

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

2006

AMENDMENT NO.2

Guidance for the Survey and Construction of Steel Ships

Part R

2006

AMENDMENT NO.1

Rule No.55 / Notice No.67 3rd October 2006

Resolved by Technical Committee on 6th July 2006

Approved by Board of Directors on 25th July 2006

RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part R

**Fire Protection, Detection and
Extinction**

2006 AMENDMENT NO.2

Rule No.55 3rd October 2006

Resolved by Technical Committee on 6th July 2006

Approved by Board of Directors on 25th July 2006

Rule No.55 3rd October 2006

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

Chapter 3 DEFINITIONS

3.2 Definitions

3.2.34 Oil Fuel Unit

Existing text has been amended as follows.

Oil fuel unit is the following equipment. However, oil fuel transfer pumps are not considered as oil fuel units.

- (1) Equipments used for the preparation of oil fuel for delivery to oil-fired boilers (including fired inert gas generators)
- (2) Equipments used for the preparation for delivery of heated oil to internal combustion engines (including gas turbines)
- (3) Equipments used for the preparation for delivery of oil to internal combustion engines (including gas turbines) at a pressure of more than 0.18 *MPa*
- (4) Oil pressure pumps, filters and heaters dealing with oil at a pressure of more than 0.18 *MPa*.

Chapter 4 PROBABILITY OF IGNITION

4.5 Cargo Areas of Tankers

4.5.10 Protection of Cargo Pump-rooms

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

- (1) for cargo pumps, ballast pumps and stripping pumps installed in cargo pump rooms and driven by shafts passing through pump-room bulkheads, gas-tight stuffing boxes approved by the Society are to be fitted to the shafts at the bulkheads and flexible couplings are to be provided between the shafts and the pumps. The stuffing boxes are to be efficiently lubricated from outside the pump-room. The seal parts of stuffing boxes are to be of material that will not initiate sparks. These pumps are to be fitted with temperature sensing devices for bulkhead shaft glands, bearings and pump casings. A continuous audible and visual alarm signal is to be automatically effected in the cargo control room or the pump control station;

Chapter 10 FIRE FIGHTING

10.4 Fixed Fire-extinguishing Systems

The title of paragraph 10.4.1 has been amended as follows.

10.4.1 General

Sub-paragraph -1 has been amended 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**.

10.5 Fire-extinguishing Arrangements in Machinery Spaces

10.5.1 Machinery Spaces containing Oil-fired Boilers or Oil Fuel Units

Sub-paragraph -1 has been amended as follows.

- 1** Fixed fire-extinguishing systems
Machinery spaces of category *A* containing oil-fired boilers or oil fuel units are to be provided with any one of the following fixed fire-extinguishing systems. In each case if the engine and boiler rooms are not entirely separate, or if fuel oil can drain from the boiler room into the engine-room, the combined engine and boiler rooms are to be considered as one compartment.
 - (1) a fixed gas fire-extinguishing system complying with the provision of **Chapter 25**;
 - (2) a fixed high-expansion foam fire-extinguishing system complying with the provision of **Chapter 26**; and
 - (3) a fixed pressure water-spraying fire-extinguishing system complying with the provision of **Chapter 27**.

Chapter 25 FIXED GAS FIRE-EXTINGUISHING SYSTEMS

25.2 Engineering Specifications

25.2.2 Carbon Dioxide Systems

The main text of sub-paragraph -2 has been amended as follows.

- 2** Controls of carbon dioxide systems protecting ro-ro spaces or other spaces which are normally manned or where personnel can be expected to enter or access, are to comply with the following requirements:

Chapter 29 FIXED FIRE DETECTION AND FIRE ALARM SYSTEMS

29.2 Engineering Specifications

29.2.5 System Control Requirements

Sub-paragraph -2 has been renumbered to -3, and sub-paragraph -2 has been added as follows.

- 2** The fire detection indicating panel is to be provided with facilities for functional testing.

