

SECTION 1

GENERAL REQUIREMENTS AND APPLICATION

1 Application

1.1 General

1.1.1 This Chapter applies to yachts and charter yachts. Where the word yachts is used in the subsequent chapter, it means yachts and charter yachts.

1.1.2 Charter yachts intended to carry more than 12 passengers are generally not covered by this chapter and are to comply with applicable rules for ships granted with the passenger ship service notation.

Note 1: However, charter yachts intended to carry more than 12 passengers built in composite or wood structures may be considered under this chapter. Attention is to be drawn on the possible additional requirements of the Flag Administration.

1.1.3 In the present Chapter, length reference to 24 m means:

- for yacht: Hull length, L_{hv} , as defined in EC Directive (EN ISO standard 8666:2002) reminded in Pt A, Ch 2, Sec 1, [2.2.1]
- for charter yacht: Length according to International Rules, L_{LL} , as defined in Pt A, Ch 2, Sec 1, [2.2.1].

1.2 National regulations

1.2.1 When the Administration of the State whose flag the yacht is entitled to fly has issued specific rules covering fire

protection, the Society may accept such rules for classification purposes in lieu of those given in this Chapter.

In this case, it is the responsibility to the Owner, Designer or Yacht builder to specify to the Society the condition of operation of the Yacht and the applicable specific Flag Rules.

In such cases, a special notation regarding the above is entered on the Certificate of Classification of the yacht.

1.3 Applicable rules depending on ship type

1.3.1 The applicable requirements of the present rules, depending on ship type, are summarized in Tab 1 .

When reference is made to the Rules for Steel ships, the latest version of the “NR 467- Rules for the Classification of Steel Ships” is applicable.

2 Yachts of 500 GT and over

2.1 Applicable rules

2.1.1 General

For yachts of 500 GT and over, the Part C Chap 4 of the Rules for Steel ships (for passenger ships with less than 36 passengers) is to be applied, unless otherwise specified in the subsequent paragraphs.

2.1.2 Material of fire divisions

The requirements of the present Ch 4, Sec 2, [2.2.1] to Ch 4, Sec 2, [2.2.3] are applicable for yachts of 500 GT and over.

Table 1 : Applicable rules in the present chapter depending on ship type

Section	Yachts of less than 24 m in length	Yachts of 24 m in length and over and of less than 500GT	Yachts of 500GT and over (see also [2])
Section 1	[3], as applicable	[3], as applicable	[2]
Section 2	Ch 4, Sec 2, [1] Ch 4, Sec 2, [2.3.1] Ch 4, Sec 2, [3]	X	Ch 4, Sec 2, [2.2.1] to Ch 4, Sec 2, [2.2.3]
Section 3		X	See [2]
Section 4		X	See [2]
Section 5	Ch 4, Sec 5, [1] Ch 4, Sec 5, [3.1] Ch 4, Sec 5, [4] as applicable	X	See [2]
Section 6	Ch 4, Sec 6, [1] Ch 4, Sec 6, [2]	Ch 4, Sec 6, [1] Ch 4, Sec 6, [3]	See [2]
Section 7	Ch 4, Sec 7, [1]	Ch 4, Sec 7, [2]	See [2]
Section 8	X, if any	X, if any	X, if any
Section 9	X, if any	X, if any	X, if any
Section 10	X	X	See [2]
X : The majority of the requirements of this section are applicable, except those expressly specified to be applicable to other types of yachts. X, if any : only applicable if the concerned equipment or space is installed on the yacht.			

2.1.3 Use of non-combustible materials: ceilings and linings

If an automatic sprinkler system is installed, the requirement of Part C Chap 4 Sec 2 [2.2.1] b) of the Rules for Steel ships is replaced by the following requirement:

- All draught stops are to be of non-combustible materials.

