

**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
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Vendido a:	PIESA AMAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No:	1883-1917	Fecha/Date:	5 de Octubre de 2006
Sold to:		Customers Order No:		Factural/invoice:	Bocas / Ends
Dimensiones y tolerancias / Dimension and tolerances				Biselado / Beveled ends	
ASME B 16.9 - 2003 and ASME B 16.28 - 1994					
Lista de Empaque:	8548	Numero:	16772	Página/Page:	1 DE 1
Packing List:		Number:			

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	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
23	T27912	8	RED. CONC. 16 X 8 CED-STD	261	487	30	121					
24	T27272	3	RED. CONC. 16 X 12 CED-STD	352	482	45	116					
25	T27912	12	RED. CONC. 16 X 12 CED-STD	261	487	30	121					
26	T27497	5	TEE RED. 6 X 4 CED-XS	323	494	46	113					
27	CTVS	20	TEE RED. 2 X 1 CED-XS	343	496	36	163					
28	T27272	5	RED. CONC. 16 X 10 CED-STD	352	482	45	116					
29	T29031	10	TEE RED. 6 X 3 CED-STD	319	454	37	105					
30	SCS	10	TEE RED. 4 X 2 CED-STD	319	461	38	156					
31	S33990	10	CODO 2 1/2 X 90° R.C. CED-XS	344	487	51	126					
32	T27434	24	RED. CONC. 10 X 5 CED-STD	346	485	33	119					
33	T25666	6	RED. CONC. 10 X 5 CED-STD	329	502	45	116					

PROCESO PROCESS	COLADA HEAT CODE	COLADA/MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
CF	T27912	27912	0.330	0.190	0.660	0.006	0.003	0.270	0.060	0.077	0.036	0.040	0.000	0.000
CF	T27272	27272	0.330	0.180	0.680	0.011	0.003	0.270	0.090	0.067	0.037	0.050	0.000	0.000
CF	T27912	27912	0.330	0.190	0.660	0.006	0.003	0.270	0.060	0.077	0.036	0.040	0.000	0.000
HF	T27497	27497	0.300	0.170	0.660	0.011	0.002	0.300	0.050	0.070	0.017	0.030	0.000	0.000
HF	CTVS	50542	0.283	0.160	0.650	0.019	0.003	0.230	0.030	0.070	0.010	0.020	0.004	0.000
CF	T27272	27272	0.330	0.180	0.680	0.011	0.003	0.270	0.090	0.067	0.037	0.050	0.000	0.000
HF	T29031	29031	0.300	0.160	0.680	0.009	0.002	0.280	0.050	0.078	0.038	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
HF	S33990	33990	0.314	0.180	0.720	0.012	0.001	0.300	0.030	0.037	0.020	0.019	0.001	0.001
CF	T27434	27434	0.300	0.160	0.670	0.009	0.002	0.260	0.060	0.076	0.025	0.040	0.000	0.000
CF	T25666	25666	0.333	0.180	0.710	0.008	0.001	0.290	0.070	0.125	0.043	0.050	0.000	0.000

ANÁLISIS QUÍMICO / CHEMICAL ANALYSIS

Certificamos que los resultados de los Análisis Químicos y Pruebas Mecánicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tuberia 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°.

6024910 6024908 6024910 6008082 42376 6024908 6015400 42230 218549 6008127 05028498

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.

Notas:

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

Hot formed ferrite in a range from 620°C to 980°C, cooled in still air. Cold formed normalized at 940°C max

Tempo de permanencia 10'

Holding time 10'

Inspección Dimensional Satisfactoria

Visual dimensional check Satisfactory

HF: FORMADO EN CALIENTE/HOT FORMED

CF: FORMADO EN FRÍO/COLD 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:

ING. JOSE MARTINEZ MACIAS

CC-008