



CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE

(DIN EN 10204:2004E - ISO 10474.3.1.B)

Tubos de Acero de Mexico, S.A.
Carr. Mty-Laredo Km 24.2
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Vendido a:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No:	5022-4848	Lista de Empaque:	1 0792	Fecha/Date:	4 de Septiembre de 2008
Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Customers Order No:		Packing List:			
Especificaciones y Grados / Standard or Specification and Steel Grade	ASME B 16.9 - 2003 and ASME B 16.28 - 1994	Dimensiones y tolerancias / Dimension and tolerances		Factural/invoice:	Bocas / Ends	Biselado / Bevelled ends	
Seamless Fittings according to ASTM A 234 "W" WPB-97, A234 "W" WPB-08a, NACE MR 01.75-2003							
Conform to ASME II Ed. 2001 ASME SA-234 "W" Grade WPB, NACE MR0103-2003							

ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C					
				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	T40183	7	CODO 8 X 45° CED-STD	339	483	33	122						
13	T40746	10	CODO 8 X 45° CED-STD	298	440	38	105						
14	T40103	7	CODO 8 X 45° CED-STD	322	455	38	110						
15	T40746	10	CODO 8 X 90° R.I. CED-STD	298	440	38	105						
16	T37883	1	CODO 16 X 90° R.I. CED-STD	289	486	37	101						
17	T40846	2	CODO 16 X 90° R.I. CED-STD	362	525	40	126						
18	T38242	5	CODO 16 X 90° R.I. CED-STD	339	495	33	90						
19	T39736	7	TEE 10 CED-STD	311	476	45	118						
20	T38336	1	TEE 10 CED-STD	240	461	37	98						
21	T22147	20	CODO 10 X 90° R.I. CED-80	321	506	46	126						
22	T39645	4	CODO 10 X 90° R.I. CED-80	305	489	44	114						

ANALISIS QUIMICO / CHEMICAL ANALYSIS

PROCESO	COLADA HEAT CODE	COLADA/HEAT M.P.MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%SI	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T40183	40183	0.290	0.160	0.670	0.011	0.001	0.260	0.070	0.064	0.009	0.030	0.000	0.000
HF	T40746	40746	0.300	0.170	0.690	0.009	0.003	0.270	0.030	0.039	0.004	0.020	0.000	0.000
HF	T40103	40103	0.300	0.170	0.670	0.011	0.002	0.260	0.050	0.071	0.010	0.030	0.000	0.000
HF	T40746	40746	0.300	0.170	0.690	0.009	0.003	0.270	0.030	0.039	0.004	0.020	0.000	0.000
HF	T37883	37883	0.330	0.180	0.780	0.011	0.003	0.280	0.040	0.057	0.013	0.030	0.000	0.000
HF	T40846	40846	0.320	0.190	0.700	0.010	0.004	0.290	0.040	0.049	0.013	0.020	0.000	0.000
HF	T38242	38242	0.290	0.170	0.650	0.014	0.001	0.260	0.040	0.056	0.014	0.030	0.000	0.000
HF	T39736	39736	0.290	0.160	0.680	0.008	0.001	0.260	0.040	0.049	0.010	0.020	0.000	0.000
HF	T38336	38336	0.290	0.160	0.650	0.008	0.001	0.250	0.050	0.067	0.012	0.030	0.000	0.000
HF	T22147	22147	0.340	0.180	0.810	0.013	0.001	0.260	0.070	0.059	0.012	0.030	0.000	0.000
HF	T39645	39645	0.310	0.180	0.680	0.010	0.002	0.280	0.050	0.050	0.008	0.030	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) certs conform to ASTM A106 Grade B N°
803393 8044524 8033206 8044524 8003924 8045270
8023114 8037958 8023202 8041578 8043860

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.

Notes:
Formado en caliente a 620°C-980°C, enfriado al aire.
Hot formed fittings in a range from 620°C to 980°C, cooled in still air.
Formado en frio normalizado a 940°C max.
Cold formed normalized at 940°C max.
Tiempo de permanencia 10".
Holding time 10".
Inspeccion Dimensional Satisfactoria.
Visual dimensional check. Satisfactory.
HF FORMADO EN CALIENTE/HOT FORMED
CF FORMADO EN FRIO/COLD FORMED

Quality Management de Calidad:
ING. WALDO GALLEGOS GALVAN

CC-008