

**CERTIFICATE****No. A/14-411057****Rev 00****Date 2014-04-07****Page 1/2**INSPECTION CERTIFICATE acc to
EN 10 204 3.1Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDENINSPECTION STAMP
QA-TUBE

| Customer References | | Sandvik References | | |
|---------------------|------------------------------|------------------------|--------------------|---------------------------------|
| 750293 | Customer order 2014-03-31 | Order No. 365170 | Subs No. 569053 | ABSMT Dispatch note 20990/54 |
| 003-00991 | ITEMS | ABSMT No. 300-11561 | C.Code 46 | |

| Material description | Steel/material Designations |
|--|-----------------------------|
| SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING | 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-3R60-6-1 6.00 X 1.00 | 537675 | 23290 | 70 | 53.0 | 420.00 |
| | | | | Total | 70 | 53.0 420.00 |

| TEST RESULTS | | | | | | | | |
|--------------------------------|-------|------|------|-------|-------|-------|-------|------|
| Chemical composition (weight%) | | | | | | | | |
| Heat | C | Si | Mn | P | S | Cr | Ni | Mo |
| 537675 | 0.017 | 0.43 | 1.62 | 0.029 | 0.007 | 17.33 | 13.15 | 2.52 |
| | | N | | | | | | |
| 537675 | 0.039 | | | | | | | |

| Tensile test at room temperature | | | | | |
|----------------------------------|----------------|-------|------------------|----|------------|
| Lot | Yield strength | | Tensile strength | | Elongation |
| | MPa | MPa | MPa | | % |
| 23290 | Rp0.2 | Rp1.0 | Rm | A | |
| | 283 | 331 | 558 | 59 | |

Following controls/tests have been satisfactorily performed:

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

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



- 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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