

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

Tubos de Acero de México, S.A.
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Vendido a: PLESA ANAHUAC Y CIA. S.A. DE C.V. Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V. Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 "M", WPB-97, A234 "M", WPB-08a, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234 "M", Grade WPB.	Pedido del Cliente No: 3333 - Customers Order No: Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2003 and ASME B 16.28 - 1994	Lista de Empaque: 9 480 Packing List:	Fecha/Date: 8 de Agosto de 2007
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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. RUPTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HB	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules						
12	T21227	100	CODO 1 X 45° CED-STD	289	417	51	122											
13	S45402	150	CODO 1 1/2 X 45° CED-STD	400	546	46	133											
14	S45280	100	CODO 1 1/4 X 45° CED-STD	357	511	28	122											
15	T33842	50	TEE RED. 6 X 3 CED-STD	335	459	38	83											
16	T25720	5	TEE 10 CED-80	299	473	37	91											

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS										PRUEBAS MECANICAS / MECHANICAL TEST					PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C												
			%C.E.	%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules												
HF	T21227	21227	0.282	0.158	0.600	0.009	0.001	0.185	0.060	0.021	0.044	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
HF	S45402	45402	0.317	0.180	0.740	0.009	0.001	0.290	0.040	0.038	0.010	0.021	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
HF	S45280	45280	0.323	0.180	0.730	0.010	0.001	0.300	0.050	0.055	0.020	0.048	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
HF	T33842	33842	0.310	0.170	0.710	0.007	0.001	0.270	0.050	0.051	0.055	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HF	T25720	25720	0.320	0.180	0.670	0.010	0.002	0.280	0.070	0.068	0.023	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes: Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max. 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

Notes: 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: ING. JOSE MARTINEZ MACIAS

HF FORMADO EN CALIENTE/HOT FORMED CF FORMADO EN FRIJO/COLD FORMED CC-008

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 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) certs conform to ASTM A106 Grade B N°. T-6612/1 329135 329135 7028673 6006604

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.