

**CERTIFICATE****No. V/13-041862 Rev 00**
Date 2013-10-10 Page 1/2INSPECTION CERTIFICATE acc to
EN 10 204 3.1Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDENINSPECTION STAMP
QA-TUBE

Customer References 713315	Sandvik References Order No. Subs No. Dispatch note 346982 130050 134145 Suppl. No C.Code 130050 15																																																																																															
Material description SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING Steel making process Electric furnace	Steel/material Designations Sandvik AISI 3R60 TP316/TP316L EN no 1.4435																																																																																															
Technical requirements ASTM A-213-11A AW, ASME SA-213-ED-10 AD-11A AW, ASTM A-269-10 NACE MR0175/ISO 15156-3:2009 PED 97/23/EC EN 10216-5 TC1 HRB MAX 80																																																																																																
EXTENT OF DELIVERY <table><thead><tr><th>It</th><th>Product designation</th><th>Heat</th><th>Lot</th><th>Kg</th><th>M</th></tr></thead><tbody><tr><td>02</td><td>THT-3R60-10-1.5</td><td>536266</td><td>17336</td><td>28.7</td><td>90.00</td></tr><tr><td></td><td>10.00 X 1.50</td><td></td><td></td><td></td><td></td></tr><tr><td colspan="4">Total</td><td>28.7</td><td>90.00</td></tr></tbody></table>		It	Product designation	Heat	Lot	Kg	M	02	THT-3R60-10-1.5	536266	17336	28.7	90.00		10.00 X 1.50					Total				28.7	90.00																																																																							
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Quality assurance - Ulrik Rodling / QA-manager MTC Service / Certificates																																																																																																

**Hardness test**

	Min	Max
Lot	HRB	HRB
17336	70	73

Following controls/tests have been satisfactorily performed:

- Flattening test.
- Flaring test
- PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Leak test: Eddy current test acc to EN 10246-2, ASME SA-1016.
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed at a temperature of Min 1040° C and quenched.

Marking:

SANDVIK 3R60 ASTM/ASME A/SA-213AW A-269 EN 10216-5 TC1 EN 10305-1 EN 1.4435 TP 316/316L COLD SMLS NDE 10.00 X 1.50 MM HT 536266 SS LOT 17336 MADE BY SANDVIK IN SWEDEN *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.

The certificate is produced with EDP and valid without signature.