

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-00871-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**
 0000287551
SMST-Item (A09) **Part No**
 0000287551-000004 SS-T6-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 21 a;ASTM A 269 15 >US units;SWAGELOK SCS-00062 REV. C
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 - 3/8 " X 0,035 " - 9,53 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
177362	QL40073418	000004	450	520.69 kg	2743.202 m	9.53 mm	0.89 mm	6096 mm	6099 mm
				1147.93 lbs	9000.01 ft	0.375 "	0.035 "	20.00 ft	20.01 ft
177691	QL40072537	000004	498	577.99 kg	3035.808 m	9.53 mm	0.89 mm	6096 mm	6099 mm
				1274.25 lbs	9960.00 ft	0.375 "	0.035 "	20.00 ft	20.01 ft
	QL40072892	000004	1097	1273.21 kg	6687.312 m	9.53 mm	0.89 mm	6096 mm	6099 mm
				2806.95 lbs	21940.00 ft	0.375 "	0.035 "	20.00 ft	20.01 ft
	QL40073087	000004	1478	1716.85 kg	9009.884 m	9.53 mm	0.89 mm	6096 mm	6099 mm
				3785.01 lbs	29559.99 ft	0.375 "	0.035 "	20.00 ft	20.01 ft
			3523	4088.74 kg	21476.206 m				
			3523	9014.14 lbs	70460.00 ft				

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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	%	%	%	%	%	%	%	%
177362	Italy	EAF + AOD	0.021	0.36	1.28	0.021	0.0080	16.8	11.2	2.0
177691	Italy	EAF + AOD	0.023	0.35	1.27	0.020	0.0070	16.6	11.1	2.1

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	%	%	%	%	%	%	%	%
QL40072537	49146586	0.027	0.36	1.30	0.022	0.0090	16.6	11.0	2.0
QL40072892	49149465	0.027	0.36	1.30	0.022	0.0090	16.6	11.0	2.0
QL40073087	49151173	0.027	0.36	1.30	0.022	0.0090	16.6	11.0	2.0
QL40073418	49154417	0.020	0.40	1.30	0.023	0.0090	16.8	11.1	2.0

Sampling done on tubes in manufacturing length

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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	%
QL40072537	49146586	43	86	52.2
	49146587	46	84	49.2
QL40072892	49149465	40	86	52.2
	49149466	53	89	45.7
QL40073087	49151173	53	87	47.2
	49151174	46	85	50.2
QL40073418	49154813	45	86	49.2
	49154814	48	88	48.6

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
QL40072537	49146586		80	81	80.5
	49146587		81	82	81.5
QL40072892	49149465		78	79	78.5
	49149466		85	86	85.5
QL40073087	49151173		86	87	86.5
	49151174		82	83	82.5
QL40073418	49154813		82	83	82.5
	49154814		83	84	83.5

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(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40072537	49146580	49146581	49146582				OK
QL40072892	49149459	49149460	49149461	49150271	49150272		OK
QL40073087	49151167	49151168	49151169	49151703	49151704	49151708	OK
	49151709	49154472	49154760	49154761	49154762		OK
QL40073418	49154807	49154808	49154809				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
QL40072537	49146583	49146584	49146585				OK
QL40072892	49149462	49149463	49149464	49150273	49150274		OK
QL40073087	49151170	49151171	49151172	49151705	49151706	49151710	OK
	49151711	49154473	49154763	49154764	49154765		OK
QL40073418	49154810	49154811	49154812				OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40072537; QL40072892; QL40073087; QL40073418

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)

Materials are in compliance with ANSI/NACE MR 0175/ISO 15156-3 Ed. 2015

(Z02) Mill's Inspector **Ruggero Clementi (QC)** Date of Edition **20/04/2022**

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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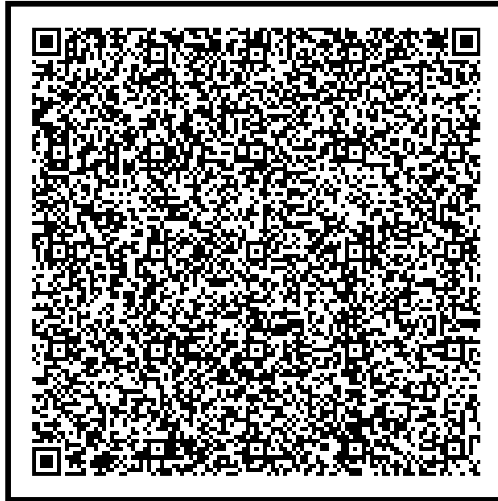
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Certificate anti counterfeiting check



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