

## CERTIFICATE

No. A/15-508217

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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

order

2015-05-13

003-00991 ITEMS

751872

Sandvik References

Order No. Subs No. ABSMT Dispatch note

405260 590853 48963/54

ABSMT No. C.Code 300-29926 46

Material description

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 59.0 01 THT-3R60-12-1.5 541662 41497 24 144.00

12.00 X 1.50

Total 24 59.0

TEST RESULTS

Chemical composition (weight%)

C Si Mn P S  $\mathtt{Cr}$ Νi Mo

541662 0.020 0.39 1.79 0.028 0.009 17.31 13.14 2.53

N 541662 0.035

Tensile test at room temperature

Yield strength Tensile strength Elongation

MPa MPa MPa % Lot Rp0.2 Rp1.0 RmΑ 41497 294 334 572 57

Following controls/tests have been satisfactorily performed:

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

Quality assurance - Lars-Ake Bergqvist / QA-manager MTC Service / Certificates

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- 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.

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The certificate is produced with EDP and valid without signature.