Chapter 30 SAMPLE EXTRACTION SMOKE DETECTION SYSTEMS

30.2 Engineering Specifications

30.2.4 System Control Requirements

Sub-paragraph -2 has been renumbered to -3, and sub-paragraph -2 has been added as follows.

- 2** The fire detection indicating panel is to be provided with facilities for functional testing.

EFFECTIVE DATE AND APPLICATION

- 1.** The effective date of the amendments is 1 April 2007.
- 2.** Notwithstanding the amendments to the Rules, the current requirements may apply to ships other than ships for which the application for Classification Survey during Construction is submitted to the Society on and after the effective date.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part R

**Fire Protection, Detection and
Extinction**

GUIDANCE

2006 AMENDMENT NO.1

Notice No.67 3rd October 2006

Resolved by Technical Committee on 6th July 2006

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

R3 DEFINITIONS

R3.2 Definitions

R3.2.18 Control Stations

Sub-paragraphs -1 and -2 have been renumbered to -2 and -4 respectively, and sub-paragraphs -1 and -3 have been added as follows.

- 1 The wording “main navigational equipment” specified in the provisions of **3.2.18, Part R of the Rules**, includes the steering stand, the compass, radar equipment.
- 2 With respect to the provisions of **3.2.18, Part R of the Rules**, spaces where major components of a fixed fire-extinguishing system are provided need not to be considered as a control station, except where in **Part R of the Rules** relevant to fixed fire-extinguishing systems there are no specific requirements for the centralization within a control station of such major components. However, the fire integrity for storage rooms of fire-extinguishing medium for fixed fire-extinguishing systems is to be in accordance with the provisions of **10.4.3(7), Part R of the Rules** and **Table R9.2.3-1**.

Paragraph R3.2.30 has been deleted.

Paragraph R3.2.31 has been added as follows.

R3.2.31 Machinery Spaces of Category A

Incinerators specified in **3.2.31, Part R of the Rules** is those with a maximum combustion capacity over 34.5 *kW*.

R4 PROBABILITY OF IGNITION

R4.4 Miscellaneous Items of Ignition Sources and Ignitability

Paragraph R4.4.2 has been added as follows.

R4.4.2 Waste Receptacles

With respect to the provisions of **4.4.2, Part R of the Rules**, receptacles constructed of combustible materials may be allowed for the use in galleys, pantries, bars, garbage handling or storage spaces and incinerator rooms provided they are intended purely for the carriage of wet waste, glass bottles and metal cans and are suitably marked.

R4.5 Cargo Areas of Tankers

R4.5.1 Separation of Cargo Tanks

Sub-paragraph -1 has been amended as follows.

- 1** The wording “such pump rooms have the same safety standard as that required for cargo pump rooms” specified in **4.5.1-1, Part R of the Rules** means that the pump rooms are to comply with all requirements applied to cargo pump rooms in **this Part** (except the requirements for fixed fire fighting systems in **10.9, Part R of the Rules**). However, the pump rooms not containing cargo pumps, stripping pumps, pumps for slop tanks, pumps for COW nor similar pumps need not comply with the requirements of **4.5.10, Part R of the Rules**. Pump-rooms intended for fuel oil transfer also need not comply with the requirements of **4.5.10, Part R of the Rules**.

Sub-paragraph -2(3) has been added as follows.

- (3)** The expression “cofferdam” means an isolating space between two adjacent steel bulkheads or decks. The minimum distance between the two bulkheads or decks is to be sufficient for safe access and inspection. In case when a corner-to-corner situation occurs, small cofferdam made by welding a diagonal plate across the corner may be permitted. No cargo, wastes or other goods are to be contained in cofferdams.

Sub-paragraphs -3 to -7 have been renumbered to -4 to -8 respectively, and sub-paragraph -3 has been added as follows.

