



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		
710912/Holmgren	Customer order 2011-12-20	Order No. 272627	Subs No. 516224	ABSMT Dispatch note 09877/54
003-00991 ITEMS		ABSMT No. 300-56845	C.Code 29	

Material description	Steel/material Designations
SEAMLESS STAINLESS COLD FINISHED INSTRUMENTATION TUBING	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-3R60-19.05-1.65 19.05 X 1.65	529443	31154	10	43.0	60.00
				Total	10	43.0 60.00

TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
529443	0.020	0.45	1.62	0.029	0.008	17.24	13.10	2.53
N								
529443	0.042							

Tensile test at room temperature						
Lot	Yield strength		Tensile strength		Elongation	
	MPa	MPa	MPa		%	%
31154	Rp0.2	Rp1.0	Rm		A	2"
	297	342	598		46	48
	300	346	597		47	48

Hardness test		
Lot	Min	Max
	HRB	HRB
31154	77	79

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

**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 EN 1.4435 TP316/316L CO
LD SMLS NDE 19.05 X 1.65 MM 3/4'' X 16 BWG/SWG HT 529443 SS LOT 31154 DIN 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.