

**CERTIFICADO DE CALIDAD/QUALITY CERTIFICATE**

EN 10 204 3.1 B


|                                   |                             |                                       |                      |
|-----------------------------------|-----------------------------|---------------------------------------|----------------------|
| <b>Factura / Invoice:</b>         | <b>Cantidad / Quantity:</b> | <b>Certificado / Certificate:</b>     | <b>Fecha / Date:</b> |
| 123253                            | 150.00                      | EE123253/126                          | 12/Abr/07            |
| <b>Descripción / Description:</b> |                             | <b>Cliente / Customer:</b>            |                      |
| CODO 90o (1") S.W. L-3000 #       |                             | 7 PLESA ANAHUAC Y CIAS., S.A. DE C.V. |                      |


Válvulas Worcester de México, S.A. de C.V., certifica que el material indicado cumple con nuestras especificaciones como se describe en nuestros catálogos, hojas de especificación, dibujos y en otra literatura. Los productos, partes, materiales indicados aquí han sido comprados, fabricados, inspeccionados, probados de acuerdo con estas especificaciones, a nuestro sistema de calidad ISO 9001, ASME/ANSI B16.34-1998 inciso (7., ASME / ANSI B16 11-1996, MSS SP-83-1995 y NACE MR-01-75. Material de acuerdo a ASTM ultima edición (libros 2003) ASME II Ed.2001 al 2002.

Válvulas Worcester de México, S.A. de C.V., hereby certifies that the material supplied is in accordance with our specifications as describe in our catalog, specification sheets, drawings, and other literature. The products, parts and materials identified herein have been purchased, manufactured, inspected and tested in accordance with these specifications, our ISO 9001 quality assurance program , ASME/ANSI B16.34-1998 part (7., ASME / ANSI B16 11-1996, MSSP SP-83-1995 and NACE MR-01-75. Material according to: ASTM last edition (2003 books) ASME II Ed. 2001 add. 02.

|                 |                   |
|-----------------|-------------------|
| <b>MATERIAL</b> | <b>No. COLADA</b> |
| <b>MATERIAL</b> | <b>No. HEAT</b>   |
| ASTM A105       | NXCC              |
| X               | -                 |
| X               | -                 |
| X               | -                 |

| ANALISIS QUIMICO / CHEMICAL ANALYSIS |       |       |       |       |       |       |       |       |       |       |      |       | PROPIEDADES MECANICAS / MECHANICAL PROPERTIES |                                      |              |              |                                     |                    |
|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|---|--------------------------------------|--------------|--------------|-------------------------------------|--------------------|
| COLADA<br>HEAT                       | C %   | Mn %  | Si %  | P %   | S %   | Cr %  | Mo %  | Ni %  | Cu %  | V %   | Fe % | Al %  | RESISTENCIA A LA TENSION<br>TENSILE STRENGTH  | LIMITE DE CEDENCIA<br>YIELD STRENGTH | % ELONGACION | % ELONGACION | REDUCCION DE AREA<br>REDUCTION AREA | DUREZA<br>HARDNESS |
| NXCC                                 | 0.190 | 0.870 | 0.190 | 0.016 | 0.012 | 0.120 | 0.010 | 0.060 | 0.160 | 0.000 | X    | 0.015 | 546 N/mm <sup>2</sup>                         | 344 N/mm <sup>2</sup>                | 28.300       |              | 63.900                              | 174 HB             |
| -                                    | X     | X     | X     | X     | X     | X     | X     | X     | X     | X     | X    | X     | X   | X                                    | X            |              | X                                   | X                  |
| -                                    | X     | X     | X     | X     | X     | X     | X     | X     | X     | X     | X    | X     | X   | X                                    | X            |              | X                                   | X                  |
| -                                    | X     | X     | X     | X     | X     | X     | X     | X     | X     | X     | X    | X     | X   | X                                    | X            |              | X                                   | X                  |

Elaboro / Elaborated by:   
 Jose Luis Perez C.  
 Metrologista

Aprobo / Aprobado by:   
 Ing. Saturnino Padilla Becerra.  
 Gerente de Aseguramiento de Calidad  
 Quality Ass. Manager.