



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-310-000317_RFI4464_MOD-ITP-XL_220
Rev.1			RFI Nr.: Date :
Unit	-		
Plant Area	-		
Isometric Number			
Inspection Package Number	IP-WSR-P-310-000317_RFI4464 - IP Spool Release From Workshop		

Sheet 01/01

The Present Inspection Package contains the following Elements:

7111-IA91F18-1-SP02-00046;1127-PN52020-1-SP04-00819;2121-IA91F63-1-SP12-00482;1127-PN52022-2-SP02-01045;1121-LS50002-4-SP15-00166;2211-PCW71A01-3-SP11-00423;2211-PCW70A01-2-SP09-00399;2211-PCW70A01-2-SP07-00397;2211-PCW70B04-1-SP01-00986;2121-IA91F63-1-SP13-00483;1121-LS50002-1-SP03-00154;2211-PE62A03-1-SP01-00425;2211-PCW71A01-3-SP09-00421;2211-PCW71A01-3-SP08-00420;2121-IA91F62-3-SP06-00468;1127-LS50009-3-SP04-00800;2211-PCW70A01-2-SP06-00395;2121-LO40B02-5-SP15-00510;1121-LS50002-4-SP14-00165;7111-IA91F18-1-SP01-00045;1127-PN52020-1-SP03-00818;1127-PN52022-2-SP04-01046;1127-PN52022-2-SP01-01044;2211-PCW70A01-2-SP08-00398;2211-PCW70B04-1-SP02-00987;2211-PCW71A01-3-SP10-00422;1127-PN52027-2-SP02-00831;1121-LS50002-1-SP04-00155;2211-PCW71A01-3-SP07-00419;2121-IA91F62-3-SP07-00469

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
06.09.2024 *C. Sandu*

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input checked="" type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y / N	Punch List Produced
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name	Signature 			
CONTRACTOR	06-09-2024	Sergio Morales Collantes				
COMPANY						
(Free)						



Tecnimont S.p.A.

REPSOL POLIMEROS
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ALBA PROJECT-PP AND PEL PLANTS



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

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

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
06.09.2024 C. Sandu

LEGEND OF CHECK RESULT	<input checked="" type="checkbox"/> Checked & NOT Accepted	<input checked="" type="checkbox"/> Checked & Accepted	N.A.	Not Applicable	Y/N	Punch List Produced
SUBCONTRACTOR	Date [DD-MMM-YYYY]	Name	Signature			
CONTRACTOR	06-09-2024	Sergio Morales Collantes				
COMPANY						
(Free)						

 Tecnimont	<p style="text-align: center;">Punch List</p> <p style="text-align: center;">PUNCH LIST</p>	<p style="text-align: center;">IDENTIFICATION CODE</p>			
		<table border="1" style="width: 100%; text-align: center;"> <tr> <td>SHEET 1 / 1</td> <td>DOC.CLASS 1</td> <td>ISSUE 01</td> </tr> </table>	SHEET 1 / 1	DOC.CLASS 1	ISSUE 01
SHEET 1 / 1	DOC.CLASS 1	ISSUE 01			
 MECWIDE <small>Engineering Services</small>	<p>ISO ID: 2121-IA91F62-3</p>				

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

LINE DATA												Tecnimont		PIPING ISOMETRIC		IDENTIFICATION CODE								
FLUID CODE: IA						LINE NO. 2"-IA-91F62-6C4										Jo	EICL T	Area	N					
REPSOL	00	07-11-2023	ISSUED FOR CONSTRUCTION			TG	M	TM	PIPING MATERIAL CLASS	INSULATION	ELD CLASS	HEAT TREATMENT	PAINTING CODE	P&ID No.	PLANT: SINES INDUSTRIAL COMPLEX		CLIENT REF: REPSOL POLYMEROS		4274	XHDL	2121	IA91F62		
	REV	DATE	REVISION DESCRIPTION			DRA N UP	CHKD UP	APP D							6C4	N / O	M	N	NR	19-A-19-000-1-01-00001 sheet 106	E C T N 19-L-19-000-2-00-86197 sheet 4		E C T N XH-SG-00000002	
N												REFERENCES		E C T N XH-LD-21210001		E C T N XH-SL-00000002		PIPE SUPPORT SPECIFICATION E C T N XH-S -00000001						
BILL OF MATERIALS												E C T N		E C T N		PIPE STANDARD SUPPORT SUMMARY E C T N XH-S -00000001								
FABRICATION MATERIALS												E C T N		E C T N		ELDING SPECIFICATION E C T N XH-S -00000001								
PS NO DESCRIPTION NS MM ITEM CODE TY. HOLD												E C T N		E C T N		E C T N								
1 PIPE 2 I3364302 8.7 M												E C T N		E C T N		E C T N								
2 FLANGES 2 I2260686 2												E C T N		E C T N		E C T N								
E R E C T I O N M A T E R I A L S												E C T N		E C T N		E C T N								
PS NO DESCRIPTION NS MM ITEM CODE TY. HOLD												E C T N		E C T N		E C T N								
3 GASKETS 2 I1654490 1												E C T N		E C T N		E C T N								
4 BOLTS 5/8 I53458376 4												E C T N		E C T N		E C T N								
5 SUPPORTS 2 268 1												E C T N		E C T N		E C T N								
6 ELDED BRACKET TO STRUCT. 2 268 1												E C T N		E C T N		E C T N								
7 ELDED BRACKET TO STRUCT. 2 269 1												E C T N		E C T N		E C T N								
8 U BOLT FOR GUIDE -P02D 2 269 1												E C T N		E C T N		E C T N								
CUT LIST												E C T N		E C T N		BOLT LIST								
PIECE NO			LENGTH MM		SIZE IN		ELD NO		ELD CAT.		SIZE IN		ELD TYPE		BOLT NO		FLANGE SIZE IN		SIZE IN		LENGTH MM			
1			526		2"		F27		F		2"		B		BJ02		2"		5/8"		85			
2			5497		2"		S28		S		2"		B											
3			2608		2"		S29		S		2"		B											
<2>			2170		2"		S30		S		2"		B											
<3>			6085		2"																			
On behalf of Tecnimont / R Piping Supervisor Cristi Sandu 02.09.2024 C. Sandu												E C T N		E C T N		E C T N								
RECEIVED 14 / 12 / 2023												E C T N		E C T N		E C T N								
AUTHORISED FOR CONSTRUCTION												E C T N		E C T N		E C T N								
SIGNED FOR CONSTRUCTION IS SHOWN ON ISO LIST FOR RELEVANT PIPING AREA												E C T N		E C T N		E C T N								
LEGENDS												E C T N		E C T N		E C T N								
JOINT TYPE HMEI TYPE OF JOINT												E C T N		E C T N		E C T N								
BW G SW S LET LET SOB B												E C T N		E C T N		E C T N								
FW S SIB B LF RF SOF S												E C T N		E C T N		E C T N								
L4 RF SLW S MTW M THD TH												E C T N		E C T N		E C T N								
PROJECT: LO LINEAL DENSITY POLYETHYLENE PEL AND POLYPROPYLENE PP FOR PROJECT - ALBA PROJECT												E C T N		E C T N		E C T N								
NOTES:												E C T N		E C T N		E C T N								
1 DENOTES PARTS LIST NO			PIPE SUPPORT			A = RESTING SUPPORT			G = GUIDE			F = AXIAL RESTRAINT			B = GUIDE + STOP			M = SPRING			PROJECT: LO LINEAL DENSITY POLYETHYLENE PEL AND POLYPROPYLENE PP FOR PROJECT - ALBA PROJECT			
WHERE A WITHOUT NUMBERING IS INDICATED THIS MEANS THAT THERE IS A REST DIRECTLY ON STEEL STRUCTURE												E C T N		E C T N		E C T N								
ISOMETRIC NO. 4274-SP-XH-DL-2121-IA91F62-3-IS00												E C T N		E C T N		E C T N								
SPOILING REV NO. 00												E C T N		E C T N		E C T N								

