

# **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**

**2007**

**AMENDMENT NO.2**

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

**Part R**

**2007**

**AMENDMENT NO.2**

Rule No.48 / Notice No.51      27th September 2007

Resolved by Technical Committee on 2nd July 2007

Approved by Board of Directors on 24th July 2007

**ClassNK**  
NIPPON KAIJI KYOKAI

---

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

**RULES**

**Part R**

**Fire Protection, Detection and  
Extinction**

**2007      AMENDMENT NO.2**

Rule No.48      27th September 2007

Resolved by Technical Committee on 2nd July 2007

Approved by Board of Directors on 24th July 2007

AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

“Rules for the Survey and Construction of Steel Ships” has been partly amended as follows:

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

Amendment 2-1

**Chapter 9 CONTAINMENT OF FIRE**

**9.4 Protection of Openings in Fire Resisting Divisions**

Paragraph 9.4.3 has been amended as follows.

**9.4.3 Ventilation Openings in Corridor Bulkheads**

- 1 Balancing openings or ducts (hereinafter, referred to as ventilation openings) in fire resisting divisions between two enclosed spaces are prohibited except for openings specified in -2 below.
- 2 In corridor bulkheads, ventilation openings may be permitted in and under the doors of cabins and public spaces. Ventilation openings are also permitted in “B” class doors leading to lavatories, offices, pantries, lockers and store rooms. Except as permitted below, the openings are to be provided only in the lower half of a door. Where such opening is in or under a door the total net area of any such opening or openings is not to exceed  $0.05 m^2$ . Alternatively, a non-combustible air balance duct routed between the cabin and the corridor, and located below the sanitary unit is permitted where the cross-sectional area of the duct does not exceed  $0.05 m^2$ . Ventilation openings, except those under the door, are to be fitted with a grille made of non-combustible material.

## Chapter 10 FIRE FIGHTING

### 10.7 Fire-extinguishing Arrangements in Cargo Spaces

#### 10.7.1 Fixed Fire-extinguishing Systems for General Cargo

Sub-paragraph -2 has been amended as follows.

- 1 Except for ro-ro and vehicle spaces, cargo spaces of ships of 2,000 *gross tonnage* and upwards are to be protected by a fixed carbon dioxide or inert gas fire-extinguishing system complying with the provisions of **Chapter 25**, or by a fire-extinguishing system which gives equivalent protection.
- 2 The Society may exempt from the requirements of -1 above and **10.7.2** provided that cargo spaces of any ship if constructed and solely intended for the carriage of ore, coal, grain, unseasoned timber, non-combustible cargoes or cargoes which constitute a low fire risk. Such exemptions may be granted only if the ship is fitted with steel hatch covers and effective means of closing all ventilators and other openings leading to the cargo spaces. In this case, a list of cargoes intended to be carried is to be submitted to the Society.

## EFFECTIVE DATE AND APPLICATION (Amendment2-1)

1. The effective date of the amendments is 1 October 2007.
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.

## Chapter 24 FIRE EXTINGUISHERS

### 24.2 Engineering Specifications

Paragraph 24.2.2 has been amended as follows.

#### 24.2.2 Portable Foam Applicators

1 A portable foam applicator unit is to consist of a foam nozzle/branch pipe, either of an inductor type or a self-inducting type or in combination with a separate inductor, capable of being connected to the fire main by a fire hose, together with a portable tank containing at least 20 l of foam-making liquid concentrate and at least one spare tank of foam-making liquid concentrate of the same capacity. ~~The nozzle is to be capable of producing effective foam suitable for extinguishing an oil fire, at the rate of at least 1.5 m<sup>3</sup>/minute.~~

#### 2 Capacity and performance of foam applicators

- (1) The nozzle/branch pipe and inductor are to be capable of producing effective foam suitable for extinguishing an oil fire, at a foam solution flow rate of at least 200 l/min at the nominal pressure in the fire main.
- (2) The foam concentrate is to be approved by the Society.
- (3) The values of the foam expansion and drainage time of the foam produced by the portable foam applicator unit are not to differ more than ±10% of that determined in (2) above.
- (4) The portable foam applicator unit is to be designed to withstand clogging, ambient temperature changes, vibration, humidity, shock, impact and corrosion normally encountered on ships.

## Chapter 26 FIXED FOAM FIRE-EXTINGUISHING SYSTEMS

### 26.2 Engineering Specifications

#### 26.2.3 Fixed Low-expansion Foam Fire-extinguishing Systems

Sub-paragraph -1(2) has been amended as follows.

