



MAQUINADOS DE ACEROS FORJADOS

CALLE SIN NOMBRE ESQ. RIO HUAYAPANGO MZ. 2 LOTE 55 COLONIA EJIDO DEL SOCORRO
CUAUTITLÁN IZCALLI EDO DE MEX, CP. 54740

TEL 5870-5003 Y 5870 8406 NEXTEL : 3538-5524 Email: mary.barrera@macerosforjados.com.mx E-mail: macerosforjados@hotmail.com

| | | | |
|------------------------|------------------------------------|-----------------------------|------|
| CERTIFICADO DE CALIDAD | | CERTIFICADO No. 1228 | |
| | | FECHA: 25-May-09 | |
| CLIENTE | PLESA ANAHUAC Y CIAS, S.A. DE C.V. | No. DE ORDEN DE COMPRA | 6449 |
| | | REF | 2035 |

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

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

| PARTIDA | CANTIDAD | DESCRIPCION DEL PRODUCTO | NORMAS APLICABLES | MEDIDA | COLADA |
|---------|----------|------------------------------|--------------------|--------|-------------|
| 01 | 25 | BRIDA A.C BLD 150# RF | ASTM A-105-05 | 2" | 1487 - 8936 |
| 02 | 25 | BRIDA A.C BLD 150# RF | ASME SA-105-05 | 3/4" | IHK |
| 03 | 13 | BRIDA A.C S.O 150# RF | ASME B16.5 | 3/4" | IHK |
| 04 | 20 | BRIDA A.C S.W SCH-XS 150# RF | NACE MR-0175-03/05 | 3/4" | IHK |

PRUEBAS MECANICAS

| COLADA | RUPTURA (P.S.I.) | CEDENCIA (P.S.I.) | ELONGACION 2% | REDUCCION DE AREA % | DUREZA HB |
|-------------|------------------|-------------------|---------------|---------------------|-----------|
| 1487 - 8936 | 83.027 | 48.996 | 26 | 38 | 84.0 |
| IHK | 83.027 | 48.996 | 26 | 38 | 84.0 |
| IHK | 83.027 | 48.996 | 26 | 38 | 84.0 |
| IHK | 83.027 | 48.996 | 26 | 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) |
|-------------|-------|------|------|-------|-------|-------|-------|-------|-------|----|----|----|-------|----|----|----|----|------|------|-----|-------|------|
| 1487 - 8936 | 0.003 | 0.81 | 0.24 | 0.007 | 0.002 | 0.009 | 0.012 | 0.027 | 0.026 | | | | 0.009 | | | | | | | | | 0.07 |
| IHK | 0.003 | 0.81 | 0.24 | 0.007 | 0.002 | 0.009 | 0.012 | 0.027 | 0.026 | | | | 0.009 | | | | | | | | | 0.07 |
| IHK | 0.003 | 0.81 | 0.24 | 0.007 | 0.002 | 0.009 | 0.012 | 0.027 | 0.026 | | | | 0.009 | | | | | | | | | 0.07 |
| IHK | 0.003 | 0.81 | 0.24 | 0.007 | 0.002 | 0.009 | 0.012 | 0.027 | 0.026 | | | | 0.009 | | | | | | | | | 0.07 |

NOTA 1) Cr+Ni+Mo+Cu

PNMG
ELABORO

25 MAY 2009

 APROBADO
ENTREGADO

CC-01 REV1.0