



Mill Test Certificate

Bri-Steel Manufacturing
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Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-2928 Production Date: Oct 26, 2016
 Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 003018
 Product Standards: ASME B36.10M-2015, API SL-45th Ed. Grade X42 PSL1, ASTM/ASME A106-2014/SA106-2015 Grade B/C NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015
 Product Markings: <API & L/C No. > API SPEC 5L NPS 18 STD 0.375 INCHWT GR X42 PSL1 SMLS 2016/10 NDE 1490PSI
 HEAT BSM-2928 (PIPE # LENGTH MASS) 70.59lb/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

Product: Details				Non-Destructive Testing										
Heat	Test Type	Product Size	Pieces	Length	Mass lb/ft	Geliger µR/hr	Res. Mag. Gauss	Visual Insp.	OD	UT (WT)	UT	ET	HydroTest	End Condition
BSM-2928	Heat	NPS 18 STD 0.375in. WT	7	DRL	70.59	<5	<10	Pass	Pass	Pass	Pass	Pass	Pass	32° Bevel

Heat	Test Type	Steelmaking Method	Chemical Analysis (wt%)																	
			Test Type		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(I/W)	CE(I/W)Max	CE(CSA)
			Heat	Product	0.21	0.92	0.013	0.005	0.23	0.03	0.01	0.01	0.01	0.01	0.01	0.004	0.001	0.001	0.0003	0.37
BSM-2928	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed (at TRCO China)		0.21	0.94	0.010	0.003	0.26	0.03	0.01	0.01	0.01	0.01	0.003	0.002	0.002	0.0003	0.38	-	0.39	
			0.21	0.93	0.011	0.003	0.26	0.03	0.01	0.01	0.01	0.003	0.002	0.002	0.0004	0.37	-	0.39		

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 2 in. GL	Yield (Rt0.5) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %
BSM-2928	Heat	Ferrite & Pearlite	78 HRBW	Pass	Longitudinal; 1.5 in. x WT	44 700	73 500	0.61	40

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J)		Shear (%)	Lateral Expansion (mm)
					(3 Tests) AVG	(3 Tests) AVG		
BSM-2928	-	-	-	-	-	-	-	-

Additional Details:
 ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with API SL-45th Ed. X42 ASTM/ASME A106-2014/SA106-2015, A53-2012/SA53-2015, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 (APIQR-1584), API Q1, and PED 2014/68/EU.
 ✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103/ISO 17495:2015 Section 13.1
 ✓ No weld repairs have been performed on this product.
 ✓ This product has not come into contact with mercury during the Bri-Steel Manufacturing processes.
 ✓ This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

Tonya Lam Nov 10 / 2016

Tonya Lam, P. Tech (Eng.)
 Assistant QA Manager