

Product:

Seamless Carbon Steel Pipe

Product Heat Number:

BSM-1650

Product Size: 18XS

## 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.brichemsteel.com
Production Date: Feb 19, 2014

**Production Method: Hot Expansion Product Heat Treatment:** As-rolled Certificate No.: MTR- 000894

**Product Standards:** ASME B36.10-2004, API 5L-45th Ed. Grade B/X42 PSL1, ASTM/ASME A/SA106-2013 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

**Product Markings** API > 5L-0898 API SPEC 5L NPS 18 XS 0.500 INCHWT GR B/X42 PSL1 SMLS 2014/02 NDE 1990PSI HEAT BSM-1650 (PIPE # LENGTH MASS) 93.45lb/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

		Product: Details							N	Non-Destructive Testin	ive Testing			
Heat	Test Type	Product Size	Pieces	Length	Mass	Geiger	Res. Mag.	Visual	OD	IN	TU	ΕT	HydroTest	End
					lb/ft	µR/hr	Gauss	Insp.		WT	ASTM E213	ASTM	1990 PSI/ 5 s	s Condition
BSM-1650	Heat	NPS 18 XS 0.500in. WT	10	DRL	93.45	6	<10	Pass	Pass	Pass	Pass	Pass	Pass	32.5° Bevel

	BSM-1650	Heat	
regas, rony when	Blast Furnace; EAF; Ladle Refining; Vacuum	Steelmaking Method	
Product	Heat	Test Type	
0.21	0.20	С	
0.89	0.89	Mn	
0.010	0.011	Р	
0.015 0.24	0.010	S	Chemical
0.24	0.24	Si	Chemical Analysis (wt%)
0.06	0.06	Cr	wt%)
0.08	0.06	Cu	
0.01	0.01	Mo	
0.06	0.06	Ni	
0.002		٧	
0.001		<b>=</b>	
0.001		Nb	
0.0004	0.0005	В	
0.38	1	CE(IIW)	
0.38	-	CE(CSA)	

	BSM-1650		Heat	
	) Heat		Test Type	
	Ferrite & Pearlite		Microstructure	
	77 HRBW		Hardness	
	Pass		Flattening Test	
	Longitudinal; 38.1 mm x WT	50mm GL	Tension Test	Mechanical Properties
State of the second sec	44,100	psi	Yield (Rt0.5)	
	73,000	psi	Tensile (Rm)	
2 2 2	0.60	(Rt0.5/Rm)	Т/У	
With the second	43	%	Elongation (A)	

	2010	1	1	1	r:	ı	ı	ı	r	r	1	BSM-1650
AVG mm		%	%	%	AVG	J	J	_	റ്	Sample Details	Standard	
		ar	% Shear			: Energy	Impact E		Temp	Impact Test	Test	Heat

## Additional Details:

- ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in and that the results meet the corresponding requirements. accordance with API 5L-45th Ed., ASTM/ASME A/SA106-2013 Grade B/C A/SA53-2012, and the purchase order 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.
- $\checkmark$  This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

2014 FEB 25

Paul Sowden, T.T.

Assistant QA Manager