

## Mill Test Certificate

Bri-Steel Manufacturing Inc. 2125-64 Avenue, Edmonton, AB Canada T6P 1Z4

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Product: Seamless Carbon Steel Pipe Product Heat Number:

Number: BSM-2058

Product Size: 14XS

Production Date: Sep 30,

Production Method: Hot Expansion

Product Standards:

Product Heat Treatment: As-rolled

Certificate No.: MTR- 001388

**Product Markings** 

brizteel

<API & L/C No.> API SPEC 5L NPS 14 XS 0.500 INCHWT GR B PSL1 SMLS 2014/09 NDE 1520PSI

ASME B36.10-2004, API 5L-45th Ed. Grade B PSL1, ASTM/ASME A/SA106-2014 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

HEAT BSM-2058 (PIPE # LENGTH MASS) 72.09lb/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

	BSM-2058		Heat	
	Heat		Test Type	
	NPS 14 XS 0.500in. WT		Product Size	Product: Details
	1		Pieces	
	DRL		Length	
	72.09	lb/ft	Mass	
	<b>5</b>	μR/hr	Geiger	
	<10	Gauss	Res. Mag.	
	Pass	Insp.	Visual	
	Pass		OD	NC
000000	Pass	TW	TU	on-Destruct
	Pass	ASTM E213 ASTM	UT	Non-Destructive Testing
	Pass	ASTM	ET	
	Pass	1520 PSI/ 5 s Condition	HydroTest	
	32.5° Bevel	Condition	End	

		BSM-2058	Heat	
	8 Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed		Steelmaking Method	
	Product	Heat	Test Type	
	0.19	0.18	С	
	0.91	0.91	Mn	
	0.010	0.011	P	
(0.00)	0.006	0.003	S	Chemical
	0.25	0.24	Si	Chemical Analysis (wt%)
	0.04	0.03	Cr	wt%)
	0.07	0.07	Cu	
	0.01	0.01	Мо	
	0.04	0.04	N.	
	0.003		<	
	100.0		11	
	100.0		qN	
	0.0003	0.0003	В	
	0.36	1	CE(IIW)	
	0.36	1	CE(CSA)	

BSM-2058		Heat	
3 Heat		Test Type	
Ferrite & Pearlite		Microstructure	
77 HRBW		Hardness	
Pass		Flattening Test	
Longitudinal; 38.1 mm x WT	50mm GL	Tension Test	Mechanical Properties
41,500	psi	Yield (Rt0.5)	
70,500	psi	Tensile (Rm)	
0.59	(Rt0.5/Rm)	1/7	
45	%	Elongation (A)	

SB		
BSM-2058		Heat
f	Standard	Test
1	Sample Details	
1	°C	Temp
	_	
-	_	Impact
ı	_	Energy
1	AVG	
ı	%	
•	%	% Shear
	%	ear
	AVG	
_	mm	922
1	mm	Lateral Ex
-	mm	xpansion
-	AVG	

Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with API 5L-45th Ed., ASTM/ASME A/SA106-2014 Grade B/C A/SA53-2012, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 and API Q1.

✓ 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.

 $\checkmark$  This product has not come into contact with mercury during the Bri-Steel Manufacturing processes.

 $\checkmark$  This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

am Oct/02/2014

Tonya Lam, C.E.T.

Assistant QA Manager