



Tecnimont S.p.A.

REPSOL POLIMEROS  
SA

4274\_CONST

ALBA PROJECT-PP AND PEL PLANTS



MOD-ITP-XL_220		RELEASE OF SPOOLS FROM WORKSHOP	Report n° <b>IP-WSR-P-310-000420_RFI5573_MOD-ITP-XL_220</b>
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	<b>IP-WSR-P-310-000420_RFI5573 - IP Spool Release From Workshop</b>		

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.

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ALBA PROJECT-PP AND PEL PLANTS



<b>MOD-ITP-XL_220</b>		<b>RELEASE OF SPOOLS FROM WORKSHOP</b>	Report n° <b>IP-WSR-P-310-000420_RFI5573_MOD-ITP-XL_220</b>
Rev.1			RFI Nr.: Date :
Unit	-		
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Sheet 01/01

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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
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name	Signature 			
CONTRACTOR	29-10-2024	Sergio Morales Collantes				
COMPANY						
(Free)						

 <b>Tecnimont</b>	<p style="text-align: center;"><b>Punch List</b></p> <p style="text-align: center;"><b>PUNCH LIST</b></p>	<p style="text-align: center;"><b>IDENTIFICATION CODE</b></p>			
		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>SHEET 1 / 1</td> <td>DOC.CLASS 1</td> <td>ISSUE 01</td> </tr> </table>	SHEET 1 / 1	DOC.CLASS 1	ISSUE 01
SHEET 1 / 1	DOC.CLASS 1	ISSUE 01			
 <b>MECWIDE</b> <small>Engineering Solutions</small>	<p><b>ISO ID:</b> <a href="#">2121-IA91F62-7</a></p>				

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



N		BILL OF MATERIAL								
		PIPE								
ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL			ITEM CODE			
1.1	5,605	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE			I3364302			
1.2	1,925	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE			I3364302			
1.3	0,156	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE			I3364302			
1.4	1,055	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE			I3364302			
WELD FITTINGS										
ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL			ITEM CODE			
2.1	1	2" x 2"	S-10S	STRAIGHT TEE ASME B16.9 A403-WP304/304L DG BE SMLS			I2259149			
4.1	1	2" x 3/4"	S-10S x S-40S	CONCENTRIC SWAGE MSS SP-95 - A403-WP304/304L DG BE PE SMLS			I2495660			
5.1	1	2"	S-10S	90 LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS			I2259133			
FORGINGS										
ITEM	QT	DIAMETER	SCH/PRESS.	DESCRIPTION / MATERIAL			ITEM CODE			
3.1	1	2" x 3/4"	3000#	REDUCING SOCKOLET MSS-SP-97 3000# A182-F304/304L DUAL GR BE SWE			I2258338			
P2308S 00477										
 2121-IA91F62-7-SP16-00477										
Weld Map Sticker										
 Boccard Alliance for success Boccard Portugal, Lda.										
Rev.	Date	DRW	Check 1	Check 2	Marking Color: GREEN			Sergio Morales  Date: 22-10-24		
					Weld Class: 6C4-M					
00	01/03/2024	ANP	AOM	PCO	Paint System: NR					
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-IA91F62-7-SP16-00477	2121-IA91F62-7	P2308S	00477	REPSOL PROJETO ALBA NERVION
Metal Tag: YES		% MT - NO	% PMI - YES	BHN% - NO	Tolerances: ASME B31.3					
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 00477</b>	<b>2121-IA91F62-7-SP16-00477</b>		<b>2121-IA91F62-7</b>		<b>00</b>		
1.1	5,605	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15 0391	3,93	22,03
40391							
1.4	1,055	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15 0391	3,93	4,15
40391							
1.3	,156	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15 0391	3,93	0,61
40391							
1.2	1,925	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15 0391	3,93	7,57
40391							
5.1	1	2.0000 S10S	0.0000 NA	90 LR ELL, SEAMLESS, A403-WP304L	NY230506AT08 0462	0,49	0,49
42965							
2.1	1	2.0000 S10S	0.0000 NA	TEE, SEAMLESS, A403-WP304L	MN012-1 0430	0,78	0,78
44252							
3.1	1	2.0000 NA	0.7500 NA	SOCKOLET, 3000#, A182-F304L	N220606AV04 0297	0,15	0,15
88696							
4.1	1	2.0000 S10S	0.7500 S40S	CONC SWAGE NIPPLE, LEB-SEP, A403-WP304L	N220606AV04 0510	1,02	1,02
135932							

