

**INSPECTION CERTIFICATE**

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-02502-rev.01** Pag. 1 / 6

<p>(A06) <b>Purchaser</b>          Salzgitter Mannesmann Stainless Tubes USA Inc.          12050 W. LITTLE YORK          77041 HOUSTON          Texas          USA</p>	<p>(A07) <b>Customer Order No</b>          5210000502 000005</p> <p>(A08) <b>SMST-Tubes Order No</b>          0000290082</p> <p><b>SMST-Item</b> (A09) <b>Part No</b>          0000290082-000005 SS-T6-S-049-20D</p>
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(B01) (B02) (B04) **Product Description**

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

<b>Specifications</b>	ASME SA 213 21;ASTM A 213 21 a;ASTM A 269 15 >US units;SWAGELOK SCS-00062 06.2021 Rev. C
<b>Grade</b>	TP 316;TP 316L;DMV 316L
<b>Tolerances</b>	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 0,049 " - 9,53 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
178540	QL40075517	000005	359	557.00 kg	2188.464 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				1227.98 lbs	7180.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
RL736	QL40075322	000005	650	1008.51 kg	3962.400 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				2223.39 lbs	13000.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
	QL40075549	000005	833	1292.43 kg	5077.968 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				2849.32 lbs	16660.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
	QL40075727	000005	955	1481.73 kg	5821.680 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				3266.66 lbs	19100.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
			<b>2797</b>	<b>4339.67 kg</b>	<b>17050.512 m</b>				
			<b>2797</b>	<b>9567.35 lbs</b>	<b>55940.00 ft</b>				

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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	%	%	%	%	%	%	%	%	
178540	Italy	EAF + AOD	0.021	0.36	1.28	0.020	0.0080	16.7	11.2	2.1	
RL736	France	EAF + VOD	0.016	0.38	1.76	0.023	0.0060	16.7	11.1	2.1	

**Product Analysis**

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

	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	%	%	%	%	%	%	%	%
QL40075322	49175890	0.020	0.41	1.78	0.023	0.0080	16.5	11.1	2.0
QL40075517	49177702	0.020	0.37	1.30	0.024	0.0090	16.8	11.2	2.0
QL40075549	49178196	0.020	0.41	1.78	0.023	0.0080	16.5	11.1	2.0
QL40075727	49180354	0.020	0.41	1.78	0.023	0.0080	16.5	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	%
QL40075322	49175890	51	92	45.5
	49175891	49	90	47.8
QL40075517	49177702	46	89	48.6
	49177703	46	88	49.9
QL40075549	49178196	45	89	48.9
	49178197	90	90	48.5
QL40075727	49180354	54	93	44.3
	49180355	53	92	44.5

Sampling done on tubes in manufacturing length

**(C30) Hardness HRB**

**ASTM E 18**

Quality Lot	(C00) Sample	(C30) HRB			
		Request			90.0 max
		Result	(C31) Min	(C31) Max	(C32) Avg
QL40075322	49175890		85	86	85.5
	49175891		84	85	84.5
QL40075517	49177702		82	83	82.5
	49177703		80	81	80.5
QL40075549	49178196		81	82	81.5
	49178197		81	82	81.5
QL40075727	49180354		85	86	85.5
	49180355		84	85	84.5

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**(C51) Flaring Test**

**ASTM A 1016**

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40075322	49175882	49175883	49175884	49175885	OK
QL40075517	49177698	49177699			OK
QL40075549	49178188	49178189	49178190	49178191	OK
QL40075727	49180346	49180347	49180348	49180349	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
QL40075322	49175886	49175887	49175888	49175889	OK
QL40075517	49177700	49177701			OK
QL40075549	49178192	49178193	49178194	49178195	OK
QL40075727	49180350	49180351	49180352	49180353	OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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**Other Tests and Declarations**

QL40075322; QL40075517; QL40075549; QL40075727

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

**07/10/2022**

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](mailto:info@mst.mannesmann.com)

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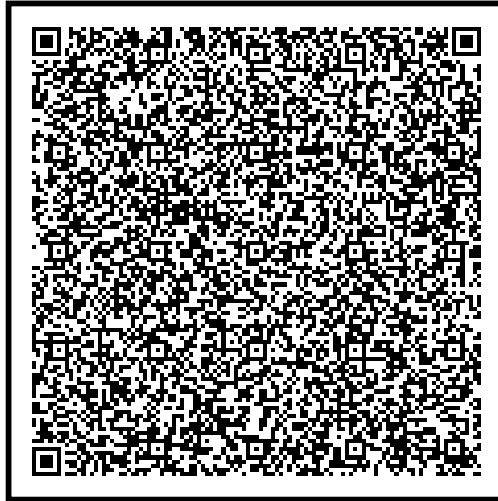
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**Certificate anti counterfeiting check**



**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.**