CDP 502

Yacht Code

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Maritime Administration

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COMMONWEALTH OF DOMINICA YACHT CODE (CDP-502) Rev03
Consolidated Code for Pleasure, Private, Small Commercial, Commercial and Passenger Yachts

ISSUE AND REVISION HISTORY

Series	Date (mm/yy)	Description	Entered by	Entered
Rev02	–	Code of standards for commercial yachts ≥ 24 m and < 500 GT, based on LY2.		
Rev03 (Draft)	10/26	Consolidated Yacht Code. Extends application to all yacht categories and tonnages. Adds Part A general provisions and yacht categories; Part B Section 27 supplementary requirements aligned with the Malta CYC 2025; new Part C Small Commercial Yachts (Malta sCYC 2024 Rev.1); new Part D Passenger Yachts (Malta PYC); new Part E Private Yachts, PYLC/YET regimes (Marshall Islands model) and Pleasure Yacht guidelines (Malta Rev.1); former Parts C and D renumbered F and G; new manning scales and survey regime in Part G Sections 2 and 3, cross-referenced to CDP-300Y Rev01 and CDP-300 Rev08. Values marked [Proposed] await a policy decision.		

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PART A: GENERAL

1 Introduction

1.1 Purpose of this Code

1.1.1 This Code sets the standards of safety, security, pollution prevention and crew welfare for every category of yacht registered with the Commonwealth of Dominica International Maritime Registry (DMRI), hereinafter the "Administration". It replaces CDP-502 Rev02, which applied only to commercial yachts of 24 m and over and less than 500 GT.

1.1.2 Rev03 consolidates into a single Dominica instrument the yacht standards that the Administration has reviewed and adopted. These are:
.1 the technical standards of CDP-502 Rev02 (Part B), derived from the Large Commercial Yacht Code (LY2);
.2 the Commercial Yacht Code (CYC) 2025 published by the Merchant Shipping Directorate of Transport Malta (in force 1 July 2025, MS Notice 194), for commercial yachts of 24 m and over of any tonnage;
.3 the Small Commercial Yacht Code (sCYC) 2024 Rev.1 of Transport Malta, for commercial yachts of 12 m hull length and over and less than 24 m;
.4 the Passenger Yacht Code (PYC) of Transport Malta, for yachts carrying more than 12 and not more than 36 passengers;
.5 the Non-Mandatory Safety Guidelines for Pleasure Yachts < 24 m Hull Length Rev.1 of Transport Malta; and
.6 the yacht certification and crew certification practices of the Republic of the Marshall Islands Maritime Administrator, in particular the Private Yacht Limited Charter (PYLC) and Yacht Engaged in Trade (YET) compliance regimes and the private and commercial yacht crew certificate structure.

1.1.3 Where this Code adopts a provision from one of these sources, the provision is a Dominica requirement in its own right. References to Maltese or Marshall Islands authorities, forms or notices in the source documents are replaced by the Dominica equivalents stated in this Code.

1.1.4 Crew certification for every yacht category is governed by CDP-300Y, Yacht Crew Certification Requirements, Rev01, read with CDP-300, Merchant Marine Personnel Certification Requirements, Rev08. Part G Section 2 of this Code sets the minimum safe manning scales.

1.2 Structure of this Code

1.2.1 The Code is arranged in the following Parts:

Part	Content	Applies to
A	General: application, categories, navigation notations, equivalence, changeover, oversight, reporting	All yachts
B	Technical standards (Sections 4 to 27)	Commercial Yachts ≥ 24 m; Private Yacht Limited Charter yachts
C	Small Commercial Yachts	Commercial Yachts ≥ 12 m LH and < 24 m Length
D	Passenger Yachts	Yachts carrying 13 to 36

Part	Content	Applies to
		passengers, ≤ 200 persons
E	Private Yachts	Private Yachts ≥ 24 m; Pleasure Yachts < 24 m (voluntary)
F	Additional technical requirements: helicopter landing areas, submersibles, open flame installations, safety management, security, sporting and leisure activities	All yachts where the arrangement is fitted or the activity is undertaken
G	Administrative standards: registration, manning and crew certification, survey and certification, bareboat handover, accident investigation	All yachts

1.2.2 Former Parts C and D of Rev02 are retained, with editorial updates, as Parts F and G.

1.3 Technical Basis and Delegation of Surveys

1.3.1 Technical standards are derived from the relevant international Conventions or equivalent standards where it is not reasonable or practicable to comply with them, the LY2 standards incorporated in Part B, and the CYC 2025, sCYC and PYC provisions incorporated in Parts B, C and D.

1.3.2 Owners, operators and managers may have surveys under this Code carried out by:
.1 a Recognized Organization (RO) Authorized by the Administration; or
.2 an Authorized Surveyor appointed in writing by the Administration, limited to the areas in which the surveyor is qualified and Authorized; or
.3 the Maritime and Coastguard Agency of the United Kingdom or another Administration, where the Administration has Authorized it in writing.

1.3.3 Statutory certificates for yachts of 500 GT and over, for Passenger Yachts, and for any yacht whose propulsion relies wholly or partly on battery installations, shall be issued only by an RO.

1.3.4 A yacht certified by another flag to an equivalent code is not accepted automatically. It is accepted only after satisfactory survey to this Code (see Part G Section 3).

1.4 Notification to IMO

1.4.1 The Administration notifies the International Maritime Organization of this Code and its application to pleasure yachts engaged in trade as an equivalent arrangement under Article 8 of the International Convention on Load Lines, 1966, Regulation I/5 of SOLAS, and Article IX of the STCW Convention, with reference to IMO circulars LL.3/Circ.172 and SLS.14/Circ.298.

1.5 Effective Date and Transition

1.5.1 This Code takes effect on 1 January 2027 **[Proposed]**.

1.5.2 Yachts certified under CDP-502 Rev02, or under survey to it on the effective date, shall comply with Rev03 not later than the first renewal survey carried out after 31 December 2027.

1.5.3 For existing yachts and for new yachts with keel laid before the effective date that cannot comply with particular provisions, the Administration may accept a proposal from the attending surveyor to phase in the requirements or equivalents within an agreed timescale not exceeding 24 months.

1.5.4 Existing equipment that does not meet a standard required by this Code may be accepted where it is shown to be of an equivalent standard. When such equipment is replaced, the replacement shall conform to this Code.

1.6 Insurance and Local Requirements

1.6.1 Insurance requirements are set out in Part G Section 1 and Part F Section 6. Hull and machinery cover and third-party liability cover, including persons on board and sporting activities, are mandatory for yachts in commercial use and strongly recommended for private yachts.

1.6.2 Owners, operators, managers and masters shall comply with this Code, with the laws and regulations of the Commonwealth of Dominica, and with any local licensing or regulatory requirement of the port or coastal State in whose waters the yacht operates. Where a port State imposes stricter requirements, the stricter requirement prevails.

1.7 Quality Management and Review

1.7.1 The provisions of this Code are incorporated in the Administration's Quality Management System.

1.7.2 The Administration will review this Code as required to reflect new legislation, international regulations, new technologies and feedback from industry, and will publish revisions on its website.

2 Definitions

Note: Where a definition is not given in this Code, guidance shall be taken from the meanings given in the International Conventions. The definitions in this Section apply throughout the Code and are in addition to those in Section 2A, which are retained from Rev02 for Part B.

3 Application

3.1 Yacht Categories

3.1.1 Every yacht registered with the Administration falls in one of the categories in Table 3.1, which also states the Part of this Code that applies and the certificate issued.

Table 3.1 – Yacht categories and certification

Category	Use	Size	Standard	Certificate issued	Validity
Pleasure Yacht	Not engaged in trade	< 24 m LH	Part E Section 3 (voluntary)	Pleasure Yacht Safety Certificate (on request)	5 years
Private Yacht	Not engaged in trade	≥ 24 m Length	Part E Section 1	Statement of Compliance (voluntary < 500 GT; survey mandatory ≥ 500 GT)	5 years
Private Yacht Limited Charter (PYLC)	Private, chartered ≤ 84 days per year **[Proposed]**, ≤ 12 passengers	≥ 24 m Length	Part B, with the PYLC conditions in Part E Section 2	PYLC Compliance Certificate	5 years
Yacht Engaged in Trade (YET)	Private, temporarily in trade other than charter	≥ 24 m Length	Part B, with the YET conditions in Part E Section 2	YET Compliance Certificate	As stated, ≤ 5 years
Small Commercial Yacht	In trade, ≤ 12 passengers	≥ 12 m LH and < 24 m Length	Part C	Small Commercial Yacht Certificate	5 years
Commercial Yacht	In trade, ≤ 12 passengers	≥ 24 m Length; < 500 GT or ≥ 500 GT	Part B	Commercial Yacht Certificate	5 years
Passenger Yacht	In trade, 13 to 36 passengers, ≤ 200 persons, international voyages	Any	Part D	Passenger Ship Safety Certificate and Passenger Yacht Certificate	5 years

3.1.2 This Code does not apply to commercial vessels of less than 12 m Hull Length, to vessels carrying more than 36 passengers, to vessels carrying cargo, to military vessels, or to vessels owned or operated by a State on non-commercial service. Commercial vessels of less than 12 m are subject to the Administration's small commercial vessel requirements or, in the waters of another State, to that State's rules.

3.1.3 A yacht carrying more than 12 passengers shall not be certified under Parts B or C, except for a Static Charter approved under Part B Section 27.12.

3.1.4 Special category yachts (high speed yachts, sail training yachts, traditional and historical yachts and yachts taking part in races) are certified under Part B or Part C, as applicable to their Length, with the additional provisions of Section 7.

3.1.5 For a yacht with an overall length from 20 m to 35 m whose Length has been measured as less than 24 m, the Length measurement and scaled load line drawings shall be sent to the Administration for review before an initial survey begins.

3.1.6 Every provision of this Code that applies to a yacht is a requirement, whether expressed as "shall" or "should".

3.2 Navigation Notations

3.2.1 Each certificate issued under Parts B, C and D states one of the following Navigation Notations, which defines the area of operation. The minimum GMDSS sea area coverage applies to the radio installation required by Parts B and C.

Table 3.2 – Navigation notations

Notation	Limit	Minimum radio coverage	Available to
Coastal	Not more than 20 nm from shore	A1	Small Commercial Yachts (Design Category A, B or C)
Short Range	Not more than 60 nm from a safe haven	A1	Small Commercial Yachts (A or B); Commercial Yachts
Extended Short Range	Not more than 150 nm from a safe haven	A1 + A2	Small Commercial Yachts (A or B); Commercial Yachts
Unrestricted	No limit	A1 + A2 + A3 (+ A4 in polar waters)	Small Commercial Yachts (A only); Commercial Yachts; Passenger Yachts
Short International Voyage	As defined in SOLAS Regulation III/3	As required by SOLAS	Passenger Yachts

3.2.2 A requirement stated for a Short Range yacht does not apply to an Extended Short Range yacht, and a requirement stated for an Extended Short Range yacht does not apply to a Short Range yacht.

3.2.3 Weather restrictions corresponding to the yacht's Design Category continue to apply where a Design Category has been assigned. The Administration may impose different weather restrictions in individual cases.

3.2.4 Yachts intending to operate in polar waters shall meet the IMO Polar Code, as applicable.

3.2.5 The navigational areas used for crew certificates in CDP-300Y use the same limits as Table 3.2.

3.3 Number of Persons

3.3.1 The maximum number of passengers and the maximum number of persons shall be stated on the yacht's certificate. The number of passengers on a Commercial Yacht or Small Commercial Yacht shall never exceed 12. On a Small Commercial Yacht the number of persons shall also not exceed the number on the Builder's Plate and CE Declaration of Conformity.

3.4 Responsibility

3.4.1 The owner, operator or manager is responsible for ensuring that a yacht to which this

Code applies is maintained, surveyed, manned and operated in compliance with it. The master has overriding authority to act as required to protect the yacht, the environment and all persons on board.

4 Equivalent Standards, Exemptions and Existing Yachts

Note: This Section is numbered 4A to preserve the Rev02 numbering of Part B Sections 4 to 26.

4.1 Deviations, Equivalencies and Alternative Design and Arrangements (ADA)

4.1.1 The Administration may accept a deviation, equivalency or alternative design and arrangement to any standard in this Code. The RO or Authorized Surveyor shall apply on the Administration's Deviation/Exemption/Equivalency Application Form, with detailed justification and recommendations.

4.1.2 An equivalency shall meet the overall intent and objective of the requirement it replaces. Where necessary it shall be tested, and supported by engineering analysis and evaluation with satisfactory results.

4.1.3 An ADA shall provide a level of safety equivalent to or better than the prescriptive requirement and shall be based on the underlying Convention requirement. Where an ADA deviates from a Convention, an engineering analysis shall be carried out.

4.2 Exemptions

4.2.1 Exemptions are granted only by the Administration, on written application supported by justification, for example restricted geographical operation. Exemptions are limited to the extent that the Conventions allow and are exceptional.

4.3 Existing Yachts, Repairs and Conversions

4.3.1 When an existing yacht does not comply with a provision of this Code and compliance is shown not to be reasonable or practicable, the owner may propose alternative arrangements or equivalences. The Administration will consider the yacht's service history and any other relevant factors, with the aim that the minimum safety standard of the Code is achieved.

4.3.2 Repairs, alterations and refurbishments shall comply with the requirements for a new yacht. A vessel converted to a commercial yacht, or altered in a way that substantially changes its dimensions or service life, shall be treated as a new yacht built on the date the conversion began, and shall be re-surveyed to the extent of a renewal survey before commercial operation.

4.4 Interpretation and Conflicts

4.4.1 Any interpretation of this Code, or of a Convention as applied by it, made by an RO or Authorized Surveyor shall be approved by the Administration. Where two requirements of this Code conflict, the more demanding requirement prevails.

4.4.2 Where this Code requires a yacht to comply with a Convention whose requirements differ by ship type, the yacht shall comply with the requirements for a cargo ship, except for Passenger Yachts, which comply with the requirements for passenger ships, unless this Code states otherwise.

5 Changeover Between Private and Commercial Status

5.1 A yacht may change from private to commercial status, or the reverse, on application to the Administration. There is no limit on the number of changeovers; registry fees for a change to commercial status are payable once in each registration year.

5.2 Before a change to commercial status, the yacht shall hold a valid Commercial Yacht Certificate, Small Commercial Yacht Certificate, Passenger Yacht Certificate or PYLC/YET Compliance Certificate, as applicable, and a Minimum Safe Manning Certificate, and the crew shall hold the commercial certificates required by CDP-300Y.

5.3 On a change to private status, the Administration issues a Certificate of Registry describing the yacht as private. The commercial certificates (other than MARPOL, AFS, BWM and tonnage certificates) shall be kept in the yacht's safe under the master's responsibility. The previous Certificate of Registry shall be returned to the Administration as soon as the new one is received on board.

5.4 A Small Commercial Yacht that has never been issued a CE Declaration of Conformity shall be certified to Directive 2013/53/EU, or assessed under Part C Section C2.3, before it changes to private status as a Pleasure Yacht.

5.5 Every changeover shall be entered in the official log book. Yachts changing from commercial to private status are strongly recommended to continue the commercial survey regime.

6 Oversight, Inspections and Reporting

6.1 Oversight of ROs and Authorized Surveyors

6.1.1 The Administration maintains an oversight program to monitor, audit and enforce statutory surveys carried out under this Code. The program may use office audits, vertical contract audits while a yacht is under survey, review of certificates and reports, and analysis of port State control and flag State inspection detentions attributable to the RO or Authorized Surveyor.

6.1.2 Owners and managers may choose the RO or Authorized Surveyor and may change it at any time. When the certification body changes, the losing body shall, on the owner's written request, send the yacht's file (drawings, plans, booklets, calculations and important documentation) to the gaining body without undue delay.

6.1.3 Authorized Surveyors shall follow the Administration's Code of Ethics and Conduct for Authorized Surveyors. RO surveyors shall follow the RO's own code of ethics. Surveys and reports shall be completed without undue delay.

6.2 Flag State Inspections

6.2.1 The Administration may carry out flag State inspections on board any yacht, in any port, by Authorized flag State inspectors. Masters, owners and managers shall give full co-operation. Unless serious deficiencies requiring re-inspection are found, the cost of a flag State inspection is borne by the Administration.

6.3 Port State Control

6.3.1 Masters, owners and managers shall give full access and co-operation to port State control officers. In case of detention, the owner or master shall inform the Administration and the yacht's RO or Authorized Surveyor immediately.

6.4 Accident and Incident Reporting

6.4.1 The owner, operator or master shall report any marine casualty or incident to the Administration within 24 hours at technical@dominica-registry.com, followed by a written report. Part G Section 5 applies to the investigation. In the waters of a coastal State, the local VTS or maritime authority shall also be informed by the quickest available means.

7 General Operational Provisions

7.1 Support Personnel

7.1.1 Support personnel may be carried where there is sufficient accommodation and safety equipment. They shall have no duty on the muster list and shall receive on-board familiarization in personal survival techniques and sufficient instruction to be able to: communicate on elementary safety matters and understand safety symbols, signs and alarms; know what to do on man overboard, fire or abandon ship; identify muster and embarkation stations and escape routes; locate and don lifejackets; raise the alarm and use a portable fire extinguisher; close and open fire, weathertight and watertight doors; and follow security procedures. Training shall be recorded and the records kept on board.

7.2 Marking and IMO Number

7.2.1 Every yacht shall be marked as required by the Dominica Maritime Regulations. Yachts are not required to have the name marked on the bows. Yachts of 300 GT and over shall have an IMO number under SOLAS Regulation XI-1/3, marked externally; the marking may be horizontal provided it is visible from the air. Yachts built of timber may be exempted.

7.3 Working Language, Documents and Records

7.3.1 Signs, notices, plans, manuals and documents relating to safety and operation shall be in the yacht's working language and in English. Manuals, drawings and publications may be carried in electronic form; the official log book and crew agreements shall be carried in paper form. The master is responsible for keeping the records required by this Code.

7.4 Special Category Yachts

7.4.1 **High speed yachts** shall comply with the IMO High Speed Craft Code as far as practicable, shall be built under class supervision and shall maintain class. Deviations from the HSC Code require acceptance by the Administration.

7.4.2 **Sail training yachts** may carry trainees and passengers, but not more than 12 passengers. The Administration sets the crew complement having regard to the number and competence of trainees, the area, the season and the weather. Trainees who are not on the muster list and have no emergency duties are not seafarers.

7.4.3 **Traditional and historical yachts** shall comply with this Code as far as practicable. What such yachts lack in modern equipment or structure shall be compensated by operational measures. They are normally certified as Short Range yachts operating in good weather, unless the Administration agrees otherwise.

7.4.4 **Yachts taking part in races** need not remain in full compliance with this Code during a race and the transfer voyages to and from it. All persons on board shall be informed of the suspended status, the Administration shall be notified before the transfer and the race, and the owner shall ensure insurance cover for all persons on board.

7.4.5 **Operation in the waters of another State.** A yacht certified under this Code that operates commercially in the territorial waters of another State shall also comply with that State's additional requirements.

PART B: TECHNICAL STANDARDS FOR COMMERCIAL YACHTS (24 m AND OVER)

The majority of the technical requirements in this Part B reflect those of the U.K.'s Large Commercial Yacht Code (L Y2).

Application of Part B

B.1 Part B applies to Commercial Yachts of 24 m Length and over, of any gross tonnage, and to yachts holding a PYLC or YET Compliance Certificate. Sections 1 to 23 retain the technical standards of Rev02. Section 27 sets supplementary requirements adopted from the CYC 2025, which apply in addition to Sections 1 to 23. Where Section 24 and Sections 1 to 23 differ, the more demanding requirement applies.

B.2 Requirements marked in Section 24 as applying to yachts of 500 GT and over are additional to those for smaller yachts. Yachts of 500 GT and over shall also hold the statutory certificates required by SOLAS, MARPOL, the Load Line Convention, the ISM and ISPS Codes and the MLC, 2006, issued by an RO.

1 Construction and Strength

The purpose of this section is to ensure that all yachts to which this Code applies are constructed to a consistent standard in respect of strength and watertight integrity. New yachts are to be built to the requirements of one of the Recognized Organizations and issued with a Class Certificate or equivalent, acceptable to the Administration. Existing yachts which do not already hold a Class Certificate or equivalent should be surveyed by one of the Recognized Organizations so that an appropriate certificate can be issued. The extent of the watertight bulkheads defined in Section 4.3 is to ensure that sufficient buoyancy is maintained by the yacht to meet the damaged stability requirements of Section 11.

1.1 General Requirements

1.1.1 All yachts should have a freeboard deck.

1.1.2 All yachts should be fitted with a weather deck throughout the length of the yacht and be of adequate strength to withstand the sea and weather conditions likely to be encountered in the declared area(s) of operation.

1.1.3 The declared area(s) of operation and any other conditions which restrict the use of the yacht at sea should be recorded on the load line certificate issued to the yacht.

1.1.4 The choice of hull construction material affects fire protection requirements, for which

reference should be made to section 14.

1.2 Structural Strength

1.2.1 For unlimited operation, all yachts hold a Class Certificate or equivalent.

1.2.2 Yachts which do not hold such a certificate may be considered for operation within the Short Range Yachts category and to other yachts to which this Code applies operating with restrictions.

1.2.3 Attention should be paid to local or global hull strength requirements for the provision of ballast.

1.3 Watertight Bulkheads

Section 11 of the Code deals with subdivision and damage stability requirements which will determine the number and positioning of watertight bulkheads defined below.