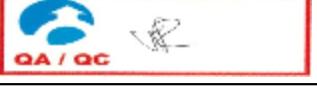
On behalf of Tecnimont / R  
 Piping Supervisor  
 Cristi Sandu  
 25.10.2024 *C. Sandu*

Number of Items :

8

Total Weight :

36,80

Signature	QA	Client
	Date	Sergio Morales Date: 22-10-24
	 <i>[Signature]</i>	

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

**ANALISI CHIMICA - CHEMICAL COMPOSITION**

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

Note - Notes

Firma  
Signature

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

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

**CARATTERISTICHE MECCANICHE - MECHANICAL TEST**

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

Note - Notes

Firma  
Signature

I dati dell'analisi chimica e delle prove meccaniche corrispondono fedelmente al certificato inviato dal fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove. I certificati sono conservati nel nostro archivio.  
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## 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: GMPPFCP2312363

CUSTOMER: Chero Piping S.p.A.

DATE: April.10th,2024

PAGE NO: 20/29

NO.	POS .No.	CHERO CODE	COMMESA COMMESA	PRODUCT & SIZE	QUANTITY	MFG NO. (HEAT NO.)	CHEMICAL COMPOSITION%					
							MIN	C	Si	Mn	P	S
74	310	C90LRB1XB 0001.ZZW	OC/2023/90 3/1040	SIZE: 2 - SCHED.S-10S 90 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	58	NY230506AT08	0.030	1.00	2.00	0.045	0.030	8.00
75	320	C90LRB1XB 000N.ZZW	OC/2023/90 3/1060	SIZE: 3 - SCHED.S-10S 90 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	16	JSG2310019	0.027	0.54	1.22	0.026	0.015	8.11
76	330	C90LRB1XB 000P.ZZW	OC/2023/90 3/1080	SIZE: 4 - SCHED.S-10S 90 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	4	JSG2312020	0.028	0.44	1.23	0.027	0.010	8.28
77	340	C90LRB1XB 000R.ZZW	OC/2023/90 3/1090	SIZE: 6 - SCHED.S-10S 90 LR ELBOW A403- WP304/304L DG BE SMLS ASME B16.9	2	JSG2312024	0.027	0.47	1.24	0.028	0.013	8.26
PHYSICAL TEST												
NO.	POS .No.	CHERO CODE	COMMESA COMMESA	CHARGE NO	STANDARD	YIELD STRENGTH MPA(N/mm <sup>2</sup> )	TENSILE STRENGTH MPA(N/mm <sup>2</sup> )	ELONGATION %	HARDNESS HB	VISUAL INSPECTION	DIMENSION INSPECTION	PMI TESTING
					MIN	170	485	28	-			
74	310	C90LRB1XB 0001.ZZW	OC/2023/90 3/1040	NY230506AT08	299	611	51	-	GOOD	GOOD	GOOD	OK
75	320	C90LRB1XB 000N.ZZW	OC/2023/90 3/1060	JSG2310019	256	665	54	-	GOOD	GOOD	GOOD	OK
76	330	C90LRB1XB 000P.ZZW	OC/2023/90 3/1080	JSG2312020	279	680	66	-	GOOD	GOOD	GOOD	OK
77	340	C90LRB1XB 000R.ZZW	OC/2023/90 3/1090	JSG2312024	273	674	62	Yuan Yuan	GOOD	GOOD	GOOD	OK

NOTE:

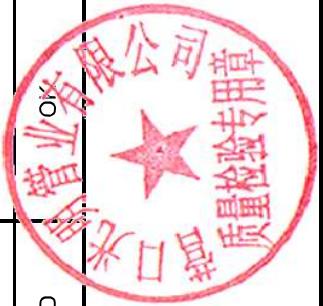
1. HEAT TREATMENT: SOLUTION ANNEALED TEMPERATURE 1050°C X 0.5HR, COOLING IN WATER.

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

2024.4.7

CHIEF OF INSPECTION DEPARTMENT







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	屈服强度 R <sub>0.2</sub> (Mpa)	抗拉强度 R <sub>u0.2</sub> (Mpa)	断面收缩率 A%	延伸率 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	-	-	172/165/174	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	-	-	172/165/174	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	-	-	172/165/174	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	-	-	172/165/174	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	-	-	172/165/174	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	-	-	172/165/174	311	Ident Code: 2258518
其他检测结果(Other examination and test)																												其他(others):
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.													特种类设备制造许可证号(Manufacture License of Special Equipment): TS2732E11-2024		陈晓 质检员(Inspector): 华洋 QA Engineer:		电话(Tel): 0510-8696009 传真(Fax): 0510-8696035
检验员(Inspector): 华洋 质检工程师(QA Engineer): 陈晓 印晓											签发日期(Date of issue): 2023.05.29						Stamp of Quality Department 质量部门(章) 检验专用章											