2121-IA91F62-3-SP07-00469

00469

2121-IA91F62-3-SP06-00468

00468

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

ALL DIMENSION AND PROPER CONFIGURATION FOR LINES NPS 1 1/2" AND SMALLER SHALL BE CHECKED IN FIELD BEFORE CONSTRUCTION
GUSSETING TO BE IMPLEMENTED BY MECHANICAL SUBCONTRACTOR AS PER SPECIFICATION 4048-XH-SG-0000000004
FOR LINE DATA AND TESTING CONDITIONS REFER TO LINE LIST 4048-XH-LL-10-0000-0001

REPSOL

Sergio Morales

Date: 02-09-24



RECEIVED
14 / 12 / 2023

RECEIVED
14 / 12 / 2023

AUTHORISED FOR CONSTRUCTION

SIGNED FOR CONSTRUCTION IS SHOWN ON ISO LIST FOR RELEVANT PIPING AREA

NOTES:

1 DENOTES PARTS LIST NO PIPE SUPPORT A = RESTING SUPPORT G = GUIDE F = AXIAL RESTRAINT B = GUIDE + STOP M = SPRING

WHERE A WITHOUT NUMBERING IS INDICATED THIS MEANS THAT THERE IS A REST DIRECTLY ON STEEL STRUCTURE

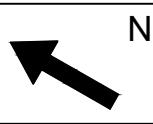
	MEC	IDE	h o	TG IFC	hk)	VK 0	PCL 22635 k 00
"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"

PROJECT: LO LINEAL DENSITY POLYETHYLENE PEL AND POLYPROPYLENE PP
FOR PROJECT - ALBA PROJECT

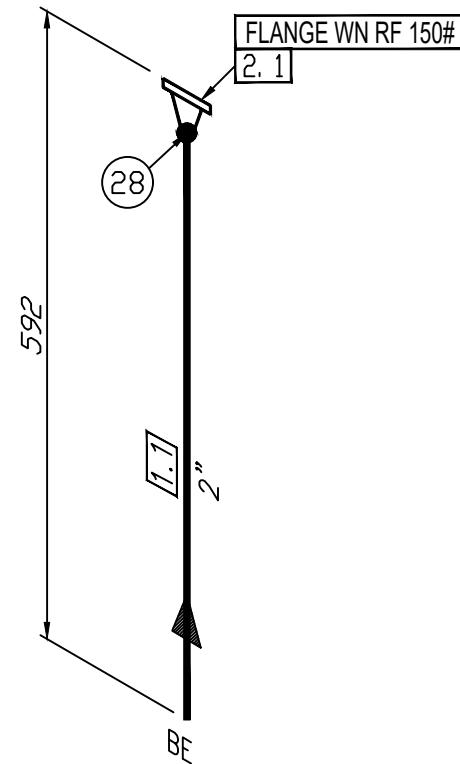
ISOMETRIC NO. 4274-SP-XH-DL-2121-IA91F62-3-IS00

SPOILING REV NO. 00

SHEET NO. 1 OF 1



N



Sergio Morales



Date: 02-09-24

Rev.	Date	DRW	Check 1	Check 2	
					Marking Color: GREEN
					Weld Class: 6C4-M
00	01/03/2024	AOM	MCM	PCO	Paint System: NA

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
02.09.2024 *C. Sandu*

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-IA91F62-3-SP06-00468	2121-IA91F62-3	P2308S	00468	REPSOL PROJETO ALBA NERVION
Metal Tag:	YES	% MT -	NO	% PMI -	YES	BHN% -	NO	Tolerances:	ASME B31.3					

BILL OF MATERIAL

PIPE

ITEM	LONGUEUR	DIAMETRE	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE
1.1	0,527	2"	S-10s	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302

FLANGES

ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATÉRIEL	ITEM CODE
2.1	1	2"	150#	S-10s	WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125_-250 AARH	I2260686

P2308S 00468



2121-IA91F62-3-SP06-00468



Weld Map Sticker

F324-302-0

Spool Material List

Contract : P2308

Client NERVION

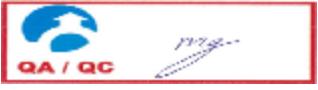
Job : P2308S

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	00468	2121-IA91F62-3-SP06-00468		2121-IA91F62-3		00	
1,1	,527	2.0000 S10S	0.0000 NA	PIPE, SEAMLESS, A312-TP304L	63981 0101	3,93	2,07
40391							
2.1	1	2.0000 S10S	0.0000 NA	WN FLG, RAISED FACE, 150#, A182-F304L	DA182 0117	2,72	2,72
37867							

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 02.09.2024 

Number of Items : 2 Total Weight : 4,79

Signature	QA 	Client  Sergio Morales Date: 02-09-24
	Date 2024-04-12 11:22:51	



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Customer : TECNIMONT SPA AFC

Kg	168	Mt	40,73	Pz No.:	7
Heat No.:	63981	Cta's job:	OC0000657	Date:	20/03/2023
P.O. No.:	PO:			Item:	I3364302

3

7500110798 DTD: 20230301 N.PRO: 4274 - PP+PE SINES (PORTUGAL) EPC

JINDAL SAW LTD.