#### 1 Quantity and foam concentrates

- (1) The foam concentrates of low-expansion foam fire-extinguishing systems is to be approved by the Society.
- (2) The system is to be capable of discharging through fixed discharge outlets in not more than 5 minutes, a quantity of foam sufficient to cover to a depth of 150 mm produce an effective foam blanket over the largest single area over which oil fuel is liable to spread. ~~The expansion ratio of the foam is not to exceed 12 to 1.~~

## Chapter 27 FIXED PRESSURE WATER-SPRAYING AND WATER-MIST FIRE-EXTINGUISHING SYSTEMS

### 27.2 Engineering Specifications

Paragraph 27.2.1 has been amended as follows.

#### 27.2.1 Fixed Pressure Water-spraying Fire-extinguishing Systems

##### ~~1~~ ~~Nozzles and pumps~~

- ~~(1) Any required fixed pressure water spraying fire extinguishing system in machinery spaces is to be provided with spraying nozzles of an approved type.~~
- ~~(2) The number and arrangement of the nozzles is to be to the satisfaction of the Society and is to be such as to ensure an effective average distribution of water of at least  $5\text{ l/m}^2$  per minute in the spaces to be protected. Where increased application rates are considered necessary, these are to be to the satisfaction of the Society.~~
- ~~(3) Precautions are to be taken to prevent the nozzles from becoming clogged by impurities in the water or corrosion of piping, nozzles, valves and pump.~~
- ~~(4) The pump is to be capable of simultaneously supplying at the necessary pressure all sections of the system in any one compartment to be protected.~~
- ~~(5) The pump may be driven by independent internal combustion machinery but, if it is dependent upon power being supplied from the emergency generator, that generator is to be so arranged as to start automatically in case of main power failure so that power for the pump required by (4) above is immediately available. The independent internal combustion machinery for driving the pump is to be so situated that a fire in the protected space or spaces will not affect the air supply to the machinery.~~

##### ~~2~~ ~~Installation requirements~~

- ~~(1) Nozzles are to be fitted above bilges, tank tops and other areas over which oil fuel is liable to spread and also above other specific fire hazards in the machinery spaces.~~
- ~~(2) The system may be divided into sections, the distribution valves of which are to be operated from easily accessible positions outside the spaces to be protected and will not be readily cut off by a fire in the protected space.~~
- ~~(3) The pump and its controls are to be installed outside the space or spaces to be protected. It is not to be possible for a fire in the space or spaces protected by the water spraying system to put the system out of action.~~

##### ~~3~~ ~~System control requirements~~

~~The system is to be kept charged at the necessary pressure and the pump supplying the water for the system is to be put automatically into action by a pressure drop in the system.~~

~~Fixed pressure water-spraying fire-extinguishing systems for machinery spaces and cargo pump-rooms are to be approved by the Society.~~

## EFFECTIVE DATE AND APPLICATION (Amendment2-2)

1. The effective date of the amendments is 1 July 2008.
2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(Note) The term “*a similar stage of construction*” means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

---

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

**Part R**

**Fire Protection, Detection and  
Extinction**

**GUIDANCE**

**2007      AMENDMENT NO.2**

Notice No.51      27th September 2007

Resolved by Technical Committee on 2nd July 2007

AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

“Guidance for the Survey and Construction of Steel Ships” has been partly amended as follows:

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

Amendment 2-1

**R9 CONTAINMENT OF FIRE**

**R9.4 Protection of Openings in Fire Resisting Divisions**

Paragraph R9.4.3 has been amended as follows.

**R9.4.3 Ventilation Openings in Corridor Bulkheads**

1 Exhaust ~~ventilations~~ of from accommodation spaces, service spaces and control stations ~~are is,~~ in principle, to be ~~effected~~ evacuated through the exhaust ventilation ducts complying with the requirements of **9.7, Part R of the Rules**, except where ventilation openings are accepted under **9.4.3, Part R of the Rules**. ~~However, where deemed as unavoidable by the Society, use of balancing ducts may be accepted subject to the compliance with the requirements in Table R9.4.3-1 below. The dampers of the balancing ducts are to be provided with indicators showing whether the damper is open or close.~~

**Table R9.4.3-1**

| Spaces   | Corridor |
|--|----------|
| Control stations                                 | €        |
| Accommodation spaces                             | A        |
| Stairways (when penetrating a single deck)       | B        |
| Stairways (when penetrating more than one decks) | €        |
| Service spaces with low fire risk                | A        |

Note (1):

“A” : ~~Manually operated fire dampers or louvers fitted with closing means are to be provided at the corridor side.~~

“B” : ~~Manually operated fire dampers or louvers fitted with closing means are to be provided on both sides, or one manually operated fire damper which is capable of being operated from either side is to be provided. (See R9.7.3-2)~~