表号: ZNNH/QM400-34-1  
修订号: 0

江阴中南重工有限公司  
Jiangyin Zhongnan Heavy Industries Co.,Ltd.  
产品质量证明书 Quality Certificate EN10204-3.1

用户(Purchaser): 意大利Techinmont

材质(Material): ASTM A403-2022 WP304/304L

质量证明书编号(Certificate No.): 2024-01-43-56

生产批号 Batch No.	产品名称 Designation	规格型号 Dimension	单位 Unit	数量 Qty	炉号 Heat No.	化学成分 Chemical Composition (%)							机械性能 Mechanical Properties					硬度 HBW	备注 Remark						
						C	Si	Mn	S	P	Cr	Ni	Ti	Mo	V	Cu	Nb	Al	N						
2024-01-43-130	ECCENTRIC SWAGE	SIZE:1.2 SCHED.1 S-10S SIZE:2.0-7.5 SCHED.2 S-40S	PCS	3	N220606AV04	0.021	0.38	1.34	0.003	0.032	18.29	8.11							57.9	265	57.5	-	-	-	160/162/158 Ident Code: D495783
2024-01-43-131	ECCENTRIC SWAGE	SIZE:1.4 SCHED.1 S-10S SIZE:2.1 SCHED.2 S-40S	PCS	1	N220606AV04	0.021	0.38	1.34	0.003	0.032	18.29	8.11							57.9	265	57.5	-	-	-	160/162/158 Ident Code: D495816
2024-01-43-132	ECCENTRIC SWAGE	SIZE:1.2 SCHED.1 S-40S SIZE:2.1 SCHED.2 S-80S	PCS	2	N220606AV04	0.021	0.38	1.34	0.003	0.032	18.29	8.11							57.9	265	57.5	-	-	-	160/162/158 Ident Code: D496327
2024-01-43-154	CONCENTRIC SWAGE	SIZE:1.2 SCHED.1 S-10S SIZE:2.0-7.5 SCHED.2 S-40S	PCS	7	N220606AV04	0.021	0.38	1.34	0.003	0.032	18.29	8.11							57.9	265	57.5	-	-	-	160/162/158 Ident Code: D495660
2024-01-43-160	CONCENTRIC SWAGE	SIZE:1.4 SCHED.1 S-10S SIZE:2.1 SCHED.2 S-40S	PCS	3	N220606AV04	0.021	0.38	1.34	0.003	0.032	18.29	8.11							57.9	265	57.5	-	-	-	160/162/158 Ident Code: D495688
2024-01-43-162	ECCENTRIC SWAGE	SIZE:1.2 SCHED.1 S-80S SIZE:2.1 SCHED.2 S-80S	PCS	3	N220606AV04	0.021	0.38	1.34	0.003	0.032	18.29	8.11							57.9	265	57.5	-	-	-	160/162/158 Ident Code: D256804
其他检测结果(Other examination and test)																				其他(others):					
尺寸检查 Dimension Inspection			外观检查 Visual Inspection		厚度 Hardness (HBW≤201)		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						
合格 OK	合格 OK	合格 OK	-	合格 OK	-	-	-	合格 OK	-	合格 OK	-	合格 OK	-	合格 OK	PMI OK	固溶 Solution Annealing									

兹证明上述产品的制造、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.

特许设备制造许可证编号(Manufacture License of Special Equipment): TS2732E11-2024

印  
薛  
凯

检验员(Inspector): 印  
薛  
凯 质保工程师(QA Engineer): 印  
薛  
凯

签发日期(Date of issue): 2024.04.22

地址: 江阴市高新技术产业开发区金山路788号  
Add: 788 Jinshan Rd, High and New Technology Industrial Development, Jiang Yin City, Jiang Su P.R. China

