

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02324-rev.01** Pag. 1 / 6

(A06) Purchaser
Salzgitter Mannesmann Stainless Tubes USA Inc.
12050 W. LITTLE YORK
77041 HOUSTON
Texas
USA

(A07) Customer Order No	HOUSTON STOCK REPLENISHMENT
(A08) SMST-Tubes Order No	0000284624
SMST-Item	(A09) Part No
0000284624-000001	SS-T4-S-035-20D

(B01) (B02) (B04) Product Description

Seamless Stainless Steel Cold Finished Tubes Solution Annealed In Bright Condition Plain Ends Square Cut Deburred

Specifications

ASME SA 213 19;ASTM A 213 19 a;ASTM A 269 15 >US units;SWAGELOK SCS-00062 REV. B

Grade

TP 316;TP 316L;DMV 316L

Tolerances

A 213 / A 1016 AW;ASTM A 269

(B03) Supplementary Requirements

None

(B06 - D01) Marking of the Product

Technical marking

MANNESMANN MST-I - ASME SA 213 / ASTM A 213 / ASTM A 269 - DMV 316L - TP 316 / TP 316L - 1/4 " X 0,035 " - 6,35 MM X 0,89 MM - AW - SML - CF - NDE - HEAT \$HEAT_NBR\$ - \$QUAL_LOT_NBR\$ - ITALY - BUNDLE \$BUNDLE_NBR\$ - NR \$INDIV_NBR\$

Country of Origin of the tubes

Italy

Quantity						Dimensions			
(B07) Heat	Quality Lot	SMST-Item	(B08) Pieces	(B13) Weight	(B16) Length	(B09) OD	(B10) WT	(B11) Ordered Length	
								min	max
352150	QL40071624	000001	210	154.03 kg	1280.160 m	6.35 mm	0.89 mm	6096 mm	6099 mm
				339.58 lbs	4200.00 ft	0.250 "	0.035 "	20.00 ft	20.01 ft
	QL40071892	000001	325	238.38 kg	1981.200 m	6.35 mm	0.89 mm	6096 mm	6099 mm
				525.54 lbs	6500.00 ft	0.250 "	0.035 "	20.00 ft	20.01 ft
	QL40072143	000001	150	110.02 kg	914.400 m	6.35 mm	0.89 mm	6096 mm	6099 mm
				242.55 lbs	3000.00 ft	0.250 "	0.035 "	20.00 ft	20.01 ft
685				502.43 kg	4175.760 m				
685				1107.67 lbs	13700.00 ft				

Heat Analysis

(B07) Heat	Request	C	Si	Mn	P	S	Cr	Ni	Mo	
										Min
										Max
		0.00	0.00	0.00	0.00	0.0050	16.0	10.0	2.0	
		0.035	1.0	2.0	0.045	0.0150	18.0	14.0	3.0	
(B07) Heat	Heat Origin	(C70) Melting Process	%	%	%	%	%	%	%	
352150	Germany	EAF + VOD	0.014	0.44	1.49	0.021	0.0080	17.0	11.3	2.1

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Product Analysis

ASTM A 213;ASME SA 213;ASTM A 269;ASTM A 480

	Request	C	Si	Mn	P	S	Cr	Ni	Mo
	Min	0.00	0.00	0.00	0.00	0.0050	16.0	10.0	2.0
	Max	0.035	1.0	2.0	0.045	0.0150	18.0	14.0	3.0
Quality Lot	(C00) Sample	%	%	%	%	%	%	%	%
QL40071624	49136260	0.015	0.46	1.50	0.020	0.0080	16.9	11.4	2.1
QL40071892	49139111	0.015	0.45	1.49	0.020	0.0080	16.9	11.4	2.1
QL40072143	49141626	0.015	0.47	1.52	0.020	0.0080	16.9	11.4	2.1

Sampling done on tubes in manufacturing length

Tensile Test at Room Temperature

ASTM A 370;ASTM A 632

(C02) Direction: LONGITUDINAL

(C10) Description: FULL SIZE TEST SPECIMEN

		(C11)	(C12)	(C13)
		YS 0.2%	U.T.S.	EL
		Rp 0,2%	Rm	2"
Request	Min	30	75	35.0
	Max			
Quality Lot	(C00) Sample	ksi	ksi	%
QL40071624	49136260	61	92	42.3
	49136261	61	92	42.1
QL40071892	49139111	42	88	50.6
	49139112	43	90	49.2
QL40072143	49141626	44	89	51.0
	49141627	44	88	50.0

