

**CERTIFICATE****No. A/09-017304 Rev 00**
Date 2009-05-26 Page 1/2INSPECTION CERTIFICATE acc to
EN 10 204 3.1Processkontroll Items AB
Box 2088
444 02 STORA HÖGA
SWEDENINSPECTION STAMP
QA-TUBE

| Customer References | | Sandvik References | | |
|---------------------|------------------------------|------------------------|--------------------|---------------------------------|
| 707247 | Customer order 2009-04-22 | Order No. 148540 | Subs No. 136507 | ABSMT Dispatch note 24319/54 |
| 003-00991 | ITEMS | ABSMT No. 300-91275 | C.Code 03 | |

| Material description | Steel/material Designations |
|---|-----------------------------|
| SÖMLÖSA ROSTFRIA RÖR. | Sandvik AISI 3R60 TP316L |
| Steel making process Electric furnace | |

Technical requirements
ASTM A-213-06AE1/ASME SA-213 ED-07 AD-08, ASTM A-269-07A
Ringhals Spec 01.32M Version 4.0

| EXTENT OF DELIVERY | | | | | | | | | |
|---|------------------------------------|----------|------------|--------|-------|--------------|-------|------|--|
| It | Product designation | Heat | Lot | Pieces | Kg | M | | | |
| 02 | XTHT-3R60-9.53-1.24 9.53 X 1.24 | 047188 | 98640 | 85 | 132.0 | 510.00 | | | |
| | | | | Total | 85 | 132.0 510.00 | | | |
| KEY TO HEAT | | | KEY TO LOT | | | | | | |
| Heat Code | Heat No. | Lot Code | Lot No. | | | | | | |
| 047188 | 521535 | 98640 | 344848 | | | | | | |
| TEST RESULTS | | | | | | | | | |
| Chemical composition (weight%) | | | | | | | | | |
| Heat | C | Si | Mn | P | S | Cr | Ni | Mo | |
| 047188 | 0.018 | 0.36 | 1.66 | 0.026 | 0.008 | 17.31 | 13.11 | 2.53 | |
| | N | | | | | | | | |
| 047188 | 0.037 | | | | | | | | |
| Chemical composition, product (weight%) | | | | | | | | | |
| Lot | C | Si | Mn | P | S | Cr | Ni | Mo | |
| 98640 | 0.018 | 0.35 | 1.64 | 0.027 | 0.007 | 17.34 | 13.06 | 2.54 | |
| | N | | | | | | | | |
| 98640 | 0.032 | | | | | | | | |

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

**Tensile test at room temperature**

| | Yield strength | Tensile strength | Elongation |
|------------|-----------------------|-------------------------|-------------------|
| | MPa | MPa | % |
| Lot | Rp0.2 | Rm | 4D |
| 98640 | 323 | 623 | 54 |
| | 315 | 620 | 54 |

Hardness test

| | Min | Max |
|------------|------------|------------|
| | HRB | HRB |
| Lot | | |
| 98640 | 79.0 | 80.0 |

Following controls/tests have been satisfactorily performed:

- Flattening test according to ASME SA-1016.
- Flaring test according to ASME SA-1016.
- PMI-test.
- Leak test: Eddy current test acc to ASME SA-1016.
- 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 00037506