

Low Expansion Foam Fire-fighting Systems



Our fire-fighting and fire prevention systems are essential for ensuring safety and protecting the life of the crew on board and property on your ships. These systems definitely require regular and proper maintenance to ensure their reliable operation in case of emergency. But increasing troubles on the systems recently reported to us suggest that they are not always properly maintained. This document is to remind you of the typical consequences the lack of maintenance could have and of the importance of maintenance to keep the system sound and operable.

The negligence of the maintenance could lead to the failure of the system operation when needed and pose considerable risks to human life or property. Since these systems serve as the last resort for safety protection, you are kindly requested to review the maintenance arrangement to ensure their reliable operation.

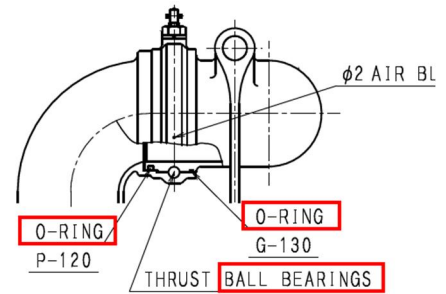
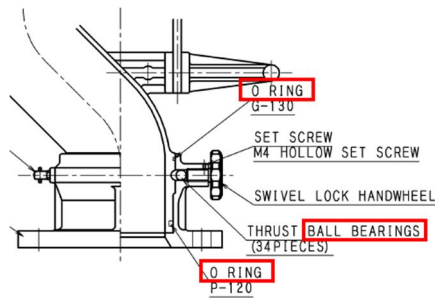
Inspection/Maintenance Conducted by Uncertified Agencies

In most cases, uncertified agencies undertake inspection services of various fire-fighting systems and equipment collectively. This could mean to save the time and labor cost to you, but they do not necessarily fully understand the fundamental structure and functions of the system, and sometimes omit electrical functional tests. Due to the difficulty in allocating enough time for each item, their collective inspection is likely to be limited to visual and superficial checks without replacing consumables. Their failure to detect and identify signs and symptoms for a malfunction could lead to serious consequences, including activation failure of the system.

Troubles Brought by Poor Maintenance

Consumables of the Foam Monitor

The foam monitor uses consumable parts such as O-rings or ball bearings. They have different service life depending on their usage environment but



can be deteriorated sooner or later. They need to be promptly replaced if the monitor doesn't smoothly tilt or swivel, or sea water leaking is found.



Appearance in a good state



Leaking from a deteriorated section



Brand-new consumables



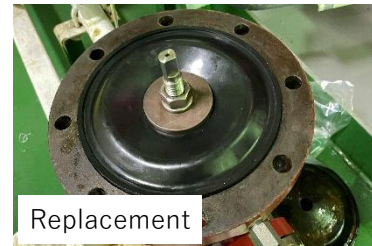
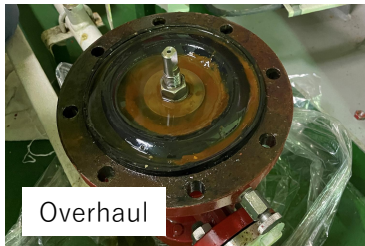
Deteriorated consumables

Proportioner (Diaphragm valve for side-proportioning system)

This is to balance the pressure of the foam liquid and sea water to maintain a specified mixing ratio. Some reported incidents suggest that its poor maintenance damages the inside of the valve.



The valve may look good in appearance, but definitely requires regular overhauls to check the inside for any damage and replacing the diaphragm seat every 5 years.



NOTE: The diaphragm seat must be installed with a specific side facing up. The installation direction varies depending on the type of device, so please check the direction when opening and install it correctly. If you are unsure of the direction, please refer to the diaphragm valve outline drawing.



NOTE: Even if the diaphragm sheet appears to be fine at first glance, a closer inspection may reveal deterioration, so we recommend that you check and replace it regularly.

Clogged tubes and pipes

Each tube, pipe, and copper pipe need to be regularly checked for clogging.



Foam Liquid Analysis

The foam liquid is required to be regularly analyzed according to the relevant rules of the classification societies or flag state.

NOTE: Do not use any undesignated foam liquid, or mix it with the genuine one.

Low Expansion Foam Liquid

Some specific types of the foam liquid for our low expansion foam fire-fighting systems used to contain some organic fluorine compound such as PFOS, PFOA, or PFHxS. We can undertake the foam liquid analysis for PFAS compound on request. We can also provide you with the manufacturer's declaration statement for submission to the classification society at your own expense. If you have any questions or concerns regarding this, please feel free to contact us.

Inspection and Maintenance

We have certified engineers who are fully qualified to inspect and service our fire-fighting systems to make sure of their reliable operation. Please feel free to contact us for the inspection and maintenance.

For request for quotation or order placement, please contact our service department at sales@kashiwa-tech.co.jp with necessary information included, such as the system name, your ship's name, and IMO No.

