



FLM-005-7

PROCARSA, S.A. DE C.V.

**CERTIFICADO DE INSPECCION  
DE PRUEBAS MECANICAS Y ANALISIS QUIMICO**

INSPECTION CERTIFICATE OF MECHANICAL TESTS AND CHEMICAL ANALYSES

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

CUSTOMER:

PEDIDO CLIENTE / P.O.

PEDIDO INTERNO / I.O. 16637

PARTIDA (S)

196645-10 / 199040-10 / 199909-10 / 200860-30

NUMERO  
NUMBER

PTM-05940-2018

FECHA  
DATE

ABRIL 04, 2018

DIAMETRO EXTERIOR : 12 3/4" ESPESOR DE PARED : 0.250" GRADO : ASTM A53-B PRESION HIDROSTATICA : 58 Kg/cm<sup>2</sup> 820 PSI HOJA 1 DE 2  
 OUTSIDE DIAMETER : WALL THICKNESS : GRADE : ASTM A53-B HYDROSTATIC TEST:

REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS																				
LIMITE ELASTICO / YIELD STRENGTH	ULTIMA TENSION / TENSILE STRENGTH	% ELONG.	LE/UT.	C	Mn	P	S	Cb	Cb+V	Cb+V+Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	CE Pcm
35000 PSI MIN.	60000 PSI MIN.	26 min.	---	0.300 max	1.200 max	0.050 max	0.045 max	---	---	---	---	0.500 max	---	---	0.400 max	0.400 max	0.150 max	---	---	---

NUM.PROBETA DESCRIPTION	COLADA HEAT	LIMITE ELASTICO YIELD STRENGTH (P.S.I.)	ULTIMA TENSION TENSILE STRENGTH (P.S.I.)	% ELONG. "	LE/UT Y.S/T.S	C	Mn	P	S	Cb	V	Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE IIW	CE Pcm
4-16 Tc Ts	172249	59 100	70 926 76 548	38	0.83	0.069	1.14	0.016	0.005	0.019	0.0040	0.009	0.210	0.031	0.029	0.004	0.021	0.019	0.007	0.0047		
15-16 Tc Ts	172252	54 795	71 807 78 054	39	0.76	0.071	1.11	0.016	0.004	0.019	0.0040	0.008	0.200	0.026	0.026	0.004	0.026	0.025	0.008	0.0050		
12-1 Tc Ts	172255	62 576	72 141 79 593	35	0.87	0.087	1.12	0.015	0.006	0.019	0.0040	0.009	0.200	0.027	0.030	0.004	0.025	0.025	0.008	0.0047		
68-18 Tc Ts	172258	57 129	75 667 75 435	36	0.76	0.088	1.14	0.016	0.005	0.019	0.0060	0.010	0.220	0.023	0.034	0.003	0.025	0.021	0.008	0.0054		
6-26 Tc Ts	172267	59 564	70 979 77 741	34	0.84	0.081	1.17	0.011	0.006	0.018	0.0020	0.009	0.210	0.026	0.040	0.004	0.019	0.024	0.008	0.0055		
52-5 Tc Ts	172273	55 058	75 042 80 091	37	0.73	0.072	1.15	0.013	0.004	0.018	0.0030	0.008	0.210	0.021	0.032	0.003	0.020	0.020	0.007	0.0054		
42-8 Tc Ts	172275	59 847	73 560 83 851	32	0.81	0.077	1.14	0.013	0.004	0.018	0.0030	0.008	0.210	0.026	0.027	0.003	0.020	0.022	0.007	0.0048		
50-18 Tc Ts	172278	63 141	72 100 78 404	33	0.88	0.071	1.13	0.013	0.005	0.018	0.0030	0.008	0.210	0.025	0.039	0.003	0.018	0.024	0.008	0.0047		
17-26 Tc Ts	173895	56 571	73 462 77 261	35	0.77	0.069	1.16	0.013	0.003	0.018	0.0030	0.010	0.200	0.031	0.036	0.003	0.026	0.026	0.007	0.0056		
29-26 Tc Ts	173904	60 483	72 584 78 157	39	0.83	0.071	1.14	0.012	0.004	0.019	0.0030	0.008	0.200	0.037	0.036	0.004	0.027	0.022	0.007	0.0056		
142-26 Tc Ts	173905	62 737	69 985 76 006	40	0.90	0.068	1.13	0.013	0.004	0.017	0.0030	0.009	0.200	0.019	0.036	0.004	0.023	0.026	0.009	0.0056		
91-26 Tc Ts	173915	62 368	73 333 79 242	40	0.85	0.076	1.17	0.013	0.003	0.018	0.0030	0.008	0.210	0.029	0.036	0.003	0.026	0.025	0.007	0.0056		
133-2 Tc Ts	173917	64 020	72 647 77 923	38	0.88	0.071	1.13	0.018	0.004	0.018	0.0050	0.009	0.200	0.018	0.045	0.003	0.018	0.019	0.005	0.0056		
63-26 Tc Ts	173923	57 621	71 746 80 143	32	0.80	0.072	1.12	0.014	0.002	0.018	0.0020	0.006	0.210	0.022	0.031	0.003	0.021	0.023	0.005	0.0056		

