



**MAHARASHTRA SEAMLESS LIMITED**  
**WORKS (MIL) TEST CERTIFICATE**  
 EN:10204:3.1

OCF.20A

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Tc No : MSL-7/QC/ 2811M/2017  
 Date : 07-MAR-18  
 Specification : ASTM A333 GR.6(2016), ASME SA333 GR.6(2015), CSA Z245.1 GR.290 CAT-II M45C(2014)  
 Process/Product: HOT FINISH SEAMLESS Carbon Steel Pipes  
 Customer : TOYOTA TSUSHO AMERICA, INC  
 P.O. No : CI-17-762 Dt. 14-NOV-17  
 W.O. No : 6170043

**DESCRIPTION**

Sl NO	Material/Item Code	SIZE (Inch)	Length Range (Feet/Mtr)	Heat No.	No Of PCS	Length (Feet/Mtr)	End Finish	Hydro Test Pressure at 10 Sec	Bend Test	Plattening Test	Flaring Test	Drift Test	Crushing Test
1		2.375 X 0.218	38-39	A8506		5237	BEVEL	3000 PSI	NA	OK	NA	NA	NA

**PHYSICAL PROPERTIES**

**CHEMICAL COMPOSITION (%)**

Sl No	Heat No	YST (PSI)	UTS (PSI)	E1 (%)	Hardness HRC	Impact Test Charpy v-notch Joule	LA/PA	CHEMICAL COMPOSITION (%)																
								C	Mn	Si	P	S	Cr	Mo	Ni	V	Cu	Al	Ti	Nb	Ce			
G.L. = 2", G.W. 3/4" - L at room temp																								
Required (Max)	71800	110200			92			.26	1.35	.5	.025	.01	.3	.12	.4	.08	.4				.11	.02	.4	
Required (Min)	42100	60200	30						.29	.1														
1	A8506	58510 57807	75031 74129	35.40 33.60	74,76, ,,	61,51,49 Av. 53.6	LA PA PA	.120 .121 .130	1.260 1.272 1.314	.330 .298 .302	.019 .018 .019	.006 .006 .006	.010 .020 .014	.002 .003 .003	.007 .010 .011	.006 .007 .002	.006 .007 .007	.026 .023 .023	.002 .001 .001	.001 .000 .000	.001 .000 .000	.335 .339 .354		

Dimensions : Outside diameter, thickness, weight, length conforms to above specification.  
 Coating : All Pipes are coated with rust preventive from outside surface only.  
 N.D.T. : Not Applicable  
 Heat Treatment : Normalized  
 Raw material : P...illed  
 Marking/Stencilling : MSL DATE OF MANUFACTURING (M/Y) ASTM A 333 GR.6/ASME SA 333 GR.6, CSA Z245.1 GR.290 CAT-II M45C-2014 SS WPS 2 CD 2.375 INCH X W. 0.218 INCH X LENGTH (38.00 - 39.00 IN FEET) WPS HEAT NO. 3000 PSI-NORM-LT - 45 DEG.C-WEIGHT-5.03 PPF-MADE IN INDIA-POSCI-17-762-PFP-MO-  
 Remarks : Material conforms to NACE MR-0175/ISO15156, NACE MR-0103; Pipes are according to ANSI B36.10; Material is free from mercury contamination; Mfg. Process BOP/EAF; Fine Grained a Vacuum Degassed; Material comply with A999/A999M Spec.; Ca = 0.0021% & B = 0.0003%; Shear area = (79,74,77)%; Normalized done at Temp. range of 920-940 Deg.C & cycle time 25-35 min.; Raw Material : JSPL (Indian Origin). Impact at - 56 Deg.C, Specimen size (mm) : 10X3.33X55, Charpy V-Notch LONGITUDINAL

CERTIFY THAT THE MATERIAL CONFORMS TO ABOVE SPECIFICATION.  
 FOR MAHARASHTRA SEAMLESS LIMITED  
 R.N.DEO - ASST. ENGINEER

Warning/Modification: use of this certification is strictly prohibited. Violation calls for criminal prosecution. For authenticity verification, you can contact us at mailto:mahaseam.com  
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Tuboscope Westco (D) GmbH  
 Vendor Services  
 REVIEWED:  INSPECTOR P. Mahadule  
 APPROVED:  SIGNATURE  
 WITNESSED:  DATE