

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

Numero:  
Number:  
22147

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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

Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	5749 - 5813 - 5743 -	Lista de Empaque: Packing List:	11271	Fecha/Date:	10 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
1	T42339 ✓	12	CODO 14 X 90° R.I. CED-STD	318	480	41	120					
2	T42339	20	TEE 8 CED-STD	307	482	36	102					
3	T41224	20	RED. CONC. 6 X 5 CED-STD	317	487	36	112					
4	T22635	20	CODO 5 X 90° R.I. CED-XS	311	455	46	103					
5	T34258	6	RED. CONC. 5 X 3 CED-STD	329	498	40	120					
6	T37717	4	RED. CONC. 5 X 3 CED-STD	361	536	38	96					
7	S38130	21	CODO 1 1/2 X 90° R.C. CED-STD	347	489	39	118					

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	T42339	42339	0.300	0.170	0.670	0.010	0.002	0.280	0.050	0.071	0.009	0.030	0.000	0.000
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
CF	T41224	41224	0.310	0.180	0.670	0.014	0.002	0.280	0.050	0.056	0.017	0.030	0.000	0.000
HF	T22635	22635	0.310	0.170	0.680	0.008	0.000	0.270	0.050	0.070	0.044	0.030	0.000	0.000
CF	T34258	34258	0.310	0.170	0.680	0.009	0.001	0.280	0.070	0.072	0.043	0.040	0.000	0.000
CF	T37717	37717	0.340	0.180	0.840	0.010	0.002	0.270	0.050	0.062	0.021	0.030	0.000	0.000
HF	S38130	38130	0.313	0.180	0.710	0.009	0.001	0.280	0.030	0.043	0.020	0.022	0.001	0.001

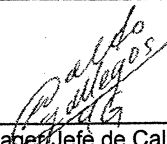
Certificamos que los resultados de los Analisis Quimicos y Pruebas Mecanicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tuberia Sin Costura) conforme ASTM A106 Grado B con N°: 8068641 9002220 8048841 5013270 7036259 8009187 258860

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°: 8068641 9002220 8048841 5013270 7036259 8009187 258860

"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 frio 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

  
**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.

CC-008