电话(Tel): 0510-86996009  
传真(Fax): 0510-86996035

检验部门(章) Stamp of Quality Department  
检验专用章 Inspection Special Seal

## Welding and QC Report Per Spool

Client : NERVION

Revision : 00

Spool : 00477

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-7-SP16-00477

## Weld data

## Welding

## Control

Weld No.	Type	Dia	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
	/Thk				1																							
0069	BW	2	S10S	MW.26_BW	BC	23/09/2024	4712055	BC	23/09/2024	4712055			001009	27/09/2024					001015	30/09/2024								
0070	BW	2	S10S	MW.26_BW	BC	17/09/2024	4712055	BC	17/09/2024	4712055			001009	27/09/2024					001015	30/09/2024								
0071	BW	2	S10S	MW.26_BW	BC	17/09/2024	4712055	BC	17/09/2024	4712055			001009	27/09/2024					001015	30/09/2024							000327	04/10/2024
0072	BW	2	S10S	MW.26_BW	BC	17/09/2024	4712055	BC	17/09/2024	4712055			001009	27/09/2024					001015	30/09/2024								
0073	BW	2	S10S	MW.26_BW	BC	17/09/2024	4712055	BC	17/09/2024	4712055			001009	27/09/2024					001015	30/09/2024								
0074	SOL	0,75	S10S	MW.26_SBR	BC	17/09/2024	4712055	BC	17/09/2024	4712055			001009	27/09/2024	000185	27/09/2024			001015	30/09/2024								
0076	BW	2	S10S	MW.26_BW	BC	20/09/2024	4712055	BC	20/09/2024	4712055			001009	27/09/2024					001015	30/09/2024								

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
25.10.2024 

Notes:

Boccard Portugal QC	Client
	Sergio Morales Date: 22-10-24
02/10/2024 10:09:09	



# Shop QC Inspection Report

P2308-001043

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

Job number: P2308S  
 Spool N°: 00477  
 Piece Mark: 2121-IA91F62-7-SP16-00477

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

Control Date: 27/09/2024

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		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		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: 27/09/2024  Signature 	QA/QC Inspection: RAIMUNDO, MARIANA  Date: 02/10/2024 10:09:09  Signature 	Customer Inspection: <b>Sergio Morales</b>  Date: 22-10-24  
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On behalf of Tecnimont / R  
 Piping Supervisor  
 Cristi Sandu  
 25.10.2024 



# Visual Examination Report (Welds)

P2308-001009

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00477

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

Project : ALBA

Piece Mark: 2121-IA91F62-7-SP16-00477

Testing Date: 27/09/2024

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

Weld No.	Weld Desc.	Welder	Temp. (°F/°C)	Technique Used			Comments
				Accepted	Rejected	Defect	
0069	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	18	X			Direct
0070	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	18	X			Direct
0071	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	18	X			Direct
0072	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	18	X			Direct
0073	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	18	X			Direct
0074	0.7500 S10S SOL-Sockolet to Header Weld (MW.26_SBR)	BC	18	X			Direct
0076	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	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: 27/09/2024

Date: 02/10/2024 10:09:09

Sergio Morales

Signature



Signature



Date: 22-10-24



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



# Liquid Penetrant Examination Report

P2308-000185

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

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Spool N°: 00477

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

Piece Mark: 2121-IA91F62-7-SP16-00477

Testing Date: 27/09/2024

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				
0074	0.7500 S10S SOL-Socket to Header Weld (MW.26_SBR)	BC	18	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: 27/09/2024

Date: 27/09/2024

Sergio Morales

Signature



Signature



Date: 22-10-24



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



# Positive Material Identification Report (PMI)

P2308-001015

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00477

Piece Mark: 2121-IA91F62-7-SP16-00477

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: 30/09/2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0069	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	77	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>		
0070	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	76	0	0	0	9	69	1	18	0	0	0	<input checked="" type="checkbox"/>		
0071	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	75	0	0	0	9	68	1	19	0	0	0	<input checked="" type="checkbox"/>		
0072	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	74	0	0	0	9	69	1	19	0	0	0	<input checked="" type="checkbox"/>		
0073	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	73	0	0	0	8	69	1	19	0	0	0	<input checked="" type="checkbox"/>		
0074	0.7500 S10S SOL-Sockolet to Header Weld (MW.26_SBR)	72	0	0	0	9	69	1	19	0	0	0	<input checked="" type="checkbox"/>		
0076	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	71	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>		
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	63	0	0	0	7	72	1	17	0	0	0	<input checked="" type="checkbox"/>		
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	64	0	0	0	7	72	1	17	0	0	0	<input checked="" type="checkbox"/>		
1.3	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	66	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>		
1.4	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	68	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>		
2.1	2.0000 S10S TEE, SEAMLESS, A403-WP304L (MN012-1)	67	0	0	0	7	72	1	17	0	0	0	<input checked="" type="checkbox"/>		
3.1	2.0000 NA 0.7500 NA SOCKOLET, 3000#, A182-F304L (N220606AV04)	69	0	0	0	7	71	1	18	0	0	0	<input checked="" type="checkbox"/>		
4.1	2.0000 S10S 0.7500 S40S CONC SWAGE NIPPLE, LEB-SEP, A403-WP304L (N220606AV04)	70	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>		
5.1	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (NY230506AT08)	65	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>		



