

CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE

(DIN EN 10204 3.1.B - ISO 10474 3.1.B)

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Vendido A: AUCOCOTA Pedido del cliente No: Lista de empaque: 6295 **Fecha:** 21 de 2003

Sold to: Customers Order No: Dimensiones y tolerancias / Dimension and tolerances Bocas / Ends

Specifications: Seamless Fittings according to ASTM/ASME ASA 234 WPB - NACE MR 01.75 ed. 02 - ASME B 16.9 and ASME B 16.28 edition 2001 **Conform to ASME II Ed. 2001** Biselado / Bevelled ends

| DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION | | | PRUEBAS MECANICAS / MECHANICAL TEST | | | | | PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C | | | | |
|--|------------------|-------------------|-------------------------------------|------------------------------------|------------------------------------|------------|--------------------|---|----------|----------|----------|-------------------------|
| ART. ITEM | COLADA HEAT CODE | CANTIDAD QUANTITY | DESCRIPCION / DESCRIPTION | ESF. CEDENCIA YIELD STRENGTH (MPa) | ESF. RUPURA TENSILE STRENGTH (MPa) | ELONG. %2" | DUREZA HARDNESS HB | DIMENSIONES SAMPLE DIM (mm) | 1 Joules | 2 Joules | 3 Joules | PROMEDIO AVERAGE Joules |
| 1 | SWA5 | 25 | RED. CONC. 4 X 3 STD | 310 | 460 | 40 | 137 | N/A | N/A | N/A | N/A | N/A |
| 2 | TUT5 | 95 | TEE 4 STD | 320 | 499 | 40 | 135 | N/A | N/A | N/A | N/A | N/A |
| 3 | TXU5 | 5 | TEE 4 STD | 341 | 504 | 43 | 139 | N/A | N/A | N/A | N/A | N/A |
| 4 | NJ5 | 180 | TEE 3 STD | 328 | 467 | 39 | 133 | N/A | N/A | N/A | N/A | N/A |
| 5 | SAS | 20 | TEE 3 STD | 314 | 486 | 37 | 134 | N/A | N/A | N/A | N/A | N/A |
| 6 | SZIS | 200 | CODO 2 X 90 RL STD | 349 | 491 | 35 | 122 | N/A | N/A | N/A | N/A | N/A |
| 7 | JX5 | 240 | CODO 1 1/4 X 90 RL STD | 390 | 536 | 54 | 128 | N/A | N/A | N/A | N/A | N/A |
| 8 | UO4 | 4 | RED. CONC. 16 X 8 STD | 292 | 485 | 33 | 147 | N/A | N/A | N/A | N/A | N/A |
| 9 | TU55 | 37 | RED. CONC. 6 X 4 STD | 312 | 494 | 42 | 132 | N/A | N/A | N/A | N/A | N/A |
| 10 | RP5 | 13 | RED. CONC. 6 X 4 STD | 313 | 492 | 40 | 136 | N/A | N/A | N/A | N/A | N/A |

| ANALISIS QUIMICO / CHEMICAL ANALYSIS | | | | | | | | | | | | | | |
|--------------------------------------|------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PROCESO PROCESS | COLADA HEAT CODE | COLADA/HEAT M.P./MOTHER PIPE | %C.E. | %C | %Mn | %P | %S | %Si | %Cr | %Cu | %Mo | %Ni | %V | %Nb |
| CF | SWA5 | 24822 | 0.324 | 0.190 | 0.740 | 0.007 | 0.001 | 0.290 | 0.020 | 0.040 | 0.010 | 0.020 | 0.001 | 0.001 |
| CF | TUT5 | 10764 | 0.331 | 0.170 | 0.760 | 0.010 | 0.001 | 0.290 | 0.060 | 0.082 | 0.055 | 0.090 | 0.000 | 0.000 |
| CF | TXU5 | 99521 | 0.325 | 0.180 | 0.700 | 0.009 | 0.003 | 0.290 | 0.070 | 0.064 | 0.039 | 0.040 | 0.000 | 0.000 |
| CF | NJ5 | 47744 | 0.339 | 0.190 | 0.610 | 0.010 | 0.001 | 0.250 | 0.130 | 0.105 | 0.060 | 0.037 | 0.001 | 0.001 |
| CF | SAS | EL02PG | 0.329 | 0.190 | 0.740 | 0.015 | 0.008 | 0.220 | 0.050 | 0.010 | 0.010 | 0.020 | 0.010 | 0.000 |
| HF | SZIS | 25296 | 0.324 | 0.180 | 0.790 | 0.010 | 0.002 | 0.290 | 0.030 | 0.040 | 0.010 | 0.020 | 0.001 | 0.001 |
| HF | JX5 | 21962 | 0.334 | 0.180 | 0.810 | 0.010 | 0.001 | 0.290 | 0.040 | 0.040 | 0.030 | 0.030 | 0.001 | 0.001 |
| CF | UO4 | 92772 | 0.303 | 0.160 | 0.701 | 0.005 | 0.003 | 0.336 | 0.028 | 0.096 | 0.012 | 0.177 | 0.002 | 0.000 |
| CF | TU55 | 10406 | 0.334 | 0.190 | 0.740 | 0.013 | 0.002 | 0.290 | 0.050 | 0.061 | 0.025 | 0.030 | 0.000 | 0.000 |
| CF | RP5 | 99245 | 0.334 | 0.180 | 0.800 | 0.010 | 0.002 | 0.260 | 0.050 | 0.055 | 0.026 | 0.030 | 0.000 | 0.000 |

Notes:
Formado en caliente a 780°C-940°C, enfriado al aire. Formed in air normalized at 940°C max.
Holding time 10'

Notes:
Hot formed fittings in a range from 780°C to 940°C. Cooled in still air.
Cold formed normalized at 940°C max.
Holding time 10'

Inspeccion Dimensional Satisfactoria. Visual dimensional check. Satisfactory.
CF: FORMADO EN FRIO/COLD FORMED

Gerente de Aseguramiento de Calidad:  Quality Assurance Manager: ING. JOSE MARTINEZ MACIAS

CC-008