



**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
Aparado Postal 43
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Vendido a:	PLESA ANAHUAC Y CIA. S. A. DE C. V.	Pedido del Cliente No:	4440 - 4507	Lista de Empaque:	10448	Fecha/Date:	6 de Mayo 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:		Biselado / Bevelled 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					
Conform to ASME II Ed. 2001 ASME SA-234 "W" Grade WPB, NACE MRO 103-2003							

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 HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
1	S26549	228	CODO 4 X 90° R. I. CED-STD	290	474	32	93	1				
2	S26551	264	CODO 3 X 90° R. I. CED-STD	334	485	29	111					
3	T38887	100	CODO 6 X 90° R. I. CED-STD	309	462	41	93					
4	T37717	30	CODO 6 X 45° CED-STD	275	475	32	93					
5	T34335	13	TEE 8 CED-XS	299	471	37	83					
6	T34322	3	TEE 8 CED-XS	326	474	38	89					
7	T37206	14	TEE 8 CED-XS	288	478	43	83					
8	T38264	10	TEE 6 CED-XS	322	484	31	105					
9	T38264	12	CODO 10 X 45° CED-STD	326	471	33	106					
10	T27741	3	TEE 12 CED-80	261	483	35	123					
11	SCS	5	TEE RED 4 X 2 CED-STD	319	461	38	156					

PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS											
			%C	%E	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	S26549	26549	0.320	0.180	0.750	0.014	0.001	0.300	0.050	0.032	0.010	0.015	0.001	0.001
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	T38887	38887	0.290	0.160	0.660	0.010	0.002	0.280	0.070	0.060	0.021	0.040	0.000	0.000
HF	T37717	37717	0.340	0.180	0.850	0.010	0.001	0.280	0.050	0.062	0.021	0.030	0.000	0.000
HF	T34335	34335	0.320	0.180	0.680	0.010	0.002	0.270	0.050	0.054	0.031	0.030	0.000	0.000
HF	T34322	34322	0.310	0.180	0.650	0.009	0.002	0.300	0.050	0.070	0.028	0.040	0.000	0.000
HF	T37206	37206	0.350	0.190	0.840	0.008	0.001	0.290	0.040	0.049	0.027	0.030	0.000	0.000
HF	T38264	38264	0.290	0.170	0.660	0.011	0.001	0.250	0.040	0.047	0.006	0.030	0.000	0.000
HF	T38264	38264	0.290	0.170	0.660	0.011	0.001	0.250	0.040	0.047	0.007	0.030	0.000	0.000
HF	T27741	27741	0.320	0.180	0.670	0.010	0.002	0.260	0.070	0.080	0.036	0.040	0.000	0.000
HF	SCS	45137	0.321	0.180	0.650	0.008	0.002	0.230	0.070	0.120	0.030	0.060	0.001	0.001

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'

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'

Inspección Dimensional: Satisfactoria
Visual dimensional check: Satisfactory

CF: FORMADO EN FRIO/COLD FORMED

ING. WALDO GALLEGOS GALVAN

Quality Manager/Jefe de Calidad:

CC-008

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.