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

CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE

(DIN EN 10204:2004E - ISO 10474 3.1.B)

Numero: Number:	Pagina/Page:
19079	1 DE 1

Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 3645 - 3508	Lista de Empaque: Packing List: 9828	Fecha/Date: 30 de Octubre de 2007
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
12	T35698	14	CODO 10 X 45° CED-XS	295	457	44	90					
13	T35714	15	CODO 8 X 90° R.C. CED-STD	311	478	37	95					
14	T35698	30	TEE RED. 6 X 4 CED-STD	322	470	32	89					
15	S39564	3	CODO 3 X 45° CED-XS	455	585	36	123					
16	S31802	7	CODO 3 X 45° CED-XS	333	479	34	117					
17	T97003	2	TEE RED. 8 X 3 STD	337	495	43	143					
18	T10995	3	TEE RED. 8 X 3 STD	306	487	35	140					
19	T11782	5	TEE RED. 8 X 3 STD	321	486	42	140					
20	T10188	5	TEE RED. 8 X 3 STD	344	509	42	140					
21	S32536	2	CODO 3 X 90° R.C. CED-STD	327	488	50	131					
22	S45279	33	CODO 3 X 90° R.C. CED-STD	271	471	33	129					

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	T35698	35698	0.300	0.170	0.660	0.009	0.001	0.280	0.040	0.051	0.024	0.030	0.000	0.000
HF	T35714	35714	0.330	0.180	0.760	0.009	0.001	0.300	0.050	0.072	0.024	0.040	0.000	0.000
HF	T35698	35698	0.000	0.180	0.670	0.009	0.001	0.280	0.040	0.052	0.024	0.030	0.000	0.000
HF	S39564	39564	0.319	0.180	0.740	0.011	0.003	0.320	0.040	0.030	0.020	0.020	0.002	0.001
HF	S31802	31802	0.320	0.180	0.770	0.009	0.002	0.330	0.030	0.034	0.010	0.014	0.001	0.001
HF	T97003	97003	0.314	0.180	0.670	0.008	0.002	0.280	0.040	0.076	0.034	0.040	0.000	0.000
HF	T10995	10995	0.349	0.190	0.770	0.012	0.002	0.290	0.090	0.052	0.031	0.050	0.000	0.000
HF	T11782	11782	0.295	0.160	0.670	0.010	0.034	0.260	0.050	0.094	0.035	0.004	0.000	0.000
HF	T10188	10188	0.356	0.190	0.790	0.007	0.002	0.270	0.060	0.088	0.071	0.040	0.000	0.000
HF	S32536	32536	0.338	0.190	0.820	0.009	0.001	0.300	0.020	0.031	0.020	0.018	0.001	0.001
HF	S45279	45279	0.340	0.190	0.740	0.010	0.001	0.290	0.050	0.054	0.030	0.051	0.002	0.001

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 Nº:

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 suplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B Nº:

7039851 7040886 7039511 266490 207944 02010522 03006099 03009107 03002715 207919 316356

"Este material cumple con los requerimientos especificados en la orden".

"The material of this certificate heat number mentioned above is in compilance with the requirements specified in the order".

Notas:

Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frio 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 620°C to 980°C, cooled in still air.

Cold formed nomalized 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