

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

Tubos de Acero de México, S.A.
Carr. Mty-Laredo Km 24.2
Apartado Postal 43
(65550) C. de Flores, N.L. Méx.
(52) 81 8305 9600 tel
(52) 81 8305 9620 fax

Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V.
Sold to:

Pedido del Cliente No: 4107-4167-
Customers Order No:

Lista de Empaque: 10305
Packing List:

Fecha/Date: 14 de Marzo de 2008

Especificaciones y Grados / Standard or Specification and Steel Grade
Seamless Fittings according to ASTM A 234 "W" WPB-37, A234 "W" WPB-05a, NACE MR 01.75-2003
Conform to ASME II Ed. 2001 ASME SA-234 "W", Grade WPB.

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9 - 2003 and ASME B 16.28 - 1994

Factura/Invoice:
Bocas / Ends
Biselado / Bevelled ends

DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION

| ART. ITEM | COLADA HEAT CODE | CANTIDAD QUANTITY | DESCRIPCION / DESCRIPTION | ESF. CEDENCIA YIELD STRENGTH (Mpa) | ESF. RUPURA TENSILE STRENGTH (Mpa) | ELONG. %2" | DUREZA HARDNESS HBW |
|-----------|------------------|-------------------|---------------------------|------------------------------------|------------------------------------|------------|---------------------|
| 1 | T34179 | 55 | TEE 4 CED-STD | 356 | 478 | 37 | 108 |
| 2 | T37091 | 46 | TEE 6 CED-XS | 312 | 490 | 37 | 100 |
| 3 | T38264 | 49 | TEE 6 CED-XS | 322 | 484 | 31 | 105 |
| 4 | T36285 | 5 | TEE 5 CED-XS | 341 | 471 | 41 | 90 |

PRUEBAS MECANICAS / MECHANICAL TEST

PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C

| DIMENSIONES SAMPLE DIM mm | 1 Joules | 2 Joules | 3 Joules | PROMEDIO AVERAGE Joules |
|---------------------------|----------|----------|----------|-------------------------|
| | | | | |

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 |
|-----------------|------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| HF | T34179 | 34179 | 0.310 | 0.180 | 0.670 | 0.009 | 0.001 | 0.270 | 0.050 | 0.072 | 0.027 | 0.030 | 0.000 | 0.000 |
| HF | T37091 | 37091 | 0.310 | 0.180 | 0.670 | 0.006 | 0.001 | 0.280 | 0.050 | 0.054 | 0.018 | 0.030 | 0.000 | 0.000 |
| HF | T38264 | 38264 | 0.290 | 0.170 | 0.660 | 0.011 | 0.001 | 0.250 | 0.040 | 0.047 | 0.006 | 0.030 | 0.000 | 0.000 |
| HF | T36285 | 36285 | 0.300 | 0.170 | 0.660 | 0.011 | 0.002 | 0.270 | 0.050 | 0.066 | 0.030 | 0.030 | 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 (Tubería 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°.
7019603 8000518 8012629 7048492

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.

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.

Notas:
Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max.
Tempo de permanencia 10'.
Inspección Dimensional: Satisfactoria.
CF FORMADO EN CALIENTE/HOT FORMED
CF FORMADO EN FRI/COLD FORMED

Notes:
Hot formed fittings in a range from 620°C to 980°C, cooled in still air.
Cold formed normalized at 940°C max.
Holding time 10'.
Visual dimensional check: Satisfactory
Visual dimensional check: Satisfactory

Jefe de Calidad:
Quality Manager:
ING. WALTER GALLEGOS GALVAN
CC-008