- 3** With respect to the requirements of **4.5.1-2, Part R of the Rules**, cargo sampling lockers may be positioned within the cargo area. However, paint lockers and spaces for the storage of other flammable liquids cannot be located within such area.

R4.5.2 Restriction on Boundary Openings

Sub-paragraph -1 has been amended as follows.

- 1 With respect to the requirements specified in **4.5.2-1** and **-2, Part R of the Rules**, access to forecastle spaces containing sources of ignition may be through doors facing cargo area provided the doors are located outside hazardous areas as defined in **4.3.1, Part H of the Rules**.

Sub-paragraph -3 has been amended as follows.

- 3 The boundaries of spaces, where “A-60” class insulation is required under the requirements of **4.5.2-2, Part R of the Rules**, are to be insulated as exemplified in **Fig.R4.5.2-1**. The ceilings and floors of spaces with asterisk are also to have “A-60” class insulation. Incidentally, foam liquid tanks for the deck foam systems may be provided in these spaces.

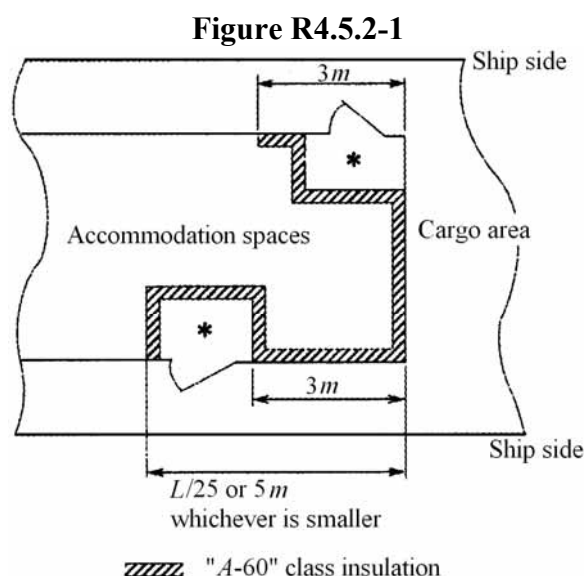
Sub-paragraphs -4 and -5 have been renumbered to -5 and -6 respectively, and sub-paragraph -4 has been added as follows.

- 4 With respect to the provisions of **4.5.2-2, Part R of the Rules**, an access to a deck foam system room (including the foam tank and the control station) may be permitted within the limits mentioned in **4.5.2-1, Part R of the Rules**, provided that the conditions specified in **4.5.2-2, Part R of the Rules** are satisfied and that door is located flush with the bulkhead.

Sub-paragraph -5 has been amended as follows.

- 5 The navigational bridge external doors and windows which are located within the limits specified in **4.5.2-2, Part R of the Rules**, are to be provided with packing and clamping fittings. For ensuring their gas-tightness, appropriate test are to be carried out. If a water hose test is applied, such tests are to be in accordance with the provisions of **B2.1.5-2(3)**.

Figure R4.5.2-1 has been amended as follows.



R4.5.3 Cargo Tank Venting

Sub-paragraph -5 has been added as follows.

- 5** For the application of **4.5.3-4(1)(c)** and **(d)**, **Part R of the Rules**, electrical equipment fitted in compliance with the applicable provisions of **4.3, Part R of the Rules** is not considered as a source of ignition or ignition hazard.

R4.5.4 Ventilation

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

- (1) For minimizing possible accumulation of the flammable vapours, the ducts are to be arranged, to permit ventilation in the vicinity of the cargo oil pump room bilge, above the floor plate or bottom longitudinals. An emergency intake located nearly 2 *m* above the cargo oil pump room lower grating is to be arranged for the ducts, and this emergency intake is to have a damper which is capable of being opened or closed from the weather deck and lower grating level. When the lower inlets are closed, at least 15 air changes per hour are to be obtained through the upper inlets.

R4.5.10 Protection of Cargo Pump-Rooms

Sub-paragraph -3 has been amended as follows.

