



WALWORTH

Industrial de Válvulas, S.A. de C.V.

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

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

No. código interno (Product Code Nr.): **AG040GA08MA2A1BG**

No. Serie (Serial Number): **V148G1079**

Fecha (Date): **September 19, 2018**

No. De Tag (Tag Number):

Clientes (Customer):

No Pedido del Cliente (Customer PO Nr.):

Partida (Customer Item):

Pedido Interno No (Walworth Sales Nr.):

Partida (Item):

Línea de producto (Product line):

Extremos (Ends):

Tipo de válvula (Type of valve):

Cuerpo (Shell):

Diámetro (Nominal diameter):

Interiores (Trim):

Presión clase (Pressure class):

Figura No (Figure Nr.):

RF Series A:

WCB

#08 (UT)

FIG 5281

Operación (Operation):

Handwheel

Otros (Other requirements):

COMPOSICION QUIMICA EN % (CHEMICAL COMPOSITION %)

Parte (Component)	Material (Material)	Colada (Heat)	% C	% Mn	% P	% S	% Si	% Ni	% Cr	% Mo	% Cu	% V	%	%	%	%	%	%
BONETE (BONNET)	ASTM_A_216_GR_WCB	K6973	0.219	0.779	0.030	0.029	0.389	0.053	0.084	0.010	0.045	0.001	0.000	0.000	0.000	0.000	0.000	0.000
CUERPO (BODY)	ASTM_A_216_GR_WCB	K7013	0.192	0.782	0.035	0.020	0.415	0.046	0.057	0.017	0.038	0.001	0.000	0.000	0.000	0.000	0.000	0.000
DISCO 1 (DISC 1)	ASTM_A_105N	G1116	0.191	0.880	0.030	0.030	0.280	0.083	0.062	0.016	0.074	0.001	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)	1st	2nd	1st	2nd	3rd	AVG
BONETE (BONNET)	K6973	(910-940) °C, NORMALIZADO (RECOCIDO) 850 °C ENFRIAMIENTO CON AIRE AIR COOL	47.0000	71.0000	27	58	161	0	0	0	0	0	0
CUERPO (BODY)	K7013	(910-940) °C, NORMALIZADO (RECOCIDO) 850 °C ENFRIAMIENTO CON AIRE AIR COOL	43.0000	85.0000	43	46	153	0	0	0	0	0	0
DISCO 1 (DISC 1)	G1116	NORMALIZADO 927 °C-943 °C ENFRIADO EN AIRE 820 °C, NORMALIZE (ANNEAL) 821 °C FURNACE COOL	43.5000	75.6900	32	58	167	162	0	0	0	0	0

PRUEBAS DE PRESION DE ACUERDO CON API 598 (PRESSURE TEST IN ACCORDANCE WITH API 598)

TIPO DE PRUEBA (Type of test)	PRESION (Pressure) (Psi)	TIEMPO (Duration) (min)	RESULTADO (Result)	TIPO DE PRUEBA (Type of test)	RESULTADO (Result)
HIESTROSTATICA DE CASCO (HYDROSTATIC SHELL)	1125	1 min	ACEPTADO (ACCEPTED)		
HIESTROSTATICA DE CASQUILLO (HYDROSTATIC BACK SEAT)	1125	1 min	ACEPTADO (ACCEPTED)		
PRUEBA HIESTROSTATICA SELLO 1 (HIGH PRESSURE SIDE 1)	815	1 min	ACEPTADO (ACCEPTED)		
PRUEBA NEUMATICA SELLO 1 (LOW PRESSURE SIDE 1)	80	1 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 598 PRESSURE TESTING OF STEEL VALVES THROUGHOUT AND WELDING
API 603 STEEL GLOBE VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
API 604 TYPE TESTING OF RISING STEM VALVES EQUIPPED WITH GRAPHITE PACKING FOR FUGITIVE EMISSIONS
ANSI B16.1 FORGED STEEL FLANGES, SOCKETS, WELDING AND THREADED
ANSI B16.3 FORGED STEEL FLANGES, SOCKETS, WELDING AND THREADED
ANSI B16.4 FORGED STEEL GLOBE VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.5 WELDED END STEEL VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.6 WELDED END STEEL VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.7 WELDED END STEEL VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.8 WELDED END STEEL VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.9 WELDED END STEEL VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.10 WELDED END STEEL VALVES-FLANGED AND BUTT-WELDING ENDS, BOLTED BONNETS
ANSI B16.11 MATERIALS FOR USE IN H2S-CONTAINING ENVIRONMENTS IN OIL AND GAS PRODUCTION
ANSI B16.12 PRESSURE TESTING OF STEEL VALVES
ANSI B16.13 PRESSURE TESTING OF STEEL VALVES
ANSI B16.14 PRESSURE TESTING OF STEEL VALVES
ANSI B16.15 PRESSURE TESTING OF STEEL VALVES
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ANSI B16.98 PRESSURE TESTING OF STEEL VALVES
ANSI B16.99 PRESSURE TESTING OF STEEL VALVES
ANSI B16.100 PRESSURE TESTING OF STEEL VALVES

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FAC-24 Rev. Original.