INSPECTION CERTIFICATE (CERTIFICATION AS PER EN 10204: 2004 Type 3.1)									
CLIENT / CUSTOMER		CERTIFICATE NO. : JSAN/CTA/327/TC/22/01 Rev.00							
END CLIENT		DATE : 26/05/2022							
P. O. NO.		P. O. ORDER QTY. : 300 Meter							
PROJECT		---							
SPECIFICATION		AUSTENITIC STAINLESS STEEL SEAMLESS PIPES IN ACCORDANCE WITH ASTM A312/ASME SA312 EDITION 2022// EN 10216-5 TC 1 EDITION 2013							
PRODUCT:		AUSTENITIC STAINLESS STEEL COLD FINISHED SEAMLESS PIPE							
HEAT NO.	GRADE	SIZE IN INCH / mm	FIX / RANDOM LENGTH (mm)	NOS	TOTAL LENGTH (meter)	TOTAL WEIGHT (MT)	LOT NO	END FINISH (PE / BE)	DELIVERY CONDITIONS
63981	TP 304/304L 1.4301/1.4307	NPS 2 SCH 10S (60.30 mm OD x 2.77 mm WT.)	5000 - 7000	49	282.530	1.212	1	PE	SOLUTION ANNEALED, PICKLED & PASSIVATED
CHEMICAL COMPOSITION %									
ELEMENTS	C	Mn	P	S	Si	Ni	Cr	Nb	Mo
REQUIRED	MIN.	--	--	--	--	8.0	18.0	--	--
REQUIRED	MAXIMUM	0.030	2.00	0.040	0.015	10.0	19.5	--	--
RAW MATERIAL	Leadie	63981	0.027	1.75	0.037	0.26	8.13	16.11	--
Product I	63981	0.027	1.76	0.038	0.009	0.28	8.13	18.12	--
Product II		0.025	1.72	0.035	0.012	0.26	8.11	18.10	--
DESTRUCTIVE TEST RESULT									
TENSILE TEST (SPECIMEN - RECTANGULAR LONGITUDINAL DIRECTION) (SAMPLE WIDTH 25.4 mm FOR ASTM A370 - 2021 & 200 mm FOR ISO 6892-1:2019)									
REQUIRED	YIELD STRENGTH AT 0.2 % PROOF STRENGTH (MPa) AS per ASTM A370 - 2021	YIELD STRENGTH AT 0.2 % PROOF STRENGTH (MPa) AS per ASTM A370 - 2021	ULTIMATE TENSILE STRENGTH (MPa) AS per ISO 6892-1:2019	ULTIMATE TENSILE STRENGTH (MPa) AS per ISO 6892-1:2019	% ELONGATION (GAUGE LENGTH 50mm) AS PER ISO 6892-1:2019	FLATTENING TEST AS PER ASTM A370 - 2021	HARDNESS TEST AS PER ASTM E 18:2020	IGC TEST AS PER ASTM A 262 : PRACTICE E'	FLANGE TEST/DRASTIC EXPANSION TEST AS PER EN ISO 845 : 1998 OTHER DESTRUCTIVE TEST
REQUIRED	205 (min.)	205 (min.) / 230 (min.)	515 - 680	515 - 680	40 (min.)	H = 22.21 mm MAXIMUM NO CRACK OR BREAK OBSERVED ON INSIDE & OUTSIDE SURFACE	90 HRB MAXIMUM	NO CRACK OR FISSURE, AT 20X MAGNIFICATION	OUTER DIA EXPANSION 17 % WITH 80° CONICAL TOOL, NO CRACK ACCEPTABLE
63981	326	336 / 372	632	648	46	44	TESTED SAMPLE = 03 NOS. RESULT FOUND SATISFACTORY	60- 65 (HRB)	SATISFACTORY
REVIEWED BY IN-CHARGE LABORATORY Format No.: JSW/SNG/SMS/QAYFR-17	Dinesh Parmar IN-CHARGE QA	Nilesh Soni APPROVED BY HEAD QA/QC	Date: 01.01.2022	CLIENT / CLIENT REPRESENTATIVE					





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Customer : TECNIMONT SPA AFC

Kg 168 Mt 40,73 Pz No.: 7
Heat No.: 63981 Cta's job: OC0000657 Date: 20/03/2023
P.O. No.: PO: Item: I3364302

3

7500110798 DTD: 20230301 N.PRO: 4274 - PP+PE SINES (PORTUGAL) EPC

JINDAL SAW LTD.

INSPECTION CERTIFICATE (CERTIFICATION AS PER EN 10204: 2004 Type 3.1)				Kg 168	Mt 40,73	Pz No.: 7
CLIENT / CUSTOMER	: M/s COMMERCIALE TUBI ACCIAIO S.P.A.	CERTIFICATE NO.	USAW/CTA/327/T/TC22/01 Rev 00	Heat No.: 63981	Cta's job: OC0000657	Date: 20/03/2023
END CLIENT	-	DATE	28/05/2022	P.O. No.: PO:	Item: I3364302	
P. O. NO.	: OS-0000212 DATED 29/12/2021 (P.O. LINE ITEM NO.- 7)	P.O. ORDER QTY.	: 300 Meter			
PROJECT						
SPECIFICATION	: AUSTENITIC STAINLESS STEEL SEAMLESS PIPES IN ACCORDANCE WITH ASTM A312/ASME SA312 EDITION 2021/ EN 10216-5 TC 1 EDITION 2013					
PRODUCT:	: AUSTENITIC STAINLESS STEEL COOL FINISHED SEAMLESS PIPE					
	HOLDING TIME 5 SEC.	SURFACE CONDITION	P.MI	VISUAL & DIMENSION INSPECTION	EDDY CURRENT	NON DESTRUCTIVE TEST
REQUIREMENT	EACH PIPE TESTED AT MIN 11.0 MPa, HOLDING TIME 5 SEC. CHLORIDE CONTENT OF HYDRO TEST WATER ≤ 50 ppm	EACH PIPE PICKLED & PASSIVATED, FREE FROM RUST, DIRT & FOREIGN PARTICLES	EACH PIPE	EACH PIPE	NOT APPLICABLE	NOT APPLICABLE
RESULT	NO SWEATS, LEAKAGE AND NO PRESSURE DROP OBSERVED AT 11.0 MPa, HOLDING TIME 5 SEC., CHLORIDE CONTENT OF HYDRO TEST WATER LESS THAN 50 ppm	ACCEPTABLE	ACCEPTABLE	ACCEPTABLE	NOT APPLICABLE	NOT APPLICABLE
ABBREVIATED: MIN. = MINIMUM, MAXIMUM = MAXIMUM						
REMARKS:	1. RAW MATERIAL ORIGIN : INDIA 2. STEEL MAKING PROCESS - EIF-AOD-CCM. 3. ALL PIPES ARE BUNDLED, PACKED WITH HOPE WOVEN FABRIC & SUPPLIED WITH PLASTIC END CAPS. 4. ALL PIPE HAS BEEN SOLUTION ANNEALED AT MINIMUM TEMPERATURE 1040 °C & QUENCHED IN WATER. 5. MATERIAL COMPLIED TO NACE MR 0175/ISO 1563-3 : 2015 & NACE MR0103 : 2015". 6. "ISSUED IN AGREEMENT WITH TUV SUD INDUSTRIES SERVICE GMBH (DECEMBER, 2023)" "QMS APPROVED ACC TO PED, ANNEX I, PARA. 4.3 BY NOTIFIED BODY 0036" "(CERTIFICATION NO. DGR-0036-QSW-B24/2017/MUC-001)"					
MARKING:	JINDAL LOGO JINDAL SAW LTD PE NPS 2 SCH 10S X 5000 - 7000 MM LONG ASTM A312/ASME SA312/EN 10216-5 TC 1 CFD SMLS PIPE TP 304/304L/1 430/1/4307 HEAT NO..... MADE IN INDIA NS					
STATEMENT OF COMPLIANCE:	THIS IS TO CERTIFIED THAT THE MATERIAL WAS MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH REQUIREMENTS OF THE MATERIAL SPECIFICATION AND HAS BEEN FOUND TO MEET THE REQUIREMENTS OF SPECIFICATION & PURCHASE ORDER.					
REVIEWED BY INCHARGE LAB	Dinesh Parmar REVIEWED BY INCHARGE QA	Nilesh Soni APPROVED BY HEAD QA/QC	Version 2.0	Date: 01/01/2022	CLIENT / CLIENT REPRESENTATIVE	
Format No:-JSW/SMG/SMLS/QA/TR-17						



ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Village : Samaghogha, Taluka : Mundra, Kutch - 370415, Gujarat, India

ORIGINAL
Page 2 of 2

Viraj Profiles Private Limited (Forgings Div.)

 Survey No. 140/1 & G-75, MIDC Tarapur Ind. Area, Distt.- Palghar, Maharashtra - 401506, India
 E: vflqc@viraj.com | W: www.viraj.com

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06) CUSTOMER : M/S CUNADO SA (ESQUINA CALLE MEXICO) 28806 ALCALA DE HENARES (MADRID) CALLE CAMINO DEL OLIVAR, 2 SPAIN	Manufacturer's Symbol (A04)	(A03) MTR NO.	100017332/ 13 Rev.1
		INVOICE NUMBER	
		(Z02) DATE	12.09.2023
		MATERIAL SPEC	ASTM A182/A182M-21 / ASME SA182/SA182M-21
		(B02) GRADE	F304/304L
		DIMENSIONAL SPEC	ASME B16.5-2020

(B01) STAINLESS STEEL FORGED FLANGES
(B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE(PED) 2014/68/EU,CERTIFYING BODY-TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION No. 0045)

(A07) ORDER NO: PC0159958 - PROJECT 4274 ALBA									(A08) Sales Order No.	100017332/160	ITEM NO & COMMUNITY CODE	6 / I2260686
(B09-B11) ITEM DESCRIPTION									(B08) QUANTITY(PCS)	(B07) HEAT NUMBER		
2" WNRF S10S 150#									12	DA182		

(C71-C92) CHEMICAL ANALYSIS

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N			
MIN						18.00	8.00	-				
MAX	0.030	2.00	1.00	0.030	0.045	20.00	11.00	-	0.1100			
HEAT	0.016	1.58	0.42	0.024	0.036	18.18	8.06	-	0.0780			

MECHANICAL PROPERTIES
Test Specification ASTM - A370

(C01) Sample location : Mid thickness-forging		(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Specimen Shape - Round		ASTM E10					
Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C32) Hardness (Hardness ≤ 22 HRC)		(C40) Charpy V-Notch 10x10x55mm (Values in Joules)			
		Rp=0.2%	Rp = 1%			BHN-1	BHN -2	AVG.	1	2	3
Req.	515 MIN	205 MIN		30 MIN							
T	553.72	280.69	324.18	57.80	70.40	158	157	158	174	182	162
											173

Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015

Remark: Materials is suitable for min. design temperature TS min = -50°C for 304/304L as permitted by ASME B31.3:2018 without verification

Melting Process : Induction furnace/Aragon Oxygen Decarburisation (AOD-IRS), Concast

Heat Treatment : Solution Annealed at 1080°C and water Quenched

Dimension : Conform with the specification (100% inspected)

Surface Inspection : Satisfactory Roughness Value Ra 3.2 To 6.3 μm

Inter Granular Corrosion Test : Passed IGC Test in Accordance With ASTM A262 Practice E

PMI Test : No objection (100% tested with mobile spectro)

Liquid Penetrant Test : No Objection Tested as per Astm E165

ULTRASONIC TEST : No Objection Tested as per ASTM E-388 & ASME V

Radioactivity Test : We here by certify that all the material is free from radioactive contamination

Mercury Contamination : Free from Mercury Contamination

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

Prime4 OBO Technimont


VIJAY KUMAR PILLAI (GM, QAD)





Contract : P2300

Drawing : 2121-IA91F62-3

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00468

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-3-SP06-00468

Weld data

Welding

Control

Weld No.	Type	Dia	Sch	Weld /Thk	1st Proc.	Pass	1st MTR	Final Pass	Final Pass	Final MTR	Dim	Date DIM	Visual	Date Visual	PT	Date PT	MT	Date MT	PMI	Date PMI	Ferite	Date Ferrite	PWHT	Date PWHT	BHN	Date BHN	Ultra	Date UT	Xray	Date Xray	
0028	BW	2	S10S	MW.26_BW	AD	18/03/2024	4712055	AD	18/03/2024	4712055			000274	21/03/2024				000173	27/03/2024												

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 05.09.2024 *C. Sandu*

Notes:

Boccard Portugal QC	Client
	Sergio Morales Date: 02-09-24
Signature	
Date: 12/04/2024 11:22:51	



Shop QC Inspection Report

P2308-000285

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

Job number: P2308S
 Spool N°: 00468
 Piece Mark: 2121-IA91F62-3-SP06-00468

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

Control Date: 21/03/2024

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: RODRIGUES, JOSE Date: 21/03/2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 12/04/2024 11:22:51 Signature 	Customer Inspection: Sergio Morales Date: 02-09-24 
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On behalf of Tecnimont / R
 Piping Supervisor
Cristi Sandu
 05.09.2024 

Visual Examination Report (Welds)

P2308-000274

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00468

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

Project : ALBA

Piece Mark: 2121-IA91F62-3-SP06-00468

Testing Date: 21/03/2024

Remarks: The results refer to the controlled items

Unacceptable indications for welding

ACCEPTANCE CRITERIA : ASME B31.3

Weld reinforcement greater than specified in project procedure

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

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

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

Surface finish that could interfere with other testing required

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

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

Identification

Weld No.	Weld Desc.	Welder	Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
0028	2.0000 S10S BW-Buttweld Straight (MW.26_BW)		AD	15	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: RODRIGUES, JOSE

Date: 21/03/2024

Signature



QA/QC Inspection: GIL, MIGUEL

Date: 12/04/2024 11:22:51

Signature



Customer Inspection:

Sergio Morales

Date: 02-09-24



On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 05.09.2024 C. Sandu



Positive Material Identification Report (PMI)

