



Alleima USA LLC

Product Area Tube

MATERIAL CERTIFICATE

982 Griffin Pond Rd, Clarks Summit, PA 18411, PA US 18411, Ph: 570-585-7500

Cert#: 2300006923

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Plant Location: 982 Griffin Pond Road, Clarks Summit, PA 18411

Sold To: 8801 Alleima Tube AB(0140) SANDVIKEN SE
 Ship To: ALLEIMA BENELUX B.V. SANDVIKEN SE

Customer Order No: 32490
 Certification Date: 20231114

Alleima Order No: 390958/29

Work Order/Lot: 311569

ASTM A213-22a, ASME SA-213, ASTM A269-22, ASME Section II
 2023 Edition, NACE MR0175/ISO 15156, 4th Edition 2022-09-21
 (Austenitic), Saudi Aramco Materials System
 Specification 01-SAMSS-047, 21 February 2023 Issue

Cold Finished BRIGHT ANNEALED Seamless Tube
Type 3R60 TP316/TP316L 1.4435

Size: 12.70MM X 2.11MM
Heat: 568456

ANALYSIS %

	C	Si	Mn	P	S	Cr	Ni
Heat	.018	.45	1.64	.030	.009	17.37	13.09
Prod	.018	.46	1.63	.029	.007	17.36	13.04
	Fe	Mo	Cu	Al	Pb	N	
Heat		2.61	.30	.005		.041	
Prod		2.59	.30	.005		.049	

Mechanical Tests:

Yield Strength				Tensile Strength		Elongation in %				Reduction Of Area %
0.2%		1.0%								
psi	MPa	psi	MPa	psi	MPa	E2"	E10"	E4d	E5d	
43000	296.6	N/A		85000	586.2	50	N/A	N/A	N/A	N/A
42200	291.0			86000	593.1	55				

Hardness Test Results: 83HRBW, 80HRBW

Flare Test per ASTM A450/A1016 and ASME SA450/SA1016,
No. samples: 2 Result: Acceptable

Flattening Test per ASTM A450/A1016 and ASME SA450/SA1016:
Acceptable

Tensile Test sample width (1=Full-Size 2=1/2" Strip): 1

This material complies with DFARS 252.225-7001 (2017)

This material does not comply with DFARS 252.225-7008 (2013)

This material complies with DFARS 252.225-7009 (2019)

This material does not comply with FAR 52.225-1 (2021)

This material complies with FAR 52.225-5 (2019)

Corrosion Test per ASTM A262 Pr.E: Acceptable

Country Of Origin: United States

100% Positive Material Identification performed

All material subjected to a final solution annealing heat treatment with material at a temperature of 1900 deg. F minimum followed by rapid quenching to below 800 deg. F in less than three (3) minutes.

The material has not come in contact with Mercury or Mercury containing compounds.

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No welding has been performed on this material.
Material was 100% eddy current tested in accordance with ASTM A450, ASTM A1016 and is acceptable.
Material manufactured in compliance with Annex 1, Paragraph 4.3 of the Pressure Equipment Directive (2014/68/EU).
LRQA Certificate number 0343/HOU/PED/PRJ11100408980.
Material has been manufactured/supplied in accordance with Alleima USA, LLC-Quality Manual- Commercial Products Revision 5 dated July 6, 2023. Quality system has been approved to ISO 9001:2015 (Cert# 10544864, 8AUG23)
No unauthorized alterations. The content of this inspection certificate may not be modified or revised in any way without the prior written approval of Alleima USA, LLC
Unauthorized alterations to the inspection certificate, including introduction of false, fictitious or fraudulent statements or entries, may be punishable by fines, imprisonment, or both.
Contravention of this notice will be prosecuted to the fullest extent of the applicable laws.
Inspection certificate produced in accordance with EN 10204 3.1 (formerly EN 10204 3.1.B).
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 USA, LLC
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 EN 10204:2004, Section 6. Contravention of this notice will be prosecuted to the fullest extent of the applicable law(s).
This is to certify that the contents of this certificate are correct and accurate as contained in Alleima's records, and that all above test results and operations performed are in compliance with the requirements of the purchase order and the specification(s) listed above.

Electronically Generated Certificate-Valid without signature
John Scherer, Quality Manager
15 (ARAMCO 3R60 R1) (15) CF (JN0491)