



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

Numero:  
Number:

19536

Pagina/Page:

1 DE 1

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  
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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	3910 - 3906 - 3925	Lista de Empaque: Packing List:	10065	Fecha/Date:	5 de Enero de 2008
Especificaciones y Grados / Standard or Specification and Steel Grade	Seamless Fittings according to ASTM A 234"M" WPB-97, A234"M" WPB-05a, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234"M", 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				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 HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
23	T36286	100	TEE 6 CED-STD	385	508	37	90					
24	T33854	1	TEE RED. 10 X 4 CED-STD	341	476	34	90					
25	T33994	4	TEE RED. 10 X 4 CED-STD	346	493	45	90					
26	T34533	2	RED. CONC. 16 X 12 CED-STD	345	488	31	85					
27	T33051	8	RED. CONC. 16 X 12 CED-STD	307	478	34	137					
28	S20509	30	RED. CONC. 4 X 2 CED-XS	279	471	36	102					
29	S22135	30	CODO 3 X 45° CED-XS	312	480	37	120					
30	S20539	60	CODO 4 X 45° CED-XS	272	459	39	102					
31	T32956	20	RED. CONC. 8 X 3 CED-STD	301	471	37	91					
32	T15572	6	RED. CONC. 5 X 4 CED-STD	405	516	28	119					
33	T34258	14	RED. CONC. 5 X 4 CED-STD	329	499	40	123					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														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°: 7046009 7029464 7029464 7036264 7026675 366679 385335 365216 7010312 4009401 7036259
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	
HF	T36286	36286	0.350	0.180	0.850	0.013	0.001	0.280	0.060	0.068	0.030	0.030	0.000	0.000
HF	T33854	33854	0.310	0.180	0.660	0.008	0.001	0.300	0.050	0.059	0.030	0.030	0.000	0.000
HF	T33994	33994	0.310	0.180	0.660	0.010	0.002	0.270	0.040	0.055	0.022	0.030	0.000	0.000
CF	T34533	34533	0.320	0.170	0.710	0.013	0.002	0.280	0.080	0.077	0.054	0.040	0.000	0.000
CF	T33051	33051	0.320	0.180	0.690	0.011	0.002	0.320	0.060	0.053	0.023	0.030	0.000	0.000
CF	S20509	20509	0.340	0.200	0.760	0.011	0.001	0.310	0.050	0.026	0.010	0.016	0.001	0.000
HF	S22135	22135	0.320	0.170	0.800	0.012	0.001	0.280	0.040	0.025	0.010	0.018	0.001	0.001
HF	S20539	20539	0.330	0.190	0.750	0.013	0.001	0.300	0.050	0.032	0.020	0.022	0.001	0.001
CF	T32956	32956	0.300	0.170	0.660	0.009	0.003	0.280	0.060	0.055	0.019	0.030	0.000	0.000
CF	T15572	15572	0.310	0.160	0.720	0.007	0.002	0.270	0.050	0.089	0.032	0.060	0.000	0.000
CF	T34258	34258	0.310	0.170	0.680	0.009	0.001	0.280	0.070	0.072	0.043	0.040	0.000	0.000

Notes:  
Formado en caliente a 820°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max. Tiempo de permanencia 10'.  
Inspección Dimensional: Satisfactoria.  
HF: FORMADO EN CALIENTE/HOT FORMED

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'.  
Visual dimensional check: Satisfactory  
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