“C” : ~~The requirements given in case “B” are to apply. However, in case where the sectional area of the duct exceeds 0.075 m<sup>2</sup>, the requirements specified in 9.7.3-1(2), Part R of the Rules are to be complied with.~~

Note (2): ~~In service spaces with high fire risk, no balancing duct is accepted.~~

- 2 Where duct trunks for accommodation spaces, service spaces and control stations are provided adjoining to corridor bulkheads, notwithstanding the provisions of **9.4.3, Part R of the Rules**, ventilation openings with manual closing appliances operable from the corridor may be provided. In this case, grilles made of non-combustible materials are to be fitted to the ventilation openings. Furthermore, in case where the sectional area of such a ventilation opening exceeds  $0.075 m^2$ , a self-closing type fire damper is to be provided in addition to the manual closing appliances.
- 3 With respect to the provisions of **9.4.3, Part R of the Rules**, ventilation openings of air inlets for air conditioning systems may be provided in corridor bulkheads in way of the air conditioning machinery rooms, subject to the following (1) to (3).
  - (1) An automatic fire damper is to be provided.
  - (2) An air inlet from the corridor is to be led to the air conditioning machinery directly without any opening which allows air flow to the air conditioning machinery room.
  - (3) The ventilation opening is to be fitted with a grille made of non-combustible material

## R10 FIRE FIGHTING

### R10.4 Fixed Fire-extinguishing Systems

#### R10.4.3 Storage Rooms of Fire-extinguishing Medium

Sub-paragraph -1 has been amended as follows.

- 1 The requirements specified in (2), (4), (5) and (6) of **10.4.3, Part R of the Rules** for storage rooms may be applied only to the storage rooms of fixed gas fire-extinguishing systems. For equivalent fixed gas fire-extinguishing systems specified in **25.2.5, Part R of the Rules**, the requirements of **10.4.3, Part R of the Rules** are to be applied to their storage rooms, unless specified otherwise according to the provisions of **R25.2.2-2**.
- 2 With respect to the requirements specified in **10.4.3(5), Part R of the Rules**, any space that only permits an access vertically through a hatch provided on an exposed deck is not deemed to be a space where access from the open deck is provided.
- 3 With respect to the requirements specified in **10.4.3, Part R of the Rules**, where fire-extinguish media protecting the cargo holds is stored in a room located forward the cargo holds, such arrangement is to be in accordance with the provisions of **R25.2.1-8**.

### R10.7 Fire-extinguishing Arrangements in Cargo Spaces

Paragraph R10.7.1 has been amended as follows.

#### R10.7.1 Fixed Fire-extinguishing Systems for General Cargo

- 1 With respect to the provisions of **10.7, Part R of the Rules**, for container cargo holds fitted with partially weathertight hatch covers in accordance with the provisions of **20.2.7, Part C of the Rules**, closing appliances for such holds may be omitted, provided that the amount of carbon dioxide is increased in accordance with the provisions of **R25.2.2-4**.
- 2 Refrigerated cargo carriers are, in principle, to be provided with the fixed fire-extinguishing systems specified in **10.7, Part R of the Rules**.
- 3 If a fixed high-expansion foam fire-extinguishing system is provided in any other space than a machinery space, the requirements of **Chapter 26, Part R of the Rules** may be applied.
- 4 The wording “effective means of closing all ventilators and other openings” specified in **10.7.1-2, Part R of the Rules** means the followings:
  - (1) Steel hatch covers provided with gaskets and clamping devices which can be made weather-tight without using hatch tarpaulins.
  - (2) Ventilators provided outside the cargo holds, readily accessible and fitted with dampers or steel weather-tight covers at a height not more than 150 *cm* above the floor. In this case, the dampers are to have steel to steel contact with the collar plate of the ventilator.
  - (3) Small hatch openings or openings provided within deckhouse provided with steel weather-tight covers or doors to protect such openings.
- 5 Vegetable oil, latex and molasses are regarded as “cargoes which constitute a low fire risk” referred in **10.7.1-2, Part R of the Rules**. For other cargoes carried in bulk, reference is to be made to the “*Code of Safe Practice for Solid Bulk Cargoes-Emergency Schedule B14, entry for coal*” and the “*List of solid bulk cargoes for which a fixed gas fire-extinguishing system may be exempted or for which a fixed gas fire-extinguishing system is ineffective*”

(MSC/Circ.~~674~~1146).

- 6** With respect to the provisions of **10.7.1-2, Part R of the Rules**, non-combustible cargoes, such as materials listed in paragraph 1 of Annex 2 to the *FTP Code*, need not be mentioned on the list of cargoes for the exemption fixed fire-extinguishing systems.

