



FLM-005-7

PROCARSA, S.A. DE C.V.

CERTIFICADO DE CALIDAD DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE:	TUCOTA	NUMERO:	PTM-50091-2001
CUSTOMER:		NUMBER:	
PEDIDO CLIENTE/NO.	8043	FECHA:	NOVIEMBRE 27, 2001
PARTIDA(S)		DATE:	
ITEMS	21677-30 / XY820-1 / XB305-1 / XB888-5		

DIAMETRO: 20" ESPESOR DE PARED: 0.250" GRADO: ASTM A53-B PRESION HIDROSTATICA: 37 Kg/cm² 520 PSI

WALL THICKNESS GRADE: ASTM A53-B PRESSURE HYDROSTATIC TEST: 520 PSI

TENSILE TEST

CHEMICAL ANALYSES PERCENT WEIGHT

NO. PROBE TA DESCRIPTION	COIL/BA HEAT	LIMITE ELASTICO YIELD STRENGTH (PSI)	ULTIMA TENSION TENSILE STRENGTH (PSI)	% ELONG. T	LEMIT V/S/T'S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
13-3 Tc	112066	62 497	76 899	36	0.81	0.087	1.16	0.015	0.007	-	-	-	0.218	0.022	0.051	0.0032	0.033	0.032	0.021	0.0074	
22-11 Tc	194488	51 563	77 143	34	0.73	0.150	0.94	0.025	0.010	-	-	-	0.203	0.016	0.033	0.0014	0.019	0.027	0.012	0.0066	
36-2 Tc	190540	57 241	74 805	36	0.94	0.145	0.91	0.017	0.012	-	-	-	0.184	0.021	0.037	0.0031	0.021	0.024	0.012	0.0061	
45-58 Tc	190542	57 308	71 990	38	0.96	0.152	0.93	0.015	0.007	-	-	-	0.195	0.019	0.048	0.0037	0.016	0.028	0.015	0.0058	
46-9 Tc	284756	43 884	72 080	40	0.70	0.125	0.90	0.021	0.008	-	-	-	0.153	0.038	0.036	0.0050	0.016	0.025	0.012	0.004	
2-9 Tc	296140	56 841	63 034	37	0.85	0.140	0.89	0.016	0.009	-	-	-	0.170	0.009	0.039	0.0030	0.018	0.027	0.011	0.0050	
3-9 Tc	296142	57 493	72 535	38	0.85	0.140	0.89	0.016	0.009	-	-	-	0.170	0.009	0.039	0.0030	0.018	0.027	0.011	0.0050	
17-9 Tc	296147	56 614	72 394	36	0.82	0.160	0.95	0.012	0.007	-	-	-	0.200	0.008	0.036	0.0020	0.014	0.029	0.011	0.0050	
15-8 Tc	298088	53 148	67 387	38	0.76	0.146	0.95	0.020	0.008	-	-	-	0.197	0.008	0.036	0.0024	0.018	0.026	0.014	0.0055	
15-8 Tc	298088	53 148	70 155	38	0.76	0.146	0.95	0.020	0.008	-	-	-	0.197	0.008	0.036	0.0024	0.018	0.026	0.014	0.0055	
15-8 Tc	298088	53 148	74 934	38	0.76	0.146	0.95	0.020	0.008	-	-	-	0.197	0.008	0.036	0.0024	0.018	0.026	0.014	0.0055	

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

[Signature]
ING. FERRANDO OSORIO PEREZ
GERENTE DE ASEGURAMIENTO DE CALIDAD
QUALITY ASSURANCE MANAGER