



PROCARSA, S.A. DE C.V.

**CERTIFICADO DE CALIDAD  
DE PRUEBAS FÍSICAS-QUÍMICAS**

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

P-1-M-5117-2002

CLIENTE: ITCOTIA

NÚMERO: 8075

FECHA: FEBRERO 09, 2002

PEDIDO CLIENTE / P.O.:

PEDIDO INTERNO / I.O.:

PARTIDA (S):

4681-3 / 25341-20 / 16788-20 / 31062-10

DIÁMETRO: 16" ESPESOR DE PARED: 0.312" GRADO: ASTM A51-B

WALL THICKNESS: 0.312" GRADE: ASTM A51-B

PRESSION HIDROSTÁTICA: 58 Kg/cm<sup>2</sup> 820 PSI

**PRUEBAS DE TENSION TENSILE TEST**

**CHEMICAL ANALYSIS PERCENT WEIGHT**

NOM/PROBETA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (P.S.I.)	ULTIMA TENSION TENSILE STRENGTH (P.S.I.)	% ELONG. 2"	LEQUIT YST'S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
12-7 TC TS	100639	51 351	69 212 73 692	43	0.74	0.143	0.92	0.013	0.007	-	-	-	0.166	0.030	0.048	0.0023	0.042	0.029	-	-	0.0053
8-12 TC TS	114973	48 173	67 647 69 472	37	0.71	0.149	0.88	0.017	0.006	-	-	-	0.158	0.020	0.040	0.0033	0.019	0.023	-	-	0.0050
15-9 TC TS	207841	48 293	68 059 72 886	42	0.71	0.143	0.95	0.013	0.006	-	-	-	0.192	0.012	0.039	0.0034	0.019	0.025	-	-	0.0057
11-14 TC TS	207843	46 899	66 749 69 840	40	0.70	0.144	0.90	0.014	0.006	-	-	-	0.202	0.013	0.047	0.0019	0.021	0.031	-	-	0.0060
20-4 TC TS	218315	67 897	80 666 83 531	35	0.84	0.078	1.11	0.018	0.006	-	-	-	0.213	0.022	0.034	0.0024	0.023	0.021	-	-	0.0044

CERTIFICAMOS QUE LA TUBERIA AGUI 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 PEREZ  
GERENTE DE ASESURAMIENTO DE CALIDAD  
QUALITY ASSURANCE MANAGER