2.1.4 Use of combustible materials

The requirement of Part C Chap 4 Sec 2 [2.2.2] of the Rules for Steel ships is replaced by the subsequent requirements:

- a) If a fixed fire detection and alarm system is installed in accordance with Part C Chap 4 Sec 3 [4.4.1] a) of the Rules for Steel ships, exposed surfaces in corridors and stairways enclosures and of ceilings in accommodation and service spaces (except saunas) and control stations are to be of low-flame spread characteristics in accordance with the Fire Test Procedures Code
- b) If an automatic sprinkler is installed in addition to the fixed fire detection and alarm system in accordance with Part C Chap 4 Sec 3 [4.4.1] b) of the Rules for Steel ships, exposed surfaces in corridors and stairways enclosures and of ceilings in the galley are to be of low-flame spread characteristics in accordance with the Fire Test Procedures Code.

2.1.5 Protection of stairways

The requirement of Part C Chap 4 Sec 5 [1.3.5] a) 1) of the Rules for Steel ships is not applicable. This requirement is replaced by the following requirement of Part C Chap 4 Sec 5 [1.4.4] of the Rules for Steel ships:

- a) Stairways which penetrate only a single deck are to be protected, at a minimum, at one level by at least B-0 class divisions and self-closing doors. Lifts which penetrate only a single deck are to be surrounded by A-0 class divisions with steel doors at both levels. Stairways and lift trunks which penetrate more than a single deck are to be surrounded by at least A-0 class divisions and be protected by self-closing doors at all levels
- b) On ships having accommodation for 12 persons or less, where stairways penetrate more than a single deck and where there are at least two escape routes direct to the open deck at every accommodation level, the A-0 requirements of the above item a) may be reduced to B-0.

2.1.6 Fire fighting and fire safety systems

The requirements of Part C Chap 4 Sections 6 and 13 of the Rules for Steel ships for cargo ships are to be applied instead of the rules for passenger ships with less than 36 passengers.

2.1.7 Material of hull, superstructures, structural bulkheads, decks and deckhouses

The requirement of Part C Chap 4 Section 7 [2] of the Rules for Steel Ships is replaced by the following requirement:

- The hull, superstructures, structural bulkheads, decks and deckhouses are to be constructed of steel or equivalent

material. For this purpose, an equivalent material to steel means a material that by itself or due to non-combustible insulation provided, has fire resistance properties equivalent to the properties of the corresponding steel division. Insulation need not to be applied on the upper side of decks and the outside of steel yacht. On yachts constructed in materials other than steel, precautions are to be taken to preserve the hull integrity in case of fire.

2.1.8 Escape

The requirement of Part C Chap 4 Section 8, [2.6] of the Rules for Steel Ships is not applicable.

2.1.9 Carriage of dangerous goods

The requirements of Part C Chap 4 Section 11 of the Rules for Steel Ships are not applicable.

2.1.10 Protection of vehicle spaces

Requirements of Part C Chap 4 Section 12 of the Rules for Steel Ships are replaced by the requirements of Ch 4, Sec 9 of the present rules.

3 Yachts of less than 500 GT

3.1 Applicable rules

3.1.1 For yachts of less than 500 GT, the subsequent paragraphs and Ch 4, Sec 2 to Ch 4, Sec 10 of the present chapter are applicable (see Tab 1).

3.2 Documentation to be submitted

3.2.1 The interested party is to submit to the Society the documents listed in Tab 2 for yachts of less than 24 m in length and listed in Tab 3 for yachts of 24 m in length and over.

3.3 Type approved products

3.3.1 Yachts of less than 24 m in length

The following materials, equipment, systems or products in general used for fire protection are to be type approved by the Society, except for special cases for which the acceptance may be given for individual yachts on the basis of suitable documentation or ad hoc tests:

- a) Fixed foam fire-extinguishing systems and associated foam-forming liquids
- b) Fixed powder fire-extinguishing systems, including the powder
- c) Sprinkler heads for automatic sprinkler systems
- d) Equivalent automatic sprinkler systems
- e) Equivalent fixed gas fire extinguishing systems.

