



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-310-000404_RFI5388_MOD-ITP-XL_220	
Rev.1			RFI Nr.: Date :	
Unit	-			
Plant Area	-			
Isometric Number				
Inspection Package Number	IP-WSR-P-310-000404_RFI5388 - IP Spool Release From Workshop			

Sheet 01/01

The Present Inspection Package contains the following Elements:

7112-DMW64001-1-SP01-03094;7112-DMW64001-1-SP02-03093;2211-PCW70B06-1-SP03-01103;2211-DMW91Q01-3-SP09-03092;2121-IA91F63-7-SP16-00497;2121-IA91F63-7-SP15-00496;2121-IA91F63-7-SP14-00495;2121-IA91F63-2-SP08-00484;2121-IA91F62-6-SP14-00504;2121-IA91F62-6-SP15-00476;2121-IA91F62-5-S
P12-00475;2121-IA91F62-5-SP11-00474;2121-IA91F62-5-SP10-00473;2121-IA91F62-4-SP03-00472;2121-IA91F62-4-SP02-00471;2121-IA91F62-4-SP01-00470;2121-IA91F62-2-SP09-00467;2121-IA91F62-1-SP13-00931;1211-PCW89017-1-SP03-00359;1211-PCW89017-1-SP02-00358;1211-PCW89017-1-SP01-00357;1211-PCW89012-2-SP03-01102;1211-PCW89012-2-SP02-01101;1211-PCW89009-1-SP01-00356;1211-LO89008-1-SP02-00343;1211-LO89008-1-SP01-00342;1211-DMW64001-2-SP03-03091;1127-LS50009-6-SP11-00807;1127-LS50009-6-SP10-00806;1126-LO32008-1-SP03-00841;1115-DMW64003-2-SP04-03090;1115-DMW64003-1-SP02-03071;1115-DMW63001-1-SP03-03076

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 *C. Sandu*
21.10.2024

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	<input type="checkbox"/> Y / N	Punch List Produced
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name	Signature 			
CONTRACTOR	21-10-2024	Sergio Morales Collantes				
COMPANY						
(Free)						



Tecnimont S.p.A.

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P12-00475;2121-IA91F62-5-SP11-00474;2121-IA91F62-5-SP10-00473;2121-IA91F62-4-SP03-00472;2121-IA91F62-4-SP02-00471;2121-IA91F62-4-SP01-00470;2121-IA91F62-2-SP09-00467;2121-IA91F62-1-SP13-00931;1211-PCW89017-1-SP03-00359;1211-PCW89017-1-SP02-00358;1211-PCW89017-1-SP01-00357;1211-PCW89012-2-SP03-01102;1211-PCW89012-2-SP02-01101;1211-PCW89009-1-SP01-00356;1211-LO89008-1-SP02-00343;1211-LO89008-1-SP01-00342;1211-DMW64001-2-SP03-03091;1127-LS50009-6-SP11-00807;1127-LS50009-6-SP10-00806;1126-LO32008-1-SP03-00841;1115-DMW64003-2-SP04-03090;1115-DMW64003-1-SP02-03071;1115-DMW63001-1-SP03-03076

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
21.10.2024

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			21-10-2024	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 style="width: 33%;">SHEET 1 / 1</td> <td style="width: 33%;">DOC.CLASS 1</td> <td style="width: 33%;">ISSUE 01</td> </tr> </table>	SHEET 1 / 1	DOC.CLASS 1	ISSUE 01
SHEET 1 / 1	DOC.CLASS 1	ISSUE 01			
 MECWIDE <small>Engineering Consultancy</small>	<p>ISO ID: 2121-IA91F62-6</p>				

NOTES AND REMARKS

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 *C. Sandu*

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

 <p>BILL OF MATERIAL</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LENGTH</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.3</td> <td>1,539</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR BE SMLS, BExBE</td> <td>I3364302</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">FLANGES</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMÉTRE</th> <th>PRESSION</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIEL</th> </tr> </thead> <tbody> <tr> <td>6.2</td> <td>1</td> <td>2"</td> <td>150#</td> <td>S-10S</td> <td>WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125-250 AARH</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">WELD FITTINGS</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>4.1</td> <td>1</td> <td>2" x 3/4"</td> <td>S-10S x S-40S</td> <td>ECCENTRIC SWAGE MSS SP-95 - A403-WP304/304L DG BE PE SMLS</td> <td>I2495783</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">FORGINGS</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/PRESS.</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>3.1</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> <div style="text-align: right; margin-top: 20px;"> P2308S 00476  2121-IA91F62-6-SP15-00476 </div> <div style="text-align: center; margin-top: 20px;"> Weld Map Sticker </div> <div style="text-align: right; margin-top: 20px;">  </div> <div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div style="flex: 1; padding-right: 10px;"> <p>On behalf of Tecnimont / R Piping Supervisor Cristi Sandu 18.10.2024 <i>C. Sandu</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Rev.</td> <td>Date</td> <td>DRW</td> <td>Check 1</td> <td>Check 2</td> <td>Marking Color: GREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Weld Class: 6C4-M</td> </tr> <tr> <td>00</td> <td>01/03/2024</td> <td>ANP</td> <td>AOM</td> <td>PCO</td> <td>Paint System: NR</td> </tr> </table> <p>Construction Code: ASME B31.3 % RT - YES % UT - NO Hydro: NO ID Cleaning: YES Piece Mark</p> <p>Acc Criteria: ASME B31.3 % PT - YES % FE - NO PWHT: NO OD Cleaning: YES</p> <p>Metal Tag: YES % MT - NO % PMI - YES BHN% - NO Tolerances: ASME B31.3</p> </div> <div style="flex: 1; padding-left: 10px;"> <p>Sergio Morales</p>  <p>Date: 16-10-24</p> </div> </div>	PIPE						ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	1.3	1,539	2"	S-10S	PIPE - A312-TP304/304L DUAL GR BE SMLS, BExBE	I3364302	FLANGES						ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATERIEL	6.2	1	2"	150#	S-10S	WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125-250 AARH	WELD FITTINGS						ITEM	QT	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	4.1	1	2" x 3/4"	S-10S x S-40S	ECCENTRIC SWAGE MSS SP-95 - A403-WP304/304L DG BE PE SMLS	I2495783	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	Rev.	Date	DRW	Check 1	Check 2	Marking Color: GREEN						Weld Class: 6C4-M	00	01/03/2024	ANP	AOM	PCO	Paint System: NR
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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 00476 2121-IA91F62-6-SP15-00476				2121-IA91F62-6			00
1.3	1,539	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	NY231216AS15 0391	3,93	6,05
40391							
6.2	1	2.0000 S10S	0.0000 NA	WN FLG, RAISED FACE, 150#, A182-F304L	CH-18449 0393	2,72	2,72
37867							
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	ECC SWAGE NIPPLE, LEB-SEP, A403-WP304L	N220606AV04 0512	1,97	1,97
73272							

