



JOHN GJERDE™

Specialists in maritime tank venting technique



MUD 1

Vent check valves

Instruction and maintenance manual.

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1. Introduction

1.1 The Problem

Liquid Mud tanks should be vented through a valve that does not allow the liquid Mud to enter the valve head itself. If it does reach the valve head, it can cause future clogging, which could in worse case lead to tank breakages.

1.2 The Solution

Using a valve with a dual action float system, the mud is stopped from entering the valve head itself, by use of a lower float.

The pressure build-up in the valve, is relieved through a swing check valve mounted on the valves side.

2. Rules and regulations

2.1 General requirements.

2.1.1. Air pipe closing devices where required by the rules, shall be permanently fixed and be of an approved type which automatically:

2.1.2. Prevents the free entry of water into the tanks.

2.1.3. Allows the passage of air or liquid to prevent excessive pressure or vacuum coming into the tank.

2.2 Design

2.2.1. Air pipe closing devices shall be so designed, that they withstand both ambient and working conditions up to an inclination of $\mp 40^\circ$ without failure or damage

2.2.2. Air pipe closing devices shall be so constructed to allow inspection of the closure and the inside of the casing as well as for changing the seals.

2.2.3. In the case of air pipe closing devices of the float type, suitable guides are to be provided to ensure unobstructed operation under all working conditions of heel and trim.

2.2.4. Efficient seating arrangements are to be provided for the closure.

2.2.5. Air pipe closing devices are to be self draining.

2.2.6. The clear area through an air pipe closing device shall be at least equal to the area or the inlet.

2.2.7. The max. Allowable tolerances for wall thickness of ball floats should not exceed +/- 10 % of the nominal thickness.



3. Materials

Casings of air pipe closing devices are to be of approved metallic materials adequately protected against corrosion.

Closures and seats made of non-metallic materials are to be compatible with the media intended to be carried in the tank and the seawater at temperatures between -25°C and 85°C.

Furthermore testing, marking and calculations are described in more detail later in this document.

4 Installation

4.1 Installation instructions

Each vent check valve type MUD 1 is supplied fully assembled and tested, with no further work required to render the unit operative. Installation is accomplished by bolting the flange of each unit to its corresponding tank vent pipe mating flange.

4.2 Maintenance

How often cleaning and inspection of the type MUD 1 is necessary, is dependent on the environment the valve is placed. However, we recommend to clean and inspect the valve, according to the described schedule.

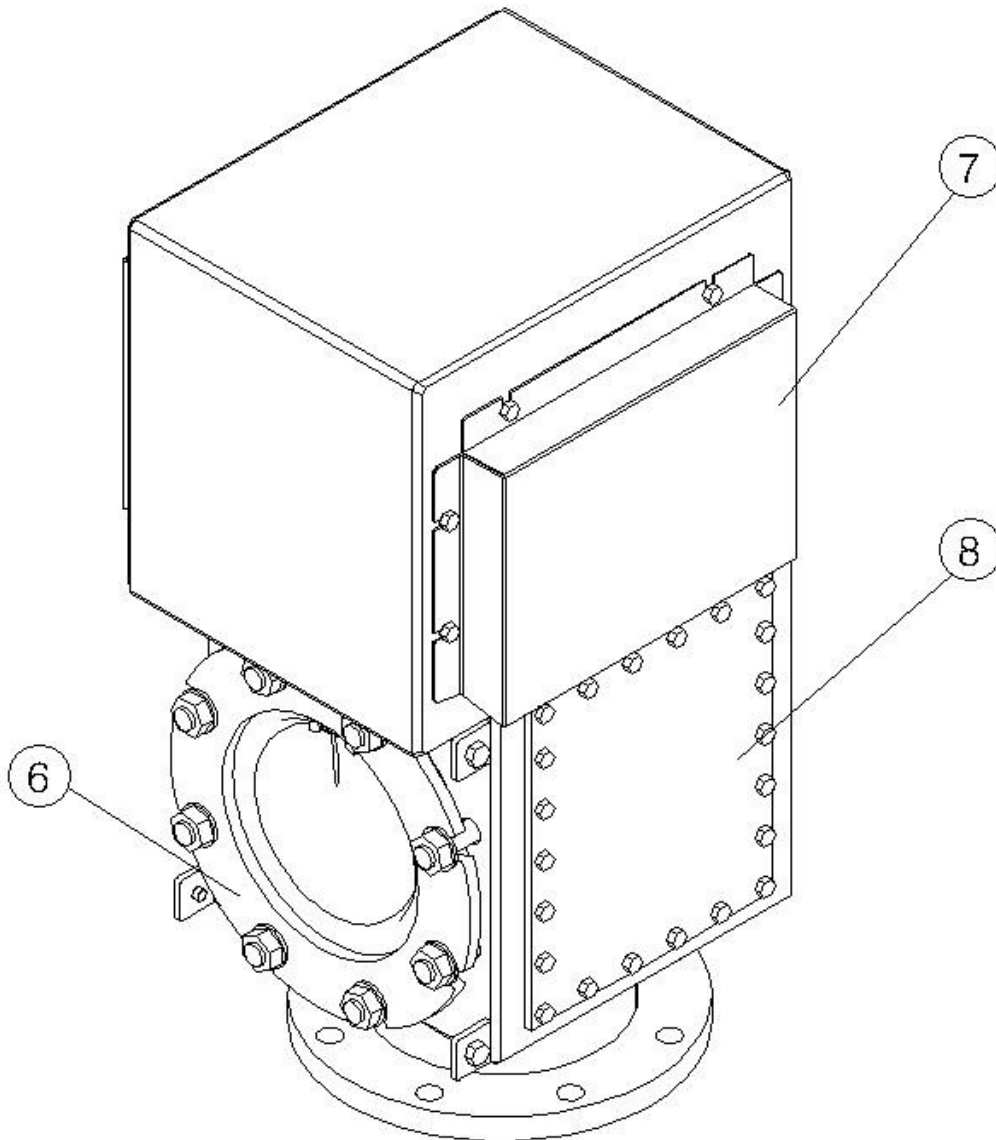
Maintenance schedule:

