

**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. Mex.
(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:	4715-	Lista de Empaque:	10565	Fecha/Date:	17 de Junio de 2008
Sold to:		Customers Order No:		Packing List:			
Especificaciones y Grados / Standard or Specification and Steel Grade		Dimensiones y tolerancias / Dimension and tolerances		Factura/Invoice:		Bocas / Ends	
Seamless Fittings according to ASTM A 234 "W", WPB-97, A234 "W", WPB-05a, NACE MR 01.75-2003		ASME B 16.9 - 2003 and ASME B 16.28 - 1994		Biselado / Bevelled ends			
Conform to ASME II Ed. 2001 ASME SA-234 "W", Grade WPB, NACE MR0103-2003							

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. RUPATURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	T39507	60	CODO 6 X 45° CED-STD	309	475	40	124					
2	T34197	6	RED. CONC. 8 X 4 CED-STD	330	492	30	90					
3	T37795	14	RED. CONC. 8 X 4 CED-STD	315	490	42	107					
4	S26551	50	CODO 3 X 45° CED-STD	334	485	29	111					
5	T39958	40	CODO 10 X 90° R.L. CED-STD	311	488	39	98					
6	T29855	1	TEE RED. 10 X 8 CED-80	323	473	45	120					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C	%E	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T39507	39507	0.300	0.170	0.680	0.011	0.001	0.280	0.060	0.059	0.012	0.030	0.000	0.000
CF	T34197	34197	0.320	0.180	0.680	0.008	0.001	0.290	0.070	0.077	0.035	0.040	0.000	0.000
CF	T37795	37795	0.310	0.180	0.670	0.010	0.001	0.280	0.050	0.054	0.012	0.040	0.000	0.000
HF	S26551	26551	0.310	0.180	0.720	0.011	0.001	0.280	0.040	0.023	0.010	0.015	0.001	0.000
HF	T39958	39958	0.310	0.180	0.670	0.010	0.003	0.260	0.060	0.063	0.007	0.030	0.000	0.000
HF	T29855	29855	0.320	0.180	0.660	0.011	0.003	0.280	0.060	0.078	0.032	0.040	0.000	0.000

Notes:
Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max.
Tiempo de permanencia 10'.
Inspección Dimensional: Satisfactoria.
Inspección Dimensional: Satisfactoria.

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.

CF: FORMADO EN FRIO/COLD FORMED
HF: FORMADO EN CALIENTE/HOT FORMED

Quality Manager/Jefe de Calidad:
ING. WALDO GALLEGOS GALVAN

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.

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 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) cuts conform to ASTM A106 Grade B N°.
8025896 7024408 8008710 424210 8029682 6027123

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 / The values of hardness for fittings NPS 2, 1 1/2" and smaller ones obtain from the conversion of hardness Rockwell B to hardness Brinell HBW by means of table WILSON DESK CHART 60.
Los valores de dureza para conexiones de NPS de 2, 1 1/2" y menores, se obtienen de la conversión de dureza Rockwell B a dureza Brinell HBW mediante la tabla WILSON DESK CHART 60.

CC-008