



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 | FTM-56818-2003 |
| CUSTOMER: | | NUMBER | |
| PEDIDO CLIENTE / P.O. | 11336 | FECHA | NOVIEMBRE 14, 2003 |
| PEDIDO INTERNO / I.O. | | DATE | |
| PARTIDA(S) | 43755-39 | | |

DIAMETRO: 16" ESPESOR DE PARED: 0.375" GRADO: ASTM A53-B PRESION HIDROSTATICA: 69 Kg/cm² 980 PSI
 WALL THICKNESS: 0.375" GRADE: ASTM A53-B ANALISIS QUIMICO % EN PESO

| NUM. PROBE DESCRIPCION | COLEDA HEAT | PRUEBAS DE TENSION TENSILE TEST | | | | CHEMICAL ANALYSIS PERCENT WEIGHT | | | | | | | | | | | | | | | |
|---------------------------|----------------|--|---|---------------|---------------|----------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|-----|
| | | LIMITE ELASTICO YIELD STRENGTH (F _{0.2}) | ULTIMA TENSION TENSILE STRENGTH (F _{0.2}) | % ELONG. % | LEWIT VARI | C | Mn | P | S | Cb | V | Ti | Si | Cr | Al | Ca | Cr | Ni | Mo | N | Ceq |
| 2-11 Tc Ts | 131400 | 52 479 | 70 575 78 596 | 37 | 0.74 | 0.170 | 1.10 | 0.013 | 0.007 | 0.001 | 0.002 | 0.002 | 0.180 | 0.029 | 0.035 | 0.0034 | 0.011 | 0.028 | 0.003 | 0.0058 | |
| 12-10 Tc Ts | 231361 | 52 189 | 70 186 77 662 | 37 | 0.74 | 0.180 | 1.11 | 0.014 | 0.008 | 0.001 | 0.002 | 0.003 | 0.237 | 0.023 | 0.045 | 0.0028 | 0.014 | 0.024 | 0.003 | 0.0038 | |
| 6 | | | | | | | | | | | | | | | | | | | | | |

CERTIFICAMOS QUE LA TUBERIA ACUÍ DESCRITA CUMPLE Y HA SIDO
 PROBADA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO
 A LOS REQUISITOS APLICABLES DE LA ESPECIFICACION:
ASTM A53-B -99

WE CERTIFY THE PIPE ABOVE MENTIONED ACCOMPLISH AND HAS
 BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN
 ACCORDANCE WITH APPLICABLE REQUIREMENTS OF SPECIFICATIONS:

(Signature)
 ING. TERNANDE OROZCO
 GERENTE DE ASEGURAMIENTO DE CALIDAD
 QUALITY ASSURANCE MANAGER