

**CERTIFICATE****No. A/10-957351****Rev 00****Date 2010-04-20****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		
708544	Customer order 2010-04-12	Order No. 192779	Subs No. 169824	ABSMT Dispatch note 03179/54
003-00991	ITEMS	ABSMT No. 300-20383	C.Code 46	

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

Technical requirements
SS 219713 Condition No -24

EXTENT OF DELIVERY						
It	Product designation	Heat	Lot	Pieces	Kg	M
02	THT-3R60-20-2.5 20.00 X 2.50	524290	57281	30	194.0	180.00
				Total	30	194.0 180.00

TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
524290	0.016	0.39	1.66	0.031	0.007	17.23	13.16	2.53
		N						
524290	0.048							

Tensile test at room temperature					
Lot	Yield strength		Tensile strength		Elongation
	MPa	MPa	MPa		%
	Rp0.2	Rp1.0	Rm		A
57281	296	340	587		53
	283	327	588		54
	284	327	591		53

**Following controls/tests have been satisfactorily performed:**  
- Ring expansion test**Quality assurance - Per Eriksson/ QA-manager Tube & Pipe**  
**MTC Service / Certificates**



- 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 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.