



CERTIFICATE

No. A/12-294423

Rev 00

Date 2012-11-20

Page 1/2

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		
712084	Customer order 2012-11-09	Order No. 311432	Subs No. 538590	ABSMT Dispatch note 35539/54
003-00991	ITEMS	ABSMT No. 300-75910	C.Code 46	

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

Technical requirements SS 219713 Condition No -24
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EXTENT OF DELIVERY								
It	Product designation	Heat	Lot	Pieces	Kg	M		
01	THT-3R60-8-1 8.00 X 1.00	532624	45845	10	11.0	60.00		
				Total	10	11.0	60.00	
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
532624	0.016	0.42	1.60	0.029	0.008	17.27	13.13	2.53
	N							
532624	0.043							
Chemical composition, product (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
532624	0.018	0.44	1.62	0.031	0.008	17.45	13.27	2.57
	N							
532624	0.043							
Tensile test at room temperature								
	Yield strength		Tensile strength		Elongation			
	MPa	MPa	MPa			%		
Lot	Rp0.2	Rp1.0	Rm			A		
45845	294	329	566			54		

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

**Hardness test**

Lot	HRB	
45845	72	73
	70	73

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.