



WALWORTH

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Industrial de Válvulas, S.A. de C.V.

Industria Ite 16 S/N Fracc. Industrial el Trébol de Tepotzotlán, Estado de México, México C.P. 54610

CERTIFICATE OF MATERIALS & TEST REPORT (CMTR) (CERTIFICADO DE CALIDAD DE MATERIALES Y REPORTE DE PRUEBAS CMTR) ACCORDING TO EN 10204 TYPE 3.1

No. código interno (Product Code Nr.): **ER060ADE1MRN1BY**

No. Serie (Serial Number): **16R3050**

Fecha (Date): **November 25, 2016**

No. De Tag (Tag Number):

Cilentes (Customer):

No Pedido del Cliente (Customer PO Nr.):

Partida (Customer Item):

Pedido Interno No (Walworth Sales Nr.):

Partida (Item):

| | | | | | |
|-----------------------------------|--|-------------------------|-----------|-----------------------------|--------|
| Linea de producto (Product line): | Cast Iron / Hierro fundido | Extremos (Ends): | FF | Operación (Operation): | N/A |
| Tipo de válvula (Type of valve): | Check Type Swing/Retencion Tipo Columpio | Cuerpo (Body): | GRAY IRON | Anexo No. (Annex Nr.): | 000000 |
| Diámetro (Nominal diameter): | 6 | Interiores (Trim): | #E1 (BCE) | Otros (Other requirements): | |
| Presión clase (Pressure class): | 125 | Figura No (Figure Nr.): | FIG W928 | | |

COMPOSICION QUIMICA EN % (CHEMICAL COMPOSITION %)

| Parte (Component) | Material (Material) | Colada (Heat) | % P | % S | % | % | % | % | % | % | % | % | % | % | % | % | % | % | % |
|-------------------|---------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| CUERPO (BODY) | ASTM_A_126_GR_B | C59A | 0.062 | 0.056 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| DISCO 1 (DISC 1) | ASTM_A_126_GR_B | C555 | 0.050 | 0.065 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| TAPA 1 (COVER 1) | ASTM_A_126_GR_B | C54W | 0.045 | 0.062 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

PROPIEDADES MECANICAS (MECHANICAL TESTING)

| Parte (Component) | Colada (Heat) | Condición de TT Normalizado & revenido Heat Treatment condition (Normalized & tempered) | Cedencia (Yield strength) (Kpsi) | Tensión (Tensile strength) (Kpsi) | Alar. En 2" (Elong. In 2") (% min) | Reduccion de area (Reduction of area) (% min) | Dureza (Hardness) (Bhn) | | Prueba Impacto (Impact Test) (Joules) | | | | | |
|-------------------|---------------|---|----------------------------------|-----------------------------------|------------------------------------|---|-------------------------|-----|---------------------------------------|-----|-----|-----|---|---|
| | | | | | | | 1st | 2nd | 1st | 2nd | 3rd | AVG | | |
| CUERPO (BODY) | C59A | NO APLICA NOT APPLICABLE | 0.0000 | 39.7300 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DISCO 1 (DISC 1) | C555 | NO APLICA NOT APPLICABLE | 0.0000 | 37.8450 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TAPA 1 (COVER 1) | C54W | NO APLICA NOT APPLICABLE | 0.0000 | 36.9750 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

PRUEBAS DE PRESIÓN DE ACUERDO CON MSS SP 71 (PRESSURE TEST IN ACCORDANCE WITH MSS SP 71)

| TIPO DE PRUEBA (Type of test) | PRESION (Pressure) (Psi) | TIEMPO (Duration) (min) | RESULTADO (Result) | TIPO DE PRUEBA (Type of test) | RESULTADO (Result) |
|---|--------------------------|-------------------------|---------------------|-------------------------------|--------------------|
| HIDROSTATICA DE CASCO (HYDROSTATIC SHELL) | 350 | 0.5 min | ACEPTADO (ACCEPTED) | | |
| PRUEBA HIDROSTATICA SELLO1 (HIGH PRESSURE CLOSURE SIDE 1) | 200 | 0.5 min | ACEPTADO (ACCEPTED) | | |



Certificamos que este producto ha sido diseñado, fabricado y probado de acuerdo con nuestro sistema de administración de calidad y con los requisitos establecidos en una o más de las siguientes normas en su última edición. (We hereby certify this product has been designed, manufactured and tested according to our quality management system and requirements stated in one or more of the following standards on their latest edition).

DESIGN AND TEST IN ACCORDANCE WITH:
DESIGN IN ACCORDANCE WITH MSS SP 71 (IRON SWING CHECK)
MSS SP 71- GRAY IRON SWING CHECK VALVES, FLANGED AND THREADED ENDS

Quality Assurance Department
Yolanda Ponciano Montoya
FAC-24 Rev. Original.