## R19 CARRIAGE OF DANGEROUS GOODS

### R19.2 General Requirements

#### R19.2.2 Application for Categories of Cargo Spaces

Sub-paragraph -4 has been added as follows.

- 1 With respect to the provisions of **19.2.2, Part R of the Rules**, ro-ro spaces fully open above and with full openings in both ends may be treated as a weather deck.
- 2 The wording “container cargo spaces” specified in **19.2.2(3), Part R of the Rules** means spaces equipped with cell-guides for stowage and securing of containers.
- 3 For the application of **19.2.2, Part R of the Rules**, vehicle spaces are considered as a ro-ro space as defined in **19.2.2(4) or (5), Part R of the Rules**.
- 4 The provisions of **19.2.2(7), Part R of the Rules** cover only those cargoes listed in Appendix B of the BC Code except cargoes of *MHB* (materials hazardous only in bulk). The carriage of other dangerous solid bulk cargoes is to be subject to acceptance by the Administrations involved.

### R19.3 Special Requirements

#### R19.3.4 Ventilation

Sub-paragraph -4 has been added as follows.

- 1 With respect to the requirements specified in **19.3.4-1, Part R of the Rules**, the wording “vapour” means the vapour evolved from dangerous goods. In case where mechanical ventilation systems are provided in enclosed cargo spaces, the following requirements (1) and (2) are to be complied with:
  - (1) Mechanical ventilation systems are to be of exhaust type.
  - (2) Ducts are to be arranged in such a way that mixture gases can be discharged from both top and bottom of the cargo spaces. However, if specific cargoes are exclusively carried, mixture gases discharging arrangement either from top or bottom of cargo spaces may be accepted taking into account the specific gravity of the cargo vapour concerned.
- 2 With respect to the requirements of **19.3.4-2, Part R of the Rules**, the following requirements (1) and (2) are to be complied with:
  - (1) In case where electric motor driven ventilation fans are installed, the following requirements (a) to (c) are to be complied with:
    - (a) Where an internal motor driven type ventilating fan is installed, the motor is to be of a type approved by the Society for use in hazardous environment taking into account the requirements of the *IMDG Code*. (See **Fig. R19.3.4-1**)
    - (b) Where an external motor driven type ventilating fan is installed on an exposed deck, the motor is to have a protection equivalent to IP55 or upward. (See **Fig. R19.3.4-2**)
    - (c) Even in the case of (b) above, where the motor is installed in the proximity of the exhaust opening, the motor is to comply with the requirements of (a) above. (See **Fig. R19.3.4-3**)

- (2) Ventilating fans are to be of non-sparking type, and protective wire gauze not exceeding  $13\text{ mm} \times 13\text{ mm}$  mesh are to be provided at openings of ventilation for cargo spaces located on the exposed deck.
- 3 Notwithstanding the provisions of **19.3.4-1, Part R of the Rules**, for cargo holds of open-top container ships, power ventilation may be required only for the lower part of the cargo hold. Such ventilation capacity may be at least 2 air changes per hour based on the empty hold volume below weather deck.
- 4 With respect to the provisions of **19.3.4, Part R of the Rules**, if adjacent spaces are not separated from cargo spaces by gastight bulkheads or decks, ventilation requirements of the cargo space are to apply to adjacent spaces.

### **R19.3.6 Personnel Protection**

Sub-paragraph -1 has been amended as follows.

- 1 The full protective clothing specified in **19.3.6-1, Part R of the Rules** is for emergency purposes and consisting of a pair of gloves, boots, a protective clothing and helmet with goggles. When selecting the protective clothing the danger of the chemicals according to the class and liquid or gaseous state of intended cargoes is to be taken into account, referring to Appendix E of the BC Code for solid bulk cargoes and emergency procedures (EmS) of the Supplement to the IMDG Code for packaged goods.
- 2 The spare bottles required in **19.3.6-2, Part R of the Rules** are to be in addition to the spare bottles required for fire-fighter's outfit.

## R25 FIXED GAS FIRE-EXTINGUISHING SYSTEMS

### R25.2 Engineering Specifications

Paragraph R25.2.5 has been amended as follows.