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(C30) Hardness HRB

ASTM E 18

Quality Lot	(C00) Sample	Request	(C30) HRB		90.0 max
			(C31) Min	(C31) Max	
QL40071624	49136260		88	89	88.5
	49136261		88	89	88.5
QL40071892	49139111		79	80	79.5
	49139112		80	81	80.5
QL40072143	49141626		81	82	81.5
	49141627		81	82	81.5

Sampling done on tubes in manufacturing length

(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40071624	49136256	49136257					OK
QL40071892	49139107	49139108	49139114	49139115	49140539	49140562	OK
	49140563						OK
QL40072143	49141622	49141623	49141684	49141685	49142562	49142563	OK
	49142566						OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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(C50) Flattening Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40071624	49136258	49136259					OK
QL40071892	49139109	49139110	49139116	49139117	49140540	49140564	OK
	49140565						OK
QL40072143	49141624	49141625	49141686	49141687	49142564	49142565	OK
	49142567						OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40071624; QL40071892; QL40072143

Heat Treatment Solution Annealed 1100 °C/2012 °F Holding Time 1 Min / mm WT rapid gas cooling

(D01)	Visual and dimensional inspection (VT) on 100% of tubes according to the order	Satisfactory
(D51)	Antimixing Check (PMI) on 100% of tubes	Satisfactory
(D02)	Eddy Current Testing (ET) on 100% of tubes ASTM A 1016	Satisfactory

"Tubing are capable of passing corrosion test in accordance with EN ISO 3651-2 method A and ASTM A 262 Practice E"

SMST USA is an authorized distributor of SMST Italy products

No Weld Repair

(Z01) SMST declares that the product was manufactured, sampled, tested, inspected and packed in accordance with the specifications and any other requirements designated in the purchase order within the extent listed in SMST order acknowledgment, and has been found to meet such requirements

Tubes are free from mercury contamination and from radioactive contamination

The material is conforming to directive 2000/53/EC and 2011/65/EU

Confirmation with reference to Pressure Equipment Directive 2014/68/EU:

The works operates a quality management system that has undergone a specific assessment for materials for pressure equipment and is certified by a competent body (TUV-Cert. No: 70/2002/MUC)

(Z02) Mill's Inspector **Ruggero Clementi (QC)** Date of Edition **23/12/2021**

This certificate is issued by SALZGITTER MANNESMANN STAINLESS TUBES via a computerized system bearing a traceable unique number. It is valid without signature. An intermediary may only pass on the original certificate without any alterations. Providing a copy of the original is only permitted subject to strict compliance with the prerequisites set out in § 6 of EN 10204:2004 i.e. traceability and availability of the original upon request. Any modification or alteration of the certificate or any copies are strictly prohibited. Any contravention of this notice or § 6 of EN 10204:2004 is illegal and will be prosecuted. Any falsification of a certificate e.g. by introducing false or fraudulent data for the purpose of promoting the sales of goods is a criminal offence under German law (and many other jurisdictions) punishable with fines and imprisonment. If an authentication is needed, please contact info@mst.mannesmann.com

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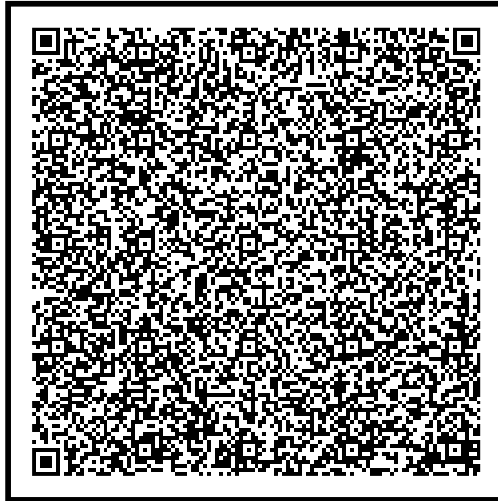
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Certificate anti counterfeiting check



**A set of information from the Inspection Certificate cover page are included in encrypted form in the above QR code.
By scanning it with your mobile device you can check if the Inspection Certificate is genuine.**