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 18.10.2024 *C. Sandu*

Number of Items : 4 Total Weight : 10,89

Signature	QA	Client
	Date	Date
	 <i>[Signature]</i>	Sergio Morales Date: 16-10-24 

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

ANALISI CHIMICA - CHEMICAL COMPOSITION

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

Note - Notes

Firma
Signature

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

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

CARATTERISTICHE MECCANICHE - MECHANICAL TEST

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

Note - Notes

Firma
Signature

I dati dell'analisi chimica e delle prove meccaniche corrispondono fedelmente al certificato inviato dal fabbricante del materiale base e/o dal laboratorio che ha effettuato le prove. I certificati sono conservati nel nostro archivio.
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CHANDAN STEEL LIMITED
(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2015 CERTIFICATE No. 04100011022

ADM. OFFICE: 504, SUGHISAGAR, N. S. PATKAR MARG,
MUMBAI 400 007, INDIA
Tel: 91-22-66150600, Fax: 91-22-66150633/34
Website: www.chandansteel.net
Email: rcv@chandansteel.net
L/c. No. :
L/c. Date:

WORKS: Plot No. 35, G. I. D. C., Umbergaon
Dist. Vadodara, Gujarat - 396 171, INDIA
Tel.: 91-260-256 2066/4267/1166, Fax: 91-260-256 2287
E-mail: export@chandansteel.net

INSPECTION CERTIFICATE 3.1
ACCORDING TO EN 10204

RACCORDUBI SPA
VIALE DE GASPERI, 194
20010 MARCALLO CON CASONE
(MILANO) - ITALIA

Test Certificate No. : EXP/22-23/01571 - 32
Date of Issue : 18.03.2023
P. O. No. : 00000350 Dt. 02-12-2022
Invoice No. & Date : EXP/22-23/01571 Date- 18.03.2023

ITEM DESCRIPTION
STAINLESS STEEL FORGED & FULLY MACHINED FLANGES

Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item	Process Route
9	CH-18449	158	5 & 7	409.41	ASTM/ASME A/SA182 F304/304L	2" WNRF150 LBS 10S	
-	-	-	-	-	-	-	Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	

CHEMICAL COMPOSITION (Weight %)

Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
9	0.023	0.52	1.74	0.036	0.005	18.23	-	8.07	-	-	0.077	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

MECHANICAL PROPERTIES

Po Sr No.	0.2% Yield Strength N/mm ² (Rp0.2)	Tensile Strength N/mm ² (R _m)	Elongation %	Reduction of Area %	Hardness (H. B. W.)
9	261	566	57	74	162-166
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

Remarks:

1. The material is solution annealed at minimum 1050 °C and water quenched.
2. Visual and Dimensions inspection OK.
3. PMI Test 100%- Satisfactory.
4. No welding was performed on this material.
5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation.
6. Inter-Granular Corrosion Test (ASTM A262- 17 (Pt.B))- Satisfactory.
7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification.
8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015.
9. Surface roughness quality checked by comparator & found 125 - 250 AARH
10. Visual , Dimension and PMI performed by CSL.
11. Mechanical Testing performed by CSL.

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.



V.Y. Narayanan
V.Y.NARAYANAN
WORKS INSPECTOR

Customer:

TECNIMONT S.p.A.

Order: 7500118979 - 26.01.24 - Item n.: 184 - Project: 4274 - PP+PE Sines (Portugal) EPC - Our ref.:

OCVEIT202400000475

Description:

W.N. 2" S.150 RF SCH.10/S

I2260686



Heat num. or Pcs. marking: CH-18449 - Qty:22,00

Protocol: CTCERC202400003069 * CERTIFIED TRUE COPY

* Issued 14-03-2024



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	CE				
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

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, JiangYin City, JiangSu P.R. China

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



质量部(章)
Stamp of Quality Department



Contract : P2300

Drawing : 2121-IA91F62-6

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00476

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-6-SP15-00476

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	
0064	BW	2	S10S	MW.26_BW	BC	13-09-2024	4712055	BC	13-09-2024	4712055			001040	02-10-2024			001044	07-10-2024											
0065	SOL	0,75	S10S	MW.26_SBR	BC	13-09-2024	4712055	BC	13-09-2024	4712055			001040	02-10-2024	000195	02-10-2024	001044	07-10-2024											
0067	BW	2	S10S	MW.26_BW	BC	13-09-2024	4712055	BC	13-09-2024	4712055			001040	02-10-2024			001044	07-10-2024									000334	04-10-2024	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

Notes:

Boccard Portugal QC	Client
	Sergio Morales Date: 16-10-24
08-10-2024 14:33:15	



Shop QC Inspection Report

P2308-001077

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

Job number: P2308S
 Spool N°: 00476
 Piece Mark: 2121-IA91F62-6-SP15-00476

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	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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: GOIS, REINALDO (N2 VT) Date: 02-10-2024 Signature 	QA/QC Inspection: RAIMUNDO, MARIANA Date: 08-10-2024 14:33:15 Signature 	Customer Inspection: Sergio Morales Date: 16-10-24 
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On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 18.10.2024 

Visual Examination Report (Welds)

P2308-001040

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00476

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

Project : ALBA

Piece Mark: 2121-IA91F62-6-SP15-00476

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	Temp. (°F/°C)	Technique Used			Comments
				Accepted	Rejected	Defect	
0064	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	BC	26	X			Direct
0065	0.7500 S10S SOL-Sockolet to Header Weld (MW.26_SBR)	BC	26	X			Direct
0067	2.0000 S10S BW-Buttweld Straight (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: GOIS, REINALDO (N2 VT)

