



PLM-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:
 PEDIDO CLIENTE / P.O. 16304
 PEDIDO INTERNO / I.O.
 PARTIDA (S)
 152903-10 / T-01-12 / T-12-12 / T-21-12

NUMERO PTM-05896-2017
 FECHA
 DATE
 ABRIL 12, 2017

DIAMETRO EXTERIOR : 12 3/4" ESPESOR DE PARED : 0.250" GRADO : ASTM A53-B
 OUTSIDE DIAMETER : WALL THICKNESS : GRADE :
 REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS : 820 PSI HOJA 1 DE 2
 LIMITE ELASTICO / YIELD STRENGTH : 60000 PSI MIN. % ELONG. : 26 min. LE/UT. : 0.300 max
 35000 PSI MIN. M_n : 1,200 max P : 0.050 max S : 0.045 max Cb : ... Cb+V : ... Cb+V+Ti : ... Si : ... Cu : 0.500 max Al : ... Ca : ... Cr : 0.400 max Ni : 0.400 max Mo : 0.150 max N : ... CE IIW : ... CE Pcm : ...

NUM. PROBEA / DESCRIPTION	COLADA / HEAT	LIMITE ELASTICO / YIELD STRENGTH (R.S.L)	ULTIMA TENSION / TENSILE STRENGTH (R.S.L)	% ELONG. 2"	LE/UT. Y.S.T.S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	CE Pcm
21-28 Tc	136553	67 262	74 603	37	0.90	0.068	1.15	0.015	0.003	0.018	0.0030	0.007	0.200	0.032	0.037	0.002	0.027	0.026	0.008	0.0053		
11-15 Tc	136565	67 792	75 280	31	0.90	0.061	1.13	0.016	0.004	0.018	0.0030	0.007	0.211	0.032	0.036	0.002	0.020	0.024	0.007	0.0059		
8-3 Tc	136566	58 867	73 649	35	0.79	0.057	1.15	0.018	0.003	0.018	0.0050	0.008	0.203	0.016	0.033	0.003	0.018	0.028	0.007	0.0057		
2-19 Tc	136567	61 611	75 142	36	0.83	0.060	1.16	0.016	0.005	0.019	0.0030	0.010	0.221	0.017	0.040	0.003	0.020	0.028	0.007	0.0055		
4-7-8 Tc	143638	63 212	73 378	35	0.82	0.077	1.14	0.015	0.006	0.018	0.0030	0.010	0.208	0.018	0.045	0.004	0.017	0.016	0.005	0.0051		
29-28 Tc	143639	65 777	76 281	33	0.87	0.071	1.14	0.018	0.003	0.019	0.0040	0.009	0.201	0.016	0.042	0.003	0.017	0.016	0.004	0.0050		
23-2 Tc	143640	69 376	74 985	35	0.89	0.073	1.13	0.013	0.006	0.018	0.0030	0.008	0.201	0.017	0.040	0.003	0.016	0.020	0.005	0.0055		
34-25 Tc	143642	65 636	77 287	34	0.87	0.079	1.16	0.012	0.003	0.018	0.0020	0.010	0.228	0.017	0.041	0.003	0.017	0.017	0.004	0.0054		
33-7 Tc	143644	68 972	74 304	32	0.91	0.066	1.14	0.013	0.003	0.019	0.0030	0.010	0.204	0.025	0.038	0.003	0.017	0.033	0.007	0.0051		
4-22 Tc	236553	59 026	75 546	33	0.79	0.070	1.14	0.018	0.003	0.018	0.0040	0.007	0.216	0.026	0.042	0.003	0.014	0.033	0.008	0.0056		
14-26 Tc	236555	64 164	76 793	33	0.88	0.063	1.15	0.017	0.008	0.018	0.0030	0.008	0.216	0.025	0.045	0.003	0.016	0.020	0.006	0.0057		
48-18 Tc	243415	66 144	74 436	34	0.86	0.084	1.14	0.018	0.003	0.018	0.0040	0.007	0.217	0.019	0.037	0.002	0.018	0.017	0.004	0.0049		
2-26 Tc	1220825012	60 753	72 763	42	0.84	0.090	0.96	0.011	0.002	0.020	0.0020	0.001	0.090	0.029	0.028	0.002	0.012	0.030	0.002	0.0040		

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

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

ASTM A53

ING. LUIS ALFONSO DE LOS SANTOS RIVERA
 SUPERVISOR DE LABORATORIO METALURGICO
 METALLURGICAL LABORATORY SUPERVISOR

