

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-00874-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	0000287554
SMST-Item	(A09) Part No
0000287554-000008	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. 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 - 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
177691	QL40072667	000008	305	654.19 kg	1859.280 m	12.70 mm	1.24 mm	6096 mm	6099 mm
				1442.24 lbs	6100.00 ft	0.500 "	0.049 "	20.00 ft	20.01 ft
177692	QL40072800	000008	420	900.85 kg	2560.320 m	12.70 mm	1.24 mm	6096 mm	6099 mm
				1986.04 lbs	8400.00 ft	0.500 "	0.049 "	20.00 ft	20.01 ft
725				1555.04 kg	4419.600 m				
725				3428.28 lbs	14500.00 ft				

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	
177692	Italy	EAF + AOD	0.024	0.33	1.28	0.022	0.0090	16.7	11.3	2.1	

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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	%	%	%	%	%	%	%	%
QL40072667	49147287	0.027	0.36	1.30	0.022	0.0090	16.6	11.0	2.0
QL40072800	49148216	0.024	0.35	1.32	0.025	0.0100	16.7	11.1	2.0

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	%
QL40072667	49147287	50	90	47.2
	49147288	44	86	51.2
QL40072800	49148216	51	88	47.8
	49148217	52	88	49.2

Sampling done on tubes in manufacturing length

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(C30) Hardness HRB

ASTM E 18

Quality Lot	(C00) Sample	Request	(C30) HRB		90.0 max
			(C31) Min	(C31) Max	
QL40072667	49147287		83	84	83.5
	49147288		80	81	80.5
QL40072800	49148216		85	86	85.5
	49148217		86	87	86.5

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
QL40072667	49147283	49147284	49147405	49147406	49147409	49147466	OK
	49147467	49147506					OK
QL40072800	49148212	49148213					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
QL40072667	49147285	49147286	49147407	49147408	49147410	49147468	OK
	49147469	49147507					OK
QL40072800	49148214	49148215					OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40072667; QL40072800

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**

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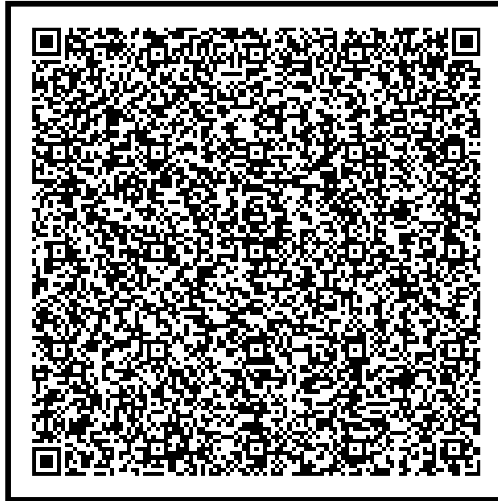
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