



CERTIFICATE

No. A/11-176754 Rev 00
Date 2011-07-06 Page 1/2

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		Sandvik References	
710287	Customer order 2011-07-06	Order No. 252030	Subs No. 507092
003-00991	ITEMS	ABSMT No. 300-47314	ABSMT Dispatch note 44246/54 C.Code 29

Material description SEAMLESS STAINLESS COLD FINISHED INSTRUMENTATION TUBING	Steel/material Designations Sandvik AISI 3R60 TP316/TP316L EN no 1.4435
Steel making process Electric furnace	

Technical requirements
 ASTM A-213-09A AW, ASME SA-213-ED-10 AW, ASTM A-269-08
 NACE MR0175/ISO 15156-3:2009
 PED 97/23/EC EN 10216-5 TC1
 HRB MAX 80

EXTENT OF DELIVERY

It	Product designation	Heat	Lot	Pieces	Kg	M
01	THT-3R60-6.35-0.89 6.35 X .89	047733	96121	5	4.0	30.00
				Total	5	4.0 30.00

KEY TO HEAT		KEY TO LOT	
Heat Code	Heat No.	Lot Code	Lot No.
047733	527495	96121	170379

TEST RESULTS

Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
047733	0.029	0.41	1.66	0.032	0.009	17.35	13.11	2.52

Chemical composition, product (weight%)

Lot	C	Si	Mn	P	S	Cr	Ni	Mo
96121	0.021	0.41	1.68	0.031	0.006	17.34	13.13	2.52

Quality assurance - Ulrik Rodling / QA-manager Tube & Pipe
MTC Service / Certificates

**Tensile test at room temperature**

Lot	Yield strength		Tensile strength	Elongation
	MPa	MPa	MPa	%
96121	Rp0.2	Rp1.0	Rm	A
	240	274	559	44
	240	275	560	46

Hardness test

Lot	Min	Max
	HRB	HRB
96121	61	70

Following controls/tests have been satisfactorily performed:

- Flattening test.
- Flaring test
- PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Leak test: Eddy current test acc to EN 10246-2, ASME SA-1016.
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed and quenched.

Marking:

SANDVIK 3R60 ASTM/ASME A/SA-213AW A-269 EN 10216-5 TC1 TP 316/TP 316L EN 1.4
435 COLD SMLS NDE 6.35 X 0.89 MM 1/4'' X 20 BWG/SWG HT 527495 SG LOT 170379 DI
N 2391/EN 10305-1 *QA-TUBE*

Approved acc. AD 2000-Merkblatt W0 and certified acc. to
Pressure Equipment Directive (97/23/EC) by
TUEV NORD; 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.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO 35856