QA/QC Inspection: RAIMUNDO, MARIANA

Customer Inspection:

Date: 02-10-2024

Date: 08-10-2024 14:33:15

Sergio Morales

Signature



Signature



Date: 16-10-24


On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu



Liquid Penetrant Examination Report

P2308-000195

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°: 00476

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

Piece Mark: 2121-IA91F62-6-SP15-00476

Testing Date: 02-10-2024

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				
0065	0.7500 S10S SOL-Sockolet to Header Weld (MW.26_SBR)	BC	26	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: REINALDO (N2 VT), GOIS

QA/QC Inspection: RAIMUNDO, MARIANA

Customer Inspection:

Date: 02-10-2024

Date: 02-10-2024

Sergio Morales

Signature



Signature



Date: 16-10-24



On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 18.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-001044

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00476

Piece Mark: 2121-IA91F62-6-SP15-00476

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			
0064	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	160	0	0	0	8	69	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0065	0.7500 S10S SOL-Sockolet to Header Weld (MW.26_SBR)	159	0	0	0	9	69	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0067	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	158	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.3	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (NY231216AS15)	155	0	0	0	7	71	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1	2.0000 NA 0.7500 NA SOCKOLET, 3000#, A182-F304L (N220606AV04)	156	1	0	0	0	7	0	2	0	86	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1	2.0000 S10S 0.7500 S40S ECC SWAGE NIPPLE, LEB-SEP, A403-WP304L (N220606AV04)	157	0	0	0	8	71	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2	2.0000 S10S WN FLG, RAISED FACE, 150#, A182-F304L (CH-18449)	154	0	0	0	8	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
18.10.2024 C. Sandu

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

Customer Inspection:

Sergio Morales

Date: 07-10-2024

Date: 08-10-2024 14:33:15

Date:

Signature



Signature



Signature

Date: 16-10-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	160
Mode	ALLOY
Time	2024-10-07 10:47
Duration	10.78
Sequence	Final
Alloy1	304SS : 1.22
Alloy2	321SS : 1.38
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.048
Sn	< LOD	:	0.054
Pd	< LOD	:	0.041
Ag	< LOD	:	0.212
Al	< LOD	:	80.000
Mo	0.138	±	0.013
Nb	0.011	±	0.005
Zr	< LOD	:	0.004
Bi	< LOD	:	0.018
Pb	< LOD	:	0.011
Se	< LOD	:	0.009
W	< LOD	:	0.100
Zn	< LOD	:	0.039
Cu	< LOD	:	0.169
Ni	8.475	±	0.316
Co	< LOD	:	0.523
Fe	69.913	±	0.484
Mn	1.800	±	0.220
Cr	18.780	±	0.281
V	< LOD	:	0.151
Ti	< LOD	:	0.183

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	159
Mode	ALLOY
Time	2024-10-07 10:47
Duration	8.94
Sequence	Final
Alloy1	304SS : 0.09
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.055
Pd	< LOD	:	0.042
Ag	< LOD	:	0.186
Al	< LOD	:	80.000
Mo	0.046	±	0.009
Nb	< LOD	:	0.009
Zr	< LOD	:	0.003
Bi	< LOD	:	0.002
Pb	< LOD	:	0.018
Se	< LOD	:	0.011
W	< LOD	:	0.071
Zn	< LOD	:	0.041
Cu	< LOD	:	0.166
Ni	9.231	±	0.323
Co	< LOD	:	0.518
Fe	69.206	±	0.480
Mn	1.813	±	0.221
Cr	19.146	±	0.281
V	< LOD	:	0.139
Ti	< LOD	:	0.166

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	158
Mode	ALLOY
Time	2024-10-07 10:47
Duration	9.81
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	:	0.051
Pd	< LOD	:	0.037
Ag	< LOD	:	0.184
Al	< LOD	:	80.000
Mo	0.108	±	0.012
Nb	0.010	±	0.005
Zr	< LOD	:	0.006
Bi	< LOD	:	0.012
Pb	< LOD	:	0.018
Se	< LOD	:	0.005
W	< LOD	:	0.082
Zn	< LOD	:	0.032
Cu	< LOD	:	0.149
Ni	8.759	±	0.305
Co	< LOD	:	0.493
Fe	70.340	±	0.458
Mn	1.534	±	0.207
Cr	18.982	±	0.268
V	< LOD	:	0.128
Ti	< LOD	:	0.133

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Constância, Portugal 2250-999

Certificate of PMI Reading

XL3t-32735

Reading No	155
Mode	ALLOY
Time	2024-10-07 10:46
Duration	9.44
Sequence	Final
Alloy1	304SS : 1.36
Alloy2	No Match : 1.91
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.042
Sn	< LOD	:	0.055
Pd	< LOD	:	0.040
Ag	< LOD	:	0.180
Al	< LOD	:	80.000
Mo	0.017	±	0.006
Nb	< LOD	:	0.005
Zr	< LOD	:	0.004
Bi	< LOD	:	0.017
Pb	< LOD	:	0.013
Se	< LOD	:	0.008
W	< LOD	:	0.082
Zn	< LOD	:	0.027
Cu	< LOD	:	0.155
Ni	7.999	±	0.308
Co	< LOD	:	0.525
Fe	71.848	±	0.475
Mn	1.312	±	0.209
Cr	17.993	±	0.273
V	< LOD	:	0.144
Ti	< LOD	:	0.148

Sergio Morales

Date: 16-10-24



On behalf of Tecnímont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	156
Mode	ALLOY
Time	2024-10-07 10:46
Duration	9.74
Sequence	Final
Alloy1	No Match : *6.49
Alloy2	No Match : *6.59
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.009
Sn	< LOD	:	0.007
Pd	< LOD	:	0.010
Ag	< LOD	:	0.017
Al	86.629	±	0.364
Mo	0.007	±	0.002
Nb	0.003	±	0.001
Zr	< LOD	:	0.002
Bi	< LOD	:	0.002
Pb	< LOD	:	0.002
Se	< LOD	:	0.002
W	< LOD	:	0.022
Zn	0.023	±	0.006
Cu	0.037	±	0.011
Ni	0.482	±	0.035
Co	0.250	±	0.054
Fe	7.953	±	0.211
Mn	0.396	±	0.069
Cr	2.813	±	0.141
V	< LOD	:	0.107
Ti	1.384	±	0.176

