



**CERTIFICATE**

**No. A/16-567333**

**Rev 00**

**Date 2016-03-29**

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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>		
753027	Customer order 2016-02-15	Order No. 431788	Subs No. 604930	ABSMT Dispatch note 17594/54
003-00991	ITEMS	ABSMT No. 300-42259	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	048240	93593	50	209.0	300.00			
				<b>Total</b>	50	209.0	300.00		
<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>			
048240	544179				93593	181185			
<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>	
048240	0.019	0.46	1.60	0.031	0.009	17.30	13.07	2.53	
	<b>N</b>								
048240	0.044								
<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>					
93593	383	422	596	41					
	380	419	596	41					
	376	418	597	41					

**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.

No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of AB Sandvik Materials Technology. Unauthorized alterations to the Inspection Certificate, including introduction of false, fictitious or fraudulent statements or entries, may be punishable by fines, imprisonment, or both. This Inspection Certificate may be copied only in the manner and for the purposes specified in Section 6 of EN 10204:2004. Contravention of this notice will be prosecuted to the fullest extent of applicable law.

The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO 181185