



**CERTIFICATE**

**No. A/14-434474**

**Rev 00**

**Date 2014-07-28**

**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

<b>Customer References</b>		<b>Sandvik References</b>	
750571	Customer order 2014-06-10	Order No. 372410	Subs No. 573106 ABSMT No. 300-14999
003-00991	ITEMS	ABSMT Dispatch note 28000/54	C.Code 46

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

<b>Technical requirements</b> SS 219713 Condition No -24
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<b>EXTENT OF DELIVERY</b>						
<b>It</b>	<b>Product designation</b>	<b>Heat</b>	<b>Lot</b>	<b>Pieces</b>	<b>Kg</b>	<b>M</b>
01	THT-3R60-20-2.5 20.00 X 2.50	537372	22630	84	551.0	504.00
				<b>Total</b>	84	551.0 504.00

<b>TEST RESULTS</b>								
<b>Chemical composition (weight%)</b>								
<b>Heat</b>	<b>C</b>	<b>Si</b>	<b>Mn</b>	<b>P</b>	<b>S</b>	<b>Cr</b>	<b>Ni</b>	<b>Mo</b>
537372	0.020	0.40	1.63	0.030	0.012	17.18	13.09	2.53
	<b>N</b>							
537372	0.040							

<b>Tensile test at room temperature</b>					
	<b>Yield strength</b>		<b>Tensile strength</b>		<b>Elongation</b>
	<b>MPa</b>	<b>MPa</b>	<b>MPa</b>		<b>%</b>
<b>Lot</b>	<b>Rp0.2</b>	<b>Rp1.0</b>	<b>Rm</b>		<b>A</b>
22630	271	313	583		51
	266	309	584		55
	271	312	582		54
	271	313	585		52

**Following controls/tests have been satisfactorily performed:**  
- Flattening test.

**Quality assurance - Lars-Åke Bergqvist / QA-manager**  
**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 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.

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