

**CERTIFICATE****No. A/13-370290****Rev 00****Date 2013-10-22****Page 1/2**INSPECTION CERTIFICATE acc to
EN 10 204 3.1Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDENINSPECTION STAMP
QA-TUBE**Customer References**

713153

Customer
order
2013-08-30

003-00991 ITEMS

Sandvik ReferencesOrder No. Subs No. ABSMT Dispatch note
342831 556421 09707/54
ABSMT No. C.Code
300-91154 46**Material description**SEAMLESS STAINLESS COLD FINISHED
HYDRAULIC TUBING**Steel making process**
Electric furnace**Steel/material Designations**Sandvik SS
3R60 2353**Technical requirements**SS 219713
Condition No -24**EXTENT OF DELIVERY**

It	Product designation	Heat	Lot	Pieces	Kg	M
01	THT-3R60-16-2 16.00 X 2.00	047973	98853	75	318.0	450.00

Total	75	318.0	450.00
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KEY TO HEAT

Heat Code	Heat No.
047973	536054

KEY TO LOT

Lot Code	Lot No.
98853	175691

TEST RESULTS**Chemical composition (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
047973	0.018	0.38	1.75	0.030	0.007	17.27	13.18	2.54
	N							
047973	0.038							

Quality assurance - Ulrik Rodling / QA-manager
MTC Service / Certificates

**Tensile test at room temperature**

	Yield strength		Tensile strength	Elongation
	MPa	MPa	MPa	%
Lot	Rp0.2	Rp1.0	Rm	A
98853	246	287	557	40
	257	302	582	46
	246	287	557	48
	254	295	558	48

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 42509