

## CERTIFICATE

No. A/13-343222 Rev 00

Date 2013-06-18 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

Customer References

Customer

2013-06-05

order

334278

551477

Order No. Subs No. ABSMT Dispatch note 01372/54

ABSMT No. C.Code 300-87007 46

Sandvik References

003-00991 ITEMS

712765

Material description SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING

Steel/material Designations Sandvik

3R60

SS 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-3R60-12-1 535645 58956 18 30.0 108.00

12.00 X 1.00

Total 18 30.0

TEST RESULTS

Chemical composition (weight%)

C Si Mn P S  $\mathtt{Cr}$ Νi Mo 2.54

0.029 535645 0.018 0.37 1.65 0.008 17.54 13.09

N

535645 0.043

Tensile test at room temperature

Yield strength Tensile strength Elongation

MPa MPa MPa % Lot Rp0.2 Rp1.0 RmΑ 58956 324 368 580 52

Following controls/tests have been satisfactorily performed:

- Flattening test.
- PMI-test.
- Intergranular corrosion test acc. to EN ISO3651-2, Method A.

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

Date



- 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.

The certificate is produced with EDP and valid without signature.