



# Mill Test Certificate

Bri-Steel Manufacturing  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-3055      Product Size: NPS 28 STD      Production Date: Feb 16, 2017  
 Production Method: Hot Expansion      Product Heat Treatment: Normalizing Forming      Certificate No.: MTR- 003166

Product Standards: ASME B36.10M-2015, ASTM/ASME A106-2014/SA106-2015 Grade B NDE, AS3-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015

Product Markings



NPS 28 STD 0.375 INCHWT SMLS 2017/02 NDE 560PSI  
 HEAT BSM-3055 (PIPE # LENGTH MASS) 110.8lb/ft ASTM/ASME A/SA106 GR B 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	Res. Mag. Gauss	Visual Insp.	OD	UT (WT)	UT	ET	HydroTest	End Condition	
BSM-3055	Heat	NPS 28 STD 0.375in. WT	5	DRL	110.8	<5	<10	Pass	Pass	ASTM E114	ASTM E213	ASTM E309	560PSI/ 5 s	Pass	35° Bevel

Heat	Test Type	Steelmaking Method	Test Type	Chemical Analysis (wt%)															
				C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(IIW)Max	CE(CSA)
BSM-3055	Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed		Heat	0.17	1.11	0.014	0.006	0.30	0.05	0.03	0.01	0.01	0.056	0.003	0.003	0.0004	0.38	-	0.38
			Product	0.18	1.12	0.010	0.008	0.31	0.05	0.02	0.01	0.01	0.058	0.002	0.001	0.0004	0.39	-	0.40

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-3055	Heat	Ferrite & Pearlite	82 HRBW	Pass	Longitudinal; 1.5 in. x WT	52 000	79 500	0.65	37

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J)	Impact Energy Results (J)	Shear (%)	Lateral Expansion (mm)
BSM-3055	-	-	-	-	(3 Tests) AVG	(3 Tests) AVG	-	(3 Tests) AVG

**Additional Details:**

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with ASTM/ASME A106-2014/SA106-2015, AS3-2012/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:

*T. Lam* Feb 16/2017

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