

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-23-01046-rev.01** Pag. 1 / 5

<p>(A06) Purchaser GRANDE PRAIRIE FLUID SYSTEM TECHNOLOGIES INC 118 COMMERCE DRIVE R3P 0Z6 WINNIPEG Manitoba Canada</p>	<p>(A07) Customer Order No 8007212 (A08) SMST-Tubes Order No 0000290227 SMST-Item (A09) Part No 0000290227-000001 SS-T4-S-035-20</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

Specifications

ASME SA 213 21;ASTM A 213 21 a;ASTM A 269 15a (2019) >US units;SWAGELOK SCS-00062 06.2021 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 - 1/4 " X 0,035 " - 6,35 MM X 0,89 MM - AW - SML - CF - NDE - HEAT \$HEAT_NBR\$ - \$QUAL_LOT_NBR\$ - ITALY - BUNDLE \$BUNDLE_NBR\$ - NR \$INDIV_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
278156	QL40078883	000001	2200	1599.66 kg	13411.200 m	6.35 mm	0.89 mm	6096 mm	6099 mm
				3526.65 lbs	44000.00 ft	0.250 "	0.035 "	20.00 ft	20.01 ft
			2200	1599.66 kg	13411.200 m				
			2200	3526.65 lbs	44000.00 ft				

Heat Analysis

(B07) Heat	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	%	%	%	%	%	%	%	
278156	Italy	EAF + AOD	0.024	0.38	1.29	0.026	0.0061	16.8	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	%	%	%	%	%	%	%	%
QL40078883	49216588	0.024	0.35	1.28	0.030	0.0070	16.9	11.4	2.0

Sampling done on tubes in manufacturing length

Tensile Test at Room Temperature

ASTM A 370;ASTM A 632

(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	%
QL40078883	49216588	41	89	53.7
	49216589	46	92	47.6

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
QL40078883	49216588		80	81	80.5
	49216589		81	82	81.5

Sampling done on tubes in manufacturing length

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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
QL40078883	49216580	49216581	49216582	49216583	49216591	49216592	OK
	49216593	49216594	49216612	49216613			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
QL40078883	49216584	49216585	49216586	49216587	49216595	49216596	OK
	49216597	49216598	49216614	49216615			OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40078883

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"

Tubes are compliant with NACE MR 0103 and MR 0175

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 **02/05/2023**

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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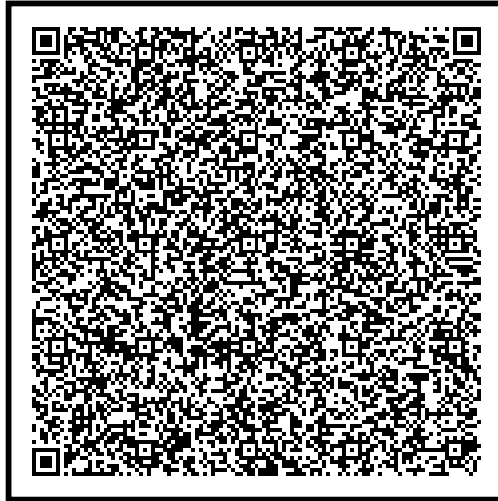
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Certificate anti counterfeiting check



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