



CERTIFICATE

No. A/12-286287 Rev 00
Date 2012-10-16 Page 1/2

INSPECTION CERTIFICATE acc to
EN 10 204 3.1

Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDEN

INSPECTION STAMP
QA-TUBE

Table with 2 columns: Customer References and Sandvik References. Includes order numbers, customer order details, and Sandvik order/subs numbers.

Table with 2 columns: Material description and Steel/material Designations. Includes material type (SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING) and designations (Sandvik, AISI, EN no).

Technical requirements
ASTM A-213-10A 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

Table titled 'EXTENT OF DELIVERY' showing columns for It, Product designation, Heat, Lot, Pieces, Kg, and M. Includes a total row.

Table titled 'TEST RESULTS' for 'Chemical composition (weight%)'. Columns include Heat, C, Si, Mn, P, S, Cr, Ni, Mo. Includes values for heat 533176.

Table titled 'Chemical composition, product (weight%)'. Columns include Heat, C, Si, Mn, P, S, Cr, Ni, Mo. Includes values for heat 533176.

Table titled 'Tensile test at room temperature'. Columns include Lot, Yield strength (MPa), Tensile strength (MPa), and Elongation (%).

Quality assurance - Per Eriksson / QA-manager
MTC Service / Certificates

**Hardness test**

| | Min | Max |
|------------|------------|------------|
| Lot | HRB | HRB |
| 46837 | 67 | 69 |

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 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 8.00 X 1.00 MM HT 533176 SS LOT 46837 MADE BY SANDVIK I N 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.