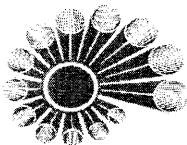


FLM-005-7



PROCARSA, S.A. DE C.V.

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

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE: PLESA ANAHUAC Y CIAS. S.A. DE C.V.

NUMERO PTM-0057-1-2011

CUSTOMER:

NUMBER

PEDIDO CLIENTE /P.O.

PEDIDO INTERNO / I.O. 3651

FECHA

DATE JULIO 09, 2011

PARTIDA (S)

ITEMS 112861-10-20-30/67569-10/80791-60

DIAMETRO :

ESPESOR DE PARED

GRADO :

PRESION HIDROSTATICA:

DIAMETER : 12 3/4"

WALL THICKNESS

0.375"

GRADE :

ASTM A53-B

HIDROSTATIC TEST: 87 Kg/cm² 1240 PSI

PRUEBAS DE TENSION

TENSILE TEST

ANALISIS QUIMICO % EN PESO

CHEMICAL ANALYSES PERCENT WEIGHT

NUM.PROBETA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (P.S.I.)	ULTIMA TENSION TENSILE STRENGTH (P.S.I.)	% ELONG. 2"	LE/UT Y.S./T.S.	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	Ceq
20-9 Tc Ts	104720	76 501	87 176 88 222	33	0.87 H	0.104	1.41	0.020	0.005	0.047	0.002	0.007	0.189	0.030	0.030	0.002	0.026	0.022	0.010	0.0070	
114-4 Tc Ts	155728	57 080	69 245 74 466	39	0.82 H	0.158	1.11	0.020	0.006	0.001	0.004	0.003	0.201	0.030	0.035	0.0027	0.020	0.030	0.007	0.0035	
2-17 Tc Ts	171122	54 034	65 409 71 211	30	0.83	0.132	0.76	0.017	0.005	0.001	0.003	0.005	0.297	0.020	0.039	0.0029	0.030	0.030	0.006	0.0033	
15-15 Tc Ts	182335	65 628	72 635 74 912	35	0.90 H	0.074	0.64	0.013	0.004	0.030	0.003	0.004	0.172	0.210	0.041	0.001	0.020	0.020	0.006	0.0062	
9-14 Tc Ts	285960	56 214	71 709 71 144	33	0.78 H	0.059	0.64	0.013	0.005	0.033	0.002	0.004	0.184	0.220	0.040	0.003	0.020	0.020	0.004	0.0045	
99-18 Tc Ts	286310	72 774	78 117 83 786	30	0.93 H	0.077	1.41	0.016	0.004	0.043	0.004	0.007	0.175	0.020	0.040	0.003	0.010	0.020	0.007	0.0076	
2-12 Tc Ts	286446	52 533	67 391 68 270	35	0.77	0.142	0.82	0.013	0.004	0.001	0.003	0.004	0.326	0.040	0.037	0.002	0.020	0.020	0.006	0.0088	
8-23 Tc Ts	287857	50 687	63 703 68 073	40	0.79 H	0.134	0.80	0.010	0.003	0.001	0.003	0.004	0.301	0.020	0.045	0.003	0.020	0.030	0.007	0.0067	

CERTIFICAMOS QUE LA TUBERIA AQUÍ 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 ALARCÓN CAZARES
SUPERVISOR DE LABORATORIO METALURGICO
METALLURGICAL LABORATORY SUPERVISOR