Table 2 : Documentation to be submitted for yachts of less than 24 m in length

N°	Comment (1)	Document (2)
1	A	Means of escape and, where required, the relevant dimensioning. Escape route signage
2	A	Arrangement of fixed fire-extinguishing systems, if any (2)
3	A	Arrangement of sprinkler or sprinkler equivalent systems including the capacity and head of the pumps, if any (2)
4	A	Fire control plan showing the position of all fixed or portable extinguishing appliances.
5	A	Electrical diagram of the fixed gas fire-extinguishing system, if any
6	A	Electrical diagram of the sprinkler systems, if any
7	A	Drawings in relation with the protection of Vehicle spaces, if any
8	I	General arrangement plan showing the purpose of the various spaces of the yacht
<p>(1) A : to be submitted for approval, in four copies I : to be submitted for information, in duplicate.</p> <p>(2) Plans are to be schematic and functional and to contain all information necessary for their correct interpretation and verification such as:</p> <ul style="list-style-type: none">• service pressures• capacity and head of pumps and compressors, if any• materials and dimensions of piping and associated fittings• volumes of protected spaces, for gas and foam fire-extinguishing systems• surface areas of protected zones for automatic sprinkler and pressure water-spraying, low expansion foam and powder fire-extinguishing systems• capacity, in volume and/or in mass, of vessels or bottles containing the extinguishing media or propelling gases, for gas, automatic sprinkler, foam and powder fire-extinguishing systems• type, number and location of nozzles of extinguishing media for gas, automatic sprinkler, pressure water-spraying, foam and powder fire-extinguishing systems. <p>All or part of the information may be provided, instead of on the above plans, in suitable operation manuals or in specifications of the systems.</p>		

3.3.2 Yachts of 24 m in length and over

The following materials, equipment, systems or products in general used for fire protection are to be type approved by the Society, except for special cases for which the acceptance may be given for individual yachts on the basis of suitable documentation or ad hoc tests:

- a) Fire-resisting and fire-retarding divisions (bulkheads or decks) and associated doors
- b) Materials with low flame spread characteristic when they are required to have such characteristic
- c) Non-combustible materials
- d) Fixed foam fire-extinguishing systems and associated foam-forming liquids
- e) Fixed powder fire-extinguishing systems, including the powder
- f) Sprinkler heads for automatic sprinkler systems
- g) Equivalent automatic sprinkler systems
- h) Nozzles for fixed pressure water-spraying fire-extinguishing systems for machinery spaces, boiler rooms and vehicle spaces
- i) Sensing heads for automatic fire alarm and fire detection systems

- j) Fixed fire detection and fire alarm systems
- k) Fire dampers
- l) Equivalent water-based fire extinguishing system for machinery spaces of category A
- m) Equivalent fixed gas fire extinguishing systems components for machinery spaces of category A.

3.3.3 As regards the granting of type approval, the requirements of Part A apply.

The Society may request type approval for other materials, equipment, systems or products required by the applicable provisions for yachts or installations of special types.

3.4 Definitions

3.4.1 Accommodation spaces

Accommodation spaces are those spaces used for halls, dining rooms, lounges and similar permanently enclosed spaces, corridors, stairs, lavatories, cabins, offices, hospitals, cinemas, games and hobbies rooms, barber shops, pantries containing no cooking appliances (as defined in [3.4.14] a)) and similar spaces.

