Minifog Watermist System
Local application systems for ship engine rooms

Safe for certain.

mx BRANDBEVEILIGING

SAFETY

Competent

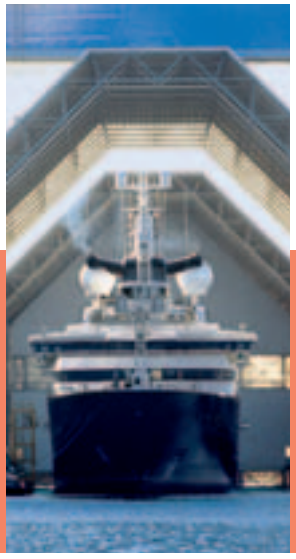
The risk

Ships require particularly high standards of safety on account of the particular conditions at sea. This applies especially to fire protection, and in particular in and around the engine room, which is home to fuel lines and other supply lines such as those that feed the main engines, auxiliary diesel engines, boiler burners, fuel separators and pumps – all these are typical areas of risk which must be considered when choosing an extinguishing system. The International Maritime Organization (IMO) therefore recommends a permanent, quick-activation fire extinguishing system to protect equipment on board in addition to the rooms themselves.

The solution

Minimax has developed the perfect solution to this special scenario: Minifog Watermist System for Ships. Special impulse nozzles, with a minimum operating pressure of only four bar at the nozzle, create a fine mist of water. The tiny water particles heat up more quickly than large ones would, and the fire is cooled and extinguished to high effect. The fact that the water droplets vaporise quickly also impairs the supply of oxygen to the fire, thus smothering it. Minifog Watermist System also fulfils another major IMO requirement: its low water quantities and fine droplets minimise the risk of distortion in hot machine parts. This prevents damage and keeps the machines in operation. They do not need to be switched off during extinguishing, and the ship remains manoeuvrable.

Maersk Recorder



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ON BOARD

Effective

How the system works

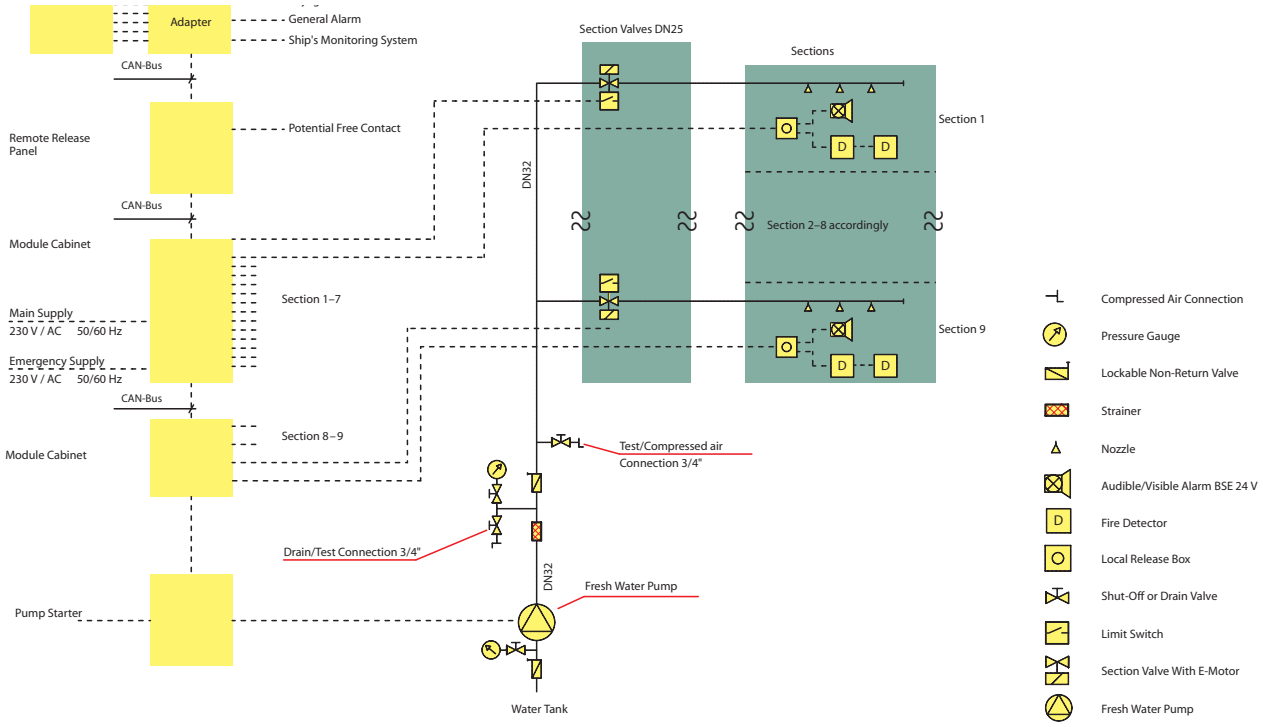
The impulse nozzles are arranged to suit the geometry of the equipment, as is the layout of the pipe network in the engine room, ensuring that the entire protected area is reliably covered in mist of water.
Generally speaking, water is supplied by a space-saving fire extinguishing pump connected to the existing fresh water tank, which supplies the system with water for up to 20 minutes. Since there are no special requirements for the extinguishing water to fulfil, the pump can also be connected to the salt water system.

