

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02050-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
 0000284624
SMST-Item (A09) **Part No**
 0000284624-000007 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	QL40071650	000007	363	575.90 kg	2212.848 m	12.70 mm	0.89 mm	6096 mm	6099 mm
				1269.64 lbs	7260.00 ft	0.500 "	0.035 "	20.00 ft	20.01 ft
358850	QL40071543	000007	338	536.24 kg	2060.448 m	12.70 mm	0.89 mm	6096 mm	6099 mm
				1182.21 lbs	6760.00 ft	0.500 "	0.035 "	20.00 ft	20.01 ft
			701	1112.14 kg	4273.296 m				
			701	2451.85 lbs	14020.00 ft				

Heat Analysis

(B07) Heat	Heat Origin	(C70) Melting Process	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
352140	Germany	EAF + VOD	%	%	%	%	%	%	%	%	%
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	

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02050-rev.01** Pag. 2 / 5

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	%	%	%	%	%	%	%	%
QL40071543	49135614	0.017	0.43	1.48	0.021	0.0090	16.7	11.3	2.1
QL40071650	49136523	0.013	0.45	1.55	0.020	0.0080	16.9	11.2	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	%
QL40071543	49135614	44	86	52.2
	49135615	43	86	51.6
QL40071650	49136523	46	90	49.6
	49136524	43	88	51.6

Sampling done on tubes in manufacturing length

(C30) Hardness HRB

ASTM E 18

		(C30) HRB			
		Request			90.0 max
Quality Lot	(C00) Sample	Result	(C31) Min	(C31) Max	(C32) Avg
QL40071543	49135614		81	82	81.5
	49135615		80	81	80.5
QL40071650	49136523		80	81	80.5
	49136524		79	80	79.5

Sampling done on tubes in manufacturing length

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02050-rev.01** Pag. 3 / 5

(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	Result
QL40071543	49135610	OK
	49135611	OK
	49135727	OK
	49135728	OK
QL40071650	49136519	OK
	49136520	OK
	49136574	OK
	49136575	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	Result
QL40071543	49135612	OK
	49135613	OK
	49135729	OK
	49135730	OK
QL40071650	49136521	OK
	49136522	OK
	49136576	OK
	49136577	OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02050-rev.01** Pag. 4 / 5

Other Tests and Declarations

QL40071543; QL40071650

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 **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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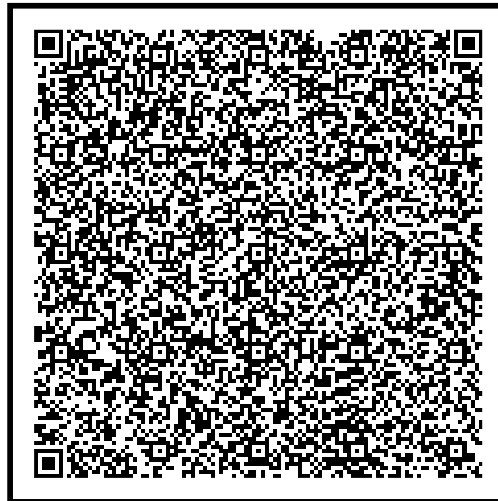
(A03) No.

4-21-02050-rev.01

Pag.

5 / 5

Certificate anti counterfeiting check



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