



CERTIFICATE

No. A/03-249923 Rev 00
 Date 2003-09-17 Page 1/2

INSPECTION CERTIFICATE acc to
 EN 10 204 3.1.B

SANDVIK DE MEXICO S.A. DE C.V.
 VIA GUSTAVO BAZ 352
 COL.LA LOMA
 TLALNEPANTLA EDO.DE MEXICO
 CP 54060 MEXICO

INSPECTION STAMP
 QA-TUBE

Customer References	Customer order	Sandvik References
560-00991	2003-09-09	Order No. Subs No. ABSMT Dispatch note 80324 20748/54 ABSMT No. C.Code 300-30414 68

Material description	Steel/material Designations
SEAMLESS STAINLESS COLD FINISHED PIPE	Sandvik AISI 3R65 TP316/TP316L
Steel making process	
Electric furnace	

Technical requirements
 ASTM A-312-01, ASME SA-312-ED-01 AD-02
 NACE MR 01-75

EXTENT OF DELIVERY

It	Product designation	Heat	Lot	Pieces	Kg	M
09	TST-316L-1/2-SCH40 21.34 X 2.77	459867	42390	90	729.0	602.47
				Total	90	729.0 602.47

TEST RESULTS

Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
459867	0.014	0.40	1.63	0.032	0.008	16.84	11.18	2.02
	Co	Cu	N					
459867	0.088	0.34	0.069					

Tensile test at room temperature

Lot	Yield strength	Tensile strength	Elongation
	N/mm2	N/mm2	%
42390	Rp0.2	Rm	2"
	373	642	54
	390	647	51
	414	667	49

Leak test: Eddy current test acc to Practice E426 with drilled hole as reference standard on all tubes, with the exception of those lots which have been hydrostatically tested.

Hardness test

	Min	Max
Lot	HRB	HRB
42390	85.0	89.0

Following controls/tests have been satisfactorily performed:

- Flattening test
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Material Identification.
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed and quenched.

The number of tests are based on the size of the manufacturing lot before cutting to finished lengths.

The delivered products comply with the specifications and requirements of the order.

The material is manufactured according to a Quality system, approved and registered to ISO 9001.

The certificate is produced with EDP and valid without signature