

INSPECTION CERTIFICATE

PO 8005275

(A02) EN 10204: 2004 TYPE 3.1

(A03) No. **5-22-00737-rev.01** Pag. 1 / 5

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

(A07) **Customer Order No**
 8005275
 (A08) **SMST-Tubes Order No**
 0000288202
SMST-Item (A09) **Part No**
 0000288202-000010 SS-T12-S-049-20

(B01) (B02) (B04) Product Description

Seamless Stainless Steel Cold Finished Tubes 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; NACE MR0175; ISO 15156

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 TP316/316L .750X .049AW SML CF ET HT RK703 PHU (XXXX) QL(XXXX) USA

Country of Origin of the tubes USA

| (B07) Heat | Quantity | | | | | Dimensions | | | |
|------------|-------------|-----------|--------------|--------------|--------------|------------|----------|----------------------|----------|
| | Quality Lot | SMST-Item | (B08) Pieces | (B13) Weight | (B16) Length | (B09) OD | (B10) WT | (B11) Ordered Length | |
| | | | | | | | | min | max |
| RK703 | QL50021123 | 000010 | 150 | 1107.00 lbs | 3000.00 ft | 0.750 " | 0.049 " | 20.00 ft | 20.01 ft |
| | QL50021124 | 000010 | 150 | 1107.00 lbs | 3000.00 ft | 0.750 " | 0.049 " | 20.00 ft | 20.01 ft |
| | QL50021125 | 000010 | 75 | 553.57 lbs | 1500.00 ft | 0.750 " | 0.049 " | 20.00 ft | 20.01 ft |

375 2767.57 lbs 7500.00 ft

Heat Analysis

| (B07) Heat | 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 | % | % | % | % | % | % | % | | | | | | | | | |
| RK703 | France | E + VOD | 0.017 | 0.32 | 1.73 | 0.017 | 0.0070 | 16.7 | 11.0 | 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 | % | % | % | % | % | % | % | % |
| QL50021123 | 59040294 | 0.017 | 0.32 | 1.73 | 0.017 | 0.0070 | 16.7 | 11.0 | 2.1 |
| QL50021124 | 59040301 | 0.017 | 0.32 | 1.73 | 0.017 | 0.0070 | 16.7 | 11.0 | 2.1 |
| QL50021125 | 59040308 | 0.017 | 0.32 | 1.73 | 0.017 | 0.0070 | 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 | % |
| QL50021123 | 59040294 | 51 | 94 | 55.5 |
| | 59040300 | 51 | 94 | 55.5 |
| QL50021124 | 59040301 | 40 | 89 | 58.2 |
| | 59040307 | 40 | 89 | 58.2 |
| QL50021125 | 59040308 | 45 | 94 | 61.5 |

Sampling done on tubes in manufacturing length

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(C30) Hardness HRB

ASTM E 18

| Quality Lot | (C00) Sample | Request Result | (C30) HRB | | |
|-------------|-----------------|-------------------|--------------|--------------|--------------|
| | | | (C31) Min | (C31) Max | (C32) Avg |
| | | | | | 90.0 max |
| QL50021123 | 59040297 | | 67 | 74 | 70.5 |
| | 59040298 | | 67 | 74 | 70.5 |
| QL50021124 | 59040304 | | 79 | 79 | 79.0 |
| | 59040305 | | 79 | 79 | 79.0 |
| QL50021125 | 59040311 | | 77 | 80 | 78.5 |
| | 59040312 | | 77 | 80 | 78.5 |

Sampling done on tubes in manufacturing length

(C51) Flaring Test

ASTM A 1016

| Quality Lot | (C00) Sample | Result |
|-------------|-----------------|--------|
| QL50021123 | 59040294 | OK |
| QL50021124 | 59040301 | OK |
| QL50021125 | 59040308 | 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 |
|-------------|-----------------|--------|
| QL50021123 | 59040294 | OK |
| QL50021124 | 59040301 | OK |
| QL50021125 | 59040308 | OK |

Sampling done on tubes in manufacturing length

Test done at both ends of tubes

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Other Tests and Declarations

QL50021123; QL50021124; QL50021125

| | | |
|-------|---|--------------|
| | Heat Treatment Bright 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 |
| | ASTM A262 Practice E: QL50021123, QL50021124, QL50021125 | Satisfactory |
| | Production Father Quality Lot QL50020919 is applicable to shipping Child Quality Lot QL50021125 Production Father Quality Lot QL50020953 is applicable to shipping Child Quality Lot QL50021124 Production Father Quality Lot QL50020934 is applicable to shipping Child Quality Lot QL50021123 | Satisfactory |
| | 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 (ABS QE Cert. No. 42608)

(Z02) Mill's Inspector

Noel Villatoro



Date of Edition

12/21/2022

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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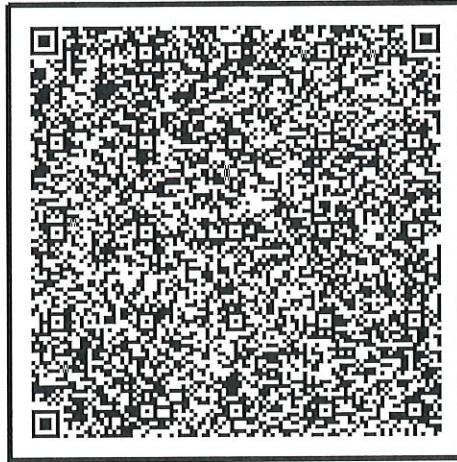
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Certificate anti counterfeiting check



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.