#### R25.2.5 Equivalent Fixed Gas Fire-extinguishing Systems for Machinery Spaces and Cargo Pump Rooms

- 1 An equivalent system specified in **25.2.5, Part R of the Rules** is to be ~~approved by the Society or organizations deemed appropriate by the Society~~ in accordance with the “*Approval of Equivalent Fixed Gas Fire-extinguishing Systems, as referred to in SOLAS 74, for machinery spaces and cargo pump rooms*” (MSC/Circ.848).
- 2 Fixed gas fire-extinguishing systems referred to in ~~-1~~, whose agent containers are stored within the area it protects are to comply with the following **(1)** to **(3)**.
  - (1) Agent containers are to be distributed throughout the space with bottles or groups of bottles located in at least six separate locations.
  - (2) Duplicate power release lines are to be arranged to release all bottles simultaneously. The release lines are to be so arranged that in the event of damage to any power release line, five sixths of the fire extinguishing gas can still be discharged. The bottle valves are to be considered to be part of the release lines and a single failure shall include also failure of the bottle valve.
  - (3) For systems that need less than six cylinders (using the smallest bottles available), agent containers need not to be distributed separately, provided that:
    - (a) The total amount of extinguishing gas in the bottles is to be such that in the event of a single failure in one of the release lines (including bottle valve), five sixths of the fire extinguishing gas can still be discharged; and
    - (b) *NOAEL (No Observed Adverse Effects Level)* values calculated at the highest expected engine room temperature are not to be exceeded when discharging the total amount of extinguishing gas simultaneously.

## EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 1 October 2007.
2. Notwithstanding the amendments to the Guidance, 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.

## **R24 FIRE EXTINGUISHERS**

### **R24.2 Engineering Specifications**

Paragraph R24.2.2 has been added as follows.

#### **R24.2.2 Portable Foam Applicators**

“Approved foam concentrates” specified in 24.2.2-2(2), Part R of the Rules means concentrates that have been approved by organizations authorized by the Administration or deemed appropriate by the Society with reference to the “Guidelines for the performance and testing criteria and surveys of low-expansion foam concentrates for fixed fire-extinguishing systems” (MSC/Circ.582/Corr.1).

## **R26 FIXED FOAM FIRE-EXTINGUISHING SYSTEMS**

### **R26.2 Engineering Specifications**

#### **R26.2.3 Fixed Low-expansion Foam Fire-extinguishing Systems**

Sub-paragraph -1 has been amended as follows.

- 1 The wording “approved foam concentrates” specified in **26.2.3-1(1), Part R of the Rules** means the one approved by organizations authorized by the Administration or deemed appropriate by the Society with reference to the “*Guidelines for performance and testing criteria and surveys of low-expansion foam concentrates for fire-extinguishing systems*” (MSC/Circ.582/Corr.1).
- 2 The wording “largest single area over which oil fuel is liable to spread” specified in **26.2.3-1(2), Part R of the Rules** means as follows:
  - (1) The aggregate total floor area of the tank top or floor top in machinery spaces and pump rooms in oil tankers.
  - (2) In spaces containing oil-fired boilers and oil fuel units where a suitable coaming capable of preventing undue spread of fuel oil is provided, the area of the space enveloped by such coaming. In this case, the coaming height is to be sufficient against a list of 15 *degrees* and a trim of 10 *degrees* of the ship. However, in no case it is necessary to exceed 750 mm.

## R27 FIXED PRESSURE WATER-SPRAYING AND WATER-MIST FIRE-EXTINGUISHING SYSTEMS

### R27.2 Engineering Specifications

Paragraph R27.2.1 has been amended as follows.

#### R27.2.1 Fixed Pressure Water-spraying Fire-extinguishing Systems

~~The wording “spraying nozzles of an approved type” specified in 27.2.1-1 Part R of the Rules means those which have passed the inspection of organizations authorized by the Administration or deemed appropriate by the Society. “Approved system” specified in 27.2.1, Part R of the Rules means a system approved in accordance with the “Guidelines for the approval of equivalent water-based fire-extinguishing systems for machinery spaces and cargo pump rooms” (MSC/Circ.1165).~~

Paragraph R27.2.2 has been amended as follows.

#### R27.2.2 Equivalent Water-mist Fire-extinguishing Systems

~~For equivalent water-mist fire-extinguishing systems specified in 27.2.2, Part R of the Rules, reference is to be made to the “Alternative arrangements for halon fire-extinguishing systems in machinery spaces and pump rooms” (MSC/Circ.668) and the “Revised test method for equivalent water-based fire-extinguishing systems for machinery spaces of category A and cargo pump rooms” (MSC/Circ.728). “Approved system” specified in 27.2.2, Part R of the Rules means a system approved in accordance with the “Guidelines for the approval of equivalent water-based fire-extinguishing systems for machinery spaces and cargo pump rooms” (MSC/Circ.1165).~~

### EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 July 2008.
2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.  
(Note) The term “*a similar stage of construction*” means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material, whichever is the less.