1.3.1 Watertight bulkheads should be fitted in accordance with the following requirements.
. 1 The strength of watertight bulkheads and their penetrations, and watertight integrity of the division should be in accordance with the requirements of one of the Recognized Organizations.
. 2 Generally, openings in watertight bulkheads should comply with the standards required for passenger vessels, as defined in SOLAS regulations II-I, Regulation 15.
. 3 Approved hinged doors may be provided for infrequently used openings in watertight compartments, where a crew member will be in immediate attendance when the door is open at sea. Audible & visual alarms should be provided in the wheelhouse.
.4 Procedures for the operation of watertight doors should be agreed with the Administration and posted in suitable locations. Watertight doors should be normally closed, with the exception of sliding watertight doors providing the normal access to frequently used living and working spaces. Additionally when an access is unlikely to be used for lengthy periods, the door should also be closed. All watertight doors should be operationally tested before a ship sails and once a week.

1.4 Enclosed Compartments within the Hull and below the Freeboard Deck provided with Access through Openings in the Hull

1.4.1 Compartment(s) below the freeboard deck, provided for recreational purposes, oil fueling/fresh water reception or other purposes to do with the business of the yacht and having access openings in the hull, should be bounded by watertight divisions without any opening (i.e. doors, manholes, ventilation ducts or any other opening) separating the compartment(s) from any other compartment below the
freeboard deck, unless provided with sliding watertight doors complying with 4.3.1 or hinged doors complying with 4.4.2.

1.4.2 Openings from any other compartment below the freeboard deck may be fitted with hinged watertight doors provided;
.1 After flooding through the shell opening of the space containing the shell opening, the resultant waterline is below the sills of the internal openings in that space, or
.2 (a) Bilge alarms are fitted in the compartment containing the shell opening, with a visual and

audible warning on the bridge, and
(b) Any hinged door opens into the compartment containing the shell opening, and
(d) "Open" door alarms, both visual and audible fitted on the bridge, and
(e) The door is to be fitted with a single closing mechanism, and
(f) Sill height of the internal door should be higher above the design waterline than the sill height of the shell opening.

1.4.3 Openings in the hull should comply with SOLAS regulation II *-1/25-10* - External Openings in cargo Ships. Provision should be made to ensure that doors may be manually closed and locked in the event of power or hydraulic failure.

1.5 Rigging on Sailing Yachts

1.5.1 GENERAL
The condition of the rig should be monitored in accordance with a planned maintenance schedule. The schedule should include, in particular, regular monitoring of all the gear associated with safe work aloft and on the bowsprit (see 23.3).

1.5.2 MASTS AND SPARS

1.5.2 .1 Dimensions and construction materials of masts and spars should be in accordance with the requirements or recommendations of one of the Recognized Organizations or a recognized national or international standard.

1.5.2.2 The associated structure for masts and spars (including fittings, decks and floors) should be constructed to effectively carry and transmit the forces involved.

1.5.3 RUNNING AND STANDING RIGGING

1.5.3.1 Wire rope used for standing rigging (stays or shrouds) should not be flexible wire rope (fiber rope core).

1.5.3.2 The strength of all blocks, shackles, rigging screws, cleats and associated fittings and attachment points should exceed the breaking strain of the associated running or standing rigging.

1.5.3.3 Chain plates for standing rigging should be constructed to effectively carry and transmit the forces involved.

1.5.4 SAILS

1.5.4.1 Adequate means of reefing or shortening sail should be provided.

1.5.4.2 Sailing vessels operating as Short Range Yachts need not carry storm canvas.

1.5.4.3 All other yachts should either be provided with separate storm sails or have specific sails designated and constructed to act as storm canvas.

1.6 Lifting Equipment

1.6.1 All fixed lifting equipment, including strong points, cranes, beams, personal and non-personal elevators and all portable lifting equipment should be tested and inspected in accordance with the requirements of the Recognized Organization or an organization approved by the Administration to a national or international standard and at intervals approved by the Administration.

1.6.2 Where the rules of the Recognized Organization or approved organization do not clearly address the type of lifting equipment, the methods and intervals of test should be agreed by the Administration.

2 Weathertight Integrity

This section is intended to outline standards to be achieved for weathertight integrity. As far as is practicable, the standards of the 1966 ICLL are to be adhered to. However, due consideration may be given to arrangements that provide an equivalent level of safety in respect of the risks of down flooding and green sea loading.

Virtual Freeboard Deck
For the purposes of this section only, where actual freeboard to the weather deck exceeds that required by ICLL 66 by at least one standard superstructure height, openings on that deck, abaft of the forward quarter, may be assumed to be in position 2. This is to be taken, unless otherwise stated, as defined in ICLL 66. For yachts up to 75m load line length, a standard superstructure height is to be taken as 1.8m. Superstructure heights for yachts of intermediate lengths should be obtained by interpolation.

2.1 Hatchways and Skylight Hatches

2.1.1 GENERAL REQUIREMENTS
2.1.1.1 All openings leading to spaces below the weather deck not capable of being closed weathertight must be enclosed within either an enclosed superstructure or a weathertight deckhouse of adequate strength meeting with the requirements of the Load Line Assigning Authority.

2.1.1.2 All exposed hatchways which give access from position 1 and position 2 are to be of substantial weathertight construction and provided with efficient means of closure. Weathertight hatch covers should be permanently attached to the yacht and provided with adequate arrangements for securing the hatch closed.

2.1.1.3 Hatches which are designated for escape purposes should be provided with covers which are to be openable from either side and in the direction of escape they are to be openable without a key. All handles on the inside are to be non-removable. An escape hatch should be readily identified and easy and safe to use, having due regard to its position.

2.1.2 HATCHWAYS WHICH ARE OPEN AT SEA

In general, hatches should be kept closed at sea. However, hatchways which may be kept open for access at sea are to be as small as practicable (a maximum of one square meter in clear area), and fitted with coamings of at least 300mm in height in positions 1 and 2. Hatchways should be as near to the centerline as practicable, especially on sailing yachts. Covers of

hatchways are to be permanently attached to the hatch coamings and, where hinged, the hinges are to be located on the forward side.

2.2 Doorways and Companionways

2.2.1 DOORWAYS LOCATED ABOVE THE WEATHER DECK 5.2.1.1

External doors in deckhouses and superstructures that give access to spaces below the weather deck are to be weathertight and door openings should have coaming heights of at least:

Location	Unrestricted Yachts	Short Range Yachts
A	600 mm	300 mm
B	300 mm	150 mm
C	150 mm	75 mm

2.2.1.1 Location A: The door is in the forward quarter length of the yacht and is used when the yacht is at sea.
2.2.1.2 Location B: The door is in an exposed forward facing location aft of the forward quarter length.
2.2.1.3 Location C: The door is in a protected location aft of the forward quarter length, or an unprotected door on the first tier deck above the weather deck.

2.2.1.2 Weathertight doors should be arranged to open outwards and when located in a house side, be hinged at the forward edge. Alternative closing arrangements will be considered providing it can be demonstrated that the *efficiency* of the closing arrangements and their ability to prevent the ingress of water will not impair the safety of the yacht.

2.2.1.3 An access door leading directly to the engine room from the weather deck should be fitted with a coaming of height of at least:

Location	Unrestricted Yachts	Short Range Yachts
Position 1	600 mm	450 mm
Position 2	380 mm	200 mm

2.2.1.4 Coaming height, construction and securing standards for weathertight doors which are provided for use only when the yacht is in port or at anchor in calm sheltered waters and are locked closed when the yacht is at sea, may be considered individually.

2.2.2 COMPANION HATCH OPENINGS

2.2 .2.1 Companionway hatch openings which give access to spaces below the weather deck should be fitted with a coaming, the top of which is at least 300mm above the decks, or 150mm in the case of Short Range Yachts.

2.2.2.2 Washboards may be used to close the vertical opening. When washboards are used, they should be so arranged and fitted that they will not be dislodged readily. Whilst stowed, provisions are to be made to ensure that they are retained in a secure location.

2.2.2.3 The maximum breadth of an opening in a companion hatch should not exceed one meter.

2.3 Skylights

2.3.1 All skylights should be of efficient weathertight construction and should be located on or as near to the centerline of the yacht as practicable.

2.3.2 If they are of the opening type they should be provided with efficient means whereby they can be secured in the closed position.

2.3.3 Skylights which are designated for escape purposes should be openable from either side, and in the direction of escape they are to be openable without a key. All handles on the inside are to be non-removable. An escape skylight should be readily identified and easy and safe to use, having due regard to its position.

2.3.4 The skylight glazing material and its method of securing within the frame should meet an appropriate national or international standard. Recognized Organization rules for "ships" are considered to meet these requirements. Where a Recognized Organization produces alternative rules for "pleasure *vessels"* or "yachts", these are considered appropriate for Short Range Yachts.
A minimum of one portable *cover* for each size of glazed opening should be provided which can be accessed rapidly and efficiently secured in the *event* of a breakage of the skylight.

2.4 Portlights

2.4.1 Portlights should be of strength appropriate to location in the yacht and meet an appropriate national or international standard. Recognized Organization rules for "ships" are considered to meet these requirements. Where a Recognized Organization produces alternative rules for "pleasure *vessels"* or "yachts", these are considered appropriate for Short Range Yachts. With regard to structural fire protection, the requirements for the construction of certain portlights should meet the requirements of Section 15.

2.4.2 In general, all portlights fitted in locations protecting openings to spaces below the weather deck or fitted in the hull of the yacht should be provided with a permanently attached deadlight which is to be capable of securing the opening watertight in the *event* of a breakage of the portlight glazing. Proposals to fit portable dead lights will be subject to special consideration and approval by the Administration, having regard for the location of the portlights and the ready availability of dead lights. Consideration should be given to the provision of operational instructions to the master as to when deadlights must be applied to portlights.

2.4.3 Portlights fitted in the hull of the yacht below the level of the freeboard deck should be either non-opening or of a non-readily openable type and be in accordance with a standard recognized by the Administration. The lower edge of the portlights should be at least 500mm or 2.5% of the breadth of the yacht, whichever is the greater, above the all-seasons load line assigned to the yacht. Portlights of the non-readily opening type must be secured closed when the yacht is in navigation and indication provided on the bridge that they are closed.

2.4.4 Portlights should not be fitted in the hull in the way of the machinery space.

2.5 Windows

2.5.1 Windows should be of strength appropriate to their location in the yacht and meet the requirements of a suitable national standard, such as BSMA 25, or an equivalent international standard. Recognized Organization rules for "ships" are considered to meet these requirements. With regard to structural fire protection, the requirements for the construction of certain windows should meet the requirements of Section 15.

2.5.2 For all yachts where the glazing material, glazing thickness, or fixing of the windows does not meet the requirements of a recognized standard, windows may be tested to the satisfaction of the Administration, at a minimum of four times the required design pressure derived from an appropriate national or international standard.
Additionally, as a minimum, calculated thicknesses should meet Recognized Organization requirements for pleasure vessels or yachts. For windows fitted with storm shutters, see 5.5.6.

2.5.3 When using a national or international standard, the following minimum design heads may be assumed when determining design head pressure.

- First tier unprotected fronts 4.5 +L/100 meters
- Second tier unprotected fronts 3.5 meters
- Elsewhere 1.5 meters

2.5.4 In general, windows fitted in superstructures or weathertight deckhouses are to be substantially framed and efficiently secured to the structure. The glass is to be of the toughened safety glass type.

2.5.5 Where chemically toughened safety glass is used, windows are to be of the laminated type, the minimum depth of chemical toughening to be 30 microns on exposed faces. Regular inspections of the windows, with particular reference to the surface condition, should form part of the operational procedures and annual survey by a Recognized Organization.

2.5.6 In general, windows should not be fitted in the main hull below the level of the freeboard deck. Proposals to fit windows in the main hull below the level of the freeboard deck will be subject to special consideration and approval by the Administration, having regard for the location and strength of the windows and their supporting structure and, the availability of strong protective covers for the windows. One item of special consideration should be operational instructions to the master as to when the strong protective covers must be applied to windows.

2.5.7 For all yachts, other than Short Range Yachts, storm shutters are required for all windows in the front and sides of first tier and front windows of the second tier of superstructures or weathertight deckhouses above the freeboard deck. Where windows are of laminated construction and their equivalent toughened safety glass thickness exceeds the requirements of the applied standard by a minimum of 30%, storm shutters need not be carried, but a blanking plate(s) is to be provided so that any window opening may be sealed in the event of glass failure. When storm shutters are interchangeable port and starboard, a minimum of 50% of each size should be provided.

2.5.8 Side and front windows to the navigating position should not be constructed of polarized tinted glass. (See Section 19.2.3)

2.6 Ventilators and Exhausts

2.6.1 Adequate ventilation is to be provided throughout the yacht. The accommodation is to be protected from the entry of gas and/or vapor fumes from machinery, exhaust and fuel systems.

Ventilators are to be of efficient construction and provided with permanently attached means of weathertight closure. Generally, ventilators serving any space below the freeboard deck or an enclosed superstructure should have a coaming of minimum height of:

Location	Unrestricted Yachts	Short Range Yachts
Forward quarter length	900 mm	450 mm
Elsewhere	760 mm	380 mm

2.6.3 Ventilators should be kept as far inboard as practicable and the height above the deck of the ventilator opening should be sufficient to prevent the ingress of water when the yacht heels.

2.6.4 The ventilation of spaces such as the machinery space, which must remain open, requires special attention with regard to the location and height of the ventilation openings above the deck, taking into account the effect of down flooding angle on stability standard. (See section 11.)
The means of closure of ventilators serving the machinery space should be selected with regard to the fire protection and extinguishing arrangements provided in the machinery space.

2.6.5 Engine exhaust outlets which penetrate the hull below the freeboard deck should be provided with means to prevent back flooding into the hull through a damaged exhaust system. A positive means of closure should be provided. The system should be of equivalent construction to the hull on the outboard side of the closure.

2.7 Air Pipes

2.7.1 Air pipes serving fuel and other tanks should be of efficient construction and provided with permanently attached means of weathertight closure. Means of closure may be omitted if it can be shown that the open end of an air pipe is afforded adequate protection by other structure(s) which will prevent the ingress of water.

2.7.2 Where located on the weather deck, air pipes should be kept as far inboard as practicable and be fitted with a coaming of sufficient height to prevent inadvertent flooding. Generally, air pipes to tanks should have a minimum coaming height of:

Location	Unrestricted Yachts	Short Range Yachts
On Weather Deck	760 mm	380 mm
Elsewhere	450 mm	225 mm

2.7.3 Air pipes to fuel tanks should terminate at a height of not less than 760mm above either, the top of the filler pipe for a gravity filling tank or, the top of the overflow tank for a pressure filling tank.

2.8 Scuppers, Sea Inlets and Discharges

The standards of ICLL should be applied to every discharge led through the shell of the yacht as far as it is reasonable and practicable to do so, and in any case, all sea inlets and overboard discharges should be provided with efficient shut-off valves arranged in positions where they are readily accessible at all times.

2.9 Materials for Valves and Associated Piping

2.9.1 Valves which are fitted below the waterline should be of steel, bronze or other material having a similar resistance to impact, fire and corrosion. Non-metallic valves will not normally be considered equivalent.

2.9.2 The associated piping should, in areas as indicated above, be of steel, bronze, copper or other equivalent material. Non-metallic valves will not normally be considered equivalent.

2.9.3 Where the use of plastic piping is proposed, it will be considered and full details of the type of piping, its intended location, and use, should be submitted for approval; with regard to watertight integrity, any plastic piping should be above the waterline. Due regard should be paid to the IMO Fire Test Procedures Code.

2.9.4 The use of flexible piping in any location should be kept to a minimum compatible with the essential reason for its use. Flexible piping and the means of joining it to its associated hard piping system should be approved as fit for the purpose.

2.10 General Equivalence

Where yachts cannot fully comply with the requirements of this section, equivalent arrangements may be considered by the Administration. Such proposals should take into account the following, although this should not be considered as an exhaustive list:
2.10.1 Openings to be kept closed at sea
2.10.2 Enhanced bilge pumping capacity and additional bilge alarms
2.10.3 Compliance with damage stability if not already a requirement (see Section 11)
2.10.4 Provision of dorade boxes or baffle systems to prevent direct ingress of water
2.10.5 Alternative ventilation for use in bad weather
2.10.6 Consideration of down flooding angle and reduced risk of green sea loads, i.e. protected position
2.10.7 Enhanced survey inspection regime
2.10.8 Operational Limitations

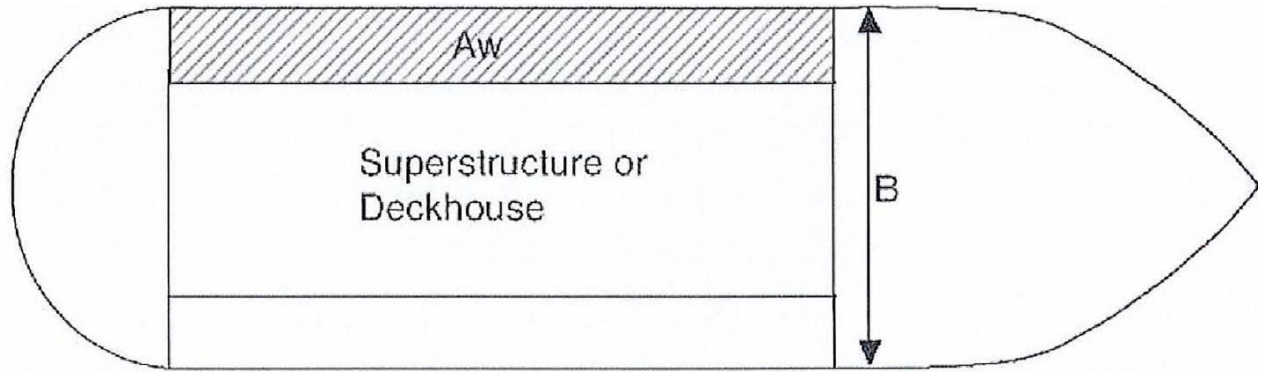
3 Water Freeing Arrangements

This section provides for consideration of the risks of green water being shipped aboard and the resulting consequences with respect to the yacht's stability and safety of personnel on deck.

3.1 General

The standards for water freeing arrangements should comply with ICLL as far as it

is reasonable and practicable to do so. In any case the intention should be to achieve a standard of safety which is at least equivalent to the standard of ICLL. Additionally, where a well is created on each side of the yacht between a superstructure or deckhouse, and the bulwark in way of that superstructure or deck house, the following formula may be used to determine the required freeing port areas on each side of the yacht for the well concerned:



$FP_{REQ} = 0.28 \times AwB$

Where:
FP_{REQ} = Freeing port area required
A_w = Area of well in way of superstructure or deckhouse
B = Full beam at deck

On sailing yachts, where the solid bulwark height does not exceed 150mm, specific freeing ports, as defined above, are not required.

3.2

In individual cases, when the Administration considers that the requirements of ICLL cannot be met, the Administration may consider and approve alternative arrangements to achieve adequate safety standards. Freeing arrangements may take account of a reduced permeability and volume of the well, when compared to a full size well.

For Short Range Yachts it is considered that the requirement for freeing port area for a forward or after well may be reduced by a form factor equal to the ratio of (actual area of well) divided by (length of well x breadth of well). Dimensions should be taken at half height of the bulwark. This may be reduced by 50% providing it can be shown that the intact stability of the yacht remains acceptable if the well is flooded to any level up to the bulwark height and that area provided will allow the well to drain in less than three minutes.

In considering an individual case, the Administration will take into account the yacht's past performance in service and the declared area(s) of operation and any other conditions which restrict the use of the yacht at sea which will be recorded on the load line certificate issued to the yacht. (See section 4.1.3.)

3.3 Recesses

3.3.1 Any recess in the weather deck should be of weathertight construction and should be self-draining under all normal conditions of heel and trim of the yacht.
A swimming pool or spa bath, open to the elements, should be treated as a recess.

3.3.2 The means of drainage provided should be capable of efficient operation when the yacht is heeled to an angle of 10° in the case of a motor yacht (see 10.2), and 30° in the case of a sailing yacht. The drainage arrangements should have the capability of draining the recess (when fully charged with water) within three minutes when the yacht is upright and at the load line draught. Means should be provided to prevent the backflow of sea water into the recess.

3.3.3 When it is not practical to provide drainage which meets the requirements of 3.3.2, alternative safety measures may be proposed for approval by the Administration. Where the above requirements for quick drainage cannot be met, the effect on intact and damage stability should be considered taking into account the mass of water and its free surface effect.

4 Machinery

This section outlines the minimum requirements for machinery which are to be in accordance with the requirements of one of the Recognized Organizations and should cover the minimum aspects defined below, even if the machinery is not considered the primary means of propulsion. Existing yachts which do not hold a Class Certificate or equivalent approved by the Administration should be surveyed by one of the Recognized Organizations so that an appropriate certificate can be issued. However alternative arrangements for Short Range Yachts may be agreed by the Administration.

4.1 General Requirements

4.1.1 The machinery and its installation should, in general, meet with the requirements of one of the Recognized Organizations. The Class Survey, Notation or equivalent should include, as a minimum, propulsion and electrical generation machinery and shafting. For existing and new vessels which operate with periodically unattended machinery spaces, the machinery and its installation should meet the standards of SOLAS II-I/Part E - Additional requirements for periodically unattended machinery spaces, so far as is reasonable and practicable to do so. Plastic piping may be accepted where the piping and the arrangements for its use meet the requirements of the IMO Fire Test Procedures Code.

4.1.2 The requirements for main propulsion are based upon the installation of diesel powered units. When other types of main propulsion are proposed, the arrangements and installation should be specially considered. Where gas turbines are to be fitted, attention should be paid to the guidance contained within the IMO High-Speed Craft Code, and installation is to be to the satisfaction of the Administration.

4.1.3 Notwithstanding the requirements of paragraph 4.1.1, in a fuel supply system to an engine unit, where a flexible section of piping is provided, connections should be of a screw type or equivalent approved type. Flexible pipes should be fire resistant/metal reinforced. Materials and fittings should be of a suitable recognized national or international standard.

