

**CERTIFICATE****No. A/18-741815****Rev 00****Date 2018-05-09****Page 1/3**INSPECTION CERTIFICATE acc to  
EN 10204 3.1Processkontroll Items AB  
Box 2088  
444 02 STORA H@GA  
SWEDENINSPECTION STAMP  
QA-TUBE**Customer References**Customer  
756379/Holmgren order  
2018-05-03  
  
003-00991 ITEMS**Sandvik References**Order No. Subs No. ABSMT Dispatch note  
512458 650836 21040/54  
ABSMT No. C.Code  
300-80464 11**Material description**SEAMLESS STAINLESS COLD FINISHED  
INSTRUMENTATION TUBING**Steel making process**

Electric furnace

**Steel/material Designations**Sandvik AISI  
3R60 TP316/TP316L  
EN no  
1.4435**Technical requirements**ASTM A-632-04  
NACE MR0175/ISO 15156-3:2015, NACE MR0103/ISO 17945:2015  
PED 2014/68/EU EN 10216-5 TC1  
HRB MAX 80**EXTENT OF DELIVERY**

It	Product designation	Heat	Lot	Pieces	Kg	M
01	THT-3R60-1.59-0.36 1.59 X .36	048615	95806	1	1.0	6.00

Total	1	1.0	6.00
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**KEY TO HEAT**

Heat Code	Heat No.
048615	549359

**KEY TO LOT**

Lot Code	Lot No.
95806	0002003045

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

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
048615	0.018	0.43	1.65	0.031	0.009	17.34	13.07	2.62
	N							
048615	0.042							

**Quality assurance - Sofia Åkesson / Q-Manager**  
**MTC Service / Certificates**

**Chemical composition, product (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
048615	0.023	0.44	1.62	0.032	0.006	17.27	13.13	2.62
	N							
048615	0.043							

**Tensile test at room temperature**

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
95806	223	256	541	55	41

**Hardness test**

Lot	Min	Max
	HRB	HRB
95806	79	80

**Following controls/tests have been satisfactorily performed:**

- Flattening test.
- Flaring test
- 100% PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Leak test: Eddy current test acc to EN 10246-2
- Visual inspection and dimensional control.

**Heat Treatment:**

Solution annealed and quenched.

**Marking:**

SANDVIK 3R60 ASTM A632 EN10216-5 TC1 EN 1.4435 TP316/TP316L CFA SML 1.59 X 0.3  
6 MM 1/16" X 28 BWG HT 549359 SG LOT 0002003045 \*QA-TUBE\*

The raw material is free from radioactive contamination.

Material free from mercury contamination.

Approved acc. AD 2000-Merkblatt W0 and certified acc. to  
Pressure Equipment Directive (2014/68/EU, Annex 1 para 4.3) 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 9001:2008.



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The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO 0002003045