



# Mill Test Certificate

Bri-Steel Manufacturing  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-2689      Product Size: NPS 26 STD      Production Date: Mar 16, 2016  
 Production Method: Hot Expansion      Product Heat Treatment: Normalizing Forming      Certificate No.: MTR- 002136  
 Product Standards: ASME B36.10M-2015, ASTM/ASME A106-2014/SA106-2015 Grade B/C NDE, A53-2012/SAS3-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015  
 Product Markings: NPS 26 STD 0.375 INCHWT SMLS 2016/03 NDE 600PSI  
 HEAT BSM-2689 (PIPE # LENGTH MASS) 102.6lb/ft ASTM/ASME A/SA106 GR B/C A/SAS3 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.	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM E309	HydroTest	End Condition	
BSM-2689	Heat	NPS 26 STD 0.375in. WT	2	DRL	102.6	<5	<10	Pass	Pass	Pass	N12.5 Pass	-	600 PSI/ 5 s	Pass	30° Bevel

Heat	BSM-2689	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(IW)		CE(IW)/Max		CE(CSA)	
			Heat	Product	0.17	0.16	1.18	1.21	0.016	0.016	0.001	0.003	0.25	0.28	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.052	0.053	0.001	0.001	0.001	0.001	0.0001	0.38	0.38	-	-	0.38	0.38	
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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-2689	Heat	Ferrite & Pearlite	78 HRBW	Pass	Longitudinal; 1.5 in. x WT	49 800	73 500	0.68	44

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J) (3 Tests) AVG	Impact Energy Results (J) (3 Tests) AVG	Shear (%) (3 Tests) AVG	Lateral Expansion (mm) (3 Tests) AVG
BSM-2689	-	-	-	-	-	-	-	-

- 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/SAS3-2015, 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 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/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:

2016 July 12

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