P2308-000173

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00468

Piece Mark: 2121-IA91F62-3-SP06-00468

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: 27/03/2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0028	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	40	0	0	0	8	69	1	19	0	0	0	X		
1,1	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (63981)	38	0	0	0	7	71	1	18	0	0	0	X		
2.1	2.0000 S10S WN FLG, RAISED FACE, 150#, A182-F304L (DA182)	39	0	0	0	8	70	1	17	0	0	0	X		

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 05.09.2024 C. Sandu

Test Performed by: FIGUEIRAS(QA), RUI (N2 PT/RT) QA/QC Inspection:

Date: 27/03/2024

Signature



Date:

Signature



Customer Inspection:

Sergio Morales

Date:

Signature Date: 02-09-24





BOCCARD PORTUGAL LDA

Certificate of Verification

XL3t-32735

Reading No	40
Mode	ALLOY
Time	2024-03-27 09:20
Duration	3.94
Sequence	Final
Alloy1	304SS : 0.20
Alloy2	No Match : 1.76
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.082
Sn	< LOD	:	0.078
Pd	< LOD	:	0.064
Ag	< LOD	:	0.174
Al	< LOD	:	80.000
Mo	0.146	±	0.023
Nb	< LOD	:	0.014
Zr	< LOD	:	0.006
Bi	< LOD	:	0.027
Pb	< LOD	:	0.032
Se	< LOD	:	0.010
W	< LOD	:	0.134
Zn	< LOD	:	0.064
Cu	< LOD	:	0.277
Ni	8.626	±	0.526
Co	< LOD	:	0.870
Fe	69.755	±	0.799
Mn	1.711	±	0.367
Cr	19.173	±	0.469
V	< LOD	:	0.218
Ti	< LOD	:	0.271

Supervised By:

Sergio Morales



Date: 02-09-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 *C. Sandu*



BOCCARD PORTUGAL LDA

Certificate of Verification

XL3t-32735

Reading No	38
Mode	ALLOY
Time	2024-03-27 09:20
Duration	2.12
Sequence	Final
Alloy1	304SS : 1.05
Alloy2	No Match : 1.94
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.114
Sn	< LOD	:	0.133
Pd	< LOD	:	0.107
Ag	< LOD	:	0.185
Al	< LOD	:	80.000
Mo	0.352	±	0.054
Nb	< LOD	:	0.026
Zr	< LOD	:	0.016
Bi	< LOD	:	0.051
Pb	< LOD	:	0.072
Se	< LOD	:	0.029
W	< LOD	:	0.288
Zn	< LOD	:	0.030
Cu	< LOD	:	0.462
Ni	7.985	±	0.792
Co	< LOD	:	1.308
Fe	71.196	±	1.226
Mn	1.810	±	0.570
Cr	18.120	±	0.708
V	< LOD	:	0.348
Ti	< LOD	:	0.414

Supervised By:

Sergio Morales



Date: 02-09-24

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 *C. Sandu*



BOCCARD PORTUGAL LDA

Certificate of Verification

XL3t-32735

Reading No	39
Mode	ALLOY
Time	2024-03-27 09:20
Duration	2.36
Sequence	Final
Alloy1	321SS : 1.41
Alloy2	304SS : 1.62
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.136
Sn	< LOD	:	0.150
Pd	< LOD	:	0.117
Ag	< LOD	:	0.216
Al	< LOD	:	80.000
Mo	0.313	±	0.055
Nb	< LOD	:	0.026
Zr	< LOD	:	0.008
Bi	< LOD	:	0.041
Pb	< LOD	:	0.053
Se	< LOD	:	0.010
W	< LOD	:	0.308
Zn	< LOD	:	0.131
Cu	< LOD	:	0.597
Ni	8.386	±	0.871
Co	< LOD	:	1.460
Fe	70.320	±	1.332
Mn	1.820	±	0.610
Cr	17.760	±	0.757
V	< LOD	:	0.414
Ti	< LOD	:	0.486

Supervised By:

Sergio Morales

Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 C. Sandu

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

Job number: P2308S
 Spool N°: 00468
 Piece Mark: 2121-IA91F62-3-SP06-00468

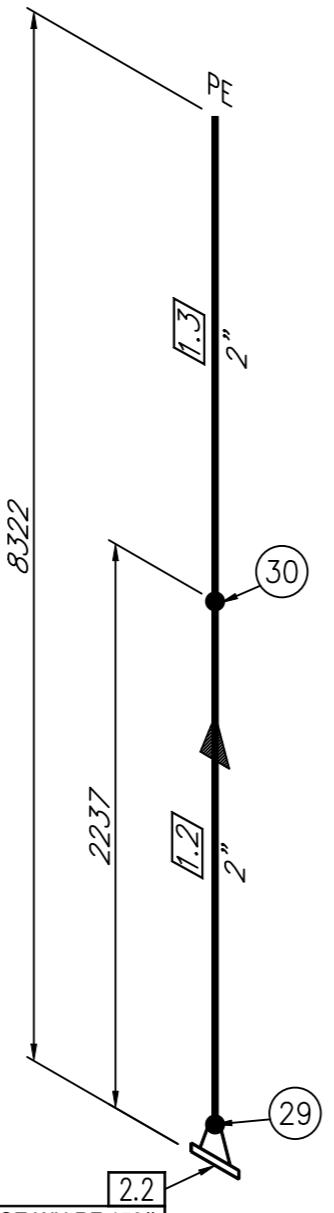
Procedure/Instruction: 23A008/010 Rev.0

Pick Tape		Clean Spray		Clean Wipes	
Brand:	Nitty Gritty Pick&Clean	Brand:	Nitty Gritty Pick&Clean	Brand:	Nitty Gritty Pick&Clean
Batch:	N/A	Batch:	N/A	Batch:	N/A
Opening Date:	07/01/2024	Opening Date:	07/01/2024	Opening Date:	07/01/2024
Expiration Date:	07/05/2024	Expiration Date:	07/05/2024	Expiration Date:	07/05/2024

Weld No.	Pickling and Cleaning				Accepted	Rejected
	Pick tape duration (at least 10/15 min)	Cleaning (with spray) and drying (with blotting paper)	OR	Cleaning (clean wipes)		
0028	15 min	OK			<input checked="" type="checkbox"/> X	<input type="checkbox"/>

Performed by: LOPES, EDUARDO Date: 25/03/2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 12/04/2024 11:21:29 Signature 	Customer Inspection: Sergio Morales Date: 02-09-24 
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On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 05.09.2024 

