

**CERTIFICATE****No. A/10-973936****Rev 00****Date 2010-06-16****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 | | |
|---------------------|------------------------------|------------------------|--------------------|---------------------------------|
| 708801/Holmgren | Customer order 2010-06-16 | Order No. 201646 | Subs No. 176819 | ABSMT Dispatch note 09153/54 |
| 003-00991 ITEMS | | ABSMT No. 300-24185 | C.Code 64 | |

| Material description | Steel/material Designations |
|--|--|
| SEAMLESS STAINLESS COLD FINISHED TUBE IN METRIC SIZES | Sandvik W.nr 3R60 1.4435 DIN X 2 CRNIMO 18 14 3 |
| Steel making process Electric furnace | |

| Technical requirements |
|--|
| DIN 17458 Testing class 1 PED 97/23/EC EN 10216-5 TC1 |

| EXTENT OF DELIVERY | | | | | | |
|--------------------|------------------------------------|--------|-------|--------|-----|------|
| It | Product designation | Heat | Lot | Pieces | Kg | M |
| 02 | TST-3R60-21.3-2.65 21.30 X 2.65 | 524358 | 57949 | 1 | 7.0 | 5.90 |
| | | | | Total | 1 | 7.0 |
| | | | | | 7.0 | 5.90 |

Tolerances according to EN ISO 1127: D3/T3

| TEST RESULTS | | | | | | | | |
|--------------------------------|-------|------|------|-------|-------|-------|-------|------|
| Chemical composition (weight%) | | | | | | | | |
| Heat | C | Si | Mn | P | S | Cr | Ni | Mo |
| 524358 | 0.017 | 0.42 | 1.65 | 0.028 | 0.008 | 17.20 | 13.11 | 2.52 |
| | | N | | | | | | |
| 524358 | 0.037 | | | | | | | |

| Tensile test at room temperature | | | | | |
|----------------------------------|----------------|-------|------------------|--|------------|
| Lot | Yield strength | | Tensile strength | | Elongation |
| | MPa | MPa | MPa | | % |
| 57949 | Rp0.2 | Rp1.0 | Rm | | A |
| | 268 | 308 | 573 | | 59 |

Following controls/tests have been satisfactorily performed:
- Ring expansion test

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



- PMI-test.
- Intergranular corrosion test acc. to EN ISO3651-2, Method A.
- Leak test: Eddy current test acc to EN 10246-2
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed and quenched.

Marking:

SANDVIK 3R60 NFA 49-117 EN 10216-5 TC1 SS 2353-22 WNR 1.4435 TP 316L Z2CND17-1
3 EN 1.4435 M S PK1 21.30 X 2.65 MM HT 524358 SS LOT 57949 *QA-TUBE*

Approved acc. AD 2000-Merkblatt W0 and certified acc. to
Pressure Equipment Directive (97/23/EC) by
TUEV NORD GmbH; notified body, reg.no. 0045.

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.