



INSPECTION CERTIFICATE
EN 10204:2004 / 3.1

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Page: 1 / 5

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SCHOELLER-BLECKMANN Edeltahlrohr GmbH
2630 TERNITZ, ROHRSTRASSE 1
AUSTRIA

TL: +43 2630 316-810
FAX: +43 2630 316-894
E-MAIL: wolfgang.hecher@sber.co.at

PO 8008025
SS-T6-S-035-20

CUSTOMER DESCRIPTION

CLIENT SOLD TO
TSS
TUBACEX SERVICE SOLUTIONS, S.A.U
POLIGONO INDUSTRIAL SARATXO
01470 AMURRIO
ESPAÑA

SOLD TO:TUBACEX AMERICA, INC.
SOLD P.O. REF.:621642
SOLD ORDER REF.:379371
COPY NUMBER: 004

CLIENT ORDER: I009784

SALES ORDER:

MATERIAL:SEAML. STAINL. STEEL TUBES/PIPES/TUBOS INOXIDABLES SIN SOLDADURA/TUBES INOX SANS SOUDURE/NAHTLOSE EDELSTAHLROHRE
BRIGHT ANNEALED / RECOCIDO BRILLANTE / RECUIT BRILLANT / BLANKGEGLÜHT, PASSIVATED AS PER ASTM A380 / PASIVADO SEGUN ASTM A380 / PASSIVÉ (ASTM A380) / PASSIVIERT (ASTM A380)
GRADE / ACERO / GRADE / WERKSTOFF: S31600,S31603,TP316,TP316L,1.4401,1.4404,
STANDARD / NORMA / STANDARD / LIEFERUNG NACH: AD 2000 W2/01.2020 EINBAUROHRE
ASME SECT.II PART.A SA213/SA213M-2021 ED.
ASTM A213/A213M-19A
ASTM A269/A269M-15a
EN 10297-2:2005
EN 10216-5:2021 TC1
AD 2000 W10/05.2016
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE A
HYDROSTATIC TEST AT 350 BAR
HARDNESS MAX. 80 HRB
NORSOK M630 REV.6 MDS S01 REV.5
ANSI/NACE MR0103/ISO 17945:2015
ANSI/NACE MR0175/ISO15156-3:2015
TRB 100 FEBRUAR 1995
TRD 100 MAI 1991
EDDY CURRENT TESTED ACC. TO ISO 10893-1
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASTM A269/A269M-15a
EN ISO 1127/03.97 D4/T3
FIXED LENGTHS / LARGOS FIJOS / LONGUEUR FIXE / GENAULÄNGE 6.096 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 9,53 X 0,91/0,89 MM/3/8"ODX20 SWG/BWG/3/8"OD X 0,036"/0,035"
COLD FINISHED/LAMINADOS EN FRIO/KALTGEFORMT/LAMINES A FROID

| Sales Item | Client Item | Delivery No | Lot No. | Heat No | Pieces | Weight | Tot Lgth | Un Lgth |
|------------|-------------|-------------|---------|---------|--------|--------------|---------------|-----------------|
| 40 | | 8170096329 | 291323 | 58661 | 2.500 | 6.552,145 LB | 50.000,000 FT | 20,000-0,000 FT |



Certified Management System acc. to ISO 9001, ISO 14001 and ISO 45001 by LRQA

SCHOELLER-BLECKMANN EDELSTAHLROHR GMBH

M. Borzacchini
HR. M. BORZACCHINI

(WORKS INSPECTOR)

We hereby certify that the material herein described has been manufactured, sampled, tested, and inspected in accordance with above standards and specifications and satisfies order's requirements. This certificate is issued by a computerized system and it is valid without original signature. In case the owner of the certificate would release as a copy of it, he must attest its conformity to the issued, assuming the responsibility for any unlawful or TUBACEX, not allowed use. Any forgery or falsification of this certificate shall legally prosecuted.

TSS S.A.U as commercial operation intermediary certifies that this certificate is a true copy of the manufacturer original certificate. TSS S.A.U makes a copy of the original certificate without changing the properties specified in the original purchase order and the product specification referenced.

RAW MATERIAL

| | | |
|--------------------------|---------------------------------------|--|
| Heat Nr: 58661 | Supplier: ACERALAVA (SPAIN) | Method: Electric furnace+AOD |
|--------------------------|---------------------------------------|--|

CHEMICAL COMPOSITION (%)

*L: Ladle C:Products

| * | Heat | Seq | C | Mn | Si | P | S | Ni | Cr | Mo | N |
|---|-------|-----|-------|------|-------|-------|--------|-------|-------|------|--------|
| L | 58661 | 1 | 0,009 | 1,49 | 0,330 | 0,028 | 0,0070 | 11,20 | 16,70 | 2,11 | 0,0630 |
| C | 58661 | 1 | 0,010 | 1,54 | 0,360 | 0,027 | 0,0070 | 11,09 | 16,62 | 2,13 | 0,0650 |

