



Tubbs de Acero de México, S.A.  
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<b>CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE</b> ( DIN EN 10204:2004E - ISO 10474 3.1.B )		Número: Number:  23061	Página/Page:  1 DE 1
Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 7372 - 7386 - 7371 -	Lista de Empaque: Packing List: 11762	Fecha/Date: 15 de Diciembre 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
1	T28070 ✓	4	CODO 6 X 45° CED-STD	281	459	29	117					
2	T42101 ✓	11	CODO 6 X 45° CED-STD	263	504	33	107					
3	S31625 ✓	50	CODO 3 X 45° CED-STD	331	510	32	124					
4	T43133 ✓	5	TEE 12 CED-40	311	481	37	97					
5	T34180 ✓	8	CODO 8 X 90° R.C. CED-XS	326	482	42	91					
6	T36431 ✓	2	CODO 8 X 90° R.C. CED-XS	299	453	41	94					

**PLESA ANAHUAC Y CIA. S.A. DE C.V.**  
**CONTROL DE CALIDAD**

FECHA: 15/Dic/2009  
CE000046  
ERMA: Enrique Ruiz

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	T28070	28070	0.310	0.170	0.670	0.009	0.003	0.300	0.060	0.084	0.042	0.040	0.000	0.000
HF	T42101	42101	0.290	0.160	0.680	0.008	0.001	0.280	0.050	0.045	0.015	0.030	0.000	0.000
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
HF	T43133	43133	0.310	0.180	0.660	0.011	0.002	0.270	0.060	0.052	0.015	0.030	0.000	0.000
HF	T34180	34180	0.330	0.180	0.750	0.008	0.001	0.270	0.050	0.070	0.025	0.030	0.000	0.000
HF	T36431	36431	0.310	0.170	0.690	0.009	0.001	0.270	0.050	0.063	0.022	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°: 6026645 8057758 460632 9015689 7036255 7049559

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°: 6026645 8057758 460632 9015689 7036255 7049559

"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".

<p>Notas:</p> <p>Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max.</p> <p>Tiempo de permanencia 10'.</p> <p>Inspección Dimensional: Satisfactoria.</p> <p>HF: FORMADO EN CALIENTE/HOT FORMED</p>	<p>Notes:</p> <p>Hot formed fittings in a range from 620°C to 980°C, cooled in still air.</p> <p>Cold formed normalized at 940°C max.</p> <p>Holding time 10'.</p> <p>Visual dimensional check: Satisfactory</p> <p>CF: FORMADO EN FRIO/COLD FORMED</p>	<p>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.</p> <p>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.</p>
<p>Quality Manager/Jefe de Calidad: ING. WALDO GALLEGOS GALVAN</p>		<p>CC-008</p>