



**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.	Pedido del Cliente No:	4215 - 4227 - 4216	Lista de Empaque:	1 0 2 2 9	Fecha/Date:	25 de Febrero de 2008
Sold to:		Customers Order No:		Packing List:			
Dimensiones y tolerancias / Dimension and tolerances				Factura/Invoice:	Bocas / Ends		
Dimensiones y tolerancias / Dimension and tolerances				Factura/Invoice:	Biselado / Bevelled ends		

Specificaciones y Grados / Standard or Specification and Steel Grade
Seamless Fittings according to ASTM A 234 "M", WPB-97, A234 "M", WPB-05a, NACE MR 0175-2003
Conform to ASME II Ed. 2001 ASME SA-234 "M", Grade WPB.

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. RUPATURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules	
1	T33854	30	TEE RED. 10 X 8 CED-STD	303	471	39	93						
2	S21782	106	CODO 3 X 90° R.I. CED-XS	295	469	32	117						
3	T36861	100	CODO 8 X 90° R.I. CED-XS	306	476	40	85						
4	T37919	20	CODO 8 X 45° CED-STD	329	469	30	98						
5	T37479	37	CODO 10 X 90° R.I. CED-STD	327	472	40	90						
6	T37796	43	CODO 10 X 90° R.I. CED-STD	329	487	41	96						
7	T37920	60	CODO 8 X 90° R.I. CED-STD	324	503	40	112						
8	S22475	50	RED. CONC. 4 X 3 CED-STD	324	504	34	116						
9	T34322	2	CODO 12 X 90° R.I. CED-40	365	505	36	82						
10	T37204	18	CODO 12 X 90° R.I. CED-40	329	504	39	87						
11	T34198	40	TEE RED. 6 X 4 CED-XS	321	475	37	84						

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	T33854	33854	0.300	0.170	0.660	0.007	0.002	0.290	0.040	0.051	0.029	0.030	0.000	0.000
HF	S21782	21782	0.300	0.180	0.660	0.012	0.250	0.040	0.033	0.010	0.024	0.001	0.002	0.000
HF	T36861	36861	0.320	0.180	0.680	0.007	0.290	0.050	0.039	0.044	0.030	0.000	0.000	0.000
HF	T37919	37919	0.320	0.180	0.700	0.010	0.280	0.050	0.063	0.017	0.040	0.000	0.000	0.000
HF	T37479	37479	0.300	0.170	0.670	0.009	0.270	0.040	0.061	0.020	0.030	0.000	0.000	0.000
HF	T37796	37796	0.300	0.170	0.670	0.010	0.260	0.040	0.051	0.010	0.040	0.000	0.000	0.000
HF	T37920	37920	0.310	0.180	0.680	0.008	0.280	0.040	0.055	0.022	0.030	0.000	0.000	0.000
CF	S22475	22475	0.330	0.190	0.800	0.009	0.260	0.030	0.028	0.010	0.020	0.001	0.001	0.001
HF	T34322	34322	0.300	0.170	0.650	0.009	0.290	0.050	0.070	0.029	0.040	0.000	0.000	0.000
HF	T37204	37204	0.310	0.170	0.680	0.008	0.270	0.050	0.075	0.050	0.040	0.000	0.000	0.000
HF	T34198	34198	0.310	0.180	0.670	0.006	0.280	0.040	0.064	0.017	0.040	0.000	0.000	0.000

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.

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) con conform to ASTM A106 Grade B N°.
7020189 375067 7052200 8007476 8002377 8004070 8007260 380958 7028471 7056416 7036258

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.

Notes:
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

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
VAF FORMADO EN FRIO/COLD FORMED

Jefe de Calidad:
Quality Manager:
ING. WARRIO GALLEGOS GALVAN

CC-008