

Larrondo LOIU (VIZCAYA) España
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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° | 265986 | Date - Datum - Fecha | 14 - 03 - 2016 |
|---|--------------|--|--------|----------------------|----------------|

| | | | | | |
|--|--------|----------------------------|--------|--|--------|
| Our order N° Werks - Nr N° de Referencia | 596388 | Heat Schmelze Colada | 407486 | Your order N° Bestell - Nr Pedido N° | OL7136 |
|--|--------|----------------------------|--------|--|--------|

| | | | |
|-------------------------------------|-------------|---|---------------------|
| 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 19,05 mm | Tolerance - Toleranz Tolerancia h 11 / DIN 176 | Bundles Bunde Bultos | 4 | Bars Stäbe Barras | 339 | Weight Gewicht Peso | 2578 Kg |
|---|--|----------------------------|---|-------------------------|-----|---------------------------|---------|

Requirements - Anforderungen - Exigencias

EN 10.088-3.2014.
EN 10.272-2007.
ASTM A 182 / A 182M-15.
ASTM A 479 / A 479M-15.
ASTM A 276-15.
ASME SA 479 / SA 479M-13
SAE AMS 5653H-12.
NACE MR-0175/ISO 15156-3 2009.
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/Hipertempe-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 ₅ %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 | 452 | 532 | 627 | 40 | 43 | 73 | 207 |

| | 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 | 0,45 | 1,72 | 0,034 | 0,029 | 17,05 | 2,00 | 11,10 | 0,32 | 0,0240 | 0,26 |

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

Remarks - Bemerkungen - Observaciones

IC test acc./IK prüfung nach ASTM A 262 E.13. OK
Crack control/Rissgeprüft acc. EN 10277-1 class 2. OK

F13092
3/8" NPT Male x 9/16"-18 Male M Type RHP Adaptor 15K 316L

EDV / EDP
Acc. EN 10.204
Marian Tejedo
Quality Mng.

Works Inspector
Der Werkssachverständige
Inspector de fábrica