



CERTIFICATE

No. A/10-974181

Rev 00

Date 2010-06-17

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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		
708782	Customer order 2010-06-10	Order No.	Subs No.	ABSMT Dispatch note
003-00991	ITEMS	200809	176139	09086/54
		ABSMT No.	C.Code	
		300-23811	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-3R60-20-2.5 20.00 X 2.50	524890	59893	84	545.0	504.00
				Total	84	545.0 504.00

TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
524890	0.018	0.39	1.64	0.026	0.008	17.32	13.03	2.51
	N							
524890	0.038							

Tensile test at room temperature				
Lot	Yield strength		Tensile strength	Elongation
	MPa	MPa	MPa	%
	Rp0.2	Rp1.0	Rm	A
59893	281	323	590	55
	283	324	589	53
	280	323	587	54
	284	325	585	56

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.