



Mill Test Certificate

Bri-Steel Manufacturing
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Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-2692 Product Size: NPS 30 STD Production Date: Mar 17, 2016
 Production Method: Hot Expansion Product Heat Treatment: As Rolled Certificate No.: MTR- 002137
 Product Standards: ASME B36.10M-2015, ASTM/ASME A106-2014/SA106-2013 Grade B NDE, A53-2012/SA53-2013 Grade B Type S, NACE MR0175-2009 MR0103-2012

Product Markings
 NPS 30 STD 0.375 INCHWT SMLS 2016/03 NDE 550PSI
 HEAT BSM-2692 (PIPE # LENGTH MASS) 118.6lb/ft ASTM/ASME A/SA106 GR B A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA



Product: Details				Non-Destructive Testing											
Heat	Test Type	Product Size	Product Method	Pieces	Length	Mass lb/ft	Geiger μR/hr	Res. Mag. Gauss	Visual Insp.	OD	UT WT	UT Pass	ET	HydroTest	End Condition
BSM-2692	Heat	NPS 30 STD 0.375in. WT		10	DRL	118.6	<5	<10	Pass	Pass	ASTM E213	N12.5 Pass	ASTM E309	550 PSI/ 5 s	35° Bevel

Chemical Analysis (wt%)																
Heat	Steelmaking Method	C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	CE(IIW)	CE(IIW)Max	CE(CSA)
BSM-2692	Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed	0.17	1.21	0.016	0.004	0.29	0.03	0.01	0.01	0.01	0.050	0.001	0.001	0.0005	0.39	0.39
		0.17	1.25	0.014	0.005	0.29	0.03	0.01	0.01	0.01	0.054	0.003	0.001	0.0003	0.40	0.40
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Mechanical Properties									
Heat	Test Type	Microstructure	Hardness	Flattening Test	Tension Test 2 in. GL	Yield (Rt0.5) psi	Tensile (Rm) psi	Y/T (Rt0.5/Rm)	Elongation (A) %
BSM-2692	Heat	Ferrite & Pearlite	80 HRBW	Pass	Longitudinal; 1.5 in. x WT	52 500	74 500	0.70	43

Heat	Test Standard	Impact Test Sample Details	Temp °C	Impact Energy Min. (J) (3 Tests) AVG	Impact Energy (J) (3 Tests) AVG	Shear (%) (3 Tests) AVG	Lateral Expansion (mm) (3 Tests) AVG
BSM-2692	-	-	-	-	-	-	-

Additional Details:

✓ We hereby certify that this pipe product was manufactured, sampled, tested and inspected by Bri-Steel Manufacturing in accordance with ASTM/ASME A106-2014/SA106-2013, A53-2012/SA53-2013, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008, API Q1, and PED 97/23/EC.

✓ This pipe product meets the sour service requirements of NACE MR0175/ISO 15156-2:2009 Annex A2 for Region 3 Sour Service, and NACE MR0103-2012 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:

T. Lam *March 22/2016*

Tonya Lam, P. Tech (Eng.)
 Assistant QA Manager