



# JINDAL SAW LTD.

## WORK / MILL TEST CERTIFICATE

D/ QLY / 24 R 00

T.C.NO: JSL / Q / 4111001364 / P R2  
 P.O.NO: P13949  
 S.O.NO: 4111001364  
 INV.NO: 9111009954

DATE: 29.03.2016  
 DATE: 14.11.2014  
 DATE: 15.11.2014  
 DATE: 12.12.2014

PAGE 1 OF 1

**CUSTOMER** : AMERICAN PIPING PRODUCTS, INC.  
**PRODUCT** : HOT FINISHED & NORMALIZED CARBON STEEL SEAMLESS PIPES  
**PIPE SPECIFICATION** : API 5L GR. B / X 42 PSL 1 45TH EDN. 2012 / ASTM A 333 GR. 6 / Gr. 1 EDN. 2014 / ASME SA 333 GR. 6 / Gr. 1 EDN. 2013 SEC II / ASTM A 53 GR. B / ASME SA 53 GR. B / ASTM A 106 GR. B / C EDN. 2014 / ASME SA 106 GR. B / C EDN. 2013 SEC II / NACE MR 0175 / NACE MR 0103 / ISO 15156

PIPE DIMENSIONS	LENGTH (FEET)	END CONDITIONS	STRAIGHTNESS	HEAT NO.	QUANTITY		
					NOS.	FEET	
6.625" OD 6"	0.280" WT SCH 40	40 - 42	Bevelled Ends	Satisfactory	2404351	126	5126.215
<b>TOTAL</b>						<b>126</b>	<b>5126.215</b>

### CHEMICAL COMPOSITION :

Heat No.	Analysis	% C	% Mn*	% Si	% S	% P	% Cr	% Ni	% Cu	% Mo	% V	% Nb	% Ti	% CE
		Reqd. Max.	0.23 1.06	0.10 Min.	0.010 Max.	0.020 Max.	0.30 Max.	0.20 Max.	0.20 Max.	0.15 Max.	0.06 Max.	0.04 Max.	0.04 Max.	0.43 Max.
2404351	Heat	0.21	1.10	0.31	0.004	0.015	0.009	0.006	0.008	0.001	0.0012	0.0006	0.002	0.393
	Product	0.19	1.11	0.29	0.003	0.013	0.007	0.005	0.006	0.002	0.0010	0.0005	0.003	0.375
	Product	0.20	1.10	0.30	0.004	0.014	0.008	0.006	0.007	0.001	0.0011	0.0006	0.002	0.383

\* Mn. is acceptable upto 1.35 % as per Clause specified in ASTM / ASME Specification.

### MECHANICAL TESTS :

Heat No.		TENSILE TEST			OTHER TESTS			
		Y.S.	U.T.S.	% E G.L. - 50.80 mm	HARDNESS TEST	FLATTENING TEST	HYDROSTATIC TEST (100%)	Impact Test
2404351	Reqd.	40000 PSI Min.	70000 PSI Min.	25.00% Min.	250 BHN Max.	As Per Spec.	3000 PSI for 5 Seconds Minimum	L - 5 - 9 J at (-53°C)
	Obtained	49729.34	77962.33	35.00	152 - 154	Satisfactory	Satisfactory	40, 36, 34 = Avg. 36.67 J

### Remarks :

1. Steel Making Process : EAF-LRF-VD-CCM, Fully Killed.
2. Visual Inspection : Satisfactory
3. Heat Treatment : Normalized at 880°C.
4. Product is free from Mercury.
5. No Repairs Made By Welding.
6. NDT Test : Satisfactory.

### T.C. AS PER ENIG204 - 3.1

We hereby certify that the material herein described has been manufactured, sampled, tested & inspected in accordance with above standard and specification & satisfy the requirements.

*[Signature]*  
 Authorized Signatory

Check For Original Water Mark