



Industrial de Válvulas, S.A. de C.V.

Industria Ite 16 S/N Fracc. Industrial el Trébol de Tepetzotlán, 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.): **BC010BA08AA2SBA1BG**

No. Lote (Batch Number): **AA00063129**

Fecha (Date): **May 26, 2016**

No. De Tag (Tag Number): **N/A**

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

No Pedido del Cliente (Customer PO Nr.): **23573**

Partida (Customer Item): **3** Pedido Interno No (Walworth Sales Nr.): **D000060299**

Cantidad (Qty): **1** Partida (Item): **3**

Línea de producto (Product line):	<b>FORGED STEEL</b>	Extremos (Ends):	<b>RAISED FACE (RF TYPE "A")</b>	Operación (Operation):	<b>HANDWHEEL</b>
Tipo de válvula (Type of valve):	<b>GATE</b>	Cuerpo (Shell):	<b>A105N</b>	Otros (Other requirements):	
Diámetro (Nominal diameter):	<b>1</b>	Interiores (Trim):	<b>#08 (UT)</b>		
Presión clase (Pressure class):	<b>150</b>	Figura No (Figure Nr.):	<b>FIG 9515</b>		

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

Parte (Component)	Material (Material)	Colada (Heat)	% C	% Mn	% P	% S	% Si	% Ni	% Cr	% Mo	% Cu	% V	%	%	%	%	%	%
<b>CUERPO (BODY)</b>	<b>ASTM_A_105N</b>	<b>C27</b>	0.183	0.981	0.021	0.023	0.214	0.044	0.056	0.021	0.059	0.001	0.000	0.000	0.000	0.000	0.000	0.000
<b>YUGO</b>	<b>ASTM_A_105N</b>	<b>C27</b>	0.183	0.981	0.021	0.023	0.214	0.044	0.056	0.021	0.059	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)		Prueba Impacto (Impact Test) (Joules)			
							1st	2nd	1st	2nd	3rd	AVG
<b>CUERPO (BODY)</b>	<b>C27</b>	NORMALIZADO 927 °C-843 °C ENFRIADO EN AIRE 920 °C, NORMALIZE ( ANNEAL ) 621 °C FURNACE COOL	45.2400	92.9450	42	54	159	159	0	0	0	0
<b>YUGO</b>	<b>C27</b>	NORMALIZADO 927 °C-843 °C ENFRIADO EN AIRE 920 °C, NORMALIZE ( ANNEAL ) 621 °C FURNACE COOL	45.2400	92.9450	42	54	159	159	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)
<b>HIDROSTATICA DE CASCO (HYDROSTATIC SHELL)</b>	450	0.25 min	ACEPTADO (ACCEPTED)		
<b>HIDROSTATICA DE CASQUILLO (HYDROSTATIC BACK SEAT)</b>	450	0.25 min	ACEPTADO (ACCEPTED)		
<b>PRUEBA NEUMATICA SELLO 1 (LOW PRESSURE CLOSURE SIDE 1)</b>	80	0.25 min	ACEPTADO (ACCEPTED)		
<b>PRUEBA NEUMATICA SELLO 2 (LOW PRESSURE CLOSURE SIDE 2)</b>	80	0.25 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 602 ( FORGED STEEL & STAINLESS STEEL GATE )  
 API 598 METAL PLUG VALVES - FLANGED, THREADED AND WELDING  
 API 591 PROCESS VALVE QUALIFICATION PROCEDURE  
 API 622 STEEL GLOBE VALVES - FLANGED AND BUTTWELDING ENDS, BOLTED BONNETS  
 API 594 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  
 ANSINONE API 675 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-SP-91 PRESSURE TESTING OF STEEL VALVES

Quality Assurance Department  
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