4.2 Installation

4.2.1 Notwithstanding the requirements referred to in 4.1, the machinery, fuel tanks and associated piping systems and fittings should be of a design and construction adequate for the service for which they are intended, and should be so installed and protected as to reduce to a minimum any danger to persons during normal movement about the yacht, with due regard being made to moving parts, hot surfaces, and other hazards.

4.2.2 Means should be provided to isolate any source of fuel which may feed a fire in an engine space. A fuel shut-off valve(s) should be provided which is capable of being closed from a position outside the engine space. The valve(s) should be fitted as close as possible to the fuel tank(s).

4.2.3 All external high-pressure fuel delivery lines between the high pressure fuel pumps and fuel nozzles should be protected with a jacketed tubing system capable of containing fuel resulting from a high-pressure line failure. The jacketed tubing system should include means for collection of leakage and arrangements should be provided for an alarm to be given in the event of a fuel line failure.

4.2.4 When a glass fuel level gauge is fitted it should be of the "flat glass" type with self closing valves between the gauge and the tank.

5 Electrical Installations

This section outlines the minimum requirements for electrical installations, which are to be in accordance with the requirements of one of the Recognized Organizations, and should cover the minimum aspects defined below. For sailing vessels, this should also cover the elements necessary to ensure safety of the yacht including control of the sails, where appropriate. Existing yachts which do not already hold a Class Certificate or approved equivalent should be surveyed by one of the Recognized Organizations so that an appropriate certificate can be issued. However alternative arrangements for Short Range Yachts may be agreed by the Administration.

5.1 Installation

5.1.1 Particular attention should be paid to the provision of overload and short circuit protection of all circuits, except engine starting circuits supplied from batteries.

5.1.2 Electrical devices working in potentially hazardous areas, into which petroleum vapor or other hydrocarbon gas may leak, should be of a type certified safe for the hazard.

5.2 Lighting

5.2.1

Lighting circuits, including those for emergency lighting, should be distributed through the spaces so that a total blackout cannot occur due to failure of a single protective device.

5.2.2 An emergency source of lighting should be provided which should be independent of the general lighting system. This source should be sufficient for up to three hours duration and should include navigation light supplies. The lighting is to provide sufficient lighting for personnel to escape from the accommodation or working spaces to their muster station, and launch and board survival craft. Additionally, this light, supplemented by torches, should be sufficient to permit emergency repairs to machinery, etc. The emergency source of power should be independent of the main power supply, external to the engine room, and with separate distribution.

5.3 Batteries

Batteries of a type suitable for marine use and not liable to leakage should be used. Areas in which batteries are stowed should be provided with adequate ventilation to prevent an accumulation of gas which is emitted from batteries of all types. Reference should also be made to Section 11.1.5.

6 Steering Gear

This section outlines the minimum requirements for steering gear, which are to be in accordance with the requirements of a Recognized Organization. The Class Notation, Survey or equivalent should cover the minimum aspects defined within this chapter. Due regard is to be paid to the requirements for emergency steering.

6.1 General Requirements

The steering gear and its installation should, in general, meet with the requirements of one of the Recognized Organizations. In the event that the above requirements cannot be met on an existing yacht, the Administration may be requested to consider and approve alternative arrangements to achieve adequate safety standards.

6.2

Yachts should be provided with means for directional control of adequate strength and suitable design to enable the heading and direction of travel to be effectively controlled at all operating speeds. When appropriate to the safe steering of the yacht, the steering gear should be power operated in accordance with the requirements of the Administration.

6.3

When the steering gear is fitted with remote control, arrangements should be made for emergency steering in the event of a failure of such control.

7 Bilge Pumping

This section outlines the minimum requirements for bilge pumping, which are to be in accordance with the requirements of a Recognized Organization. The Class Notation or equivalent should cover the minimum aspects defined within this chapter. The principle objective of this section is that in the event of one compartment being flooded, which may or may not be the engine room, there is an ability to control any leakage to adjacent compartments.

7.1 General Requirements

The bilge pumping equipment and its installation should, in general, meet with the requirements of a Recognized Organization. The yacht should hold a Certificate of Class or equivalent or should be surveyed by one of the Recognized Organizations so that an appropriate certificate can be issued. In the event that the above requirements cannot be met on an existing yacht, the Administration may be requested to consider alternative arrangements to achieve adequate safety standards.

7.2

All yachts should be provided with at least two fixed and independently powered pumps, with suction pipes so arranged that any compartment can be effectively drained when the yacht is heeled to an angle of 10°. For Short Range Yachts, the second pump and suction pipes may be portable.

7.3

The location of pumps, their individual power supplies and controls, including those for bilge valves, should be such that in the event of any one compartment being flooded another pump is available to control any leakage to adjacent compartments.

7.4

Each bilge pump suction line should be fitted with an efficient strum box.

7.5

In the case of a yacht where the propulsion machinery space may be unmanned at any time, a bilge level alarm should be fitted. The alarm should provide an audible and visual warning in the Master's cabin and in the wheelhouse. The audible and visual alarm may be accepted elsewhere if it is considered that such a location may be more appropriate.

7.6

Pumping and piping arrangements for bilges into which fuel or other oils of similar or higher fire risk could collect, under either normal or fault conditions, should be
kept clear of accommodation spaces and separate from accommodation bilge systems. Bilge level alarms meeting the requirements of 10.5 should be fitted to all such bilges.

8 Stability

This section outlines the minimum requirements for intact and damage stability. For yachts less than 85m Load Line length, a minor damage methodology is adopted in

which damage is assumed not to occur on any bulkhead, deck, or other watertight boundary.

8.1 General

8.1.1 This section deals with the standards for both intact and damage stability.

8.1.2 An intact stability standard proposed for assessment of a yacht type not covered by the standards defined in the Code should be submitted to the Administration for approval at the earliest opportunity.

8.1.3 If used, permanent ballast should be located in accordance with a plan approved by the Administration and in a manner that prevents shifting of position. Permanent ballast should not be removed from the yacht or relocated within the yacht without the approval of the Administration. Permanent ballast particulars should be noted in the ship's stability booklet. Attention should be paid to local or global hull strength requirements from the point of view of the fitting of additional ballast.

8.2 Intact Stability Standards

8.2.1 Motor yachts

8.2.1.1 Monohull Yachts

The curves of statical stability for seagoing conditions should meet the following criteria:

.1 The area under the righting lever curve (GZ curve) should not be less than 0.055 meter-radians up to 30° angle of heel and not less than 0.09 meter-radians up to 40º angle of heel, or the angle of down flooding, if this angle is less;
.2 The area under the GZ curve between the angles of heel of 30º and 40º or between 30° and the angle of down flooding if this is less than 40°, should not be less than 0.03 meter-radians;
.3 The righting lever (GZ) should be at least 0.20 meters at an angle of heel equal to or greater than 30°;
.4 The maximum GZ should occur at an angle of heel of preferably exceeding 30º but not less than 25º;
.5 After correction for free surface effects, the initial metacentric height (GM) should not be less than 0.15 meters; and
.6 In the event that the yachts intact stability standard fails to comply with the criteria defined in .1 to .5 the Administration may be consulted for the purpose of specifying alternative but equivalent criteria.

8.2.1.2 Monohull Yachts operating as Short Range Yachts
Where Short Range Yachts are unable to meet the criteria *above,* the following criteria may be used:

.1 The area under the righting lever curve (GZ curve) should not be less than 0.07 meter-radians up to 15º angle of heel, when maximum GZ occurs at 15°, and 0.055 meter-radians up to 30º angle of heel, when maximum GZ occurs at 30º or *above.* Where the maximum GZ occurs at angles of between 15º and 30º , the corresponding area under the GZ

curve, A_{req} should be taken as follows:-
A_{req} = 0.055 +0.001(30º - Θ max) meter-radians where Θ max is the angle of heel in degrees where the GZ curve reaches its maximum.

. 2 The area under the GZ curve between the angles of heel of 30º and 40º or between 30º and the angle of down flooding if this is less than 40º, should not be less than 0.03 meter-radians;
.3 The righting lever (GZ) should be at least 0.20 meters at an angle of heel equal to or greater than 30º;
.4 The maximum GZ should occur at an angle of heel not less than 15°;
.5 After correction for free surface effects, the initial metacentric height (GM) should not be less than 0.15 meters.

8.2.1.3 Multi-hulls
The curves of statical stability for seagoing conditions should meet the following criteria:

.1 The area under the righting lever curve (GZ curve) should not be less than

0.075 meter-radians up to an angle of 20º when the maximum righting lever (GZ) occurs at 20º and, not less than 0.055 meter-radians up to an angle of 30º when the maximum righting lever (GZ) occurs at 30º or *above.* When the maximum GZ occurs at angles between 20º and 30º the corresponding area under the GZ curve, A_{req} should be taken as follows:
A_{req} = 0.055 + 0.002(30° -Θ max) meter-radians, where Θ max is the angle of heel in degrees where the GZ curve reaches its maximum.
. 2 The area under the GZ curve between the angles of heel of 30º and 40º, or between 30º and the angle of down flooding if this is less than 40º, should not be less than 0.03 meter-radians;
.3 The righting lever (GZ) should be at least 0.20 meters at an angle of heel where it reaches its maximum;
.4 The maximum GZ should occur at an angle of heel not less than 20º;
.5 After correction for free surface effects, the initial metacentric height (GM) should not be less than 0.15 meters; and
.6 If the maximum righting lever (GZ) occurs at an angle of less than 20º approval of the stability should be considered by the Administration as a special case.

8.2.1.4 For the purpose of assessing whether the stability criteria are met, GZ curves should be produced for the loading conditions applicable to the operation of the yacht.

8.2.1.5 Superstructures

8.2.1.5.1 The buoyancy of enclosed superstructures complying with regulation 3(10)(b) of the ICLL may be taken into account when producing GZ curves.

8.2.1.5.2 Superstructures, the doors of which do not comply with the requirements of regulation 12 of ICLL, should not be taken into account.

8.2.1.6 High Speed Yachts
In addition to the criteria above, designers and builders should address the following hazards which are known to affect yachts operating in planing modes or those achieving relatively high speeds:

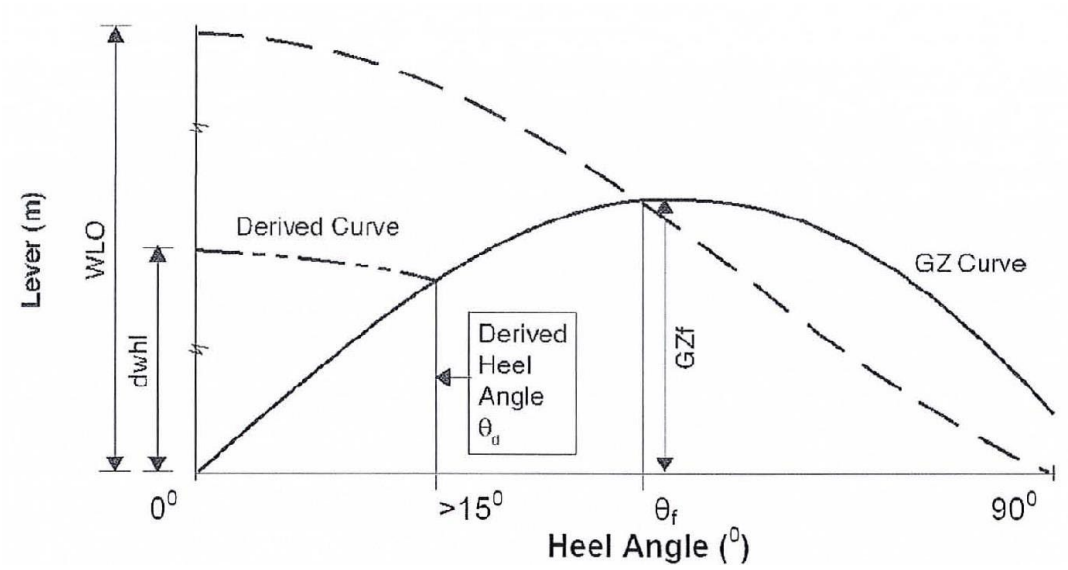
.1 Directional instability, often coupled to roll and pitch instabilities;

.2 Bow diving of planing yachts due to dynamic loss of longitudinal stability in calm seas;
.3 Reduction in transverse stability with increasing speed in monohulls;
.4 Porpoising of planing monohulls being coupled with pitch and heave oscillations;
.5 Generation of capsizing moments due to immersion of chines in planing monohulls (chine tripping).

8.2.2 Sailing yachts

8.2.2.1 Monohulls

.1 Curves of statical stability (GZ curves) for at least the loaded Departure with 100% consumables and the loaded Arrival with 10% consumables should be produced.
.2 The GZ curves required by .1 should have a positive range of not less than 90º .For yachts of more than 45m, a range of less than 90º may be considered but may be subject to agreed operational criteria.
.3 In addition to the requirements of .2, the angle of steady heel should be greater than 15 degrees (see figure). The angle of steady heel is obtained
from the intersection of a "derived wind heeling lever" curve with the GZ curve required by .1.



In the figure:
'dwhl' = the "derived wind heeling lever" at any angle Θ

$$Dwhl = 0.5 \times WLO \times \cos^{1.3} \Theta$$

Where $WLO = \frac{GZ_f}{\cos^{1.3} \Theta_f}$

Noting that:
WLO= is the magnitude of the actual wind heeling lever at 0º which would cause the yacht to heel to the 'down flooding angle' Θ_f or 60º whichever is least.
GZ_f= is the lever of the yacht's GZ at the down flooding angle (Θ_f) or 60º whichever is least.
Θ_d= is the angle at which the 'derived wind heeling' curve intersects the GZ curve. (If Θ_d is less than *15º* the yacht will be considered as having insufficient stability for the purpose of the Code).

Θ_f = is the 'down-flooding angle' is the angle of heel causing immersion of the lower edge of openings having an aggregate area, in square meters,
greater than:

$$\frac{D}{1500}$$ where Δ = vessels displacement in tons

All regularly used openings for access and for ventilation should be considered when determining the downflooding angle. No opening regardless of size which may lead to progressive flooding should be immersed at an angle of heel of less than 40°. Air pipes to tanks can, however, be disregarded.

If, as a result of immersion of openings in a superstructure, a yacht cannot meet the required standard, those superstructure openings may be ignored and the openings in the weather deck used instead to determine Θ_f. In such cases the GZ curve should be derived without the benefit of the buoyancy of the superstructure.

It might be noted that provided the yacht complies with the requirements of 8.2.2.1.1, 8.2.2.1.2 and 8.2.2.1.3 and is sailed with an angle of heel which is no greater than the 'derived angle of heel', it should be capable of withstanding a wind gust equal to 1.4 times the actual wind velocity (i.e. twice the actual wind pressure) without immersing the 'down-flooding openings', or heeling to an angle greater than 60°.

8.2.2.2 Multi-hull

.1 Curves of statical stability in both roll and pitch shall be prepared for at least the Loaded Arrival with 10% consumables. The VCG shall be obtained by one of the three methods listed below:

.1 Inclining of complete craft in air on load cells, the VCG being calculated from the moments generated by the measured forces, or

.2 Separate determination of weights of hull and rig (comprising masts and all running and standing rigging), and subsequent calculation assuming that the hull VCG is 75% of the hull depth above the bottom of the canoe body, and that the VCG of the rig is at half the length of the mast (or a weighted mean of the lengths of more than one mast), or

.3 A detailed calculation of the weight and CG position of all components of the yacht, plus a 15% margin of the resulting VCG height above the underside of canoe body.

. 2 If naval architecture software is used to obtain a curve of pitch restoring moments, then the trim angle must be found for a series of longitudinal center of gravity (LCG) positions forward of that necessary for the design waterline. The curve can then be derived as follows:

GZ in pitch = CG' × cos (trim angle) trim angle= TFP-TAPLBP

Where:
CG'= shift of LCG forward of that required for design trim, measured parallel to baseline
T_{FP} = draught at forward perpendicular T_{AP} = draught at aft perpendicular
L_{BP} = length between perpendiculars
Approximations to maximum roll or pitch moments are not acceptable.

.3 Data shall be provided to the user showing the maximum advised mean apparent wind speed appropriate to each combination of sails, such wind speeds being calculated as the lesser of the following:

$$v_W = 1.5\sqrt{\frac{LM_R}{A'_S\, h\cos\phi_R + A_D b}}$$

or

$$v_W = 1.5\sqrt{\frac{LM_P}{A'_S\, h\cos\phi_P + A_D b}}$$

v_W = maximum advised apparent wind speed (knots)

LM_R = maximum restoring moment in roll (N.m)

LM_P = limiting restoring moment in pitch (N.m), defined as the pitch restoring moment at the least angle of the following:

a) Angle of maximum pitch restoring moment, or
b) Angle at which foredeck is immersed
c) 10º from design trim

A'_s = area of sails set including mast and boom (m^2)
h = height of combined center of effort of sails and spars above the waterline
$\emptyset_R$ = heel angle at maximum roll righting moment (in conjunction with LM_R)
$\emptyset_P$ = limiting pitch angle used when calculating LM_P (in conjunction with

A_D = plan area of the hulls and deck (m^2)
b = distance from centroid of A_D to the centerline of the leeward hull

This data shall be accompanied by the note:

In following winds, the tabulated safe wind speed for each sail combination should be reduced by the boat speed.

.4 If the maximum safe wind speed under full fore-and-aft sail is less than 27 knots, it shall be demonstrated by calculation using annex D of ISO 12217-2 (2002) that, when inverted and/or fully flooded, the volume of buoyancy, expressed in cubic meters (m^3), in the hull, fittings and equipment is greater than:
1.2 x (fully loaded mass in tons)
thus ensuring that it is sufficient to support the mass of the fully loaded yacht by a margin. Allowance for trapped bubbles of air (apart from dedicated air tanks and watertight compartments) shall not be included.

. 5 The maximum safe wind speed with no sails set calculated in accordance with .3 above should exceed 36 knots. For Short Range Yachts this wind speed should exceed 32 knots.

.6 Trimarans used for unrestricted operations should have sidehulls each having a total buoyant volume of at least 150% of the displacement volume in the fully loaded condition.

. 7 The stability information booklet shall include information and guidance on:

.1 The stability hazards to which these craft are vulnerable, including the risk of capsize in roll and/or pitch;

.2 The importance of complying with the maximum advised apparent wind speed information supplied;

.3 The need to reduce the tabulated safe wind speeds by the yacht speed in following winds;

.4 The choice of sails to be set with respect to the prevailing wind strength, relative wind direction, and sea state;

.5 The precautions to be taken when altering course from a following to a beam wind.

. 8 In yachts required to demonstrate the ability to float after inversion (according to .3 above), an emergency escape hatch shall be fitted to each main
inhabited watertight compartment such that it is above, both upright and inverted waterlines.

8.3 Damage Stability

The following requirements are applicable to all yachts. It should be noted that compliance with the damage stability criteria is not required for yachts that obtain full compliance with the ICLL conditions of assignment.

8.3.1 Watertight bulkheads of the yacht should be so arranged that minor hull damage that results in the free flooding of any one compartment will cause the yacht to float at a waterline which, at any point, is not less than 75mm below the weather deck, freeboard deck, or bulkhead deck if not concurrent.

8.3.2 Minor damage should be assumed to occur anywhere in the length of the yacht, but not on a watertight bulkhead.

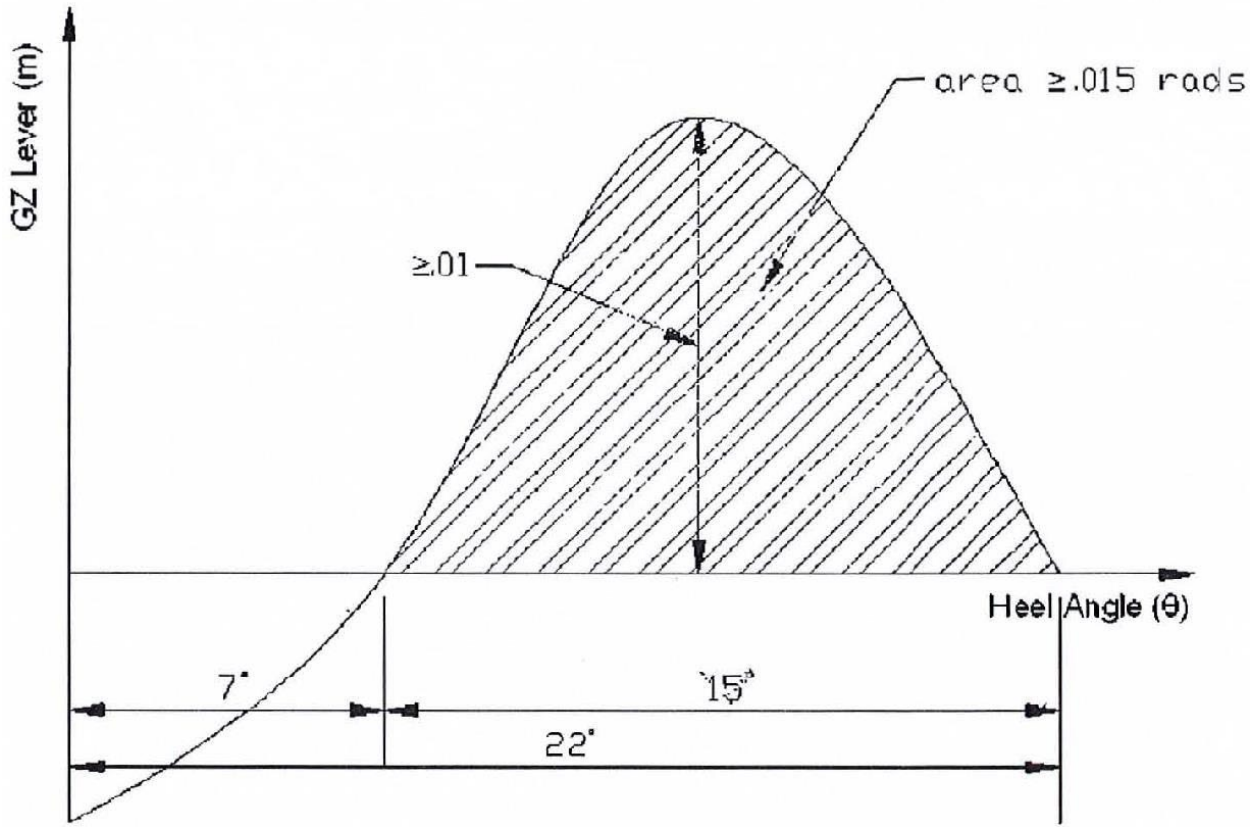
8.3.3

Standard permeability's should be used in this assessment, as follows:

Space	Percentage Permeability
Stores	60
Stores but not of a substantial quantity thereof	95
Accommodation	95
Machinery	85

8.3.4

In the damaged condition, considered in 8.3.1, the residual stability should be such that any angle of equilibrium does not exceed 7º from the upright, the resulting righting lever curve has a range to the downflooding angle of at least 15° beyond any angle of equilibrium, the maximum righting lever within that range is not less than 100mm and the area under the curve is not less than 0.015 meter radians.



