



Tubbs de Acero de México, S.
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**CERTIFICADO DE CALIDAD
INSPECTION CERTIFICATE**
(DIN EN 10204:2004E - ISO 10474 3.1.B)

Numero:
Number: 29113
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Vendido a: Sold to: PLESA ANAHUAC Y CIA. S.A. DE C.V.	Pedido del Cliente No: Customers Order No: 18670 - 19265 - 19204 - 19354 -	Lista de Empaque: Packing List: 15161	Fecha/Date: 31 de octubre de
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-13e Conform to ASME II Ed. 2013 ASME SA-234,Grade WPB	Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2012		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	PROMEDI AVERA: Joules
1	T71197	2	TEE 6 CED-XS	330	512	39	149					
2	T65064	5	CODO 12 X 90° R.L. CED-40	288	472	69	136					
3	T72971	8	CODO 10 X 90° R.L. CED-80	342	484	35	142					
4	S25806	11	CODO 1 1/4 X 45° CED-STD	397	537	44	133					
5	S44801	49	CODO 1 1/4 X 45° CED-STD	381	516	48	116					
6	S44801	35	CODO 1 1/2 X 45° CED-STD	381	516	48	116					
7	T6971	4	CODO 5 X 45° CED-XS	288	479	42	120					
8	T70959	6	TEE 5 CED-STD	380	526	30	149					
9	T69560	5	RED. CONC. 8 X 5 CED-STD	323	483	37	148					
10	T72870	2	RED. CONC. 12 X 6 CED-80	276	460	31	139					

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	T71197	71197	0.350	0.190	0.800	0.007	0.002	0.290	0.060	0.073	0.023	0.040	0.000	0.000
HF	T65064	65064	0.310	0.180	0.660	0.013	0.002	0.300	0.060	0.068	0.023	0.040	0.000	0.000
HF	T72971	72971	0.300	0.170	0.670	0.007	0.001	0.300	0.040	0.079	0.018	0.040	0.000	0.000
HF	S25806	25806	0.340	0.190	0.730	0.014	0.001	0.300	0.050	0.070	0.040	0.033	0.003	0.002
HF	S44801	44801	0.310	0.160	0.830	0.012	0.001	0.280	0.040	0.050	0.010	0.035	0.001	0.002
HF	S44801	44801	0.310	0.160	0.830	0.012	0.001	0.280	0.040	0.050	0.010	0.035	0.001	0.002
HF	T6971	6971	0.310	0.180	0.700	0.005	0.002	0.300	0.020	0.041	0.010	0.020	0.000	0.000
HF	T70959	70959	0.320	0.170	0.760	0.007	0.001	0.270	0.040	0.075	0.017	0.040	0.000	0.000
CF	T69560	69560	0.310	0.180	0.690	0.007	0.001	0.270	0.050	0.060	0.016	0.040	0.000	0.000
CF	T72870	72870	0.310	0.180	0.670	0.006	0.002	0.280	0.040	0.062	0.016	0.040	0.000	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°:
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°:
14021655 13034074 14043098 13008551 13025325 1302514044789 14025121 14007244 14041844
"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.
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 FRIJO/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.
MATERIAL ACCORDING TO NACE MR0175 / ISO 15156-1, 2009 AND NACE MR0103, 2012 ONLY HARDNESS

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