

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 763110 003-00991 ITEMS -W Customer order 2022-10-05	Alleima References A08 Order No. Subs No. Dispatch note 590916 714662 21813/54 Suppl. No C.Code 300-47401 15																																																			
Material description B01/B04 SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING Metallurgical process C70 Electric furnace	Steel/material Designations B02 Alleima 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 <table><thead><tr><th>It</th><th>Product designation</th><th>Heat</th><th>Lot</th><th>Pieces</th><th>Kg</th><th>M</th></tr></thead><tbody><tr><td>01</td><td>THT-3R60-12-1.5 12.00 X 1.50</td><td>043286</td><td>95538</td><td>2</td><td>5.0</td><td>12.00</td></tr><tr><td></td><td></td><td>043963</td><td>95749</td><td>1</td><td>3.0</td><td>6.00</td></tr><tr><td></td><td></td><td>044366</td><td>96076</td><td>22</td><td>53.0</td><td>132.00</td></tr><tr><td></td><td></td><td colspan="2">Total</td><td>25</td><td>61.0</td><td>150.00</td></tr></tbody></table> KEY TO HEAT <table><thead><tr><th>Heat Code</th><th>Heat No.</th></tr></thead><tbody><tr><td>043286</td><td>563620</td></tr><tr><td>043963</td><td>564988</td></tr><tr><td>044366</td><td>566003</td></tr></tbody></table> KEY TO LOT <table><thead><tr><th>Lot Code</th><th>Lot No.</th></tr></thead><tbody><tr><td>95538</td><td>2061961-11</td></tr><tr><td>95749</td><td>2066793-11</td></tr><tr><td>96076</td><td>2073016-11</td></tr></tbody></table>		It	Product designation	Heat	Lot	Pieces	Kg	M	01	THT-3R60-12-1.5 12.00 X 1.50	043286	95538	2	5.0	12.00			043963	95749	1	3.0	6.00			044366	96076	22	53.0	132.00			Total		25	61.0	150.00	Heat Code	Heat No.	043286	563620	043963	564988	044366	566003	Lot Code	Lot No.	95538	2061961-11	95749	2066793-11	96076	2073016-11
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Quality assurance - Sofia Åkesson / Q-Manager A05/Z02 MTC Service / Certificates																																																				



TEST RESULTS
Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
043286	0.020	0.44	1.66	0.029	0.009	17.29	13.07	2.62
043963	0.018	0.38	1.58	0.028	0.009	17.50	13.18	2.63
044366	0.020	0.38	1.71	0.030	0.010	17.35	13.04	2.62
N								
043286	0.040							
043963	0.038							
044366	0.040							

Chemical composition, product (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
043286	0.023	0.45	1.67	0.031	0.007	17.36	13.14	2.64
043963	0.019	0.38	1.59	0.029	0.008	17.53	13.23	2.65
044366	0.021	0.39	1.70	0.030	0.008	17.39	13.06	2.62
N								
043286	0.038							
043963	0.043							
044366	0.035							

Tensile test at room temperature

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
95538	279	309	579	66	60
95749	297	326	585	65	62
96076	307	337	578	64	69

Hardness test

Lot	Min	Max
	HRB	HRB
95538	75	75
95749	77	78
96076	79	80

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 12.00 X 1.50 MM . HT 563620 SZ LOT 2061961-11 MADE BY SANDVIK IN CZECHIA *QA-TUBE*

SANDVIK 3R60 ASTM/ASME A/SA213 A269 COLD EN 10216-5 TC1 AW TP 316/TP 316L EN 1.4435 CFA SML 12.00 X 1.50 MM . HT 564988 SZ LOT 2066793-11 MADE BY SANDVIK IN CZECHIA *QA-TUBE*

3R60 ASTM/ASME A/SA213 A269 COLD EN 10216-5 TC1 AW TP 316/TP 316L EN 1.4435 CFA SML 12.00 X 1.50 MM . HT 566003 SZ LOT 2073016-11 MADE BY ALLEIMA 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 Alleima.

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.

Alleima, formerly Sandvik Materials Technology. During a brand transition period, both Sandvik and Alleima marking on products may exist.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO C-4544/10
C-4645/50
C-4879/40

