



MAQUINADOS DE ACEROS FORJADOS

CALLE SIN NOMBRE ESQ. RIO HUAYAPANGIO MZ. 2 LOTE 55 COLONIA FUIDO DEL SOCORRO

CIUDADALIZCALLI EDO DE MEX. CP. 54740

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| | | | | | |
|------------------------|-----------------------------------|----------------|------------------------|-----------|----------|
| CERTIFICADO DE CALIDAD | | CERTIFICADO No | | 1258 | |
| | | FECHA | | 02-Jul-09 | |
| CLIENTE | PLESA ANAHUAC Y CIAS S.A. DE C.V. | | No. DE ORDEN DE COMPRA | 6540 | REF 2050 |

| | | | |
|------------------|---|---------|--|
| ESPECIFICACIONES | ASTM A 105N - C3 ASME SA105N/NACE-MR-01-75-03 | PROCESO | FORGED/ROLLED 1150-1200 GRADES CELS US |
|------------------|---|---------|--|

| | | | |
|-----------------|--|---------------------|--|
| NORMAS Y GRADOS | ASME boiler and pressure Vesse SECC 1, Code Part A, Edition 2004 | TRATAMIENTO TERMICO | NORMALIZED 900 GRADES CELSIUS AND ALLOWED TO COOL IN STILL AIR |
|-----------------|--|---------------------|--|

| PARTIDA | CANTIDAD | DESCRIPCION DEL PRODUCTO | NORMAS APLICABLES | MEDIDA | COLADA |
|---------|----------|-------------------------------|--------------------|--------|-------------|
| 01 | 20 | BRIDA 4 C THD 150# RF | ASTM A-105-05 | 2" | 3136 |
| 02 | 20 | BRIDA A C THD 150# RF | ASME SA-105-05 | 2-1/2" | 1268 - 3264 |
| 03 | 50 | BRIDA A.C.S.O 150# RF | ASME B16.5 | 2 | 8936 |
| 04 | 6 | BRIDA A.C.S.O 800# RF | NACE MR-0175-03/05 | 3" | JER |
| 05 | 25 | BRIDA A.C.S.W SCH-STD 150# RF | | 1" | HHW |

PRUEBAS MECANICAS

| COLADA | RUPTURA (P.S.I.) | CEDENCIA (P.S.I.) | ELONGACION 2% | REDUCCION DE AREA % | DUREZA HB |
|-------------|------------------|-------------------|---------------|---------------------|-----------|
| 3136 | 85.254 | 43.564 | 26 | 35 | 85 |
| 1268 - 3264 | 85.254 | 43.564 | 26 | 39 | 85 |
| 8936 | 85.254 | 43.564 | 26 | 35 | 85 |
| JER | 79.995 | 49.995 | 27 | 42 | 84.0 |
| HHW | 83.027 | 48.996 | 28 | 38 | 84.0 |

% COMPOSICION QUIMICA

| COLADA | C | Mn | Si | P | S | Cr | Ni | Mo | Cu | SN | Al | Nb | V | Ti | Co | As | Sb | Hppm | Nppm | cEq | Cr+Mo | 1) | |
|-------------|-------|------|------|-------|-------|-------|-------|-------|-------|----|----|----|-------|----|----|----|----|------|------|-----|-------|----|------|
| 3136 | 0.3 | 0.85 | 0.19 | 0.007 | 0.015 | 0.08 | 0.08 | 0.027 | 0.2 | | | | 0.002 | | | | | | | | | | 0.39 |
| 1268 - 3264 | 0.3 | 0.85 | 0.19 | 0.007 | 0.015 | 0.05 | 0.08 | 0.027 | 0.2 | | | | 0.002 | | | | | | | | | | 0.39 |
| 8936 | 0.3 | 0.55 | 0.19 | 0.007 | 0.015 | 0.05 | 0.08 | 0.027 | 0.2 | | | | 0.002 | | | | | | | | | | 0.39 |
| JER | 0.190 | 0.30 | 0.22 | 0.005 | 0.018 | 0.050 | 0.100 | 0.025 | 0.250 | | | | 0.004 | | | | | | | | | | 0.44 |
| HHW | 0.003 | 0.51 | 0.24 | 0.007 | 0.002 | 0.009 | 0.012 | 0.027 | 0.025 | | | | 0.009 | | | | | | | | | | 0.07 |

NOTA 1) Cr+Ni+Mo+Cu

PNMG
ELABORO

03 JUL 2009

ENTREGADO
 APROBADO

CC-01 REV1.0

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