CERTIFICATE

A03/Z02 **No. A/23-138783** **Rev 00**
Date 2023-01-04 **Page** 1/3

A02/Z03
INSPECTION CERTIFICATE acc to
EN 10204 3.1

INSPECTION STAMP
QA-TUBE

A06
PROCESSKONTROLL ITEMS AB
BOX 2088
444 02 STORA HÖGA
SWEDEN

Customer References A07
763465
Customer order 2023-01-04

003-00991 ITEMS -W

Alleima References A08

Order No.	Subs No.	Dispatch note
594001	716984	26722/54

Suppl. No	C.Code
300-49523	21

Material description B01/B04
SEAMLESS STAINLESS COLD FINISHED
HYDRAULIC TUBING

Metallurgical process C70
Electric furnace+AOD

Steel/material Designations B02

Alleima	UNS
254 SMO	S31254

EN no
1.4547

Technical requirements B03
ASTM A-213-19 AW, ASME SA-213-ED-19 AW, ASTM A-269-15A
NACE MR0175/ISO 15156-3:-2015, PED 2014/68/EU EN 10216-5 TC1
NORSOK M-630:2020, NORSOK MDS R18 REV.6
HRB MAX 90

EXTENT OF DELIVERY B07-B13

It	Product designation	Heat	Lot	Pieces	Kg	M
01	THT-254SMO-12-1 12.00 X 1.00	557913	23954	1	3.0	6.00
			Total	1	3.0	6.00

TEST RESULTS

Chemical composition (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
557913	0.009	0.45	0.50	0.020	<0.0005	20.14	17.90	6.07

Heat	Cu	N
557913	0.56	0.205

Chemical composition, product (weight%)

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
557913	0.009	0.44	0.49	0.019	<0.001	20.15	17.85	6.11

Heat	Cu	N
557913	0.56	0.20

Quality assurance - Sofia Åkesson / Q-Manager A05/Z02
MTC Service / Certificates

Tensile test at room temperature

	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
Lot	**Rp0.2**	**Rp1.0**	**Rm**	**A**	**2"**
23954	376	418	716	46	44

Hardness test

Lot	**HRB**	
23954	85	86
	86	84

Corrosion test according to ASTM G-48A, 50°C for 24 hours.
In delivery condition.
No pitting corrosion found at 20x enlargement.

	Specimen weight loss
Lot	**g/m2**
23954	0.00

Following controls/tests have been satisfactorily performed:
- Flattening test.
- Flaring test
- 100% PMI-test.
- Leak test: Eddy current test acc to EN ISO 10893-1, ASME SA-1016.
- Visual inspection and dimensional control.

Heat Treatment:
Bright annealed at min 1150°C/0.25 minutes and quenched in water/forced gas.

Marking:
SANDVIK 254 SMO ASTM A213/A269 ASME SA213 COLD EN10216-5 TC1 AW UNS S31254 EN 1.4547 CFA SML NDE 12.00 X 1.00 MM 0.472 X 0.039 HT 557913 SS LOT 23954 MADE I N SWEDEN *QA-TUBE*

The raw material is free from radioactive contamination.

Material free from mercury contamination.

No welding or weld repair.

NORSOK M-650 QTR NO: QTR6Mo_BA215

NORSOK M-650 QTR NO: QTR6Mo_BA832

NORSOK M-650 QTR NO: 6Mo Tubes

NORSOK M-650 QTR NO: QTR/Type6Mo/R1000/2019 - Cold finished annealed rapidly cooled by protective gas.

NORSOK M-650 QTR NO: QTR/Type6Mo/R2000/2021 - Cold finished annealed rapidly cooled by protective gas.

NORSOK M-650 QTR NO: QTR/Type6Mo/INDUKCE/2022

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.