



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

Industria Ite 16 S/N Fracc. Industrial el Trébol de  
Tepetzollán, 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.): **AC080BA08MA2A1BG**

No. Serie (Serial Number): **V148C7597**

Fecha (Date): **March 9, 2016**

No. De Tag (Tag Number):

Cientes (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 STEEL	Extremos (Ends):	RAISED FACE (RF TYPE "A")	Operación (Operation):	HANDWHEEL
Tipo de válvula (Type of valve):	GATE OS & Y	Cuerpo (Shell):	WCB	Otros (Other requirements):	
Diámetro (Nominal diameter):	8	Interiores (Trim):	#08 UT		
Presión clase (Pressure class):	150	Figura No (Figure Nr.):	FIG 5202		

**COMPOSICION QUIMICA EN % (CHEMICAL COMPOSITION %)**

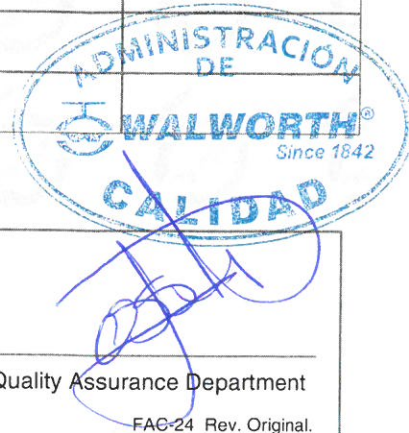
Parte (Component)	Material (Material)	Colada (Heat)	% C	% Mn	% P	% S	% Si	% Ni	% Cr	% Mo	% Cu	% V	%	%	%	%	%	%	%
BONETE (BONNET)	ASTM_A_216_GR_WCB	K5662	0.189	0.853	0.020	0.028	0.434	0.036	0.074	0.008	0.032	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CUERPO (BODY)	ASTM_A_216_GR_WCB	K5384	0.190	0.950	0.021	0.008	0.470	0.020	0.180	0.010	0.030	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DISCO 1 (DISC 1)	ASTM_A_216_GR_WCB	K5403	0.190	0.890	0.022	0.013	0.440	0.023	0.210	0.023	0.026	0.008	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 (Tensile strength) (Kpsi)	Tensión (Yield 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	
BONETE (BONNET)	K5662	(910-940) °C, NORMALIZADO ( RECOCIDO ) 650 °C ENFRIAMIENTO CON AIRE (910-940) °C, NORMALIZE ( ANNEAL ) 650 °C AIR COOL	46.2550	75.9800	45	53	161	0	0	0	0	0	0
CUERPO (BODY)	K5384	(910-940) °C, NORMALIZADO ( RECOCIDO ) 650 °C ENFRIAMIENTO CON AIRE (910-940) °C, NORMALIZE ( ANNEAL ) 650 °C AIR COOL	46.4000	74.6800	32	52	151	0	0	0	0	0	
DISCO 1 (DISC 1)	K5403	(910-940) °C, NORMALIZADO ( RECOCIDO ) 650 °C ENFRIAMIENTO CON AIRE (910-940) °C, NORMALIZE ( ANNEAL ) 650 °C AIR COOL	45.6750	75.4000	31	52	151	0	0	0	0	0	

**PRUEBAS DE PRESIÓN 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)
HIDROSTATICA DE CASCO (HYDROSTATIC SHELL)	450	2 min	ACEPTADO (ACCEPTED)		
HIDROSTATICA DE CASQUILLO (HYDROSTATIC BACK SEAT)	450	2 min	ACEPTADO (ACCEPTED)		
PRUEBA HIDROSTATICA SELLO 1 (HIGH PRESSURE CLOSURE SIDE 1)	315	2 min	ACEPTADO (ACCEPTED)		
PRUEBA HIDROSTATICA SELLO 2 (HIGH PRESSURE CLOSURE SIDE 2)	315	2 min	ACEPTADO (ACCEPTED)		
PRUEBA NEUMATICA SELLO 1 (LOW PRESSURE CLOSURE SIDE 1)	80	2 min	ACEPTADO (ACCEPTED)		
PRUEBA NEUMATICA SELLO 2 (LOW PRESSURE CLOSURE SIDE 2)	80	2 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 IN ACCORDANCE WITH API 600 (CAST STEEL GATE, OS & YOKE)  
API 598 METAL FLANG 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 H<sub>2</sub>S-CONTAINING ENVIRONMENTS IN OIL AND GAS PRODUCTION  
NACE MR0103 MATERIAL RESISTANT TO SULFIDE STRESS CRACKING IN CORROSIVE PETROLEUM ENVIRONMENT  
MSS-5191 PRESSURE TESTING OF STEEL VALVES

Quality Assurance Department

FAC-24 Rev. Original.