

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02048-rev.01** Pag. 1 / 5

(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**
 0000284623
SMST-Item (A09) **Part No**
 0000284623-000007 SS-T8-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 - 1/2 " X 0,035 " - 12,70 MM X 0,89 MM - AW - SML - CF - NDE - HEAT \$HEAT_NBR\$ - \$QUAL_LOT_NBR\$ - ITALY - BUNDLE \$BUNDLE_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
352140	QL40071399	000007	81	128.50 kg	493.776 m	12.70 mm	0.89 mm	6096 mm	6099 mm
				283.29 lbs	1620.00 ft	0.500 "	0.035 "	20.00 ft	20.01 ft
	QL40071545	000007	259	410.90 kg	1578.864 m	12.70 mm	0.89 mm	6096 mm	6099 mm
				905.88 lbs	5180.00 ft	0.500 "	0.035 "	20.00 ft	20.01 ft
358850	QL40071780	000007	391	620.31 kg	2383.536 m	12.70 mm	0.89 mm	6096 mm	6099 mm
				1367.55 lbs	7820.00 ft	0.500 "	0.035 "	20.00 ft	20.01 ft
			731	1159.71 kg	4456.176 m				
			731	2556.72 lbs	14620.00 ft				

Heat Analysis

		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
(B07) Heat	Heat Origin	(C70) Melting Process	%	%	%	%	%	%	%	%
352140	Germany	EAF + VOD	0.015	0.44	1.53	0.023	0.0080	17.0	11.3	2.2
358850	Germany	EAF + VOD	0.017	0.41	1.47	0.024	0.0100	16.7	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	%	%	%	%	%	%	%	%
QL40071399	49134600	0.013	0.44	1.58	0.020	0.0080	16.9	11.2	2.1
QL40071545	49135632	0.013	0.44	1.56	0.020	0.0080	17.0	11.2	2.1
QL40071780	49137843	0.017	0.43	1.48	0.021	0.0090	16.7	11.3	2.1

Sampling done on tubes in manufacturing length

Tensile Test at Room Temperature

ASTM A 370

(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	%
QL40071399	49134600	40	85	50.6
	49134601	40	85	51.2
QL40071545	49135632	43	86	53.1
	49135633	42	86	53.5
QL40071780	49137843	44	86	51.2
	49137844	51	89	50.6

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(C30) Hardness HRB

ASTM E 18

Quality Lot	(C00) Sample	Request	(C30) HRB		90.0 max
			(C31) Min	(C31) Max	
QL40071399	49134600	Result	78	79	78.5
	49134601		78	79	78.5
QL40071545	49135632		81	82	81.5
	49135633		81	82	81.5
QL40071780	49137843		79	80	79.5
	49137844		83	84	83.5

Sampling done on tubes in manufacturing length

(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40071399	49134596	49134597	49134607	49134612	OK
QL40071545	49135628	49135629	49136252	49136253	OK
QL40071780	49137839	49137840			OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

(C50) Flattening Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40071399	49134598	49134599	49134608	49134613	OK
QL40071545	49135630	49135631	49136254	49136255	OK
QL40071780	49137841	49137842			OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40071399; QL40071545; QL40071780

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"
SMTS 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 **03/11/2021**

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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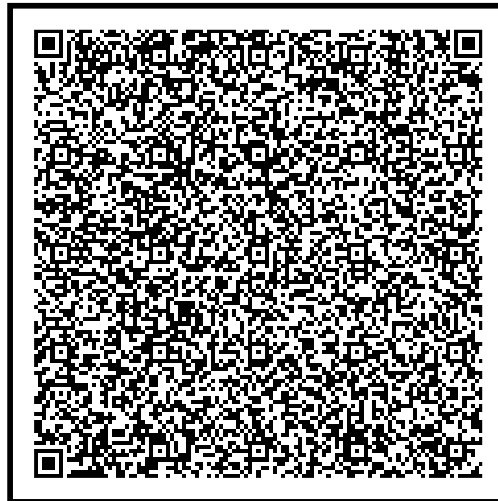
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Certificate anti counterfeiting check



**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.**