



WALWORTH
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Industrial de Válvulas, S.A. de C.V.

Industria Ite 16 S/N Fracc. Industrial el Trébol de
Tepotztlán, 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.): ER080ADE1MRN1BY

No. Serie (Serial Number): 16R2190

Fecha (Date): July 4, 2016

No. De Tag (Tag Number): _____

Clientes (Customer): PLESA ANAHUAC Y CIAS, S.A DE C.V.

No Pedido del Cliente (Customer PO Nr.): 22817

Partida (Customer Item): 30 Pedido Interno No (Walworth Sales Nr.): D000060182

Partida (Item): 30

| | | | | | |
|-----------------------------------|------------------|-------------------------|-----------|-----------------------------|-----|
| Linea de producto (Product line): | Cast Iron | Extremos (Ends): | FF | Operación (Operation): | N/A |
| Tipo de válvula (Type of valve): | Check Type Swing | Cuerpo (Shell): | GRAY IRON | Otros (Other requirements): | |
| Diámetro (Nominal diameter): | 8 | Interiores (Trim): | #E1 (BCE) | | |
| 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 | C58T | 0.057 | 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 |
| DISCO 1 (DISC 1) | ASTM_A_126_GR_B | C54H | 0.049 | 0.055 | 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 | C59D | 0.050 | 0.053 | 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) | C58T | NO APLICA NOT APPLICABLE | 0.0000 | 38.7150 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DISCO 1 (DISC 1) | C54H | NO APLICA NOT APPLICABLE | 0.0000 | 36.5400 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TAPA 1 (COVER 1) | C59D | NO APLICA NOT APPLICABLE | 0.0000 | 41.7600 | 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 SELLO 1 (HIGH PRESSURE CLOSURE SIDE 1) | 200 | 0.5 min | ACEPTADO (ACCEPTED) | | |
| HIDROSTATICA DE CASCO (HYDROSTATIC SHELL) | 350 | 0.5 min | ACEPTADO (ACCEPTED) | | |
| PRUEBA HIDROSTATICA SELLO 1 (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).

- API 599 METAL PLUG VALVES - FLANGED, THREADED AND WELDING
- API 591 PROCESS VALVE QUALIFICATION PROCEDURE
- API 623 STEEL GLOBE VALVES - FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
- API 624 TYPE TESTING OF RISING STEM VALVES EQUIPPED WITH GRAPHITE PACKING FOR FUGITIVE EMISSIONS
- ANSI B16-10 FACE TO FACE AND END TO END DIMENSIONS OF VALVES
- ANSI B16-11 FORGED FITTINGS, SOCKET - WELDING AND THREADED
- ANSI/NACE MR0175/ISO 15156-1 MATERIALS FOR USE IN H₂S-CONTAINING ENVIRONMENTS IN OIL AND GAS PRODUCTION
- NACE MR0103 MATERIAL RESISTANT TO SULFIDE STRESS CRACKING IN CORROSIIVE PETROLIUEUM ENVIRONMENT
- MSS-SP61 PRESSURE TESTING OF STEEL VALVES

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