



PROCARSA S.A. DE C.V.

CERTIFICADO DE CALIDAD  
DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

|                       |          |        |                     |
|-----------------------|----------|--------|---------------------|
| CLIENTE:              | TUCOTA   | NUMERO | PTM-53084-1-2002    |
| CUSTOMER:             |          | NUMBER |                     |
| PEDIDO CLIENTE / P.O. | 9437     | FECHA  | SEPTIEMBRE 17, 2002 |
| PEDIDO INTERNO / I.O. |          | DATE   |                     |
| PARTIDA (S)           |          |        |                     |
| ITEMS                 | 39945-38 |        |                     |

DIAMETRO : 12 3/4"

ESPESOR DE PARED

0.250"

GRADO :

API 5L X-42

PRESSION HIDROSTATICA:

98 Kg/cm<sup>2</sup>

1400 PSI

PRUEBAS DE TENSION

TENSILE TEST

CHEMICAL ANALYSIS PERCENT WEIGHT

| IDENTIFICACION | GRANDEZAS | UNIDAD | VALOR  | VALOR NOMINAL | % DEBILIDAD | LONGITUD | DIAMETRO | C    | Mn    | P     | S | Cb | V | Ti | SI    | Ca    | Al    | Co     | Cr    | Ni    | Mo | N | Ceq |
|----------------|-----------|--------|--------|---------------|-------------|----------|----------|------|-------|-------|---|----|---|----|-------|-------|-------|--------|-------|-------|----|---|-----|
| 3-11 TC        | 120145    | 50 772 | 66 806 | 71 889        | 41          | 0.76     | 0.142    | 0.93 | 0.017 | 0.005 | - | -  | - | -  | 0.153 | 0.018 | 0.042 | 0.0032 | 0.023 | 0.028 | -  | - | -   |
| 21-15 TC       | 121107    | 53 425 | 63 041 | 69 889        | 41          | 0.85     | 0.132    | 0.81 | 0.013 | 0.007 | - | -  | - | -  | 0.141 | 0.010 | 0.040 | 0.0005 | 0.016 | 0.032 | -  | - | -   |
| 30-12 TC       | 121108    | 53 561 | 65 880 | 72 106        | 37          | 0.81     | 0.144    | 0.79 | 0.021 | 0.010 | - | -  | - | -  | 0.133 | 0.015 | 0.034 | 0.0005 | 0.022 | 0.032 | -  | - | -   |
| 19-6 TC        | 221072    | 53 689 | 63 889 | 70 382        | 35          | 0.84     | 0.137    | 0.81 | 0.017 | 0.010 | - | -  | - | -  | 0.159 | 0.021 | 0.043 | 0.0003 | 0.025 | 0.029 | -  | - | -   |

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:

API SPECIFICATION SL

FORTY-SECOND EDITION, JANUARY, 2000

EFFECTIVE DATE : JULY 1, 2000

ING. FERNANDO OSORIO PENEZ  
GERENTE DE ASESURAMIENTO DE CALIDAD  
QUALITY ASSURANCE MANAGER