



Mill Test Certificate

Bri-Steel Manufacturing
 2125-64 Avenue, Edmonton, AB Canada T6P 1Z4
 Tel: 001 (780) 459-6603
 Fax: 001 (780) 459-6986
 www.bri-steel.com

Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-3093 Product Size: NPS 30 SCH 30 Production Date: Mar 21, 2017
 Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 003257

Product Standards: ASME B36.10M-2015, ASTM/ASME A106-2014/SA106-2015 Grade B NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015

Product Markings



NPS 30 SCH 30 0.625 INCHWT SMLS 2017/03 NDE 900PSI
 HEAT BSM-3093 (PIPE # LENGTH MASS) 196.32lb/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	Pieces	Length	Mass lb/ft	Geliger $\mu R/hr$	Res. Mag. Gauss	Visual Insp.	OD	UT (WT) ASTM E114	UT ASTM E213	ET ASTM E309	HydroTest 900PSI/ 5 s	End Condition
BSM-3093	Heat	NPS 30 SCH 30 0.625in. WT	3	DRL	196.32	<5	<10	Pass	Pass	Pass	N12.5 Pass	-	Pass	35° Bevel

Heat	Test Type	Steelmaking Method	Test Type	Chemical Analysis (wt%)															
				C	Mn	P	S	Si	Cr	Cu	Mo	Ni	V	Ti	Nb	B	CE(IIW)	CE(IIIW)Max	CE(CSA)
				Heat	0.17	1.11	0.012	0.002	0.32	0.05	0.01	0.01	0.01	0.01	0.054	0.002	0.001	0.0004	0.38
BSM-3093	Blast Furnace; EAF; Ladle Refining; Vacuum Degass; Fully Killed		Product	0.17	1.12	0.011	0.005	0.34	0.06	0.01	0.01	0.01	0.057	0.002	0.001	0.0004	0.38	-	0.38

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-3093	Heat	Ferrite & Pearlite	81 HRBW	Pass	Longitudinal; 1.5 in. x WT	52 000	78 000	0.67	48

Heat	Test Standard	Result	Impact Test Sample Details	Temp °C	Impact Energy Min. (J)	Impact Energy Results (J)	Shear (%)	Lateral Expansion (mm)
BSM-3093	-	-	-	-	(3 Tests) AVG	(3 Tests) AVG	(3 Tests) AVG	(3 Tests) AVG

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/SA106-2015, A53-2012/SA53-2015, and the purchase order requirements, and that the results meet the corresponding requirements. Bri-Steel Manufacturing is registered and certified to ISO-9001:2008 (APIQR-1584), API Q1, and PED 2014/68/EU.

- ✓ 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/ISO 17495:2015 Section 13.1

- ✓ 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 MTR 123/2017

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