



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. 799 | |
| | | FECHA: 11-sep-13 | |
| CLIENTE | PLESA ANAHUAC Y CIAS S.A. DE C.V. | No. DE ORDEN DE COMPRA | 16451 Y 16493 |
| | | REF | F-819 |

ESPECIFICACIONES

| | |
|--------------------------------------------------------|-------------------------------------------|
| A 105N - ASTM A 105N -03/ ASME SA105N/NACE-MR-01-75/09 | FORGED/ROLLED 1150-1200 GRADES FAHRENHEIT |
|--------------------------------------------------------|-------------------------------------------|

NORMAS Y GRADOS

TRATAMIENTO TERMICO

| ASME BOILER AND PRESSURE VESSEL SECC II, CODE PART A, EDITION 2010 | | NORMALIZED 900 GRADES FAHRENHEIT AND ALLOWED TO COOL IN STILL AIR | | | |
|--------------------------------------------------------------------|----------|-------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------|--------|
| PARTIDA | CANTIDAD | DESCRIPCION DEL PRODUCTO | NORMAS APLICABLES | MEDIDA | COLADA |
| 01 | 10 | BRIDA A.C. THD R.F. 150LBS 38MM | ASTM A-105-09 ASME SA-105-10 ASME B16.5 NACE MR-0175-09 ASME-SA-105-10 FULLY KILLED | 1-1/2" | JCC |
| 02 | 30 | BRIDA A-105 A.C. S.O RF DE 2" 150 LBS | | 2" | 8936 |
| 03 | 30 | BRIDA A.C. S.W C-80/XS R.F. 150LBS 51M | | 1" | 8936 |
| 04 | 10 | BRIDA A.C. S.W C-80/XS R.F. 300LBS 25M | | 3/4" | JLD |
| 05 | 5 | BRIDA A.C. S.W C-80/XS R.F. 300LBS 19M | | 1" | HHW |
| 06 | 10 | BRIDA A.C.W.N. C-XS/80 R.F. 150LBS 25M | | 1-1/2" | JCC |
| 07 | 10 | BRIDA A-105 A.C. BLD DE 1-1/2" 150 LBS | | | |

PRUEBAS MECANICAS

| COLADA | RUPTURA (P.S.I.) | CEDENCIA (P.S.I.) | ELONGACION 2% | REDUCCION DE AREA % | DUREZA HB |
|--------|------------------|-------------------|---------------|---------------------|-----------|
| JCC | 82475 | 44622 | 31 | 59 | 180 |
| 8936 | 85254 | 43564 | 29 | 39 | 157 |
| 8936 | 85254 | 43564 | 29 | 39 | 157 |
| JHD | 71670 | 50276 | 29 | 33 | 177 |
| JLP | 70050 | 50276 | 29 | 33 | 169 |
| HHW | 83575 | 45422 | 27 | 59 | 159 |
| JCC | 82475 | 44622 | 31 | 59 | 180 |

% 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 | 0.03 | 0.87 | 0.25 | 0.006 | 0.01 | 0.050 | 0.080 | 0.021 | 0.230 | | | 0.001 | 0.001 | | | | | | | | | 0.38 |
| 8936 | 0.18 | 0.87 | 0.25 | 0.006 | 0.01 | 0.050 | 0.080 | 0.021 | 0.230 | | | 0.001 | 0.001 | | | | | | | | | 0.38 |
| 8936 | 0.18 | 0.87 | 0.25 | 0.006 | 0.01 | 0.050 | 0.080 | 0.021 | 0.230 | | | 0.001 | 0.001 | | | | | | | | | 0.38 |
| JHD | 0.17 | 0.68 | 0.18 | 0.013 | 0.02 | 0.080 | 0.011 | 0.035 | 0.150 | | | 0.001 | 0.009 | | | | | | | | | 0.28 |
| JLP | 0.16 | 0.65 | 0.19 | 0.010 | 0.03 | 0.070 | 0.150 | 0.033 | 0.150 | | | 0.001 | 0.003 | | | | | | | | | 0.40 |
| HHW | 0.14 | 0.87 | 0.25 | 0.006 | 0.01 | 0.050 | 0.080 | 0.021 | 0.230 | | | 0.001 | 0.001 | | | | | | | | | 0.38 |
| JCC | 0.03 | 0.87 | 0.25 | 0.006 | 0.01 | 0.050 | 0.080 | 0.021 | 0.230 | | | 0.001 | 0.001 | | | | | | | | | 0.38 |

NOTA 1) CR+NI+MO+CU

CERTIFICAMOS QUE EL MATERIAL AQUÍ DESCRITO, CUMPLE CON TODOS LOS ESTANDARES DE CALIDAD MENCIONADOS. MATERIAL CALMADO GRANO FINO TRATADO CON CALCIO Y DESGASIFICADO AL VACIO ULTIMA EDICION.

Leslie Monserrath

ELABORO

Ing. Bernardino B. Aguas

CC-01 REV1.0

MAQUINADOS DE
ACEROS FORJADOS
ENTREGADO