	 <p>Sergio Morales Date: 02-09-24</p> <p></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Rev.</th> <th>Date</th> <th>DRW</th> <th>Check 1</th> <th>Check 2</th> <th>Marking Color:</th> <th>GREEN</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Weld Class:</td> <td>6C4-M</td> </tr> <tr> <td>00</td> <td>01/03/2024</td> <td>AOM</td> <td>MCM</td> <td>PCO</td> <td>Paint System:</td> <td>NA</td> </tr> </table> <p>On behalf of Tecnimont / R Piping Supervisor Cristi Sandu <i>C. Sandu</i> 02.09.2024</p>	Rev.	Date	DRW	Check 1	Check 2	Marking Color:	GREEN						Weld Class:	6C4-M	00	01/03/2024	AOM	MCM	PCO	Paint System:	NA	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6" style="text-align: center;">BILL OF MATERIAL</th> </tr> <tr> <th colspan="6" style="text-align: center;">PIPE</th> </tr> <tr> <th>ITEM</th> <th>LONGUEUR</th> <th>DIAMÉTRE</th> <th>SCH/mm</th> <th>DESCRIPTION / MATERIEL</th> <th>ITEM CODE</th> </tr> </thead> <tbody> <tr> <td>1.2</td> <td>2,170</td> <td>2"</td> <td>S-10s</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExBE</td> <td>I3364302</td> </tr> <tr> <td>1.3</td> <td>6,085</td> <td>2"</td> <td>S-10s</td> <td>PIPE - A312-TP304/304L DUAL GR SMLS, BExPE</td> <td>I3364302</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6" style="text-align: center;">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>2.2</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> <div style="text-align: right; margin-top: 10px;"> P2308S 00469  2121-IA91F62-3-SP07-00469 </div> <div style="text-align: right; margin-top: 10px;">  </div> <div style="text-align: right; margin-top: 10px;"> F324-302-0 </div>	BILL OF MATERIAL						PIPE						ITEM	LONGUEUR	DIAMÉTRE	SCH/mm	DESCRIPTION / MATERIEL	ITEM CODE	1.2	2,170	2"	S-10s	PIPE - A312-TP304/304L DUAL GR SMLS, BExBE	I3364302	1.3	6,085	2"	S-10s	PIPE - A312-TP304/304L DUAL GR SMLS, BExPE	I3364302	FLANGES						ITEM	QT	DIAMÉTRE	PRESSION	SCH/mm	DESCRIPTION / MATERIEL	2.2	1	2"	150#	S-10s	WN FLANGE ASME B16.5 150# A182-F304/304L DUAL GR RF BE 125-250 AARH
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Metal Tag:	YES	% MT -	NO	% PMI -	YES	BHN% -	NO	Tolerances:	ASME B31.3																																																														

Spool Material List

Contract : P2308

Client NERVION

Job : P2308S

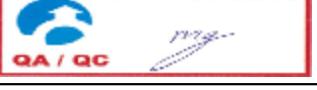
Project ALBA

Job	Spool	Piece Mark	Drawing	Rev					
Item No	Qty	Size1	Sch1	Size2	Sch2	Description	Heat No	Unit	Weight
Tag No							MTR No	Weight	Kgs
ID No							Folder No		
P2308S	00469	2121-IA91F62-3-SP07-00469	2121-IA91F62-3	00					
1.2	2,17	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	8,53
40391									
1.3	6,085	2.0000	S10S	0.0000	NA	PIPE, SEAMLESS, A312-TP304L	S-23594 0357	3,93	23,91
40391									
2.2	1	2.0000	S10S	0.0000	NA	WN FLG, RAISED FACE, 150#, A182-F304L	DA182 0117	2,72	2,72
37867									

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
02.09.2024 C. Sandu

Number of Items : 3

Total Weight : 35,16

Signature	QA	Client
		Sergio Morales Date: 02-09-24
Date	2024-08-23 15:41:09	

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

12

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

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

(AN ISO 45001 : 2018 COMPANY)

(AN PED 2014/68/EU APPROVED COMPANY)

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

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

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

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

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

Chemical Analysis %

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

Mechanical Test

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

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

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

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

Prepared by

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

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

Page no. 01 of 12

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

APPLUS OBO TCM
28 03 24

Viraj Profiles Private Limited (Forgings Div.)

 Survey No. 140/1 & G-75, MIDC Tarapur Ind. Area, Distt.- Palghar, Maharashtra - 401506, India
 E: vflqc@viraj.com | W: www.viraj.com

(A02) INSPECTION CERTIFICATE & MILL TEST REPORT - EN 10204 3.1

(A06) CUSTOMER : M/S CUNADO SA (ESQUINA CALLE MEXICO) 28806 ALCALA DE HENARES (MADRID) CALLE CAMINO DEL OLIVAR, 2 SPAIN	Manufacturer's Symbol (A04)	(A03) MTR NO.	100017332/ 13 Rev.1
		INVOICE NUMBER	
		(Z02) DATE	12.09.2023
		MATERIAL SPEC	ASTM A182/A182M-21 / ASME SA182/SA182M-21
		(B02) GRADE	F304/304L
		DIMENSIONAL SPEC	ASME B16.5-2020

(B01) STAINLESS STEEL FORGED FLANGES
(B04) DELIVERY CONDITION : HOT FORGED AND FULLY MACHINED

ISO 9001:2015-TUV NORD REG.No-04100031210/05 EXPIRY DATE: 22.07.2024 & APPROVED ACCORDING TO AD 2000 MERKBLATT W0 & CERTIFIED ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE(PED) 2014/68/EU,CERTIFYING BODY-TUV NORD SYSTEMS (NOTIFIED BODY REGISTRATION No. 0045)

(A07) ORDER NO: PC0159958 - PROJECT 4274 ALBA		(A08) Sales Order No.	100017332/160	ITEM NO & COMMUNITY CODE	6 / I2260686
(B09-B11) ITEM DESCRIPTION			(B08) QUANTITY(PCS)	(B07) HEAT NUMBER	
2" WNRF S10S 150#			12	DA182	
(C71-C92) CHEMICAL ANALYSIS					

ELEMENT	%C	%Mn	%Si	%S	%P	%Cr	%Ni	%Mo	%N					
MIN						18.00	8.00	-						
MAX	0.030	2.00	1.00	0.030	0.045	20.00	11.00	-	0.1100					
HEAT	0.016	1.58	0.42	0.024	0.036	18.18	8.06	-	0.0780					

MECHANICAL PROPERTIES

Test Specification ASTM - A370												
(C01) Sample location : Mid thickness-forging		(C03) Test Temp : RT	(C02) Test Direction : Tr	(C10) Specimen Shape - Round	ASTM E10							
Test Values	(C12) Tensile Strength	(C11) Yield Strength		(C13) Elongation%	Reduction of Area	(C32) Hardness (Hardness ≤ 22 HRC)		(C40) Charpy V-Notch 10x10x55mm (Values in Joules)				
		Rp=0.2%	Rp = 1%					(C42) Single values (C43)				
Req.	Mpa	Mpa	Mpa	Lo=4D	%	BHN-1	BHN -2	AVG.	1	2	3	AVG
T	515 MIN	205 MIN	324.18	57.80	70.40	158	157	158	174	182	162	173

Other applicable Specifications :: NACE MR 0175 / ISO 15156-2015 & NACE MR 0103-2015

