

Mill Test Certificate

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

Tel: 001 (780) 469-6603 Fax: 001 (780) 469-6986

www.brichemsteel.com

Seamless Carbon Steel Pipe **Product Heat Number:** BSM-1315 Product Size: 18 STD Production Date:

Oct 10, 2013

Product:

Production Method: Hot Expansion Product Heat Treatment: As-rolled Certificate No.: MTR- 000529

Product Standards: ASME B36.10-2004, ASTM/ASME A/SA106-2011 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

Product Markings NPS 18 STD 0.375 INCHWT SMLS 2013/10 NDE 1000PSI

NUMBER OF THE SEM-1315 (PIPE # LENGTH MASS) 70.59lb/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

	BSM-1315		Heat	
	Heat		Test Type	
	NPS 18 STD 0.375in. WT		Product Size	Product: Details
	12		Pieces	
	DRL		Length	
	70.59	lb/ft	Mass	
	<5	μR/hr	Geiger	
	<10	Gauss	Res. Mag.	
	Pass	Insp.	Visual	
	Pass		OD	No
0.00	Pass	WT	TU	Non-Destructive Testing
	Pass	ASTM E213 ASTM	UΤ	tive Testing
Contract to the second	Pass		ET	
	Pass	1000 PSI/ 5 s Condition	HydroTest	
	32.5° Bevel	Condition	End	

		BSM-1315	Heat	
0.000	Degas, rully stiere		Steelmaking Method	
	Product	Heat	Test Type	
	t 0.23	0.19	С	
200	0.97	0.90	Mn	
	0.026	0.024	Р	
	0.010	0.009	S	Chemical Analysis (wt%)
	0.25	0.23	Si	Analysis (
	0.08	0.08	Cr	wt%)
	0.01	0.01	Cu	
	0.01		Mo	
	0.04	0.04	N:	
	0.005		٧	
	0.001		∄	
	0.001		Nb	
	0.0001		В	
	0.41	1	CE(IIW)	
	0.41	1	CE(CSA)	

BSM-1315 Heat Ferrite & Pearlite 80 HRBW Pass Longitudinal; 38.1 mm x WT 46,700 75,000 0.62 40	50mm GL psi (Rt0.5/Rm) %	Heat Test Type Microstructure Hardness Flattening Test Tension Test Yield (Rt0.5) Tensile (Rm) Y/T Elongation (/	Mechanical Properties	Elongation (/ %	Y/T (Rt0.5/Rm) 0.62	Tensile (Rm) psi 75,000	Yield (Rt0.5) psi 46,700	Test GL 1 mm x		Hardness 80 HRBW	Microstructure Ferrite & Pearlite	Test Type Heat	Heat BSM-1315
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	1							
		2 2 2 2 2	, AAA	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	70 70 70	% % AVG	70 70 AVG IIIII	76 76 AVG HIIII
	J J AVG	J AVG %	J AVG %	AVG %	%	%	% % AVG	% % AVG mm
 , -	. AVG	AVG %	AVG %	AVG % %	AVG % % AVG	% % AVG	% % AVG mm	% % AVG mm mm
	. AVG	AVG %	AVG %	AVG % %	- %	- % AVG	% % AVG mm	- % % AVG mm mm

Additional Details:

- \checkmark We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing Inc. in accordance with ASTM/ASME A/SA106-2011 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.
- \checkmark This certificate represents a quality control system that is compliant with EN 10204:2004 Type 3.1.

Mill Test Certificate approved by:

rescenden 2013 OCT 23

Paul Sowden, T.T.

Assistant QA Manager



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Product: Seamless Carbon Steel Pipe

Product Heat Number:

BSM-1315

Product Size: 18 STD

Production Date: Oct 10, 2013

Production Method: **Hot Expansion**

Product Heat Treatment: As-rolled

Certificate No.: MTR- 000530

Product Standards: ASME B36.10-2004, API 5L-45th Ed. Grade B PSL1, ASTM/ASME A/SA106-2011 Grade B/C NDE, A/SA53-2012 Grade B Type S, NACE MR0175-2009 MR0103-2010

Product Markings BRI-STEEL <API> 5L-0898 API SPEC 5L NPS 18 STD 0.375 INCHWT GR B PSL1 SMLS 2013/10 NDE 1000PSI ELEASTREAM HEAT BSM-1315 (PIPE # LENGTH MASS) 70.59Ib/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA

BS	Г		Т
BSM-1315		Heat	
Heat		Test Type	
NPS 18 STD 0.375in. WT		Product Size	Product: Details
12		Pieces	
DRL		Length	
70.59	lb/ft	Mass	
~ 5	μR/hr	Geiger	
<10	Gauss	Res. Mag.	
Pass	Insp.	Visual	
Pass		00	No
Pass	WT	TU	on-Destruct
Pass	ASTM E213 ASTM	UT	Non-Destructive Testing
Pass	ASTM	ET	
Pass	1000 PSI/ 5	HydroTest	
32.5° Bevel	5 s Condition	End	

0.41	0.41	0.0001	0.001	0.001	0.005	0.04	0.01	0.01	0.08	0.25	6 0.010	0.97 0.026	0.97	0.23	Product	or of the state of	
-	-					0.04		0.01	0.08	0.23	4 0.009	0.02	0.90	0.19	Heat	Blast Furnace; EAF; Ladle Refining; Vacuum Depas: Fully Killed	BSM-1315
CE(CSA)	CE(IIW)	В	Nb	Ti	<	N.	Mo	Cn	Cr	Si	S	P	Mn	С	Test Type	Steelmaking Method	1
				- C ((C)-(1)-(-)-(-)-(-)-(-)-(-)-(-)-(-)-(-)-(-					(wt%)	Analysis	Chemical Analysis (wt%)						

.,		
Yield (Rt0.5)	Yield (Rt0.5) Tensile (Rm)	

BSM-1315			Heat
1		Standard	Test
ì	7	Sample Details	Impact Test
	,	ຕໍ	Temp
	ر	-	
			Impact
-	·		Energy
	AVG	200	
r	%	2	
1	%		% Shear
1	%	2	ear
r	AVG		
-1	mm		
1	mm		Lateral Ex
ſ	mm		Expansion
1	AVG		

Additional Details:

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