

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02288-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	0000287182
SMST-Item	(A09) Part No
0000287182-000008	SS-T8-S-049-20D

(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 03.2020 Solution annealed

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 0,049 " - 12,70 MM X 1,24 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
366470	QL40072130	000008	525	1126.07 kg	3200.400 m	12.70 mm	1.24 mm	6096 mm	6099 mm
				2482.56 lbs	10500.00 ft	0.500 "	0.049 "	20.00 ft	20.01 ft
370270	QL40072083	000008	1275	2732.62 kg	7772.400 m	12.70 mm	1.24 mm	6096 mm	6099 mm
				6024.40 lbs	25500.00 ft	0.500 "	0.049 "	20.00 ft	20.01 ft
	QL40072218	000008	901	1930.57 kg	5492.496 m	12.70 mm	1.24 mm	6096 mm	6099 mm
				4256.18 lbs	18020.00 ft	0.500 "	0.049 "	20.00 ft	20.01 ft
			2701	5789.26 kg	16465.296 m				
			2701	12763.14 lbs	54020.00 ft				

Heat Analysis

(B07) Heat	Heat Origin	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	%	%	%	%	%	%	%	%	
366470	Germany	EAF + VOD	0.015	0.30	1.59	0.028	0.0080	17.3	11.3	2.1	
370270	Germany	EAF + VOD	0.017	0.45	1.50	0.025	0.0100	17.3	11.4	2.2	

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02288-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	%	%	%	%	%	%	%	%
QL40072083	49141085	0.017	0.48	1.54	0.027	0.0120	17.3	11.3	2.1
QL40072130	49141414	0.012	0.30	1.60	0.024	0.0080	17.3	11.2	2.1
QL40072218	49142520	0.017	0.48	1.54	0.027	0.0120	17.3	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	%
QL40072083	49141085	54	90	45.3
	49141086	49	91	48.2
QL40072130	49141414	52	88	46.3
	49141415	53	88	45.7
QL40072218	49142520	47	88	49.6
	49142521	48	88	49.2

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INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-21-02288-rev.01** Pag. 3 / 5

(C30) Hardness HRB

ASTM E 18

Quality Lot	(C00) Sample	Request		(C30) HRB	
		Result	(C31) Min	(C31) Max	90.0 max (C32) Avg
QL40072083	49141085		86	87	86.5
	49141086		83	84	83.5
QL40072130	49141414		83	84	83.5
	49141415		84	85	84.5
QL40072218	49142520		83	84	83.5
	49142521		84	85	84.5

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
QL40072083	49141079	49141080	49141081	49141171	49141172	49141229	OK
	49141230						OK
QL40072130	49141408	49141409	49141410				OK
QL40072218	49142516	49142517	49142523	49142524	49144658	49144659	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	(C00) Sample	(C00) Sample	Result
QL40072083	49141082	49141083	49141084	49141173	49141174	49141231	OK
	49141232						OK
QL40072130	49141411	49141412	49141413				OK
QL40072218	49142518	49142519	49142525	49142526	49144660	49144661	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. **4-21-02288-rev.01** Pag. 4 / 5

Other Tests and Declarations

QL40072083; QL40072130; QL40072218

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 **16/12/2021**

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

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

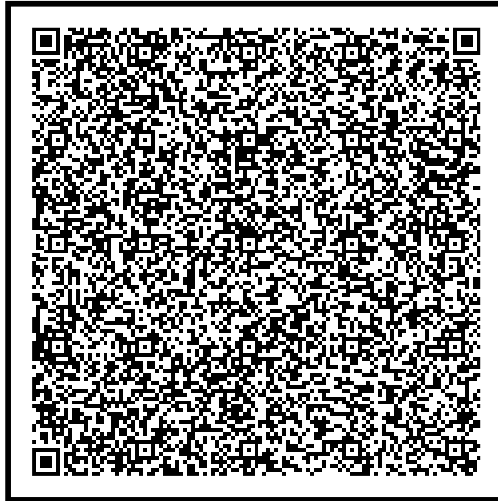
(A03) No.

4-21-02288-rev.01

Pag.

5 / 5

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.**