

CERTIFICATE

No. V/23-059287

2023-05-17

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A02/Z03

INSPECTION CERTIFICATE acc to EN 10204 3.1

A06

Date

PROCESSKONTROLL ITEMS AB

BOX 2088

444 02 STORA HÖGA

SWEDEN

INSPECTION STAMP

Customer References

QA-TUBE

A07

Alleima References

A08

763942

Order No. Subs No. Dispatch note

597507 173882 197490

C.Code

Suppl. No 173882

15

Material description

B01/B04

Steel/material Designations

SEAMLESS STAINLESS COLD FINISHED

HYDRAULIC TUBING

Alleima 3R60 TP316/TP316L

B02

EN no

1.4435

Metallurgical process

Electric furnace

C70

Technical requirements

B03

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

EXTENT OF DELIVERY

B07-B13

It Product designation Heat Κq М Lot 01 THT-3R60-6-1 044481 96938 52.5 420.00

Total 52.5 420.00

KEY TO HEAT KEY TO LOT

Heat Code Heat No. Lot Code Lot No. 044481 567705 96938 2092496-11

TEST RESULTS

Chemical composition (weight%)

6.00 X 1.00

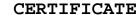
Heat Si Mn Νi C P S CrMΩ 044481 0.023 0.37 1.49 0.030 0.008 17.27 13.08 2.64

N 0.044 044481

> Quality assurance - Sofia Åkesson / Q-Manager MTC Service / Certificates

A05/Z02





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Chemical composition, product (weight%)

Heat C Si Mη P S Cr Νi Mo 044481 1.49 0.031 17.35 0.026 0.38 0.008 13.11 2.66

N

044481 0.035

Tensile test at room temperature

	Yield strength	Tensile strength	Elongation	
	MPA MPa	MPa	%	%
Lot	Rp0.2 Rp1.0	Rm	A	2"
96938	235 310	537	70	51

Hardness test

	Min	Max	
Lot	HRB	HRB	
96938	73	73	

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 6.00 X 1.00 MM . HT 567705 SZ LOT 2092496-11 MADE BY ALLEIMA IN CZEC HIA *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 WO 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.





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Alleima

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-8667/40

