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Sandvik Materials Technology

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

200916969

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Sold To: 632580

SANDVIK DE MEXICO

TLALNEPANTLA, EDO MEXICO

Customer Order No: 450867

Sandvik Order No: 77087/9 Work Order/Lot: 524309

Ship To:

GAISA FORWARDING INC

LAREDO TX

Certification Date: 20090526

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

Size: 2 1/2" SCH 40 Type TP316/TP316L (UNS S31600/S31603)

Heat: 519988

Material Manufacturer: Pennsylvania Extruded Tube Co. USA

ANALYSIS %

	C	Si	Mn	₽	S	Cr	Ni
Heat	.013	.39	1.70	.026	.009	17.05	11.20
Prod	.012	.40	1.70	.028	.008	17.05	11.17
	Fe	Mo	Al	Pb			

.005 2.03 Heat Prod 2.01 .004

Mechanical Tests:

Yield Strength				Tensile		Elongation			Reduction	
0.2%		1.0%		Strength		in %			Of Area	
psi	MPa	psi	MPa	psi	MPa	E2"	E10"	E4d	E5d	%
39400	271.7	N/A		88200	608.3	52	N/A	N/A	N/A	N/A

Hardness Test Results: 77HRB, 78HRB

Hydrostatic Test (psi): 2200

Flattening Test per ASTM A999: Acceptable

Tensile Test sample width (1=Full-Size 2=1/2" Strip): 2

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.

PLEASA ANAHUAC Y CIAS. S.A. DE C.V. Certificate produced in accordance with EN 10204 3.1

(formerly EN 10204 3.1.B)

Melt Source: AB Sandvik MT, Sweden

Melt Method: Electric Arc Furnace-AOD Refining CONTROL DE CALIDAD

This is to certify that the contents of this certificate

are correct and accurate as contained in Sandvik's records,

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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 R27) (32) (US36542)