Fault Isolation Requirements for Individually Identifiable Fire Detectors

Amended Rules

Rules for the Survey and Construction of Steel Ships Part R

Reason for Amendment

At the 88th Session of the IMO Maritime Safety Committee (MSC 88) held in December 2010, amendments to the International Code for Fire Safety Systems (FSS Code) related to fixed fire detection and fire alarm systems were adopted as resolution MSC.311(88), and this resolution has already been incorporated into the ClassNK Rules.

The resolution's fault isolation requirements for individually identifiable fire detectors installed in cargo ships and on passenger ship cabin balconies were, however, subsequently reviewed by the IMO's Sub-committee on Ship Systems and Equipment. As a result, amendments to the requirements were adopted as resolution MSC.484(103).

Accordingly, relevant requirements are amended based on MSC.484(103).

Outline of Amendment

Specifies relaxation provisions for the fault isolation requirements for fixed fire detection and alarm systems with individually identifiable detectors.

"Rules for the survey and construction of steel ships" has been partly amended as follows:

Part R Fire Protection, Detection and Extinction

Chapter 29 FIXED FIRE DETECTION AND FIRE ALARM SYSTEMS

29.2 Engineering Specifications

29.2.1 General Requirements*

Sub-paragraph -8 has been added as follows.

6 Fixed fire detection and fire alarm systems with individually identifiable fire detectors are to be so arranged that:

(1) means are provided to ensure that any fault (*e.g.*, power break, short circuit, earth, etc.) occurring in the section will not prevent the continued individual identification of the remainder of the connected detectors in the section;

(2) all arrangements are made to enable the initial configuration of the system to be restored in the event of failure (*e.g.*, electrical, electronic, informatics, etc.);

(3) the first initiated fire alarm will not prevent any other detector from initiating further fire alarms; and

(4) no section will pass through a space twice. When this is not practical (*e.g.*, for large public spaces), the part of the section which by necessity passes through the space for a second time is to be installed at the maximum possible distance from the other parts of the loop.

7 The fixed fire detection and fire alarm system is, as a minimum, to have section identification capability.

8 Notwithstanding **-6(1)** above, isolator modules need not be provided for each fire detector if the system is arranged in such a way that the number and location of individually identifiable fire detectors rendered ineffective due to faults are not larger than an equivalent section in a section-identifiable system arranged in accordance with **29.2.4-1**.