INSPECTION CERTIFICATE acc to
EN 10 204 3.1

Processkontroll Items AB
Box 2088
444 02  STORA HÖGA
SWEDEN

INSPECTION STAMP
QA-TUBE

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**Customer References**

| | Customer |
|---|---|
| 708606 | order |
| | 2010-04-27 |

003-00991  ITEMS

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**Sandvik References**

Order No.   Subs No.   ABSMT Dispatch note
194836    171465    04943/54
ABSMT No.   C.Code
300-21246   46

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**Material description**
SEAMLESS STAINLESS COLD FINISHED
HYDRAULIC TUBING

**Steel making process**
Electric furnace

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**Steel/material Designations**

| Sandvik | SS |
|---|---|
| 3R60 | 2353 |

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**Technical requirements**
SS 219713
Condition No -24

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**EXTENT OF DELIVERY**

| It | Product designation | Heat | Lot | Pieces | Kg | M |
|---|---|---|---|---|---|---|
| 01 | THT-3R60-16-2 | 047416 | 93699 | 60 | 254.0 | 360.00 |
| | 16.00 X 2.00 | | | | | |
| | Total | | | 60 | 254.0 | 360.00 |

**KEY TO HEAT**

| Heat Code | Heat No. |
|---|---|
| 047416 | 524284 |

**KEY TO LOT**

| Lot Code | Lot No. |
|---|---|
| 93699 | 4845059/1-2 |

**TEST RESULTS**
**Chemical composition (weight%)**

| Heat | C | Si | Mn | P | S | Cr | Ni | Mo |
|---|---|---|---|---|---|---|---|---|
| 047416 | 0.018 | 0.41 | 1.67 | 0.031 | 0.007 | 17.47 | 13.15 | 2.53 |

| Heat | N |
|---|---|
| 047416 | 0.043 |

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**Quality assurance - Per Eriksson/ QA-manager Tube & Pipe**
**MTC Service / Certificates**

**Tensile test at room temperature**

| | Yield strength | | Tensile strength | Elongation |
|---|---|---|---|---|
| | MPa | MPa | MPa | % |
| Lot | Rp0.2 | Rp1.0 | Rm | A |
| 93699 | 274 | 306 | 567 | 56 |
| | 275 | 306 | 567 | 58 |
| | 271 | 307 | 568 | 56 |
| | 273 | 304 | 570 | 55 |

**Following controls/tests have been satisfactorily performed:**
- Flattening test.
- PMI-test.
- Intergranular corrosion test acc. to EN ISO3651-2, Method A.
- Leak test: Eddy current test acc to SS 114301/114305 E1
- Visual inspection and dimensional control.

**Heat Treatment:**
Solution annealed and quenched.

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.

The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO A100441