

**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 | <b>EN 10204/3.1</b> | Certificate n° - Prüf-Nr<br>Certificado n° | <b>331660</b> | Date - Datum - Fecha | <b>10 - 11 - 2017</b> |
|---|---------------------|--|---------------|----------------------|-----------------------|

|  |               |                            |               |  |               |
|--|---------------|----------------------------|---------------|--|---------------|
| Our order N°<br>Werks - Nr<br>N° de Referencia | <b>620972</b> | Heat<br>Schmelze<br>Colada | <b>439224</b> | Your order N°<br>Bestell - Nr<br>Pedido N° | <b>OL7590</b> |
|--|---------------|----------------------------|---------------|--|---------------|

|                                     |  |   |                        |
|-------------------------------------|--|---|------------------------|
| Steel Grade<br>Werkstoff<br>Calidad | <b>X-2-CRNIMO-17-12-2 / 1.4404 MECAMAX</b> | According to<br>Entsprechend<br>Corresponde | <b>EN 10.272-2007.</b> |
|-------------------------------------|--|---|------------------------|

|   |   |                            |          |                         |                           |                |
|---|---|----------------------------|----------|-------------------------|---------------------------|----------------|
| Shape and Size - Gegenstad<br>Perfil y dimensión<br><b>HEXAGON 15,88 mm</b> | Tolerance - Toleranz<br>Tolerancia<br><b>h11 /DIN 176 /EN 10278</b> | Bundles<br>Bunde<br>Bultos | <b>4</b> | Bars<br>Stäbe<br>Barras | Weight<br>Gewicht<br>Peso | <b>2149 Kg</b> |
|---|---|----------------------------|----------|-------------------------|---------------------------|----------------|

|  |  |
|--|--|
| Requirements - Anforderungen - Exigencias  |  |
| EN 10.088-3.2014.<br>ASTM A 276/A 276M-17.<br>NACE MR-0175/ISO 15156-3 2015.<br>NACE MR-0103/ISO 17945-2015.<br>Type 316L.<br>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 | <b>FLOW TECHNOLOGY LTD</b><br><b>TEST CERTIFICATE</b><br><b>VERIFIED TRUE</b><br><b>COPY OF ORIGINAL</b> |

|  |                        |  |                                       |
|--|------------------------|--|---------------------------------------|
| Melting process / Erschmelzungsart / Proceso de Fusión | <b>E.A.F. / A.O.D.</b> | Heat treatment / Wärmebehandlung / Tratamiento térmico | <b>1060C 4H/Std WATER/WASSER/AGUA</b> |
|--|------------------------|--|---------------------------------------|

**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.                             | 200                   | 235                | 500        | 20         |        |                          |  |
|  | Max.                             |                       |                    | 900        |            |        | 315                      |  |
| Temperature °C<br>20   | Spec. N°<br>Probe Nr.<br>Pro N°. | 1                     | 561                | 730        | 758        | 36     | 63                       | 229  |
|  | 2                                | 563                   | 732                | 760        | 35         | 62     | 229                      |  |

|      | C     | Si   | Mn   | P     | S     | Cr    | Mo   | Ni    | N      | Co   |
|------|-------|------|------|-------|-------|-------|------|-------|--------|------|
| Min. |       |      |      |       |       | 16,50 | 2,00 | 10,00 |        |      |
| Max. | 0,030 | 1,00 | 2,00 | 0,045 | 0,030 | 18,50 | 2,50 | 13,00 | 0,1000 |      |
|      | 0,026 | 0,31 | 1,63 | 0,035 | 0,027 | 16,55 | 2,01 | 10,00 | 0,0340 | 0,16 |

|  |   |  |  |
|--|---|--|--|
| Visual and dimensional inspection<br>Besichtigung und Ausmessung <b>O.K.</b><br>Control visual y dimensional | Radioactivity inspection<br>Radioaktivitätskontrolle <b>O.K.</b><br>Control de Radioactividad | Antimixing test<br>Spektrosk Verwechslungspr <b>O.K.</b><br>Antimezcla | Grain Size<br>Korngröße<br>Tamaño de grano |
|--|---|--|--|

|  |   |
|--|---|
| Remarks - Bemerkungen - Observaciones  | EDV / EDP<br>Acc. EN 10.204<br>Marian Tejado<br>Quality Mng.<br><br>Works Inspector<br>Der Werkssachverständige<br>Inspector de fábrica |
| IC test acc./IK prüfung nach EN ISO 3651-2/98 Met.A. OK<br><br><b>F14788</b><br><b>1/4" NPT X 9/16" JIC M/M ADAPTOR 10K 316L</b> |   |

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