

INSPECTION CERTIFICATE acc to
EN 10 204 3.1.BSANDVIK DE MEXICO S.A. DE C.V.
VIA GUSTAVO BAZ 352
COL.LA LOMA
TLALNEPANTLA EDO.DE MEXICO
CP 54060 MEXICOINSPECTION STAMP
QA-TUBE

Customer References	Customer order	Sandvik References	Order No.	Subs No.	ABSMT Dispatch note
560-00991	2003-02-13	ABSMT No.	300-10741	80304	40915/54
		C.Code		68	

Material description
SEAMLESS STAINLESS COLD FINISHED
PIPE

Steel making process
Electric furnace

Steel/material Designations

Sandvik	AISI
3R65	TP316/TP316L

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
01	TST-316L-3/4-SCH40 26.67 X 2.87	458250	36964	17	173.0	104.53
				Total	17	173.0 104.53

TEST RESULTS**Chemical composition (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
458250	0.011	0.36	1.67	0.030	0.009	16.76	11.20	2.03
	Co	N						
458250	0.088	0.062						

Tensile test at room temperature

Lot	Yield strength		Tensile strength		Elongation
	N/mm2	Rp0.2	N/mm2	Rm	%
36964	319		601		58
	287		606		58
	345		593		59

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
36964	74.0	80.0

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 9002.

The certificate is produced with EDP and valid without signature