

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-23-01051-rev.01** Pag. 1 / 6

(A06) Purchaser
GRANDE PRAIRIE FLUID SYSTEM TECHNOLOGIES INC
118 COMMERCE DRIVE
R3P 0Z6 WINNIPEG
Manitoba
Canada

(A07) Customer Order No	8007212
(A08) SMST-Tubes Order No	0000290227
SMST-Item	(A09) Part No
0000290227-000006	SS-T6-S-065-20

(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 - 3/8 " x 0,065 " - 9,53 MM x 1,65 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
278153	QL40078691	000006	417	818.00 kg	2542.032 m	9.53 mm	1.65 mm	6096 mm	6099 mm
				1803.38 lbs	8340.00 ft	0.375 "	0.065 "	20.00 ft	20.01 ft
	QL40078847	000006	498	977.31 kg	3035.808 m	9.53 mm	1.65 mm	6096 mm	6099 mm
				2154.60 lbs	9960.00 ft	0.375 "	0.065 "	20.00 ft	20.01 ft
278155	QL40078831	000006	480	941.99 kg	2926.080 m	9.53 mm	1.65 mm	6096 mm	6099 mm
				2076.73 lbs	9600.00 ft	0.375 "	0.065 "	20.00 ft	20.01 ft
			1395	2737.30 kg	8503.920 m				
			1395	6034.71 lbs	27900.00 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	%	%	%	%	%	%	%	%
278153	Italy	EAF + AOD	0.022	0.33	1.28	0.023	0.0062	16.7	11.2	2.1
278155	Italy	EAF + AOD	0.020	0.37	1.30	0.025	0.0080	16.7	11.3	2.1

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Product Analysis

ASME SA 213;ASTM A 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	%	%	%	%	%	%	%	%
QL40078691	49214534	0.021	0.35	1.30	0.028	0.0080	16.6	11.2	2.0
QL40078831	49216052	0.023	0.37	1.31	0.030	0.0110	16.9	11.3	2.0
QL40078847	49216168	0.021	0.35	1.30	0.028	0.0080	16.6	11.2	2.0

Sampling done on tubes in manufacturing length

Tensile Test at Room Temperature

ASTM A 632;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	%
QL40078691	49214534	59	98	41.7
	49214535	58	96	42.3
QL40078831	49216052	45	89	51.2
	49216053	45	89	51.6
QL40078847	49216168	46	94	47.2
	49216169	46	93	47.6

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(C30) Hardness HRB

ASTM E 18

Quality Lot	(C00) Sample	Request Result	(C30) HRB		
			(C31) Min	(C31) Max	90.0 max (C32) Avg
QL40078691	49214534		88	89	88.5
	49214535		88	89	88.5
QL40078831	49216052		82	83	82.5
	49216053		82	83	82.5
QL40078847	49216168		82	83	82.5
	49216169		82	83	82.5

Sampling done on tubes in manufacturing length

(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	Result
QL40078691	49214528	OK
	49214529	OK
	49214530	OK
QL40078831	49216048	OK
	49216049	OK
QL40078847	49216162	OK
	49216163	OK
	49216164	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	Result
QL40078691	49214531	OK
	49214532	OK
	49214533	OK
QL40078831	49216050	OK
	49216051	OK
QL40078847	49216165	OK
	49216166	OK
	49216167	OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL40078691; QL40078831; QL40078847

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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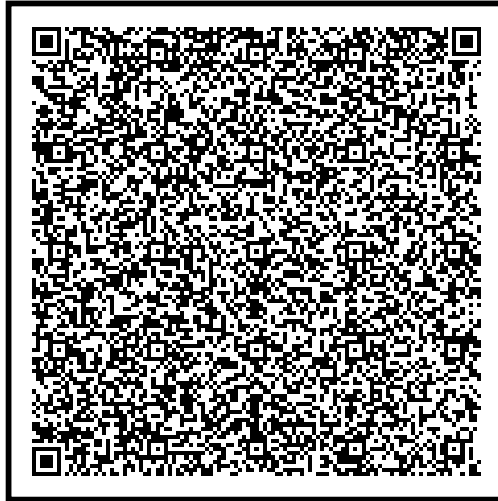
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Certificate anti counterfeiting check



**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.**