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

WE CERTIFY THAT THE ABOVE DESCRIBED PIPE HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATION, AND MEETS THE APPLICABLE REQUIREMENTS THEREIN

ASTM A53

*[Handwritten Signature]* 931

ING. LUIS ALFONSO DE LOS SANTOS RIVERA  
SUPERVISOR DE LABORATORIO METALURGICO  
METALLURGICAL LABORATORY SUPERVISOR



FLM-005-7  
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 CUSTOMER:

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 NUMBER PTM-05940-2018

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 PEDIDO INTERNO / I.O. 16637  
 PARTIDA (S)  
 ITEMS 196645-10 / 199040-10 / 199909-10 / 200860-30

FECHA  
 DATE ABRIL 04, 2018

DIAMETRO EXTERIOR : 12 3/4" ESPESOR DE PARED : 0.250" GRADO : ASTM A53-B PRESION HIDROSTATICA: 58 Kg/cm<sup>2</sup> 820 PSI HOJA 2 DE 2  
 OUTSIDE DIAMETER : WALL THICKNESS : GRADE : HYDROSTATIC TEST:

REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS				C	Mn	P	S	Cb	Cb+V	Cb+V+Ti	Si	Cu	Al	Ca	Cr	Ni	Mo	N	CE HW	CE Pcm
LIMITE ELASTICO / YIELD STRENGTH	ULTIMA TENSION / TENSILE STRENGTH	% ELONG.	LE./U.T.	0.300 max	1.200 max	0.050 max	0.045 max	---	---	---	---	0.500 max	---	---	0.400 max	0.400 max	0.150 max	---	---	---
35000 PSI MIN.	60000 PSI MIN.	26 min.	---																	

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	CE HW	CE Pcm
168-3 Tc Ts	173924	61 969	69 728 74 294	40	0.89	0.068	1.11	0.014	0.004	0.018	0.0020	0.007	0.210	0.023	0.028	0.003	0.022	0.023	0.005	0.0056		
12-21 Tc Ts	176000	59 058	70 805 76 535	34	0.83	0.077	1.15	0.013	0.006	0.017	0.0030	0.007	0.190	0.024	0.025	0.004	0.017	0.019	0.005	0.0052		
85-22 Tc Ts	177893	65 814	71 433 76 353	37	0.92	0.075	1.14	0.015	0.004	0.017	0.0030	0.008	0.200	0.020	0.032	0.003	0.023	0.018	0.004	0.0053		
63-22 Tc Ts	177898	66 180	72 133 76 353	35	0.92	0.071	1.14	0.013	0.003	0.018	0.0030	0.010	0.220	0.032	0.037	0.002	0.019	0.021	0.004	0.0053		
83-26 Tc Ts	177900	62 903	73 091 76 588	35	0.86	0.082	1.14	0.012	0.004	0.018	0.0030	0.009	0.210	0.022	0.036	0.003	0.016	0.017	0.004	0.0050		
81-23 Tc Ts	177901	64 146	70 352 75 111	37	0.91	0.069	1.15	0.016	0.003	0.018	0.0040	0.009	0.220	0.036	0.037	0.002	0.022	0.022	0.005	0.0056		

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

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