Certificate No: LR2560602TA
Issue Date: 26/04/2025
Expiry Date: 25/04/2030

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, South Korea

Type Butterfly Valves

Description
AV series:
AV-C type (Concentric rubber seat- Pinned & Pinless type)
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
- Fresh water systems
- Fuel oil and diesel oil systems
- Other piping systems where applicable

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Da-Young Kang
Engineering Piping - Senior Specialist to
Lloyd's Register Asia
A member of the Lloyd's Register group

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Note : see OTHER CONDITIONS below.

Specified Standard

Lloyd's Register Rules and Regulations for Classification of Ships, Part 5, Chapter 12, Section 5, July 2024

Ratings

Nominal size (mm):
1) AV-C type (Pinned) : 50 to 2000
AV-C type (Pinless) : 50 to 600
2) AV-T type : 50 to 1000
3) AV-O & AV-H types : 50 to 800

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.

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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.
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).
7) The valves may be used as "in-line" valves (not outlet valves on deep tanks) in lubricating or fuel oil piping systems and as suction valves on double bottom lubricating oil or fuel oil tanks in machinery spaces provided the design is such that failure of non-metallic seal would not result in external leakage and fire spread, and a suitable gasket joint may befitted between the pipe flange and the valve body.
8) The valves are not to be used for the service that is the transfer of oil fuel to the settling or service tanks as required in the event of fire or damage in passenger ships.
9) The valves may be used as isolating valves to separate the sections of the fire main and the discharge pipe within the machinery space containing the main fire pumps provided they are fitted in an easily accessible and tenable position outside the machinery space and distanced about 1 meter from the machinery space boundary and/or boundary which will affect by heat in the event of fire in machinery space s as per Paragraph 2.1.4.1, Regulation 10,Chapter II-2 of SOLAS Consolidated Edition 2009.
10) The valves may be used in air piping systems having a working pressure not greater than 7 bar except as stop valves on pressure vessels.

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.

Previous Version: LR2018974TA

The Design Appraisal Document BTS/ENG/M250470 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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