



CERTIFICATE

A03/Z02

No. A/20-924676

Rev

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Date

2020-11-24

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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 760325 Customer order 2020-11-23 003-00991 ITEMS -W	Sandvik References A08 Order No. Subs No. ABSMT Dispatch note 562531 691410 28715/54 ABSMT No. C.Code 300-26139 15
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Material description B01/B04 SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING Metallurgical 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-213-19 AW, ASME SA-213-ED-19 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

EXTENT OF DELIVERY B07-B13								
It	Product designation	Heat	Lot	Pieces	Kg	M		
01	THT-3R60-20-2.5 20.00 X 2.50	559836	30290	44	284.0	264.00		
				Total	44	284.0 264.00		
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
559836	0.019	0.39	1.51	0.034	0.007	17.26	13.14	2.73
	N							
559836	0.045							
Chemical composition, product (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
559836	0.018	0.40	1.50	0.034	0.007	17.21	13.08	2.72
	N							
559836	0.045							

Quality assurance - Sofia Åkesson / Q-Manager A05/Z02
MTC Service / Certificates



Tensile test at room temperature

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
30290	275	310	587	55	59
	274	308	585	55	58

Hardness test

Lot	Min	Max
	HRB	HRB
30290	72	74

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 1.4435 TP316/3 16L CFA SML NDE 20.00 X 2.50 MM HT 559836 SS LOT 30290 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.

