

INSPECTION CERTIFICATE acc to  
EN 10 204 3.1

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		Sandvik References		
STOCK	Customer order 2009-05-28	Order No.	Subs No. 81097	ABSMT Dispatch note 26620/54
560-00991 SANDMEX		ABSMT No. 300-93516	C.Code 68	

Material description	Steel/material Designations
SEAMLESS STAINLESS HOT FINISHED PIPE	Sandvik AISI 3R65 TP316/TP316L AFNOR Z6CND17-11/Z2CND17-12
Steel making process Electric furnace	<div style="border: 1px solid black; padding: 5px; transform: rotate(-5deg);"> <p>PLEASA ANAHUAC Y CIAS. S.A. DE C.V. CONTROL DE CALIDAD</p> <p>FECHA 26 Ene 2010 C000195 FIRMA [Signature]</p> </div>

Technical requirements
ASTM A-312-07, ASME SA-312-ED-07 AD-08 NACE MR0175/ISO 15156-3:2003 NEA 49-117-09/85, tolerances and leak test acc. to ASTM A312-07

EXTENT OF DELIVERY						
It	Product designation	Heat	Lot	Pieces	Kg	M
26	TST-E-316L-4-SCH40 114.30 X 6.02	522196	48591	3	297.0	18.00
				Total	3	297.0 18.00

TEST RESULTS									
Chemical composition (weight%)									
Heat	C	Si	Mn	P	S	Cr	Ni	Mo	
522196	0.015	0.38	1.60	0.027	0.009	16.76	11.19	2.05	
	N								
522196	0.060								

Chemical composition, product (weight%)									
Heat	C	Si	Mn	P	S	Cr	Ni	Mo	
522196	0.017	0.39	1.60	0.029	0.009	16.74	11.21	2.05	
	N								
522196	0.062								

Tensile test at room temperature						
Lot	Yield strength		Tensile strength		Elongation	
	MPa	Rp0.2	MPa	Rm	%	%
48591	270		596		48	48

**Hydrostatic test**

Lot	Sec	MPa
48591	6	13.0

**Hardness test**

Lot	Min HRB	Max HRB
48591	77.0	80.0

**Following controls/tests have been satisfactorily performed:**

- Flattening test
- Ring expansion test
- Flaring test
- PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- 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.