

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

Tubos de Acero de México, S.A.
Carr. Mty.-Ixtedo Km 24.2
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(52) 81 8305 9600 tel
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Vendido a:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No:	4482 - 4507	Lista de Empaque:	10417	Fecha/Date:	24 de Abril de 2008
Sold to:		Customers Order No:		Packing List:			
Especificaciones y Grados / Standard or Specification and Steel Grade				Dimensiones y tolerancias / Dimension and tolerances			
Seamless Fittings according to ASTM A 234"WPB-97, A234"WPB-05a, NACE MR 01.76-2003				ASME B 16.9 - 2003 and ASME B 16.28 - 1994			
Conform to ASME II Ed. 2001 ASME SA-234"WPB, NACE MRO 103-2003				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	PROMEDIO AVERAGE Joules		
1	S21043	108	CODO 4 X 90° R.I. CED-STD	353	488	36	115							
2	S23663	120	CODO 4 X 90° R.I. CED-STD	310	494	35	121							
3	S26551	264	CODO 3 X 90° R.I. CED-STD	334	485	29	111							
4	T37717	100	CODO 6 X 90° R.I. CED-STD	275	475	32	93							
5	T38541	12	CODO 14 X 90° R.I. CED-STD	299	486	43	120							
6	T37363	30	CODO 6 X 45° CED-STD	351	496	39	94							
7	T29807	8	CODO 10 X 90° R.I. CED-20	340	495	38	88							
8	T38769	18	CODO 12 X 90° R.I. CED-STD	341	503	32	93							
9	T38264	12	CODO 10 X 45° CED-STD	326	471	33	106							
10	T38264	40	CODO 10 X 90° R.I. CED-STD	326	471	33	106							
11	T27741	1	TEE 12 CED-80	261	483	35	123							

PROCESO PROCESS	COLADA HEAT CODE	COLADAH/HEAT M.P/MOTHER PIPE	ANALISIS QUIMICO / CHEMICAL ANALYSIS											
			%C.E.	%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	S21043	21043	0.330	0.190	0.730	0.009	0.001	0.260	0.040	0.028	0.030	0.028	0.001	0.001
HF	S23663	23663	0.340	0.200	0.710	0.012	0.001	0.300	0.040	0.073	0.030	0.033	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	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	T38541	38541	0.300	0.170	0.670	0.007	0.001	0.280	0.050	0.072	0.013	0.040	0.000	0.000
HF	T37363	37363	0.310	0.170	0.700	0.008	0.001	0.270	0.070	0.052	0.039	0.030	0.000	0.000
HF	T29807	29807	0.310	0.170	0.660	0.007	0.003	0.280	0.060	0.084	0.048	0.040	0.000	0.000
HF	T38769	38769	0.310	0.180	0.680	0.011	0.002	0.280	0.040	0.046	0.018	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	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

Notas:
Formado en caliente a 820°C-980°C, enfriado al aire, Formado en frío normalizado a 940°C max.
Tempo de permanencia 10'.
Hot formed ferritic in a range from 820°C to 980°C, cooled in still air.
Cold formed normalized at 940°C max.
Holding time 10'.
Visual dimensional check: Satisfactory

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CF: FORMADO EN FRIOCALDO 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: *[Signature]*

ING. WILDO GALLEGOS GALVAN

CC-008