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Sandvik Materials Technology

Product Area Tube P.O. Box 1220 Scranton PA USA 18501 570-585-7500

200926033

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SANDVIK DE MEXICO GAISA FORWARDING INC

TLALNEPANTLA, EDO MEXICO LAREDO TX

Customer Order No: 450888 Certification Date: 20090819

Sandvik Order No: 81759/19

Work Order/Lot: 524099

ASTM A312-08a, ASME SA-312, ASTM A376-06, ASME SA-376, ASME Section II 2007 Edition, 2008 Addenda, NACE MR0175 / ISO 15156 First edition 2003-12-15, (Austenitic)

Hot Finished PROCESS ANNEALED AND PICKLED Seamless Pipe

Type TP316/TP316L (UNS S31600/S31603) 2" SCH 40 Size:

Heat:

Material Manufacturer: Pennsylvania Extruded Tube Co. USA ANALYSIS %

C Si Mn CrΝi .008 .39 Heat 1.67 .034 .011 17.01 11.27 Prod .009 .40 1.70 .036 .011 17.05 11.47 Fe Mo \mathtt{Al} Pb

.003 2.06 Heat Prod 2.07 .004

Mechanical Tests:

Yield Strength Tensile Elongation Reduction 1.0% Of Area Strength in % MPa psi MPa E2" E10" MPa E4dE5d psi psi 49200 339.3 87900 606.2 39 N/AN/A N/A N/A

Hardness Test Results: 77HRB, 81HRB

Hydrostatic Test (psi): 2000

Flattening Test per ASTM A999: Acceptable Tensile Test sample width (1=Full-Size 2=1/2" Strip): 2

This Material complies with DFARS 252.225-7014 & Alternate 1

Corrosion Test per ASTM A262 Pr.E: Acceptable

Country Of Origin: United States

This Material complies with FAR BAA (FAR 52.225-1)

This Material complies with DFARS BAA (DFARS 252.225-7001)

and FAR TAA(FAR 52.225-5)

All material subjected to a final solution annealing heat treatment with material at a temperature of 1900 deg. F minimum followed by rapid quenching.

The material has not come in contact with Mercury or Mercury

containing compounds.

No welding has been performed on this material.

Material has been manufactured/supplied in accordance

with Sandvik Materials Technology Quality Manual Standard
Products Revision 10 dated May 29, 2007. Quality system
has been approved to ISO 9001:2000. Certificate produced in accordance with EN 10204 3.1 (formerly EN 10204 3.1.B)
Melt Source: AB Condition

Melt Source: AB Sandvik MT, Sweden
Melt Method: Electric Arc Furnace-AOD Refining

This is to certify that the contents of this certificate the 2010

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are correct and accurate as contained in Sandvik's records, and that all above test results and operations performed are in compliance with the requirements of the purchase order and the specification(s) listed above.

Electronically Generated Certificate-Valid without signature Audrey Kakareka, Quality Engr. 10 (STKA312/376 R28) (32) (US36542)