

Oct 15, 2004
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No. 200477272

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

GAISA FORWARDING INC
LAREDO TX

Customer Order No: \50565
Sandvik Order No: 42108/11
Work Order/Lot: 513866

Certification Date: 20040913

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: 502478

ANALYSIS %

	C	Si	Mn	P	S	Cr	Ni
Heat	.010	.39	1.64	.029	.009	16.84	11.19
Prod	.010	.39	1.63	.030	.006	16.85	11.17
	Fe	Mo	Al	Pb			
Heat		2.04	.004				
Prod		2.03	.003				

Mechanical Tests:

Yield Strength		Tensile Strength		Elongation in %				Reduction Of Area %	
0.2%	1.0%			E2"	E10"	E4d	E5d		
psi	MPa	psi	MPa	psi	MPa				
40100	276.6	N/A		87600	604.1	46	N/A	N/A	N/A
38900	268.3			84100	580.0	48			

Hardness Test Results: 80HRB, 81HRB

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

100% Positive Material Identification performed.

All material subjected to a final solution annealing heat treatment with material at a temperature of 1900 deg.F. minimum followed by rapid quenching to below 800 deg.F in less than three (3) minutes.

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) (DDT)

Authorized Representative