DNV·GL

Certificate No:
TAP000010N

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Butterfly Valves

with type designation(s)
RVA COUPLUG

Issued to
Sitek AS
Hauglandshella, Norway

is found to comply with
DNV GL rules for classification – Ships Pt.4 Ch.6 Piping systems

Application :

Product(s) approved by this certificate is/are accepted for installation on vessels classed by DNV GL.

Temperature range:	**0°C to +120 °C**
Max. working press.:	**PN10 to PN25 (See certificate)**
Sizes:	**DN50 to DN300**

Issued at **Høvik** on **2018-05-31**

This Certificate is valid until **2023-06-30**.

for **DNV GL**

DNV GL local station: **Ulsteinvik**

Approval Engineer: **Zeinab Sharifi**

Marianne Spæren Marveng
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Product description

Butterfly valves with a central disc obturator. Valves are mounted via grooved couplings on both sides or via a grooved coupling on one side and flange on the other.

Materials:

Body:	Ductile iron GGG 40.3 (EN-GJS-400-18)
Disc:	Aluminium Bronze C95800/ AISI316/ ASTM 351 Gr. CF8M/ Ductile iron GGG 40.3 (EN-GJS-400-18)
Stem:	AISI 316 / 17-4 PH
Seat:	NBR/EPDM/Viton

Application/Limitation

The valves may be use as closing or regulation valves in: fresh and seawater, cargo, fuel, lubrication, hydraulic and thermal oil, sanitary and compressed air systems.

Nominal valve sizes and pressure rating:

Size	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250	DN300
Pressure rating*	PN 16/25						PN 10/25	PN10	

**Maximum working pressure/temperature ratings shall comply with EN 1092-2.*

The approval does not include operating gear for remote control of the valves.

EN-GJS-400-18 (nodular cast iron of the ferritic type) may be used in class II and III piping systems, and valves located on the ship's side and bottom and valves on the collision bulkhead. Ref. DNVGL-RU-SHIP Pt.4 Ch.6 Sec.2 [1.1.1]

Austenitic stainless steel AISI 316 is not seawater resistant and shall not be used in direct contact with seawater. Ref. DNVGL-RU-SHIP Pt.4 Ch.6 Sec.2 [1.1.1]

The valves shall not be used for piping subjected to pressure shock, excessive strain and vibration.

Valves covered by this certificate shall not be installed in systems where fire safe application required.

When used as shipside valves the disc must not extend outside the hull plating in open position.

This certificate does not cover valves to be installed in LNG/LPG applications.

Coupling connections are not a part of this certificate. Type approved couplings shall be used.

Type Approval documentation

Tests carried out

Burst test

Production Tests

All valve bodies shall be subjected by the manufacturer to a hydrostatic test at a pressure equal to 1.5 times the nominal pressure (The nominal pressure is the maximum allowable working pressure at room temperature). The test pressure need not be more than 70 bar in excess of the nominal pressure.

All valves assembly shall be subjected to seat leakage test at 1.1 times maximum working pressure at closed position.

Butterfly valves fitted on ship's side and bottom are also to be hydrostatically tested at a pressure equal to 5 bar applied independently on each side of the closed disc.

Production Testing and acceptance criteria shall be in accordance with API 598.

Certification

Valve bodies shall be delivered with material certificates in accordance with DNV Ship Rules Pt.4 Ch.6 Sec.2 Table A2. Materials with NV and W certificates shall be manufactured in a foundry approved by the society.

DNV GL product certificates are required for valves with DN > 100 mm and PN > 16 bar and for ship side valves with DN > 100 mm regardless of pressure rating. For other valves the manufacturer's certificate may be accepted.

Marking of product

Each valve shall be clearly marked for identification. The identification marking may be performed on the body or on a plate of non-corrosive material. When a metallic plate is used, the plate shall be permanently fixed to the body.

Identification marking on the body shall be located to non-stressed areas and shall be clearly legible. The identification marking shall as a minimum include the following:

- manufacturer's name or trade mark
- valve type designation
- size
- Maximum working Pressure
- arrow to indicate direction of flow on one way flow valves.

Periodical assessment

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNVGL-CP-0338.