# Positive Material Identification Report (PMI)

P2308-001015

Client : NERVION  
 Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00477

Piece Mark: 2121-IA91F62-7-SP16-00477

Material:

Procedure / Instruction reference: 4274-LZ-VF-W31010370QAC11 - Rev: 1

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

Equipment Deviation : + - 5%

Testing Date: 30/09/2024

Weld / Item No	Description	Reading Number	Longitudinal	Chemical Elements									Accepted	Rejected	Comments
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Test Performed by: GONCALVES(QA), J. (N2 PT/RT) QA/QC Inspection: RAIMUNDO, MARIANA

Date: 30/09/2024

Signature



Date: 02/10/2024 10:09:09

Signature



Customer Inspection:

Sergio Morales

Date:



Signature Date: 22-10-24

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

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Reading No	77
Mode	ALLOY
Time	2024-09-30 13:56
Duration	10.58
Sequence	Final
Alloy1	304SS : 0.01
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

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	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.051
Pd	< LOD	:	0.034
Ag	< LOD	:	0.175
Al	< LOD	:	80.000
Mo	0.039	±	0.007
Nb	< LOD	:	0.006
Zr	< LOD	:	0.002
Bi	< LOD	:	0.013
Pb	< LOD	:	0.013
Se	< LOD	:	0.007
W	< LOD	:	0.072
Zn	< LOD	:	0.024
Cu	< LOD	:	0.149
Ni	8.692	±	0.291
Co	< LOD	:	0.479
Fe	70.018	±	0.438
Mn	1.647	±	0.199
Cr	18.936	±	0.257
V	< LOD	:	0.128
Ti	< LOD	:	0.147

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Sergio Morales

Date: 22-10-24



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	76
Mode	ALLOY
Time	2024-09-30 13:55
Duration	9.74
Sequence	Final
Alloy1	304SS : 0.03
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.041
Sn	< LOD	:	0.052
Pd	< LOD	:	0.035
Ag	< LOD	:	0.166
Al	< LOD	:	80.000
Mo	0.045	±	0.008
Nb	0.009	±	0.004
Zr	< LOD	:	0.004
Bi	< LOD	:	0.014
Pb	< LOD	:	0.024
Se	< LOD	:	0.010
W	< LOD	:	0.106
Zn	< LOD	:	0.033
Cu	< LOD	:	0.159
Ni	9.457	±	0.308
Co	< LOD	:	0.486
Fe	69.244	±	0.453
Mn	1.694	±	0.205
Cr	18.981	±	0.264
V	< LOD	:	0.134
Ti	< LOD	:	0.155

Sergio Morales

Date: 22-10-24



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

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Reading No	75
Mode	ALLOY
Time	2024-09-30 13:55
Duration	10.79
Sequence	Final
Alloy1	304SS : 0.03
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

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	%	±	Error
Sb	< LOD	:	0.035
Sn	0.068	±	0.026
Pd	< LOD	:	0.035
Ag	< LOD	:	0.156
Al	< LOD	:	80.000
Mo	0.044	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.005
Bi	< LOD	:	0.016
Pb	< LOD	:	0.011
Se	< LOD	:	0.011
W	< LOD	:	0.069
Zn	< LOD	:	0.032
Cu	< LOD	:	0.153
Ni	9.351	±	0.292
Co	< LOD	:	0.468
Fe	68.999	±	0.431
Mn	1.839	±	0.198
Cr	19.133	±	0.252
V	< LOD	:	0.122
Ti	< LOD	:	0.132

---

Sergio Morales

Date: 22-10-24



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

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Reading No	74
Mode	ALLOY
Time	2024-09-30 13:55
Duration	11.38
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	:	0.042
Sn	< LOD	:	0.048
Pd	< LOD	:	0.034
Ag	< LOD	:	0.180
Al	< LOD	:	80.000
Mo	0.050	±	0.008
Nb	0.010	±	0.004
Zr	< LOD	:	0.004
Bi	< LOD	:	0.005
Pb	< LOD	:	0.008
Se	< LOD	:	0.008
W	< LOD	:	0.094
Zn	< LOD	:	0.025
Cu	< LOD	:	0.147
Ni	9.386	±	0.289
Co	< LOD	:	0.454
Fe	69.348	±	0.424
Mn	1.727	±	0.194
Cr	19.104	±	0.249
V	< LOD	:	0.118
Ti	< LOD	:	0.130

