HIGH PRESSURE CO2 FIRE EXTINGUISHING SYSTEM

According to SOLAS Reg. II-2/10.4.1, 10.5.1-3, 10.7, 10.9.1, 20.6.1, FSS Code Ch. 5, MSC/Circ 550

IMO Rules and SOLAS under NFPA

CO2 has been used as the extinguishing agent in fixed installations since the beginning of the twentieth century. In 1928, the first rules for the design of such systems were issued by the National Fire Protection Association in the USA.
These rules formed the basis of IMO rules and SOLAS, which in the revised edition are fundamental for marine systems.

This is a fixed system to extinguish fire by smoothering action with CO2.
As a fire extinguishing agent, CO2 is non-corrosive and cause no chemical reaction on metals, electrical insulations and oil, nor mechanical damage to applied surfaces.
CO2 does not deteriorate with age can be stored for an indefinite time.
Our versatile and unique devices are enable simple and reliable actuation of the system.
The total flooding system is designed to discharge at least 85% of the total quantity of CO2 required for protected space within two minutes so that fire in the space can be extinguished at once.

CO2 as and extinguishing agent

Fain supplies high pressure CO2 systems for the fire protection of machinery spaces, pump rooms, cargo holds, paint stores and galley exhaust ventilation ducts. The systems are designed according to the SOLAS requirements and are type approved by the major classification societies. CO2 will extinguish a fire by reducing the percentage of oxygen in the surroundings to below what is needed to sustain combustion. The Fain CO2 systems are an environmentally friendly fire extinguishing alternative as Fain supplies CO2 as a bi-product from other industrial processes. If discharged, the CO2 will not do any damage to the ship. However, CO2 is hazardous to humans as it is an asphyxiant and therefore strict safety routine are required.

Characteristics

- Suitable for extinguishing in closed spaces like engine rooms, auxiliary rooms, cargo holds, etc.
- Extinguish the fire within a short time and leave no residue after extinguishing.
- Suitable for extinguishing fires in combustible liquids, gases and electrical equipment, and for extinguishing smoldering fires in wood, paper, textiles, etc.
- Installed as a total flooding central bank system inclusive a number of distributions.
- Normally installed with pneumatic release, but can also be supplied with mechanical, electrical, and manual release upon your request.

Applications

Fain supplies High Pressure CO2 systems for all types of vessels with engine rooms from just a few m^3 and up to super container vessels, VLCC and LNG with engine rooms of more than 30,000 m^3.

Development and Service

Product development is a continuously on going project for our technical department. This will ensure an up-to-date system with the required approvals, specially designed for maritime use in rough and demanding environments. Fain offers consultative services, engineering, layout and commissioning on fixed installation.

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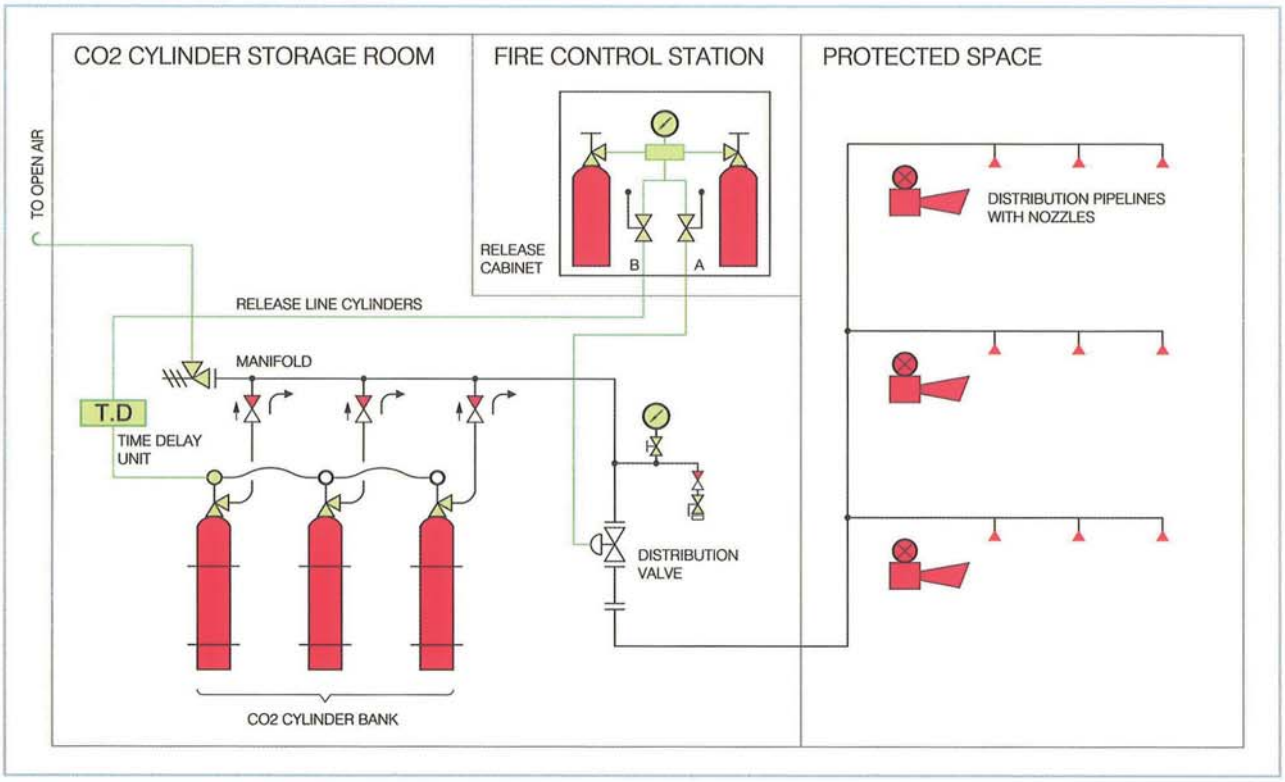

High Pressure CO2 system is a central system. Several CO2 cylinders, located in a separated room, are connected to a common manifold before the main valves and the distribution piping. The cylinder vavles and main valves are normally pneumatically operated by means of CO2 gas from two smaller control cylinders. Due to safety reasons, the system is manually released from a release cabinet located outside the protected space. When opening the release cabinet, microswitches will ensure the activation of CO2 warning alarms and ventilation shut off. After a defined time delay, the piping and nozzle arrangement allows the CO2 gas to spread rapidly to the protected areas.

▲ CO2 Cylinder Assembly

▲ Cyliner Valve Assembly

▲ Pilot & Flexible Hose Assembly

▲ Manifold Assembly

▲ Main Pipe Assembly

▲ P.O.D Valve Assembly (Main Isolating Valve)

▲ CO2 Control Box Unit

▲ Alarm Relay Box

▲ Time Delay Unit

▲ Check Valve

▲ CO2 Nozzle

▲ CO2 Gas Discharging