

# **RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

**Part R**

**Fire Protection, Detection and Extinction**

**Rules for the Survey and Construction of Steel Ships**

**Part R**

**2008**

**AMENDMENT NO.1**

**Guidance for the Survey and Construction of Steel Ships**

**Part R**

**2008**

**AMENDMENT NO.1**

Rule No.13 / Notice No.9      27th February 2008

Resolved by Technical Committee on 30th November 2007

Approved by Board of Directors on 25th December 2007

**ClassNK**  
NIPPON KAIJI KYOKAI

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# **RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**

**RULES**

**Part R**

**Fire Protection, Detection and  
Extinction**

**2008      AMENDMENT NO.1**

Rule No.13      27th February 2008

Resolved by Technical Committee on 30th November 2007

Approved by Board of Directors on 25th December 2007

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

## **Part R            FIRE PROTECTION, DETECTION AND EXTINCTION**

### **Chapter 10      FIRE FIGHTING**

#### **10.4 Fixed Fire-extinguishing Systems**

##### **10.4.1 General**

Sub-paragraph -5 has been added as follows.

**1** Unless otherwise specified, the requirements of **10.4** apply to fixed fire-extinguishing systems required by the provisions of **10.5**, **10.7** and **10.9**.

**2** Where a fixed fire-extinguishing system not required by this chapter is installed, it is to meet the relevant requirements of this Chapter and the requirements of **Chapters 22 to 35**, as appropriate.

**3** Fire-extinguishing systems using Halon 1211, 1301 and 2402 and perfluorocarbons are to be prohibited.

**4** In general, the use of steam as a fire-extinguishing medium in fixed fire-extinguishing systems is not permitted. Where the use of steam is permitted by the Society, it is to be used only in restricted areas as an addition to the required fire-extinguishing system and is to comply with the requirements of **Chapter 25**.

**5** When a pump system is commonly served for fixed water-based fire-extinguishing systems (except those required in **10.6**) for the protection of different areas, appropriate measures are to be taken for a system consisting of fire-extinguishing systems, pump systems, etc., to prevent that a damage or a failure of any one fire-extinguishing system will result in a failure of function of other fire-extinguishing systems.

## EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 April 2008.
2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for construction\* is before the effective date.  
\*“contract for construction” is defined in IACS Procedural Requirement (PR) No.29 (Rev.4).

### IACS PR No.29 (Rev.4)

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder.  
For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
  - (1) such alterations do not affect matters related to classification, or
  - (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which **1.** and **2.** above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

#### Notes:

1. This Procedural Requirement applies to all IACS Members and Associates.
2. This Procedural Requirement is effective for ships “contracted for construction” on or after 1 January 2005.
3. Revision 2 of this Procedural Requirement is effective for ships “contracted for construction” on or after 1 April 2006.
4. Revision 3 of this Procedural Requirement was approved on 5 January 2007 with immediate effect.
5. Revision 4 of this Procedural Requirement was adopted on 21 June 2007 with immediate effect.

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# **GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS**

**Part R**

**Fire Protection, Detection and  
Extinction**

**GUIDANCE**

**2008 AMENDMENT NO.1**

Notice No.9 27th February 2008

Resolved by Technical Committee on 30th November 2007

“Guidance for the survey and construction of steel ships” has been partly amended as follows:

## **Part R FIRE PROTECTION, DETECTION AND EXTINCTION**

### **R10 FIRE FIGHTING**

#### **R10.4 Fixed Fire-extinguishing Systems**

Paragraph R10.4.1 has been added as follows.

##### **R10.4.1 General**

With respect of the provisions of 10.4.1-5, Part R of the Rules, when commonly served for fixed water-based fire-extinguishing systems (excepting those for cargo spaces), pump systems are to comply with the following (1) to (5).

- (1) Each fire-extinguishing system is to comply with the performance standards required for each system when the system operates independently.
- (2) Failure of any one component in the power and control system is not to 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. 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.
- (3) Alarms for typical faults in the power and control system are to be provided in a continuously manned control station. Means are to be provided to ensure that the system can be operated manually from positions outside the protected area(s) in case of such faults.
- (4) The system is to be arranged to avoid a single failure (including pipe rupture) in one protected area resulting in the system being inoperable in another protected area.
- (5) Redundant arrangements for power and water supply are to be located in different compartments separated by A class divisions.