Sergio Morales

Date: 16-10-24



On behalf of Tecnímont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	157
Mode	ALLOY
Time	2024-10-07 10:46
Duration	8.36
Sequence	Final
Alloy1	301SS : *1.89
Alloy2	304SS : *1.96
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.047
Sn	< LOD	:	0.058
Pd	< LOD	:	0.043
Ag	< LOD	:	0.150
Al	< LOD	:	80.000
Mo	0.065	±	0.010
Nb	< LOD	:	0.008
Zr	< LOD	:	0.005
Bi	< LOD	:	0.019
Pb	< LOD	:	0.016
Se	< LOD	:	0.010
W	< LOD	:	0.105
Zn	< LOD	:	0.029
Cu	< LOD	:	0.175
Ni	8.202	±	0.327
Co	< LOD	:	0.546
Fe	71.715	±	0.503
Mn	1.493	±	0.222
Cr	17.661	±	0.285
V	0.165	±	0.079
Ti	< LOD	:	0.173

Sergio Morales

Date: 16-10-24



On behalf of Tecnímont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	154
Mode	ALLOY
Time	2024-10-07 10:46
Duration	9.52
Sequence	Final
Alloy1	304SS : 1.23
Alloy2	No Match : *2.00
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.043
Sn	< LOD	:	0.054
Pd	< LOD	:	0.037
Ag	< LOD	:	0.158
Al	< LOD	:	80.000
Mo	0.349	±	0.020
Nb	0.018	±	0.006
Zr	< LOD	:	0.007
Bi	< LOD	:	0.015
Pb	< LOD	:	0.016
Se	< LOD	:	0.009
W	< LOD	:	0.103
Zn	< LOD	:	0.048
Cu	0.389	±	0.095
Ni	8.121	±	0.305
Co	< LOD	:	0.509
Fe	70.883	±	0.467
Mn	1.791	±	0.215
Cr	17.943	±	0.269
V	< LOD	:	0.143
Ti	< LOD	:	0.158

Sergio Morales

Date: 16-10-24



On behalf of Tecnicont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

Contract : P2308
Client : NERVION
Project : ALBA

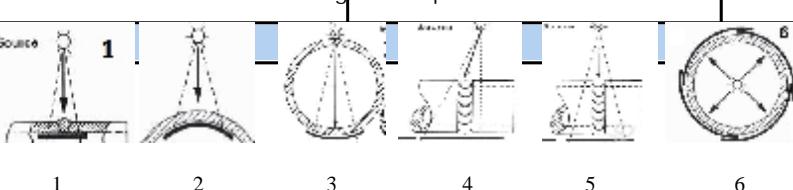
Spool N°: P2308S-00476
Isometric N°: 2121-IA91F62-6
Piece Mark: 2121-IA91F62-6-SP15-00476

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: 2x2,23		Class: C3		Sensitivity: 4																															
Activity (Ci): 22.3		Lead Sheets: 0,5		Ø of visible wire/hole 0,0063(0,16)																															
Films/Casette:Single		Testing Technique		Indication Codes (ISO 6520)																															
		<table border="1"> <tr> <td>BB-Back Bevel</td> <td>EP-Excess Penetration (504)</td> <td>SB-Suck Back</td> </tr> <tr> <td>FA-Film Artifact</td> <td>ST-Sugared Tack</td> <td></td> </tr> <tr> <td>BW-Back Weld</td> <td>GR-Grind Repair</td> <td>SU-Surface</td> </tr> <tr> <td>BT-Burn Through (510)</td> <td>HL-Hi-LO</td> <td>T-Tungsten</td> </tr> <tr> <td>C-Cap</td> <td>LC-Lack of Cleanup</td> <td>UC-Undercut (5011)</td> </tr> <tr> <td>CP-Clustered Porosity (2012)</td> <td>LF-Lack of Fusion (401)</td> <td>UP-Unformity Porosity (2013)</td> </tr> <tr> <td>CL-Cold Lap</td> <td>LP-Lack of Penetration (402)</td> <td>V-Valley in Cap</td> </tr> <tr> <td>CR-Crack</td> <td>P-Porosity (2011)</td> <td>W-Wire</td> </tr> <tr> <td>CC-Crater Crack (104)</td> <td>R-Root</td> <td>WH-Worm Hole (2016)</td> </tr> <tr> <td>DI-Dimensional</td> <td>S-Slag (301)</td> <td>XN-Xray Film Non-Conform</td> </tr> </table>		BB-Back Bevel	EP-Excess Penetration (504)	SB-Suck Back	FA-Film Artifact	ST-Sugared Tack		BW-Back Weld	GR-Grind Repair	SU-Surface	BT-Burn Through (510)	HL-Hi-LO	T-Tungsten	C-Cap	LC-Lack of Cleanup	UC-Undercut (5011)	CP-Clustered Porosity (2012)	LF-Lack of Fusion (401)	UP-Unformity Porosity (2013)	CL-Cold Lap	LP-Lack of Penetration (402)	V-Valley in Cap	CR-Crack	P-Porosity (2011)	W-Wire	CC-Crater Crack (104)	R-Root	WH-Worm Hole (2016)	DI-Dimensional	S-Slag (301)	XN-Xray Film Non-Conform		
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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
0067	2.0000 S10S BW (MW.26_BW)	BC	A	500	440	NA	4	475	3.3	W4	-	RX436
0067	2.0000 S10S BW (MW.26_BW)	BC	B	500	440	NA	4	475	3.6	W4	-	RX436

Contract : P2308
Client : NERVION
Project : ALBA

Spool N°: P2308S-00476
Isometric N°: 2121-IA91F62-6
Piece Mark: 2121-IA91F62-6-SP15-00476

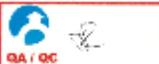
Procedure/ Instruction:

