



Tubos 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

<b>CERTIFICADO DE CALIDAD</b> <b>INSPECTION CERTIFICATE</b> (DIN EN 10204:2004E - ISO 10474 3.1.B)		Número: Number:	Página/Page:
		23439	1 DE 1

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	7907 - 8141	Lista de Empaque: Packing List:	11967	Fecha/Date:	17 de Mayo de 2010
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	S33021	17	CODO 4 X 90° R.L. CED-STD	325	501	35	142					
2	S32859	4	CODO 4 X 90° R.L. CED-STD	319	501	32	137					
3	S33021	42	CODO 3 X 45° CED-STD	317	483	31	135					
4	S31625	8	CODO 3 X 45° CED-STD	331	510	32	124					
5	S29142	120	CODO 2 X 90° R.L. CED-XS	317	491	31	120					
6	S33368	117	CODO 2 X 90° R.L. CED-STD	335	500	30	128					
7	S32706	183	CODO 2 X 90° R.L. CED-STD	341	507	30	118					
8	T41975	6	CODO 14 X 90° R.L. CED-XS	311	473	42	100					
9	T42699	2	CODO 14 X 90° R.L. CED-XS	328	517	35	97					
10	S46693	24	CODO 2 1/2 X 45° CED-STD	337	486	32	133					
11	S31050	200	CODO 1 1/2 X 90° R.L. CED-STD.	367	534	32	130					

**PLEASA ANAHUAC Y CIAS. S.A. DE C.V.**  
**CONTROL DE CALIDAD**  
 FECHA: 13 May 2010  
 FIRMA: E. 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	S33021	33021	0.320	0.180	0.740	0.013	0.001	0.300	0.030	0.045	0.010	0.025	0.001	0.000
HF	S32859	32859	0.340	0.190	0.770	0.011	0.002	0.280	0.040	0.065	0.010	0.035	0.001	0.000
HF	S33021	33021	0.310	0.180	0.720	0.014	0.001	0.290	0.030	0.044	0.010	0.024	0.001	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	S29142	29142	0.340	0.190	0.770	0.010	0.001	0.280	0.040	0.034	0.030	0.034	0.001	0.002
HF	S33368	33368	0.350	0.200	0.800	0.011	0.002	0.270	0.030	0.039	0.010	0.022	0.001	0.002
HF	S32706	32706	0.320	0.180	0.790	0.013	0.001	0.290	0.030	0.046	0.010	0.027	0.001	0.001
HF	T41975	41975	0.000	0.180	0.680	0.008	0.001	0.270	0.050	0.068	0.019	0.030	0.000	0.000
HF	T42699	42699	0.340	0.180	0.830	0.018	0.002	0.320	0.040	0.067	0.024	0.030	0.000	0.000
HF	S46693	46693	0.320	0.180	0.720	0.013	0.001	0.270	0.050	0.038	0.010	0.025	0.001	0.001
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

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°: 473674 473674 473305 460632 458095 479030 479006 9024563 8068634 329515 479680  
 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°:  
 "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. <b>HF: FORMADO EN CALIENTE/HOT FORMED</b>	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 <b>CF: FORMADO EN FRIO/COLD FORMED</b>	Quality Manager/Jefe de Calidad: <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.

CC-008