Remark: Materials is suitable for min. design temperature TS min = -50°C for 304/304L as permitted by ASME B31.3:2018 without verification

Melting Process : Induction furnace/Aragon Oxygen Decarburisation (AOD-IRS), Concast

Heat Treatment : Solution Annealed at 1080°C and water Quenched

Dimension : Conform with the specification (100% inspected)

Surface Inspection : Satisfactory Roughness Value Ra 3.2 To 6.3 μm

Inter Granular Corrosion Test : Passed IGC Test in Accordance With ASTM A262 Practice E

PMI Test : No objection (100% tested with mobile spectro)

Liquid Penetrant Test : No Objection Tested as per Astm E165

ULTRASONIC TEST : No Objection Tested as per ASTM E-388 & ASME V

Radioactivity Test : We here by certify that all the material is free from radioactive contamination

Mercury Contamination : Free from Mercury Contamination

We certify that the above material has been inspected and tested and complies with the order/contract and is of Indian origin

Prime4 OBO Technimont


VIJAY KUMAR PILLAI (GM, QAD)





Contract : P2300

Drawing : 2121-IA91F62-3

Welding and QC Report Per Spool

Job : P2300S

Material : Stainless Steel 304, 316, 317

Client : NERVION

Revision : 00

Spool : 00469

Spec : 6C4-M

Project : ALBA

Piece Mark : 2121-IA91F62-3-SP07-00469

Weld data

Welding

Control

Weld No.	Type	Dia	Sch	Weld /Thk	1st Proc.	Pass	1st MTR	Final Pass	Final MTR	Dim	Date DIM	Visual	Date Visual	PT	Date PT	MT	Date MT	PMI	Date PMI	Ferite	Date Ferrite	PWHT	Date PWHT	BHN	Date BHN	Ultra	Date UT	Xray	Date Xray
0029	BW	2	S10S	MW.26_BW	AY	26/06/2024	4712055	AY	26/06/2024	4712055			000782	09/08/2024				000778	22/08/2024										
0030	BW	2	S10S	MW.26_BW	AY	26/06/2024	4712055	AY	26/06/2024	4712055			000782	09/08/2024				000778	22/08/2024										

On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024

Notes:

Signature	Boccard Portugal QC	Client
	Sergio Morales	Date: 02-09-24
Date	23/08/2024 15:41:09	



Shop QC Inspection Report

P2308-000806

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

Job number: P2308S
 Spool N°: 00469
 Piece Mark: 2121-IA91F62-3-SP07-00469

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

Control Date: 09/08/2024

Remarks: The results refer to the controlled items

Actions / Tasks List	Required		Done/ Identified
	Yes	No	
Welder / weld list labels printed and pasted on the spool sheet	X	<input type="checkbox"/>	X
Spool Barcode label printed	X	<input type="checkbox"/>	X
Spool is identified with the metal tag	X	<input type="checkbox"/>	X
Spool stencil required (hard stamp low stress)	<input type="checkbox"/>	X	<input type="checkbox"/>
Joint preparation & cleanliness / spool dimensions checked	X	<input type="checkbox"/>	X
Level, plumb, Two holes, flanges and internal alignment, Squareness	X	<input type="checkbox"/>	X
Material checked (type of material, rate, heat numbers, filler material, etc.)	X	<input type="checkbox"/>	X
Welders list match with actual welder stencil / Id. on pipe	X	<input type="checkbox"/>	X
PWHT- Spool identified as per Procedure / Instruction for PWHT	<input type="checkbox"/>	X	<input type="checkbox"/>
HT (Hardness Test)- Welds identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
MT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
PT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
PMI - Welds identified as per Procedure / Instruction	X	<input type="checkbox"/>	X
FE (Ferrite test) - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
RT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
UT - Welds identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
Spool identified (by marker) as per Procedure / Instruction (Job number, sheet number and Paint type if required)	X	<input type="checkbox"/>	X
Hydro - Spool identified as per Procedure / Instruction	<input type="checkbox"/>	X	<input type="checkbox"/>
Cleanliness - Cleaned inside free of slag, scale, sand, weld spatter, cutting chips, etc. and blow out by compressed air	X	<input type="checkbox"/>	X

Comments:

Performed by: MATOS, MARCO (N2 VT/PT) Date: 09/08/2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 23/08/2024 15:41:09 Signature 	Customer Inspection: Sergio Morales Date: 02-09-24 
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On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu
 05.09.2024 

Visual Examination Report (Welds)

P2308-000782

Contract : P2308

Job number: P2308S

Material: Stainless Steel 304, 316, 317

Client : NERVION

Spool Nº: 00469

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

Project : ALBA

Piece Mark: 2121-IA91F62-3-SP07-00469

Testing Date: 09/08/2024

Remarks: The results refer to the controlled items

Unacceptable indications for welding

ACCEPTANCE CRITERIA : ASME B31.3	Weld reinforcement greater than specified in project procedure
The illumination of the surface must be at least 500 lux. However, a value of 1000lux is recommended	Any linear indications greater than specified in project procedure, surface porosity with rounded indications having a dimension greater than specified project procedure
Indications of lack of fusion open to the surface / Cracks located on external surfaces	Surface finish that could interfere with other testing required
Incomplete penetration of welds / Indications of undercut on surfaces which are greater than specified in project procedure	Misalignment greater than specified in applicable code or poor fit up of weld joints

Weld No.	Weld Desc.	Identification		Temp. (°F/°C)	Accepted	Rejected	Defect	Technique Used	Comments
		Welder							
0029	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AY	29	X				Direct	
0030	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	AY	29	X				Direct	

Sketch / Photo:

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

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

QA/QC Inspection: GIL, MIGUEL

Customer Inspection:

Date: 09/08/2024

Date: 23/08/2024 15:41:09

Sergio Morales

Signature



Signature



Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 *C. Sandu*



Positive Material Identification Report (PMI)

P2308-000778

Client : NERVION

Contract : P2308 / Project : ALBA

Remarks: The results refer to the controlled items

Job number: P2308S

Spool N°: 00469

Piece Mark: 2121-IA91F62-3-SP07-00469

Material: Stainless Steel 304, 316, 317

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

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

Equipment Deviation : + - 5%

Testing Date: 22/08/2024

Weld / Item No	Description	Reading Number	Chemical Elements										Accepted	Rejected	Comments
			%Ti	%Mo	%Cu	%Ni	%Fe	%Mn	%Cr	%Nb	%Al	%V			
0029	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	220	0	0	0	8	70	1	19	0	0	0	X		
0030	2.0000 S10S BW-Buttweld Straight (MW.26_BW)	219	0	0	0	8	70	1	19	0	0	0	X		
1.2	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	218	0	0	0	8	71	1	18	0	0	0	X		
1.3	2.0000 S10S PIPE, SEAMLESS, A312-TP304L (S-23594)	217	0	0	0	8	71	1	18	0	0	0	X		
2.2	2.0000 S10S WN FLG, RAISED FACE, 150#, A182-F304L (DA182)	216	0	0	0	7	70	1	18	0	0	0	X		

