



FLM-005-7

PROCARSA, S.A. DE C.V.

CERTIFICADO DE CALIDAD  
DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

CLIENTE:	BOGOTÁ	NUMERO:	FLM-50904-1-2002
CUSTOMER:		NUMBER:	
PEDIDO CLIENTE / P.O.	9076	FECHA:	ENERO 15, 2002
PEDIDO INTERNO / I.O.		DATE:	
PARTIDA(S)	27126-1 / 25093-20		

DIAMETRO: 12 3/4"      ESPESOR DE PARED: 0.250"      GRADO:      ASTM A53-B      PRESION HIDROSTATICA: 58 Kg/cm<sup>2</sup>      820 PSI

PRUEBAS DE TENSION

ANALISIS QUIMICO % EN PESO

NUM./PROBETA DESCRIPCION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (PSI)	ULTIMA TENSION TENSILE STRENGTH (PSI)	% ELONG. % ELONG.	LEADY Y.S.T.S	CHEMICAL ANALYSIS PERCENT WEIGHT														
						C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N
15-20 TC	33825	48 678	62 623	38	0.78	0.180	0.78	0.010	0.006	0.0022	0.0004	-	0.156	0.008	0.035	0.0016	0.004	0.008	0.0008	0.0025
16-27 TC	43177	57 219	65 679	38	0.79	0.162	0.74	0.011	0.005	0.0022	0.0004	-	0.157	0.028	0.035	0.0001	0.006	0.012	0.0039	0.0036
4-20 TC	43809	50 944	60 349	42	0.84	0.160	0.77	0.010	0.005	0.0020	0.0010	-	0.140	0.010	0.037	0.0005	0.003	0.009	0.0020	0.0029
6-26 TC	83467	52 829	67 729	42	0.78	0.166	0.75	0.015	0.001	0.0022	0.0025	-	0.200	0.013	0.047	0.0020	0.005	0.008	0.0029	0.0027
4-4 TC	114480	50 002	74 300	39	0.77	0.142	0.89	0.018	0.007	0.003	0.004	-	0.141	0.019	0.043	0.0016	0.021	0.031	0.011	0.0033
5-5 TC	214257	51 297	63 176	38	0.81	0.146	0.80	0.011	0.006	0.003	0.002	-	0.176	0.013	0.040	0.0029	0.018	0.028	0.012	0.0044
5-5 TC			71 373																	

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

  
ING. FERNANDO ORDOÑEZ PÉREZ  
GERENTE DE ASEGURAMIENTO DE CALIDAD  
QUALITY ASSURANCE MANAGER