




# Mill Test Certificate

Bri-Steel Manufacturing  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-2061      Product Size: NPS 14 STD      Production Date: Sep 30, 2014  
Production Method: Hot Expansion      Product Heat Treatment: ThermoMechanical Formed      Certificate No.: MTR- 001392  
Product Standards: ASME B36.10M-2015, API 5L-45th Ed. GradeB PS1.1, ASTM/ASME A106-2014/SA106-2013 Grade B/C NDE, A53-2012/SA53-2013 Grade B Type S, NACE MR0175-2009 MR0103-2012  
Product Markings  
 <API & L/C No.> API SPEC 5L NPS 14 STD 0.375 INCHWT GRB PS1.1 SMLS 2014/09 NDE 1140PS1  
HEAT BSM-2061 (PIPE # LENGTH MASS) 54.57lb/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 $\mu$ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest 1140PSI/ 5 s	End Condition			
BSM-2061	Heat	NPS 14 STD 0.375in. WT	1	DRL	54.57	<5	<10	Pass	Pass	Pass	Pass	Pass	Pass	33° Bevel			
Chemical Analysis (wt%)																	
Heat	Steelmaking Method	Test Type	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(CSA)
BSM-2061	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Heat	0.18	0.96	0.012	0.003	0.24	0.03	0.08	0.01	0.04	-	-	-	0.0005	0.36	0.36
		Product	0.19	0.94	0.011	0.005	0.24	0.04	0.08	0.02	0.03	0.003	0.001	0.001	0.0002	0.37	0.37
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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-2061	Heat	Ferrite & Pearlite	78 HRBW	Pass	Longitudinal; 1.5 in. x WT	45,700	72,500	0.63	41

Heat	Test Standard	Impact Test Sample Details	Temp °C	Impact Energy				% Shear				Lateral Expansion			
BSM-2061	-	-	-	J	J	J	AVG	%	%	%	AVG	mm	mm	mm	AVG
				-	-	-	-	-	-	-	-	-	-	-	-

## Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with API 5L-45th Ed., ASTM/ASME A106-2014/SA106-2013, A53-2012/SA53-2013, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008, API Q1, and PED 97/23/EC.

✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103-2012 Section 2.1

✓ 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:

  
2015 Nov 16

Kenton Dechant, P.Eng.  
Manager of Quality and R&D