

FLOW TECHNOLOGY LTD

TEST CERTIFICATE
VERIFIED TRUE
COPY OF ORIGINAL

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Management Systems
Certified by
LRQA
ISO 9001 / 901 6000300
ISO 14001 / 901 1879678

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° | 202396 | Date - Datum - Fecha | 30 - 07 - 2014 |
|---|--------------|--|--------|----------------------|----------------|

| | | | | | |
|--|--------|----------------------------|--------|--|--------|
| Our order N° Werks - Nr N° de Referencia | 548470 | Heat Schmelze Colada | 377515 | Your order N° Bestell - Nr Pedido N° | OL6399 |
|--|--------|----------------------------|--------|--|--------|

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

| | | | | | | | | |
|---|-------------|------------------------------------|-----------------|----------------------------|---|-------------------------|---------------------------|---------|
| Shape and Size - Gegenstand Perfil y dimensión | ROUND 32 mm | Tolerance - Toleranz Tolerancia | h 10 /ISO 286-1 | Bundles Bunde Bultos | 2 | Bars Stäbe Barras | Weight Gewicht Peso | 1264 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 / Erweichungsart / Proceso de Fusión | E.A.F. / A.O.D. | Heat treatment / Wärmebehandlung / Tratamiento térmico | 1060C 4H/Std WATER/WASSER/AGUA |
|--|-----------------|--|--------------------------------|

Solution annealed/Abgeschreckt/Hipertempe-Turned/Drehen/Torneado-Polished/Poliert/Pulido-

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. | 180 | 225 | 460 | 40 | | | | |
| | Max. | | | | | | | | |
| Temperature °C 20 | Spec. N° Probe Nr. Pro N° | 1 | 282 | 291 | 574 | 51 | 54 | 72 | 149 |

| | 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 | 0,46 | 1,62 | 0,034 | 0,029 | 17,05 | 2,03 | 11,10 | 0,35 | 0,0200 | 0,18 |

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

| | | |
|---------------------------------------|---|---|
| Remarks - Bemerkungen - Observaciones | IC test acc./IK prüfung nach ASTM A 262 E.02. OK 100% US test/US prüfung. OK | EDV / EDP Acc. EN 10.204 Alfredo Molina Certification Mng. Works Inspector Der Werkssachverständige Inspector de fábrica |
|---------------------------------------|---|---|

F12791
3/8" BSPP CS MALE X SWIV FEM 90° BLOCK ELBOW 10K 316L