Heat: S0006184 **Order:** 30505121 2" XH 0.500" PIPE SMLS A53/API5L/A106 GR B/X-42 PEB SRL
Your PO: PO240552-15 **Line:** 1

Document Ref.Code: F02-JP-QA-20 Revision No: 4 Effective Date: 29-Apr-2018	MTC No: JC-21-0450 MTC Date: 26-Dec-2021 Page: 1/1	**MILL TEST CERTIFICATE** MTC Type: EN 10204 - 3.1	شركة الجبيل لخدمات الطاقة (جسكو) **JUBAIL ENERGY SERVICES CO. (JESCO)** Tareeq 263, South of Tareeq 150, P.O. Box 10997 Jubail Industrial City, Eastern Province, 31961 Saudi Arabia

P.O. Number	Line Item Number	Internal Order	Technical File	Packing list
288415	05	C0001221-05	C-1221.05_01	2112262210

Product:	Grade:	End Type:	Dimensions:	Length [mm]	Quantity: PCS	Total length [FT]	Total weight [MT]
SEAMLESS LINE PIPE	BR/X42R/B/B	PLAIN END BEVELED	12" XS (12.750" x 0.500" 323.8 x 12.70 mm)	Min: 11580 Max: 12800	126	5206.08	159.399

Product Description: SEAMLESS LINE PIPE, API 5L PSL2_ASTM/ASME A/SA 53_ASTM/ASME A/SA 106_NACE MR 0175/ISO 15156_NACE MR0103, GRADE BR/X42R/B/B, AS ROLLED, SUITABLE FOR INTERNAL AND EXTERNAL COATING, PLAIN END BEVELED, SURFACE PROTECTED WITH STANDARD MILL VARNISH, END PROTECTOR, PACKED LOOSE IN LAYERS WITH WOOD SEPARATORS

Standard: API 5L = Ed 46, Apr.2018; ASTM A 53 = 2020; ASTM A 106 = 2019a; ASME SA 53 / SA 106 = ASME BPVC-IIA-2019; NACE MR0175/ISO 15156 = 2015; NACE MR0103 = 2015

STEEL IS FULLY KILLED WAS PRODUCED BY ELECTRIC ARC FURNACES TO A FINE GRAIN PRACTICE

Name and location of steelmaking facility: JINDAL SHADEED IRON & STEEL LLC, Sultanate of Oman

TEST: CHEMICAL COMPOSITION acc. to ASTM A751 method

Heat	Sample		Pcs.	C [%] max	Si [%] min-max	Mn* [%] min-max	P [%] max	S [%] max	Cr [%] max	Ni [%] max	Mo [%] max	Al [%]	Cu [%] max	Ti [%] max	Nb [%] max	V [%] max	B [%] max	CE_{IIW} [%] max	CE_{PCM} [%] max	Nb+V [%] max	Cu+Ni+Cr+Mo+V [%] max	
				0.24	0.10-0.40	0.29-1.06	0.025	0.010	0.30	0.30	0.15		0.40	0.04	0.05	0.06	0.0010	0.43	0.25	0.06	1.00	STD
S0006184			126	0.17	0.26	1.05	0.012	0.002	0.014	0.006	0.001	0.026	0.007	0.002	0.001	0.005	0.0003	0.35		0.006	0.033	HEAT
	2000107064			0.16	0.28	1.03	0.013	0.002	0.013	0.003	0.001	0.024	0.007	0.002	0.002	0.001	0.0002	0.34		0.003	0.025	PRODUCT
	2000107065			0.16	0.26	1.04	0.013	0.002	0.011	0.003	0.001	0.027	0.006	0.001	0.002	0.001	0.0002	0.34		0.003	0.022	PRODUCT

TENSILE TEST acc. to ASTM A 370 method

Temp.	T/L	Type	Specimen Dim. [mm] Width	Specimen Dim. [mm] Thick	Sec.[mm²]	Rt0.5 [PSI]	Rm [PSI]	Elongation [%] (Cal: 50.8 mm)
						min: 42 100 max: 71 800	min: 60 200 max: 95 000	min: 30
RT	L	Rec	37.70	12.76	481.05	47 715	71 100	50.05
RT	L	Rec	38.20	13.05	498.51	47 482	69 377	49.92

RT= Room Temperature; L= Longitudinal ; T= Transverse ; Rt=Yield Strength ; Rm=Tensile Strength ; Rec=Reclangular

TEST: IMPACT TEST acc. to ASTM A 370 method

Heat	Sample			T/L	Size [mm]	Temp. °F	IMPACT TEST [ft-lb]			Single Min. 15.0 1	2	3	Avg. Min. 20.0 Avg.
S0006184	2000107064			T	10 x 10	32				106.7	117.6	106.7	110.3
	2000107064-S												
	2000107065-S												

HARDNESS TEST acc. to ASTM E92 method

Type	Location	1	2	3	4	Average
HV10						
HV10						
HV10	Surface	145	139	143	144	143
HV10	Surface	134	136	136	139	136

Max 248

REMARKS

FOLLOWING CONTROLS/TESTS HAVE BEEN SATISFACTORILY PERFORMED:
- Hot Rolled seamless line pipes -As Rolled
- Hydrostatic Test at pressure 193 Bar (2810 PSI) for minimmum 5 sec;
- Visual Inspection and Dimensional Control;
- Flux Leakage Examination acc. to ASTM E570 for detection of External Longitudinal/Transversal imperfections with rectangular notch of 5% WT, 50 mm L , 1 mm W
- Ultrasonic Examination acc. to ASTM E213 for detection of External Longitudinal/Transversal imperfections with rectangular notch of 5% WT, 50 mm L , 1 mm W
- Ultrasonic Examination acc. to ASTM E213 for detection of Internal Longitudinal/Transversal imperfections with rectangular notch of 10% WT, 50 mm L , 1 mm W
- Flattening test - acc. to ASTM A530 - PASSED
- Wet Fluorescent Magnetical Particle Inspection on both End Area, acc. to ASTM E709

REMARKS
- The material was not subjected to any weld repair.
- The material is free of mercury contamination and/or addition.
- The material is free of radioactive contamination (<100 becquerels/gram).

*For each reduction of 0.01% below the specified maximum for carbon, an increase of 0.05% above the specified maximum for manganese is permissible, up to a maximum of 1.65%

PRODUCT MARKING:
By stencil: JESCO_API Spec 5L-0724_ API MONOGRAM_MO-YR_ASTM/ASME A/SA 53_ASTM/ASME A/SA 106_NACE MR 0175_ISO 15156_NACE MR0103_12.750" 0.500" BR/X42R/B/B PSL2 SMLS TEST PRESSURE:2810 PSI/NDE PIPE NO######### LENGTH ##.## (ft) WEIGHT ####.# (lb) HEAT NO ######## PO: 288415 TF C-1221.05 MADE IN SAUDI ARABIA

CONFIRMATION -We hereby certify that the product been described has been manufactured and tested in accordance with above standards and specifications and satisfies the requirements.

QUALITY ANALYSIS & CERTIFICATION

Prepared by: ..... Marin Talpos .....

Signature: .....

APPROVAL STAMP:

شركة الجبيل لخدمات الطاقة Approved جسكو JESCO Quality Assurance (QA) Jubail Energy Services Co.

QUALITY ASSURANCE MANAGER

Approved by: ..... Gamal Mohammed Elkholy .....

Signature: .....