



CERTIFICATE

A03/Z02

No. A/21-940903

Rev 00

Date

2021-02-17

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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> 760654  Customer order 2021-02-04  003-00991 ITEMS -W	<b>Sandvik References</b> <span style="float: right;">A08</span> Order No. Subs No. ABSMT Dispatch note 565757 694103 33355/54 <b>ABSMT No. C.Code</b> 300-28438 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> <b>Sandvik AISI</b> 3R60 TP316/TP316L <b>EN no</b> 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-3R60-12-1.5	560942	34901	2	5.0	12.00
	12.00 X 1.50	560942	34904	28	68.0	168.00
			Total	30	73.0	180.00
<b>TEST RESULTS</b>						
<b>Chemical composition (weight%)</b>						
Heat	C	Si	Mn	P	S	Cr Ni Mo
560942	0.018	0.37	1.67	0.033	0.008	17.12 13.06 2.62
	N					
560942	0.039					
<b>Chemical composition, product (weight%)</b>						
Heat	C	Si	Mn	P	S	Cr Ni Mo
560942	0.018	0.36	1.66	0.031	0.005	17.05 13.04 2.60
	N					
560942	0.041					

<b>Quality assurance - Sofia Åkesson / Q-Manager</b> 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	2"
34901	277	306	563	53	51
34904	285	315	570	60	58

**Hardness test**

Lot	Min	Max
	HRB	HRB
34901	77	78
34904	73	75

**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 12.00 X 1.50 MM HT 560942 SS LOT 34901 MADE IN SWEDEN \*QA-TUBE \*

SANDVIK 3R60 ASTM A213/A269 ASME SA213 COLD EN10216-5 TC1 AW EN 1.4435 TP316/3 16L CFA SML NDE 12.00 X 1.50 MM HT 560942 SS LOT 34904 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.





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.

