

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

ACEROS INOXIDABLES

OLARRA

Trade Mark - Zeichen des Lieferwerkes
Anagrama del suministrador



Works Inspector Stamp - Werkssachverständiger
Sello del Inspector



OLARRA U.K. LTD.
FOREST PARK - CLEOBURY MORTIMER
NR KIDDERMINSTER - DY 149BD - ENGLAND

| | | | | | |
|---|--------------|--|--------|----------------------|----------------|
| Certificate type - APZ Nach Certificado tipo | EN 10204/3.1 | Certificate n° - Prüf-Nr Certificado n° | 196049 | Date - Datum - Fecha | 10 - 06 - 2014 |
|---|--------------|--|--------|----------------------|----------------|

| | | | | | |
|--|--------|----------------------------|--------|--|--------|
| Our order N° Werks - Nr N° de Referencia | 548580 | Heat Schmelze Colada | 374462 | Your order N° Bestell - Nr Pedido N° | OL6404 |
|--|--------|----------------------------|--------|--|--------|

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

| | | | | | | | | | |
|---|------------------|------------------------------------|---------------|----------------------------|----|-------------------------|-----|---------------------------|---------|
| Shape and Size - Gegenstand Perfil y dimensión | HEXAGON 25,65 mm | Tolerance - Toleranz Tolerancia | h 11 /DIN 176 | Bundles Bunde Bultos | 10 | Bars Stäbe Barras | 351 | Weight Gewicht Peso | 4972 Kg |
|---|------------------|------------------------------------|---------------|----------------------------|----|-------------------------|-----|---------------------------|---------|

Requirements - Anforderungen - Exigencias

| | |
|--|---|
| EN 10.088-3.2005. EN 10.272-2007. ASTM A 182 / A 182M-13a. ASTM A 479 / A 479M-13b. ASTM A 276-13a. ASME SA 479 / SA 479M-13 NACE MR-0175-2003/ISO 15156-3 2009. SAE AMS 5653H-12. 316S31AV-1.4404-1.4401-Type 316-Type 316L. PED 97/23/EC, Annex I, Parag.4.3/DGR 97/23/EG | Anhang I Absatz 4.3 Certificate/Zertifikat Nr. 348/2008/MUC |
|--|---|

| | | | |
|--|-----------------|--|--------------------------------|
| 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 / Kerschlag / Resiliencia ISO V Jules | |
|--|---------------------------------|-----------------------|--------------------|------------|------------|--------|--------------------------|--|-----|
| RD. 10,00 mm. | Min. | 325 | 375 | 550 | 20 | | | | |
| | Max. | | | | | | | | |
| Temperature°C 20 | Spec. N° Probe Nr. Pro N° | 1 | 408 | 495 | 616 | 43 | 46 | 73 | 192 |

| | 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 | | |
| | 0,022 | 0,39 | 1,78 | 0,033 | 0,021 | 17,20 | 2,04 | 11,05 | 0,45 | 0,0355 | 0,19 |

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

Remarks - Bemerkungen - Observaciones

IC test acc./IK prüfung nach ASTM A 262 E.02. OK
Crack control/Rissgeprüft acc. EN 10277-1 class 2. OK

F11978
1/2" BSPP F/F SWIV STR 10K 316L

EDV / EDP
Acc. EN 10.204
Alfredo Molina
Certification
Mng.

Works Inspector
Der Werkssachverständige
Inspector de fábrica