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 Certificate No:
 LR2002499TA

 Issue Date:
 24/03/2020

 Expiry Date:
 23/03/2025

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer SWAGELOK PRODUCT COMPLIANCE GROUP

Address 29500 SOLON ROAD, Solon, OH, 44139-3492, United States of America

 Place of Production
 SWAGELOK PRODUCT COMPLIANCE GROUP

29500 SOLON ROAD, Solon, OH, 44139-3492, United States of America

Type Valves - General

Description Process Interface Valves:

VB03 - 1, 1-1/2 and 2 inches (25, 38 and 50 mm) VB04 - 3/8, 1/2, and 3/4 inches (9.5, 14 and 20 mm)

Trade Name Swagelok VB Series

Application Process Instrumentation and piping products to enable smooth transition from

process piping to instrumentation.

Specified Standard ASME B 31.3 - 2018

LR Rules and Regulations for the Classification of Naval Ships 2020 LR Rules and Regulations for the Classification of Ships 2019

LR Rules and Regulations for Offshore Units 2020

Ratings ASME B 16.5 Flange rating -Class 150, 300, 600, 900, 1500 and 2500

Temperature -58 to 400 °F(-50 to 204 °C) for Stainless steel and duplex valve

assemblies

Temperature -50 to 400 °F (-46 to 204 °C) for carbon steel valve assemblies

Gopal Nair

Americas Design Appraisal Manager to Lloyd's Register Quality Assurance Inc A member of the Lloyd's Register group

1330 Enclave Parkway, Houston, Texas, 77077, United States of America

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Additional Tests

Report SER-2006-01-039 VB 04 burst

test

Report SER-2006-01-040 VB 03 burst

test

Lloyd's Register Fire test certificate EDB 500486 /1 1 /₂ inch -1500# - 7/02/1995 Lloyd's Register Fire test certificate EDB 500543/11- 13 /₁₆" -5K API 6A - 4/05/1995 Lloyd's Register Fire test certificate EDB 501782/1 1 /₂ inch 600# - 7/12/1995 Lloyd's Register Fire test certificate EDB 601944/1 1 /₂ inch 150# - 21/11/1996 Lloyd's Register Fire test certificate EBD 601887/1 1 /₂ inch 150# - 30/09/1996 Lloyd's Register Fire test certificate EBD 601887/3 1 /₂ inch 600# - 30/09/1996 Lloyd's Register Fire test certificate EBD 601887/4 1 /₂ inch 1500# - 30/09/1996 Lloyd's Register Fire test certificate EBD 601887/5 2 inch API 5K - 30/09/1996 Lloyd's Register Fire test certificate EBD 9801431/1 1 inch 150 # - 15/05/1998 Lloyd's Register Fire test certificate EBD 9801687/2-1 1 /₂-inch 1500# - 18/09/1998 Lloyd's Register Fire test certificate GLS 0050341/1 1 /₂ inch 600# - 6/12/2000 Lloyd's Register Fire test certificate GLS 0103033/1 1 /₂ inch 1500# - 30/01/2001 Lloyd's Register Fire test certificate EDB 9801687/1 1 /₂ inch 600# - 6/02/2001 Lloyd's Register Fire test certificate EDB 9801687/1 1 /₂ inch 600# - 6/02/2001

Additional Tests

- 1. VB03 and VB04 valves are intended to enable smooth transition from process piping to instrumentation and applications are limited to such process instrumentation, tapping, block and bleed, sampling etc.
- 2. Where intended for any other applications consult the local Lloyd's Register design support or plan verification offices with product literature information.
- 3. Valve ratings will be governed by material class of flange rating as per ASME B 16.5
- 4. Where fire tested valves are required for process, the seats are to be made out of Peek with body material combination of ASTM 182 F316/F316L or ASTM 350 LF2 or ASTM F182 F51 as stated in the product literature.
- 5. Where end fittings employ compression fittings, they are to be in accordance with Lloyd's Register type approved certificate 01/00062 or extension of the referenced certificate.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register Quality Assurance Inc of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. LR2002499TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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