



Mill Test Certificate

Bri-Steel Manufacturing Inc.
2125-64 Avenue, Edmonton, AB Canada T6P 1Z4
Tel: 001 (780) 469-6603
Fax: 001 (780) 469-6986
www.bri-steel.com

Product: Seamless Carbon Steel Pipe

Product Heat Number: BSM-1768

Product Size: 14T80

Production Date: Apr 15, 2014

Production Method: Hot Expansion

Product Heat Treatment: As-rolled

Certificate No.: MTR- 001038

Product Standards: ASME B36.10-2004, ASTM/ASME A/SA106-2013 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

Product Markings



NPS 14 TRUE 80 0.750 INCHWT SMLS 2014/04 NDE
HEAT BSM-1768 (PIPE # LENGTH MASS) 106.1lb/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	Geiger μ R/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT ASTM E213	ET ASTM	HydroTest	End Condition
BSM-1768	Heat	NPS 14 TRUE 80 0.750in. WT	19	DRL	106.1	<5	<10	Pass	Pass	Pass	Pass	Pass	-	Plain End

Chemical Analysis (wt%)														
Heat	Steelmaking Method	Test Type	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb
			Heat	0.20	0.88	0.012	0.005	0.25	0.05	0.05	0.01	0.04		0.0003
			Product	0.19	0.89	0.011	0.004	0.24	0.05	0.06	0.01	0.04	0.003	0.001
BSM-1768	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed													

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 50mm GL	Yield (Rt0.5) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %
BSM-1768	Heat	Ferrite & Pearlite	78 HRBW	Pass	Longitudinal; 38.1 mm x WT	40,000	72,500	0.55	47

Heat	Test Standard	Impact Test Sample Details	Temp °C	Impact Energy						Lateral Expansion			
				J	J	J	AVG	%	%	AVG	mm	mm	AVG
				-	-	-	-	-	-	-	-	-	-
BSM-1768													

Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with ASTM/ASME A/SA106-2013 Grade B/C A/SA53-2012, and the purchase order requirements, and that the results meet the corresponding requirements.

✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service-2009 NACE MR0103-2010 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:

2014 APR 22

Paul Sowden, T.T.
Assistant QA Manager