



CERTIFICATE

A03/Z02

No. V/22-038058

Rev

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Date

2022-03-03

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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 762314	Sandvik References A08 Order No. Subs No. Dispatch note 583206 172490 195089 Suppl. No C.Code 172490 15
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

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	Kg	M			
	02 THT-3R60-28-1.5 28.00 X 1.50	041814	94226	35.8	36.00			
			Total	35.8	36.00			
KEY TO HEAT	Heat Code	Heat No.	KEY TO LOT					
	041814	563101	Lot Code	Lot No.				
			94226	2040640-11				
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
041814	0.016	0.43	1.69	0.033	0.008	17.48	13.15	2.63
	N							
041814	0.040							

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



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

Lot	C	Si	Mn	P	S	Cr	Ni	Mo
94226	0.012	0.43	1.72	0.034	0.006	17.50	13.02	2.59
	N							
94226	0.038							

Tensile test at room temperature

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
94226	277	313	567	50	52
	257	296	569	50	52

Hardness test

Lot	Min	Max
	HRB	HRB
94226	69	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/ASME A/SA213 A269 COLD EN 10216-5 TC1 AW TP 316/TP 316L EN 1.4435 CFA SML 28.00 X 1.50 MM . HT 563101 SZ LOT 2040640-11 MADE BY SANDVIK IN CZECHIA *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.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO C-2879/60