Acceptance Criteria:

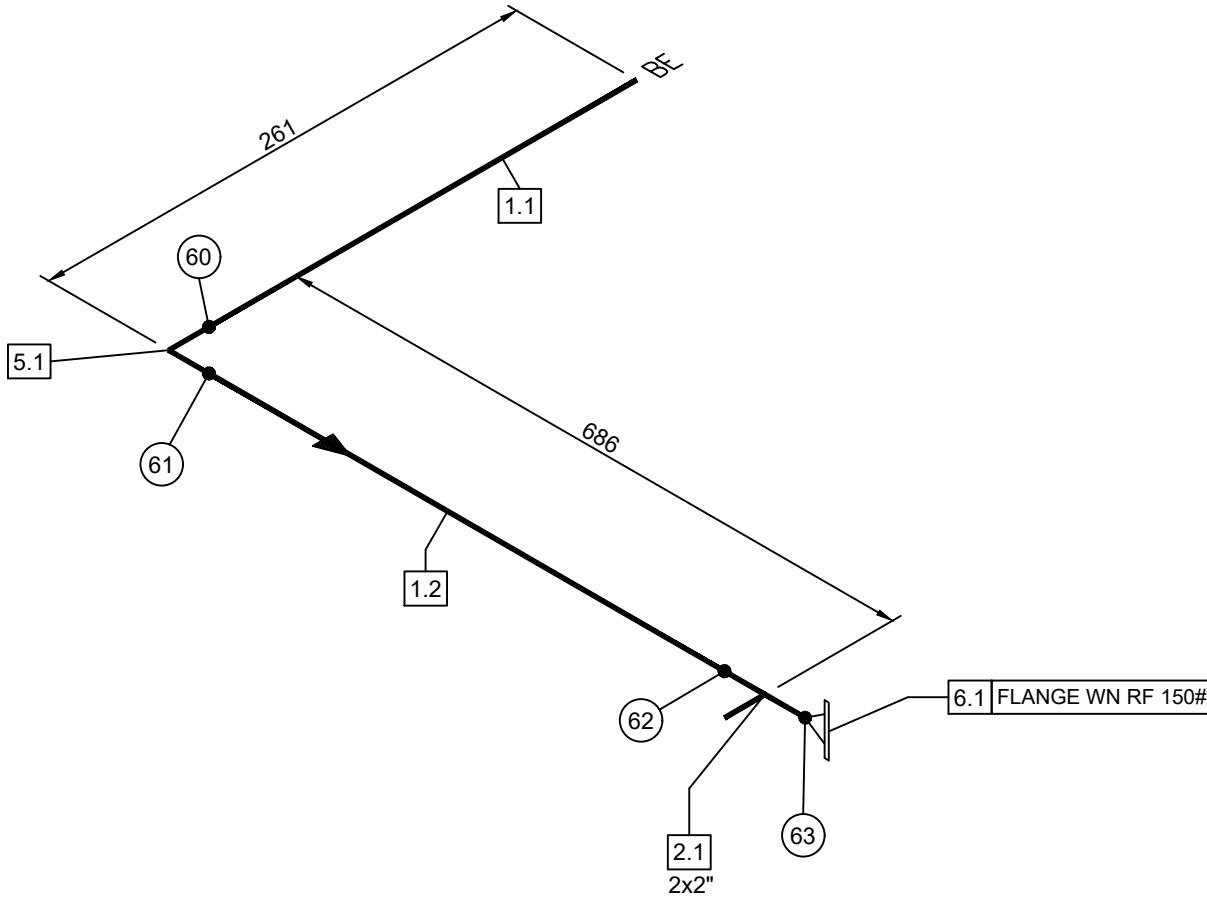
Testing Date:

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: 2x2,23	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			
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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								08-10-2024 14:33:15		
Signature:											Sergio Morales	 Date: 16-10-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 

	<p>BILL OF MATERIAL</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LENGTH</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.1</td> <td>0,183</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>0,542</td> <td>2"</td> <td>S-10S</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">FITTINGS</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMETER</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIAL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>2.1</td> <td>1</td> <td>2" x 2"</td> <td>S-10S</td> <td>STRAIGHT TEE ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259149</td> </tr> <tr> <td>5.1</td> <td>1</td> <td>2"</td> <td>S-10S</td> <td>90LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS</td> <td>I2259133</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6">FLANGES</th> </tr> <tr> <th>ITEM</th> <th>QT</th> <th>DIAMÉTRE</th> <th>PRESSION</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIEL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>6.1</td> <td>1</td> <td>2"</td> <td>150#</td> <td>S-10S</td> <td>WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125 -250 AARH</td> <td>I2260686</td> </tr> </tbody> </table> <div style="text-align: right; margin-top: 10px;"> P2308S 00504  2121-IA91F62-6-SP14-00504 </div> <div style="text-align: center; margin-top: 10px;"> Weld Map Sticker </div> <div style="text-align: right; margin-top: 10px;">  </div>	PIPE						ITEM	LENGTH	DIAMETER	SCH/mm	DESCRIPTION / MATERIAL	ITEM CODE	1.1	0,183	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	1.2	0,542	2"	S-10S	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	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	5.1	1	2"	S-10S	90LR ELBOW ASME B16.9 A403-WP304/304L DG BE SMLS	I2259133	FLANGES						ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE	6.1	1	2"	150#	S-10S	WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125 -250 AARH	I2260686
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					<p>On behalf of Tecnimont / R Piping Supervisor Cristi Sandu 18.10.2024 <i>C. Sandu</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Rev.</td> <td>Date</td> <td>DRW</td> <td>Check 1</td> <td>Check 2</td> <td>Marking Color: GREEN</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Weld Class: 6C4-M</td> </tr> <tr> <td>00</td> <td>05/04/2024</td> <td>GLU</td> <td>PCO</td> <td></td> <td>Paint System: NR</td> </tr> </table> <p>Sergio Morales  Date: 16-10-24</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Construction Code: ASME B31.3</td> <td>% RT - YES</td> <td>% UT - NO</td> <td>Hydro: NO</td> <td>ID Cleaning: YES</td> <td>Piece Mark</td> <td>Ref. Drawing</td> <td>Job #</td> <td>Spool #</td> <td>Project</td> </tr> <tr> <td>Acc Criteria: ASME B31.3</td> <td>% PT - YES</td> <td>% FE - NO</td> <td>PWHT: NO</td> <td>OD Cleaning: YES</td> <td rowspan="2">2121-IA91F62-6-SP14-00504</td> <td rowspan="2">2121-IA91F62-6</td> <td rowspan="2">P2308S</td> <td rowspan="2">00504</td> <td rowspan="2">REPSOL PROJETO ALBA NERVION</td> </tr> <tr> <td>Metal Tag: YES</td> <td>% MT - NO</td> <td>% PMI - YES</td> <td>BHN% - NO</td> <td>Tolerances: ASME B31.3</td> </tr> </table>	Rev.	Date	DRW	Check 1	Check 2	Marking Color: GREEN						Weld Class: 6C4-M	00	05/04/2024	GLU	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-IA91F62-6-SP14-00504	2121-IA91F62-6	P2308S	00504	REPSOL PROJETO ALBA NERVION	Metal Tag: YES	% MT - NO	% PMI - YES	BHN% - NO	Tolerances: ASME B31.3																					
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Spool Material List