Controlling the extinguishing system

The fine water spray system is controlled by an Alarm & Control System (ACS), which fulfils all of the latest requirements.
A series of fire detectors is installed in the engine room in order to quickly detect and combat a fire as soon as it breaks out. There are at least two fire detectors for each piece of equipment being protected. Flame, smoke and heat detectors are installed, depending on the area of use. The extinguishing procedure does not begin until two detectors register a fire independently from one another (dual detector dependency).
The operating panel on the bridge is the most important component after the fire detectors. It is used as a display and also to control the system. For example, any information received is displayed in plain text on its large-format screen.
An additional remote control panel can be used to control as many as nine sections from a safe place near the equipment. This panel also displays the operating statuses of the equipment connected to it, such as the fire extinguishing pump, zone valves, and so on.
The module cabinet houses the control units for each of the local zone valves, the pump starter, and – if stipulated – the primary and back-up power supply units.
The ACS also incorporates a port for passing information on to other fire detection and monitoring systems on board.

Local Application System

Scheme of operation



Fire Detection Panel

Local Release Box

Remote Release Panel

BENEFITS

A class of its own

Minimax Minifog Watermist System provides customised protection for engine rooms.

- The fine water spray system consumes very little water, which reduces collateral damage.
- Resources such as fresh water are preserved, and the quantities of extinguishing water which need to be carried are smaller.
- As it is a low-pressure system, the standard parts used are cheaper (fittings, piping, valves, etc.).
- The piping used in Minifog Watermist System is narrower than in conventional spray deluge systems, thus saving weight.
- A low number of nozzles limits the amount of piping, reduces weight, and simplifies installation.
- There are other cost and space savings – such as during upgrading, when the system can be connected to an existing primary extinguishing pump.
- The nozzle outlet is wide and incorporates a fine gauze, which protects Minifog nozzles from becoming blocked. This makes them highly reliable, and also enables the use of sea water.
- Conventional fire protection systems weigh a lot and increase energy consumption – and with that, inevitably, transport costs.

Minifog Watermist System is economical and quick to fit within existing set-ups – even while the ship is at sea. It is the ideal combination of safety and economy for ocean-going vessels.

Complete carefree package

We don't only supply components. If required our technicians can also plan, design, install and commission the whole system and have it certified by the classification authorities. Once our systems have been fitted, we maintain responsibility for them by conducting service and repairs.

Certification

Minimax has been active in the maritime industry for many years, and all its fire extinguishing systems have the relevant IACS certification. Our company is also certified in compliance with ISO 9002.

SYSTEMATIC

Specific

Minimax has been supplying fire protection systems for ships for more than 100 years – from entire fire extinguishing systems to manual fire extinguishing devices. Here are just some examples of the systems we manufacture:

- Sprinkler systems on passenger ships and ferries
- Drencher systems for RoRo decks and tank decks on gas tankers
- Foam/water monitoring systems for tank decks, and on FiFi ships
- Foam systems for heli-decks and engine rooms
- Powder systems on gas tankers
- CO_2 systems for engine rooms and galley ventilation shafts
- Novec™ 1230 systems for small engine rooms and special rooms

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