HEAT TREATMENT

HIPERTEEMPLADOS A 1100 °C , 10 min , J
SOLUTION ANNEALED AT 1100 °C , 10 min , JET
HYPERTEMPES 1100 °C , 10 min , J
LOESUNGSGEGLUEHT 1100 °C , 10 min , Jet

TENSILE TEST

| Lot No | Sample | T | Rp0.2 | Rp1.0 | Rm | A2" | A5 |
|------------|--------|----|-------|-------|-----|-----|----|
| | | °C | KSI | KSI | KSI | % | % |
| Min | | 20 | 30 | 35 | 75 | 35 | 40 |
| Max | | 20 | | | 100 | | |
| 291323 | 1 | 20 | 57 | 61 | 90 | 39 | 41 |
| | 2 | 20 | 56 | 60 | 94 | 40 | 44 |
| | 3 | 20 | 56 | 60 | 89 | 41 | 51 |
| | 4 | 20 | 54 | 58 | 95 | 42 | 46 |
| | 5 | 20 | 56 | 59 | 94 | 39 | 49 |
| | 6 | 20 | 57 | 61 | 92 | 40 | 44 |
| | 7 | 20 | 56 | 61 | 91 | 41 | 45 |
| | 8 | 20 | 54 | 58 | 94 | 36 | 46 |
| | 9 | 20 | 55 | 60 | 96 | 35 | 45 |
| | 10 | 20 | 55 | 59 | 92 | 38 | 46 |
| | 11 | 20 | 56 | 60 | 88 | 39 | 42 |
| | 12 | 20 | 58 | 62 | 88 | 40 | 43 |
| | 13 | 20 | 54 | 58 | 81 | 40 | 41 |
| | 14 | 20 | 56 | 60 | 84 | 38 | 42 |
| | 15 | 20 | 55 | 59 | 90 | 39 | 43 |
| | 16 | 20 | 56 | 61 | 94 | 40 | 42 |
| | 17 | 20 | 57 | 60 | 93 | 39 | 45 |
| | 18 | 20 | 57 | 61 | 93 | 38 | 46 |
| | 19 | 20 | 55 | 60 | 90 | 40 | 43 |
| | 20 | 20 | 53 | 57 | 90 | 41 | 43 |
| | 21 | 20 | 57 | 61 | 89 | 39 | 49 |
| | 22 | 20 | 58 | 62 | 94 | 40 | 43 |
| | 23 | 20 | 52 | 56 | 89 | 39 | 43 |
| | 24 | 20 | 58 | 63 | 94 | 39 | 44 |
| | 25 | 20 | 50 | 54 | 87 | 40 | 46 |
| | 26 | 20 | 50 | 54 | 86 | 42 | 46 |
| | 27 | 20 | 49 | 53 | 85 | 40 | 44 |
| | 28 | 20 | 55 | 60 | 89 | 38 | 45 |
| | 29 | 20 | 54 | 59 | 87 | 40 | 43 |



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TENSILE TEST

| Lot No | Sample | T | Rp0.2 | Rp1.0 | Rm | A2" | A5 |
|------------|--------|----|-------|-------|-----|-----|----|
| | | °C | KSI | KSI | KSI | % | % |
| Min | | 20 | 30 | 35 | 75 | 35 | 40 |
| Max | | 20 | | | 100 | | |
| | 30 | 20 | 54 | 59 | 88 | 39 | 45 |
| | 31 | 20 | 51 | 55 | 86 | 40 | 46 |
| | 32 | 20 | 52 | 56 | 87 | 41 | 44 |
| | 33 | 20 | 52 | 56 | 88 | 39 | 42 |
| | 34 | 20 | 54 | 59 | 87 | 41 | 44 |
| | 35 | 20 | 54 | 59 | 87 | 38 | 44 |
| | 36 | 20 | 54 | 59 | 88 | 40 | 46 |
| | 37 | 20 | 52 | 56 | 87 | 42 | 44 |

HARDNESS TEST

| Lot No | Sample | HRB | HV |
|------------|--------|-----|-----|
| Min | | | |
| Max | | 80 | 150 |
| 291323 | 1 | 78 | 149 |
| | 2 | 78 | 148 |

**METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS
METALLURGIQUES**

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A ASTM A262 PRACT.E:
SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND ASTM A262
PRACT.E: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM A262 PRACT.E:SATISFAISANT

INTERGRANULAR CORROSION TEST ACC. TO DIN 50914/DIN EN ISO 3651-2 MET.A:
SATISFACTORY
ENSAYO DE CORROSION INTERGRANULAR DE ACUERDO A DIN 50914/ DIN EN ISO
3651-2 MET.A: SATISFACTORIO
BESTÄNDIGKEIT GEGEN INTERKRISTALLINE KORROSION ENTSPRECHEND DIN 50914/
DIN EN ISO 3651-2 VERF.A: IN ORDNUNG
ESSAI DE CORR. INTERGR. SELON ASTM DIN 50914/DIN EN ISO 3651-2 MET.A:
SATISFAISANT

