



**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. 10)  
 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 : 60.30 mm X 5.54 mm  
 Length Range : 20 - 20 Feet  
 Total Length : 22840 Feet ( 1142 Pcs )  
 Material Code : \_\_\_\_\_

Test Certificate No.: MSL-6/QC/0001R/2022  
 Date: 26 July 2022

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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 Reqs.	
Req.	Min.	%		0.290	0.100																						
	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	AB273		H	0.180	1.030	0.260	0.011	0.005	0.010	0.0020	0.005	0.005	0.0020	0.0018	0.0020	0.0038	0.0058	0.0003	-	0.026	-	5.722	0.010	-	0.355		
			P1	0.190	1.020	0.250	0.010	0.005	0.011	0.0030	0.006	0.006	0.0018	0.0019	0.0020	0.0037	0.0057	0.0002	-	0.027	-	5.368	0.012	-	0.364		
			P2	0.170	1.040	0.260	0.011	0.004	0.010	0.0020	0.004	0.004	0.0021	0.0016	0.0021	0.0037	0.0058	0.0003	-	0.025	-	6.118	0.008	-	0.347		
2	AB299		H	0.170	1.040	0.220	0.011	0.006	0.011	0.0020	0.007	0.005	0.0020	0.0020	0.0015	0.0040	0.0055	0.0002	-	0.033	-	6.118	0.012	-	0.347		
			P1	0.170	1.040	0.210	0.011	0.005	0.012	0.0010	0.006	0.006	0.0019	0.0019	0.0016	0.0038	0.0054	0.0003	-	0.034	-	6.118	0.012	-	0.347		
			P2	0.180	1.030	0.230	0.012	0.007	0.011	0.0030	0.008	0.004	0.0021	0.0022	0.0017	0.0043	0.0060	0.0002	-	0.032	-	5.722	0.012	-	0.356		
3	AB690		H	0.160	1.020	0.200	0.020	0.003	0.011	0.0020	0.004	0.005	0.0020	0.0010	0.0014	0.0030	0.0044	0.0003	-	0.035	-	6.375	0.009	-	0.334		
			P1	0.170	1.020	0.200	0.020	0.004	0.011	0.0020	0.005	0.006	0.0019	0.0012	0.0013	0.0031	0.0044	0.0004	-	0.036	-	6.000	0.011	-	0.344		
			P2	0.160	1.030	0.210	0.019	0.003	0.010	0.0010	0.003	0.004	0.0021	0.0011	0.0015	0.0032	0.0047	0.0003	-	0.034	-	6.438	0.007	-	0.335		

C) MECHANICAL PROPERTIES																																							
Sl No.	Heat No.	Test Unit	Quantity Pcs Feet	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																					
					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= 19.05 mm					Temperature°C :								Transverse Direction																					
					1				2				3				Avg				OD			Mid				ID											
					1				2				3				Avg				1			2				3				Avg							
Req.	Min.									290	414			30																									
	Max.																																						
1	AB273		102	2040	JSPL, Chhatisgarh/ 3119394	L	375.12	496.80	0.76	35.84	-	-	-	-	-	-	-	-	-	-	74	75	75	74	74	-	-	-	-	-	-	-	-	-	-	-			
2	AB299		836	16720	JSPL, Chhatisgarh/ 3120012	L	347.98	479.20	0.73	36.80	-	-	-	-	-	-	-	-	-	-	75	74	74	75	75	-	-	-	-	-	-	-	-	-	-				
3	AB690		204	4080	JSPL, Chhatisgarh/ 3215441	L	351.68	493.36	0.71	35.60	-	-	-	-	-	-	-	-	-	-	76	77	77	76	76	-	-	-	-	-	-	-	-	-	-				
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					OK					Flattening Test					NA					Flaring Test					NA				
HIC					NA					SSC					NA					Micro Structure/Grain Size					Reveals fine Femite and pearlite /ASTM No. 7-B					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 2.375 INCH X WT 0.218 INCH HFS HEATNO... + 2970 PSI + LENGTH...IN FEET + MADE IN INDIA + WEIGHT - 5.03 LB/FT + PO/SHIPPING MARK : "PO # 25.436" + B.NO...

E) Remarks 1) Matl 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

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Warning : Modification or unauthorized use of this certification is strictly prohibited. Violation calls for criminal prosecution. For authenticity verification, you can contact us at: msltc@mahaseam.com.