#### Salzgitter Mannesmann Stainless Tubes USA, Inc

(A05)

12050 West Little York - Houston, TX 77041 - USA

www.mannesmann-stainless-tubes.com



## **INSPECTION CERTIFICATE**

(A02)

EN 10204: 2004 TYPE 3.1

5-22-00079-rev.01

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(A06) Purchaser

GRANDE PRAIRIE FLUID SYSTEM TECHNOLOGIES INC

118 COMMERCE DRIVE

R3P 0Z6 WINNIPEG

Manitoba

Canada

(A07) Customer Order No

8004952

(A08) SMST-Tubes Order No

0000287773

(A03) No.

SMST-Item (A09) Part No

0000287773-000008 SS-T12-S-095-20

(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 19;ASTM A 213 19 a;ASTM A 269 15 >US units;SWAGELOK SCS-00062 REV. B

03.2020 Solution annealed

**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-U A/SA-213 A-269 TP 316/TP 316L .750 X .095AW SML CF ET HT 364170

PHU50028988000 QL50019216 287773-8 USA

**Country of Origin of the tubes** 

USA

	Quantity						Dime	nsions	
(B07) Heat	Quality Lot	SMST-Item	(B08) Pieces	(B13) Weight	(B16) Length	(B09) OD	(B10) WT	(B Ordered	11) I Length
								min	max
364170	QL50019216	800000	108	1443.00 lbs	2160.00 ft	0.750 "	0.095 "	20.00 ft	20.01 ft

108 1443.00 lbs 2160.00 ft

#### **Heat Analysis**

		Request	С	Si	Mn	Р	S	Cr	Ni	Мо
	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	%	%	%	%	%	%	%	%
364170	Germany	EAF + VOD	0.019	0.43	1.62	0.027	0.0070	16.7	11.3	2.2

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#### **Product Analysis**

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

	Request	С	Si	Mn	Р	S	Cr	Ni	Мо
	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	%	%	%	%	%	%	%	%
QL50019216	59025438	0.019	0.43	1.62	0.027	0.0070	16.7	11.3	2.2

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	%
QL50019216	59025438	44	88	51.7
QL30019210	59025513	44	88	51.7

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
OL 50040046	59025439		76	72	74.0
QL50019216	59025440		72	75	73.5

Sampling done on tubes in manufacturing length

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## (C51) Flaring Test

## **ASTM A 1016**

Quality Lot	(C00) Sample	Result
QL50019216	59025438	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	Result
QL50019216	59025438	OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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(A02)EN 10204: 2004 TYPE 3.1 5-22-00079-rev.01 4/5 (A03) No. Pag. Other Tests and Declarations QL50019216 Heat Treatment Solution Annealed @ 1950 °F rapid gas cooling 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 Tubes in compliance with customer specification nr. - SCS-00062 rev. B - SQS-00012 rev. Y - SQS-00020 rev. K - SGS- 00008 No Weld Repair SMST declares that the product was manufactured, sampled, tested, inspected and packed in accordance with the specifications and any other (Z01) 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 (ABS QE Cert. No. 42608)

(Z02) Mill's Inspector Noel Villatoro Date of Edition 02/14/2022

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(A01) Salzgitter Mannesmann Stainless Tubes USA, Inc

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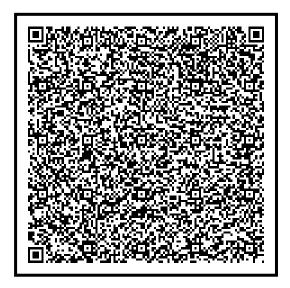
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EN 10204: 2004 TYPE 3.1

INSPECTION CENTIFICATE

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