Contract : P2308

Client NERVION

Job : P2308S

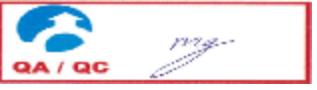
Project ALBA

Job	Spool	Piece Mark	Drawing	Rev			
Item No Tag No ID No	Qty	Size1 Sch1	Size2 Sch2	Description	Heat No MTR No Folder No	Unit Weight Kgs	Weight Kgs
P2308S	00504	2121-IA91F62-6-SP14-00504		2121-IA91F62-6		00	
1.1	,183 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	0,72
40391							
1.2	,542 2.0000 S10S	0.0000 NA		PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	2,13
40391							
6.1	1 2.0000 S10S	0.0000 NA		WN FLG, RAISED FACE, 150#, A182-F304L	CH-18449 0393	2,72	2,72
37867							
5.1	1 2.0000 S10S	0.0000 NA		90 LR ELL, SEAMLESS, A403-WP304L	M220696 0410	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							

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 *C. Sandu*

Number of Items : 5

Total Weight : 6,84

Signature	QA	Client
	 <i>[Handwritten signature]</i>	Sergio Morales Date: 16-10-24 
Date	2024-09-18 11:36:19	

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

12

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



F / QA / 24

REV. NO. 10

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

INSPECTION CERTIFICATE

In Accordance with EN 10204/3.1

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

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

Chemical Analysis %

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

Mechanical Test

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

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

Marking on pipes: SURAJ LTD SPECIFICATION GRADE SIZE

CFD EN 10216-5 TC1 EN GRADE SL NO. _____ HEAT NO. _____ P O NO. _____

Remarks:

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

Prepared by

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

SURAJ LTD
THOL
For, Suraj Limited.
C.I.Nayak
Dept,Head Quality

Page no. 01 of 12

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

APPLUS OBO TCM
28 03 24

CHANDAN STEEL LIMITED (GOVT. OF INDIA RECOGNISED EXPORT HOUSE) ISO 9001:2015 CERTIFICATE No. 04100011022												
ADM. OFFICE: 504, SUGHISAGAR, N. S. PATKAR MARG, MUMBAI 400 007, INDIA Tel: 91-22-66150600, Fax: 91-22-66150633/34 Website: www.chandasteel.net Email: exp@chandasteel.net L/c. No. : L/c. Date:						WORKS: Plot No.35, G. I. D. C., Umbergaon Dist: Vadodara, Gujarat - 396 171, INDIA Tel.: 91-260-256 2066/4267/1166, Fax: 91-260-256 2287 E-mail: export@chandasteel.net						
INSPECTION CERTIFICATE 3.1 ACCORDING TO EN 10204												
RACCORDUBI SPA VIALE DE GASPERI, 194 20010 MARCALLO CON CASONE (MILANO) - ITALIA						Test Certificate No. : EXP/22-23/01571 - 32 Date of Issue : 18.03.2023 P. O. No. : 00000350 Dt. 02-12-2022 Invoice No. & Date : EXP/22-23/01571 Date- 18.03.2023						
ITEM DESCRIPTION STAINLESS STEEL FORGED & FULLY MACHINED FLANGES												
Po Sr No.	Heat No.	Pcs	Box No.	Wt.Kgs	Grade	Item			Process Route			
9	CH-18449	158	5 & 7	409.41	ASTM/ASME A/SA182 F304/304L	2" WNRF150 LBS 10S			Electric Induction Melting, A.O.D. Refining, Continuous Casting & Hot Forging			
-	-	-	-	-	-	-						
-	-	-	-	-	-	-						
-	-	-	-	-	-	-						
-	-	-	-	-	-	-						
CHEMICAL COMPOSITION (Weight %)												
Po Sr No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N	OTHERS
9	0.023	0.52	1.74	0.036	0.005	18.23	-	8.07	-	-	0.077	-
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
MECHANICAL PROPERTIES												
Po Sr No.	0.2% Yield Strength N/mm ² (Rp0.2)	Tensile Strength N/mm ² (R _m)	Elongation %		Reduction of Area %	Hardness (H. B. W.)						
9	261	566	57		74	162-166						
-	-	-	-		-	-						
-	-	-	-		-	-						
-	-	-	-		-	-						
-	-	-	-		-	-						
Remarks: <p>1. The material is solution annealed at minimum 1050 °C and water quenched. 2. Visual and Dimensions inspection OK. 3. PMI Test 100%- Satisfactory. 4. No welding was performed on this material. 5. Material is free from mercury and radio-active contamination and is found within the limits of the background radiation. 6. Inter-Granular Corrosion Test (ASTM A262- 17 (Pt.B))- Satisfactory. 7. The material conforms to ASTM A 182 - 22, ASME SECTION II PART A SA 182 - 21 & Dimension confirms to ASME B16.5-20 Specification. 8. The material hardness conforms to NACE MR0175/ISO 15156-3:2015 & NACE MR0103-2015. 9. Surface roughness quality checked by comparator & found 125 - 250 AARH. 10. Visual , Dimension and PMI performed by CSL. 11. Mechanical Testing performed by CSL.</p>												

We hereby certify that, the material described herein,
and supplied are in compliance with the requirements of the order.



