



CERTIFICATE

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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		
	Customer order	Order No.	Subs No.	ABSMT Dispatch note
	2009-07-31		81112	31083/54
560-00991		ABSMT No.	C.Code	
		300-96767	68	
Material description SEAMLESS STAINLESS HOT FINISHED PIPE		Steel/material Designations:		
		Sandvik	AISI	
		3R65	TP316/TP316L	
		AFNOR		
		Z6CND17-11/Z2CND17-12		
Steel making process Electric furnace				

Technical requirements

ASTM A-312-08, ASME SA-312-ED-07 AD-08
NACE MR0175/ISO 15156-3:2003
NFA 49-117-09/85, tolerances and leak test acc. to ASTM A312/A999

EXTENT OF DELIVERY

It	Product designation	Heat	Lot	Pieces	Kg	M
14	TST-E-316L-3-SCH40 88.90 X 5.49	522465	50053	20	1427.0	124.05
				Total	20	1427.0 124.05

TEST RESULTS

Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
522465	0.014	0.39	1.70	0.031	0.011	16.79	11.34	2.06
	N							
522465	0.060							

Chemical composition, product (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
522465	0.013	0.39	1.71	0.030	0.009	16.83	11.36	2.06
	N							
522465	0.055							

Tensile test at room temperature

Lot	Yield strength		Tensile strength		Elongation	
	MPa	MPa	MPa	%	%	%
	Rp0.2		Rm		A 2"	
50053	267		615		48 47	

Quality assurance - Per Eriksson/ QA-manager Tube & Pipe
MTC Service / Certificates



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Hardness test

	Min	Max
Lot	HRB	HRB
50053	75.0	77.0

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
- Leak test: Eddy current test acc to ASME SA-999.
- 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.