**NON-DESTRUCTIVE TESTS/ENSAYOS NO DESTRUCTIVOS/ZERSTÖRUNGSFREIE
PRÜFUNGEN/ESSAIS NON DESTRUCTIFS**

POSITIVE MATERIAL IDENTIFICATION TEST ON EACH TUBE/PIPE BY
"X-RAY-FLUORESCENCE-ANALYZER": SATISFACTORY
VERIFICACION DEL GRADO DE ACERO EN CADA TUBO MEDIANTE "ANALIZADOR DE
FLUORESCENCIA DE RAYOS X": SATISFACTORIO
VERWECHSLUNGSPRUEFUNG AN JEDEM ROHR MIT



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"RÖNTGEN-FLUORESZENZ-ANALYSATOR": IN ORDNUNG
VERIFICATION DE LA NUANCE SUR CHAQUE TUBE PAR
"X-RAY-FLUORESCENCE-ANALYZER": SATISFAISANT

HYDROSTATIC PRESSURE TESTED AT 350 bar, 5100 PSI DURING 5 SEC ON EACH
TUBE/PIPE: SATISFACTORY

ENSAYO HIDROSTÁTICO A 350 bar, 5100 PSI DURANTE 5 SEC EN CADA TUBO:
SATISFACTORIO

WASSERDRUCKPRÜFUNG BEI 350 bar, 5100 PSI HALTEZEIT 5 SEC JE ROHR: IN
ORDNUNG

ESSAI DE PRESSION HYDROSTATIQUE À 350 bar, 5100 PSI PENDANT 5 SEC SUR
CHAQUE TUBE: SATISFAISANT

100% EDDY CURRENT TEST AT ISO 10893-1: SATISFACTORY

100% ENSAYO DE CORRIENTES INDUCIDAS DE ACUERDO A ISO 10893-1:
SATISFACTORIO

100% WIRBELSTROM PRUEFUNG NACH ISO 10893-1: O.B.

100% CONTROLE COURANTS FOUCAULT D'APRES ISO 10893-1: BIEN

**TECHNOLOGICAL TESTS/ENSAYOS TECNOLÓGICOS/TECNOLOGISCHE
PRÜFUNGEN/TECHNOLOGICAL TESTS**

FLARING TEST: SATISFACTORY

ABOCARDADO S.NORMA: SATISFACTORIO

AUFWEITVERSUCH: IN ORDNUNG

ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY

APLASTADO S.NORMA: SATISFACTORIO

RINGFALTVERSUCH: IN ORDNUNG

ESSAI D'APLATISSEMENT: SATISFAISANT

BESICHTIGUNG UND NACHMESSUNG: IN ORDNUNG

INSPECTION AND CHECKING OF DIMENSIONS: SATISFACTORY

INSPECTION ET CONTROL DES DIMENSIONS: SATISFAISANT

DIE WERKSTOFFWERTE ENSPRECHEN PUNKT 7.5 DER DRUCKGERÄTERICHTLINIE
2014/68/EU, ANHANG 1, MIT EINER BRUCHDEHNUNG VON MINDESTENS 14 % IM
ZUGVERSUCH UND EINER KERBSCHLAGARBEIT VON MINDESTENS 27 J AN EINER
ISO-V-KERBSCHLAGPROBE BEI 20° C.

MATERIAL CHARACTERISTICS COMPLY WITH POINT 7.5 OF ANNEX I TO PRESSURE
EQUIPMENT DIRECTIVE 2014/68/EU BY HAVING AN ELONGATION AFTER RUPTURE AT
TENSILE TEST NO LESS THAN 14 % AND A BENDING RUPTURE ENERGY AT IMPACT
TEST NO LESS THAN 27 J AT 20°C.



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MARKING

SCHOELLER BLECKMANN / TUBACEX GROUP - SBS 9,53 X 0,91/0,89 MM/3/8"ODX20 SWG/BWG/3/8"OD X 0,036"/0,035" ASME SA213 ASTM A213 ASTM A269 EN 10216-5 TC1 EN 10297-2 S31600 S31603TP316 TP316L 1.4401 1.4404 CFA CD AW SMLS HEAT/ PMI-AV LOT NO/ MADE IN AUSTRIA T/A ZFP

REMARKS

MECHANICAL TESTS WERE PERFORMED IN LONGITUDINAL DIRECTION IF NOT OTHERWISE STATED.

NO WELD REPAIR HAS BEEN PERFORMED ON THE MATERIAL.

MATERIAL MANUFACTURER APPROVED WITH CERTIFICATE NR. 245/2004/MUC BY TÜV SÜDDEUTSCHLAND (NOTIFIED BODY 0036) TO ISSUE CERTIFICATES OF SPECIFIC PRODUCT CONTROL IN ACCORDING TO PRESSURE EQUIPMENT DIRECTIVE 2014/68/EU.

MATERIAL IS FREE OF RADIOACTIVE CONTAMINATION



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