2024

Sergio Morales  
Date: 11-11-24



On behalf of Tecnimont  
QC Welding Inspector

GABRIEL BONFILATU  
ISO 9001:2015 certification level  
VT/P/T/M/R/T/D-T-OFO-P-A  
(R)

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

## Certificate of PMI Reading

XL3t-32735

Reading No	60
Mode	ALLOY
Time	2024-10-31 11:37
Duration	12.03
Sequence	Final
Alloy1	304SS : 0.08
Alloy2	No Match : *2.11
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.035
Sn	< LOD	:	0.049
Pd	< LOD	:	0.037
Ag	< LOD	:	0.156
Al	< LOD	:	80.000
Mo	0.041	±	0.007
Nb	< LOD	:	0.005
Zr	< LOD	:	0.005
Bi	< LOD	:	0.005
Pb	< LOD	:	0.035
Se	< LOD	:	0.010
W	< LOD	:	0.078
Zn	< LOD	:	0.031
Cu	0.210	±	0.077
Ni	8.061	±	0.273
Co	< LOD	:	0.463
Fe	70.888	±	0.421
Mn	1.623	±	0.191
Cr	18.502	±	0.245
V	0.152	±	0.065
Ti	< LOD	:	0.127

02/12/2024  
On behalf of Tecnimont  
QC Welding Inspector

Sergio Morales



Date: 11-11-24

GABRIEL BONFILATU  
INTERNSI's Project Manager  
ISO EN 9712 Certified Welder  
VTPI/TUV/RUT-T OFD-PA  
(R)

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

## Certificate of PMI Reading

XL3t-32735

Reading No	56
Mode	ALLOY
Time	2024-10-31 11:36
Duration	12.60
Sequence	Final
Alloy1	304SS : 0.31
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.052
Pd	< LOD	:	0.039
Ag	< LOD	:	0.184
Al	< LOD	:	80.000
Mo	0.133	±	0.012
Nb	< LOD	:	0.005
Zr	< LOD	:	0.003
Bi	< LOD	:	0.014
Pb	< LOD	:	0.008
Se	< LOD	:	0.009
W	< LOD	:	0.101
Zn	< LOD	:	0.039
Cu	0.576	±	0.096
Ni	8.359	±	0.281
Co	< LOD	:	0.463
Fe	70.930	±	0.428
Mn	1.280	±	0.187
Cr	18.096	±	0.246
V	< LOD	:	0.125
Ti	< LOD	:	0.154

02/12/2024

Sergio Morales



Date: 11-11-24

On behalf of Tecnimont  
QC Welding Inspector

GARIBEL BONET ALU  
ISO EN 9712 Product Inspector  
VT/PT/MT/RT/UT/TOFD Level 2  
(R)  
PA

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

## Certificate of PMI Reading

XL3t-32735

Reading No	58
Mode	ALLOY
Time	2024-10-31 11:36
Duration	11.81
Sequence	Final
Alloy1	304SS : 1.69
Alloy2	No Match : *2.76
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.041
Sn	< LOD	:	0.048
Pd	< LOD	:	0.035
Ag	< LOD	:	0.142
Al	< LOD	:	80.000
Mo	0.063	±	0.009
Nb	< LOD	:	0.005
Zr	< LOD	:	0.002
Bi	< LOD	:	0.012
Pb	< LOD	:	0.017
Se	< LOD	:	0.007
W	< LOD	:	0.091
Zn	< LOD	:	0.028
Cu	0.183	±	0.077
Ni	8.247	±	0.278
Co	< LOD	:	0.461
Fe	71.008	±	0.428
Mn	2.097	±	0.199
Cr	18.028	±	0.245
V	0.140	±	0.065
Ti	< LOD	:	0.143

02/12/2024

On behalf of Tecnimont

QC Welding Inspector

Sergio Morales



Date: 11-11-24

GABRIEL HOMMA FALU  
INTERNSIS INSPECTION  
ISO EN 9712 Certified Inspector Level 2  
VT/PT/MT/UT/TOFD - PA  
(R)