- 3** The wording “suitable positions in order that potentially dangerous leakages are readily detected” specified in **4.5.10(3), Part R of the Rules** means the zone where air circulation is reduced (*e.g.* recessed corners).

R9 CONTAINMENT OF FIRE

R9.2 Thermal and Structural Boundaries

R9.2.3 Bulkheads within Accommodation Area

Sub-paragraph -9 has been amended as follows.

- 9** The wording “other machinery spaces having little or no fire risk” referred to in footnote *i* of **Table R9.2, Part R of the Rules** means auxiliary machinery spaces which have little or no possibility of spreading fire due to a fire within machinery spaces of category *A* and do not contain any machinery having a pressure lubrication system, such as: fan rooms, ventilation and air-conditioning machinery rooms; windlass room; steering gear room; stabilizer equipment room; electrical propulsion motor room; hydraulic system store rooms; rooms containing section switchboards and purely electrical equipment other than oil-filled electrical transformers (about 10 *kVA*); shaft alleys and pipe tunnels; spaces for pumps and refrigeration machinery (not handling or using flammable liquids).

Table R9.2.3-1 has been amended as follows.

Table R9.2.3-1

Control stations	Spaces containing navigational apparatus (steering stand, compass and radar equipment) Electric rooms (where charging/discharging panels or battery charges are located), battery rooms, motor-generator rooms for navigational apparatus, radio or inverter rooms Spaces containing control systems and storage rooms of fire-extinguishing medium for fixed fire extinguishing systems (See Note (1) below)
Accommodation spaces	Telephone rooms (Telephone booths)
Service spaces with low risk of fire	Shore connection box rooms Electric rooms (where transformers, switchboards (see Note (2) below), motor-generators, etc. of less than 50 kVA (kW) are located and having areas of less than 4 m ²) Space where distribution panels and starters are located Accommodation ladder winch machinery rooms Ballast control rooms, main cargo control rooms
Other machinery spaces	Electric rooms (except those categorized as “control stations” or “service spaces with low risk of fire”) Storage rooms for hydraulic units for deck machinery and cargo gears Propulsion motor rooms Propulsion motor control rooms Steering gear rooms (See Note (3) below) Emergency fire pump rooms (See Note (4) below) Spaces containing deck foam systems (See Note (5) below) Spaces other than machinery spaces of category A where fuel oil piping lines are located Inert gas fan rooms
Service spaces with high risk of fire	Oxygen or acetylene bottle storage rooms (See Note (6) below) Jumper lockers Mail rooms, specie rooms and workshops Provision store rooms (See Note (7) below) Refrigerating chambers (See Note (8) below)
Other spaces	1. To duct spaces and cable trunks, the requirements of 9.2.3-6, Part R of the Rules for lift trunks are to apply. 2. Under deck passages of container ships with self-closing gas-tight doors separating the spaces from cargo spaces effectively, are to be regarded as void spaces. However, in case where they serve as escape route, they are to be regarded as corridors.

Notes:

- (1) Except where permitted to be stored in the space protected by that fixed fire-extinguishing system according to the type of the system.
- (2) Small distribution boards may be located behind panels/linings within accommodation spaces including stairway enclosures, provided no provision is made for storage. Such location need not to be considered as a separate space nor categorized as a service space with low risk of fire.
- (3) In case where an emergency fire pump is installed in the steering gear room or spaces which are only accessible directly therefrom (except from the engine room specified in **R10.2.2-4**), the fire integrity of boundaries between the space where the main fire pump is installed and the steering gear room is to be in accordance with **R10.2.2-3**.
- (4) The fire integrity of boundaries separating from the space where the main fire pump is installed is to be in accordance with **10.2.2-3(2), Part R of the Rules**.
- (5) Attention is paid to the provisions of **R4.5.2-3** and **-4**.
- (6) In case where one side or more of the walls are open to an exposed deck, such storage rooms may be regarded as those on the open deck.
- (7) Such spaces having areas of less than 4 m² may be considered as a service space with low risk of fire.

