



MACEROSFORJADOS DE IZCALLI S.A. DE C.V.

Calle : Amapola mz 2 Num.Int11 Colonia Ejido el socorro C.P. : 5474
CUAUTITLAN IZCALLI EDO MEXICO

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CERTIFICADO DE CALIDAD

CERTIFICADO No.

0036

CLIENTE

PLESA ANAHUAC Y CIAS, S.A. DE C.V.

FECHA:

08-feb-12

No. DE ORDEN DE COMPRA

12205,12223

REF

00015

ESPECIFICACIONES

A 105N - ASTM A 105N - 03/ ASME SA105N/NACE-MR-01-75/03

PROCESO

FORGED/ROLLED 1150-1200 GRADES CELSIUS

NORMAS Y GRADOS

ASME BOILER AND PRESSURE VESSEL SECC II, 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 A.C. S.O. R.F. 150LBS DE | ASTM A-105-05 ASME SA-105-05 ASME B16.5 NACE MR-0175-03/05 ASME-SA-105-10 | 1-1/2" | JCC |
| 02 | 15 | BRIDA A.C. S.W. R.F. 150LBS DE | | 1" | HHW |
| 03 | 20 | BRIDA A.C. S.O. R.F. 150LBS DE | | 1" | HHW |
| 04 | 15 | BRIDA A.C. S.W. R.F. 150LBS DE | | 1" | HHW |

PRUEBAS MECANICAS

| COLADA | RUPTURA (P.S.I.) | CEDECENCIA (P.S.I.) | ELONGACION 2% | REDUCCION DE AREA % | DUREZA HB |
|--------|------------------|---------------------|---------------|---------------------|-----------|
| JCC | 85254 | 43564 | 26 | 39 | 85 |
| HHW | 82475 | 44622 | 31.1 | 59 | 84 |
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% COMPOSICION QUIMICA

| COLADA | C | MN | Si | P | S | CR | Ni | Mo | Cu | SN | AL | Nb | V | Ti | Co | AS | Sb | HPPM | NPPM | CEQ | CR+M O | 1) |
|--------|------|------|------|-------|-------|-------|-------|-------|-------|----|----|----|-------|----|----|----|----|------|------|-----|-----------|------|
| JCC | 0.31 | 0.87 | 0.25 | 0.006 | 0.013 | 0.050 | 0.08 | 0.021 | 0.230 | | | | 0.001 | | | | | | | | | 0.38 |
| HHW | 0.31 | 0.81 | 0.21 | 0.006 | 0.016 | 0.063 | 0.074 | 0.02 | 0.190 | | | | 0.003 | | | | | | | | | 0.35 |
| HHW | 0.31 | 0.81 | 0.21 | 0.006 | 0.016 | 0.063 | 0.074 | 0.02 | 0.190 | | | | 0.003 | | | | | | | | | 0.35 |
| HHW | 0.31 | 0.81 | 0.21 | 0.006 | 0.016 | 0.063 | 0.074 | 0.02 | 0.190 | | | | 0.003 | | | | | | | | | 0.35 |

MAQUINADOS DE
ACEROS FORJADOS

08 FEB 2012

NOTA 1) CR+Ni+Mo+Cu

PNMG
ELABORO

ENTREGADO

CC-01 REV1.0

APROBADO