



CERTIFICATE

A03/Z02

No. A/22-105320

Rev 00

Date

2022-04-14

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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

<b>Customer References</b> <span style="float: right;">A07</span> 762450  Customer order 2022-03-31  003-00991 ITEMS -W	<b>Sandvik References</b> <span style="float: right;">A08</span> Order No. Subs No. SMT Dispatch note 584254 709359 12149/54 SMT No. C.Code 300-42321 15
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<b>Material description</b> <span style="float: right;">B01/B04</span> SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING  <b>Metallurgical process</b> <span style="float: right;">C70</span> Electric furnace	<b>Steel/material Designations</b> <span style="float: right;">B02</span> Sandvik AISI 3R60 TP316/TP316L EN no 1.4435
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<b>Technical requirements</b> <span style="float: right;">B03</span> 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
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<b>EXTENT OF DELIVERY</b> <span style="float: right;">B07-B13</span>						
It	Product designation	Heat	Lot	Pieces	Kg	M
01	THT-3R60-8-1 8.00 X 1.00	042692	95210	25	25.0	150.00
				Total	25	25.0 150.00
<b>KEY TO HEAT</b>			<b>KEY TO LOT</b>			
Heat Code	Heat No.			Lot Code	Lot No.	
042692	563620			95210	2054676-11	
<b>TEST RESULTS</b>						
<b>Chemical composition (weight%)</b>						
Heat	C	Si	Mn	P	S	Cr Ni Mo
042692	0.020	0.44	1.66	0.029	0.009	17.29 13.07 2.62
	N					
042692	0.040					

<b>Quality assurance - Sofia Åkesson / Q-Manager</b> MTC Service / Certificates	A05/Z02
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**Chemical composition, product (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
042692	0.023	0.45	1.67	0.031	0.007	17.36	13.14	2.64
	N							
042692	0.038							

**Tensile test at room temperature**

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
95210	313	350	580	67	53

**Hardness test**

Lot	Min	Max
	HRB	HRB
95210	75	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 8.00 X 1.00 MM . HT 563620 SZ LOT 2054676-11 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.





No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of 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-3339/30

