

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-01799-rev.01** Pag. 1 / 5

(A06) **Purchaser**
 Swagelok Calgary Valve and Fitting
 3202 - 12th Avenue NE
 T2A 6N8 Calgary
 Alberta
 Canada

(A07) **Customer Order No**
 775535
 (A08) **SMST-Tubes Order No**
 0000287719
SMST-Item (A09) **Part No**
 0000287719-000005 SS-T12-S-049-20

(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 21 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-I - ASME SA 213 / ASTM A 213 / ASTM A 269 - DMV 316L - TP 316 / TP 316L - 3/4 " x 0,049 " - 19,05 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

(B07) Heat	Quality Lot	SMST-Item	Quantity			Dimensions			
			(B08) Pieces	(B13) Weight	(B16) Length	(B09) OD	(B10) WT	(B11) Ordered Length	
								min	max
RK781	QL40073510	000005	660	2200.34 kg	4023.360 m	19.05 mm	1.24 mm	6096 mm	6099 mm
				4850.92 lbs	13200.00 ft				
			660	2200.34 kg	4023.360 m				
			660	4850.92 lbs	13200.00 ft				

Heat Analysis

(B07) Heat	Heat Origin	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	
		(C70) Melting Process	%	%	%	%	%	%	%	%	
RK781	France	E + VOD	0.012	0.26	1.84	0.016	0.0050	16.8	11.1	2.1	

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-01799-rev.01** Pag. 2 / 5

Product Analysis

ASTM A 213;ASME SA 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	%	%	%	%	%	%	%	%
QL40073510	49155293	0.016	0.26	1.85	0.018	0.0067	16.7	11.0	2.1

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	%
QL40073510	49155293	40	88	55.5
	49155294	40	87	55.1

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
QL40073510	49155293		81	82	81.5
	49155294		81	82	81.5

Sampling done on tubes in manufacturing length

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-01799-rev.01** Pag. 3 / 5

(C51) Flaring Test

ASTM A 1016

Quality Lot	(C00) Sample	Result
QL40073510	49155289	OK
	49155290	OK
	49155549	OK
	49155741	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
QL40073510	49155291	OK
	49155292	OK
	49155550	OK
	49155742	OK

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

INSPECTION CERTIFICATE

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **4-22-01799-rev.01** Pag. 4 / 5

Other Tests and Declarations

QL40073510

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"

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 **15/07/2022**

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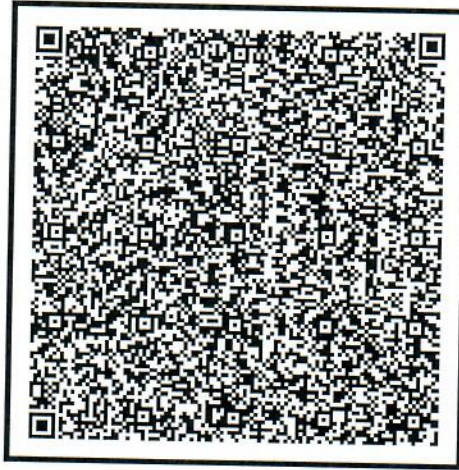
(A02) EN 10204: 2004 TYPE 3.1

(A03) No.

4-22-01799-rev.01

Pag. 5 / 5

Certificate anti counterfeiting check



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