Tests for Preventive Measures for Redundant Operations of Fixed Local Application Fire-extinguishing Systems

Object of Amendment

Rules for the Survey and Construction of Steel Ships Part B

Reason for Amendment

Regulation II-2/10 of SOLAS specifies fixed local application fire-fighting systems located machinery spaces of category A are required to have capacities exceeding 500 m^3. In cases said spaces are also periodically unmanned machinery spaces, the required fire-fighting systems are to have both automatic and manual release capabilities. The Society has already incorporated these requirements into Part R of the Rules for the Survey and Construction of Steel Ships.

An investigation into a recent fire incident found that because the flame detectors installed in protected spaces adjacent to the space where the fire started also detected the fire, the fixed local application fire-extinguishing systems in those other spaces also simultaneously activated. As a result, water was simultaneously discharged in several spaces, and this lead to the failure of initial fire extinguishing efforts due to a lack of sufficient water pressure.

To prevent redundant operations of fixed local application fire-fighting systems, relevant requirements are amending accordingly to add test requirements for fixed local application fire-fighting systems at Classification Surveys during Construction.

Outline of the Amendment

Specifies test requirements for fixed local application fire-fighting systems at Classification Surveys during Construction.

Effective Date and application

This amendment applies to ships the keels of which are laid or which are at a similar stage of construction on or after 1 January 2026.

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

ID:DX25-02

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Amended-Original Requirements Comparison Table
(Tests for Preventive Measures for Redundant Operations of Fixed Local Application Fire-extinguishing Systems)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS **Part B CLASS SURVEYS** **Chapter 2 CLASSIFICATION SURVEYS**	**RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS** **Part B CLASS SURVEYS** **Chapter 2 CLASSIFICATION SURVEYS**	

Table B2.9 Survey – Fire Protection, Means of Escape and Fire Fighting Equipment

Survey Items	Details
(Omitted)	
15 Fixed local application fire-fighting systems	(1) Airtight tests of piping with pressures not less than maximum working pressure are to be carried out. (2) Piping tests which consist of delivering air are to be carried out. (3) Performance tests of alarm systems are to be carried out. (4) For ships with periodically unattended machinery spaces, performance tests of feed water pumps and starting valves by automatic and manual operation are to be carried out. For other ships, performance tests of feed water pumps and starting valves by manual operation are to be carried out. (5) The inspection specified by the diesel engine manufacturer is to be carried out. (6) For ships with the system of automatic release, the preventive tests for redundant operations of said systems are to be carried out. Testing procedures are to be in accordance with **Annex 2.1.7 "Procedures for Preventive Tests for Redundant Operations of the Fixed Local Application Fire-extinguishing Systems"**.
(Omitted)	

Specifies requirements of Classification Survey during Construction for the fixed local application fire-fighting systems.

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Amended-Original Requirements Comparison Table
(Tests for Preventive Measures for Redundant Operations of Fixed Local Application Fire-extinguishing Systems)

Amended	Original	Remarks
Annex 2.1.7 PROCEDURES FOR TESTS OF PREVENTIVE MEASURES FOR REDUNDANT OPERATIONS OF THE FIXED LOCAL APPLICATION FIRE-EXTINGUISHING SYSTEMS **An1.1 Scope** These procedures apply to the tests for redundant operations of the fixed local application fire-extinguishing systems specified in **item 16, Table B2.9, Part B of the Rules**. **An1.2 Tests** **1** A mock fire from burner or other fire source which is approximately 300 *mm* is to be ignited at each location specified in **(1)** to **(6)** below and the flame detector installed in the protected space is to be confirmed to be activated. (1) The fire hazard portions of internal combustion machinery (main engine and diesel generator) (2) Boiler fronts (3) The fire hazard portions of incinerators (4) Purifiers for heated fuel oil (5) Inert gas generators using flue gases (6) Thermal oil heater **2** Within a period of 30 *seconds* after the detection of the fire in a protected space, other flame detectors installed in the same protected space or in other protected spaces are to be confirmed to have not been activated.	**(Newly added)**	

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Amended-Original Requirements Comparison Table
(Tests for Preventive Measures for Redundant Operations of Fixed Local Application Fire-extinguishing Systems)

Amended	Original	Remarks
3 If other flame detectors installed in the same protected space or other protected spaces have activated, measures such as to changing the positions/angles of the flame detectors, installing shield plates, etc. are needed. After such measures have been implemented, the performance tests in **-1** and **-2** above are to carried out again to confirm the other flame detectors do not activate. **4** In **-2** above, even when equipment that is used for the same purpose (diesel generators, purifiers, etc.) is installed adjacent to each other, flame detectors are not to detect redundantly, except in the case of a plan to detect multiple pieces of equipment by a single flame detector. On the other hand, if the redundant operation of the fire-fighting systems is within the maximum pump capacity of the systems, no additional measures are required. **An1.3 Tests for Sister Ships** The tests specified in **An1.2** are to be implemented for sister ships.		
EFFECTIVE DATE AND APPLICATION **1.** This amendment applies to ships the keels of which are laid or which are at a similar stage of construction on or after the 1 January 2026 of establishment.		

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