

**CERTIFICATE****No. A/13-319958****Rev 00****Date 2013-03-12****Page 1/2**INSPECTION CERTIFICATE acc to
EN 10 204 3.1Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDENINSPECTION STAMP
QA-TUBE

Customer References		Sandvik References	
712575	Customer order 2013-03-12	Order No. 324734	Subs No. 546204
003-00991	ITEMS	ABSMT No. 300-82444	ABSMT Dispatch note 43957/54
		C.Code 68	

Material description	Steel/material Designations
SEAMLESS STAINLESS COLD FINISHED PIPE	Sandvik AISI 3R12 TP304/TP304L EN no 1.4306
Steel making process Electric furnace	

Technical requirements
ASTM A-312-09, ASME SA-312-ED-10 AD-11A NACE MR0175/ISO 15156-3:2009 PED 97/23/EC EN 10216-5 TC1 TOLERANCES ACC. ASTM A312

EXTENT OF DELIVERY								
It	Product designation		Heat	Lot	Pieces	Kg	M	
01	TST-3R12-1/2-SCH40		533554	49828	1	7.0	6.00	
	21.34 X 2.77							
					Total	1	7.0	6.00
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	N
533554	0.010	0.35	1.19	0.028	0.007	18.35	10.10	0.049
Chemical composition, product (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	N
533554	0.010	0.35	1.19	0.027	0.005	18.46	10.10	0.045
Tensile test at room temperature								
		Yield strength		Tensile strength		Elongation		
		MPa	MPa	MPa		%	%	
Lot		Rp0.2	Rp1.0	Rm		A	2"	
49828		323	366	624		52	56	
Quality assurance - Per Eriksson / QA-manager								
MTC Service / Certificates								

**Hardness test**

	Min	Max
Lot	HRB	HRB
49828	78	80

Following controls/tests have been satisfactorily performed:

- Flattening test.
- Ring expansion test
- PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Leak test: Eddy current test acc to EN 10246-2 and ASTM Pr.E426 with drilled hole as reference standard in lieu of hydrostatic test.
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed and quenched.

The raw material is free from radioactive contamination.

Material free from mercury contamination.

Approved acc. AD 2000-Merkblatt W0 and certified acc. to Pressure Equipment Directive (97/23/EC) by TUEV NORD; notified body, reg.no. 0045.

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 9001:2008.

The certificate is produced with EDP and valid without signature.