8.3.5 A yacht of 85 meters and above should meet a SOLAS one-compartment standard of subdivision, calculated using the deterministic damage stability methodology.

8.4 Elements of Stability

8.4.1 Unless otherwise specified, the lightship weight, vertical center of gravity (KG) and longitudinal center of gravity (LCG) of a yacht should be determined from the results of an inclining experiment.

8.4.2 An inclining experiment should be conducted in accordance with a detailed standard which is approved by the Administration and, in the presence of an authorized surveyor.

8.4.3 The report of the inclining experiment and the lightship particulars derived should be approved by the Administration prior to its use in stability calculations. At the discretion of the owner(s)/operator(s)/manager(s) and prior to approval of the lightship particulars by the Administration, a margin for safety may be applied to the lightship weight and KG calculated after the inclining experiment. Such a margin should be clearly identified and recorded in the stability booklet. A formal record should be kept in the stability booklet of alterations or modifications to the yacht for which the effects on lightship weight and vertical centers of gravity are offset against the margin.

8.4.4 When sister yachts are built at the same shipyard, the Administration may accept a

lightweight check on subsequent yachts to corroborate the results of the inclining experiment conducted on the lead yacht of the class.

8.5 Stability Documents

8.5.1 A yacht should be provided with a stability information booklet for the master. The booklet is to be approved by the Administration.

8.5.2 The content, form and presentation of information contained in the stability information booklet should be based on the model booklet for the yacht type (motor or sailing) published by/for the Administration.

8.5.3 A yacht with previously approved stability information which undergoes a major refit or alterations should be subjected to a complete reassessment of stability and provided with newly approved stability information. A major refit or major alteration is one which results in either a change in the lightship weight of 2% and above and/or the longitudinal center of gravity of 1% and above (measured from the aft perpendicular) and/or the calculated vertical center of gravity rises by 0.25% and above (measured from the keel).

Additionally, unless it can be clearly demonstrated that no major change has occurred, a lightweight check should be carried out at the renewal survey required in Part G, Section 3.11.5.4

Sailing yachts should have, readily available, a copy of the 'Curves of Maximum Steady Heel Angle to Prevent Downflooding in Squalls', or in the case of a multihull, the values of maximum advised mean apparent wind speed, for the reference of the watch keeper. This should be a direct copy taken from that contained in the approved stability booklet.

8.5.5 The overall sail area and spar weights and dimensions should be as documented in the yacht's stability information booklet. Any rigging modifications that increase the overall sail area, or the weight/dimensions of the rig aloft must be accompanied by an approved updating of the stability information booklet.

8.5.6 For Short Range Yachts, where the damage stability has not been assessed, the following note should be added to the approved stability booklet:

"*This yacht has not been assessed for damage stability, and therefore might not remain afloat in the event of damage or flooding."*

9 Freeboard

The purpose of this section is to ensure that all yachts are assigned a freeboard in accordance with ICLL 1966. This section also outlines the requirements for draught marks to enable trim to be readily calculated.

9.1 General

9.1.1 The freeboard for the yacht and its marking should be approved by the Assigning Authority for the assignment of freeboard and issue of the International Load Line Certificate (1966).

9.1.2 Yachts should comply with ICLL for the assignment of a freeboard mark which corresponds to the deepest loading condition included in the stability information booklet for the yacht.

9.1.3 The freeboard assigned should be compatible with the strength of hull structure, intact and damage stability requirements for the yacht, and should ensure that minimum bow height requirements are met.

9.1.4 The Assigning Authority should provide the owner(s)/operator(s)/manager(s) of the yacht with a copy of the particulars of the freeboard assigned and a copy of the record of particulars relating to the conditions of assignment.

9.2 Freeboard Mark and Loading

9.2.1 The freeboard mark applied should be positioned port and starboard at amidships on the load line length and may be an all-seasons mark. The mark should be a permanent disc and be of contrasting color to the hull of the yacht in way of the mark.

9.2.2

The fresh water freeboard allowance should be obtained by deducting from the all seasons freeboard assigned, the quantity

$$\frac{\Delta}{4T} \text{ millimeters}$$

Where:
Δ = displacement in salt water in tons at the all-seasons draught
T = tons per centimeters immersion at the all seasons load waterline

Alternatively the deduction may be taken as 1/48th of the all-seasons draught of the ship at amidships.

9.2.3

A yacht should not operate in any condition which will result in its appropriate freeboard marks being submerged when it is at rest and upright in calm water.

9.3 Datum Draught Marks

9.3.1 Datum draught marks should be provided at the bow and stern, port and starboard, and be adequate for assessing the condition and trim of the yacht. Such draught marks may be single datum lines.

9.3.2 The marks should be permanent and easily read but need not be of contrasting color to the hull. The marks need not indicate more than one draught at each position and should be above, but within 1000mm, of the deepest load waterline.

9.3.3 The draught to which marks relate should be indicated either above the mark on the hull and/or in the stability information booklet for the yacht. The position of the marks should be verified at initial placement by the Administration or the yacht's Assigning Authority.

10 Life-saving Appliances

The purpose of this section is to ensure that all yachts are equipped with the minimum essential LSA equipment appropriate to yacht operations. The basic provision is for the principles of SOLAS to be met. However, some sections have been identified where alternative standards can be accepted, where appropriate.

10.1 General Requirements

10.1.1 Life-Saving Appliances should be provided in accordance with Table 1 - Life-Saving Appliances.

10.1.2 All equipment fitted should be of a type which has been accepted by the Administration as complying with IMO Lifesaving Appliances Code and the applicable IMO Resolution.

10.1.3 Additional life-saving equipment which is provided should meet the requirements of 10.1.2. When personal safety equipment is provided for use in water sports activities, arrangements for its stowage should ensure that it will not be used mistakenly as lifesaving equipment in an emergency situation.

10.1.4 All life-saving equipment carried should be fitted with retro-reflective material in accordance with the recommendations of the applicable IMO Resolution.

10.1.5 Liferaft embarkation arrangements should comply with the following:

.1 Where the distance between the embarkation deck and the top of the liferaft buoyancy tube exceeds one meter with the yacht in its lightest condition, an embarkation ladder is to be provided. A means for fastening is to be provided and ladders are to be readily available for use at all times.
. 2 Where the distance between the embarkation deck and the top of the liferaft buoyancy tube exceeds 4.5 meters with the yacht in its lightest condition, davit launched liferafts and at least one launching appliance for launching are to be provided on each side of the yacht.

10.1.6 Falls for launching devices are to comply with IMO Lifesaving Appliances Code. When

falls are of stainless steel, they should be renewed at intervals not exceeding the service life recommended by the manufacturer, or where no service life is stated be treated as galvanized steel falls. Falls of alternative materials may be considered by the Administration.

10.1.7 Every inflatable or rigid inflatable rescue boat, inflatable boat, inflatable liferaft and hydrostatic release unit should be serviced, at intervals not exceeding 12 months, at an approved service station. Hydrostatic release units which have been approved for a service life of two years and which should be replaced at the end of their life, need not be serviced after one year.

10.1.8 Maintenance of equipment should be carried out in accordance with the instructions for onboard maintenance.

10.1.9 The stowage and installation of all life-saving appliances is to be to the satisfaction of the Administration.

10.1.10 All life-saving appliances should be in working order and be ready for immediate use at the commencement of, and at all times during, the voyage.

10.1.11 For a yacht equipped with stabilizer fins or having other projections at the sides of the hull, special consideration should be given, and provisions made, as necessary to avoid possible interference with the safe evacuation of the yacht in an emergency.

10.1.12 Means should be provided to prevent overboard discharge of water into survival craft.

Table 1 - Life-saving Appliances

Yacht size	Short Range Yacht	≥ 24m	≥ 85m
Lifeboats (see 13.2.1)	-	-	Yes
Liferafts (see 13.2.2)	YES	Yes	Yes
Manoverboard recovery system (see 13.2.3.3)	YES	-	-
Rescue boat (see 13.2.3)	-	Yes	Yes
Lifejackets (see 13.2.4)	YES	Yes	Yes
Immersion suits (see 13.2.5)	YES	Yes	Yes/2/0
Lifebuoys (total)	4	4	8
Lifebuoys with light and smoke (see 13.2.6.1)	2	2	2
Lifebuoys with light	-	-	2
Lifebuoys with buoyant lifeline (see 13.2.6.2)	2	2	2
Set of line throwing appliances (4 lines plus 4 charges)	1	1	1
Rocket parachute flares	6	6	12
Two-way radiotelephone sets	2	2	3
EPIRB (see 13.2.7)	1	1	1
SART (see 13.2.8)	1	1	2
General alarm (see 13.2.9)	Yes	Yes	Yes
Lighting (see13.2.10)	Yes	Yes	Yes
Posters and signs showing survival craft and equipment operating instructions	Yes	Yes	Yes
Training manual	Yes	Yes	Yes
Instructions for onboard maintenance	Yes	Yes	Yes
Lifesaving signals and rescue poster – SOLAS No 1 in wheelhouse (see 13.2.11)	Yes	Yes	Yes

10.2 Equipment Carriage Requirements

10.2.1 LIFEBOATS (REQUIRED FOR YACHTS OVER 85M IN LENGTH)

10.2.1.1 When lifeboats are required to be carried, their acceptance is conditional upon the provision of suitable stowage and launching arrangements.

10.2.1.2 When lifeboats are provided on each side of the yacht, the lifeboat(s) on each side should be of capacity to accommodate the total number of persons onboard.

10.2.1.3 Alternative arrangements to the carriage of lifeboats may be considered as indicated below:
.1 Substitution of lifeboats by liferafts where the yacht complies with a SOLAS 2 compartment subdivision standard; or
.2 Substitution of lifeboats by a sufficient number of davit launched life rafts such that in the event of any one liferaft being lost or rendered unserviceable, sufficient aggregate capacity remains on either side of the yacht for all persons on board.

Additionally one approved rescue boat should be provided on either side of the yacht.

10.2.1.4 A lifeboat will also be acceptable as a rescue boat provided it also meets the requirements of IMO Lifesaving Appliances Code as a rescue boat.

10.2.2 LIFERAFTS

10.2.2.1 The liferafts carried are to be stowed in GRP containers and must contain the necessary "emergency pack". For yachts operating within 60 miles from a safe haven, liferafts provided may be equipped with a "SOLAS B PACK". For all other yachts, life rafts should be equipped with a "SOLAS A PACK".

10.2.2.2 Liferaft approval includes approval of their stowage, launching and float-free arrangements.

10.2.2.3 For yachts of less than 85m in length, or those complying with 10.2.1.3, a sufficient number of life rafts should be provided so that in the *event* of any one liferaft being lost or rendered unserviceable, sufficient aggregate capacity remains on either side of the yacht for all persons on board. This may be achieved by transferring liferafts from one side to the other. Where liferafts are transferable, this requirement may be met by the ability of the rafts to be transferred within 5 minutes, as below:

- Liferafts of 6-15 persons capacity to be carried by 2 persons
- Liferafts of more than 15 persons capacity to be carried by 4 persons.

10.2.2.4 When lifeboats are provided in accordance with 10.2.1.2, sufficient liferafts are to be provided such that in the event of anyone lifeboat being lost or rendered unserviceable, sufficient aggregate liferaft capacity remains on either side of the yacht for all persons onboard. Where life rafts are transferable, this requirement may be met by the ability of the rafts to be transferred within five minutes, as detailed in 10.2.2.3.

10.2.2.5 GRP containers containing life rafts should be stowed on the weather deck or in an

open space and fitted with hydrostatic release units so that the liferafts will float free of the yacht and automatically inflate.

10.2.2.6 Liferafts may form part of an approved Marine Evacuation System (MES). A sufficient number of systems should be provided, such that in the event of anyone entire system being lost or rendered unserviceable, sufficient aggregate capacity remains on either side of the yacht for all persons on board.

10.2.2.7 For yachts operating with reduced personnel aboard, attention is drawn to the dangers associated with the use of large capacity liferafts with small numbers of persons embarked.

10.2.3 RESCUE BOATS AND RECOVERY OF PERSONS FROM THE SEA

Means should be provided for the recovery of a person from the sea to the yacht and it should be assumed that the person is unconscious or unable to assist in the rescue. This requirement is satisfied by the following sections as appropriate to the size of the yacht. If an over side boarding ladder or scrambling net is provided the ladder or net should extend from the weather deck to at least 600mm below the lowest operational waterline.

All rescue boats covered within this section are to be equipped to the requirements of the IMO Lifesaving Appliance Code Ch. V/5.1.2. Additionally, rescue boats need not be capable of being launched from both sides, and means to lower the boat
from within the boat is not required.

10.2.3.1 All yachts to which this Code applies should be provided with a rescue boat either meeting the requirements of one of the following:

10.2.3.1.1 The yacht should be provided with a rescue boat meeting SOLAS requirements in all respects, except for the color where white will also be considered acceptable.

10.2.3.1.2 A boat which is not SOLAS approved but which is suitable for rescue purposes. The boat may be rigid, rigid inflatable, or inflatable, and should have a capacity for not less than four persons, one of which should be assumed to be lying down. Tubes of rigid inflatable or inflatable boats should have a minimum of three buoyancy compartments. The boat is to be capable of displaying a highly visible color. If stowed in a grab bag, required equipment need not be permanently stowed in the boat.

10.2.3.2 Launching appliances should be either of an approved type or comply with the following requirements:

The appliance should be able to launch the boat within five minutes. When a power operated device is fitted, it should be capable of operation either by hand or by an emergency source of power in the event of a main power failure. The routing of the emergency source of power should be considered in respect of damaged waterlines and fire. The launching appliance and its attachments should be constructed to withstand a static proof load on test of not less than 2.2 times the maximum working load. Acceptable factors of safety are six for wires, hooks and sheaves, and 4.5 for the remainder of the launching appliance. The appliance and its attachments should also be tested dynamically to 1.1 times the working load. It should be noted that there is no requirement to recover the rescue boat provided that the casualty and the boat's crew can be recovered on board from the boat in the water. The design of the falls and winch system should take account of the principles of IMO Lifesaving Appliances Code Ch. VI/6.1.2.

Where it is proposed to use the running rigging on sailing yachts, the above requirements should also be met.

10.2.3.3 Short Range Yachts
Yachts operating as Short Range Yachts should either comply with requirements of 10.2.3.1.1, 10.2.3.1.2, or the following:

10.2.3.3.1 The yacht should have sufficient mobility and maneuverability in a seaway to enable persons to be retrieved from the water. For assessing this ability it is not considered acceptable to retrieve persons over the stern of the yacht or adjacent to the propeller(s). The recovery location should be visible from the conning position at all times during the recovery, although this may be achieved by the use of remote controls where necessary.
The yacht should be provided with suitable equipment and/or arrangements to enable the person(s) to be recovered without further persons entering the water.

10.2.4 LIFEJACKETS

10.2.4.1 One adult SOLAS approved lifejacket should be provided for each person on board plus spare adult lifejackets sufficient for at least 10% of the total number of persons onboard or two, whichever is the greater. Each lifejacket should be fitted with a light and whistle.

10.2.4.2 Included in the above number of lifejackets, there should be at least two SOLAS approved inflatable lifejackets for use of the crew of any rescue boat or inflatable boat carried onboard.

10.2.4.3 In addition to the adult lifejackets, a sufficient number of children's lifejackets should be provided for children carried on the yacht.

10.2.5 IMMERSION SUITS

10.2.5.1

One approved immersion suit should be provided for each person onboard. Due consideration should be given to the provision of appropriate immersion/thermal protection for children carried on board; these should be of the insulated type. However, these need not be provided if the yacht is operating in water of surface temperatures of 20°C or more and within latitudes 30ºN and 30°5.

10.2.6 LIFEBUOYS

10.2.6.1 Lifebuoys port and starboard provided with combined self-igniting light and self-activating smoke signals should be capable of quick deployment from the navigating bridge.

10.2.6.2 The attached buoyant lifeline required on each of two of the lifebuoys is to have a minimum length of 30 meters.

10.2.6.3 Each lifebuoy should be marked with the yacht's name and Port of Registry.
10.2.7 EPIRB

An approved EPIRB should be installed in an easily accessible position ready to be manually released, capable of being placed in a survival craft and floating free if the yacht sinks. All

EPIRBs should be registered with the Administration. EPIRBS are to be tested annually and serviced at not more than five yearly intervals by an approved shore based maintainer.

10.2.8 RADAR TRANSPONDERS (SART)

The SART is to be stowed in an easily accessible position so that it can rapidly be placed in any survival craft. Means should be provided in order that it can be mounted in the survival craft at a height of at least one meter above sea level.

10.2.9 GENERAL ALARM

10.2.9.1 The alarm may consist of the ship's whistle or siren providing it can be heard in all parts of the yacht.

10.2.9.2 For a yacht of 85m in length and above, it is to be supplemented by an electrically operated bell or Klaxon system, which is to be powered from the yacht's main supply and also the emergency source of power (see section 5). In addition, a public address system or other suitable means of communication should be provided.

10.2.10 LIGHTING

10.2.10.1 Alleyways, internal and external stairways, and exits giving access to, and including, the muster and embarkation stations should be adequately lit. (See also section 5).

10.2.10.2 Adequate lighting is to be provided in the vicinity of survival craft, launching appliance(s) (when provided) and the overside area of sea in way of the launching position(s). The lighting should be supplied from the emergency source of power.

10.2.11 LIFE-SAVING SIGNALS AND RESCUE POSTER

When display space in the wheelhouse is restricted, the 2 sides of a SOLAS No.2 poster (as contained in liferaft equipment packs) may be displayed in lieu of a SOLAS No.1 poster.

11 Fire Safety

11.1 Protection of spaces containing vehicles or craft with fuel in their tanks or lockers storing such fuels

11.1.1 Special consideration should be given to safe conditions of carriage of petrol and other highly flammable liquids either in hand portable containers/tanks or in the tanks of vehicles (such as personal water craft, motor cars and helicopters) which may be transported. This is not considered applicable to diesel stowage.

11.1.2 The quantity of petrol and/or other highly flammable liquids carried should be kept to a

minimum, generally up to 150 liters maximum. Greater quantities may be specially considered by the Administration on receipt of a reasoned case made by the master.

11.1.3 Containers used for the carriage of flammable liquids should be constructed to a recognized standard appropriate to the contents and each container clearly marked to indicate its contents.

11.1.4 Small lockers on open deck for the stowage of hand portable containers of petrol should be located away from high risk areas, have no electrical fittings, and be provided with the following:

- Natural ventilation openings top and bottom.
- Drainage leading overboard.
- Means of securing the fuel containers.
- A facility to boundary cool the locker.

11.1.5 Enclosed spaces, and larger lockers on open deck, designated for the safe carriage of petrol or similar fuel or vehicles with fuel in their tanks should be fitted with:

.1 A manual water spray system giving a coverage of 3.5 ltr/m²/minute over the total area of deck, which may be taken from the fire main with the isolating valve located outside the garage. An equivalent arrangement may be considered. Adequate provision should be made for drainage of water introduced to the space. This should not lead to machinery or other spaces where a source of ignition may exist.
.2 A fixed fire detection and fire alarm system complying with the requirements of SOLAS regulations II-2/Part A / IMO Fire Safety Systems Code Chapter IX. The system within the space should also comply with 11.1.5.5.
.3 Ducted mechanical exhaust ventilation, which is isolated from other ventilated spaces, should provide at least 6 air changes per hour (based on the empty space) and for which reduction of the airflow should be signaled by an
audible and visual alarm on the navigating bridge and at the "in port" control station(s). Exhaust ducting should be arranged to extract from the area low over the bilge. If the fan motors are located in the space or in the ventilation duct they should be certified safe to the correct designation for the flammable vapor/liquid. The ventilation fans should be of a non-sparking type and the ventilation system should be capable of rapid shut down and effective closure in event of fire.
.4 A suitable gas detection system is to be provided, with audible and visual alarm in the wheelhouse and where it may always be observed by the crew.
.5 All electrical equipment located up to 450mm above the deck should be certified safe for petrol vapors.
.6 Electrical equipment located higher than 450mm above the deck should either,
(a) Be to [IP55] standard of construction (IEC Publication 529 -Classification of Degree of Protection provided by Enclosures). or,
(b) Provided with easily accessible means of isolation (on all poles) located outside the space. These isolators should be grouped together as far as practicable and be clearly marked. This option should not be used for safety systems such as steering motors, rudder indicators, etc.
.7 Regardless of the height of installation, it is considered that the following equipment located within the space should be certified safe for the flammable vapors:
(a) Gas detection system

(b) Bilge alarm
(c) Fire detection system
(d) At least one light fitting (on a dedicated circuit, possibly emergency)

It should be noted that electrical equipment includes starters, distribution boxes, etc.