- (8) If thermally insulated with non-combustible materials, such spaces may be considered as a service space with low risk of fire.

R9.7 Ventilation Systems

R9.7.1 Duct and Dampers

Sub-paragraph -1 has been amended as follows.

- 1 With respect to the provisions of **9.7.1, Part R of the Rules**, irrespective of the sectional area, the ventilation ducts are, in principle, to be of non-combustible material. However, flexible bellows of combustible material may be used for connecting fans to the ducting in air conditioning room, except the extent specified in -2.

Sub-paragraph -4 has been amended as follows.

- 4 Fire dampers required to be fitted in the requirements of **9.7.4(2), Part R of the Rules** need not comply with the requirements of **9.7.1-2, Part R of the Rules**, provided that they are to be capable of stopping the draught.

R9.7.3 Details of Duct Penetrations

Sub-paragraph -3 has been added as follows.

- 3 Ventilation inlets and outlets located at outside boundaries which are fitted with closing appliances as required by **5.2.2-1, Part R of the Rules**, need not comply with the requirements of **9.7.3, Part R of the Rules**.

R9.7.4 Exhaust Ducts from Galley Ranges

Sub-paragraphs (2) and (3) have been amended as follows.

- (2) Unless otherwise permitted by the Society, the term of “spaces containing combustible materials” will normally apply to all spaces in accommodation.
- (3) The wording “exhaust ducts from galley ranges are to be constructed of “A” class divisions” means that ducts are to be of steel with a thickness of 4.5 *mm* or more. “A” class applies only to the part of the duct outside the galley and the part where such duct piercing a bulkhead.

R10 FIRE FIGHTING

R10.2 Water Supply Systems

R10.2.1 Fire Mains and Hydrants

Sub-paragraph -3 has been amended as follows.

- 3** With respect to the provisions of **10.2.1-4(1), Part R of the Rules**, any part of the fire main isolated by the isolating valves from the section of the fire main within the machinery space containing the main fire pump or pumps is to be routed outside such machinery space. Such isolating valve is provided is to be a corridor within the accommodation space or the fire control station. In case where the valve is provided on open deck or other spaces, the position of the installation is to be such that the valve will be free from damage by cargo loaded on deck or free from mechanical damage, and that operation of the valve would not be impaired by such cargo loaded on deck or storage goods. In case where the valve is provided on open deck, means are to be provided to prevent the valve from freezing.
When the valve is provided in a corridor, such corridor need not be dealt with the control station.

R10.2.2 Fire Pumps

Sub-paragraphs -3 to -5 have been renumbered to -4 to -6 respectively, and sub-paragraph -3 has been added as follows.

- 3** With respect to the provisions of **10.2.2-3(2), Part R of the Rules**, when a single access to the emergency fire pump room is through another space adjoining a machinery space of category *A* or the space containing the main fire pumps, boundaries between that other space and the machinery space of category *A* or the spaces containing the main fire pumps are to be insulated by “*A-60*” class standard.

Sub-paragraphs -5 and -6 have been renumbered to -7 and -8 respectively, and sub-paragraphs -5 and -6 have been added as follows.

- 5** The provisions of **10.2.2-3(5), Part R of the Rules** do not force to choose pumps with capacity and pressure characteristics other than that being optimal for the service intended, just to make their connection to the fire main possible, provided the required number and capacity of fire pumps are already fitted.
- 6** With respect to the requirements of **10.2.2-3(6), Part R of the Rules**, at least one of the fire pump is to be connected to a sea chest which is provided with de-icing arrangements.

R10.4 Fixed Fire-extinguishing Systems

Section R10.4 has been deleted.

R10.5 Fire-extinguishing Arrangements in Machinery Spaces

R10.5.1 Machinery Spaces containing Oil-fired Boilers or Oil Fuel Units

Sub-paragraph -1 has been amended as follows.

