

**CERTIFICATE**

No. A/11-130578 Rev 00
Date 2011-01-20 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						
709511	Customer order 2010-12-08	Order No. 223970	Subs No. 193995 ABSMT No. C.Code 300-34008 46					
003-00991 ITEMS		ABSMT Dispatch note 27796/54						
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								
EXTENT OF DELIVERY								
It	Product designation	Heat	Lot	Pieces	Kg	M		
01	THT-3R60-16-2 16.00 X 2.00	047659	95470	65	275.0	390.00		
				Total	65	275.0 390.00		
KEY TO HEAT		KEY TO LOT						
Heat Code	Heat No.	Lot Code	Lot No.					
047659	525856	95470	4847893/1-1					
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
047659	0.019	0.39	1.61	0.032	0.009	17.31	13.20	2.54
	N							
047659	0.035							
Quality assurance - Per Eriksson/ QA-manager Tube & Pipe								
MTC Service / Certificates								

**Tensile test at room temperature**

	Yield strength		Tensile strength	Elongation
	MPa	MPa	MPa	%
Lot	Rp0.2	Rp1.0	Rm	A
95470	272	313	563	57
	281	296	563	59
	271	322	554	56
	278	301	577	60

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 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.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO A101587