



CERTIFICATE

No. A/11-167213

Rev 00

Date 2011-05-30

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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		
710135	Customer order 2011-05-24	Order No. 246208	Subs No. 504483	ABSMT Dispatch note 40442/54
003-00991	ITEMS	ABSMT No. 300-44612	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-3R60-20-2.5 20.00 X 2.50	527748	24863	20	131.0	120.00
				Total	20	131.0 120.00

TEST RESULTS									
Chemical composition (weight%)									
Heat	C	Si	Mn	P	S	Cr	Ni	Mo	
527748	0.021	0.37	1.69	0.028	0.008	17.14	13.14	2.53	
	N								
527748	0.039								

Tensile test at room temperature					
Lot	Yield strength		Tensile strength		Elongation
	MPa	MPa	MPa		%
	Rp0.2	Rp1.0	Rm		A
24863	275	316	589		53
	274	313	584		57
	276	315	589		57

Following controls/tests have been satisfactorily performed:
- Ring expansion test

Quality assurance - Ulrik Rodling / 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.