

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

Número:  
Number: 23057

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Tubos de Acero de México.  
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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: 7314 - 7315	Lista de Empaque: Packing List: 11758	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
12	S33737	20	CODO 6 X 90° R.L. CED-XS	280	466	37	135					
13	S32307	68	CODO 2 1/2 X 90° R.L. CED-STD	314	486	31	122					
14	T43299	16	CODO 8 X 45° CED-STD	326	480	34	109					
15	T42773	4	CODO 8 X 45° CED-STD	365	494	34	106					
16	T42773	60	CODO 8 X 90° R.L. CED-STD	365	494	34	106					
17	S31762	46	CODO 4 X 90° R.L. CED-XS	254	452	33	111					
18	S31050	120	CODO 1 1/2 X 90° R.L. CED-STD	367	534	32	130					
19	T34322	1	RED. CONC. 10 X 6 CED-STD	307	475	34	99					
20	T41272	3	RED. CONC. 10 X 6 CED-STD	338	509	42	110					
21	T41975	1	RED. CONC. 10 X 6 CED-STD	347	501	30	102					
22	T39854	9	RED. CONC. 10 X 6 CED-STD	290	470	43	101					

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	S33737	33737	0.340	0.200	0.750	0.009	0.001	0.270	0.040	0.034	0.010	0.017	0.001	0.002
HF	S32307	32307	0.350	0.190	0.710	0.012	0.002	0.260	0.050	0.039	0.010	0.028	0.001	0.001
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	T42773	42773	0.310	0.180	0.670	0.016	0.001	0.260	0.048	0.071	0.023	0.030	0.000	0.000
HF	T42773	42773	0.310	0.180	0.670	0.016	0.001	0.260	0.048	0.071	0.023	0.030	0.000	0.000
HF	S31762	31762	0.320	0.180	0.740	0.012	0.001	0.290	0.050	0.023	0.010	0.021	0.001	0.000
HF	S31050	31050	0.330	0.190	0.760	0.007	0.002	0.270	0.030	0.023	0.010	0.013	0.001	0.000
CF	T34322	34322	0.290	0.160	0.650	0.008	0.002	0.290	0.050	0.059	0.028	0.040	0.000	0.000
CF	T41272	41272	0.340	0.190	0.820	0.017	0.002	0.310	0.050	0.040	0.010	0.030	0.000	0.000
CF	T41975	41975	0.300	0.170	0.680	0.008	0.002	0.270	0.050	0.069	0.019	0.030	0.000	0.000
CF	T39854	39854	0.320	0.190	0.690	0.011	0.001	0.290	0.040	0.052	0.006	0.020	0.000	0.000

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 (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) certis conform to ASTM A106 Grade B N°  
479806 468319 9052913 9002651 9002651 470425 479680  
7026676 8054914 8070097 8069915  
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>Notes:</p> <p>Formado en caliente a 620°C-580°C, enfriado al air. Formado en frío normalizado a 940°C max. Tiempo de permanencia 10'. Inspección Dimensional: Satisfactoria. HF: FORMADO EN CALIENTE/HOT FORMED</p>	<p>Notes:</p> <p>Hot formed fittings in a range from 620°C to 580°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</p>	<p><i>Waldo Gallegos</i></p> <p>Quality Manager/Jefe de Calidad: ING. WALDO GALLEGOS GALVAN</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. 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>
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