

Larrondo LOIU (VIZCAYA) España  
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Management Systems  
Certified by  
LRQA  
ISO 9001 / SGI 6000360  
ISO 14001 / SGI 1870678

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<br>Certificado tipo   |  | EN 10204/3.1                      |  | Certificate n° - Prüf-Nr<br>Certificado n°          |  | 292317   |  | Date - Datum - Fecha  |  | 18 - 11 - 2016  |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| Our order N°<br>Werks - Nr<br>N° de Referencia  |  | 614322                            |  | Heat<br>Schmelze<br>Colada                          |  | 419457   |  | Your order N°<br>Bestell - Nr<br>Pedido N°  |  | OL7476  |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| Steel Grade<br>Werkstoff<br>Calidad   |  |                                   |  | 316-S-11 AV   |  |  |  | According to<br>Entsprechend<br>Corresponde                                       |  |   |  | BS 970:PART 3:1991.  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| Shape and Size - Gegenstand<br>Perfil y dimensión<br>HEXAGON 55 mm  |  |                                   |  | Tolerance - Toleranz<br>Tolerancia<br>h 11 /DIN 176 |  |  |  | Bundles<br>Bunde<br>Bultos  |  | 2   |  | Bars<br>Stäbe<br>Barras                                      |  | 17                       |  | Weight<br>Gewicht<br>Peso   |  | 1111 Kg |  |             |  |  |  |   |  |  |  |
| Requirements - Anforderungen - Exigencias   |  |                                   |  |   |  |  |  |   |  |   |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| EN 10.088-3.2014.<br>EN 10.272-2007.<br>ASTM A 182 / A 182M-15.<br>ASTM A 479 / A 479M-15.<br>ASTM A 276-16a.<br>ASME SA 479 / SA 479M-15<br>SAE AMS 5653H-12.<br>NACE MR-0175/ISO 15156-3 2009.<br>NACE MR-0103-12/ISO 17945-2015.<br>316S31AV-1.4404-1.4401-Type 316-Type 316L. |  |                                   |  |   |  | PED 2014/68/EU, Annex I, Parag.4.3/DGR 2014/68/EU<br>Anhang I Absatz 4.3 Certificate/Zertifikat Nr. 348/2008/MUC |  |   |  |   |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| Melting process / Erschmelzungsart / Proceso de Fusión  |  |                                   |  |   |  | Heat treatment / Wärmebehandlung / Tratamiento térmico   |  |   |  |   |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| E.A.F. / A.O.D.   |  |                                   |  |   |  | 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<br>Abmessungen des Probestabes<br>Medida de las probetas  |  | Rp0,2%<br>N/mm2<br>MPA            |  | Rp 1%<br>N/mm2<br>MPA                               |  | Rm<br>N/mm2<br>MPA   |  | A<br>%L 5D  |  | A<br>%L 4D  |  | Z<br>%   |  | Hardness<br>Härte<br>HBw |  | Impact test / Kersbschlag / Resiliencia<br>ISO V Jules              |  |         |  |             |  |  |  |   |  |  |  |
| RD. 10,00 mm.   |  | Min.                              |  | 325   |  | 375  |  | 550   |  | 20  |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
|   |  | Max.                              |  |   |  |  |  |   |  |   |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| Temperature °C<br>20  |  | Spec. N°.<br>Probe Nr.<br>Pro N°. |  | 1   |  | 416  |  | 501   |  | 622   |  | 42   |  | 45                       |  | 73  |  | 197     |  |             |  |  |  |   |  |  |  |
| 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    |  |             |  |  |  |   |  |  |  |
|   |  | 0,018                             |  | 0,57  |  | 1,53   |  | 0,033   |  | 0,029   |  | 17,10  |  | 2,02                     |  | 11,05   |  | 0,37    |  | 0,0265 0,16 |  |  |  |   |  |  |  |
| Visual and dimensional inspection<br>Besichtigung und Ausmessung<br>Control visual y dimensional  |  |                                   |  | O.K.  |  |  |  | Radioactivity inspection<br>Radioaktivitätskontrolle<br>Control de Radioactividad |  |   |  | O.K.   |  |                          |  | Antimixing test<br>Spektrosk Verwechslungspr<br>Antimezcla          |  |         |  | O.K.        |  |  |  | Grain Size<br>Korngrösse<br>Tamaño de grano |  |  |  |
| Remarks - Bemerkungen - Observaciones   |  |                                   |  |   |  |  |  |   |  |   |  |  |  |                          |  |   |  |         |  |             |  |  |  |   |  |  |  |
| IC test acc./IK prüfung nach ASTM A 262 E.14. OK<br>Crack control/Rissgeprüft acc. EN 10277-1 class 2. OK   |  |                                   |  |   |  |  |  |   |  | F13996<br>M52 x 2 Metric Male x Male Adaptor 10K<br>(38s) |  | EDV / EDP<br>Acc. EN 10.204<br>Marian Tejedo<br>Quality Mng. |  |                          |  | Works Inspector<br>Der Werkssachverständige<br>Inspector de fábrica |  |         |  |             |  |  |  |   |  |  |  |

362540, 362541