---

Sergio Morales

Date: 22-10-24



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

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Reading No	73
Mode	ALLOY
Time	2024-09-30 13:55
Duration	10.49
Sequence	Final
Alloy1	304SS : 0.23
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

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	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.050
Pd	< LOD	:	0.037
Ag	< LOD	:	0.167
Al	< LOD	:	80.000
Mo	0.039	±	0.007
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.012
Pb	< LOD	:	0.028
Se	< LOD	:	0.007
W	< LOD	:	0.074
Zn	< LOD	:	0.023
Cu	< LOD	:	0.149
Ni	8.905	±	0.294
Co	< LOD	:	0.480
Fe	69.576	±	0.441
Mn	1.513	±	0.198
Cr	19.165	±	0.259
V	< LOD	:	0.134
Ti	< LOD	:	0.156

---

Sergio Morales

Date: 22-10-24



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	72
Mode	ALLOY
Time	2024-09-30 13:54
Duration	11.58
Sequence	Final
Alloy1	304SS : 0.25
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.039
Sn	0.048	±	0.024
Pd	< LOD	:	0.035
Ag	< LOD	:	0.115
Al	< LOD	:	80.000
Mo	0.046	±	0.007
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.012
Pb	< LOD	:	0.004
Se	< LOD	:	0.009
W	< LOD	:	0.073
Zn	< LOD	:	0.035
Cu	< LOD	:	0.143
Ni	9.466	±	0.282
Co	< LOD	:	0.443
Fe	69.004	±	0.414
Mn	1.873	±	0.191
Cr	19.234	±	0.243
V	< LOD	:	0.115
Ti	< LOD	:	0.147

---

Sergio Morales

Date: 22-10-24



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	71
Mode	ALLOY
Time	2024-09-30 13:54
Duration	10.46
Sequence	Final
Alloy1	304SS : 1.08
Alloy2	321SS : 1.53
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.041
Sn	< LOD	:	0.048
Pd	< LOD	:	0.037
Ag	< LOD	:	0.161
Al	< LOD	:	80.000
Mo	0.039	±	0.007
Nb	< LOD	:	0.007
Zr	< LOD	:	0.005
Bi	< LOD	:	0.008
Pb	< LOD	:	0.033
Se	< LOD	:	0.011
W	< LOD	:	0.093
Zn	< LOD	:	0.031
Cu	< LOD	:	0.141
Ni	8.451	±	0.290
Co	< LOD	:	0.480
Fe	70.795	±	0.444
Mn	1.457	±	0.197
Cr	18.574	±	0.258
V	0.151	±	0.070
Ti	< LOD	:	0.166

---

Sergio Morales



Date: 22-10-24

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi 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	63
Mode	ALLOY
Time	2024-09-30 13:52
Duration	11.57
Sequence	Final
Alloy1	301SS : 1.15
Alloy2	No Match : 2.30
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.046
Pd	< LOD	:	0.033
Ag	< LOD	:	0.159
Al	< LOD	:	80.000
Mo	0.025	±	0.006
Nb	< LOD	:	0.004
Zr	< LOD	:	0.003
Bi	< LOD	:	0.010
Pb	< LOD	:	0.002
Se	< LOD	:	0.007
W	< LOD	:	0.082
Zn	< LOD	:	0.022
Cu	< LOD	:	0.124
Ni	7.778	±	0.266
Co	0.460	±	0.229
Fe	72.016	±	0.416
Mn	1.408	±	0.183
Cr	17.964	±	0.238
V	< LOD	:	0.120
Ti	< LOD	:	0.158

---

Sergio Morales

Date: 22-10-24



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	64
Mode	ALLOY
Time	2024-09-30 13:52
Duration	10.77
Sequence	Final
Alloy1	301SS : 1.24
Alloy2	No Match : 2.20
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.050
Pd	< LOD	:	0.038
Ag	< LOD	:	0.146
Al	< LOD	:	80.000
Mo	0.022	±	0.006
Nb	< LOD	:	0.006
Zr	< LOD	:	0.004
Bi	< LOD	:	0.004
Pb	< LOD	:	0.026
Se	< LOD	:	0.008
W	< LOD	:	0.094
Zn	< LOD	:	0.032
Cu	< LOD	:	0.134
Ni	7.859	±	0.279
Co	< LOD	:	0.474
Fe	72.279	±	0.432
Mn	1.263	±	0.189
Cr	17.874	±	0.248
V	< LOD	:	0.129
Ti	< LOD	:	0.151