Table 3 : Documentation to be submitted for yachts of 24 m in length and over

Nº	Comment (1)	Document (2)
1	A	Structural fire protection, showing the method of construction and the purpose of the various spaces of the yacht, the fire rating of bulkheads and decks, means of closings of openings in A and B class divisions, draught stops
2	A	Natural and mechanical ventilation systems showing the penetrations on A class divisions, location of dampers, means of closing, arrangements of air conditioning rooms
3	A	Means of escape and, where required, the relevant dimensioning. Escape route signage
4	A	Automatic fire detection system
5	A	Fire pumps and fire main including pumps head and capacity, hydrant and hose locations
6	A	Arrangement of fixed fire-extinguishing systems, if any (2)
7	A	Arrangement of sprinkler or sprinkler equivalent systems including the capacity and head of the pumps, if any (2)
8	A	Fire control plan
9	A	Electrical diagram of the fixed gas fire-extinguishing systems, if any
10	A	Electrical diagram of the sprinkler systems, if any
11	A	Drawings in relation with the protection of Vehicle spaces, if any
12	I	General arrangement plan
<p>(1) A : to be submitted for approval, in four copies I : to be submitted for information, in duplicate.</p> <p>(2) Plans are to be schematic and functional and to contain all information necessary for their correct interpretation and verification such as:</p> <ul style="list-style-type: none">• service pressures• capacity and head of pumps and compressors, if any• materials and dimensions of piping and associated fittings• volumes of protected spaces, for gas and foam fire-extinguishing systems• surface areas of protected zones for automatic sprinkler and pressure water-spraying, low expansion foam and powder fire-extinguishing systems• capacity, in volume and/or in mass, of vessels or bottles containing the extinguishing media or propelling gases, for gas, automatic sprinkler, foam and powder fire-extinguishing systems• type, number and location of nozzles of extinguishing media for gas, automatic sprinkler, pressure water-spraying, foam and powder fire-extinguishing systems. <p>All or part of the information may be provided, instead of on the above plans, in suitable operation manuals or in specifications of the systems.</p>		

3.4.2 A class divisions

"A" class divisions are those divisions formed by bulkheads and decks which comply with the following criteria:

- a) they are constructed of steel or other equivalent material
- b) they are suitably stiffened
- c) they are insulated with approved non-combustible materials such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature, at any one point, including any joint, rise more than 180°C above the original temperature, within the time listed below:
 - class "A-60" 60 minutes
 - class "A-30" 30 minutes

- class "A-15"..... 15 minutes
- class "A-0"..... 0 minutes
- d) they are so constructed as to be capable of preventing the passage of smoke and flame to the end of the one-hour standard fire test; and
- e) the Society required a test of a prototype bulkhead or deck in accordance with the Fire Test Procedures Code (see [3.4.7]) to ensure that it meets the above requirements for integrity and temperature rise.
- f) Equivalent arrangements may be accepted, if they comply with Ch 4, Sec 2, [2.2].

The products indicated in Tab 4 may be installed without testing or approval.

Table 4 : Products installed without testing or approval

Classification	Product description
Class A-0 bulkhead	A steel bulkhead with dimensions not less than the minimum dimensions given below: <ul style="list-style-type: none">• thickness of plating: 4 mm• stiffeners 60 x 60 x 5 mm spaced at 600 mm or structural equivalent
Class A-0 deck	A steel deck with dimensions not less than the minimum dimensions given below: <ul style="list-style-type: none">• thickness of plating: 4 mm• stiffeners 95 x 65 x 7 mm spaced at 600 mm or structural equivalent

3.4.3 B class divisions

"B" class divisions are those divisions formed by bulkheads, decks, ceilings or linings which comply with the following criteria:

- a) they are constructed of approved non-combustible materials and all materials used in the construction and erection of "B" class divisions are non-combustible, with the exception that combustible veneers may be permitted provided they meet other appropriate requirements of this Chapter
- b) they have an insulation value such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature at any one point, including any joint, rise more than 225°C above the original temperature, within the time listed below:
 - class "B-15" 15 minutes
 - class "B-0" 0 minutes
- c) they are so constructed as to be capable of preventing the passage of flame to the end of the first half hour of the standard fire test; and
- d) the Society required a test of a prototype division in accordance with the Fire Test Procedures Code (see [3.4.7]) to ensure that it meets the above requirements for integrity and temperature rise
- e) Equivalent arrangements may be accepted, if they comply with Ch 4, Sec 2, [2.2]

In order to be defined as B class, a metal division is to have plating thickness not less than 2 mm when constructed of steel.

3.4.4 Continuous B class ceilings or linings

Continuous "B" class ceilings or linings are those "B" class ceilings or linings which terminate at an "A" or "B" class division.

3.4.5 Engine space

On yachts of less than 24m in length, the engine space is the space or compartment of the boat, containing main or auxiliary engine(s).

3.4.6 Escape ways

On yachts of 24 m in length and over, escape ways are those spaces used by the persons on board to go to the embarkation areas:

- from the door of their cabin, or
- from the door of any collective space, such as mess room, or

- from the door of any occupied service space.