11.2 Miscellaneous

11.2.1 CONSTRUCTION AND ARRANGEMENT OF SAUNAS

11.2.1.1 The perimeter of the sauna should be of "A" class boundaries and may include changing rooms, showers and toilets. The sauna should be insulated to A-60, and B15 for Short Range Yachts, against other spaces except those inside of the perimeter.

11.2.1.2 Bathrooms with direct access to saunas may be considered as part of them. In such cases, the door between sauna and the bathroom need not comply with fire safety requirements.

11.2.1.3 Wooden linings on bulkheads and ceilings are permitted. The ceiling above the oven should be lined with a non-combustible plate with an air gap of at least 30mm. The distance from the hot surfaces to combustible materials should be at least 500mm or the combustible materials should be protected (e.g. non- combustible plate with an air gap of at least 30mm).

11.2.1.4 Wooden benches are permitted.

11.2.1.5 The sauna door should open outwards by pushing.

11.2.1.6 Electrically heated ovens should be provided with a timer.

11.2.1.7 All spaces within the perimeter of the sauna are to be protected by a fire detection and alarm system and an automatic sprinkler system.

11.2.1 CONSTRUCTION AND ARRANGEMENT OF THERMAL SUITE (E.G. STEAM ROOM)

11.2.2.1 The perimeter of the thermal suite may include changing rooms, showers and toilets.

11.2.2.2 Bathrooms with direct access to the suite may be considered as part of it. In such cases, the door between suite and the bathroom need not comply with fire safety requirements.

11.2.2.3 If the steam generator is contained within the perimeter, the suite boundary should be constructed to an A-O standard, or B-O for Short Range Yachts. If the steam generator is not contained within the perimeter then the boundaries of the space should be constructed of B-O class divisions, and the steam generator should be protected by A-O standard divisions, or B-O for Short Range Yachts.

11.2.2.4 If a suite arrangement contains a sauna then the requirements contained in 11.2.1 are applicable, regardless of the steam generator location.

11.2.2.5 All spaces within the perimeter are to be protected by a fire detection and alarm system and an automatic sprinkler.

11.2.3 DEEP FAT FRYING EQUIPMENT

Attention is drawn to the requirements SOLAS II-2/10.6.4 for fire extinguishing systems for deep fat cooking equipment.

For fryers of up to 15 liters cooking oil capacity, the provision of a suitably sized Class F extinguisher (to a national/international standard such as BS7937:2000) together with manual isolation of the electrical power supply is acceptable.

11.3 Fire Control Plan(s)

11.3.1 A fire control (general arrangement) plan(s) should be permanently exhibited for the guidance of the master and crew of the yacht. The content of the plan(s) should adequately show and describe the principal fire prevention and protection equipment and materials. As far as practical, symbols used on the plans should comply with a recognized international standard. The fire control plan may be a combined Fire & Safety Plan, which should show the positions of stowage of the lifesaving and fire appliances.

11.3.2 For each deck, the plan(s) should show the position of control stations; sections of the yacht which are enclosed respectively by "A" class divisions and "B" class

divisions; location of flammable liquid storage (see 11.1.); particulars of and locations of fire alarms, fire detection systems, sprinkler installations, fixed and portable fire extinguishing appliances; fireman's outfit(s); means of access and emergency escapes for compartments and decks; locations and means of control of systems and openings which should be closed down in a fire emergency.

11.3.3 The plan(s) required by 11.3.1 should be kept up to date. Up-dating alterations should be applied to all copies of the plans) without delay. Each plan should include a list of alterations and the date on which each alteration was applied.

11.3.4 A duplicate set of the plan(s) should be permanently stored in a prominently marked weathertight enclosure readily accessible to assist non-yacht fire-fighting personnel who may board the yacht in a fire emergency.

11.3.5 Instructions valid to the maintenance and operation of all the equipment and installations onboard for the fighting and containment of fire should be kept in one document holder, readily available in an accessible location.

12 Structural Fire Protection

The purpose of this section is to ensure a consistent level of structural fire protection. The section is primarily concerned with protecting high risk spaces such as the engine room and galley. It also makes provision for restricting the quantity of combustible materials and sets out the principles for detection of fire and effective escape

12.1 General

12.1.1 Terms used in this section should have the same meaning as defined in SOLAS. Table 1

is a guide to the major requirements of this Section. The Table is intended as a quick reference to the requirements and is not to be used in isolation when designing the fire safety arrangements.

Table 1

Passive fire protection (see 15.2)	Category 'A' machinery spaces: 'A-30'/ 'A-0'.
Means of escape (see 15.3) • Category 'A' machinery spaces • Accommodation and other spaces	 Two (2) Two (2)
Fixed fire detection system (see 15.7)	• Fitted in machinery spaces • Fitted in service spaces, control stations and accommodation spaces
Automatic sprinkler system or equivalent	Fitted in yachts that do not meet restrictions on combustible materials (15.2.3.6 & 15.2.3.8).

12.2 Structure

The purpose of this section is to contain a fire in the space of origin. For this purpose, the following functional requirements should be met:

- the ship should be subdivided by thermal and structural boundaries as required by this section;
- thermal insulation of boundaries should have due regard to the fire risk of the space and adjacent spaces;
- the fire integrity of the divisions should be maintained at openings and penetrations.

12.2.1 FORMS OF CONSTRUCTION - FIRE DIVISIONS

12.2.1.1 Fire divisions required by 12.2.2 are to be constructed in accordance with the remaining paragraphs of this sub-section.

12.2.1.2 Fire divisions using steel equivalent, or alternative forms of construction may be accepted if it can be demonstrated that the material by itself, or due to noncombustible insulation provided, has the fire resistance properties equivalent to those divisions required by 12.2.2.1.

12.2.1.3 Insulation required by 12.2.1.2 is to be such that the temperature of the structural core does not rise above the point at which the structure would begin to lose its strength at any time during the applicable exposure to the standard fire test as referenced in the IMO FTP Code. For 'A' Class divisions, the applicable exposure is 60 minutes, and for 'B' Class divisions, the applicable exposure is 30 minutes.

12.2.1.3.1 For aluminum alloy structures, the insulation is to be such that the temperature of the structural core does not rise more than 200°C above the ambient temperature at any time during the applicable fire exposure.

12.2.1.3.2 For composite structures, the insulation is to be such that the temperature of the laminate does not rise more than the minimum temperature of deflection under load of the resin at any time during the applicable fire exposure. The temperature of deflection under load is to

be determined in accordance with a recognized international standard.

12.2.1.3.3 Insulation need only be applied on the side that is exposed to the greatest fire risk, i.e. inside the engine room, a division between two such spaces should however be insulated on both sides unless it is a steel division.

12.2.1.3.4 Special attention is to be given to the fixing of fire door frames in bulkheads constructed of materials other than steel. Measures are to be taken to ensure that the temperature of the fixings when exposed to fire does not exceed the temperature at which the bulkhead itself loses strength.

12.2.2 STRUCTURAL FIRE PROTECTION

12.2.2.1

(a) Machinery spaces of category 'A', are to be enclosed by 'A-30' Class divisions.
(b) For Short Range Yachts, machinery spaces of category 'A', are to be enclosed by 'B-15' Class divisions.

12.2.2.2 Openings in 'A' and 'B' Class divisions are to be provided with permanently attached means of closing that are to be at least as effective for resisting fires as the divisions in which they are fitted. Generally, windows should not be fitted in machinery space boundaries.

12.2.2.3 Where 'A' Class divisions are penetrated for the passage of electric cables, pipes, trunks, ducts, etc., or for girders, beams or other structural members, arrangements are to be made to ensure that the fire resistance is not impaired.

12.2.2.4 Where 'B' Class divisions are penetrated for the passage of electric cables, pipes, trunks, ducts, etc., or for the fitting of ventilation terminals, lighting fixtures and similar devices, arrangements are to be made to ensure that the fire resistance is not impaired.

12.2.2.5 Where the structure or 'A' Class divisions are required to be insulated, it is to be ensured that the heat from a fire is not transmitted through the intersections and terminal points of the divisions or penetrations to uninsulated boundaries. Where the insulation installed does not achieve this, arrangements are to be made to prevent this heat transmission by insulating the horizontal and vertical boundaries or penetrations for a distance of 450 mm (this may be reduced to 380mm on steel divisions only).

12.2.3 MATERIALS

12.2.3.1 Except in refrigerated compartments of service spaces, all insulation (e.g. fire and comfort) is to be of not readily- ignitable materials.

12.2.3.2 Pipes penetrating 'A' or 'B' Class divisions are to be of approved materials having regard to the temperature such divisions are required to withstand.

12.2.3.3 Pipes conveying oil or other combustible liquids through accommodation and service spaces are to be of approved materials having regard to the fire risk.

12.2.3.4 Materials readily rendered ineffective by heat are not to be used for overboard scuppers, sanitary discharges, and other outlets which are close to the waterline and where the failure of the material in the event of fire would give rise to danger of flooding. Due regard should be paid to the IMO Fire Test Procedures Code.

12.2.3.5 Vapor barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings for cold service system need not be non-combustible, but they are to be kept to the minimum quantity practicable and their exposed surfaces are to have low flame spread characteristics.

12.2.3.6 Upholstery composites (fabric in association with any backing or padding material) used throughout the yacht should be approved in accordance with the IMO FTP Code, Annex 1, Part 8, or equivalent. This does not apply to spaces fitted with sprinklers or equivalent approved fixed fire extinguishing systems.

12.2.3.7 It is recommended that organic foams used in upholstered furniture and mattresses are of the combustion modified type.

12.2.3.8 Suspended textile materials such as curtains or drapes should be approved in accordance with the IMO FTP Code, Annex 1, Part 7, or equivalent. This does not apply to spaces fitted with sprinklers or equivalent approved fixed fire extinguishing systems.

12.2.4 SURFACE OF INSULATION

In spaces where penetration of oil products is possible, the surface of insulation is to be impervious to oil or oil vapors. Insulation boundaries are to be arranged to avoid immersion in oil spillages.

12.2.5 FUEL ARRANGEMENTS

12.2.5.1 Arrangements for the storage, distribution and utilization of oil fuel are to be such as to minimize the risk of fire or explosion.

12.2.5.2 Oil fuel tanks situated within, or adjacent to, the boundaries of Category 'A' machinery spaces are not to contain oil fuel having a flashpoint of less than 60°C.

12.2.5.3 Oil fuel, lubricating oil and other flammable oils are not to be carried in fore-peak tanks.

12.2.5.4 Every oil fuel pipe, which, if damaged, would allow oil to escape from a storage, settling or daily service tank situated above the double bottom, shall be fitted with a cock or valve directly on the tank capable of being closed from a safe position outside the space concerned in the event of a fire occurring in the space in which such tanks are situated.

12.2.5.5 Means are to be provided to stop fuel transfer pumps, oil fired boilers and separators from outside the machinery space.

12.2.5.6 Fuel filter bowls should be of metal construction.

12.3 Means of escape

12.3.1 The purpose of this section is to provide means of escape so that persons onboard can safely and swiftly escape to the liferaft embarkation deck. For this purpose, the following functional requirements should be met:

- Safe escape routes should be provided;
- Escape routes should be maintained in a safe condition, clear of obstacles;

and

- Additional aids for escape should be provided as necessary to ensure

accessibility, clear marking, and adequate design for emergency situations.

12.3.2 REQUIREMENTS

12.3.2.1 Stairways, ladders and corridors serving all spaces normally accessible are to be arranged so as to provide ready means of escape to a deck from which embarkation into survival craft may be effected.

12.3.2.2 The arrangement of the yacht should be such that all compartments are provided with a satisfactory means of escape. In the case of the accommodation, two means of escape from every restricted space or group of spaces should be provided.

Concealed escapes and escape routes are to be clearly marked to ensure ready exit. Category 'A' machinery spaces on motor yachts should also be provided with a minimum of two means of escape. Other machinery spaces should also have at least two means of escape as widely separated as possible, except where the small size of the machinery space makes it impracticable.

(a) The normal means of access to the accommodation and service spaces below the open deck is to be arranged so that it is possible to reach the open deck without passing through a galley, engine room or other space with a high fire risk, wherever practicable.

(b) Where accommodation arrangements are such that access to compartments is through another compartment, the second escape route is to be as remote as possible from the main escape route. This may be through hatches of adequate size, leading to the open deck or separate space to the main escape route.

(c) In exceptional circumstances a single means of escape may be accepted for spaces, other than accommodation spaces, that are entered only occasionally, if the escape route does not pass through a galley, machinery space or watertight door.

(d) No escape route should be obstructed by furniture or fittings. Additionally, furniture along escape routes should be secured in place to prevent shifting if the yacht rolls or lists.

(e) All doors in escape routes are to be openable from either side. In the direction of escape they are all to be openable without a key. All handles on the inside of weathertight doors and hatches are to be non-removable. Where doors are lockable measures to ensure access from outside the space are to be provided for rescue purposes.

12.3.2.3 Lifts are not considered as forming a means of escape.

12.4 Ventilation systems

12.4.1 Ventilation fans for machinery spaces and enclosed galleys are to be capable of being stopped, and main inlets and outlets of ventilation systems closed, from outside the spaces being served. This position should not be readily cut off in the event of a fire in the spaces served.

12.4.2 Ventilation ducts for Category 'A' machinery spaces, galleys, spaces containing vehicles or craft with fuel in their tanks, or lockers storing such fuels, are generally not to pass through accommodation spaces, service spaces or control stations.
Where this is unavoidable, the trunking should be constructed of steel at least 3mm thick or equivalent to the satisfaction of the administration. The ducting within the accommodation should be fitted with:
.1 Fire insulation to A-30 (B-15 on Short Range Yachts) standard to a point at least 5 meters from the machinery space or galley; and
.2 Automatic fire dampers located in the deck or bulkhead within the accommodation where the trunking passes from the machinery space or galley into the accommodation. These automatic fire dampers are also to be manually closable from outside the galley or machinery space.

12.4.3 Ventilation ducts for accommodation spaces, service spaces or control stations are not to pass through Category 'A' machinery spaces, spaces containing vehicles or craft with fuel in their tanks, or lockers storing such fuels, unless the ducts are constructed of steel and arranged to preserve the integrity of the division.

12.4.4 Store-rooms containing highly flammable products are to be provided with ventilation arrangements that are separate from other ventilation systems. Ventilation is to be arranged to prevent the buildup of flammable vapors at high and low levels. The inlets and outlets of ventilators are to be positioned so that they do not draw from or vent into an area which would cause undue hazard, and are to be fitted with spark arresters.

12.4.5 Ventilation systems serving Category 'A' machinery spaces are to be independent of systems serving other spaces.

12.4.6 All enclosed spaces containing free standing fuel tanks are to be ventilated independently of systems serving other spaces.

12.4.7 Ventilation is to be provided to prevent the accumulation of dangerous concentrations of flammable gas which may be emitted from batteries.

12.5 Arrangements for gaseous fuel for domestic purposes

12.5.1 Where gaseous fuel is used for domestic purposes, the arrangements for the storage, distribution and utilization of the fuel is to be such that, having regard to the hazards of fire and explosion which the use of such fuel may entail, the safety of the yacht and the persons onboard is preserved. The installation is to be in accordance with recognized National or

International Standards. Hydrocarbon gas detectors and carbon monoxide detectors should be provided.

12.5.2 Gas cylinders, regulators and safety devices should be stowed on the open deck (where leakage will not accumulate) or in a compartment that is vapor-tight to the yachts interior, and fitted with a vent and drain, so that any gas which may leak can disperse overboard.

12.5.3 An open flame gas appliance provided for cooking, heating or any other purpose should comply with the requirements of Directive 2009/142/EC of the European Parliament or equivalent. The installation of an open flame gas appliance should comply with the appropriate provisions of Part F Section 3.

12.6 Space heaters

Space heaters, if used, are to be fixed in position and so constructed as to reduce fire risks to a minimum. The design and location of these units is to be such that clothing, curtains or other similar materials cannot be scorched or set on fire by heat from the unit.

12.7 Fixed fire detection and fire-alarm systems

The purpose of this section is to ensure that a fire is detected in the space of origin and to provide for an alarm for safe escape and fire-fighting activity. A fixed fire detection and fire alarm system is to be fitted in all enclosed spaces except those containing no significant fire risk (toilets, bathrooms, void spaces, etc.). Manually operated call points shall be placed effectively to ensure a readily accessible means of notification. The fixed fire detection and fire-alarm system is to be installed in accordance with the requirements of SOLAS 74, Chapter II-2, Part C RegulationII-2/7 and the IMO Fire Safety Systems Code, Chapter 9.

12.8 Fixed fire-extinguishing systems not required by this Section

Where a fixed fire-extinguishing system not required by this Chapter is installed the arrangement is to be to the satisfaction of the Administration.

13 Fire Appliances

13.1 General Requirements

12.1.1 Fire appliances are to be of an approved type and should be provided to meet the minimum requirements listed in Table 1 and the specific requirements of 9.2.

12.1.2 Fire appliances provided in addition to those required by 13.1.1 should be of a type acceptable to the Administration.

12.1.3 The location of concealed fire appliances should be clearly marked.

Table 1 – Fire Appliances

1	Provision of water jet – sufficient to reach any part of yacht.	1
2	Power driven fire pump - engine or independent drive.	1
3	Additional independent power driven fire pump, power source and sea connection - not located in the same space as item 2.	1
4	Fire main & hydrants -	Sufficient to achieve item 1 with a single length of hose.
5	Hoses - with jet/spray nozzles each fitted with a shut-off facility.	3
6	Fire extinguishers - portable,(accommodation and service spaces).	For each deck, one within 10m of any position within an accommodation or service space.
7	Fire extinguishers - for a machinery space containing internal combustion type machinery the options are: (a) a fixed fire extinguishing system approved in accordance with the IMO Fire Safety Systems Code; and (b) (i) 1 portable extinguisher for oil fires for each 74.6kw power; or (ii) 2 portable extinguishers for oil fires together with either 1 foam extinguisher of 45l capacity; or 1 co2 extinguisher of 16kg capacity	7 (max) 2 + 1
8	Firemans outfit - to include an approved breathing apparatus	2[1]
9	Fire blanket - in galley	1

Notes:

1. A minimum of two breathing apparatus are to be provided. In yachts where stowage considerations do not allow the carriage of two apparatus, proposals to carry a single unit should be agreed with the Administration.

13.2 Specific Requirements

13.2.1 PROVISION OF WATER JET

At least one jet of water, from a single length of hose, should be able to reach any part of the yacht normally accessible to passengers or crew while the yacht is being navigated and, any store room or any part of a storage compartment when empty.

13.2.2 FIRE PUMPS

13.2.2.1

The power driven fire pump should have a capacity of:

$$2.5\times1+0.066\times LB+D0.52 \text{ m3/hour}$$

Where:
L = the length
B = the greatest molded breadth
D = the molded depth measured to the bulkhead deck at amidships.

When discharging at full capacity through two adjacent fire hydrants, the pump should be capable of maintaining a water pressure of O.2N/mm2 at any hydrant, provided the fire hose can be effectively controlled at this pressure.

13.2.2.2 The second fire pump, which may be portable, should have a capacity of at least 80% of that required by 13.2.2.1 and be capable of input to the fire main. A permanent sea connection, external to the machinery space, should be provided. "Throw-over" sea suctions are not acceptable.

13.2.2.3 Each centrifugal fire pump should be provided with a non-return valve in the connection to the fire main.

13.2.3 FIRE MAIN AND HYDRANTS

13.2.3.1 A fire main, water service pipes and fire hydrants should be fitted.

13.2.3.2 The fire main and water service pipe connections to the hydrants should be sized for the maximum discharge rate of the pump(s) connected to the main.

13.2.3.3 The fire main, water service pipes and fire hydrants should be constructed such that they will:

.1 Not be rendered ineffective by heat;
.2 Not readily corrode; and
.3 Be protected against freezing.

13.2.3.4 When a fire main is supplied by two pumps, one in the machinery space and one elsewhere, provision should be made for isolation of the fire main within the machinery space and for the second pump to supply the fire main and hydrants external to the machinery space. Isolation valve(s) should be manually operated valves fitted outside the machinery space in a position easily accessible in the event of a fire.

13.2.3.5 The fire main should have no connections other than those necessary for firefighting or washing down.

13.2.3.6 Fire hydrants should be located for easy attachment of fire hoses, protected from damage and distributed so that a single length of the fire hoses provided can reach any part of the yacht.

13.2.3.7 Fire hydrants should be fitted with valves that allow a fire hose to be isolated and removed when a fire pump is operating.

13.2.4 FIRE HOSES

13.2.4.1 Fire hoses should not exceed 18 meters in length and, generally, the diameter of a lined hose for use with a powered pump should not be less than 45 mm.

13.2.4.2 Fire hoses and associated tools and fittings should be kept in readily accessible and known locations, close to the hydrants or connections on which they will be used. Hoses supplied from a powered pump should have jet/spray nozzles (incorporating a shut-off facility) of diameter 19mm, 16mm or 12mm depending on firefighting purposes. For accommodation and service spaces, the diameter of nozzles need not exceed 12mm. For machinery spaces and exterior locations, the nozzle size should be as to obtain the maximum discharge possible from two jets at the pressure referred to in 13.2.2.1, from the smallest pump.

13.2.4.3 Hydrants or connections in interior locations on the yacht should have hoses connected at all times. For use within accommodation and service spaces, proposals to provide a smaller diameter of hoses and jet/spray nozzles will be considered.

13.2.4.4 The number of fire hoses and nozzles provided should correspond to the functional fire safety requirements, but be at least three.

13.2.5 PORTABLE FIRE EXTINGUISHERS FOR USE IN ACCOMMODATION AND SERVICE SPACES

13.2.5.1 The number, location, fire extinguishing medium type and capacity should be selected according to the perceived fire risk, but for each deck, one portable extinguisher should be available for use within a distance of 10m from any location. A minimum of at least three portable fire extinguishers should be provided. As far as practical, the fire extinguishers provided should have a uniform method of operation and should be of an approved type and capacity.

