

SC 216 FSS Code – Water-based fire-extinguishing systems

(Aug 2007)

SOLAS Regulation II-2/10.5.1.1, 10.5.2.1, 10.5.6 and 10.6 require the installation of fixed pressure water-spraying fire-extinguishing systems for the protection of different areas of the ship. These systems are to comply with the performance standards set out in the FSS Code and to the requirements set out in the regulation itself, which do not specifically address combining systems which protect different types of spaces.

Water mist systems protecting accommodation (including cabin balcony) and service spaces, control stations, machinery spaces (total flooding and local application), and other specific fire hazards (such as deep fat fryers) using the same pump units may be accepted provided that:

- a) the performance standards required for each single hazard (i.e. Res. A.800(19), MSC/Circ.1165, MSC/Circ.913, ISO 15371:2000) are met.
- b) Failure of any one component in the power and control system should not result in a reduction of the total pump capacity below that required by any of the areas the system is required to protect (e.g. MSC/Circ.1165, Annex, Definitions 20: *"In all cases the capacity and design of the system should be based on the complete protection of the space demanding the greatest volume of water"* or IMO/Res A.800(19) Annex 3.22: *"Pumps and alternative supply components should be sized so as to be capable of maintaining the required flow to the hydraulically most demanding area of not less than 280 m²"*) except that for sprinkler systems such a failure should not result in a reduction of the automatic release capability or reduction of sprinkler pump capacity by more than 50%^[1]. Pump units arranged as 2x100%, 3x50%, etc. with a dedicated starter cabinet or equivalent arrangements will be accepted. Back-up arrangements are not required for the remote release controls. However, alarms for typical faults in the power and control system shall be provided in a continuously manned control station. Means shall be provided to ensure that the system can be operated manually from positions outside the protected area(s) in case of such faults.
- c) the system shall be arranged to avoid a single failure (including pipe rupture) in one protected area resulting in the system being inoperable in another protected area.
- d) redundant arrangements^[2] for power and water supply shall be located in different compartments separated by A class divisions.

[1] Hydraulic calculations shall be conducted for sprinkler systems to assure that sufficient flow and pressure are delivered to the hydraulically most remote 140 m² in the event of the failure of any one component.

[2] The term "redundant arrangements for power and water supply" identifies the need to guarantee the function of the system by means of separate source of power and water inlets.

Note:

1. This Unified Interpretation is to be applied by all Members and Associate on ships contracted for construction on or after 1 January 2008.
2. The "contracted for construction" date means the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. For further details regarding the date of "contract for construction", refer to IACS Procedural Requirement (PR) No. 29.

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