

**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

<b>Customer References</b> <span style="float: right;">A07</span> 763942	<b>Alleima References</b> <span style="float: right;">A08</span> <table style="width: 100%;"> <tr> <td><b>Order No.</b></td> <td><b>Subs No.</b></td> <td><b>Dispatch note</b></td> </tr> <tr> <td>597507</td> <td>173882</td> <td>197490</td> </tr> <tr> <td><b>Suppl. No</b></td> <td><b>C.Code</b></td> <td></td> </tr> <tr> <td>173882</td> <td>15</td> <td></td> </tr> </table>	<b>Order No.</b>	<b>Subs No.</b>	<b>Dispatch note</b>	597507	173882	197490	<b>Suppl. No</b>	<b>C.Code</b>		173882	15																																																																			
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<b>Material description</b> <span style="float: right;">B01/B04</span> SEAMLESS STAINLESS COLD FINISHED HYDRAULIC TUBING   <b>Metallurgical process</b> <span style="float: right;">C70</span> Electric furnace	<b>Steel/material Designations</b> <span style="float: right;">B02</span> <table style="width: 100%;"> <tr> <td><b>Alleima</b></td> <td><b>AISI</b></td> </tr> <tr> <td>3R60</td> <td>TP316/TP316L</td> </tr> <tr> <td><b>EN no</b></td> <td></td> </tr> <tr> <td>1.4435</td> <td></td> </tr> </table>	<b>Alleima</b>	<b>AISI</b>	3R60	TP316/TP316L	<b>EN no</b>		1.4435																																																																							
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<b>Technical requirements</b> <span style="float: right;">B03</span> 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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**Chemical composition, product (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	Mo
044481	0.026	0.38	1.49	0.031	0.008	17.35	13.11	2.66
	N							
044481	0.035							

**Tensile test at room temperature**

Lot	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
	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 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-8667/40

