

**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**

(DIN EN 10204:2004E - ISO 10474.3.1 B)

Numero:
Number: 16922

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: 2097
Customers Order No:

Lista de Empaque:
Packing List: 8629

Fecha/Date: 7 de Noviembre de 2006

Especificaciones y Grados / Standard or Specification and Steel Grade
Seamless fittings according to ASTM A 234-97, A 234-05a, NACE MR 01:75-2003
Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB

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

Factural/invoice:
Bocas / Ends
Biselado / Bevelled ends

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	PRUEBAS MECANICAS / MECHANICAL TEST						PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C			
				ESF. CEDENCIA YIELD STRENGTH (Mpa)	ESF. RUPITURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules	
12	T27420	4	CODO 8 X 90° R.L. CED-STD	337	495	40	116						
13	T29436	3	CODO 8 X 90° R.L. CED-STD	373	489	33	96						
14	T28071	19	CODO 8 X 90° R.L. CED-STD	275	428	37	82						
15	T29390	19	CODO 8 X 90° R.L. CED-STD	303	488	42	116						
16	T28615	7	CODO 8 X 90° R.L. CED-STD	306	481	42	106						
17	T22635	2	CODO 8 X 90° R.L. CED-STD	317	490	40	126						
18	T29864	1	CODO 8 X 90° R.L. CED-STD	268	436	34	90						
19	T30550	5	CODO 8 X 90° R.L. CED-STD	335	470	36	88						
20	T29077	16	TEE RED. 8 X 4 CED-STD	327	489	44	155						
21	T26676	1	RED. CONC. 12 X 6 CED-STD	310	473	35	114						
22	T27406	14	RED. CONC. 12 X 6 CED-STD	338	488	44	111						

ANALISIS QUIMICO / CHEMICAL ANALYSIS

PROCESSO	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T27420	27420	0.320	0.170	0.690	0.012	0.003	0.280	0.080	0.079	0.031	0.040	0.000	0.000
HF	T29436	29436	0.310	0.180	0.670	0.009	0.001	0.290	0.040	0.065	0.025	0.030	0.000	0.000
HF	T28071	28071	0.320	0.170	0.690	0.012	0.003	0.280	0.080	0.079	0.031	0.040	0.000	0.000
HF	T29390	29390	0.310	0.180	0.670	0.009	0.001	0.290	0.040	0.065	0.025	0.030	0.000	0.000
HF	T28615	28615	0.300	0.170	0.680	0.007	0.002	0.280	0.040	0.094	0.026	0.030	0.000	0.000
HF	T22635	22635	0.310	0.170	0.680	0.009	0.001	0.270	0.050	0.069	0.045	0.030	0.000	0.000
HF	T29864	29864	0.300	0.170	0.660	0.006	0.000	0.280	0.050	0.069	0.029	0.040	0.000	0.000
HF	T30550	30550	0.310	0.170	0.670	0.007	0.001	0.270	0.050	0.079	0.046	0.040	0.000	0.000
HF	T29077	29077	0.310	0.170	0.680	0.008	0.001	0.270	0.050	0.074	0.038	0.040	0.000	0.000
CF	T26676	26676	0.310	0.170	0.690	0.010	0.003	0.290	0.050	0.068	0.022	0.040	0.000	0.000
CF	T27406	27406	0.300	0.170	0.690	0.009	0.001	0.270	0.040	0.067	0.021	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 (Tuberia Sin Costura) conforme ASTM A106 Grado B con N°: 6026711 6023245 6026711 6023245 6013965 5013246 6031391 6036118 6023971 6002818 6023969

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.

Notes:
Formado en caliente a 820°C-960°C, enfriado al aire.
F. Formado en frío normalizado a 940°C max.
Tiempo de permeancia 10'.
Inspección Dimensional. Satisfactoria.
HF: FORMADO EN CALENT/MOT FORMED
CF: FORMADO EN FRI/COLD FORMED

Notes:
Hotformed fittings in a range from 820°C to 960°C, cooled in still air.
Cold formed normalized at 940°C max.
Holding time 10'.
Visual dimensional check. Satisfactory
HF: FORMADO EN CALENT/MOT FORMED
CF: FORMADO EN FRI/COLD FORMED

Jefe de Calidad:
Quality Manager:
ING. JOSE MARTINEZ MACIAS

CC-008