

R EMPRESAS RIGA, S.A de C.V.

SW J. Id. 1000

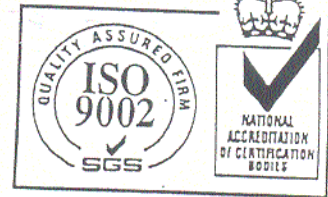
CONEXIÓN SOLDABLE

CARR. MTY-LAREDO KM. 24.2

APARTADO POSTAL 43 C.P. 65550 CIÉNEGA DE FLORES, N.L., MÉXICO

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Certificate Q5377

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|--|--|---|
| CERTIFICADO DE CALIDAD No.: 7702 CERTIFIED TEST REPORT: | LISTA DE EMPAQUE : 4795 PACKING LIST: | FECHA: SEPTIEMBRE 5 de 2001 DATE: |
| VENDIDO A: SOLD TO: | | PEDIDO DEL CLIENTE No. CUSTOMERS ORDER No. |
| | | EMBARCADO A: SHIP TO: LOS MISMOS |

PRUEBAS MECANICAS

| QNT. | COLADA HEAT CODE | DESCRIPTION | ESF. DE CEDENCIA YIELD STRENGTH (PSI) | ESF. RUPTURA TENSILE STRENGTH (PSI) | ELONGACION ELONGATION % 2" | DUREZA HARDNESS HB |
|------|---------------------|----------------------------|---|---|----------------------------------|--------------------------|
| 20 | QA4 | TEE 8 CED XS | | | | |
| 204 | HJ4 | TEE 8 CED STD | 51802 | 76316 | 36 | 145 |
| 61 | PI4 | TEE 8 CED STD | 50404 | 71616 | 34 | 136 |
| 31 | QC4 | TEE 8 CED STD | 46986 | 70173 | 34 | 147 |
| 2 | QG4 | TEE 8 CED STD | 42514 | 68225 | 35 | 143 |
| 2 | EV4 | TEE 10 CED 20 | 44937 | 69676 | 41 | 144 |
| 4 | AO4 | TEE 12 CED 20 | 46995 | 70173 | 42 | 124 |
| 4 | NI4 | TEE 16 CED STD | 42080 | 71753 | 35 | 124 |
| 112 | OK4 | TEE RED. 3 X 2 CED STD | 52472 | 72891 | 36 | 140 |
| 20 | GJ4 | TEE RED. 3 X 2 1/2 CED STD | 46900 | 70500 | 37 | 135 |
| 4 | VD2 | TEE RED. 4 X 2 CED XS | 44200 | 68000 | 39 | 116 |
| | | | 37600 | 62100 | 34 | 142 |

ANALISIS QUIMICO

| CODE | C.E. | C | Mn | P | S | Si | Cr | Cu | Mo | Ni | V | Nb |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| QA4 | 0.354 | 0.180 | 0.980 | 0.011 | 0.004 | 0.267 | 0.026 | 0.075 | 0.002 | 0.001 | 0.002 | 0.000 |
| HJ4 | 0.290 | 0.181 | 0.571 | 0.001 | 0.001 | 0.345 | 0.015 | 0.091 | 0.002 | 0.058 | 0.002 | 0.000 |
| PI4 | 0.295 | 0.170 | 0.664 | 0.004 | 0.000 | 0.354 | 0.024 | 0.093 | 0.008 | 0.015 | 0.002 | 0.000 |
| QC4 | 0.346 | 0.185 | 0.879 | 0.005 | 0.000 | 0.230 | 0.039 | 0.084 | 0.002 | 0.001 | 0.002 | 0.000 |
| QG4 | 0.310 | 0.170 | 0.750 | 0.010 | 0.001 | 0.290 | 0.040 | 0.067 | 0.001 | 0.030 | 0.000 | 0.000 |
| EV4 | 0.325 | 0.174 | 0.750 | 0.006 | 0.004 | 0.280 | 0.060 | 0.101 | 0.022 | 0.040 | 0.001 | 0.000 |
| AO4 | 0.298 | 0.167 | 0.680 | 0.006 | 0.001 | 0.270 | 0.040 | 0.051 | 0.014 | 0.040 | 0.002 | 0.000 |
| NI4 | 0.294 | 0.197 | 0.490 | 0.001 | 0.000 | 0.365 | 0.019 | 0.110 | 0.002 | 0.031 | 0.009 | 0.000 |
| OK4 | 0.312 | 0.180 | 0.740 | 0.009 | 0.007 | 0.220 | 0.010 | 0.010 | 0.020 | 0.020 | 0.002 | 0.000 |
| GJ4 | 0.287 | 0.150 | 0.730 | 0.007 | 0.005 | 0.230 | 0.050 | 0.010 | 0.010 | 0.020 | 0.007 | 0.000 |
| VD2 | 0.309 | 0.170 | 0.730 | 0.007 | 0.006 | 0.220 | 0.060 | 0.020 | 0.020 | 0.020 | 0.000 | 0.000 |

LOS PRODUCTOS MANUFACTURADOS POR EMPRESAS RIGA, S.A. de C.V. ESTAN CONFORME A LAS SIGUIENTES ESPECIFICACIONES:

PRODUCTS MANUFACTURED BY EMPRESAS RIGA, S.A. de C.V. ARE CONFORMING TO FOLLOWING SPECIFICATIONS:
STARTING MATERIAL SEAMLESS PIPE ASTM A-106 GRADE B.

ASTM A-234 WPB, ASME SA234 WPB, ANSI B 16.9 Y ANSI B16.2B, NACE MR 0175
CONEXIONES SIN COSTURA, FORJADO EN CALIENTE Y NORMALIZADO
SEAMLESS FITTINGS, HOT FORMED AND NORMALIZED

GERENTE CONTROL DE CALIDAD:
QUALITY CONTROL MANAGER:

[Signature]
ING. JOSE MARTINEZ MACIAS.

CC-008