



CERTIFICATE

No. A/12-231719

Rev 00

Date 2012-02-28

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INSPECTION CERTIFICATE acc to
EN 10 204 3.1

Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDEN

INSPECTION STAMP
QA-TUBE

Customer References		Sandvik References		
711154	Customer order 2012-02-28	Order No. 281601	Subs No. 521453	ABSMT Dispatch note 16035/54
003-00991	ITEMS	ABSMT No. 300-61119	C.Code 68	

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

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

EXTENT OF DELIVERY						
It	Product designation	Heat	Lot	Pieces	Kg	M
02	TST-3R12-1/2-SCH40 21.34 X 2.77	530793	35072	1	7.0	5.98
				Total	1	7.0
					7.0	5.98

TEST RESULTS

Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	N
530793	0.007	0.38	1.14	0.024	0.007	18.23	10.07	0.052

Chemical composition, product (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	N
530793	0.009	0.39	1.13	0.027	0.006	18.27	10.08	0.046

Tensile test at room temperature

Lot	Yield strength		Tensile strength		Elongation	
	MPa	MPa	MPa		%	%
35072	Rp0.2	Rp1.0	Rm		A	2"
	295	343	612		51	55

Quality assurance - Per Eriksson / QA-manager
MTC Service / Certificates

**Hardness test**

	Min	Max
Lot	HRB	HRB
35072	80	84

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.

The certificate is produced with EDP and valid without signature.