

FLM-005-7



PROCARSA, S.A. DE C.V.

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

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE: TUBOS MONTERREY, S.A. DE C.V.

NUMERO PTM-78679-1-2011

CUSTOMER:

NUMBER

PEDIDO CLIENTE / P.O.

PEDIDO INTERNO / I.O. 3398

FECHA

PARTIDA (S)

DATE ENERO 25, 2011

ITEMS

80026-10 / 80687-10 / 76658-40 / 77429-30 / 106424-30

DIAMETRO: 12 3/4" ESPESOR DE PARED: 0.406" GRADO: ASTM A53-B PRESION HIDROSTATICA: 94 Kg/cm² 1,340 PSI
DIAMETER: 12 3/4" WALL THICKNESS: 0.406" GRADE: ASTM A53-B HYDROSTATIC TEST: 94 Kg/cm² 1,340 PSI

**PRUEBAS DE TENSION
TENSILE TEST**

**ANALISIS QUIMICO % EN PESO
CHEMICAL ANALYSES PERCENT WEIGHT**

NUM. PROBETA DESCRIPTION	COLA/HA HEAT	LIMITE ELASTICO YIELD STRENGTH (P.S.I.)	ULTIMA TENSION TENSILE STRENGTH (P.S.I.)	% ELONG. 2"	LEVEL Y.S.P.S.	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
66-17 Tc Ts	169327	58 007	64 831 78 821	35	0.89	0.125	0.76	0.011	0.005	0.001	0.003	0.004	0.282	0.030	0.035	0.003	0.030	0.030	0.006	0.0034	
57-10 Tc Ts	170631	55 696	69 198 73 360	35	0.80	0.131	0.76	0.012	0.007	0.001	0.003	0.005	0.328	0.010	0.050	0.003	0.020	0.020	0.006	0.0057	
98-5 Tc Ts	170881	54 667	69 333 70 957	40	0.79	0.131	0.77	0.017	0.008	0.001	0.003	0.003	0.295	0.020	0.025	0.003	0.020	0.020	0.006	0.0073	
3-16 Tc Ts	266714	54 137	61 633 70 971	41	0.88	0.123	0.80	0.011	0.006	0.001	0.003	0.004	0.169	0.040	0.040	0.002	0.020	0.030	0.008	0.0057	
13-10 Tc Ts	266941	57 944	66 197 71 235	41	0.88	0.146	0.83	0.014	0.005	0.001	0.003	0.002	0.154	0.030	0.039	0.003	0.030	0.030	0.007	0.0080	
25-16 Tc Ts	266943	55 944	63 449 72 953	40	0.88	0.135	0.82	0.010	0.003	0.001	0.003	0.003	0.161	0.020	0.038	0.004	0.030	0.020	0.006	0.0083	
14-17 Tc Ts	296126	59 958	70 529 77 550	40	0.85	0.072	1.16	0.010	0.004	0.019	0.003	0.007	0.235	0.024	0.039	0.003	0.014	0.021	0.006	0.0068	
16-17 Tc Ts	296127	58 747	69 191 74 851	40	0.84	0.072	1.18	0.010	0.003	0.016	0.003	0.009	0.240	0.033	0.037	0.003	0.015	0.025	0.007	0.0076	
5-17 Tc Ts	296131	56 193	68 644 75 115	42	0.81	0.073	1.19	0.013	0.003	0.018	0.003	0.009	0.227	0.032	0.028	0.003	0.016	0.022	0.006	0.0066	
109-3 Tc Ts	720476	73 684	84 211 85 085	30	0.88	0.160	1.07	0.012	0.003	0.016	0.001	0.003	0.315	0.026	0.037	0.003	0.021	0.013	0.005	0.0053	

CERTIFICAMOS QUE LA TUBERIA AQUI DESCRITA CUMPLE Y HA SIDO FABRICADA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO CON LOS REQUISITOS APLICABLES DE LA ESPECIFICACION:

ASTM-06

WE CERTIFY THE PIPE ABOVE MENTIONED ACCOMPLISH AND HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SPECIFICATIONS:

ING. ALEJANDRO ALARCON CAZARES
SUPERVISOR DE LABORATORIO METALURGICO
METALLURGICAL LABORATORY SUPERVISOR