



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: CUSTOMER:	PLESA ANAHUAC Y CIAS. S.A. DE C.V.	NUMERO NUMBER	PTM-02212-1-20
PEDIDO CLIENTE / P.O. PEDIDO INTERNO / I.O.	15113	FECHA DATE	JUNIO 23, 2012
PARTIDA (S) ITEMS	114068-50 / 128561-10		

DIAMETRO EXTERIOR : OUTSIDE DIAMETER :	16"	ESPEJOR DE PARED : WALL THICKNESS :	0.375"	GRADO : GRADE :	ASTM A53-B	PRESION HIDROSTATICA: HIDROSTATIC TEST:	69 Kg/cm <sup>2</sup> 980 PSI
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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	C	
35000 PSI MIN.	60000 PSI MIN.	28 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"	LE/U.T. Y.S/T.S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	C
21-14 Tc Ts	107044	53 638	65 659 70 075	35	0.81	0.131	0.80	0.018	0.006	0.002	0.0040	0.004	0.290	0.010	0.041	0.002	0.020	0.020	0.005	0.0058		
1-15 Tc Ts	219842	56 168	69 703 71 629	38	0.80	0.110	0.79	0.016	0.005	0.001	0.0020	0.005	0.245	0.028	0.035	0.002	0.021	0.020	0.005	0.0057		
8-15 Tc Ts	222097	55 861	69 450 71 782	41	0.80	0.114	0.80	0.010	0.005	0.001	0.0010	0.003	0.206	0.026	0.040	0.003	0.017	0.018	0.004	0.0056		
19-8 Tc Ts	222101	50 403	64 868 68 915	35	0.77	0.103	0.80	0.014	0.004	0.003	0.0020	0.003	0.202	0.029	0.039	0.003	0.017	0.020	0.004	0.0062		
20-11 Tc Ts	222103	53 555	65 189 68 442	40	0.82	0.110	0.79	0.018	0.005	0.001	0.0020	0.003	0.220	0.028	0.037	0.002	0.020	0.019	0.004	0.0049		
4-14 Tc Ts	222314	54 467	67 496 74 229	40	0.80	0.118	0.78	0.014	0.005	0.002	0.0020	0.003	0.212	0.029	0.037	0.004	0.014	0.015	0.005	0.0054		

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 ALARCÓN CAZARES  
JEFE DE LABORATORIO METALURGICO  
METALLURGICAL LABORATORY CHIEF