3.4.7 Fire Test Procedures Code

Fire Test Procedures Code means the "International Code for Application of Fire Test Procedures", as adopted by the Maritime Safety Committee of the IMO by Resolution MSC.61 (67), as may be amended by the IMO.

3.4.8 Galleys

Spaces containing any electrically heated cooking plate or hot plate for keeping food warm with a power of more than 5 kW are to be regarded, for the purpose of Ch 4, Sec 4 to Ch 4, Sec 6, as galleys.

3.4.9 Low-flame-spread

- a) A low flame-spread means that the surface thus described will adequately restrict the spread of flame, this being determined in accordance with the Fire Test Procedures Code
- b) Non-combustible materials are considered as low flame spread. However, due consideration will be given by the Society to the method of application and fixing.

3.4.10 Machinery spaces

On yachts of 24 m in length and over, machinery spaces are machinery spaces of category A and other spaces containing propulsion machinery, boilers, oil fuel units, steam and internal combustion engines, generators and major electrical machinery, oil filling stations, refrigerating, stabilizing, ventilation and air conditioning machinery, and similar spaces, and trunks to such spaces.

3.4.11 Machinery spaces of category A

On yachts of 24 m in length and over, machinery spaces of category A are those spaces and trunks to such spaces which contain either:

- a) internal combustion machinery used for main propulsion
- b) internal combustion machinery used for purposes other than main propulsion where such machinery has in the aggregate a total power output of not less than 375 kW; or
- c) any oil-fired boiler or oil fuel unit, or any oil-fired equipment other than boilers, such as inert gas generators, incinerators, etc.

3.4.12 Non-combustible material

- a) Non-combustible material is a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to approximately

750°C, this being determined in accordance with the Fire Test Procedures Code. Any other material is a combustible material

- b) In general, products made only of glass, concrete, ceramic products, natural stone, masonry units, common metals and metal alloys are considered as being non-combustible and may be installed without testing and approval.

3.4.13 Oil fuel unit

- a) The oil fuel unit is the equipment used for the preparation of oil fuel for delivery to an oil-fired boiler, or equipment used for the preparation for delivery of heated oil to an internal combustion engine, and includes any oil pressure pumps, filters and heaters dealing with oil at a pressure of more than 0,18 MPa.
- b) "Fuel oil unit" includes any equipment used for the preparation and delivery of fuel oil, whether or not heated, to boilers (including inert gas generators) and engines (including gas turbines) at a pressure of more than 0,18 MPa.

3.4.14 Pantries

- a) Pantries (including isolated pantries) containing no cooking appliances may contain:
 - coffee automats, toasters, dishwashers, microwave ovens, water boilers and similar appliances, each with a maximum power of 5 kW
 - electrically heated cooking plates and hot plates for keeping food warm, each with a maximum power of 2kW and a surface temperature not greater than 150°C.

A dining room containing such appliances is not regarded as a pantry.

- a) Main pantries and pantries containing cooking appliances may contain:

- 1) coffee automats, toasters, dishwashers, microwave ovens, water boilers and similar appliances, each with a power of more than 5 kW
- 2) electrically heated cooking plates and hot plates for keeping food warm, each with a maximum power of 5 kW.

3.4.15 Steel or other equivalent material

Steel or other equivalent material means any non-combustible material which, by itself or due to insulation provided, has structural and integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test (e.g., aluminium alloy with appropriate insulation).

3.4.16 Service spaces

Service spaces are those spaces used for galleys (as defined in [3.4.8]), pantries containing cooking appliances (as defined in [3.4.14] b)), lockers, mail and specie rooms, store-rooms, workshops other than those forming part of the machinery spaces, and similar spaces and trunks to such spaces.

3.4.17 Standard fire test

A standard fire test is a test in which specimens of the relevant bulkheads or decks are exposed in a test furnace to temperatures corresponding approximately to the standard time-temperature curve in accordance with the test method specified in the Fire Test Procedures Code (see [3.4.7]).

3.4.18 Vehicle spaces

Spaces containing vehicles or crafts with fuel in their tanks for their own propulsion.