13.2.5.2 Portable fire extinguishers of the carbon dioxide type should not be located or provided for use in accommodation spaces.

13.2.5.3 Except for portable extinguishers provided in connection with a specific hazard within a space when it is manned (such as a galley), portable extinguishers generally should be located external to, but adjacent to, the entrance of the space(s) in which they will be used. Extinguishers should be stowed in readily accessible and marked locations.

13.2.5.4 Spare charges should be provided onboard for at least 50% of each type and capacity

of portable fire extinguisher onboard. When an extinguisher is not of a type which is rechargeable when the yacht is at sea, an additional portable fire extinguisher of the same type (or its equivalent) should be provided.

13.2.6 FIRE EXTINGUISHING IN MACHINERY SPACES

13.2.6.1 In a machinery space containing internal combustion type machinery, fire appliances should be provided at least to the extent listed in item 7 of Table 1 - Fire Appliances.

13.2.6.2 In a machinery space containing an oil fired boiler, oil fuel settling tank or oil fuel unit, a fixed fire extinguishing system complying with the IMO Fire Safety Systems Code should be installed.

13.2.6.3 Portable fire extinguishers should be installed and the number, location, fire extinguishing medium type and capacity should be selected according to the perceived fire risk in the space. (Spare charges or spare extinguishers should be provided per 13.2.5.4.) In any case, portable fire extinguishers for extinguishing oil fires should be fitted:

.1 In a boiler room - at least two;
.2 In a space containing any part of an oil fuel installation - at least two; and
.3 In a firing space - at least one.

14Radio

14.1 Radio communications: The Global Maritime Distress and Safety System (GMDSS)

All yachts of 300GT and above should comply with the requirements of SO LAS Chapter IV as amended.

14.1.1 Each yacht should carry sufficient radio equipment to perform the following distress and safety communications functions throughout its intended voyage:

- Transmitting ship to shore distress alerts by at least two separate and independent means, each using a different radio communication service;
- Receiving shore-to-ship distress alerts;
- Transmitting and receiving ship-to-ship distress alerts;
- Transmitting and receiving search and rescue coordinating communications;
- Transmitting and receiving on-scene communications;
- Transmitting and receiving signals for locating by radar;
- Transmitting and receiving maritime safety information;
- Transmitting and receiving bridge-to-bridge communications.

14.2 Radio installations

Table 1 illustrates the radio installations to be carried to fulfil the functional requirements for sailing at different distances from a safe haven.

Table 1

Radio Equipment	Distance from nearest shore station - nautical miles			
	Up to 30	Up to 100	Up to 200	Unlimited
VHF Radiotelephone with Digital Selective Calling (DSC)	One	One	One	One
MF/HF Radiotelephone with Digital Selective Calling (DSC)	None	One[1]	One[1]	One[1]
INMARSAT Ship Earth Station	None	None	One[1]	One[1]
NAVTEX2 receiver	One[2]	One[2]	One[2]	One[2]

Notes:

1. An INMARSAT ship earth station or an MF/HF radiotelephone with DSC may be fitted for operations over 60 miles from the nearest shore station.
   When a yacht operates north of 70° North, or south of 70° South, i.e. polar regions, an INMARSAT Ship Earth and MF/HF is required due to lack of coverage also, IRIDIUM is recommended.
2. If the yacht is sailing in an area where an international NAVTEX service is not provided then the NAVTEX receiver should be supplemented by an INMARSAT enhanced group calling system.

14.2.1

Example:
As an illustration, the minimum equipment to be installed on a yacht engaged on worldwide operations south of 70 degrees North and north of 70 degrees South would be:
One VHF radiotelephone with DSC; one INMARSAT-C ship earth station; one NA VTEX receiver.
Note also the requirement for the carriage of two way radiotelephone sets, EPIRBs and SARTs given in section 10 Table 1.

14.3 Operational Performance

All required radio communications equipment should be of a type which is approved by the relevant authority.

14.4 Installation

14.4.1 The radio installation should:
.1 Be so located to ensure the greatest possible degree of safety and operational availability;
.2 Be protected against the harmful effect of water, extremes of temperature and other adverse environmental conditions;
.3 Be clearly marked with the call sign, the yacht station identity and any other codes applicable to the use of the radio installation.

14.5 Sources of energy

14.5.1 There should be available at all times, while the yacht is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source, or sources, of energy for the radio installations.

14.5.2 A reserve source of energy, independent of the propelling power of the yacht and its electrical system, should be provided for the purpose of conducting distress and safety radio communications for a minimum of one hour in the event of failure of the yacht's main and emergency sources of electrical power, (three hours minimum).
An independent reserve source of energy should be provided for the purpose of conducting distress and safety radio communications for a minimum of 1 hour in addition to that provided by the emergency source of electrical power.

14.5.3 When a reserve source of energy consists of a rechargeable accumulator battery, a means of automatically charging such batteries should be provided, which is capable of recharging them to minimum capacity requirements within 10 hours which should include a visual and audible charger failure device.

14.5.4 The siting and installation of accumulator batteries should ensure the highest degree of service and safety.

14.6 Watches

14.6.1 A yacht, while at sea, should maintain a continuous watch:
.1 Where practicable, on VHF Channel 16;
.2 Where practicable, on VHF Channel 13;
.3 On VHF Digital Selective Calling (DSC), on channel 70;
.4 If fitted with an MF/HF radiotelephone, on the distress and safety DSC frequency 2187.5kHz;
.5 for satellite shore-to-ship distress alerts, if fitted, with a radio facility for reception of maritime safety information by the INMARSAT enhanced group calling system;
.6 for broadcasts of maritime safety information on the appropriate frequency or frequencies, on which such information is broadcast for the area in which the yacht is navigating; normally using the International NAVTEX service or INMARSAT's enhanced group calling facility. (Further information may be obtained from the Admiralty List of Radio Signals volume 5.)

15 Navigation Lights, Shapes and Sound Signals

15.1

Every yacht should comply with the requirements of the International Regulations for Preventing Collisions At Sea, 1972, as amended.

15.2

All navigation lights should be provided with main and emergency power supply.

15.3

With due regard to accessibility, the requirement for duplication for navigation lights required to be shown whilst underway may be satisfied by having a spare lamp that can be easily fitted within three minutes.

15.4

For yachts where compliance is impracticable, alternatives may be considered by application to the Administration.

16 Navigational Equipment and Visibility from Wheelhouse

16.1Navigational Equipment

16.1.1 A yacht should be fitted with the following:
.1 A properly adjusted standard magnetic compass or other means, independent of any power supply, to determine the ship's heading .
. 2 In a steel yacht, it should be possible to correct the compass for co-efficients B, C and D, and heeling error.
.3 The magnetic compass or repeater should be so positioned as to be clearly readable by the helmsman at the main steering position. It should also be provided with an electric light, the electric power supply of which should be of the twin wire type.

16.1.2 A yacht should be fitted with, the following additional equipment:
.1 An echo sounder;
.2 A receiver for a global navigation satellite system or a terrestrial radio navigation system, or other means suitable for use at all times throughout the intended *voyage,* to establish and update the ship's position by automatic means;
.3 A distance measuring log;
.4 A gyro compass or spare magnetic compass bowl;
.5 A rudder angle indicator; and
.6 A 9 GHz radar.

16.1.3 For yachts of less than 300GT the equipment specified in 15.1.1 and 15.1.2 need not be of an approved type.

16.1.4 Means should be provided for taking bearings as near as practicable *over* an arc of the horizon of 360º. This requirement may be met by the fitting of a pelorus compass, or, on a yacht

other than a steel yacht, with a hand bearing compass.

16.1.5 For yachts under 300GT the requirements of 16.1.2.4 may be met by the use of a fluxgate compass, provided that a suitable back up power supply is available to power the compass in the event of failure of the main electrical supply. Where such a compass incorporates a capability to measure magnetic deviation by undertaking a calibration routine, and where the deviation figures are recorded within the device, a deviation card is not required.

16.1.6 Attention should be paid to magnetic effects on magnetic compasses, including fluxgate compasses, when operating in Polar Regions. (I.e. north of 70° N, or south of 70° S).

16.1.7 All yachts of 300GT and over shall be fitted with an approved automatic identification system (AIS) in accordance with SOLAS Chapter V. The AIS shall:
.1 Provide automatically to appropriately equipped shore stations, other ships and aircraft, information including the ships identity, type, position, course, speed, navigational status and other safety related information;
.2 Receive automatically such information from similarly fitted ships;
.3 Monitor and track ships; and
.4 Exchange data with shore- based facilities.

16.2 Bridge Visibility

16.2.1 Navigation bridge visibility should comply with SOLAS Chapter V, Regulation 22. Yachts under 45m in length should comply as far as reasonable and practicable.

16.2.2 Windows may be inclined from the vertical plane provided that, where necessary, appropriate measures are taken to avoid adverse reflections from within.

16.2.3 Windows to the navigating position should not be of either polarized or tinted glass (see 2.5.8) Portable tinted screens may be provided for selected windows.

17Miscellaneous Equipment

17.1 Nautical Publications

Every yacht should carry nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage.
An approved electronic chart display and information system (ECDIS) may be accepted as meeting these chart carriage requirements.
Back-up arrangements to meet these functional requirements should be provided where this function is partly or fully filled by electronic means. This means single ECDIS and paper charts or duplicate ECDIS.

17.2 Measuring Instruments

Every yacht should carry a barometer. Every sailing yacht should carry an anemometer and an inclinometer.

17.3 Signaling Lamp

Every yacht should carry a daylight signaling lamp, or other means to communicate by light during day and night using an energy source of electrical power not solely dependent upon the ship's power supply. The signaling lamp may be the searchlight required by 17.4.

17.4 Searchlight

Every yacht should carry an efficient fixed or portable searchlight suitable for man overboard search and rescue operations.

17.5 Yachts of less than 150 GT require a radar reflector.

17.6 Yachts of more than 300GT must be marked externally with the yacht's IMO number which may be horizontal provided that it is visible from the air. The IMO number should also marked on part of the internal structure in accordance with SOLAS.

18 Anchors and Cables

The purpose of this section is to set out the minimum standard for anchoring and mooring arrangements. It should be noted that this element is to be an integral part of the Classification process and this should be reflected in the Class Notation or equivalent.

18.1 Equipment

18.1.1 Yachts will be considered to have adequate equipment if fitted out in accordance with standards for such equipment, set by a Recognized Organization.

18.1.2 Yachts not equipped in accordance with 21.1.1 may be specially considered by the Administration, provided full information is submitted for approval.

18.1.3 All yachts are to have at least two anchors, one of which must be ready for use at all times. Any powered deployment system should be connected to an emergency power supply or be capable of being manually operated.

18.2 Sailing Yachts

18.2.1 The sizing of anchors and cables for sailing yachts should take into account the additional windage *effect* of the masts and rigging.

18.2.2 Typically, for square rigged sailing yachts, experience based guidance on approximate increase in anchor mass and cable strength required is:

- For yachts up to 50 meters in length, typically 50% above the requirements for a typical motor yacht having the same total longitudinal profile area of hull and superstructure as the square rigged sailing yacht under consideration;

and

- For yachts 100 meters in length and over, typically 30% above the requirements for a typical motor yacht having the same total longitudinal profile area of hull and superstructure as the square rigged sailing yacht under consideration. For a square rigged sailing yacht of between 50 and 100 meters in length the increase should be obtained by linear interpolation.

19Accommodation

19.1 General

19.1.1 An adequate standard of accommodation should be provided to ensure the comfort, recreation, health and safety of all persons on board.

19.1.2 Attention is drawn to the achievement of appropriate standards for means of access and escape, lighting, heating, food preparation and storage, messing, safety of movement about the yacht, ventilation and water services.

19.1.3 Generally, accommodation standards for the crew should be at applied, wherever practicable, to the standards set by the International Labor Organization (ILO) conventions for

crew accommodation in merchant ships. When it is neither reasonable nor practicable to site crew sleeping accommodation amidships or aft, and above the deepest waterline as required, measures taken to ensure an equivalent level of crew health and safety should be agreed with the Administration. Sleeping accommodation with the deckhead lining below the deepest waterline is not permitted. It is recommended that where such accommodation is sited partially below the deepest waterline it should be arranged such that in the event of damage to the watertight compartment in which the accommodation space is situated, the lining should not be immersed.

19.1.4 Crew accommodation should not be sited within hazardous spaces.
The following standards are described by general principles which need to be expanded to meet the requirements which relate to the use and areas of operation of particular yachts.

19.2 Access/Escape Arrangements

See 11.3 and 12.2.12.

19.3 Lighting

An electric lighting system should be installed which is capable of supplying adequate light to all enclosed accommodation and working spaces. The system should be designed and installed in accordance with section 5.

19.4 Heating

As considered appropriate, an adequate heating installation should be provided.

19.5 Food Preparation, Storage and Messing

The galley floor should be provided with a non-slip surface and provide a good foothold. All furniture and fittings in the galley shall be made of a material which is impervious to dirt and moisture. All metal parts of furniture and fittings shall be rust resistant.

The ventilation in the galley shall be arranged to ensure that there is an adequate supply of fresh air and for the efficient discharge of fumes into the open air (see also 19.7). When a cooking appliance is gimballed it should be protected by a crash bar or other means to prevent personal injury. Means should be provided to lock the gimballing mechanism. Means should be provided to allow the cook to be secured in position, with both hands free for working, when the yacht motions threaten safe working.

Secure and hygienic storage for food and garbage should be provided. A messing area(s) should be provided, each messing area shall be large enough to accommodate the greatest number of persons likely to use it at any one time.

19.6 Hand Holds and Grab Rails

There should be sufficient hand holds and grab rails within the accommodation to allow safe movement around the accommodation at all times. Stairways should be specially considered.

19.7 Ventilation

Effective means of ventilation should be provided to all enclosed spaces which are entered by personnel. Mechanical ventilation should be provided to all accommodation spaces on yachts which are intended to make long international voyages or operate in tropical waters. As a

minimum, mechanical ventilation should be capable of providing six changes of air per hour, when all access and other openings (other than ventilation intakes) to the spaces are closed. Air conditioning systems are to provide a minimum of 25m3 of air per hour, per person accommodated in the ventilated space during normal operating conditions. Enclosed galleys are to be specially considered, and where air conditioning is not fitted should have, as a minimum, a mechanical supply of 20 fresh air changes per hour and a mechanical exhaust of 30 changes.

19.8 Water Services

An adequate supply of fresh drinking water should be provided and piped to convenient positions throughout the accommodation spaces.
In addition, an emergency reserve supply of drinking water should be carried, sufficient to provide at least two liters per person. The installation of fresh water making machines and disinfection arrangements are to be to the acceptance of the Administration. (For this purpose silver ionization or chlorination would be considered acceptable.)

19.9 Sleeping Accommodation

An appropriately sized bed (bunk or cot) should be provided for every person on board, with due regard for the guidance produced by the ILO. Where considered appropriate, means for preventing the occupants from falling out, should be provided.
There shall be no direct access into sleeping rooms from spaces for machinery, galleys, paint rooms or from engine, deck, and other bulk storerooms, drying rooms, communal wash places or water closets.
In crew accommodation, wherever possible, the maximum number of persons per sleeping room is to be two and there should be unobstructed access to at least one side of each bed. Any increase in the maximum number of persons per sleeping room should be agreed with the Administration.

19.10 Toilet Facilities

Adequate sanitary toilet facilities should be provided on board. The facilities should be at least one water closet, one shower for every eight persons or part thereof,
and one washbasin for every six persons or part thereof.

In yachts where a sanitary system, including a holding tank, is provided, care should be taken to ensure that there is no possibility of fumes from the tank finding their way back to a toilet, should the water seal at the toilet be broken.

19.11 Stowage Facilities for Personal Effects

Adequate stowage facilities for clothing and personal effects should be provided for every person on board.

19.12 Securing of Heavy Equipment

All heavy items of equipment such as ballast, batteries, cooking stove, etc., should be securely fastened in place. All stowage lockers containing heavy items should have lids or doors which are capable of being securely fastened.

19.13 Garbage Arrangements

There should be suitable arrangements for the storage, segregation and disposal of garbage in accordance with the requirements of MARPOL Annex V.

20Protection of Personnel

20.1 Deckhouses and Superstructures

The structural strength of any deckhouse or superstructure should comply with the requirements of one of the Recognized Organizations, as appropriate to the yacht and its areas of operation.

20.2 Bulwarks and Guardrails

20.2.1 Bulwarks and/or guardrails on all accessible decks should be 1000mm high except that on yachts built to 1959 Load Line Rules these may be 915mm high. Any opening should not exceed 380mm. Where no bulwarks are fitted, or bulwark height is less than 230mm, the lowest opening should not exceed 230mm. They should be supported at intervals not exceeding 2.2 meters. Intermediate courses of rails or wires should be evenly spaced.

20.2.2 Satisfactory means (in the form of guard rails, life lines, gangways or underdeck passages, etc.) shall be provided for the protection of the crew in getting to and from their quarters, the machinery space and all other areas used in the necessary work of the craft.

20.2.3 Where the function of the yacht would be impeded by the provision of bulwarks and/or guard rails complying with 23.2.1, alternative proposals detailed to provide equivalent safety for persons on deck should be submitted to the Administration for approval.

20.3 Safe Work Aloft, Overside, and on the Bowsprit of Sailing Yachts

20.3.1 When access to the rig, bowsprit, or overside working is required, provision should be made to enable people to work safely, in accordance with the UK's Code of Safe Working Practices for Merchant Seamen, or a suitable equivalent.

20.3.2 The arrangements provided should be based on established safe working practices for the type of yacht. The arrangements may include but not be limited to:

- Safety nets below the bowsprit;
- Safety grab rails or jackstays (metal or wire) fixed along the bowsprit to act as handholds and strong points for safety harnesses;
- Mandatory use of safety harnesses aloft, overside, and for work on the bowsprit;
- Sufficient footropes and horses in wire (or rope) permanently rigged to enable seamen to stand on them whilst working out on the yards or on the bowsprit;
- Safety jackstays (metal or wire) fixed along the top of the yards, to provide handholds and act as strong points for safety harnesses;

- Means of safely climbing aloft, such as;
  - Fixed metal steps or ladders attached to the mast; or
  - Traditional ratlines (rope) or, rattling bars (wood/steel), fixed across the shrouds to form a permanent ladder.

20.4 Personal Clothing

It should be the responsibility of an owner/managing agent/master to advise that the following requirements for items of personal clothing should be met:

.1 Each person on board a yacht should have protective clothing appropriate to the prevailing air and sea temperatures.

.2 Each person on board a yacht should have footwear having non-slip soles, to be worn on board.

20.5 Noise

Attention is drawn to the IMO Code on Noise Levels on Board Ships.

20.5.1 Yachts covered by this Code should meet the recommendations so far as is reasonable and practicable.

20.5.2 The IMO Code on Noise Levels on Board Ships promotes the control of noise within the framework of internationally agreed guidelines, whilst recommending methods of measuring noise at listening posts.

20.5.3 For safe navigation, it is important that sound signals and VHF communications can be heard, at the navigating position in normal operating conditions.

20.5.4

For machinery spaces, workshops and stores which are manned either continuously or for lengthy periods, the recommended limits are 90 dB(A) for machinery spaces and 85dB(A) for workshops and stores.

For machinery spaces which are not intended to be continuously manned or are attended for short periods only, the recommended limits are 110 dB(A).

The limits have been set from hearing damage risk considerations and the use of suitable ear protectors.

20.5.5 To indicate the need to wear ear protectors, safety signs, signs with symbols and supplementary warning notices should be displayed at all entrances to spaces in which the noise level exceeds 85 dB(A).

21 Medical Stores

A yacht to which this Code applies should carry medical stores at least as one of the tables below or to an equivalent standard.