---

Sergio Morales

Date: 22-10-24



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	66
Mode	ALLOY
Time	2024-09-30 13:53
Duration	10.21
Sequence	Final
Alloy1	321SS : 0.47
Alloy2	No Match : *1.97
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.055
Pd	< LOD	:	0.043
Ag	< LOD	:	0.174
Al	< LOD	:	80.000
Mo	0.090	±	0.011
Nb	< LOD	:	0.006
Zr	< LOD	:	0.008
Bi	< LOD	:	0.017
Pb	< LOD	:	0.012
Se	< LOD	:	0.010
W	< LOD	:	0.110
Zn	< LOD	:	0.044
Cu	0.260	±	0.089
Ni	8.327	±	0.308
Co	< LOD	:	0.509
Fe	71.725	±	0.470
Mn	1.466	±	0.205
Cr	17.045	±	0.263
V	< LOD	:	0.146
Ti	0.323	±	0.107

---

Sergio Morales

Date: 22-10-24



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	68
Mode	ALLOY
Time	2024-09-30 13:53
Duration	10.58
Sequence	Final
Alloy1	321SS : 0.94
Alloy2	No Match : 2.13
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.038
Sn	< LOD	:	0.049
Pd	< LOD	:	0.038
Ag	< LOD	:	0.173
Al	< LOD	:	80.000
Mo	0.019	±	0.006
Nb	< LOD	:	0.007
Zr	< LOD	:	0.004
Bi	< LOD	:	0.014
Pb	< LOD	:	0.007
Se	< LOD	:	0.007
W	< LOD	:	0.085
Zn	< LOD	:	0.036
Cu	< LOD	:	0.148
Ni	8.308	±	0.294
Co	< LOD	:	0.487
Fe	71.620	±	0.448
Mn	1.472	±	0.199
Cr	17.904	±	0.256
V	< LOD	:	0.132
Ti	< LOD	:	0.175

Sergio Morales

Date: 22-10-24



On behalf of Tecnimont / R  
Piping Supervisor  
Cristi 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	67
Mode	ALLOY
Time	2024-09-30 13:53
Duration	9.47
Sequence	Final
Alloy1	301SS : 1.65
Alloy2	304SS : 1.97
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.049
Pd	< LOD	:	0.040
Ag	< LOD	:	0.186
Al	< LOD	:	80.000
Mo	< LOD	:	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.006
Bi	< LOD	:	0.002
Pb	< LOD	:	0.021
Se	< LOD	:	0.009
W	< LOD	:	0.107
Zn	< LOD	:	0.043
Cu	< LOD	:	0.152
Ni	7.987	±	0.308
Co	< LOD	:	0.523
Fe	72.097	±	0.476
Mn	1.451	±	0.211
Cr	17.799	±	0.271
V	< LOD	:	0.128
Ti	< LOD	:	0.145

---

Sergio Morales

Date: 22-10-24



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	69
Mode	ALLOY
Time	2024-09-30 13:54
Duration	10.22
Sequence	Final
Alloy1	304SS : 1.66
Alloy2	No Match : *2.58
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.052
Pd	< LOD	:	0.037
Ag	< LOD	:	0.176
Al	< LOD	:	80.000
Mo	0.042	±	0.008
Nb	< LOD	:	0.005
Zr	< LOD	:	0.003
Bi	< LOD	:	0.014
Pb	< LOD	:	0.008
Se	< LOD	:	0.006
W	< LOD	:	0.081
Zn	< LOD	:	0.033
Cu	0.200	±	0.080
Ni	7.890	±	0.286
Co	0.493	±	0.246
Fe	71.013	±	0.445
Mn	1.514	±	0.200
Cr	18.518	±	0.259
V	0.142	±	0.068
Ti	< LOD	:	0.132

Sergio Morales

Date: 22-10-24



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	70
Mode	ALLOY
Time	2024-09-30 13:54
Duration	10.22
Sequence	Final
Alloy1	304SS : 1.56
Alloy2	No Match : *1.93
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

---

	%	±	Error
Sb	< LOD	:	0.039
Sn	< LOD	:	0.054
Pd	< LOD	:	0.038
Ag	< LOD	:	0.189
Al	< LOD	:	80.000
Mo	0.070	±	0.010
Nb	0.009	±	0.004
Zr	< LOD	:	0.004
Bi	< LOD	:	0.009
Pb	< LOD	:	0.014
Se	< LOD	:	0.008
W	< LOD	:	0.092
Zn	< LOD	:	0.031
Cu	0.162	±	0.081
Ni	8.192	±	0.298
Co	< LOD	:	0.499
Fe	71.538	±	0.455
Mn	1.517	±	0.203
Cr	17.880	±	0.261
V	< LOD	:	0.139
Ti	< LOD	:	0.147

