



CERTIFICATE

A03/Z02

No. A/20-915522

Date _____

2020-10-08

Rev

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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	Sandvik References		A08
760013	Customer order		Order No.	Subs No.	ABSMT Dispatch note
	2020-09-21		559540	688891	26039/54
			ABSMT No.	C.Code	
003-00991 ITEMS			300-24007	15	

Material description SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING	B01/B04	Steel/material Designations	B02
		Sandvik	AISI
		3R60 EN no 1.4435	TP316/TP316L
Metallurgical process Electric furnace	C70		

Technical requirements 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	B03
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EXTENT OF DELIVERY							B07-B13	
It	Product designation			Heat	Lot	Pieces	Kg	M
01	THT-3R60-16-2			048919	96559	80	336.0	480.00
	16.00 X 2.00							
	12002							
Total						80	336.0	480.00
KEY TO HEAT				KEY TO LOT				
Heat Code		Heat No.		Lot Code		Lot No.		
048919		559191		96559		2014548-11		
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
048919	0.017	0.420	1.640	0.033	0.007	17.290	13.160	2.650
	N							
048919	0.035							

Quality assurance - Sofia Åkesson / Q-Manager MTC Service / Certificates	A05/Z02
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A01

AB SANDVIK MATERIALS TECHNOLOGY Reg No. 556234-6832 VAT No. SE556234683201
SE-81181 SANDVIKEN SWEDEN www.materials.sandvik mtc service.smt@sandvik.com



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

Lot	C	Si	Mn	P	S	Cr	Ni	Mo
96559	0.017	0.420	1.640	0.033	0.005	17.220	12.910	2.640
	N							
96559	0.037							

Tensile test at room temperature

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
96559	262	300	577	52	53
	263	300	587	52	53

Hardness test

Lot	Min	Max
	HRB	HRB
96559	76	77

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 EN10305-1 TP 316/TP 316L EN 1.4435 COLD SML NDE 16.00 X 2.00 MM **SAKNAS** HT 559191 SZ LOT 201454 8-11 MADE BY SANDVIK *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.





No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of AB Sandvik Materials Technology. Unauthorized alterations to the Inspection Certificate, including introduction of false, fictitious or fraudulent statements or entries, may be punishable by fines, imprisonment, or both. This Inspection Certificate may be copied only in the manner and for the purposes specified in Section 6 of EN 10204:2004. Contravention of this notice will be prosecuted to the fullest extent of applicable law.

The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO C-870/20

