



CERTIFICATE

A03/Z02

No. A/22-105831

Rev

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Date

2022-04-19

Page

1/3

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 762274/Holmgren 003-00991 ITEMS -W	Sandvik References A08 <table border="0"> <tr> <td>Order No.</td> <td>Subs No.</td> <td>SMT Dispatch note</td> </tr> <tr> <td>582715</td> <td>708036</td> <td>12310/54</td> </tr> <tr> <td>SMT No.</td> <td>C.Code</td> <td></td> </tr> <tr> <td>300-41132</td> <td>29</td> <td></td> </tr> </table>	Order No.	Subs No.	SMT Dispatch note	582715	708036	12310/54	SMT No.	C.Code		300-41132	29	
Order No.	Subs No.	SMT Dispatch note											
582715	708036	12310/54											
SMT No.	C.Code												
300-41132	29												

Material description B01/B04 SEAMLESS STAINLESS COLD FINISHED INSTRUMENTATION TUBING Metallurgical process C70 Electric furnace	Steel/material Designations B02 <table border="0"> <tr> <td>Sandvik</td> <td>AISI</td> </tr> <tr> <td>3R60</td> <td>TP316/TP316L</td> </tr> <tr> <td>EN no</td> <td></td> </tr> <tr> <td>1.4435</td> <td></td> </tr> </table>	Sandvik	AISI	3R60	TP316/TP316L	EN no		1.4435	
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	Pieces	Kg	M		
01	THT-3R60-9.53-0.89 9.53 X .89	042494	94865	4	3.0	24.00		
				Total	4	3.0 24.00		
KEY TO HEAT			KEY TO LOT					
Heat Code	Heat No.			Lot Code	Lot No.			
042494	563620			94865	2050640-11			
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
042494	0.020	0.44	1.66	0.029	0.009	17.29	13.07	2.62
	Co	Ti	Al	N				
042494	0.16	<0.003	0.004	0.040				

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%)**

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
042494	0.023	0.45	1.67	0.031	0.007	17.36	13.14	2.64
	N							
042494	0.038							

Tensile test at room temperature

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
94865	303	338	580	70	57

Hardness test

Lot	Min	Max
	HRB	HRB
94865	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 9.53 X 0.89 MM 3/8'' X 20 BWG/SWG HT 563620 SZ LOT 2050640-11 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-3164/10

