Certificate No: LR2018974TA
Issue Date: 26/04/2020
Expiry Date: 25/04/2025

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	**Ace Valve Co., Ltd.**
Address	1-12, Somang-gil, Juchon-myeon, Gimhae-si, Gyeongnam, 50969, Korea, Republic of
Place of Production	Ace Valve Co., Ltd. 1-12, Somang-gil, Juchon-myeon, Gimhae-si, Gyeongnam, 50969, Korea, Republic of
Type	Butterfly Valves
Description	AV series: AV-C type (Concentric rubber seat) AV-T type (Concentric Teflon seat) AV-O type (Double eccentric NBR/EPDM/VITON seat) AV-H type (Double eccentric Teflon/rubber seat) Wafer/semi-lug/ full-lug/ flange type resilient seat butterfly valve
Trade Name	AV series
Application	Marine Piping Systems:- • Cargo handling systems in oil tankers • Water ballast systems • Tank cleaning systems • Cargo tank venting and inert gas systems • Bilge and drainage systems • Sea water systems

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- Fresh water systems
- Fuel oil and diesel oil systems
- Other piping systems where applicable

Note : see OTHER CONDITIONS below.

Specified Standard

Lloyd's Register Rules and Regulations for Classification of Ships, Part 5, Chapter 12, Section 5, July 2019

Ratings

Nominal size (mm): 50 to 2000 (AV-C type)
50 to 1000 (AV-T type)
50 to 800 (AV-O & AV-H types)

Maximum working pressure (MPa) : 1.0 (AV-C & AV-T Type)
1.6 (AV-C & AV-H type)

Specified pipe flange design:
JIS 5K/10K, ANSI 150psi, DIN PN6/PN10 (AV-C & AV-T type)
JIS 10K/16K, ANSI 150psi, DIN PN10/PN16 (AV-O & AV-H type)

Other Conditions

Where the valves are intended to be installed on a ship classed with LR, their positions are to be indicated on any plans of piping systems and arrangements which are required to be submitted for classification approval and final acceptance of their applications of their applications to be confirmed thereon, and the following conditions should also be observed:-

1) The valves are to be made, installed and tested in accordance with Part 5, Chapter 12 of the Rules and Regulations for the Classification of Ships.

2) In all cases the materials are to be suitable for their intended service conditions.

3) The valves for ship-side applications are to be installed such that the section of piping immediately inboard of the valve can be removed without affecting the watertight integrity of the hull, and the wafer type and semi-lug types not to be used for such applications.

4) The valves are not to be used in spaces where leakage or failure caused by fire could result in fire spread, flooding or the loss of an essential service.

5) The valves are not to be used for the services in which they are required to be capable of being closed remotely in the event of fire.

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6) The valve is not to be used for bilge services, except i) bilge suctions for holds in bulk carriers when fitted in a pipe tunnel in association with a non-return valve and similar low fire risk spaces and ii) as pump suction valves from main bilge line where the valve is located in the immediate vicinity of the pump and fitted in conjunction with a metal non-return valve on the bilge main side of the butterfly valve (cargo ships only).

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 Asia of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document No. LR2018974TA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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