



PROCARSA, S.A. DE C.V.

CERTIFICADO DE CALIDAD  
DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE: TUCOTIA  
CUSTOMER:  
PEDIDO CLIENTE / P.O. 10040  
PARTIDA(S)  
ITEMS

NUMERO PTM-54321-2003  
NUMBER  
FECHA DATE  
MARZO 13, 2003

DIAMETRO: 12 3/4" ESPESOR DE PARED WALL THICKNESS 0.250"  
GRADO: ASTM A53-B  
PRESION HIDROSTATICA: 58 Kg/cm<sup>2</sup> 820 PSI  
ANALISIS QUIMICO % EN PESO

PRUEBAS DE TENSION  
TENSILE TEST

CHEMICAL ANALYSES PERCENT WEIGHT

NUMEROTA DESCRIPTION	COLABA HEAT	LIMITE ELASTICO YIELD STRENGTH (FALL)	ULTIMA TENSION TENSILE STRENGTH (FALL)	% ELONG. %	LEAIT Y. STS	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mn	N	Ceq
11-10 TC TS	127029	58 044	68 346 75 743	37	0.82	0.165	1.11	0.019	0.007	0.003	0.004	0.004	0.202	0.012	0.038	0.0023	0.019	0.023	0.012	0.0041	
20-5 TC TS	127036	56 144	69 058 72 139	38	0.81	0.180	1.11	0.018	0.007	0.002	0.005	0.003	0.150	0.017	0.037	0.0037	0.020	0.020	0.015	0.0046	
3-19 TC TS	127038	56 263	70 610 75 419	34	0.80	0.157	1.15	0.014	0.007	0.001	0.002	0.003	0.243	0.012	0.045	0.0027	0.013	0.024	0.003	0.0054	
5-14 TC TS	127039	52 829	68 399 73 486	34	0.77	0.180	1.14	0.017	0.006	0.003	0.004	0.004	0.230	0.043	0.034	0.0027	0.028	0.039	0.018	0.0047	
14-3 TC TS	227455	49 489	69 277 69 218	37	0.74	0.159	1.07	0.013	0.007	0.003	0.004	0.004	0.203	0.027	0.045	0.0023	0.022	0.022	0.012	0.0063	

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 PEREZ  
GERENTE DE ASEGURAMIENTO DE CALIDAD  
DIRECTV ASSURANCE MANAGER

*[Signature]*  
9/21