

CERTIFICATE

Customer

2013-08-30

order

No. A/13-370290

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INSPECTION CERTIFICATE acc to EN 10 204 3.1

Processkontroll Items AB Box 2088 444 02 STORA HÖGA

INSPECTION STAMP

QA-TUBE

713153

Sandvik References

SWEDEN

Order No. Subs No. ABSMT Dispatch note

342831 556421 09707/54

ABSMT No. C.Code 300-91154 46

003-00991 ITEMS

Material description

Customer References

SEAMLESS STAINLESS COLD FINISHED

HYDRAULIC TUBING

Steel/material Designations

Sandvik SS 3R60 2353

Steel making process

Electric furnace

Technical requirements

SS 219713

Condition No -24

EXTENT OF DELIVERY

It Product designation Heat Lot Pieces Kg M

01 THT-3R60-16-2 047973 98853 75 318.0 450.00 16.00 X 2.00

Total 75 318.0 450.00

KEY TO HEAT KEY TO LOT

Heat No. Heat Code Lot Code Lot No.

047973 536054 98853 175691

TEST RESULTS

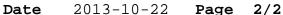
Chemical composition (weight%)

Heat C Si Mn P \mathtt{Cr} Νi Mo S 0.030 0.007 17.27 047973 0.018 0.38 1.75 13.18 2.54

N

047973 0.038

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





Tensile test		_	m	-1
	Yleid : MPa	strength MPa	Tensile strength MPa	Elongation %
			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