



PROCARSA, S.A. DE C.V.

**CERTIFICADO DE CALIDAD  
DE PRUEBAS FISICAS-QUIMICAS**

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE:	TUCOTA	NUMERO:	FTM-53494-2002
CUSTOMER:		NUMBER:	
PEDIDO CLIENTE / P.O.:	9692	FECHA:	NOVIEMBRE 14, 2002
PEDIDO INTERNO / I.O.:		DATE:	
PARTIDA (S):	34592-30 / 38274-30		
ITEMS:			

DIAMETRO: 16"      ESPESOR DE PARED: 0.590"      GRADO:      ASTM A53-B      PRESION HIDROSTATICA: 92 Kg/cm<sup>2</sup>      ISO PSI

WALL THICKNESS:      GRADE:      ASTM A53-B      PRESSURE HYDROSTATIC:      92 Kg/cm<sup>2</sup>      ISO PSI

**CHEMICAL ANALYSIS PERCENT WEIGHT**

RESERVA DESCRIPCION	ORDENA MAT	LIBRE ELASTICO YIELD STRENGTH (σ <sub>0.2</sub> )	ULTIMA TENSION TENSILE STRENGTH (σ <sub>U</sub> )	% ELONG. %	LEAIT YATS	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
2-6 Tc Ts	122271	56 945	68 470 75 442	41	0.83	0.164	1.11	0.015	0.007	0.003	0.003	0.004	0.219	0.013	0.041	0.0027	0.015	0.024	0.009	0.0039	
7-6 Tc Ts	222099	53 699	68 470 75 442	41	0.83	0.164	1.11	0.014	0.007	0.003	0.003	0.003	0.204	0.012	0.037	0.0028	0.017	0.026	0.009	0.0032	
13-11 Tc Ts	222104	52 259	68 587 76 920	42	0.75	0.158	1.10	0.013	0.007	0.003	0.003	0.004	0.226	0.028	0.045	0.0029	0.021	0.037	0.013	0.0047	
4-2 Tc Ts	225650	50 037	68 940 72 426	36	0.73	0.163	1.11	0.017	0.007	0.003	0.004	0.004	0.181	0.012	0.045	0.0011	0.016	0.022	0.015	0.0046	
2-7 Tc Ts	225652	51 062	68 330 71 284	38	0.75	0.166	1.11	0.014	0.006	0.003	0.004	0.004	0.248	0.031	0.035	0.0024	0.012	0.041	0.028	0.0067	

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 A53-B -99

ING. FERNANDO OSORIO REYES