V.Y. Narayanan
V.Y.NARAYANAN
WORKS INSPECTOR

Customer: TECNIMONT S.p.A. Order: 7500118979 - 26.01.24 - Item n.: 184 - Project: 4274 - PP+PE Sines (Portugal) EPC - Our ref.: OCVEIT202400000475
Description: W.N. 2" S.150 RF SCH.10/S I2260686



Contract : P2300

Drawing : 2121-IA91F62-6

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00504

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-6-SP14-00504

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
0060	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000938	12-09-2024				000974	14-09-2024										
0061	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000938	12-09-2024				000974	14-09-2024										
0062	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000938	12-09-2024				000974	14-09-2024										
0063	BW	2	S10S	MW.26_BW	AE	15-07-2024	4712055	AE	15-07-2024	4712055			000938	12-09-2024				000974	14-09-2024										

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

Notes:

Boccard Portugal QC	Client
 	Sergio Morales Date: 16-10-24
18-09-2024 11:36:19	

Signature

Date



Shop QC Inspection Report

P2308-000972

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

Job number: P2308S
 Spool N°: 00504
 Piece Mark: 2121-IA91F62-6-SP14-00504

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

Control Date: 12-09-2024

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: 12-09-2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 18-09-2024 11:36:19 Signature 	Customer Inspection: Sergio Morales Date: 16-10-24 
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On behalf of Tecnimon / R
 Piping Supervisor
 Cristi Sandu
 18.10.2024 

Visual Examination Report (Welds)

P2308-000938

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00504

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

Project : ALBA

Piece Mark: 2121-IA91F62-6-SP14-00504

Testing Date: 12-09-2024

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	
0060	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	26	X			Direct
0061	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	26	X			Direct
0062	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	26	X			Direct
0063	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AE	26	X			Direct

Sketch / Photo:

Defects									
Clustered Porosity	CP	Porosity	P	Cap	C	Lack of Cleanup	LC		
Unibmly Porosity	UP	Slag	S	Undercut	UC	Crack	CR		
Test Performed by: MATOS, MARCO (N2 VT/PT)				QA/QC Inspection: GIL, MIGUEL		Customer Inspection:			
Date: 12-09-2024				Date: 18-09-2024 11:36:19					
Signature 				Signature 					
				Signature 					
				Date: 16-10-24					

On behalf of Tecnimon / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000974

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00504

Piece Mark: 2121-IA91F62-6-SP14-00504

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			
0060	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	26	0	0	0	8	69	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0061	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	24	0	0	0	9	69	1	19	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0062	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	22	0	0	0	8	69	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
0063	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	20	0	0	0	8	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	27	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	23	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2.1	2.0000 S10S TEE, SEAMLESS, A403-WP304L (MN012-1)	21	0	0	0	8	71	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5.1	2.0000 S10S 90 LR ELL, SEAMLESS, A403-WP304L (M220696)	25	0	0	0	8	72	1	17	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6.1	2.0000 S10S WN FLG, RAISED FACE, 150#, A182-F304L (CH-18449)	19	0	0	0	7	70	1	18	0	0	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 

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

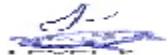
Customer Inspection:

Date: 14-09-2024

Sergio Morales



Signature



Date: 18-09-2024 11:36:19

Signature



Date:

Signature

Date: 16-10-24

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

Certificate of PMI Reading

XL3t-32735

Reading No	26
Mode	ALLOY
Time	2024-09-14 06:14
Duration	9.90
Sequence	Final
Alloy1	304SS : 0.78
Alloy2	No Match : *2.26
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.042
Sn	< LOD	:	0.051
Pd	< LOD	:	0.039
Ag	< LOD	:	0.179
Al	< LOD	:	80.000
Mo	0.037	±	0.008
Nb	< LOD	:	0.008
Zr	< LOD	:	0.004
Bi	< LOD	:	0.009
Pb	< LOD	:	0.015
Se	< LOD	:	0.007
W	< LOD	:	0.079
Zn	< LOD	:	0.031
Cu	< LOD	:	0.161
Ni	8.748	±	0.309
Co	< LOD	:	0.513
Fe	69.068	±	0.468
Mn	1.981	±	0.218
Cr	19.361	±	0.276
V	< LOD	:	0.141
Ti	< LOD	:	0.145

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Constância, Portugal 2250-999

Certificate of PMI Reading

XL3t-32735

Reading No	24
Mode	ALLOY
Time	2024-09-14 06:14
Duration	8.99
Sequence	Final
Alloy1	304SS : 0.47
Alloy2	No Match : 1.75
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.053
Pd	< LOD	:	0.039
Ag	< LOD	:	0.146
Al	< LOD	:	80.000
Mo	0.032	±	0.008
Nb	< LOD	:	0.009
Zr	< LOD	:	0.004
Bi	< LOD	:	0.018
Pb	< LOD	:	0.017
Se	< LOD	:	0.007
W	< LOD	:	0.090
Zn	< LOD	:	0.032
Cu	< LOD	:	0.154
Ni	9.179	±	0.322
Co	< LOD	:	0.519
Fe	69.326	±	0.479
Mn	1.741	±	0.218
Cr	19.157	±	0.280
V	< LOD	:	0.138
Ti	< LOD	:	0.172

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Certificate of PMI Reading

XL3t-32735

Reading No	22
Mode	ALLOY
Time	2024-09-14 06:13
Duration	7.09
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.050
Sn	< LOD	:	0.064
Pd	< LOD	:	0.047
Ag	< LOD	:	0.160
Al	< LOD	:	80.000
Mo	0.026	±	0.008
Nb	< LOD	:	0.009
Zr	< LOD	:	0.007
Bi	< LOD	:	0.017
Pb	< LOD	:	0.021
Se	< LOD	:	0.007
W	< LOD	:	0.112
Zn	< LOD	:	0.024
Cu	< LOD	:	0.191
Ni	8.914	±	0.364
Co	< LOD	:	0.589
Fe	69.978	±	0.545
Mn	1.727	±	0.249
Cr	18.917	±	0.318
V	< LOD	:	0.152
Ti	< LOD	:	0.167

