

## Mill Test Certificate

**Bri-Steel Manufacturing Inc.** 

2125-64 Avenue, Edmonton, AB Canada T6P 1Z4 Fax: 001 (780) 469-6986 www.brichemsteel.com Tel: 001 (780) 469-6603

Product: Seamless Carbon Steel Pipe

Production Method:

**Hot Expansion** 

Product Heat Number: BSM-2234

**Product Heat Treatment:** 

As-rolled

Product Size:

NPS 22 STD

Production Date: Jan 29, 2015

MTR

000831

Product Standards: ASME B36.10-2004, ASTM A335/ASME SA335-2011 GR. P11, NACE MR0175-2009 MR0103-2012

**Product Markings:** BRI-STEEL MFG NPS 22 STD 0.375 INCHWT SMLS 2015/01 UT 750PSI

HEAT BSM-2234(PIPE# LENGTH MASS)78.72lb/ft ASTM A335/ASME SA335 GR. P11 MADE IN CANADA.

BSM-2234	Heat		
Heat	Test Type		
NPS 22 STD 0.375 in.WT	Product Size*	0	Product Details
1	Pieces		
DRL	Length		
78.72	lb/ft	Mass	
<5	μR/hr	Geiger	
<20	Gauss	Res.Mag.	
Pass	Insp.	Visual	
Pass	OD		Non-E
Pass	WT	IN	Non-Destructive T
Pass	ASTM E213	TU	esting
Pass	ASTM E213 ASTM E309 750 psi/5s	ET	
Pass	750 psi/5s	HydroTest	
32.5° Bevel	5s Condition	End	

	741	BSM-2234			
	Vacuum Degas; Fully Killed	Blast Furnace; EAF; Ladle Refining;	Steelmaking Method		
	Product	Heat	Analysis		
	0.11	0.12	С		
	0.39	0.39	Mn		
	0.010	0.011	Р		
	0.002	0.001	S		Chemica
	0.11 0.39 0.010 0.002 0.59 1.07 0.1	0.12 0.39 0.011 0.001 0.58 1.06	Si		Chemical Analysis (wt%)
Section 1	1.07	1.06	Cr		(wt%)
	0.13		Си		
S 50,000 30,000	0.46	0.47	Mo		
	0.10	1	Z.		
2 10 10 10 10 10	0.003	1	<	,,,,,	
STATE STATE STATE STATE	0.005		Τï		
STREET, STREET, STREET,	0.002		Nb		
	0.0003		В		
S. Commission of the Commissio	0.37	,	(IIW)	Œ	
	0.37	i	(CSA)	CE	

BSM-2234 Heat	Heat		
Heat	Test Type		
Ferrite & Pearlite	Microstructure		
78	HRBW	Hardness	
Pass	Flattening Test	000000	Mechar
Longitudinal; 38.1mm x WT	50mm GL	Tension Test	Mechanical Properties
41,400	psi	Yield (Rt0.5)	
74,000	psi	Tensile (Rm)	
0.56	(Rt0.5/Rm)	Τ/γ	
36	%	Elongation (A)	

## Additional Details:

- corresponding requirements. Inc. in accordance with ASTM/ASME A/SA335-2011, and the purchase order requirements, and that the results meet the ✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing
- 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:

Tonya Lam, C.E.T. Assistant QA Manager

<sup>\*</sup>This product was manufactured with a specified minimum wall thickness of 0.375inches.