Table 1 – unlimited operation

Medicines

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
1. Cardio Vascular			
(a)	Cardio vascular analeptics Sympathomimetics	Adrenaline / Epinephrine injection BP 0.5ml adrenaline acid tartrate injection 1.0mg in 1ml (1 in 1000) and / or Epipen (Adrenaline 0.3mg)	10* 5
(b)	Anti-angina preparations	Glyceryl Trinitrate Spray 400 micrograms / metered 200 dose aerosol and Transdermal patches 5mg	1 unit 2
(c)	Diuretics	Frusemide / Furosemide i) 40 mg tablets ii) 10 mg in 1 ml inj. (2 ml ampule)	 28* 2
(d)	Anti-haemorrhagics if there are women with potential for child bearing working on board (including utertonics).	i) Phytomenadione (Vitamin K1) paediatric injection (0.2ml ampoule) ii) Ergometrine 500mcg , Oxytocin 5 units (1ml ampoule) (Syntometrine)	1* 2*
(e)	Anti hypertensive	Atenolol 50 mg tablets	28
2. Gastro Intestinal System			
(a)	Medicines for gastric and duodenal disorders • Histamine H2 receptor anti-ulcer antagonists • Antacid mucous mixture	 Cimetidine 400mg tablets Proprietary Antacid of choice	 60 As required
(b)	Anti-emetics	i) Prochlorperazine maleate 3mg buccal tablets ii) Promethazine hydrochloride 25mg per ml (1ml ampoules) Hyoscine hydrobromide 0.3 mg tablets or Cinnarizine 15 mg	50* 10* 60 60
(c)	Lubricant laxatives	Glycerol suppository mould 4 mg	12
(d)	Anti-diarrhoeals	Loperamide 2 mg capsules	30
(e)	Intestinal antiseptics	i) Trimethoprim 200mg tablets ii) Ciprofloxacin 500mg tablets iii) Metronidazole 400mg tablets	Use 7(b) Use 7(a)ii Use 7(e)
(f)	Haemorrhoide preparation	Proprietary preparation of choice	As required

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
3. Analgesics Anti-Spasmodics			
(a)	Analgesics, anti-pyretics and anti-inflammatory agents	i) Paracetamol 500 mg tablets and ii) Ibuprofen 400 mg tablets iii) Diclofenac socium 50 mg suppository	100 100 10
(b)	Powerful analgesics	i) Codeine Phosphate 30mg tablets ii) Morphine Sulphate 10mg in 1ml injection (1ml ampoule) or Nalbuphine 10mg in 1ml injection	28 10 10
(c)	Spasmolytics	Hyoscine butylbromide 10mg tablets	56
4. Nervous System			
(a)	Anxiolitics	i) Diazemuls injection 5mg per ml, (2ml ampoules) ii) Diazepam 5mg tablets	5* 28*
(b)	Neuroleptics	i) Chlorpromazine hydrochloride 25mg injection ii) Chlorpromazine hydrochloride 25mg tablets	5* 28*
(c)	Seasickness remedies	Hyoscine Hydrobromide 0.3 mg tablets Or Cinnarizine 15 mg	Use 2(b)iii)
(d)	Anti-epileptics	Diazepam rectal dispenser 10mg in 2.5ml	5
5. Anti-allergics and Anti-anaphylatics			
(a)	H_1 Anti-histamines	Cetrirzine 10mg tablets	30*
(b)	Injectable / oral glucocorticoids	i) Hydrocortisone injection powder for reconstitution 100mg vial with 2ml water for injection / ready diluted 100mg in 1ml injection ii) Prednisolone 5mg tablets	3 28
6. Respiratory System			
(a)	Bronchospasm preparations	i) Salbutamol aerosol inhaler unit, giving 100 micrograms per metered inhalation + SPACER ii) Beclomethasone 100 micrograms per metered dose inhaler	200 inhalations 1
(b)	Anti-tussives	Proprietary cough mixture	As required
(c)	Medicines used for colds and sinusitis	Paracetamol 500mg tablets or Proprietary cold remedy	Use 3(a)i) As required
7. Anti-infection			
(a)	Antibiotics	i) Benzylpenicillin – benzylpenicillin sodium 600mg injection (powder for reconstitution in a rubber capped and metal topped vial) and water for injection 2ml ii) Ciprofloxacin (as hydrochloride) 500mg tablets iii) Cefuroxime injection 750mg vial and water for injection iv) Erythromycin 250mg tablets v) Doxycycline 100mg capsules	10 20 20 28 8
(b) (c)	Anti-bacterial / Urinary antiseptics	Trimethoprim 200mg tablets	14
(d)	Anti-parasitics	Mebendazole 100mg tablets	6*

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
(e)	Intestinal anti-infectives	Metronidazole suppositories 1g Metronidazole 500mg or 400mg tablets	10 21
(f)	Anti-tetanus vaccines and immunoglobuiln	i) Tetanus Vaccine (0.5ml ampoule) or Tetanus & Diphtheria Vaccine ii) Tetanus Immunoglobulin ampoule for injection	5* 1*
8. Compounds promoting rehydration, caloric intake and plasma expansion			
(a)	WHO Generic Formula	Sodium chloride & dextrose rehydration salts sachets of Oral Rehydration Salts, Formula A: BP Oral powder in sachet to provide Na=35mmol, K=20mmol, Cl-37mmol, CO3= 18mmol and glucose 200mmol when reconstituted in a litre of water or Proprietary equivalent e.g. Dioralyte	1 box (16 – 20)
9. Medicines for external use			
(a)	Skin medicines		
	Antiseptic solutions	100 ml solution or pre-impregnated wipe containing 0.015% w/v chlorhexidine and 0.15% w/v cetrimide	1* bottle or 1 pack wipes
	Antibiotic ointments	Neomycin / Bacitracin cream 15g tube	1
	Anti-inflammatory and analgesic ointments	i) Hydrocortisone 1% cream 15g tube ii) Proprietary NSAID gel /ointment	2 As Required
	Anti-mycotic skin creams	i) Benzoic ointment BP 50mg(benzoic acid 6%; salicylic acid 3%, in emulsifying ointment 15g ii) Miconazole nitrate 2% topical cream 30g iii) Clotrimazole 500mg pessary (if women onboard)	3 2 2
	Burn preparations	Silver Sulphadiazine 1% cream 50g tube	2
		Miscellaneous skin preparations i) Permethrin 1% in a base containing isopropylalcohol 20% Cream Rinse ii) Zinc ointment, BP (containing zinc oxide 15%) 25g iii) Potassium permanganate crystals 10g container / Permitabs pack	 2* 1* 1*
(b)	Eye medicines		
	- Antibiotic ointment	Chloramphenicol 1% 4g tube	4
		All eye drops are recommended in minimum (single dose) form:	
	- Antibiotic drops	Neomycin sulphate 0.5% 0.5ml	20
	- Anti-inflammatory drops	Dexamethasone sodium phosphate 0.1% 0.5ml	20
	- Anaesthetic drops	Amethocaine hydrochloride 0.5% 0.5ml	20
	- Hypotonic drops	Pilocarpine nitrate 2% 0.5ml	20
	- Diagnostic drops	Fluorescein sodium 1% 0.5ml	20
(c)	Ear / Nasal medicines		

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
	Antibiotic / anti-inflammatory solution	Antibiotic eardrops containing in each ml; neomycin 3,400 units, polymixin B sulphate 10,000 units, hydrocortisone 50mg (5ml dropper bottle)	1*
		Decongestant solution : Ephedrine nasal drops BP 0.5% ephedrine hydrochloride (10ml bottle)	1*
(d)	Medicines for oral and throat infections		
	Antibiotic or antiseptic mouthwashes	Chlorhexidine gluconate 0.2% mouthwash 300 ml	1
(e)	Local anaesthetics		
	Local anaesthetics given by subcutaneous injection hydrochloride 1% 50 mg for injection	Lignocaine / Lidocaine	5
	Local anaesthetic gel	Lignocaine / Lidscaine gel 2%, chlorlexidine 0.25% in lubricant (syringe)	1
	Dental anaesthetics and antiseptic mixtures	i) Proprietary gel e.g. Bonjela	1
		ii) Oil of Cloves 10ml	1*

Note: Items marked with a *, the specified quantity is regarded as sufficient regardless of crew size.

Medical Equipment

Statutory Requirements	Recommended Specification	Quantity
1. Resuscitation equipment		
Appliance for the administration of oxygen	Oxygen giving set comprising of the following:- 1) Oxygen reservoir (e.g. D Size 300ltr cylinder) 2) 1 flow meter unit giving a minimum setting of not less than 4ltrs per minute 3) 1 pressure regulating unit 4) 1 set of tubing 5) 5 x 24% oxygen disposable face masks 6) 5 x high concentration oxygen disposable face masks with a reservoir. Each part constructed so that it can only be assembled in the correct manner	1
Mechanical aspirator to clear upper respiratory passages	Aspirator to clear airways (manual, hand operated) + 2 catheters	1
Equipment for mouth to mouth resuscitation	Pocket face mask with valve and O2 inlet Guedal Airway Sizes 3 & 4	1
2. Dressing and suturing equipment		

Statutory Requirements	Recommended Specification	Quantity
Disposable skin stapler /or suture kit	1) Sterile non-absorbable sutures swaged to a 6 (including staple remover) half circle needle with a cutting edge 2 sizes e.g. 16mm & 26mm 2) Sterile absorbable sutures swaged to a 3 half circle needle 1 size e.g. 26mm	6 3
Adhesive elastic bandage	Adhesive elastic bandage 7.5cm x 4m	4
	Crepe bandage 7.5cm x 4m	4
Tubular gauze bandage, for finger dressings	20m length with applicator	1
Disposable gloves	Latex free, vinyl	25 pairs
Adhesive dressings	Assorted sterile	40
Sterile bandages with unmedicated dressings (Ambulance dressings)	(1) medium, No.1 (12x10) cm (2) large, No.2 (20x15) cm (3) extra large, No.3 (28x20) cm	5 5 4
Adhesive sutures	75mm adhesive suture strips	6
Sterile gauze swabs	Packet containing 5 sterile gauze pads size 7.5cm x 7.5cm	10
Sterile sheet for burns victims		1
Triangular sling / bandage		4
Paraffin gauze dressings, size 10cm x 10cm		40
3. Instruments		
Disposable scalpels	e.g. 10 blades	2
Stainless steel instrument box		1
Scissors	Stainless steel dressing scissors Sharp pointed scissors	1
Dissecting forceps	Toothed	1
Haemostatic clamps		1
Needle forceps		1
Disposable razors		5
4. Examining and monitoring equipment		
Disposable tongue depressors		10
Reactive strips for urine analysis	e.g. Mulistix	1 pack
Temperature charts		1 pad
Medical evaluation reports		1 pad
Pregnancy test kit	When women on board	1
Stethoscope		1
Aneroid sphygmomanometer		1
Standard clinical thermometer		3
Hypothermic thermometer low reading rectal thermometer		1
Sputum cup with cover	Disposable	2
Specimen jars	Strong glass or plastic with airtight lid 50 ml with blank labels	2
5. Equipment for injection, perfusion, puncture and catheterization		
Bladder drainage	Bladder drainage set (including bag, spigots and tube)	1
Rectal drip set		1
Urine drainage bag		Use bladder drainage set
Disposable syringes	2ml, 5ml, 10ml	10
Disposable hypodermic needles	(21G) 0.8mm and (25G) 0.5mm	30
"Sharps" disposal box	1 litre size	1

Statutory Requirements	Recommended Specification	Quantity
Catheter	1) Foley type 16 Charriere guage, 5 ml balloon (short / medium term use in adults) 2) Nelaton size 16 Charriere guage (with no balloon) 3) Penile sheath set	1 1 1
6. General Medical Equipment		
Bedpan	(stainless steel or sterilisable plastic)	1
Hot water bottle	With fabric cover	1
Urine bottle (urinal)		1
Icebag		1
7. Immobilisation and setting equipment		
Malleable finger splint		1
Malleable forearm and hand splint		1
Splints – simple, vacuum (inflatable only if others unavailable)	Set of four (half leg, full leg, half arm and full arm)	1
Thigh splint - (Traction)	e.g. Thomas splint, Donway etc	1
Collar for neck immobilisation – (semi-rigid)	Adult size pack of 3, small, medium and large or adjustable collar	1
8. Disinfection, Disinsectization and Prophylaxis		
Water – disinfection compound -	In liquid form	5
Liquid insecticide Powder insecticide	In liquid form	5

Recommended Additional Medical Equipment

Recommended Additional Equipment	Quantity
Face masks disposable	5
Plastic measuring jug 1/2 litre size	1
Disposable paper towels	100
Latex free sterile surgical disposable gloves (large)	5 pairs
Waterproof plastic sheeting, size 1m x 2m	2
Lotion bowl (size at least 200mm x 90mm, stainless steel or sterilisable plastic, to be marked "medical")	1
Kidney dish (size 250mm stainless steel or sterilisable plastic)	1
Safety pins, rustless medium	6
Magnifying glass 7.5cm diameter with handle	1
Nail brush	1
Body bag – large size	1
Vessels in malarial areas only – microscope slides in individual transit containers	5
1) Excavator double ended Guys' pattern G2 2) Filling paste inserter (for inserting filling paste into the tooth) 3) Dental mirror size 4 on handle 4) Cavit (temporary dental filling) tube	1 set of all items
Kit for protection against blood transmitted diseases (to be carried in all vessels trading in malarial areas where medical facilities are limited and emergency shore based treatment is necessary) (To be kept in heavy gauge polythene bag, and labelled "to be used only for the treatment of...." Insert the name of the seafarer going ashore for emergency treatment). Each kit to contain the following : (1) 10 x 2 ml syringes (2) 10 x 10 ml syringes (3) 20 x 21G 0.8mm needles (4) 1 blood giving set (5) 1 blood taking set (6) pack of pre injection site swabs (7) Disposable latex free gloves 2 pairs (large size)	1 kit

Table 2 – up to 150 miles from a safe haven

Medicines

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
1. Cardio Vascular			
(a)	Cardio vascular analeptics Sympathomimetics	Adrenaline / Epinephrine injection BP 0.5ml adrenaline acid tartrate injection 1.0mg in 1ml (1 in 1000) and / or Epipen (Adrenaline 0.3mg)	10 5
(b)	Anti-angina preparations	Glyceryl Trinitrate Spray 400 micrograms / metered 200 dose aerosol and transdermal patches 5mg	1 unit 2
(c)	Diuretics	Frusemide / Furosemide 40 mg tablets	 28
(d)	Anti-haemorrhagics if there are women with potential for child bearing working on board (including utertonics)	i) Phytomenadione (Vitamin K1) paediatric injection (0.2ml ampoule) ii) Ergometrine 500mcg , Oxytocin 5 units (1ml ampoule) (Syntometrine)	1* 1*
2. Gastro Intestinal System			
(a)	Medicines for gastric and duodenal disorders • Antacid mucous mixture	 Proprietary Antacid of choice	 As required
(b)	Anti-emetics	i) Prochlorperazine maleate 3mg buccal tablets Hyoscine hydrobromide 0.3 mg tablets or Cinnarizine 15 mg	50* 60 60
(d)	Anti-diarrhoeals	Loperamide 2 mg capsules	30
(e)	Intestinal antiseptics	i) Trimethoprim 200mg tablets ii) Ciprofloxacin 500mg tablets iii) Metronidazole 400mg tablets	Use 7(b) Use 7(a)ii Use 7(e)
(f)	Haemorrhoide preparation	Proprietary preparation of choice	As required
3. Analgesics Anti-Spasmodics			
(a)	Analgesics, anti-pyretics and anti-inflammatory agents	i) Paracetamol 500 mg tablets and ii) Ibuprofen 400 mg tablets	50 50
(b)	Powerful analgesics	i) Codeine Phosphate 30mg tablets ii) Morphine Sulphate 10mg in 1ml injection (1ml ampoule) or Nalbuphine 10mg in 1ml injection	28 10 10
(c)	Spasmolytics	Hyoscine butylbromide 10mg tablets	56
4. Nervous System			
(b)	Neuroleptics	Chlorpromazine hydrochloride 25mg tablets	28*
(c)	Seasickness remedies	Hyoscine Hydrobromide 0.3 mg tablets Or Cinnarizine 15 mg	Use 2(b)iii)
(d)	Anti-epileptics	Diazepam rectal dispenser 10mg in 2.5ml	5

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
5. Anti-allergics and Anti-anaphylatics			
(a)	H_1 Anti-histamines	Cetrirzine 10mg tablets	30*
(b)	Injectable / oral glucocorticoids	i) Hydrocortisone injection powder for reconstitution 100mg vial with 2ml water for injection / ready diluted 100mg in 1ml injection	1
		ii) Prednisolone 5mg tablets	28
6. Respiratory System			
(a)	Bronchospasm preparations	i) Salbutamol inhaler 100 micrograms per metered dose. 200 dose inhaler with volumatic	1
		ii) Beclomethasone 100 micrograms per metered dose inhaler	1
(b)	Anti-tussives	Proprietary cough mixture	As required
(c)	Medicines used for colds and sinusitis	Paracetamol 500mg tablets or Proprietary cold remedy	Use 3(a)i) As required
7. Anti-infection			
(a)	Antibiotics	i) Benzylpenicillin – benzylpenicillin sodium 600mg injection (powder for reconstitution in a rubber capped and metal topped vial) and water for injection 2ml	2
		ii) Ciprofloxacin (as hydrochloride) 500mg tablets	10
		iii) Erythromycin 250mg tablets	28
(b) (c)	Anti-bacterial / Urinary antiseptics	Trimethoprim 200mg tablets	14
(d)	Anti-parasitics	Mebendazole 100mg tablets	6*
(e)	Intestinal anti-infectives	Metronidazole 500mg or 400mg tablets	21
(f)	Anti-tetanus vaccines and immunoglobuiln	i) Tetanus Vaccine (0.5ml ampoule) or Tetanus & Diphtheria Vaccine	1*
8. Compounds promoting rehydration, caloric intake and plasma expansion			
(a)	WHO Generic Formula	Sodium chloride & dextrose rehydration salts sachets of Oral Rehydration Salts, Formula A: BP Oral powder in sachet to provide Na=35mmol, K=20mmol, Cl-37mmol, CO3= 18mmol and glucose 200mmol when reconstituted in a litre of water or Proprietary equivalent e.g. Dioralyte	1 box (16 – 20)
9. Medicines for external use			
(a)	Skin medicines		
	Antiseptic solutions	100 ml solution or pre-impregnated wipe containing 0.015% w/v chlorhexidine and 0.15% w/v cetrimide	1 bottle or 1 pack wipes
	Antibiotic ointments	Neomycin / Bacitracin cream 15g tube	1
	Anti-inflammatory and analgesic ointments	Proprietary NSAID gel /ointment	As Required

Reference number	Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
	Anti-mycotic skin creams	i) Benzoic ointment BP 50mg(benzoic acid 6%; salicylic acid 3%, in emulsifying ointment 15g	1
		ii) Miconazole nitrate 2% topical cream 30g	1
		iii) Clotrimazole 500mg pessary (if women onboard).	1
	Burn preparations	Silver Sulphadiazine 1% cream 50g tube	1
(b)	Eye medicines		
	- Antibiotic ointment	Chloramphenicol 1% 4g tube	1
		All eye drops are recommended in minimum (single dose) form:	
	- Antibiotic drops	Neomycin sulphate 0.5% 0.5ml	20
	- Anti-inflammatory drops	Dexamethasone sodium phosphate 0.1% 0.5ml	20
	- Anaesthetic drops	Amethocaine hydrochloride 0.5% 0.5ml	20
	- Hypotonic drops	Pilocarpine nitrate 2% 0.5ml	20
	- Diagnostic drops	Fluorescein sodium 1% 0.5ml	20
(c)	Ear / Nasal medicines		
	Antibiotic / anti-inflammatory solution	Antibiotic eardrops containing in each ml; neomycin 3,400 units, polymixin B sulphate 10,000 units, hydrocortisone 50mg (5ml dropper bottle)	1*
		Decongestant solution : Ephedrine nasal drops BP 0.5% ephedrine hydrochloride (10ml bottle)	1*
(d)	Medicines for oral and throat infections		
	Antibiotic or antiseptic mouthwashes	Chlorhexidine gluconate 0.2% mouthwash 300 ml	1
(e)	Local anaesthetics		
	Local anaesthetics given by subcutaneous injection hydrochloride 1% 50 mg for injection	Lignocaine / Lidocaine	5
	Dental anaesthetics and antiseptic mixtures	i) Proprietary gel e.g. Bonjela	1
		ii) Oil of Cloves 10ml	1*

Note: Items marked with a * the specified quantity is regarded as sufficient regardless of crew size.

Medical Equipment

Statutory Requirements	Recommended Specification	Quantity
1. Resuscitation equipment		
Appliance for the administration of oxygen	Oxygen giving set comprising the following:- 1) Oxygen reservoir (e.g. D Size 300ltr cylinder) 2) 1 flow meter unit giving a minimum setting of not less than 4ltrs per minute 3) 1 pressure regulating unit 4) 1 set of tubing 5) 5 x 24% oxygen disposable face masks 6) 5 x high concentration oxygen disposable face masks with a reservoir. Each part constructed so that it can only be assembled in the correct manner	1
Mechanical aspirator to clear upper respiratory passages	Aspirator to clear airways (manual, hand operated) + 2 catheters	1 1
Equipment for mouth to mouth resuscitation	Pocket face mask with valve and O2 inlet Guedal Airway Sizes 3 & 4	
2. Dressing and suturing equipment		
Adhesive elastic bandage	Adhesive elastic bandage 7.5cm x 4m	1
	Crepe bandage 7.5cm x 4m	4
Tubular gauze bandage, for finger dressings	20m length with applicator	1
Disposable gloves	Latex free, vinyl	25 pairs
Adhesive dressings	Assorted sterile	40
Sterile bandages with unmedicated dressings (Ambulance dressings)	(1) medium, No.1 (12x10) cm (2) large, No.2 (20x15) cm (3) extra large, No.3 (28x20) cm	3 3 2
Adhesive sutures	75mm adhesive suture strips	6
Sterile gauze swabs	Packet containing 5 sterile gauze pads size 7.5cm x 7.5cm	5
Sterile sheet for burns victims		1
Triangular sling / bandage		4
Paraffin gauze dressings, size 10cm x 10cm		10
3. Instruments		
Stainless steel instrument box		1
Scissors	Stainless steel dressing scissors Sharp pointed scissors	1 1
Dissecting forceps	Toothed	1
Haemostatic clamps		1
4. Examining and monitoring equipment		
Disposable tongue depressors		10
Temperature charts		1 pad
Stethoscope		1
Aneroid sphygmomanometer		1
Standard clinical thermometer		1
Hypothermic thermometer low reading rectal thermometer		1
5. Equipment for injection, perfusion, puncture and catheterization		
Disposable syringes	2ml, 5ml, 10ml	5 of each
Disposable hypodermic needles	(21G) 0.8mm and (25G) 0.5mm	15
"Sharps" disposal box	1 litre size	1

Statutory Requirements	Recommended Specification	Quantity
6. Immobilisation and setting equipment		
Malleable finger splint		1
Malleable forearm and hand splint		1
Splints – simple, vacuum (inflatable only if others unavailable)	Set of four (half leg, full leg, half arm and full arm)	1
Thigh splint - (Traction)	e.g. Thomas splint, Donway etc	1
Collar for neck immobilisation – (semi-rigid)	Adult size pack of 3, small, medium and large or adjustable collar	1

Recommended Additional Medical Equipment

Recommended Additional Equipment	Quantity
Face masks disposable	6
Plastic measuring jug 1/2 litre size	1
Disposable paper towels	100
Latex free sterile surgical disposable gloves (large)	5 pairs
Waterproof plastic sheeting, size 1m x 2m	1
Safety pins, rustless medium	6
Magnifying glass 7.5cm diameter with handle	1
Nail brush	1
Stretcher equipment (A system for trauma management, i.e. immobilisation and stretcher equipment most suited for treatment on the vessel concerned)	1
Body bag – large size	1
Vessels in malarial areas only – microscope slides in individual transit containers	5

Table 3 – up to 60 miles from a safe haven

Medicines

Statutory Treatment Requirements	Recommended Medicine and Dosage Strength Representing best practice.	Recommended Quantity for 10 persons
Cardio Vascular		
Anti-angina preparations	Glyceryl Trinitrate Spray 400 micrograms / metered 200 dose aerosol	1 unit
Gastro intestinal system		
Anti-emetics	Hyoscine hydrobromide 0.3 mg tablets or Cinnarizine 15 mg	60 60
Anti-diarrhoeals	Loperamide 2 mg tablets	30
Analgesics and Anti-spasmodics		
Analgesics, anti-pyretics and anti-inflammatory agents	i) Paracetamol 500 mg tablets and ii) Ibuprofen 400 mg tablets	50 50
Nervous system		
Seasickness remedies	Hyoscine Hydrobromide or Cinnarizine	Use medicines intended for gastro intesintal system
Medicines for external use		
Skin Medicines		
Antiseptic solutions	100 ml solution or pre-impregnated wipe containing 0.015% w/v chlorhexidine and 0.15% w/v cetrimide	1 bottle or 1 pack wipes
Burn preparations	Proprietary antiseptic cream	1

Medical Equipment

Statutory Requirements	Recommended Specification	Quantity
Resusitation Equipment		
Mask for mouth to mouth resuscitation	Pocket face mask	1
Dressing and suturing equipment		
Adhesive elastic bandage	Adhesive elastic bandage 7.5 cm x 4 m	1
Disposable polyethylene gloves	Latex free, vinyl	5 prs
Adhesive dressings	Assorted, sterile	20
Sterile bandages with unmedicated dressings (Ambulance dressings)	(1) medium, No.1 (12 x 10) cm (2) large, No.2 (20 x 15) cm (3) extra large No.3 (28 x 20) cm	6 2 2
Sterile gauze swabs	Packet containing 5 sterile gauze pads size 7.5 cms x 7.5 cms	1
Recommended Additional Items		
	Scissors stainless steel / or sterile disposible	1 pr
	Triangular bandages about 90 cm x 127 cm	4
	Medium safety pins, rustless	6
	Sterile paraffin gauze dressings	10
	Plastic burns bags	1

First Aid Instructions or a First Aid Manual (e.g. St John's, Red Cross, Red Crescent, St Andrew's) should also be included with the Medical Stores.

