



CERTIFICATE

A03/Z02
 No. A/19-840186 Rev 00
 Date 2019-08-26 Page 1/3

A02/Z03
 INSPECTION CERTIFICATE acc to
 EN 10204 3.1

A06
 PROCESSKONTROLL ITEMS AB
 BOX 2088
 444 02 STORA HÖGA
 SWEDEN

INSPECTION STAMP
 QA-TUBE

Customer References A07 Customer order 758289/Holmgren 2019-08-23 003-00991 ITEMS	Sandvik References A08 Order No. Subs No. ABSMT Dispatch note 541254 674033 02240/54 ABSMT No. C.Code 300-10466 29
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Material description B01/B04 SEAMLESS STAINLESS COLD FINISHED INSTRUMENTATION TUBING Steel making process C70 Electric furnace	Steel/material Designations B02 Sandvik AISI 3R60 TP316/TP316L EN no 1.4435
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Technical requirements B03 ASTM A-213-18B AW, ASME SA-213-ED-17 AW, ASTM A-269-15A NACE MR0175/ISO 15156-3:-2015, NACE MR0103/ISO 17945-1:-2015 PED 2014/68/EU EN 10216-5 TC1 HRB MAX 80
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EXTENT OF DELIVERY								B07-B13
It	Product designation	Heat	Lot	Pieces	Kg	M		
01	THT-3R60-6.35-1.24 6.35 X 1.24	555824	58302	20	19.0	120.00		
			Total	20	19.0	120.00		
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
555824	0.021	0.36	1.57	0.030	0.006	17.62	13.23	2.64
	Ti	Al	N					
555824	0.004	0.006	0.036					
Chemical composition, product (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
555824	0.022	0.37	1.56	0.031	0.005	17.61	13.16	2.64
	N							
555824	0.035							

Quality assurance - Sofia Åkesson / Q-Manager MTC Service / Certificates	A05/Z02
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**Tensile test at room temperature**

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	4D
58302	302	349	570	56	56

Hardness test

Lot	Min	Max
	HRB	HRB
58302	74	76

Following controls/tests have been satisfactorily performed:

- Flattening test.
- Flaring test
- 100% PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E and EN ISO 3651-2A
- Leak test: Eddy current test acc to EN ISO 10893-1, ASME SA-1016.
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed at a temperature of Min 1040° C and quenched.

Marking:

SANDVIK 3R60 ASTM A213/A269 ASME SA213 COLD EN10216-5 TC1 AW EN 1.4436 EN 1.4435 TP316/316L CFA SML NDE 6.35 X 1.24 MM 1/4'' X 18 BWG/SWG HT 555824 SS LOT 5 8302 MADE IN SWEDEN *QA-TUBE*

The raw material is free from radioactive contamination.

Material free from mercury contamination.

No welding or weld repair.

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 9001:2015.

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The certificate is produced with EDP and valid without signature.