#### **R10.5 Fire-extinguishing Arrangements in Machinery Spaces**

##### **R10.5.5 Fixed Local Application Fire-fighting Systems**

Sub-paragraph -2 has been amended as follows.

2 Nozzle installations are to be determined as in the following (1) or (2) corresponding to the test results in accordance with MSC/Circ.913 as specified in -1 above. When the fire-fighting system is provided, nozzles are installed in the different manner from the conditions determined by the test in accordance with MSC/Circ.913, additional fire tests deemed as necessary by the Society are to be carried out to verify the fire-extinguishing capabilities.

- (1) For nozzles of a system that extinguishes fires referred to in 3.3.2.1 to 3.3.2.3 of Appendix

of Annex to *MSC/Circ.913*

(a) Nozzles installed in grid: See **Fig. R10.5.5-1**

(b) Nozzles installed in a single row: See **Fig. R10.5.5-2**

(c) Single nozzle: See **Fig. R10.5.5-3**

(2) For nozzles of a system that extinguishes fires referred to in 3.3.2.3 to 3.3.2.5 of Appendix of Annex to *MSC/Circ.913*

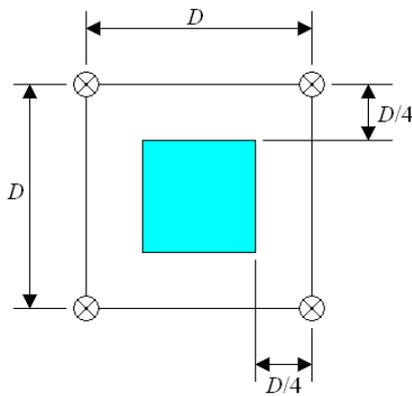
(a) Nozzles installed in grid: See **Fig. R10.5.5-4**

(b) Nozzles installed in a single row: See **Fig. R10.5.5-5**

(c) Single nozzle: See **Fig. R10.5.5-3**

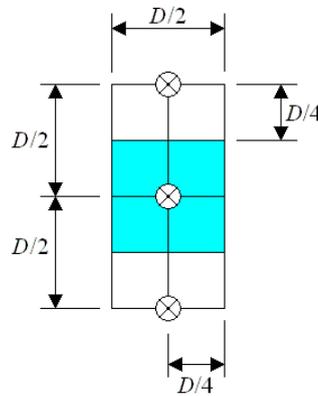
Fig. R10.5.5-1 to Fig. R10.5.5-5 have been added as follows.

**Fig. R10.5.5-1**



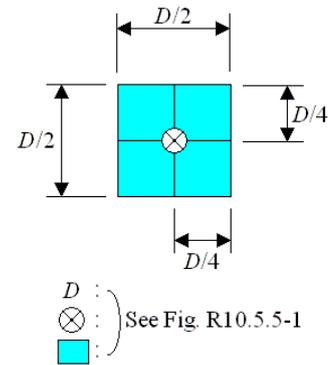
$D$  : Maximum Nozzle Spacing accepted by tests  
 $\otimes$  : Water Mist Nozzles  
 : Protected Area

**Fig. R10.5.5-2**



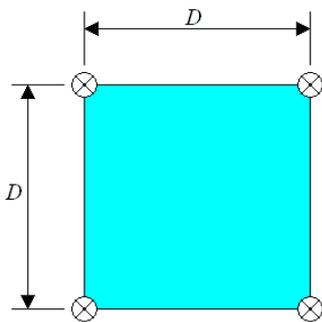
$D$  :  
 $\otimes$  : See Fig. R10.5.5-1  
 :

**Fig. R10.5.5-3**



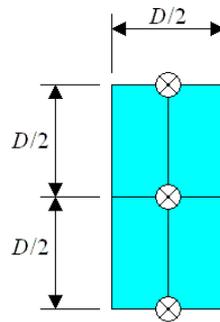
$D$  :  
 $\otimes$  : See Fig. R10.5.5-1  
 :

**Fig. R10.5.5-4**



$D$  :  
 $\otimes$  : See Fig. R10.5.5-1  
 :

**Fig. R10.5.5-5**



$D$  :  
 $\otimes$  : See Fig. R10.5.5-1  
 :

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