

Larroydo LOIU (VIZCAYA) España
P.O. Box 1.323/48080 Bilbao
Tel. 34-(4) 4 71 13 00
Fax. 34-(4) 4 53 16 36

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
Señlo del inspector

3

| | | | | |
|---|---------------------|--|---------------|--|
| Certificate type - APZ Nach Certificado tipo | EN 10204/3.1 | Certificate n° - Prüf-Nr Certificado n° | 275284 | Date - Datum - Fecha 01 - 06 - 2016 |
|---|---------------------|--|---------------|--|

| | | | | | |
|--|---------------|----------------------------|---------------|--|---------------|
| Our order N° Werks - Nr N° de Referencia | 598357 | Heat Schmelze Colada | 412866 | Your order N° Bestell - Nr Pedido N° | OL7177 |
|--|---------------|----------------------------|---------------|--|---------------|

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

| | | | | | | | |
|--|---|----------------------------|----------|-------------------------|------------|---------------------------|----------------|
| Shape and Size - Gegenstad Perfil y dimensión HEXAGON 19,05 mm | Tolerance - Toleranz Tolerancia h 11 /DIN 176 | Bundles Bunde Bultos | 4 | Bars Stäbe Barras | 304 | Weight Gewicht Peso | 2351 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-15
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/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 | 491 | 579 | 648 | 34 | 37 | 72 | 217 |

| | 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 | | |
| | 0,019 | 0,36 | 1,69 | 0,036 | 0,028 | 17,05 | 2,10 | 11,00 | 0,39 | 0,0210 | 0,22 |

| | | | | | | |
|--|-------------|---|-------------|--|-------------|--|
| 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

F13325
1/4" Female x Female High Pressure Coupling 60K 316L

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

Works inspector
Der Werkssachverständige
Inspector de fábrica