MAHARASHTRA SEAMLESS LIMITED
WORKS (MILL) TEST CERTIFICATE
EN 10204 : 3.1B

QCF 20A

Test Certificate No.: MSL-6/QC/0001X/2022
Date: 16 August 2022

Customer :
P.O.No : 42456 Dtd. 04-03-2022
OC/Loading slip no. : 66210080 (Item No. 17)
Specification : ASTM A106 GR.B / API 5L GR.B / X42 PSL-1
Process/Type of Pipe : Hot Finished seamless carbon steel pipes

OD X WT : 88.90 mm X 5.49 mm (3.500" X 0.216")
Length Range : 20 - 20 Feet
Total Length : 10900 Feet (545 Pcs)
Material Code : .....

A) CHEMICAL COMPOSITION (%) - Reference standard ASTM A-751 & ASTM E-415

Sl No	Heat No	Test Unit	Analysis	C	Mn	Si	P	S	Cr	Mo	Ni	Cu	V	Nb	Ti	Nb+V	Nb+V+Ti	B	Ca	Al	N	Mn/C	Cu+Ni	CE Pcm	CE IIW	B) Special / supplementary Reqts.
Req.	Min.	%			0.290	0.100												0.001								
	Max.	%		0.260	1.060	0.500	0.030	0.010	0.400	0.150	0.400	0.400	0.080	0.110	0.110			0.003		0.032		6.059	0.011		0.349	
1	AB204		H	0.170	1.030	0.240	0.017	0.004	0.024	0.002	0.006	0.005	0.0020	0.0010	0.0023	0.0030	0.0053	0.0003		0.033		6.059	0.011		0.358	
			P1	0.170	1.030	0.230	0.017	0.003	0.025	0.001	0.005	0.006	0.0019	0.0012	0.0024	0.0031	0.0055	0.0004		0.031		5.667	0.011		0.341	
			P2	0.180	1.020	0.250	0.018	0.005	0.024	0.003	0.007	0.004	0.0021	0.0011	0.0025	0.0032	0.0057	0.0003								

C) MECHANICAL PROPERTIES

Reference standard ASTM 370 & E-8 — Tensile Testing (Loc: Pipe Body)

Sl No.	Heat No.	Test Unit	Quantity Pcs	Quantity Feet	Name of the Steel Maker and Address/Supplier Heat No.	Orientn.	YST (Mpa)	UTS (Mpa)	YST/UTS Ratio	El (%)
						G.L.=50 mm Nom. Width= 19.05 mm				
Req.	Min.						290	415		30
	Max.									
1	AB204		545	10900	JSPL, Chhattisgarh/ 3118615	L	354.62	469.66	0.76	35.20
							359.66	475.62	0.76	34.70

Reference standard ASTM E-23 — CVN Impact Test (Pipe Body)

Size & Orientation:	Absorbed Energy (J)				% Shear Area			
Temperature°C :	1	2	3	Avg	1	2	3	Avg.
1								

Reference standard ASTM E-18 — Through Wall Hardness (Pipe Body) — Hardness (HRB) — Transverse Direction

Sl No	OD 1	OD 2	OD 3	OD 4	OD Avg.	Mid 1	Mid 2	Mid 3	Mid 4	Mid Avg.	ID 1	ID 2	ID 3	ID 4	ID Avg.
1	75	76	74	75	75										

Raw Material	Fully Killed & Fine Grain Practice	Dimension	Good	NDE Method	Ultrasonic Testing - Good	End Area Inspection	OK
Steel Route	EAF-LRF-VD-CCM	Weight	Good	Location & Orientation	Longitudinal & Transverse Notch at OD & ID	Hydro Test Pressure	2970 Psi
Hot Rolling Temp. °C	880-940	End Finish	Bevel	Type & Size of Ref.Indicator	10% Notch X 50mm Length X 1.0mm Width	Holding Time	5 Sec.
Heat Treatment	NA	Straightness	OK	Residual Magnetism	10 Gauss Max	End Protection	Plastic end cap
Delivery Condition	R	Visual	OK	Field Weldability	NA	External Coating	Black Varnished
Norm./Temp. Temp(°C)	NA	Bend Test	NA	Flattening Test	OK	Flaring Test	NA
HIC	NA	SSC	NA	Micro Structure/Grain Size	Reveals fine Ferrite and pearlite /ASTM No. 7-8	CTOD	NA
Inclusion Rating	NA	Hot Straight. Temp.°C	NA	Colour Coding	NA		

D) Marking/Stencilling : MAHA ((M)) API SPEC 5L/ASTM A106 GR.B/ASME SA106 GR.B/ NACE MR0175/MR0103 3.500 0.216 B/L245/X42/L290 PSL1 SMLS HEAT NO.... + 2970 PSI BE SRL MADE IN INDIA + WEIGHT - 7.58 LB/FT + PO/SHIPPING MARK : "PO # 25.436 + B. NO.....

E) Remarks : 1) Mati Confirms to API 5L GR.B PSL-1 / X42 (EDN. 2018)/ ASTM/ASME A106 B (EDN. 2019a)/ SA106 B (EDN. 2021). 2) "Country of melt and pour : INDIA".

Legends : T-Transverse, L-Longitudinal, YST-Yield Strength, UTS-Ultimate Tensile Strength, EL-Elongation, GL-Gauge Length, H-Heat , P1-Product 1, P2-Product 2, R-As Rolled, Q-Quenched & Tempered, N-Normalised, N&T-Normalised & Tempered, PE-Plain-end, BC-Buttress Thread Casing, LC-Long Round Thread Casing, SC-Short Round Thread Casing, NU-Non-upset tubing, EU-External Upset tubing, NA- Not Applicable

The material has been manufactured, sampled,tested and inspected and has been found conforming to the specification and PO

FOR MAHARASHTRA SEAMLESS LTD
DEBTANU PAL - Asst. Engineer

Maharashtra Seamless Ltd. SEAL Vile Bhagad Mangaon

Rev. 01 Date: 31.01.2020

W & R.O : D-114,MIDC Industrial Area, Vile - Bhagad, Varchiwadi,Dist.Raigad,Maharashtra-402308 Phone :9223685171

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