



FLM-005-7

PROCARSA, S.A. DE C.V.
CERTIFICADO DE CALIDAD
DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

| | | | |
|-----------------------|--------|---------|---------------------|
| CLIENTE: | TUCOTA | NUMERO: | PTM-0085-2-2001 |
| (CUSTOMER: | | NUMBER | |
| PEDIDO CLIENTE / NO. | | FECHA | SEPTIEMBRE 28, 2001 |
| PEDIDO INTERNO / I.O. | | DATE | |
| PARTIDAS) | | | |

TAMAYO: 24" ESPESOR DE PARED: 0.250" GRADO: ASTM A53-B PRESION HIDROSTATICA: 31 Kg/cm² 440 PSI
 SIZE: WALL THICKNESS: 0.250" GRADE: ASTM A53-B CHEMICAL ANALYSIS PERCENT WEIGHT: 31 Kg/cm² 440 PSI

PRUEBAS DE TENSION
 TENSILE TEST

| NUM. PROBE DESCRIPTION | COLADA HEAT | LIMITES ELASTICO YIELD STRENGTH (PSI) | ULTIMA TENSION TENSILE STRENGTH (PSI) | % ELONG. 2" | LEQT V.S/T.S | C | Mn | P | S | Cb | V | Ti | Si | Cu | Al | Ca | Cr | Ni | Mo | N | Ceq |
|---------------------------|----------------|---|---|----------------|-----------------|-------|------|-------|-------|-------|---|----|-------|-------|-------|----|--------|-------|----|---|-----|
| 64-5 Tc Ts | 164235 | 54 814 | 72 842 74 099 | 39 | 0.75 | 0.070 | 0.68 | 0.012 | 0.010 | 0.011 | - | - | 0.219 | 0.110 | 0.039 | - | 0.0200 | 0.020 | - | - | - |
| 63-12 Tc Ts | 269142 | 56 834 | 70 726 77 177 | 34 | 0.80 | 0.090 | 0.72 | 0.015 | 0.008 | 0.012 | - | - | 0.229 | 0.050 | 0.033 | - | 0.0100 | 0.010 | - | - | - |
| 116-11 Tc Ts | 164231 | 57 337 | 78 997 75 480 | 40 | 0.73 | 0.060 | 0.73 | 0.011 | 0.010 | 0.013 | - | - | 0.227 | 0.080 | 0.044 | - | 0.0100 | 0.020 | - | - | - |
| 47-9 Tc Ts | 269108 | 54 491 | 69 749 74 478 | 39 | 0.78 | 0.080 | 0.70 | 0.013 | 0.010 | 0.013 | - | - | 0.210 | 0.090 | 0.046 | - | 0.0200 | 0.020 | - | - | - |
| 101-13 Tc Ts | 269151 | 60 633 | 70 233 75 111 | 36 | 0.86 | 0.070 | 0.67 | 0.009 | 0.007 | 0.013 | - | - | 0.258 | 0.060 | 0.032 | - | 0.0100 | 0.020 | - | - | - |

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 TORO PEREZ
 GERENTE DE ASEGURAMIENTO DE CALIDAD
 QUALITY ASSURANCE MANAGER