- 1 With respect to the requirements specified in **10.5.1, Part R of the Rules**, the requirements of fire-extinguishing systems required for machinery spaces containing oil-fired boilers, oil fuel units or internal combustion engines are to be as given in **Table R10.5.1-1**. However, for the use of this table, oil-fired machinery other than boilers such as fired inert gas generators, incinerators and waste disposal units are to be considered the same as oil-fired boilers.

R10.5.4 Other Machinery Spaces

Sub-paragraph -1 has been deleted, and sub-paragraphs -2 and -3 have been renumbered to -1 and -2 respectively.

Sub-paragraph -2 has been amended as follows.

- 2 For the fire extinguishers specified in -1 above, the provisions of **R10.5.1-3** of this Guidance is to be applied.

R10.6 Fire-extinguishing Arrangements in Control Stations, Accommodation and Service Spaces

R10.6.2 Spaces containing Flammable Liquid

Existing text has been numbered to sub-paragraph -2, and sub-paragraph -1 has been added as follows.

- 1 The requirements of **10.6.2, Part R of the Rules** need not apply to spaces for the storage of cargo samples, when such spaces are positioned within the cargo area onboard tankers.

R10.7 Fire-extinguishing Arrangements in Cargo Spaces

R10.7.1 Fixed Fire-extinguishing Systems for General Cargo

Existing text has been numbered to sub-paragraph -2, and sub-paragraph -1 has been added as follows.

- 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**.

R10.8 Cargo Tank Protection

R10.8.1 Fixed Deck Foam Systems

Sub-paragraph -1 has been amended as follows.

- 1 With respect to the requirements of **10.8.1, Part R of the Rules**, the fire pumps or the emergency fire pump required in **10.2, Part R of the Rules** may be utilized as pumps for fixed deck foam systems provided that those pumps have sufficient capacity for supplying both the deck foam systems and the water supply systems as required. A common line for fire main and deck foam line can only be accepted provided it can be demonstrated that the hose nozzles can be effectively controlled by one person when supplied from the common line at a pressure needed for operation for monitors.

Section R10.9 has been added as follows.

R10.9 Protection of Cargo Pump Room

R10.9.1 Fixed Fire-Extinguishing Systems

For the application of **10.9.1(1)(a), Part R of the Rules**, alarms to warn of the release of fire-extinguishing medium are to be in accordance with the followings.

- (1) Pneumatic operated alarms
CO₂ operated alarms are not to be used. Air operated alarms may be used provided the air supply is clean and dry.
- (2) Electrically operated alarms
The arrangements are to be such that the electric actuating mechanism is located outside the pump room except where the alarms are certified intrinsically safe.

R19 CARRIAGE OF DANGEROUS GOODS

R19.2 General Requirements

R19.2.2 Application for Categories of Cargo Spaces

Existing text has been numbered to sub-paragraph -2, and sub-paragraph -1 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.

Sub-paragraph -3 has been added as follows.

- 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**.

R19.3 Special Requirements

R19.3.1 Water Supplies

Sub-paragraph -5 has been amended as follows.

- 5** Fixed spraying arrangement required in **19.3.1-3, Part R of the Rules** is to be of a type approved by organizations authorized by the Administration or deemed appropriate by the Society, or equivalent. For cargo holds of open-top container ships, reference is to be made to paragraphs 9.2, 9.3 and 9.4 of *MSC/Circ.608/Rev.1 "Interim guidelines for open-top container ships"*.

R19.3.4 Ventilation

Sub-paragraph -3 has been added as follows.

- 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.

R19.3.5 Bilge Pumping

Sub-paragraph -3 has been added as follows.

- 3 With respect to the provisions of **19.3.5, Part R of the Rules**, bilge systems for cargo holds of open-top container ships are to be independent of the machinery space bilge system and be located outside of the machinery space.

