

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 8344 8860 Tel
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CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE
 (DIN EN 10204 3.1.B - ISO 10474 3.1.B)

Vendido a: PLESA ANAHUAC
Sold to: PLESA ANAHUAC

Numero: 16031
Numero: 16031
Página/Page: 1 DE 1

Lista de Empaque: 1322 1373
Packing List: 1322 1373

Fecha/Date: 12 de Mayo de 2006
Factora/invoice: 8211

Factura/invoice: Bocas / Ends
Biselado / Bevelled ends

Pedido del Cliente No: 1322 1373
Customers Order No: 1322 1373

Dimensiones y tolerancias / Dimension and tolerances
ASME B 16.9-01 and ASME B 16.28 edition 1994

| DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION | | PRUEBAS MECANICAS / MECHANICAL TEST | | PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C | | | | | | | |
|--|------------------|-------------------------------------|---------------------------|---|-------------------------------------|------------|--------------------|----------|----------|----------|-------------------------|
| ART. ITEM | COLADA HEAT CODE | CANTIDA QUANTITY | DESCRIPCION / DESCRIPTION | ESF. CEDENCIA YIELD STRENGTH (Mpa) | ESF. RUPTURA TENSILE STRENGTH (Mpa) | ELONG. %2" | DUREZA HARDNESS HB | 1 Joules | 2 Joules | 3 Joules | PROMEDIO AVERAGE Joules |
| 1 | T25337 | 4 | RED. TEE 12 X 8 SCH-STD | 364 | 482 | 40 | 126 | | | | |
| 2 | T17791 | 10 | ELLS 10 X 90 L.R. SCH-20 | 310 | 482 | 39 | 123 | | | | |
| 3 | T22147 | 4 | ELLS 10 X 90 L.R. SCH-20 | 333 | 498 | 42 | 126 | | | | |
| 4 | T12167 | 2 | ELLS 10 X 90 L.R. SCH-20 | 323 | 491 | 46 | 144 | | | | |

| 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 | T25337 | 25337 | 0.320 | 0.190 | 0.670 | 0.011 | 0.003 | 0.270 | 0.040 | 0.073 | 0.013 | 0.040 | 0.000 | 0.000 |
| HF | T17791 | 17791 | 0.325 | 0.190 | 0.660 | 0.019 | 0.002 | 0.280 | 0.060 | 0.058 | 0.034 | 0.030 | 0.000 | 0.000 |
| HF | T22147 | 22147 | 0.340 | 0.180 | 0.780 | 0.016 | 0.001 | 0.270 | 0.070 | 0.062 | 0.050 | 0.030 | 0.000 | 0.000 |
| HF | T12167 | 12167 | 0.327 | 0.190 | 0.690 | 0.001 | 0.001 | 0.280 | 0.050 | 0.077 | 0.020 | 0.040 | 0.000 | 0.000 |

Notas:
 Formado en caliente a 780°C-840°C, enfriado al aire, Formado en frío normalizado a 840°C max.
 Hot formed fittings in a range from 780°C to 840°C, cooled in still air, Cold formed normalized at 840°C max.
 Tiempo de permanencia 10' Holding time 10'
 Inspección Dimensional Satisfactoria Visual dimensional check Satisfactory
 HF: FORMADO EN CALIENTE/HOT FORMED CF: FORMADO EN FRIO/COLD FORMED

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) conforme ASTM A106GradeB 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 (Pipe) certs conform to ASTM A106 Grade B N°:
 06002498 04019777 05013271 3011290

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.

Jefe de Aseguramiento de Calidad:
 Quality Assurance Coordinator

ING. JOSE MARINEZ MACIAS

CC-008