On behalf of Tecnimont / R
 Piping Supervisor
 Cristi Sandu *C. Sandu*
 05.09.2024

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

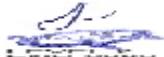
Customer Inspection:

Date: 22/08/2024

Date: 23/08/2024 15:41:09

Date: Sergio Morales

Signature



Signature



Signature

Date: 02-09-24



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

Certificate of PMI Reading

XL3t-32735

Reading No	220
Mode	ALLOY
Time	2024-08-22 16:05
Duration	7.57
Sequence	Final
Alloy1	304SS : 0.65
Alloy2	No Match : *2.22
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.055
Sn	< LOD	:	0.062
Pd	< LOD	:	0.046
Ag	< LOD	:	0.194
Al	< LOD	:	80.000
Mo	0.115	±	0.014
Nb	< LOD	:	0.011
Zr	< LOD	:	0.005
Bi	< LOD	:	0.008
Pb	< LOD	:	0.026
Se	< LOD	:	0.009
W	< LOD	:	0.112
Zn	< LOD	:	0.052
Cu	0.208	±	0.101
Ni	8.306	±	0.358
Co	< LOD	:	0.597
Fe	70.117	±	0.549
Mn	1.564	±	0.250
Cr	19.235	±	0.324
V	< LOD	:	0.160
Ti	< LOD	:	0.136

Sergio Morales

Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	219
Mode	ALLOY
Time	2024-08-22 16:05
Duration	8.98
Sequence	Final
Alloy1	304SS : 0.00
Alloy2	No Match : *2.09
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.040
Sn	< LOD	:	0.051
Pd	< LOD	:	0.041
Ag	< LOD	:	0.128
Al	< LOD	:	80.000
Mo	0.041	±	0.008
Nb	< LOD	:	0.009
Zr	< LOD	:	0.003
Bi	< LOD	:	0.015
Pb	< LOD	:	0.014
Se	< LOD	:	0.008
W	< LOD	:	0.090
Zn	< LOD	:	0.029
Cu	< LOD	:	0.163
Ni	8.315	±	0.314
Co	< LOD	:	0.526
Fe	70.568	±	0.482
Mn	1.518	±	0.217
Cr	19.016	±	0.282
V	< LOD	:	0.131
Ti	< LOD	:	0.154

Sergio Morales
Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	218
Mode	ALLOY
Time	2024-08-22 16:05
Duration	10.43
Sequence	Final
Alloy1	304SS : 1.64
Alloy2	No Match : *2.72
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.044
Sn	< LOD	:	0.051
Pd	< LOD	:	0.035
Ag	< LOD	:	0.198
Al	< LOD	:	80.000
Mo	0.048	±	0.008
Nb	< LOD	:	0.007
Zr	< LOD	:	0.003
Bi	< LOD	:	0.014
Pb	< LOD	:	0.020
Se	< LOD	:	0.008
W	< LOD	:	0.078
Zn	< LOD	:	0.037
Cu	0.242	±	0.084
Ni	8.109	±	0.293
Co	0.645	±	0.251
Fe	71.133	±	0.451
Mn	1.353	±	0.199
Cr	18.140	±	0.259
V	< LOD	:	0.129
Ti	< LOD	:	0.131

Sergio Morales

Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	217
Mode	ALLOY
Time	2024-08-22 16:04
Duration	8.93
Sequence	Final
Alloy1	304SS : 0.73
Alloy2	No Match : 2.21
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.042
Sn	< LOD	:	0.054
Pd	< LOD	:	0.042
Ag	< LOD	:	0.174
Al	< LOD	:	80.000
Mo	0.040	±	0.008
Nb	< LOD	:	0.006
Zr	< LOD	:	0.003
Bi	< LOD	:	0.006
Pb	< LOD	:	0.018
Se	< LOD	:	0.006
W	< LOD	:	0.075
Zn	< LOD	:	0.046
Cu	0.277	±	0.091
Ni	8.028	±	0.310
Co	< LOD	:	0.529
Fe	71.320	±	0.477
Mn	1.518	±	0.214
Cr	18.053	±	0.274
V	< LOD	:	0.133
Ti	< LOD	:	0.135

Sergio Morales
Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 C. Sandu

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

Certificate of PMI Reading

XL3t-32735

Reading No	216
Mode	ALLOY
Time	2024-08-22 16:04
Duration	8.96
Sequence	Final
Alloy1	304SS : 1.49
Alloy2	No Match : 2.30
Flags	
SAMPLE	
HEAT	
LOT	
BATCH	
MISC	
NOTE	

	%	±	Error
Sb	< LOD	:	0.044
Sn	< LOD	:	0.057
Pd	< LOD	:	0.042
Ag	< LOD	:	0.188
Al	< LOD	:	80.000
Mo	0.461	±	0.024
Nb	< LOD	:	0.010
Zr	< LOD	:	0.004
Bi	< LOD	:	0.013
Pb	< LOD	:	0.017
Se	< LOD	:	0.009
W	< LOD	:	0.102
Zn	< LOD	:	0.037
Cu	0.689	±	0.112
Ni	7.931	±	0.312
Co	< LOD	:	0.525
Fe	70.553	±	0.482
Mn	1.665	±	0.221
Cr	18.270	±	0.280
V	< LOD	:	0.145
Ti	< LOD	:	0.162

Sergio Morales
Date: 02-09-24



On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 C. Sandu

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

Job number: P2308S
Spool N°: 00469
Piece Mark: 2121-IA91F62-3-SP07-00469

Procedure/Instruction: 23A008/010 Rev.0

Pick Tape	Clean Spray	Clean Wipes
Brand: Nitty Gritty Pick&Clean	Brand: Nitty Gritty Pick&Clean	Brand: Nitty Gritty Pick&Clean
Batch: N/A	Batch: N/A	Batch: N/A
Opening Date: 24/06/2024	Opening Date: 24/06/2024	Opening Date: 24/06/2024
Expiration Date: 24/10/2024	Expiration Date: 24/10/2024	Expiration Date: 24/10/2024

Weld No.	Pickling and Cleaning			Accepted	Rejected
	Pick tape duration (at least 10/15 min)	Cleaning (with spray) and drying (with blotting paper)	OR	Cleaning (clean wipes)	
0029	15 min	OK		<input checked="" type="checkbox"/> X	<input type="checkbox"/>
0030	15 min	OK		<input checked="" type="checkbox"/> X	<input type="checkbox"/>

Performed by: FERREIRA, FILIPE Date: 12/07/2024 Signature 	QA/QC Inspection: GIL, MIGUEL Date: 12/08/2024 16:44:57 Signature 	Customer Inspection: Sergio Morales Date: 02-09-24 
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On behalf of Tecnimont / R
Piping Supervisor
Cristi Sandu
05.09.2024 