



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

QCF 20A

Customer :
 P.O.No : 12682 Dated: 28-FEB-22
 OC/Loading slip no. : 66210079 (Item No. 01)
 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 : 114.30 mm X 8.56 mm
 Length Range : 20 - 20 Feet
 Total Length : 4620 Feet (231 Pcs)
 Material Code :

Test Certificate No.: MSL-6/QC/0001E/2022
 Date: 07 June 2022

Page: 1 of 1

A) CHEMICAL COMPOSITION (%) - Reference standard ASTM A-751 & ASTM E-415																											
SI 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 Reqs.	
Req.	Min.	%		0.260	1.060	0.500	0.030	0.010	0.400	0.150	0.400	0.400	0.080	0.110	0.110												
	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												
1	AB662		H	0.170	1.000	0.250	0.012	0.004	0.031	0.0026	0.008	0.006	0.0011	0.0003	0.0025	0.0014	0.0039	0.0003	-	0.029	-	5.882	0.014	-	0.345		
			P1	0.170	1.000	0.240	0.012	0.003	0.032	0.0016	0.007	0.007	0.0010	0.0002	0.0026	0.0012	0.0038	0.0003	-	0.030	-	5.882	0.014	-	0.345		
			P2	0.180	0.990	0.260	0.013	0.005	0.031	0.0036	0.009	0.005	0.0012	0.0003	0.0027	0.0015	0.0042	0.0004	-	0.028	-	5.500	0.014	-	0.353		
2	AB696		H	0.170	1.030	0.260	0.014	0.004	0.018	0.0032	0.012	0.006	0.0012	0.0002	0.0022	0.0014	0.0036	0.0003	-	0.034	-	6.059	0.018	-	0.347		
			P1	0.170	1.030	0.250	0.014	0.003	0.019	0.0022	0.011	0.007	0.0011	0.0003	0.0023	0.0014	0.0037	0.0003	-	0.035	-	6.059	0.018	-	0.347		
			P2	0.180	1.020	0.270	0.015	0.005	0.018	0.0042	0.013	0.005	0.0013	0.0004	0.0024	0.0017	0.0041	0.0004	-	0.033	-	5.667	0.018	-	0.356		
3	AB700		H	0.170	1.040	0.200	0.012	0.004	0.015	0.0029	0.006	0.006	0.0011	0.0004	0.0017	0.0015	0.0032	0.0003	-	0.026	-	6.118	0.012	-	0.348		
			P1	0.180	1.030	0.200	0.011	0.005	0.016	0.0039	0.007	0.007	0.0009	0.0003	0.0018	0.0012	0.0030	0.0002	-	0.027	-	5.722	0.014	-	0.357		
			P2	0.170	1.050	0.190	0.012	0.003	0.015	0.0029	0.005	0.005	0.0012	0.0004	0.0019	0.0016	0.0035	0.0003	-	0.025	-	6.176	0.010	-	0.349		

C) MECHANICAL PROPERTIES																																	
SI No.	Heat No.	Test Unit	Quantity		Name of the Steel Maker and Address/Supplier Heat No.	Reference standard ASTM 370 & E-8					Reference standard ASTM E-23								Reference standard ASTM E-18														
			Pcs	Feet		Tensile Testing (Loc Pipe Body)				CVN Impact Test (Pipe Body)				Through Wall Hardness (Pipe Body)																			
						Orientn.	YST (Mpa)	UTS (Mpa)	YST/UTS Ratio	El (%)	Absorbed Energy (J)		% Shear Area		Hardness (HRB)																		
			G.L.=50 mm Nom. Width= 25.40 mm					Size & Orientation:				Transverse Direction																					
					Temperature°C:				OD				Mid				ID																
Req.	Min.	Max.					1	2	3	Avg	1	2	3	Avg	1	2	3	4	Avg	1	2	3	4	Avg	1	2	3	4	Avg				
1	AB662		43	860	J SPL, Chhattisgarh/ 3215345	L	357.86	478.44	0.75	37.80	-	-	-	-	-	-	-	-	-	74	75	75	74	74	-	-	-	-	-	-	-	-	-
2	AB696		138	2760	J SPL, Chhattisgarh/ 2215424	L	348.52	496.29	0.70	36.62	-	-	-	-	-	-	-	-	-	77	78	78	78	78	-	-	-	-	-	-	-	-	-
3	AB700		50	1000	J SPL, Chhattisgarh/ 2215418	L	345.78	494.39	0.70	37.34	-	-	-	-	-	-	-	-	-	79	78	79	79	79	-	-	-	-	-	-	-	-	-

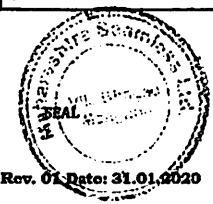
Raw Material	Fully killed & Fine Grain Practice	Dimension	Good	NDE Method	Ultrasonic Testing - Good	End Area Inspection	OK
Steel Route	BAF-LRF-VD-CCM	Weight	Good	Location & Orientation	Longitudinal & Transverse Notch at OD & ID	Hydro Test Pressure	2970 Psi
Hot Rolling Temp. °C	880-940	End Finish	Bevel	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) MSL API 5L X-42 PSL-1 / ASTM A106 GR.B / NACE MR0175/MR0103 (% S HARDNESS CONTROLLED) BE SMLS SRL OD 4.500 INCH X WT 0.337 INCH HFS HEATNO.... + 2970 PSI + LENGTH...IN FEET + MADE IN INDIA + WEIGHT - 15.00 LB/FT + PO/SHIPPING MARK : "PO # 25.436" + B.NO....

E) Remarks : 1) Mail 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". 3) Revised TC Rev.01 Dtd. 01-08-2022.

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
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Rev. 01 Date: 31.01.2020