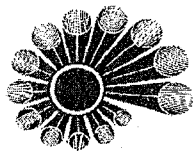


FLM-005-7



PROCARSA, S.A. DE C.V.

**CERTIFICADO DE CALIDAD  
DE PRUEBAS MECANICAS Y ANALISIS QUIMICO**

QUALITY CERTIFICATE OF MECHANICAL TESTS AND CHEMICAL ANALYSES

CLIENTE: PLESA ANAHUAC Y CIAS. S.A. DE C.V.

CUSTOMER: S.A. DE C.V.

PEDIDO CLIENTE / P.O.

PEDIDO INTERNO / I.O. 5950

PARTIDA (S)

ITEMS 511351-10,20,30,40,50

NUMERO

PTM-1584-2012

NUMBER

FECHA

DATE

MARZO 07, 2012

DIAMETRO EXTERIOR :

OUTSIDE DIAMETER : 10 3/4"

ESPEJOR DE PARED :

WALL THICKNESS : 0.250"

GRADO :

GRADE : ASTM A53-B

PRESION HIDROSTATICA:

HIDROSTATIC TEST: 69 Kg/cm<sup>2</sup> 980 PSI

## REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS

## REQUERIMIENTOS DE ANALISIS QUIMICO % EN PESO / CHEMICAL ANALYSES BY PERCENTAGE OF WEIGHT REQUIREMENTS

LIMITE ELASTICO / YIELD STRENGTH	ULTIMA TENSION / TENSILE STRENGTH	% ELONG.	L.E./U.T.	C	Mn	P	S	Cb	Cb+V	Cb+V+Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	CE
35000 PSI MIN.	60000 PSI MIN.	26 min.	---	0.300 max	1.200 max	0.050 max	0.045 max	---	---	---	---	0.500 max	---	---	0.400 max	0.400 max	0.150 max	---	---	---

NUM.PROBETA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (P.S.I.)	ULTIMA TENSION TENSILE STRENGTH (P.S.I.)	% ELONG. 2"	L.E./U.T. Y.S/T.S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	CE
72-28 Tc Ts	220908	55 295	65 418 70 884	40	0.84	0.114	0.78	0.016	0.006	0.001	0.002	0.003	0.193	0.039	0.038	0.003	0.031	0.026	0.009	0.0046		
31-10 Tc Ts	220906	50 357	64 043 68 168	44	0.78	0.112	0.80	0.018	0.005	0.001	0.002	0.004	0.205	0.036	0.032	0.002	0.021	0.017	0.004	0.0050		
176-8Tc Ts	220904	53 865	65 023 69 156	40	0.82	0.104	0.77	0.018	0.008	0.001	0.004	0.003	0.213	0.032	0.024	0.003	0.020	0.016	0.008	0.0057		
16-22 Tc Ts	120936	48 605	63 158 71 948	40	0.76	0.116	0.80	0.011	0.007	0.001	0.002	0.004	0.209	0.018	0.037	0.003	0.017	0.017	0.005	0.0059		
75-25 Tc Ts	121141	55 064	64 740 71 956	40	0.85	0.111	0.79	0.015	0.005	0.001	0.002	0.003	0.182	0.041	0.031	0.003	0.020	0.022	0.012	0.0046		
96-1 Tc Ts	121140	50 855	64 918 71 789	40	0.78	0.115	0.80	0.018	0.003	0.001	0.002	0.004	0.198	0.016	0.029	0.003	0.016	0.016	0.006	0.0045		
85-14 Tc Ts	121139	53 189	63 696 70 933	45	0.83	0.113	0.79	0.016	0.003	0.001	0.002	0.004	0.215	0.014	0.032	0.003	0.019	0.016	0.005	0.0048		
76-3Tc Ts	220907	53 805	66 057 75 443	42	0.81	0.114	0.83	0.016	0.004	0.002	0.002	0.004	0.217	0.026	0.025	0.003	0.019	0.017	0.006	0.0052		
172-8 Tc Ts	220955	56 060	66 241 73 065	38	0.84	0.128	0.77	0.010	0.006	0.002	0.001	0.003	0.206	0.025	0.031	0.004	0.015	0.017	0.009	0.0056		
21-10Tc Ts	120934	52 533	63 816 68 522	45	0.82	0.102	0.82	0.014	0.006	0.002	0.001	0.004	0.203	0.029	0.023	0.002	0.025	0.019	0.005	0.0059		
51-3 Tc Ts	121136	55 412	65 416 69 499	43	0.84	0.114	0.78	0.017	0.004	0.001	0.001	0.005	0.218	0.026	0.033	0.003	0.023	0.018	0.005	0.0048		
135-23Tc Ts	220960	53 390	64 262 68 777	42	0.83	0.116	0.81	0.018	0.005	0.001	0.004	0.004	0.206	0.021	0.036	0.003	0.018	0.015	0.006	0.0046		
55-3 Tc Ts	220957	53 923	64 511 72 813	42	0.83	0.125	0.81	0.015	0.004	0.001	0.003	0.004	0.217	0.021	0.028	0.003	0.019	0.015	0.006	0.0045		

CERTIFICAMOS QUE LA TUBERIA AQUÍ DESCRITA CUMPLE Y HA SIDO FABRICADA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO CON LOS REQUISITOS APLICABLES DE LA ESPECIFICACION:

ASTM -10

WE CERTIFY THAT THE ABOVE DESCRIBED PIPE HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATION, AND MEETS THE APPLICABLE REQUIREMENTS THEREIN

ING. ALEJANDRO ALCARÓN CAZARES  
JEFE DE LABORATORIO METALURGICO  
METALLURGICAL LABORATORY CHIEF