



# Mill Test Certificate

Bri-Steel Manufacturing  
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Product: Seamless Carbon Steel Pipe      Product Heat Number: BSM-3065      Production Date: Feb 23, 2017  
 Production Method: Hot Expansion      Product Heat Treatment: Normalizing Forming      Certificate No.: MTR- 003180  
 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  
 Product Markings: NPS 18 TRUE 40 0.562 INCHWT SMLS 2017/02 NDE 1300PSI  
 HEAT BSM-3065 (PIPE # LENGTH MASS) 104.73lb/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 µR/hr	Res. Mag. Gauss	Visual Insp.	OD	UT (WT) ASTM E114	UT ASTM E213	ET ASTM E309	HydroTest 1300PSI/ 5s	End Condition
BSM-3065	Heat	NPS 18 TRUE 40 0.562in. WT	3	DRL	104.73	<5	<20	Pass	Pass	Pass	N12.5 Pass	-	Pass	Plain End

Heat	BSM-3065	Steelmaking Method Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed	Chemical Analysis (wt%)																	
			Test Type		C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(IIW)Max	CE(CSA)
			Heat	Product	0.20	0.56	0.013	0.008	0.24	0.02	0.01	0.01	0.01	0.01	0.004	0.002	0.001	0.0003	0.30	-
						0.21	0.55	0.013	0.006	0.25	0.03	0.01	0.002	0.001	0.001	0.0003	0.31	-	0.32	

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-3065	Heat	Ferrite & Pearlite	73 HRBW	Pass	Longitudinal, 1.5 in. x WT	42 600	67 000	0.64	45

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-3065	-	-	-	-	-	-	-	-	-

- 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. Langan* March 02 2017

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