

**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**
(DIN EN 10204:2004E - ISO 10474 3.1.B)

Tubos de Acero de México, S.A.
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Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V.
 Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.
 Pedido del Cliente No: 2327 - 2390 -
 Customers Order No: Dimensiones y tolerancias / Dimension and tolerances
 ASME B 16.9 - 2003 and ASME B 16.28 - 1994
 Fecha/Date: 26 de Enero de 2007
 Numero: 17261
 Pagina/Page: 1 DE 1
 Listado de Empaque: 8817
 Packing List: Factura/Invoice: Bocas / Ends
 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. RUPTURA TENSILE STRENGTH (Mpa) | ELONG %2" | DUREZA HARDNESS HB | DIMENSIONES SAMPLE DIM mm | 1 Joules | 2 Joules | 3 Joules | PROMEDIO AVERAGE Joules |
| 1 | T31365 | 30 | RED. CONC. 10 X 8 CED-STD | 398 | 501 | 30 | 95 | | | | | |
| 2 | S80268 | 40 | CODO 4 X 45° CED-STD | 313 | 475 | 36 | 114 | | | | | |
| 3 | T31365 | 30 | RED. CONC. 10 X 6 CED-STD | 398 | 501 | 30 | 95 | | | | | |
| 4 | T29261 | 12 | TEE 16 CED-STD | 309 | 478 | 37 | 91 | | | | | |
| 5 | S38904 | 20 | CODO 5 X 90° R.L. CED-XS | 332 | 487 | 39 | 116 | | | | | |
| 6 | T20124 | 2 | TEE 14 CED-STD | 302 | 486 | 31 | 106 | | | | | |
| 7 | T27021 | 4 | TEE 14 CED-STD | 330 | 487 | 48 | 123 | | | | | |

ANALISIS QUIMICO / CHEMICAL ANALYSIS

| PROCESO PROCESS | COLADA HEAT CODE | COLADA/MOTHER PIPE | %C.E. | %C | %Mn | %P | %S | %Si | %Cr | %Cu | %Mo | %Ni | %V | %Nb |
|-----------------|------------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| CF | T13365 | 31365 | 0.290 | 0.160 | 0.660 | 0.008 | 0.001 | 0.270 | 0.050 | 0.068 | 0.033 | 0.030 | 0.000 | 0.000 |
| HF | S80268 | 80268 | 0.330 | 0.170 | 0.750 | 0.011 | 0.003 | 0.290 | 0.040 | 0.037 | 0.030 | 0.270 | 0.001 | 0.001 |
| CF | T13365 | 31365 | 0.290 | 0.160 | 0.660 | 0.008 | 0.001 | 0.270 | 0.050 | 0.068 | 0.033 | 0.030 | 0.000 | 0.000 |
| HF | T29261 | 29261 | 0.320 | 0.180 | 0.680 | 0.009 | 0.004 | 0.280 | 0.050 | 0.068 | 0.042 | 0.030 | 0.000 | 0.000 |
| HF | S38904 | 38904 | 0.313 | 0.170 | 0.780 | 0.009 | 0.002 | 0.280 | 0.030 | 0.024 | 0.020 | 0.021 | 0.001 | 0.001 |
| HF | T20124 | 20124 | 0.300 | 0.170 | 0.670 | 0.005 | 0.003 | 0.270 | 0.040 | 0.077 | 0.036 | 0.040 | 0.000 | 0.000 |
| HF | T27021 | 27021 | 0.320 | 0.190 | 0.670 | 0.006 | 0.003 | 0.270 | 0.040 | 0.077 | 0.020 | 0.040 | 0.000 | 0.000 |

Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tuberia Sin Costura) conforme ASTM A106 Grado B con N°: We certify that result of chemical analysis and mechanical test are true and correct copy of the test certificate issued by the manufacturer and/or supplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B N°: 6043053 330260 6043053 6035314 261678 5001575 6004898

Este material cumple con los requerimientos especificados en la orden.
 The material of this certificate heat number mentioned above is in compliance with the requirements specified in the order.

Notas: Formado en caliente a 820°C-980°C, enfriado al aire. Formado en frio normalizado a 940°C max. Time de permeancia 10'.
 Notes: Hot formed fittings in a range from 820°C to 980°C, cooled in still air. Cold formed normalized at 940°C max. Holding time 10'.
 Inspeccion Dimensional Satisfactoria. Visual dimensional check: satisfactory.
 HF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

The Products described herein were produced in accordance with the above referenced specification and are identified with the "R" which is permanently marked on each fitting.
 Jefe de Calidad: Quality Manager: ING. JOSE MARTINEZ MACIAS CC-008