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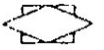
Equipment systems
 certified by
 IRQA
 ISO 9001 - 501 500 360
 ISO 14001 - 501 20 06/2

ACEROS INOXIDABLES

OLARRA

**OLARRA U.K. LTD.
 FOREST PARK - CLEOBURY MORTIMER
 NR KIDDERMINSTER - DY 14 9BD - ENGLAND**

Trade Mark - Zeichen des Erzeugerwerkes
 Anagrama del suministrador



Works Inspector Stamp - Werkssachverständiger
 Sello del Inspector



Certificate type - APZ Nach **EN 10204/3.1** Certificate n° - Prüf-Nr **350011** Date - Datum - Fecha **16 - 04 - 2018**
 Certificado tipo Certificado n°

Our order N° **654453** Heat **453142** Your order N° **OL8271**
 Werks - Nr Schmelze Colada Bestell - Nr Pedido N°

Steel Grade **316-S-11 AV** According to **BS 970:PART 3:1991.**
 Werkstoff Entsprechend Correspondence
 Calidad

Shape and Size - Gegenstand **ROUND 36 mm** Tolerance - Toleranz **h 10 / ISO 286-1** Bundles **2** Bars **Släbe** Weight **1263 Kg**
 Perfil y dimensión Tolerancia Bunde Släbe Gewicht
 Bultos Barras Peso

Requirements - Anforderungen - Exigencias
 EN 10.088-3.2014. NACE MR-0103/ISO 17945-2015.
 EN 10.272-2016. 316S31AV-1.4404-1.4401-Type 316-Type 316L.
 ASTM A 182/A 182M-16. PED 2014/68/EU, Annex I, Parag.4.3/DGR 2014/68/EU
 ASTM A 479 / A 479M-17. Anhang I Absatz 4.3 Certificate/Zertifikat Nr. 348/2008/MUC
 ASTM A 276/A 276M-17.
 ASME SA 479 / SA 479M-15
 NORSOK M-630 and MDS S01.
 SAE AMS 5653H-12.
 NACE MR-0175/ISO 15156-3 2015.
 ASME SA 182 / SA 182M-15

FLOW TECHNOLOGY LTD
TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

Melting process / Erschmelzungsart / Proceso de Fusión **E.A.F. / A.O.D.** Heat treatment / Wärmebehandlung / Tratamiento térmico **1060C 4H/Std WATER/WASSER/AGUA**
Solution annealed/Abgeschreckt/Hipertemple-Turned/Drehen/Torneado-Polished/Poliert/Pulido-

Test results - Ergebnis der Prüfungen - Resultados de los ensayos

Dimension of Specimen Abmessungen des Probestabes Medida de las probetas	Rp0.2% N/mm2 MPA	Rp 1% N/mm2 MPA	Rm N/mm2 MPA	A %L 5D	A %L 4D	Z %	Hardness Harte HBw	Impact test / Kernschlag / Resiliencia ISO V Jules
RD. 10.00 mm.	190	225	490	40				
Temperature °C 20	321	357	589	49	52	73	170	

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	N	Co
Min						16.50	2.00	11.00			
Max	0.030	1.00	2.00	0.045	0.030	18.50	2.50	14.00	0.70		
	0.013	0.51	1.57	0.033	0.023	17.15	2.04	11.10	0.35	0.0185	0.14

Visual and dimensional inspection **O.K.** Radioactivity inspection **O.K.** Antimixing test **O.K.** Grain Size **7-8 ASTM E-112-13**
 Besichtigung und Ausmessung **O.K.** Radioaktivitätskontrolle **O.K.** Spektroskop Verwechslungspr **O.K.** Korngröße **7-8 ASTM E-112-13**
 Control visual y dimensional **O.K.** Control de Radioactividad **O.K.** Antimezcla **O.K.** Tamaño de grano

Remarks - Bemerkungen - Observaciones
 IC test acc./IK prüfung nach ASTM A 262 E. 15. OK
 100% US test/US prüfung. OK
 No welding or weld repair.
 Free from mercury or radio-activity contamination.
 Crack control/Rissgeprüft acc. EN 10277-1 class 3. OK
F14988
1/2" BSP ALL FEM SWIV TEE 10K 316L
 We hereby certify that material described herein complies with the requirements agreed on the order

EIDV / EDP
Acc. EN 10.204
Marian Tejedo
Quality Mng.
 Works Inspector
 Der Werkssachverständige
 Inspector de fábrica