



**CERTIFICATE**

**No. A/16-605884 Rev 00**  
**Date 2016-09-27 Page 1/2**

INSPECTION CERTIFICATE acc to  
EN 10204 3.1

Processkontroll Items AB  
Box 2088  
444 02 STORA HÖGA  
SWEDEN

INSPECTION STAMP  
QA-TUBE

<b>Customer References</b>		<b>Sandvik References</b>	
753812/HOLMGREN	Customer order 2016-09-05	Order No. 452769	Subs No. 615938
003-00991 ITEMS		ABSMT No. 300-51645	Dispatch note 29045/54
		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-3R60-16-2 16.00 X 2.00	048293	94570	43	179.0	258.00		
				<b>Total</b>	43	179.0 258.00		
<b>KEY TO HEAT</b>			<b>KEY TO LOT</b>					
<b>Heat Code</b>	<b>Heat No.</b>		<b>Lot Code</b>	<b>Lot No.</b>				
048293	545400		94570	183048				
<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>
048293	0.018	0.43	1.63	0.034	0.0009	17.36	13.08	2.62
	<b>N</b>							
048293	0.032							
<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>			
94570	262	296	561		46			
	241	280	556		45			
	264	297	559		44			

**Quality assurance - Lars-Åke Bergqvist / 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.

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The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO 183048