



<b>CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE</b> ( DIN EN 10204:2004E - ISO 10474 3.1.B )	Número: Number:	Página/Page:	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 (52) 81 8305 9620 fax
	22927	1 DE 1	

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	7205 - 7234	Lista de Empaque: Packing List:	11692	Fecha/Date:	4 de Noviembre 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 <b>ASME B 16.9 - 2007 and ASME B 16.28 - 1994</b>			Factura/Invoice: <b>Bocas / Ends</b> 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
1	S31625	264	CODO 3 X 90° R.L. CED-STD	331	510	32	124					
2	T42633	17	RED. CONC. 8 X 4 CED-STD	300	475	42	121					
3	T43329	3	RED. CONC. 8 X 4 CED-STD	319	494	42	99					
4	T42774	6	CODO 8 X 45° CED-STD	315	482	42	122					
5	T42773	16	CODO 8 X 45° CED-STD	365	494	34	106					
6	T43299	8	CODO 8 X 45° CED-STD	326	480	34	109					
7	T31593	2	CODO 8 X 45° CED-STD	345	477	36	86					
8	T84238	8	CODO 10 X 90° R.L. CED-XS	356	495	43	118					
9	S45280	7	CODO 1 1/4 X 90° R.L. CED-STD	357	511	28	122					
10	S45402	33	CODO 1 1/4 X 90° R.L. CED-STD	400	546	46	133					
11	T40894	6	TEE 16 CED-STD	342	490	42	124					

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	S31625	31625	0.310	0.170	0.750	0.012	0.002	0.260	0.040	0.034	0.010	0.016	0.001	0.001
CF	T42633	42633	0.300	0.170	0.670	0.011	0.002	0.270	0.050	0.055	0.018	0.030	0.000	0.000
CF	T43329	43329	0.310	0.180	0.680	0.012	0.000	0.300	0.040	0.044	0.017	0.020	0.000	0.000
HF	T42774	42774	0.310	0.180	0.690	0.015	0.002	0.270	0.040	0.069	0.023	0.030	0.000	0.000
HF	T42773	42773	0.310	0.180	0.670	0.016	0.001	0.260	0.040	0.071	0.023	0.030	0.000	0.000
HF	T43299	43299	0.310	0.170	0.700	0.011	0.001	0.270	0.050	0.057	0.014	0.040	0.000	0.000
HF	T31593	31593	0.310	0.170	0.670	0.009	0.002	0.280	0.070	0.067	0.026	0.040	0.000	0.000
HF	T84238	84238	0.320	0.190	0.660	0.019	0.002	0.260	0.050	0.043	0.028	0.020	0.000	0.000
HF	S45280	45280	0.323	0.180	0.730	0.010	0.001	0.300	0.050	0.055	0.020	0.048	0.001	0.000
HF	S45402	45402	0.320	0.180	0.740	0.009	0.001	0.290	0.040	0.038	0.010	0.021	0.001	0.001
HF	T40894	40894	0.310	0.180	0.650	0.011	0.002	0.300	0.050	0.061	0.008	0.030	0.000	0.000

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 (Tubería Sin Costura) conforme ASTM A106 Grado B con N°: 460632 9001713 9007104 9001730 9002385 9012288 6044001 9040864 329135 329135 9052911

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°: 460632 9001713 9007104 9001730 9002385 9012288 6044001 9040864 329135 329135 9052911

\*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	<b>Quality Manager / Jefe de Calidad:</b> <b>ING. WALDO GALLEGOS GALVAN</b>	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.
---	---	--	---