

**CERTIFICATE****No. A/13-318250****Rev 00****Date 2013-03-05****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	
712502	Customer order 2013-02-21	Order No. 322480	Subs No. 544990
003-00991 ITEMS		ABSMT No. 300-81456	ABSMT Dispatch note 42788/54
		C.Code 46	

Material description	Steel/material Designations
SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING	Sandvik SS 3R60 2353
Steel making process Electric furnace	

Technical requirements
SS 219713 Condition No -24

EXTENT OF DELIVERY						
It	Product designation	Heat	Lot	Pieces	Kg	M
01	THT-3R60-12-1.5 12.00 X 1.50	534365	53981	35	83.0	210.00
Total				35	83.0	210.00
TEST RESULTS						
Chemical composition (weight%)						
Heat	C	Si	Mn	P	S	Cr
534365	0.016	0.34	1.72	0.030	0.009	17.44
	N					Ni
534365	0.045					13.17
						Mo
						2.55
Chemical composition, product (weight%)						
Heat	C	Si	Mn	P	S	Cr
534365	0.016	0.35	1.71	0.031	0.008	17.49
	N					Ni
534365	0.044					13.21
						Mo
						2.56
Tensile test at room temperature						
Yield strength			Tensile strength		Elongation	
MPa			MPa		%	
Rp0.2			Rm		A	
Lot	Rp1.0					
53981	291	329	565		54	

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

**Hardness test**

Lot	HRB	
53981	76	76
	78	77

Following controls/tests have been satisfactorily performed:

- Flattening test.
- PMI-test.
- Intergranular corrosion test acc. to EN ISO3651-2, Method A.
- Leak test: Eddy current test acc to SS 114301/114305 E1
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed and quenched.

The raw material is free from radioactive contamination.

Material free from mercury contamination.

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.