



**CERTIFICATE**

**No. A/12-278570**

**Rev 00**

**Date 2012-09-14**

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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

<b>Customer References</b>		<b>Sandvik References</b>		
711839	Customer order 2012-09-03	Order No. 303255	Subs No. 533981	ABSMT Dispatch note 30754/54
003-00991	ITEMS	ABSMT No. 300-71857	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-3R60-16-2 16.00 X 2.00	533303	47476	120	505.0	720.00
				<b>Total</b>	120	505.0 720.00

<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>
533303	0.016	0.35	1.66	0.029	0.008	17.35	13.08	2.53
	<b>N</b>							
533303	0.033							

<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>
47476	263	304	558		55

<b>Hardness test</b>		
<b>Lot</b>	<b>HRB</b>	
47476	75	76
	75	74

**Quality assurance - Per Eriksson / QA-manager**  
**MTC Service / Certificates**

**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 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.

The certificate is produced with EDP and valid without signature.