



LM-005-7  
**PROCARSA, S.A. DE C.V.**

**CERTIFICADO DE CALIDAD  
 DE PRUEBA FISICAS-QUIMICAS**

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CUSTOMER:	TUCOTA	NUMERO	PTM-53084-2002
PEDIDO CLIENTE / P.O.	9437	FECHA	SEPTIEMBRE 17, 2002
PARTIDA(S) PEDIDO INTERNO / I/O.	29180-20 / 28565-50 / 29887-10	DATE	
ITEMS			

DIAMETRO: 16"      ESPESOR DE PARED: 0.375"      GRADO:      ASTM A53-B      69 Kg/cm<sup>2</sup>      980 PSI      HOJA 1 DE 2  
 TIPO DE PRUEBA: TENSILE TEST      WALL THICKNESS      GRADE:      ANALISIS QUIMICO % EN PESO      HIDROSTATIC TEST:      CHEMICAL ANALYSES PERCENT WEIGHT

NUM. PROBE DESCRIPCION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (PSI)	ULTIMA TENSION TENSILE STRENGTH (PSI)	% ELONG. ELONG.	LEBUT V. S. T.S.	C	Ma	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
157-5 Tc Ts	117401	64 005	73 921 80 201	35	0.87	0.120	1.13	0.018	0.006	0.022	0.004	-	0.110	0.017	0.035	0.0022	0.017	0.029	0.010	0.0057	
77-5 Tc Ts	117403	59 108	70 930 75 946	40	0.83	0.104	1.20	0.016	0.004	0.022	0.004	-	0.143	0.020	0.045	0.0026	0.019	0.021	0.005	0.0055	
176-12 Tc Ts	117404	64 153	75 097 84 408	36	0.85	0.103	1.20	0.016	0.006	0.024	0.003	-	0.163	0.018	0.043	0.0031	0.014	0.024	0.005	0.0067	
118-7 Tc Ts	117410	63 858	71 371 75 257	35	0.89	0.098	1.11	0.014	0.007	0.020	0.003	-	0.161	0.014	0.037	0.0028	0.018	0.030	0.014	0.0070	
23-12 Tc Ts	117480	69 006	80 186 89 388	32	0.86	0.142	1.14	0.016	0.006	0.037	0.004	-	0.186	0.015	0.032	0.0029	0.014	0.020	0.004	0.0064	
39-15 Tc Ts	117657	62 790	71 759 79 936	35	0.88	0.082	1.18	0.015	0.007	0.022	0.004	-	0.135	0.015	0.044	0.0033	0.022	0.022	0.018	0.0058	
47-8 Tc Ts	117658	65 024	73 152 78 603	38	0.89	0.088	1.20	0.014	0.007	0.020	0.004	-	0.144	0.015	0.040	0.0028	0.022	0.025	0.017	0.0055	
3-4 Tc Ts	117659	66 516	73 347 79 350	36	0.91	0.077	1.12	0.017	0.009	0.022	0.004	-	0.137	0.021	0.032	0.0030	0.027	0.028	0.017	0.0057	
67-9 Tc Ts	117662	68 452	80 145 84 231	35	0.85	0.133	1.11	0.012	0.008	0.033	0.004	-	0.189	0.016	0.038	0.0035	0.020	0.023	0.017	0.0058	
205-14 Tc Ts	117841	66 780	77 910 83 584	35	0.86	0.076	1.19	0.014	0.008	0.021	0.003	-	0.121	0.014	0.030	0.0030	0.016	0.022	0.018	0.0054	
179-7 Tc Ts	117842	62 941	71 038 74 817	37	0.88	0.089	1.11	0.014	0.008	0.020	0.004	-	0.115	0.013	0.029	0.0031	0.017	0.022	0.018	0.0052	
148-14 Tc Ts	117843	65 053	73 727 75 205	36	0.88	0.094	1.12	0.018	0.009	0.021	0.004	-	0.141	0.017	0.023	0.0037	0.026	0.029	0.018	0.0051	
136-11 Tc Ts	117844	62 305	71 467 76 984	36	0.87	0.082	1.20	0.018	0.009	0.020	0.003	-	0.114	0.015	0.023	0.0034	0.024	0.028	0.017	0.0042	
160-14 Tc Ts	117845	67 610	73 920 77 743	38	0.91	0.085	1.11	0.018	0.008	0.018	0.005	-	0.107	0.013	0.020	0.0036	0.021	0.024	0.015	0.0049	
16-6 Tc Ts	216954	62 561	71 628 78 324	37	0.87	0.099	1.14	0.014	0.007	0.021	0.003	-	0.134	0.011	0.036	0.0025	0.008	0.021	0.003	0.0072	

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

WE CERTIFY THE PIPE ABOVE MENTIONED ACCOMPLISH AND HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SPECIFICATIONS:

ASTM

ING. FERNANDO OSORIO BEREZ  
 GERENTE DE ASEGURAMIENTO DE CALIDAD  
 QUALITY ASSURANCE MANAGER