

**CERTIFICATE****No. A/16-564108 Rev 00**  
**Date 2016-03-14 Page 1/2**INSPECTION CERTIFICATE acc to  
EN 10204 3.1Processkontroll Items AB  
Box 2088  
444 02 STORA HÖGA  
SWEDENINSPECTION STAMP  
QA-TUBE

<b>Customer References</b>		<b>Sandvik References</b>							
753122	Customer order 2016-03-02	Order No. 433643	Subs No. 605938						
003-00991 ITEMS		ABSMT No. 300-43077	Dispatch note 16845/54						
<b>Material description</b> SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING		<b>Steel/material Designations</b> Sandvik EN no 5R75 1.4571							
<b>Steel making process</b> Electric furnace									
<b>Technical requirements</b> PED 97/23/EC EN 10216-5 TC1 HRB MAX 90									
<b>EXTENT OF DELIVERY</b>									
It	Product designation	Heat	Lot	Pieces	Kg	M			
01	THT-5R75-16-2	048227	93580	24	103.0	144.00			
	16.00 X 2.00								
				Total	24	103.0 144.00			
<b>KEY TO HEAT</b>		<b>KEY TO LOT</b>							
Heat Code	Heat No.	Lot Code	Lot No.						
048227	543082	93580	181377						
<b>TEST RESULTS</b>									
<b>Chemical composition (weight%)</b>									
Heat	C	Si	Mn	P	S	Cr	Ni	Mo	
048227	0.031	0.43	1.22	0.027	0.007	16.72	12.12	2.03	
	Ti	N							
048227	0.32	0.015							
<b>Tensile test at room temperature</b>									
	<b>Yield strength</b>		<b>Tensile strength</b>		<b>Elongation</b>				
	MPa	MPa	MPa		%				
Lot	Rp0.2	Rp1.0	Rm		A				
93580	277	310	566		44				
	300	333	593		42				
	294	327	579		45				
<b>Quality assurance - Lars-Åke Bergqvist / QA-manager</b>									
<b>MTC Service / Certificates</b>									

**Hardness test**

	Min	Max
Lot	HRB	HRB
93580	79	80

**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 EN 10246-2
- Visual inspection and dimensional control.

**Heat Treatment:**

Solution annealed and quenched.

**Marking:**

SANDVIK 5R75 EN 10216-5 TC1 EN 10305-1 WNR 1.4571 EN 1.4571 H S 16.00 X 2.00 M  
M HT 543082 SG LOS 181377 MADE BY SANDVIK \*QA-TUBE\*

The raw material is free from radioactive contamination.

Material free from mercury contamination.

Approved acc. AD 2000-Merkblatt W0 and certified acc. to  
Pressure Equipment Directive (97/23/EC) by  
TUEV NORD; notified body, reg.no. 0045.

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 181377