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Certificate of PMI Reading

XL3t-32735

Reading No	20
Mode	ALLOY
Time	2024-09-14 06:12
Duration	6.07
Sequence	Final
Alloy1	304SS : 0.22
Alloy2	No Match : 1.77
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.061
Sn	< LOD	:	0.081
Pd	< LOD	:	0.057
Ag	< LOD	:	0.153
Al	< LOD	:	80.000
Mo	0.104	±	0.016
Nb	< LOD	:	0.012
Zr	< LOD	:	0.009
Bi	< LOD	:	0.010
Pb	< LOD	:	0.017
Se	< LOD	:	0.013
W	< LOD	:	0.127
Zn	< LOD	:	0.047
Cu	< LOD	:	0.229
Ni	8.505	±	0.434
Co	< LOD	:	0.718
Fe	70.061	±	0.663
Mn	1.811	±	0.304
Cr	18.931	±	0.387
V	< LOD	:	0.193
Ti	< LOD	:	0.228

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 *C. Sandu*

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Certificate of PMI Reading

XL3t-32735

Reading No	27
Mode	ALLOY
Time	2024-09-14 06:15
Duration	16.28
Sequence	Final
Alloy1	304SS : 0.23
Alloy2	No Match : *2.11
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.031
Sn	< LOD	:	0.038
Pd	< LOD	:	0.029
Ag	< LOD	:	0.148
Al	< LOD	:	80.000
Mo	0.037	±	0.006
Nb	< LOD	:	0.005
Zr	< LOD	:	0.002
Bi	< LOD	:	0.009
Pb	< LOD	:	0.007
Se	< LOD	:	0.005
W	< LOD	:	0.058
Zn	< LOD	:	0.028
Cu	0.295	±	0.066
Ni	8.084	±	0.222
Co	< LOD	:	0.371
Fe	71.646	±	0.342
Mn	1.454	±	0.152
Cr	18.022	±	0.196
V	< LOD	:	0.100
Ti	< LOD	:	0.122

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Certificate of PMI Reading

XL3t-32735

Reading No	23
Mode	ALLOY
Time	2024-09-14 06:13
Duration	8.12
Sequence	Final
Alloy1	304SS : 0.22
Alloy2	No Match : *2.10
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.059
Pd	< LOD	:	0.042
Ag	< LOD	:	0.187
Al	< LOD	:	80.000
Mo	< LOD	:	0.008
Nb	< LOD	:	0.006
Zr	< LOD	:	0.006
Bi	< LOD	:	0.003
Pb	< LOD	:	0.020
Se	< LOD	:	0.006
W	< LOD	:	0.089
Zn	< LOD	:	0.039
Cu	< LOD	:	0.168
Ni	8.166	±	0.336
Co	< LOD	:	0.560
Fe	71.835	±	0.515
Mn	1.423	±	0.229
Cr	18.006	±	0.296
V	0.178	±	0.083
Ti	< LOD	:	0.170

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Constância, Portugal 2250-999

Certificate of PMI Reading

XL3t-32735

Reading No	21
Mode	ALLOY
Time	2024-09-14 06:13
Duration	22.42
Sequence	Final
Alloy1	304SS : 0.13
Alloy2	No Match : *2.07
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.033
Sn	< LOD	:	0.038
Pd	< LOD	:	0.030
Ag	< LOD	:	0.182
Al	< LOD	:	80.000
Mo	< LOD	:	0.007
Nb	< LOD	:	0.005
Zr	< LOD	:	0.004
Bi	< LOD	:	0.010
Pb	< LOD	:	0.009
Se	< LOD	:	0.008
W	< LOD	:	0.071
Zn	< LOD	:	0.024
Cu	< LOD	:	0.112
Ni	8.111	±	0.307
Co	< LOD	:	0.355
Fe	71.478	±	0.608
Mn	1.626	±	0.159
Cr	18.186	±	0.798
V	< LOD	:	0.274
Ti	< LOD	:	0.222

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Certificate of PMI Reading

XL3t-32735

Reading No	25
Mode	ALLOY
Time	2024-09-14 06:14
Duration	19.57
Sequence	Final
Alloy1	304SS : 1.84
Alloy2	No Match : *1.99
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.026
Sn	< LOD	:	0.033
Pd	< LOD	:	0.024
Ag	< LOD	:	0.187
Al	< LOD	:	80.000
Mo	< LOD	:	0.004
Nb	< LOD	:	0.005
Zr	< LOD	:	0.002
Bi	< LOD	:	0.011
Pb	< LOD	:	0.008
Se	< LOD	:	0.005
W	< LOD	:	0.056
Zn	< LOD	:	0.022
Cu	< LOD	:	0.099
Ni	8.113	±	0.204
Co	< LOD	:	0.342
Fe	72.104	±	0.313
Mn	1.297	±	0.137
Cr	17.833	±	0.179
V	0.112	±	0.047
Ti	< LOD	:	0.114

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu

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Certificate of PMI Reading

XL3t-32735

Reading No	19
Mode	ALLOY
Time	2024-09-14 06:12
Duration	10.34
Sequence	Final
Alloy1	304SS : 1.64
Alloy2	No Match : *2.45
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.043
Sn	0.054	±	0.026
Pd	< LOD	:	0.035
Ag	< LOD	:	0.129
Al	< LOD	:	80.000
Mo	0.463	±	0.022
Nb	0.010	±	0.005
Zr	< LOD	:	0.004
Bi	< LOD	:	0.006
Pb	< LOD	:	0.018
Se	< LOD	:	0.008
W	< LOD	:	0.099
Zn	< LOD	:	0.028
Cu	0.526	±	0.096
Ni	7.912	±	0.285
Co	< LOD	:	0.481
Fe	70.429	±	0.442
Mn	1.914	±	0.206
Cr	18.254	±	0.257
V	< LOD	:	0.131
Ti	< LOD	:	0.160

Sergio Morales

Date: 16-10-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
18.10.2024 C. Sandu