

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

Numero:  
Number:  
22134

Pagina/Page:  
1 DE 1

Tubbs de Acero de México, S.A.  
Carr. Mty-Laredo Km 24.2  
Apartado Postal 43  
(65550) C. de Flores, N.L. Méx.  
(52) 81 8305 9600 tel  
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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	5791 - 5624	Lista de Empaque: Packing List:	11264	Fecha/Date:	6 de Febrero de 2009
Especificaciones y Grados / Standard or Specification and Steel Grade	Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234M Grade WPB, NACE MR0103-2003	Dimensiones y tolerancias / Dimension and tolerances	ASME B 16.9 - 2007 and ASME B 16.28 - 1994	Factura/Invoice: Bocas / Ends	Biselado / Bevelled ends		

DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION				PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C				
ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	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
12	S24067	26	CODO 3 X 45° CED-STD	315	479	31	114					
13	S34882	1	CODO 3 X 45° CED-STD	357	481	26	126					
14	S27377	3	CODO 3 X 45° CED-STD	343	520	32	116					
15	T17649	2	CODO 3 X 45° CED-STD	443	537	27	124					
16	S32624	68	CODO 2 1/2 X 90° R.L. CED-STD	321	494	30	120					
17	S25531	10	CODO 5 X 45° CED-STD	300	482	36	105					
18	T42080	8	CODO 8 X 90° R.C. CED-STD	333	495	38	124					
19	S43766	25	RED. CONC. 4 X 2 CED-STD	341	501	40	124					
20	T42339	3	CODO 14 X 45° CED-40	307	482	36	102					
21	T41975	3	CODO 14 X 45° CED-40	257	452	35	121					
22	S31052	40	CODO 2 X 45° CED-XS	326	495	31	120					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	S24067	24067	0.340	0.190	0.760	0.011	0.001	0.280	0.060	0.061	0.040	0.055	0.001	0.000
HF	S34882	34882	0.319	0.180	0.750	0.009	0.002	0.300	0.030	0.040	0.020	0.017	0.001	0.001
HF	S27377	27377	0.350	0.200	0.790	0.017	0.000	0.270	0.040	0.034	0.010	0.033	0.001	0.002
HF	T17649	17649	0.340	0.170	0.870	0.015	0.003	0.280	0.040	0.074	0.041	0.030	0.000	0.000
HF	S32624	32624	0.340	0.200	0.750	0.011	0.002	0.280	0.040	0.041	0.010	0.031	0.001	0.002
HF	S25531	25531	0.320	0.180	0.730	0.010	0.001	0.320	0.040	0.040	0.020	0.027	0.001	0.001
HF	T42080	42080	0.330	0.180	0.710	0.009	0.001	0.260	0.060	0.067	0.030	0.050	0.009	0.004
CF	S43766	43766	0.350	0.200	0.820	0.011	0.001	0.290	0.030	0.062	0.020	0.023	0.002	0.001
HF	T42339	42339	0.300	0.170	0.670	0.010	0.003	0.280	0.050	0.070	0.008	0.030	0.000	0.000
HF	T41975	41975	0.300	0.170	0.680	0.008	0.001	0.280	0.050	0.068	0.018	0.030	0.000	0.000
HF	S31052	31052	0.320	0.180	0.740	0.009	0.001	0.260	0.040	0.035	0.010	0.020	0.001	0.001

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°: 405032 229535 431024 4019512 470646 412367 8062388 311696 9002220 8063328 458095

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°: 405032 229535 431024 4019512 470646 412367 8062388 311696 9002220 8063328 458095

"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.  
Tiempo de permanencia 10'.  
Inspección Dimensional: Satisfactoria.  
HF: FORMADO EN CALIENTE/HOT FORMED

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'.  
Visual dimensional check: Satisfactory  
CF: FORMADO EN FRIO/COLD FORMED

*Waldo Gallegos*  
**Quality Manager / Jefe de Calidad:**  
**ING. WALDO GALLEGOS GALVAN**

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.