



# Mill Test Certificate

Bri-Steel Manufacturing  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-2879      Product Size: NPS 14 STD      Production Date: Sep 12, 2016  
 Production Method: Hot Expansion      Product Heat Treatment: Normalizing Forming      Certificate No.: MTR- 002956  
 Product Standards: ASME B36.10M-2015, ASTM/ASME A106-2014/SA106-2015 Grade B NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015



NPS 14 STD 0.375 INCHWT SMLS 2016/09 NDE  
 HEAT BSM-2879 (PIPE # LENGTH MASS) 54.57lb/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	Gelger	Res. Mag. Gauss	Visual Insp.	OD	UT (WT) ASTM E114	UT ASTM E213	ET ASTM E309	HydroTest	End Condition	
BSM-2879	Heat	NPS 14 STD 0.375in. WT	9	DRL	54.57	<5	<10	Pass	Pass	Pass	N12.5 Pass	-	-	30° Bevel	

Heat	BSM-2879	Steelmaking Method Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed	Chemical Analysis (wt%)																																	
			Test Type		C		Mn		P		S		Si		Cr		Cu		Mo		Ni		V		Ti		Nb		B		CE(IIW)		CE(IW)/Max		CE(CSA)	
			Heat	Product	0.22	0.21	0.56	0.54	0.008	0.008	0.006	0.002	0.23	0.26	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.002	0.002	0.001	0.001	0.001	0.001	0.0002	0.32	0.31	0.32				
Mechanical Properties																																				

Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test	Yield (Rt0.5) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %
BSM-2879	Heat	Ferrite & Pearlite	73 HRBW	Pass	Longitudinal; 1.5 in. x WT	41 000	70 000	0.59	42

Heat	Test	Standard	Result	Impact Test	Temp °C	Impact Energy Min. (J)	Impact Energy Results (J)	Shear (%)	Lateral Expansion (mm)
BSM-2879	-	-	-	Sample Details	-	(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, 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:

*T. Lam* sept 19 / 2016

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