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Management Systems
 Certified by
LRQA
 ISO 9001 / SGI 6000360
 ISO 14001 / SGI 1870678

FLOW TECHNOLOGY LTD

**TEST CERTIFICATE
 VERIFIED TRUE
 COPY OF ORIGINAL**

ACEROS INOXIDABLES

OLARRA

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

Trade Mark - Zeichen des Lieferwerkes
 Anagrama del suministrador



Works Inspector Stamp - Werkssachverständiger
 Sello del Inspector



| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---------------------------------|--|---|--|--|--|---|--|------------|--|--|--|--------------------------|--|--|--|---------|--|--|--|--|--|-------------------|--|--|--|
| Certificate type - APZ Nach Certificado tipo | | EN 10204/3.1 | | Certificate n° - Prüf-Nr Certificado n° | | 347271 | | Date - Datum - Fecha 22 - 03 - 2018 | | | | | | | | | | | | | | | | | | | |
| Our order N° Werks - Nr N° de Referencia | | 650469 | | Heat Schmelze Colada | | 452722 | | Your order N° Bestell - Nr Pedido N° | | | | OL8212 | | | | | | | | | | | | | | | |
| Steel Grade Werkstoff Calidad | | | | 316-S-11 AV | | | | According to Entsprechend Corresponde | | | | BS 970:PART 3:1991. | | | | | | | | | | | | | | | |
| Shape and Size - Gegenstad Perfil y dimensión HEXAGON 34,93 mm | | | | Tolerance - Toleranz Tolerancia h 11 /DIN 176 | | | | Bundles Bunde Bultos | | 5 | | Bars Stäbe Barras. | | 96 | | Weight Gewicht Peso | | 2506 Kg | | | | | | | | | |
| Requirements - Anforderungen - Exigencias | | | | | | | | | | | | 316S31AV-1.4404-1.4401-Type 316-Type 316L. PED 2014/68/EU, Annex I, Parag.4.3/DGR 2014/68/EU Anhang I Absatz 4.3 Certificate/Zertifikat Nr. 348/2008/MUC | | | | | | | | | | | | | | | |
| EN 10.088-3.2014. EN 10.272-2016. ASTM A 182/A 182M-16. ASTM A 479 / A 479M-17. ASTM A 276/A 276M-17. ASME SA 479 / SA 479M-15 SAE AMS 5653H-12. NACE MR-0175/ISO 15156-3 2015. NACE MR-0103/ISO 17945-2015. NORSOK M-630 and MDS S01. | | | | | | 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-Cold drawn/Gezogen/Estirado- | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 Härte HBw | | Impact test / Kersbschlag / Resiliencia ISO V Jules | | | | | | | | | | | |
| RD. 10,00 mm. | | Min. 325 | | 375 | | 550 | | 20 | | | | | | | | | | | | | | | | | | | |
| | | Max. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature °C 20 | | Spec. N° Probe Nr. Pro N° | | 1 | | 397 | | 485 | | 591 | | 45 | | 48 | | 73 | | 183 | | | | | | | | | |
| 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 | | | | | | | | | |
| | | 0,020 | | 0,47 | | 1,59 | | 0,031 | | 0,028 | | 17,15 | | 2,01 | | 11,05 | | 0,36 | | 0,0200 0,20 | | | | | | | |
| Visual and dimensional inspection Besichtigung und Ausmessung Control visual y dimensional | | | | Radioactivity inspection Radioaktivitätskontrolle Control de Radioactividad | | | | O.K. | | | | Antimixing test Spektrosk Verwechslungspr Antimezcla | | | | O.K. | | | | Grain Size Korngröße Tamaño de grano | | | | 5-6 ASTM E-112-13 | | | |
| Remarks - Bemerkungen - Observaciones | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| IC test acc./IK prüfung nach ASTM A 262 E.15. OK Crack control/Rissgeprüft acc. EN 10277-1 class 2. OK | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F14073 1 5/16" JIC HEX PLUG 10K 316L | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EDV / EDP Acc. EN 10.204 Marian Tejedo Quality Mng. Works Inspector Der Werkssachverständige Inspector de fábrica | | | | | | | | | | | | | | | | | | | | | | | | | | | |

We hereby certify that material described herein complies with the requirements agreed on the order.

Firmado digitalmente por / Signed digitally by:
 ACEROS INOXIDABLES OLARRA SA - CIF A48663546
 Fecha / Date:22-03-2018 10:27