---

Sergio Morales

Date: 22-10-24



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	65
Mode	ALLOY
Time	2024-09-30 13:53
Duration	9.69
Sequence	Final
Alloy1	304SS : 1.46
Alloy2	No Match : *1.96
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.046
Sn	< LOD	:	0.053
Pd	< LOD	:	0.037
Ag	< LOD	:	0.170
Al	< LOD	:	80.000
Mo	< LOD	:	0.009
Nb	< LOD	:	0.007
Zr	< LOD	:	0.006
Bi	< LOD	:	0.013
Pb	< LOD	:	0.018
Se	< LOD	:	0.010
W	< LOD	:	0.092
Zn	< LOD	:	0.036
Cu	< LOD	:	0.133
Ni	8.179	±	0.305
Co	< LOD	:	0.513
Fe	71.763	±	0.469
Mn	1.423	±	0.207
Cr	17.903	±	0.268
V	< LOD	:	0.141
Ti	< LOD	:	0.157

Sergio Morales

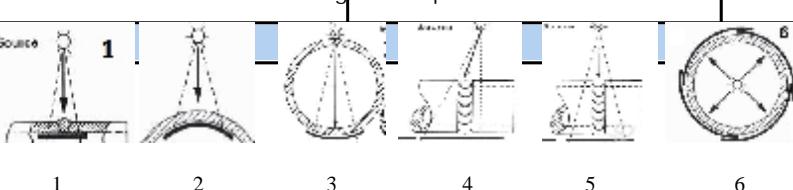
Date: 22-10-24



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

Contract : P2308 Spool N°: P2308S-00477  
Client : NERVION Isometric N°: 2121-IA91F62-7  
Project : ALBA Piece Mark: 2121-IA91F62-7-SP16-00477

Procedure/ Instruction: Acceptance Criteria: Testing Date: Material:

4274-LZ-VD-FW31010370QAC02 - RevA\$ME B.31.3 – Table 341.3.2		04/10/2024	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): 22.3		Lead Sheets: 0,5	$\varnothing$ 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>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>LP-Lack of Penetration (402)</td> </tr> <tr> <td></td> <td>CR-Crack</td> <td>V-Valley in Cap</td> </tr> <tr> <td></td> <td>CC-Crater Crack (104)</td> <td>P-Porosity (2011)</td> </tr> <tr> <td></td> <td>DI-Dimensional</td> <td>W-Wire</td> </tr> <tr> <td></td> <td></td> <td>R-Root</td> </tr> <tr> <td></td> <td></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	LP-Lack of Penetration (402)		CR-Crack	V-Valley in Cap		CC-Crater Crack (104)	P-Porosity (2011)		DI-Dimensional	W-Wire			R-Root			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)																																								
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	CC-Crater Crack (104)	P-Porosity (2011)																																								
	DI-Dimensional	W-Wire																																								
		R-Root																																								
		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
0071	2.0000 S10S BW (MW.26_BW)	BC	A	500	440	NA	4	475	3.2	4		- RX425
0071	2.0000 S10S BW (MW.26_BW)	BC	B	500	440	NA	4	475	3.2	4		- RX425

Contract : P2308  
Client : NERVION  
Project : ALBA

Spool N°: P2308S-00477  
Isometric N°: 2121-IA91F62-7  
Piece Mark: 2121-IA91F62-7-SP16-00477

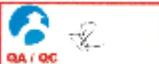
## Procedure/ Instruction:

## Acceptance Criteria:

## Testing Date:

## Material:

4274-LZ-VD-FW31010370QAC02 - RevA\$ME B.31.3 – Table 341.3.2		04/10/2024		Stainless Steel 304, 316, 317	
Equipment		Normal Fluid Film		IQI	
Type: G-RAY	Brand: FUJI	Type: ASTM-1A		Equipment: GE M ECO	
Source Equip: Ir192	Type: IX50	Position: Film Side		Type: Auto	
Source Dim: 2x1.4	Class: C3	Sensitivity: 4		Temperature: 29	
Activity (Ci): 22.3	Lead Sheets: 0,5	$\varnothing$ of visible wire/hole 0,0063(0,16)		Developer: G135	
Films/Casette:Single		Indication Codes (ISO 6520)		Fixer: G335	
Testing Technique					
1	2	3	4	5	6
Source					
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-Uniformity 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					
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	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:	04/10/2024	04/10/2024									02/10/2024 10:09:09		
Signature:												Sergio Morales Date: 22-10-24 	

On behalf of Tecnimont / R  
Piping Supervisor  
Cristi Sandu  
25.10.2024 