



PROCARSA, S.A. DE C.V.

CERTIFICADO DE CALIDAD
DE PRUEBAS FISICAS-QUIMICAS

QUALITY CERTIFICATE OF TEST PHYSICALS-CHEMICAL

| | | | |
|-----------------------|---|--------|----------------|
| CLIENTE: | TUCOTIA | NUMERO | PTM-50600-2001 |
| CUSTOMER: | | NUMBER | |
| PEDIDO CLIENTE / P.O. | 8075 | FECHA | ENERO 03, 2002 |
| PEDIDO INTERNO / I.O. | | DATE | |
| PARTIDA (S) | 4681-30 / 16798-20 / 25341-20 / X8983-9 | | |
| ITEMS | | | |

DIAMETRO: 16" ESPESOR DE PARED 0.312" GRADO: ASTM A53-B PRESTION HIDROSTATICA: 58 Kg/cm² 820 PSI
 WALL THICKNESS 0.312" GRADE: ASTM A53-B HYDROSTATIC TEST: 58 Kg/cm² 820 PSI

PRUEBAS DE TENSION

CHEMICAL ANALYSIS PERCENT WEIGHT

| NUM. PROBEA DESCRIPTION | COLADA HEAT | LIMITE ELASTICO YIELD STRENGTH (σ ₂₁₁) | ULTIMA TENSION TENSILE STRENGTH (σ ₂₁₁) | % ELONG. 2" | LEGLIT V.S.T.S | C | Mn | P | S | Cb | V | Ti | Si | Cu | Al | Ca | Cr | Ni | Mo | N | Ceq |
|----------------------------|----------------|--|---|----------------|-------------------|-------|------|-------|-------|----|---|----|-------|-------|-------|--------|-------|-------|----|---|-----|
| 8-2 TC TS | 100639 | 60 310 | 66 232 71 358 | 40 | 0.91 | 0.143 | 0.92 | 0.013 | 0.007 | - | - | - | 0.166 | 0.030 | 0.048 | 0.0023 | 0.042 | 0.029 | - | - | - |
| 16-17 TC TS | 107895 | 47 895 | 65 746 69 994 | 43 | 0.73 | 0.138 | 0.90 | 0.015 | 0.004 | - | - | - | 0.200 | 0.013 | 0.050 | 0.0030 | 0.022 | 0.031 | - | - | - |
| 3-1 TC TS | 107904 | 47 974 | 66 622 72 567 | 41 | 0.73 | 0.147 | 0.93 | 0.013 | 0.007 | - | - | - | 0.186 | 0.015 | 0.041 | 0.0031 | 0.019 | 0.026 | - | - | - |
| 2-5 TC TS | 114972 | 47 203 | 66 700 68 893 | 35 | 0.71 | 0.137 | 0.87 | 0.013 | 0.007 | - | - | - | 0.142 | 0.019 | 0.044 | 0.0028 | 0.018 | 0.024 | - | - | - |
| 8-12 TC TS | 114973 | 48 173 | 67 647 68 893 | 37 | 0.71 | 0.149 | 0.88 | 0.017 | 0.006 | - | - | - | 0.158 | 0.020 | 0.040 | 0.0033 | 0.019 | 0.023 | - | - | - |
| 15-9 TC TS | 207841 | 48 293 | 68 472 68 059 | 42 | 0.71 | 0.143 | 0.95 | 0.013 | 0.006 | - | - | - | 0.192 | 0.012 | 0.039 | 0.0034 | 0.019 | 0.025 | - | - | - |
| 11-14 TC TS | 207843 | 46 899 | 66 749 72 886 | 40 | 0.70 | 0.144 | 0.90 | 0.014 | 0.006 | - | - | - | 0.202 | 0.013 | 0.047 | 0.0019 | 0.021 | 0.031 | - | - | - |
| 6-11 TC TS | 207845 | 49 203 | 69 640 65 313 | 41 | 0.75 | 0.141 | 0.89 | 0.013 | 0.005 | - | - | - | 0.178 | 0.016 | 0.025 | 0.0019 | 0.019 | 0.036 | - | - | - |
| 3-10 TC TS | 297069 | 60 752 | 74 469 74 373 | 38 | 0.87 | 0.144 | 0.97 | 0.018 | 0.009 | - | - | - | 0.172 | 0.027 | 0.034 | 0.0022 | 0.020 | 0.029 | - | - | - |

CERTIFICAMOS QUE LA TUBERIA ACUÍ 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 OSORIO PEREZ
 GERENTE DE ASEGURAMIENTO DE SALUD
 QUALITY ASSURANCE MANAGER