

May 20, 2004
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MXVC
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No. 200459375

M A T E R I A L C E R T I F I C A T E

Sandvik Materials Technology, Tubular Products Area
P.O. Box 1220, Scranton, PA USA 18501, Ph: 570-585-7500
Plant Location: 982 Griffin Pond Road, Clarks Summit, PA 18411

Sold To: 632580

Ship To:

SANDVIK DE MEXICO
TLALNEPANTLA, EDO MEXICO
Customer Order No: 450540
Sandvik Order No: 30030/8
Work Order/Lot: 513293

GAISA FORWARDING INC
LAREDO TX
Certification Date: 20040412

ASTM A312-03, ASME SA-312, ASME Section II, 2001 Edition; 2003 Addenda
NACE MR0175-2000 (Austenitic)

Hot Finished PROCESS ANNEALED AND PICKLED Seamless Pipe

Type TP316/TP316L (UNS S31600/S31603)

Size: 2" SCH 40

Heat: 501781

ANALYSIS %

	C	Si	Mn	P	S	Cr	Ni
Heat	.020	.44	1.65	.026	.009	17.09	11.33
Prod	.020	.44	1.65	.027	.006	17.09	11.35
	Fe	Mo	Al	Pb			
Heat		2.02	.003				
Prod		2.02	.003				

Mechanical Tests:

Yield Strength				Tensile Strength		Elongation in %				Reduction Of Area %
0.2%		1.0%								
psi	MPa	psi	MPa	psi	MPa	E2"	E10"	E4d	E5d	
38900	268.3	N/A		83900	578.6	48	N/A	N/A	N/A	N/A
38500	265.5			82300	567.6	50				

Hardness Test Results: 78HRB, 80HRB

Hydrostatic Test (psi): 2070

Flattening Test per ASTM A530: Acceptable

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

Corrosion Test per ASTM A262 Pr.E, MIL-P-24691/3 and

MIL-P-1144D. No. samples: 1 Result: Acceptable

Country Of Origin: United States

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 6 dated October 9, 2003. Quality system has been approved to ISO 9001:2000.

Certificate produced in accordance with EN 10204 (DIN 50049) 3.1.B.

This is to certify that the contents of this certificate 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.

Kurt Revak, Quality Specialist
30 (STKA312 R15) (32) (DP)

Kurt M. Revak
Authorized Representative