



FLM-005-7

PROCARSA, S.A. DE C.V.

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

QUALITY 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. 15737

PARTIDA (S)

ITEMS 118065-50 / 94430-20 / 110229-10 / 102624-10 / T-14-12

NUMERO

NUMBER

PTM-04087-2014

FECHA

DATE

FEBRERO 20, 2014

DIAMETRO EXTERIOR : OUTSIDE DIAMETER :	16"	ESPEJOR DE PARED : WALL THICKNESS :	0.250"	GRADO : GRADE :	ASTM A53-B	PRESION HIDROSTATICA: HYDROSTATIC TEST:	46 Kg/cm ² 660 PSI
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REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS				REQUERIMIENTOS DE ANALISIS QUIMICO % EN PESO / CHEMICAL ANALYSES BY PERCENTAGE OF WEIGHT REQUIREMENTS																
LIMITE ELASTICO / YIELD STRENGTH	ULTIMA TENSION / TENSILE STRENGTH	% ELONG.	L.E./U.T.	C	Mn	P	S	Ch	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. 2"	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
3-1 Tc Ts	111115	47 305	64 160 73 035	42	0.73	0.116	0.79	0.010	0.005	0.002	0.0020	0.003	0.222	0.025	0.030	0.004	0.015	0.032	0.008	0.0061		
8-9 Tc Ts	182261	52 060	64 803 67 608	36	0.80	0.135	0.79	0.012	0.005	0.004	0.0030	0.005	0.301	0.020	0.031	0.002	0.030	0.020	0.013	0.0065		
5-9 Tc Ts	188142	51 673	65 108 66 605	44	0.79	0.148	0.80	0.016	0.005	0.005	0.0050	0.005	0.291	0.030	0.034	0.002	0.040	0.030	0.013	0.0064		
13-8 Tc Ts	188143	50 266	62 797 67 215	38	0.80	0.133	0.78	0.013	0.005	0.005	0.0050	0.005	0.298	0.020	0.038	0.003	0.040	0.020	0.013	0.0058		
9-10 Tc Ts	188144	48 150	62 557 69 187	40	0.76	0.118	0.81	0.012	0.004	0.003	0.0030	0.005	0.313	0.020	0.034	0.002	0.030	0.030	0.009	0.0086		
155-2 Tc Ts	201543	62 891	75 993 82 077	40	0.82	0.100	1.14	0.019	0.005	0.046	0.0050	0.009	0.196	0.022	0.028	0.003	0.017	0.022	0.004	0.0082		
186-18 Tc Ts	201552	63 570	75 917 81 633	35	0.83	0.090	1.16	0.017	0.004	0.048	0.0040	0.009	0.199	0.016	0.029	0.002	0.016	0.022	0.004	0.0087		
4-5 Tc Ts	289699	63 075	70 171 73 966	38	0.89	0.063	1.18	0.012	0.006	0.020	0.0050	0.009	0.240	0.050	0.024	0.002	0.020	0.030	0.014	0.0066		
3-17 Tc Ts	1231059012	57 304	73 801 77 110	37	0.77	0.128	0.83	0.008	0.003	0.010	0.0020	0.001	0.159	0.010	0.040	0.003	0.014	0.014	0.002	0.0060		
6-14 Tc Ts	1241001012	59 408	74 683 75 798	40	0.79	0.138	0.84	0.008	0.004	0.006	0.0010	0.002	0.152	0.009	0.038	0.002	0.009	0.008	0.001	0.0049		

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 -10

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

ING. ALEJANDRO ARCON CAZARES
JEFE DE LABORATORIO METALURGICO
METALLURGICAL LABORATORY CHIEF