

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-00872-rev.01** Pag. 1 / 7

(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**
 0000287551-000005 SS-T6-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. 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 0.049 " - 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
177691	QL40073060	000005	120	186.19 kg	731.520 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				410.48 lbs	2400.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
	QL40073061	000005	387	601.58 kg	2359.169 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				1326.26 lbs	7740.06 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
352140	QL40073486	000005	48	74.47 kg	292.608 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				164.18 lbs	960.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
372380	QL40072798	000005	40	62.22 kg	243.840 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				137.17 lbs	800.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
	QL40073265	000005	361	560.11 kg	2200.656 m	9.53 mm	1.24 mm	6096 mm	6099 mm
				1234.83 lbs	7220.00 ft	0.375 "	0.049 "	20.00 ft	20.01 ft
			956	1484.57 kg	5827.793 m				
			956	3272.92 lbs	19120.06 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	%	%	%	%	%	%	%	%
177691	Italy	EAF + AOD	0.023	0.35	1.27	0.020	0.0070	16.6	11.1	2.1
352140	Germany	EAF + VOD	0.015	0.44	1.53	0.023	0.0080	17.0	11.3	2.2
372380	Germany	EAF + VOD	0.018	0.34	1.45	0.025	0.0090	17.1	11.5	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	%	%	%	%	%	%	%	%
QL40072798	49148194	0.019	0.40	1.54	0.022	0.0090	17.1	11.5	2.1
QL40073060	49150927	0.027	0.36	1.30	0.022	0.0090	16.6	11.0	2.0
QL40073061	49150936	0.027	0.36	1.30	0.022	0.0090	16.6	11.0	2.0
QL40073265	49152593	0.019	0.40	1.54	0.022	0.0090	17.1	11.5	2.1
QL40073486	49155154	0.013	0.44	1.56	0.020	0.0080	17.0	11.2	2.1

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	%
QL40072798	49148194	52	88	47.6
	49148195	55	90	47.2
QL40073060	49150927	47	88	48.6
	49150928	47	88	48.2
QL40073061	49150936	56	91	47.2
	49150937	53	89	48.4
QL40073265	49152593	42	87	51.6
	49152594	42	87	51.6
QL40073486	49155154	42	87	51.2

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(C30) Hardness HRB

ASTM E 18

Quality Lot	(C00) Sample	(C30) HRB			
		Request			90.0 max
		Result	(C31) Min	(C31) Max	(C32) Avg
QL40072798	49148194		85	86	85.5
	49148195		86	87	86.5
QL40073060	49150927		83	84	83.5
	49150928		83	84	83.5
QL40073061	49150936		85	86	85.5
	49150937		84	85	84.5
QL40073265	49152593		81	83	82.0
	49152594		81	83	82.0
QL40073486	49155154		81	83	82.0
	49155155		82	84	83.0

Sampling done on tubes in manufacturing length

(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40072798	49148188	49148189	49148190		OK
QL40073060	49150925				OK
QL40073061	49150930	49150931	49150932	49156476	OK
QL40073265	49152589	49152590			OK
QL40073486	49155152				OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes



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(C50) Flattening Test

ASTM A 1016

Quality Lot	(C00) Sample	(C00) Sample	(C00) Sample	(C00) Sample	Result
QL40072798	49148191	49148192	49148193		OK
QL40073060	49150926				OK
QL40073061	49150933	49150934	49150935	49156477	OK
QL40073265	49152591	49152592			OK
QL40073486	49155153				OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40072798; QL40073060; QL40073061; QL40073265; QL40073486

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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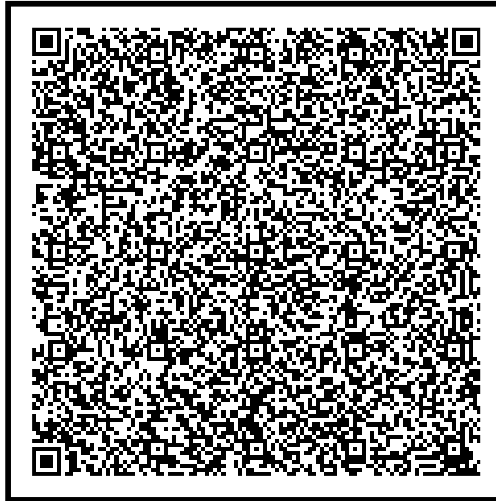
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Certificate anti counterfeiting check



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