



Bri-Steel Manufacturing
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Mill Test Certificate

Product: Seamless Carbon Steel Pipe Product Heat Number: BSM-2900 Product Size: NPS 24 STD Production Date: Sep 28, 2016
 Production Method: Hot Expansion Product Heat Treatment: Normalizing Forming Certificate No.: MTR- 002982
 Product Standards: ASME B36.10M-2015, ASTM/ASME A106-2014/SA106-2015 Grade B/C NDE, A53-2012/SA53-2015 Grade B Type S, NACE MR0175/ISO 15156-2:2009 MR0103/ISO 17495:2015

Product Markings
 NPS 24 STD 0.375 INCHWT SMLS 2016/09 NDE 750PSI
 HEAT BSM-2900 (PIPE # LENGTH MASS) 94.62lb/ft ASTM/ASME A/SA106 GR B/C A/SA53 GR B NACE MR0175/MR0103 MADE IN CANADA



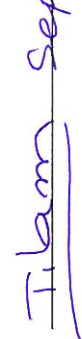
| Product: Details | | Non-Destructive Testing | | | | | | | | | | | | |
|------------------|-----------|-------------------------|--------|--------|------------|--------------|-----------------|--------------|------|-------------------|----|----|-----------|---------------|
| Heat | Test Type | Product Size | Pieces | Length | Mass lb/ft | Geiger µR/hr | Res. Mag. Gauss | Visual Insp. | OD | UT (WT) ASTM E114 | UT | ET | HydroTest | End Condition |
| BSM-2900 | Heat | NPS 24 STD 0.375in. WT | 7 | DRL | 94.62 | <5 | >10 | Pass | Pass | N12.5 Pass | - | - | Pass | 30° Bevel |

| Chemical Analysis (wt%) | | | | | | | | | | | | | | | | | |
|-------------------------|--|-----------|------|------|-------|-------|------|------|------|------|------|-------|-------|-------|---------|------------|---------|
| Heat | Steelmaking Method | Test Type | C | Mn | P | S | Si | Cr | Cu | Mo | Ni | V | Ti | Nb | CE(IIW) | CE(IIW)Max | CE(CSA) |
| BSM-2900 | Blast Furnace; EAF; Ladle Refining; Vacuum Degas; Fully Killed | Heat | 0.21 | 0.91 | 0.010 | 0.004 | 0.24 | 0.03 | 0.01 | 0.01 | 0.01 | 0.001 | 0.002 | 0.001 | 0.0002 | 0.37 | 0.38 |
| | | Product | 0.24 | 0.91 | 0.014 | 0.005 | 0.25 | 0.03 | 0.01 | 0.01 | 0.01 | 0.001 | 0.003 | 0.001 | 0.0002 | 0.40 | 0.41 |
| | | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Mechanical Properties | | | | | | | | | |
|-----------------------|-----------|--------------------|----------|-----------------|----------------------------|---------------|--------------|----------------|------------------|
| Heat | Test Type | Microstructure | Hardness | Flattening Test | Tension Test | Yield (RT0.5) | Tensile (Rm) | Y/T (RT0.5/Rm) | Elongation (A) % |
| BSM-2900 | Heat | Ferrite & Pearlite | 78 HRBW | Pass | Longitudinal; 1.5 in. x WT | 45 500 | 76 000 | 0.60 | 44 |

| Heat | Test Standard | Result | Impact Test Sample Details | Temp °C | Impact Energy Min. (J) (3 Tests) AVG | Impact Energy Results (J) (3 Tests) AVG | Shear (%) (3 Tests) AVG | Lateral Expansion (mm) (3 Tests) AVG |
|----------|---------------|--------|----------------------------|---------|--------------------------------------|---|-------------------------|--------------------------------------|
| BSM-2900 | - | - | - | - | - | - | - | - |

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:

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