

SCHOELLER-BLECKMANN Edeltahlrohr GmbH
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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.:621934-8008026 SOLD ORDER REF.:387525 COPY NUMBER: 001
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CLIENT ORDER: I010091

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: 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-21b
ASTM A269/A269M-15a
EN 10216-5:2021 TC1
EN 10297-2:2005
AD 2000 W10/01.2020
CORROSION TESTED ACC. TO ASTM A262 PRACTICE E
CORROSION TESTED ACC. TO EN ISO 3651-2 PRACTICE A
EDDY CURRENT TESTED ACC. TO ISO 10893-1
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
TOLERANCES / TOLERANCIAS / TOLERANCES / TOLERANZEN NACH: ASTM A269/A269M-15a
EN ISO 1127/03.2019 D4/T3
FIXED LENGTHS / LARGOS FIJOS / LONGUEUR FIXE / GENAULÄNGE 6.096 MM
PLAIN ENDS / LISOS / EXTRÉMITÉ D'EQUERRE / GLATTE ENDEN,
DIMENSIONS/DIMENSIONES/DIMENSIONS/DIMENSIONS: 12,70 X 1,24/1,22 MM/1/2 "ODX18 BWG/SWG/1/2 "OD X 0,049 "/0,048
" 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
70		8170099570	296038	59717	1.200	5.727,615 LB	24.000,000 FT	20,000-0,000 FT
70		8170099571	296038	59717	1.200	5.727,615 LB	24.000,000 FT	20,000-0,000 FT



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

**SCHOELLER-BLECKMANN
EDELSTAHLROHR GMBH**

Riegler

FR. N. RIEGLER

(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: 59717 **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	59717	1	0,013	1,53	0,310	0,027	0,0080	11,22	16,72	2,20	0,0635
C	59717	1	0,014	1,59	0,350	0,028	0,0080	11,09	16,70	2,24	0,0650

HEAT TREATMENT

HIPERTEMPLADOS 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		
296038	1	20	54	58	88	35	40
	2	20	50	54	87	47	53
	3	20	50	55	88	37	42
	4	20	48	53	87	45	50
	5	20	53	57	88	36	40
	6	20	49	54	85	41	46
	7	20	49	54	86	37	42
	8	20	50	55	87	37	42
	9	20	50	55	88	37	42
	10	20	48	52	85	45	50
	11	20	48	52	86	45	50
	12	20	48	53	87	45	50
	13	20	48	52	86	45	50
	14	20	48	53	85	45	51
	15	20	50	55	88	37	42
	16	20	47	51	85	45	50
	17	20	50	55	87	41	46
	18	20	49	54	85	41	46

HARDNESS TEST

Lot No	Sample	HRB	HV
Min			
Max		80	150
296038	1	78	148
	2	78	147

METALURGICAL TESTS/ENSAYOS METALÚRGICOS/METALLURGISCHE PRÜFUNGEN/ESSAIS

METALLURGIQUES

INTERGRANULAR CORROSION TEST ACC. TO ASTM A262 PRACT."E": SATISFACTORY



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

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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

"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 6 SEC

ON EACH TUBE/PIPE: SATISFACTORY

ENSAYO HIDROSTÁTICO A 350 bar, 5100 PSI DURANTE 6 SEC

EN CADA TUBO: SATISFACTORIO

WASSERDRUCKPRÜFUNG BEI 350 bar, 5100 PSI HALTEZEIT 6 SEC

JE ROHR: IN ORDNUNG

ESSAI DE PRESSION HYDROSTATIQUE À 350 bar, 5100 PSI PENDANT 6 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/TECHNOLOGISCHE
PRÜFUNGEN/TECHNOLOGICAL TESTS**

FLARING TEST: SATISFACTORY

ABOCARDADO S.NORMA: SATISFACTORIO

AUFWEITVERSUCH: IN ORDNUNG



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ESSAI D'EVASEMENT: SATISFAISANT

FLATTENING TEST: SATISFACTORY

APLASTADO S.NORMA: SATISFACTORIO

RINGFALTVERSUCH: IN ORDNUNG

ESSAI D'APLATISSEMENT: SATISFAISANT

THE TUBES/PIPES CONFORM ALSO TO

ANSI/NACE MR0103/ISO 17495:2015

ANSI/NACE MR0175/ISO15156-3:2015

BESICHTIGUNG UND NACHMESSUNG: IN ORDNUNG

INSPECTION AND CHECKING OF DIMENSIONS: SATISFACTORY

INSPECTION ET CONTROL DES DIMENSIONS: SATISFAISANT

DIE ANZAHL DER PRÜFUNGEN ENTSPRICHT DEN

ZULÄSSIGEN LOSGRÖSSEN IN FERTIGUNGSLÄNGEN.

THE NUMBER OF TESTS IS BASED ON THE SIZE OF THE

MANUFACTURING LOT BEFORE CUTTING TO LENGTHS.

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.

MARKING

SCHOELLER BLECKMANN / TUBACEX GROUP - SBS 12,70 X 1,24/1,22 MM/1/2 "ODX18 BWG/SWG/1/2 "OD X 0,049 "/0,048 "
ASME SA213 ASTM A213 ASTM A269 EN 10216-5 TC1 EN 10297-2 TP316 TP316L1.4401 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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