

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

Tubos de Acero de Mexico, S.A.  
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Vendido a:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No:	5201 - 5202	Lista de Empaque:	1 0905	Fecha/Date:	9 de Octubre de 2008
Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Customers Order No:		Packing List:			
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	Dimensiones y tolerancias / Dimension and tolerances		Factura/Invoice:	Bocas / Ends		
Conform to ASME II Ed. 2001 ASME SA-234 "M" Grade WPB, NACE MR0103-2003		ASME B 16.9 - 2003 and ASME B 16.28 - 1994		Biselado / Bevelled ends			

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 HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules
12	T40182	34	CODO 6 X 45° CED-STD	323	490	39	122				
13	S26550	80	CODO 4 X 45° CED-STD	341	475	34	95				
14	S21394	37	CODO 2 X 45° CED-STD	458	679	29	133				
15	T41466	15	CODO 8 X 45° CED-STD	276	471	39	109				
16	T40182	18	CODO 8 X 45° CED-STD	340	481	31	95				
17	T40433	7	CODO 8 X 45° CED-STD	314	490	39	124				
18	T37795	1	CODO 10 X 90° R.L. CED-XS	314	479	31	117				
19	T41032	15	CODO 10 X 90° R.L. CED-XS	326	506	43	122				
20	T40156	15	RED. CONC. 10 X 6 CED-STD	304	465	42	104				
21	S43382	25	RED. CONC. 4 X 3 CED-STD	305	473	41	111				
22	T39508	50	RED. CONC. 6 X 4 CED-STD	327	491	39	116				

**ANALISIS QUIMICO / CHEMICAL ANALYSIS**

PROCESO PROCESS	COLADA HEAT CODE	COLADAH/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T40182	40182	0.320	0.180	0.690	0.015	0.002	0.280	0.060	0.064	0.009	0.030	0.000	0.000
HF	S26550	26550	0.320	0.190	0.720	0.010	0.002	0.270	0.040	0.018	0.010	0.013	0.001	0.001
HF	S21394	21394	0.310	0.180	0.720	0.011	0.001	0.260	0.030	0.035	0.010	0.021	0.001	0.001
HF	T41466	41466	0.310	0.180	0.670	0.010	0.002	0.280	0.040	0.061	0.006	0.030	0.000	0.000
HF	T40182	40182	0.310	0.170	0.680	0.013	0.002	0.270	0.070	0.063	0.009	0.030	0.000	0.000
HF	T40433	40433	0.300	0.170	0.670	0.011	0.002	0.280	0.040	0.055	0.010	0.030	0.000	0.000
HF	T37795	37795	0.320	0.190	0.660	0.011	0.002	0.280	0.060	0.057	0.011	0.040	0.000	0.000
HF	T41032	41032	0.320	0.190	0.680	0.007	0.001	0.280	0.040	0.062	0.008	0.030	0.000	0.000
CF	T40156	40156	0.310	0.170	0.730	0.010	0.002	0.280	0.040	0.050	0.006	0.030	0.000	0.000
CF	S43382	43382	0.330	0.190	0.740	0.013	0.002	0.300	0.040	0.046	0.020	0.026	0.001	0.001
CF	T39508	39508	0.300	0.170	0.680	0.012	0.002	0.280	0.060	0.049	0.017	0.030	0.000	0.000

**Notes:**

Formado en caliente a 620°C-800°C, enfriado al aire.  
Hot formed fittings in a range from 620°C to 800°C, cooled in still air.

Formado en frío normalizado a 940°C max.  
Cold formed normalized at 940°C max.

Tiempo de permanencia 10".  
Holding time 10".

Inspección Dimensional, Satisfactoria.  
Visual dimensional check, Satisfactory

Inspección Dimensional, Satisfactoria.  
Visual dimensional check, Satisfactory

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 1/2" 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 1/2" y menores, se obtienen de la conversión de dureza Rockwell B a dureza Brinell HBW mediante la tabla WILSON DESK CHART 60.