



FLM-005-7
PROCARSA, S.A. DE C.V.

**CERTIFICADO DE CALIDAD
 DE PRUEBAS FISICAS-QUIMICAS**
 QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE: TUCOTA
 CUSTOMER:
 PEDIDO CLIENTE / P.O. 9662
 PEDIDO INTERNO / I.O. 9662
 PARTIDA (S) 40687-20
 ITEMS
 NUMERO PTM-5374-2002
 FECHA DICIEMBRE 26, 2002
 DATE

DIAMETRO: 12 3/4" ESPESOR DE PARED 0.219" GRADO: ASTM A53-B
 WALL THICKNESS TENSILE TEST

NUM. PROYECTO DESCRIPCION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (Q _{LL})	ULTIMA TENSION TENSILE STRENGTH (Q _{LL})	% ELONG. I"	LE/UT Y/STS	CHEMICAL ANALYSIS PERCENT WEIGHT															
						C	Mn	P	S	Cb	V	Ti	Si	Ca	Al	Ca	Cr	Ni	Mo	N	Ceq
8-15 Tc	127027	52 365	70 692	35	0.74	0.180	1.14	0.022	0.007	0.001	0.002	0.003	0.159	0.017	0.039	0.0022	0.017	0.029	0.004	0.0022	
Ts			75 496																		
13-15 Tc	127035	51 475	69 881	36	0.74	0.165	1.07	0.017	0.007	0.003	0.004	0.004	0.195	0.016	0.036	0.0028	0.020	0.023	0.013	0.0066	
Ts			72 018																		

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-89

ING. FERNANDO OSORIO PEREZ
 GERENTE DE ASSEGURAMIENTO DE CALIDAD
 QUALITY ASSURANCE MANAGER

[Signature]
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