

FLM-005-7

PROCARSA, S.A. DE C.V.

CERTIFICADO DE INSPECCION DE PRUEBAS MECANICAS Y ANALISIS QUIMICO

INSPECTION CERTIFICATE OF MECHANICAL TESTS AND CHEMICAL ANALYSES

CLIENTE: PLESA ANAHUAC Y CIAS. S.A. DE C.V.

CUSTOMER:

NUMERO PTM-05228-2017

NUMBER

PEDIDO CLIENTE / P.O.

PEDIDO INTERNO / I.O. 164630

FECHA

DATE

PARTIDA (S)

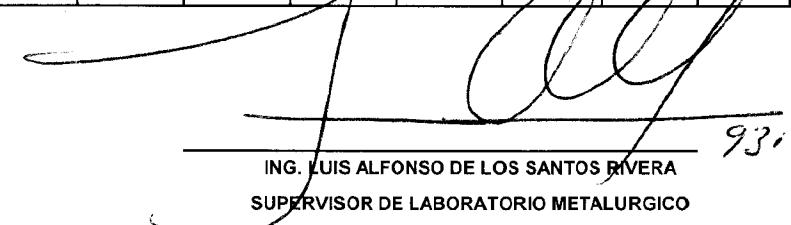
ITEMS 112699-20 / 25343-80 / 22219-20 / 54230-10 / 95660-40

OCTUBRE 19, 2017

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|---|--|--------------------|--|
| DIAMETRO EXTERIOR : OUTSIDE DIAMETER : | ESPESOR DE PARED : WALL THICKNESS : | GRADO : GRADE : | PRESION HIDROSTATICA: HIDROSTATIC TEST: |
| 10 3/4" | 0.307" | ASTM A53-B | 84 Kg/cm ² 1,200 PSI |

| REQUERIMIENTOS DE PRUEBAS DE TENSION / TENSILE TEST REQUIREMENTS | | | | C | Mn | P | S | Cb | Cb+V | Cb+V+Ti | Si | Cu | Al | Ca | Cr | Ni | Mo | N | CE IIW | CE Pcm |
|--|-----------------------------------|----------|-----------|-----------|-----------|-----------|-----------|-----|------|---------|-----|-----------|-----|-----|-----------|-----------|-----------|-----|--------|--------|
| LIMITE ELASTICO / YIELD STRENGTH | ULTIMA TENSION / TENSILE STRENGTH | % ELONG. | L.E./U.T. | 0.300 max | 1.200 max | 0.050 max | 0.045 max | --- | --- | --- | --- | 0.500 max | --- | --- | 0.400 max | 0.400 max | 0.150 max | --- | --- | --- |
| 35000 PSI MIN. | 60000 PSI MIN. | 27 min. | --- | | | | | | | | | | | | | | | | | |

| NUM.PROBETA DESCRIPTION | COLADA HEAT | LIMITE ELASTICO YIELD STRENGTH (P.S.I.) | ULTIMA TENSION TENSILE STRENGTH (P.S.I.) | % ELONG. 2" | LE/U.T. Y.S/T.S | C | Mn | P | S | Cb | V | Ti | Si | Cu | Al | Ca | Cr | Ni | Mo | N | CE IIW | CE Pcm |
|----------------------------|----------------|---|--|----------------|--------------------|-------|------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
| 6-1 Tc Ts | 104532 | 48 326 | 62 966 74 059 | 42 | 0.76 | 0.125 | 0.78 | 0.015 | 0.005 | 0.001 | 0.0020 | 0.004 | 0.301 | 0.020 | 0.034 | 0.002 | 0.023 | 0.019 | 0.006 | 0.0053 | | |
| 3-3 Tc Ts | 104534 | 49 255 | 65 742 74 895 | 42 | 0.74 | 0.125 | 0.78 | 0.017 | 0.005 | 0.001 | 0.0020 | 0.004 | 0.298 | 0.033 | 0.033 | 0.003 | 0.031 | 0.020 | 0.006 | 0.0070 | | |
| 4-11 Tc Ts | 115138 | 51 973 | 64 560 73 325 | 38 | 0.81 | 0.144 | 0.92 | 0.021 | 0.006 | -- | -- | -- | 0.168 | 0.025 | 0.038 | 0.003 | 0.022 | 0.035 | -- | -- | | |
| 18-14 Tc Ts | 115139 | 53 609 | 63 242 72 241 | 41 | 0.85 | 0.139 | 0.88 | 0.016 | 0.006 | -- | -- | -- | 0.159 | 0.022 | 0.041 | 0.002 | 0.018 | 0.023 | -- | -- | | |
| 3-26 Tc Ts | 211974 | 47 737 | 63 967 73 024 | 40 | 0.75 | 0.151 | 0.91 | 0.013 | 0.004 | -- | -- | -- | 0.169 | 0.012 | 0.040 | 0.004 | 0.015 | 0.028 | 0.005 | 0.0058 | | |
| 1-20 Tc Ts | 236055 | 71 280 | 81 610 84 859 | 34 | 0.87 | 0.098 | 1.15 | 0.016 | 0.006 | 0.023 | 0.0030 | 0.004 | 0.297 | 0.017 | 0.041 | 0.002 | 0.019 | 0.028 | 0.004 | 0.0047 | | |
| 15-9 Tc Ts | 284354 | 61 146 | 67 834 70 134 | 35 | 0.90 | 0.073 | 1.20 | 0.010 | 0.004 | 0.020 | 0.0030 | 0.012 | 0.330 | 0.030 | 0.044 | 0.002 | 0.020 | 0.020 | 0.008 | 0.0059 | | |
| 39-15 Tc Ts | 297506 | 69 960 | 76 463 79 095 | 34 | 0.91 | 0.090 | 1.15 | 0.013 | 0.004 | 0.020 | 0.0030 | 0.009 | 0.264 | 0.025 | 0.028 | 0.003 | 0.022 | 0.028 | 0.007 | 0.0065 | | |
| 16-21 Tc Ts | 297507 | 66 716 | 72 821 78 436 | 35 | 0.91 | 0.073 | 1.17 | 0.012 | 0.004 | 0.020 | 0.0040 | 0.008 | 0.260 | 0.030 | 0.034 | 0.002 | 0.011 | 0.023 | 0.005 | 0.0054 | | |
| 52-22 Tc Ts | 297518 | 66 355 | 74 480 79 119 | 34 | 0.89 | 0.074 | 1.19 | 0.015 | 0.005 | 0.020 | 0.0030 | 0.009 | 0.229 | 0.031 | 0.034 | 0.002 | 0.022 | 0.028 | 0.005 | 0.0064 | | |

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| CERTIFICAMOS QUE LA TUBERIA AQUÍ DESCRITA CUMPLE Y HA SIDO FABRICADA, MUESTREADA, PROBADA E INSPECCIONADA DE ACUERDO CON LOS REQUISITOS APLICABLES DE LA ESPECIFICACION: | 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 |  <p>931</p> <p>ING. LUIS ALFONSO DE LOS SANTOS RIVERA SUPERVISOR DE LABORATORIO METALURGICO METALLURGICAL LABORATORY SUPERVISOR</p> |
| ASTM A53 | . | |
| . | . | |
| . | . | |