

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 763465 003-00991 ITEMS -W	Alleima References Order No. Subs No. Dispatch note 594001 716984 33079/54 Suppl. No C.Code 300-49523 15
Material description SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING Metallurgical process Electric furnace	Steel/material Designations Alleima AISI 3R60 TP316/TP316L EN no 1.4435

Technical requirements ASTM A-213-21B AW, ASME SA-213-ED-21 AW, ASTM A-269-22 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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EXTENT OF DELIVERY							B07-B13	
It	Product designation		Heat	Lot	Pieces	Kg	M	
02	THT-3R60-16-2		044463	96902	84	354.0	504.00	
		16.00 X 2.00						
					Total	84	354.0	504.00
KEY TO HEAT			KEY TO LOT					
Heat Code		Heat No.				Lot Code	Lot No.	
044463		567184				96902	2070306-11	
TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
044463	0.018	0.39	1.74	0.032	0.006	17.52	13.25	2.62
	N							
044463	0.035							

Quality assurance - Sofia Åkesson / Q-Manager MTC Service / Certificates
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Chemical composition, product (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
044463	0.019	0.41	1.70	0.031	0.007	17.36	13.16	2.60
	N							
044463	0.030							

Tensile test at room temperature

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	Rp0.2	Rp1.0	Rm	A	2"
96902	268	301	568	53	55
	254	286	556	57	58

Hardness test

	Min	Max
Lot	HRB	HRB
96902	73	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:

3R60 ASTM/ASME A/SA213 A269 COLD EN 10216-5 TC1 AW TP 316/TP 316L EN 1.4435 CF A SML NDE 16.00 X 2.00 MM . HT 567184 SZ LOT 2070306-11 MADE BY ALLEIMA IN CZE CHIA *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-8637/40