R19.3.6 Personnel Protection

Existing text has been replaced with the following sub-paragraphs.

- 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.
- 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.

R20 PROTECTION OF VEHICLE AND RO-RO SPACES

R20.4 Detection and Alarm

R20.4.1 Fixed Fire Detection and Fire Alarm Systems

Existing text has been numbered to sub-paragraph -2, and sub-paragraph -1 has been amended as follows.

- 1** With respect to the provisions of **20.4.1, Part R of the Rules**, the requirement of the fire detection needs not apply to weather decks used for the carriage of vehicle.

R20.5 Fire-extinction

R20.5.1 Fixed Fire-extinguishing Systems

Sub-paragraphs -1 to -5 have been renumbered to -2 to -6 respectively, and sub-paragraph -1 has been added as follows.

- 1** With respect to the provisions of **20.5.1, Part R of the Rules**, the requirement of the fixed fire-extinguishing system needs not apply to weather decks used for the carriage of vehicle.

Sub-paragraphs -3 to -6 have been renumbered to -4 to -7 respectively, and sub-paragraph -3 has been added as follows.

- 3** The fixed high expansion foam fire-extinguishing system specified in **20.5.1-1(2), Part R of the Rules** is to be in accordance with the applicable provisions of **Chapter 26, Part R of the Rules**.

R20.5.2 Portable Fire Extinguishers

Sub-paragraph -1 has been amended as follows.

- 1** With respect to the requirements of **20.5.2-1, Part R of the Rules**, portable extinguishers need not be provided at ro-ro spaces etc. on weather decks, except the one positioned at each entrance to the spaces. Portable foam applicators also need not to be provided on weather decks.

R21 SPECIAL REQUIREMENTS FOR SMALL SHIPS AND SHIPS FOR RESTRICTED SERVICE

R21.2 Special Requirements

R21.2.1 Requirements for Ships of less than 500 gross tonnage

Sub-paragraph -12 has been renumbered to -13, and sub-paragraph -12 has been newly added as follows.

12 The requirements of **10.7.2, Part R of the Rules** need not apply to.

R24 FIRE EXTINGUISHERS

R24.1 General

R24.1.2 Type Approval

Existing text has been amended as follows.

The wording “fire extinguishers of approved types and designs” specified in **24.1.2, Part R of the Rules** means those which have passed the inspection of organizations authorized by Administration or deemed appropriate by the Society with reference made to the “*Improved guidelines for marine portable fire extinguishers*” (IMO Res. A.951(23)) or other standards accepted by the Administration.

R25 FIXED GAS FIRE-EXTINGUISHING SYSTEMS

R25.2 Engineering Specifications

R25.2.2 Carbon Dioxide Systems

Sub-paragraph -5 has been added as follows.

5 The discharge time specified in **25.2.2-1(5), Part R of the Rules** may be checked by suitable calculations.

R34 FIXED DECK FOAM SYSTEMS

R34.2 Engineering Specifications

R34.2.2 Component Requirements

Existing text has been numbered to sub-paragraph -2, and sub-paragraph -1 has been added as follows.

- 1** With respect to the provisions of **34.2.2, Part R of the Rules**, where a deck foam system is supplied from a common line for the fire main, additional foam concentrate is to be provided for operation of 2hose nozzles for the same period of time required for the foam system.

R34.2.3 Installation Requirements

Sub-paragraphs -1 to -3 have been renumbered to -2 to -4 respectively, and sub-paragaraph -1 has been added as follows.

- 1** With respect to the provisions of **34.2.3-1, Part R of the Rules**, the major equipment except their controls, such as the foam concentrate tank and the pumps, may be located in the engine room.

EFFECTIVE DATE AND APPLICATION

- 1.** The effective date of the amendments is 1 April 2007.
- 2.** Notwithstanding the amendments to the Guidance, the current requirements may apply to ships other than ships for which the application for Classification Survey during Construction is submitted to the Society on and after the effective date.