



Tubos de Acero de México, S.A.
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CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)	Número: Number:	Página/Page:
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Vendido a: Sold to:	PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	7468 - 7469 - 7488 - 7413 -	Lista de Empaque: Packing List:	11793	Fecha/Date:	6 de Enero 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
12	R71005	85	CODO 1 X 90° R.I. CED-STD	329	462	46	110					
13	S38031	20	CODO 5 X 90° R.I. CED-XS	334	492	35	112					
14	S31050	50	CODO 1 1/2 X 45° CED-STD	367	534	32	130					
15	T27384	3	TEE 10 CED-80	316	504	50	100					
16	T43496	1	TEE 10 CED-80	307	488	35	98					
17	T41415	10	RED. CONC. 12 X 6 CED-STD	318	495	33	124					
18	S38031	10	CODO 5 X 45° CED-XS	334	492	35	112					

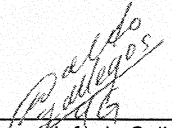
ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	R71005	71005	0.310	0.170	0.720	0.009	0.002	0.210	0.050	0.018	0.018	0.080	0.001	0.001
HF	S38031	38031	0.322	0.190	0.730	0.011	0.001	0.280	0.020	0.037	0.010	0.018	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
HF	T27384	27384	0.290	0.160	0.660	0.008	0.002	0.270	0.050	0.067	0.028	0.030	0.000	0.000
HF	T43496	43496	0.320	0.190	0.680	0.014	0.002	0.290	0.050	0.067	0.023	0.030	0.000	0.000
CF	T41415	41415	0.320	0.190	0.740	0.009	0.002	0.300	0.020	0.047	0.010	0.020	0.000	0.000
HF	S38031	38031	0.322	0.190	0.730	0.011	0.001	0.280	0.020	0.037	0.010	0.018	0.001	0.001

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°: 2270324 257247 479680 6005433 9015605 8068973 257247

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°: 2270324 257247 479680 6005433 9015605 8068973 257247

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