1. Monthly, visual inspection of swing check (5). If this is clogged up by dirt it will need to be cleaned/changed
2. Yearly, complete inspection of valve, according to following instructions.

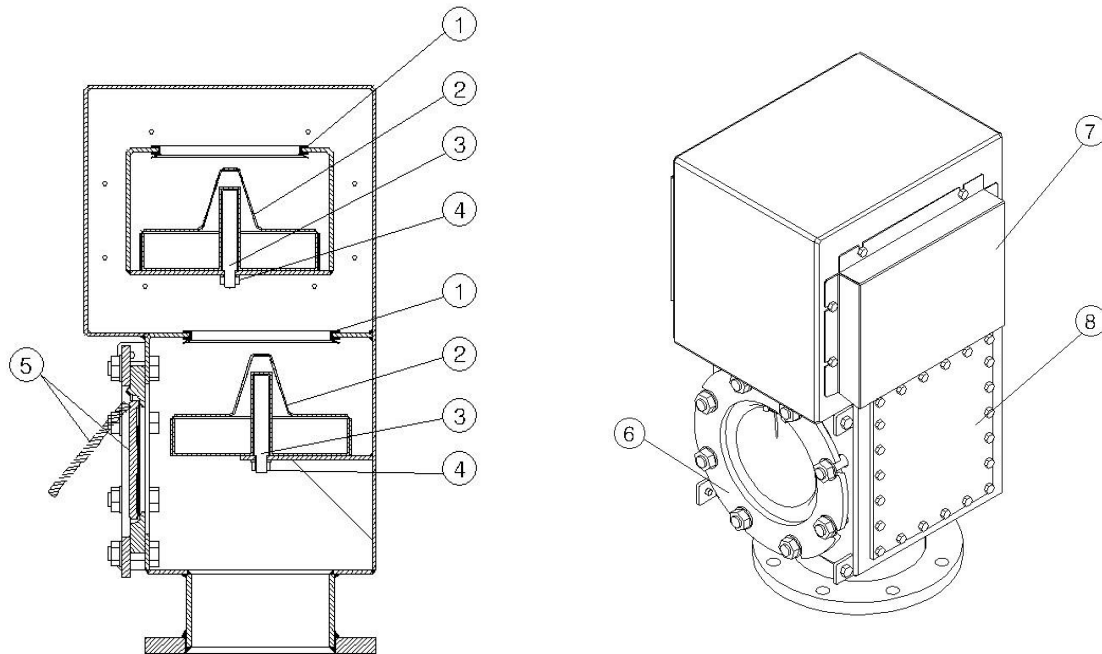
Vital inspection points, for yearly inspection:

1. Float (2)
2. Float gasket (1)
3. Guiding-pin (3)
4. Flame screen (under cover 7)
5. General execution

Cleaning and inspection of the type MUD 1 are carried out according to the following procedure.



1. Remove the side covers (7) and side plates (8)
Access is gained to the flame screen if fitted on the upper chamber.
These have to be checked to ensure that they are clean and free of damage.



2. If the cover (7) is fitted with a protective flame screen, then disassemble this from the valve. Access is gained to the internals of the valve.
3. Ensure that the floats are moving freely up and down on the guiding-pin (3) from the upper chamber and the lower chamber, and are unharmed. If one of them needs to be changed, loosen the guiding-pin, remove guiding-pin and float, exchange old float with new float and reassemble.
4. Ensure that the guiding-pin has not deteriorated.
5. Inspect the float gaskets from the upper chamber and the bottom chamber, ensure that they are soft and smooth. If one of them is damaged it should be removed and renewed. To fix a new gasket, please observe that the edge to which it is has to be fixed by adhesive is clean and free from oil and other lubricants. The adhesive is applied continuously around the gasket groove, and the gasket is then firmly pressed into place. Leave for 12-20 hours to fix.
6. If any parts are damaged, then please make a note of the part and the dimension of the valve.
7. We have spares in stock, and can deliver these when ordered. Any part in the valve has to be replaced by a genuine spare part from John Gjerde AS, to ensure proper valve function.



7

5. orderform

ORDERFORM SPAREPARTS Mud 1 SERIES

product	dimension	quantity
1.....
2.....
3.....
4.....
5.....
6.....
7.....

Company :.....

Address :.....

Zip code :.....

City :.....

Country :.....

Telephone nr :.....

E-mail :.....

Purchasing NO :.....

Contact person:.....

Date :.....