Medical training requirements for members of the complement of the yacht are given in Part D Section 2 on Manning and Personnel Certification.

21 Shore-ship Transfer of Personnel

22.1 Tenders (Dinghies)

22.1.1 When a yacht carries a rigid or inflatable tender, it should be fit for its intended use, regularly inspected by the owner/managing agent, and maintained in a safe condition.

22.1.2 Safety equipment should be provided in the tender as appropriate to its intended range and area of operation.

22.1.3 Each tender should be clearly marked with the number of persons (mass 75 kg) that it can safely carry, and the name of the parent yacht.

22.1.4 In the case of petrol-engine tenders, see section 14 for the safety requirements for the carriage of petrol.

22.2 Helicopters

See Part F Section 1 to this Code for the safe operation of helicopters including the construction of landing areas.

22.3 Pilot for Yacht

Boarding arrangements provided for pilots should have due regard for SOLAS Chapter V, Regulation 23, the applicable IMO Resolution, International Maritime Pilots' Association (IMPA) recommendations, or any documents replacing them.

22.4 Gangways, Passarelles and Accommodation Ladders

22.4.1 A safe means of access is to be provided at all times when in port, either deployed or available for deployment. If the safe means of access is not deployed, there shall be a means provided for communication between those on the quay and those on board.

22.4.2 When provided, gangways, passerelles, and accommodation ladders should be manufactured to a recognized national or international standard, and be clearly marked with the manufacturer's name, the model number, the maximum design angle of use and the maximum safe loading (by number of persons and by total weight). Side screens or handrail(s) should be provided on both sides, suitable to prevent individuals falling from the gangway, passerrelle or accommodation ladder.

22.4.3 Where gangways, passerelles or ladders do not comply with national or international standards, a manufacturer's test load certificate should be provided. Alternatively practical tests may be carried out to the satisfaction of the Administration. In all cases the maximum design angle, maximum number of persons, and the maximum total weight should be clearly marked, and are to be used in accordance with the manufacturer's instructions.

22.4.4 Accommodation ladders should be provided on a yacht of 120 meters in length and over.

22.4.5 Access equipment and immediate approaches to it should be adequately illuminated.

22.4.6 Reference should be made to appropriate national and international standards such as:
ISO 7061:1993 - Shipbuilding - Aluminum shore gangways for seagoing yachts
ISO 5488:1979 - Shipbuilding - Accommodation ladders
BSMA 78: 1978 - Gangways (excluding the maximum overall widths specified in table 2)
BSMA 89:1980 - Accommodation Ladders.

23 Clean Seas

23.1

Yachts should comply with all the requirements of MARPOL, as prescribed by the regulations of the Administration. For yachts under 400GT it is the owner's responsibility to comply with local administration/port state requirements and for dealing with oily bilge water retention etc.

23.2

Every yacht of 400GT and above and every yacht certified to carry 15 persons or more should carry a garbage management plan which should include the written procedures agreed for collection, storage, processing and disposal of garbage; and a garbage record book recording disposal and incineration, as outlined in Regulation 9 of Annex V of MARPOL.

23.3

Special local requirements may exist in national sea areas, ports, harbors and marinas. The attention of owners/operators is drawn to the need to comply with all applicable local requirements.

24 Supplementary Requirements for Commercial Yachts

24.1 Classification

24.1.1 Yachts of 500 GT and over shall be classed by an RO and shall maintain class throughout the validity of the Commercial Yacht Certificate.

24.1.2 Yachts of less than 500 GT shall be built to, or entered into, the class of an RO. A yacht no longer in class may be accepted where documentary evidence of construction to, or entry into, class is provided to the satisfaction of the Administration. Where no valid class certificate is held, hull and machinery shall be surveyed at each renewal to the extent of a classification renewal survey.

24.1.3 Every yacht, irrespective of size and area of operation, that has a battery installation as the sole source of propulsive power or as part of a hybrid system, shall be classed and shall maintain class covering hull and machinery.

24.2 Rigging on Sailing Yachts

24.2.1 Masts, spars, standing and running rigging shall be designed and maintained to the rules of an RO or a recognized international standard.

24.2.2 A rigging survey shall be carried out by a professional rigger, jointly with the attending surveyor, at the initial survey, at each renewal survey and at the second or third annual survey. The rigger's reports and the rigging material and equipment certificates shall be kept on board. After each rigging survey the RO or Authorized Surveyor shall issue a statement confirming the rigging complies with the RO's rules or a recognized standard.

24.3 Emergency Lighting and Emergency Power

24.3.1 An emergency source of lighting, independent of the general lighting system, shall illuminate for at least 3 hours the escape routes, muster and embarkation stations, survival craft launching areas, machinery spaces and the steering position.

24.3.2 On yachts of less than 500 GT, an emergency source of electrical power complying with RO rules shall supply, automatically and simultaneously, for at least 3 hours: emergency lighting; navigation aids (including GNSS, echo sounder and AIS); the radio installation required by Section 17; the fire detection and alarm system; and any other services required by RO rules. Yachts of 500 GT and over shall comply with SOLAS Chapter II-1 Part D.

24.4 Lithium-Ion Batteries Used for Propulsion or Main Power

24.4.1 Where lithium-ion batteries are used for main or hybrid propulsion, or for main electrical supply, the installation shall meet RO rules (and SOLAS Chapter II-1 Part D for yachts of 500 GT and over), and the yacht shall hold a valid class certificate covering hull and machinery.

24.4.2 Battery compartments shall:
.1 be located and designed to keep batteries within their thermal operating limits in the most onerous conditions, with redundant temperature control and early alarms on the bridge on failure of temperature control or excessive temperature rise;
.2 have a gas, smoke and heat detection system effective for the battery type, and an effective manual or automatic fixed fire-extinguishing system;
.3 have ventilation that can be shut down from outside the compartment, inlets and exhausts with permanently attached closing flaps that can be closed remotely, and the capacity to expel toxic or flammable gases to a safe location outside the yacht;
.4 allow liquid residues to drain away from the batteries, and allow fire-fighting media to spread through the compartment;
.5 secure batteries against the maximum predicted vessel motions, with no unsecured heavy items, no dangerous or flammable goods stored in the compartment, and attention to nearby heat sources; and
.6 meet the structural fire protection requirements for a machinery space of Category A.

24.4.3 A risk assessment or hazard identification (HAZID, FMEA) shall be carried out for every battery installation. Changes to operational procedures are not accepted as an alternative to safe design.

24.4.4 Batteries, high-voltage equipment and compartments shall be labelled with international symbols. Emergency procedures for every likely battery emergency shall be developed and drilled, and all crew shall be aware of them.

24.4.5 Inspection and maintenance shall follow the manufacturer's recommendations and include testing of sensors and assessment of the state of health of each cell. A battery log book shall be kept. Charging systems shall prevent overcharging and overheating.

24.4.6 Self-contained certified battery charging and storage cabinets are strongly recommended and may be accepted in lieu of, or in addition to, the arrangements above. The Administration may give special consideration to small-capacity systems and batteries not susceptible to self-combustion.

24.5 Battery Charging Stations and Battery-Powered Water Sports Equipment

24.5.1 Portable lithium-ion batteries of 100 Wh or more (including those in equipment, toys and appliances) shall be charged only on an open deck out of direct sunlight, in a continuously manned area, in a space with gas, smoke and heat detection and a fixed fire-extinguishing system, or in a certified battery charging cabinet. Ventilation openings of unmanned charging stations shall have remotely closable flaps. Charging on open decks during dark hours should be avoided, and charging should not be left unattended.

24.5.2 Battery-powered water sports equipment and toys shall be stored on an open deck or in a garage or locker that has: forced ventilation exhausting directly outside, capable of remote isolation and closure; a gas, smoke and heat detection system; a fixed fire-extinguishing system; a charging indicator visible locally and on the bridge; boundary cooling equipment and instructions, with bilge pumping arrangements; a garage door that can be closed from outside the space; and no-smoking signs.

24.6 Other Means of Power Generation and Power Storage

24.6.1 The Administration will consider innovative power generation and storage systems not directly covered by this Code, having regard to IMO requirements and interim guidelines, RO rules and IACS requirements. In the absence of published requirements, an ADA under Section 4A may be used.

24.6.2 Yachts using gases or other low-flashpoint fuels shall comply with the applicable sections of the IGF Code.

24.7 Stability – Lightship Survey

24.7.1 A lightship survey shall be carried out once in every five years at a renewal survey, and the records kept on board. Where no substantial weights have been added or removed, a declaration by the owner, manager or master may be accepted.

24.7.2 A new inclining experiment and approved stability booklet are required where the lightship survey shows a change in lightship weight of 2 % or more, a shift in the longitudinal center of gravity of 1 % or more of length, or a rise in the vertical center of gravity of 0.5 % or more.

24.7.3 Where a yacht has no stability booklet approved by an RO or Authorized Surveyor, an inclining experiment shall be carried out and an approved booklet placed on board within three months of the initial survey.

24.8 Navigation Equipment

24.8.1 Navigation equipment shall be type approved (wheel marked) or certified to an equivalent standard accepted by the Administration. CE certified equipment may be accepted on yachts of less than 300 GT.

24.8.2 Every yacht shall carry a magnetic compass, or other means independent of any power

supply, displaying heading at the main steering position. Yachts of 150 GT and over shall carry a spare magnetic compass. Deviation cards shall be renewed at least every three years.

24.8.3 Commercial yachts of 150 GT and over shall be fitted with a Bridge Navigational Watch Alarm System (BNWAS) meeting IMO Resolution MSC.128(75), in operation whenever the yacht is underway at sea.

24.8.4 Yachts of 300 GT and over shall comply with SOLAS Regulation V/19. Yachts of 3,000 GT and over shall also carry a Voyage Data Recorder, ECDIS with an approved back-up arrangement, a 3 GHz radar or a second 9 GHz radar, and a second automatic tracking aid.

24.8.5 Every yacht shall have a navigation lights plan approved by an RO or Authorized Surveyor. Navigation lights shall have main and emergency supply. LED lights shall be used only within the lifespan stated by the manufacturer.

24.8.6 Up-to-date charts and nautical publications appropriate to the intended voyages shall be carried. Where ECDIS is used to meet chart carriage requirements, a back-up of paper charts, a second ECDIS or an approved electronic back-up shall be provided.

24.9 Marine Pollution Prevention

24.9.1 The following thresholds apply in addition to Section 26:

Requirement	Applies to
IOPP Certificate	Yachts ≥ 400 GT
ISPP Certificate	Yachts ≥ 400 GT, and any yacht certified to carry more than 15 persons
IAPP Certificate	Yachts ≥ 400 GT
EIAPP Certificate	Each marine diesel engine ≥ 130 kW installed on or after 1 January 2000, or that has undergone a major conversion since that date (emergency engines may be exempted)
Garbage Management Plan	Yachts ≥ 100 GT, and any yacht certified to carry 15 persons or more
Garbage placards	All yachts
AFS Certificate (AFS Declaration < 400 GT)	Yachts ≥ 400 GT
BWM Certificate or BWM Declaration of Non-Applicability	Yachts ≥ 400 GT
IEE Certificate	Yachts ≥ 400 GT

24.9.2 Machinery spaces and bilges shall be kept clean and free from oil contamination.

24.10 ISM and ISPS

24.10.1 Yachts of 500 GT and over shall comply with the ISM Code under SOLAS Chapter IX. The company ashore shall hold a Document of Compliance and the yacht a Safety Management Certificate, issued by an RO. Yachts of less than 500 GT are strongly recommended to implement the ISM Code voluntarily; a Statement of Compliance may be issued by an RO or a qualified Authorized Surveyor.

24.10.2 Yachts of 500 GT and over shall comply with the ISPS Code under SOLAS Chapter XI-2 and hold an International Ship Security Certificate issued by a Recognized Security Organization. Yachts of less than 500 GT are strongly recommended to implement the ISPS Code voluntarily.

24.11 Tenders, Extended Range Tenders and Ancillary Craft

24.11.1 Tenders and ancillary craft carried, towed or accompanying the yacht shall be used only in conjunction with the mother yacht, shall not engage in separate commercial activity, and shall operate within 3 nautical miles of the mother yacht.

24.11.2 Each tender shall be marked with the number of persons it may safely carry and with the name "T/T [name of mother yacht]". Tenders of less than 12 m with remote throttle controls shall have a kill cord, worn at all times underway, and a spare. Personal watercraft are not tenders. Tenders and other motorized craft used in dark hours shall carry navigation lights; personal watercraft shall not be used in dark hours.

24.11.3 Submersibles designated as tenders shall comply with IMO MSC/Circ.981, as amended, be built and maintained to RO rules, and be operated by trained and qualified crew (see Part F Section 2 and CDP-300Y). The maximum safe working load of launching equipment and the maximum launch sea state shall be stated.

24.11.4 Tenders shall be safely manned without reducing the manning of the mother yacht below the Minimum Safe Manning Certificate. Tender operators shall hold the tender endorsement required by CDP-300Y.

24.11.5 An Extended Range Tender designated as the yacht's rescue boat may operate up to 6 nautical miles from the mother yacht, shall meet the rescue boat requirements of Section 13, shall be stowed on board and shall serve the mother yacht only. Extended Range Tenders are surveyed with the mother yacht at initial and renewal surveys and at the second or third annual survey, and are issued an Extended Range Tender Certificate by the Administration.

24.12 Static Chartering

24.12.1 A Commercial Yacht that remains berthed or at anchor may, with a Static Charter Statement issued by the Administration, carry more than 12 passengers during a static charter.
24.12.2 The application shall include: the yacht's details; the maximum number of persons, and of crew and other staff, to be carried; a documented risk assessment by an RO or Authorized Surveyor, with mitigating measures; confirmation by the RO or Authorized Surveyor that the approved stability booklet includes a loading condition for the maximum persons and any ancillary equipment, including all persons crowding to one side of the highest deck, meeting Section 11 and the 2008 IS Code Part A Chapter 3 (excluding 2.2 and 2.3); evidence of insurance; and the owner's undertaking to meet paragraph 24.12.3.
24.12.3 During every static charter:
.1 lifejackets and liferafts shall be provided for all persons on board when at anchor;
.2 at least two means of escape from the yacht shall be available when alongside;
.3 crew shall be trained and an evacuation drill carried out before the charter;
.4 the port authority shall be notified in advance, and the Administration notified at least 48 hours in advance on the prescribed form;
.5 the yacht shall not navigate while more than 12 passengers are on board (tenders may transfer persons);
.6 static charters at anchor shall take place only in good weather, within 1 nautical mile of the coast and within 5 nautical miles of a safe haven, with tenders on standby throughout.
24.12.4 The Static Charter Statement remains valid while its conditions are unchanged, the Commercial Yacht Certificate and statutory certificates are valid and no periodical survey is overdue.

24.13 Medical Stores

24.13.1 Medical stores appropriate to the area and range of operation shall be carried in accordance with Section 24 and the Dominica MLC requirements. Medical stores and their contents shall be inspected and certified at intervals not exceeding 12 months by a qualified pharmacist or doctor. Guides to their use, including antidotes, shall be carried.

24.14 Maritime Labour Convention

24.14.1 Yachts of 500 GT and over shall hold a Maritime Labour Certificate and a Declaration of Maritime Labour Compliance issued by an RO.

24.14.2 Yachts of less than 500 GT shall be inspected for MLC compliance by an RO or Authorized Surveyor at intervals not exceeding 36 months (two inspections in each five-year period). A copy of the MLC inspection report shall be kept on board and sent to the Administration. A voluntary MLC Statement of Compliance is strongly recommended.

24.14.3 Hours of rest shall be not less than 10 hours in any 24-hour period and 77 hours in any 7-day period. Rest may be divided into no more than two periods, one of at least 6 hours, with not more than 14 hours between them. Records of hours of work and rest shall be kept.

24.15 Yachts Operating with Bareboat Charterers

24.15.1 The handover procedure in Part G Section 4 applies. The owner or managing agent shall ensure the yacht remains manned in accordance with its Minimum Safe Manning Certificate and that every seafarer holds valid certificates.

PART C: SMALL COMMERCIAL YACHTS (12 m LH TO LESS THAN 24 m LENGTH)

C1 Application

C1.1 This Part applies to Small Commercial Yachts: yachts of 12 m Hull Length (ISO 8666) and over and less than 24 m Length, engaged in trade, carrying no cargo and not more than 12 passengers. It adopts the Transport Malta Small Commercial Yacht Code (sCYC) 2024 Rev.1, with Dominica administrative provisions.

C1.2 Where Hull Length is less than 24 m but Length is 24 m or more, Part B applies. Where Hull Length is more than 24 m but Length is less than 24 m, this Part applies and, unless the yacht is classed, a post-construction assessment under C2.3 is required.

C1.3 This Part does not apply to yachts of Design Category D, or to rigid inflatable boats of Design Category C or D. Detachable hull sections that increase the length measured under the Load Line and Tonnage Conventions shall be included in the Length.

C1.4 Where a Small Commercial Yacht is 300 GT or more, the Administration shall be consulted, as additional Convention requirements apply.

C1.5 Yachts of less than 24 m Length certified under Part B before the effective date are deemed to comply with this Part, and shall transfer to the Part C survey regime at the first renewal survey after the effective date. Deviations, exemptions and equivalencies already accepted continue to apply. Existing equipment is accepted until replaced.

C1.6 The navigation notations available are Coastal, Short Range, Extended Short Range and Unrestricted (Table 3.2), subject to the yacht's Design Category.

C2 Pre-Requisite Certification

C2.1 As a pre-requisite to certification under this Part, the yacht shall be CE certified under Directive 2013/53/EU by a Notified Body under Module B+C, B+D, B+E, B+F, G or H. Modules A and A1 are not accepted. Where the yacht holds more than one Design Category, the highest category and all its restrictions apply.

C2.2 The limits on the Builder's Plate and CE Declaration of Conformity (maximum load, maximum persons and maximum propulsion power) continue to apply.

C2.3 A yacht that is not CE certified and not classed (including yachts built to USCG or other standards and yachts built before 16 June 1994) shall undergo a CE post-construction assessment or gap analysis by a Notified Body, RO or Authorized Surveyor. The resulting statement shall confirm compliance with Directive 2013/53/EU and any other standard met; state the Design Category, maximum persons, maximum load and maximum propulsion power; identify any RCD requirement not met, with justification and mitigating measures; and summarize the yacht's service history.

C2.4 As an alternative to CE certification, a yacht holding a valid class certificate issued by an RO, or already certified under Part B, may be accepted. A class certificate is not otherwise required under this Part.

C2.5 Traditional-build yachts built predominantly of timber need not be CE certified but shall undergo the post-construction assessment in C2.3 and an initial survey. Replicas built of other materials are not treated as traditional build.

C2.6 A yacht certified as a commercial yacht by a Red Ensign Group Administration, France, Italy, Malta or the Marshall Islands may be issued a provisional Small Commercial Yacht Certificate valid for three months, with the same navigation range and restrictions, pending completion of the initial survey. Certification by other flags is considered case by case.

C3 Construction and Watertight Integrity

C3.1 The structure, watertight and weathertight integrity, hull openings, freeing arrangements and sea connections shall meet Directive 2013/53/EU and the relevant harmonized ISO standards for the yacht's Design Category, and the additional requirements of this Part. Bulwarks shall have freeing ports located as close to the deck as possible and not higher than the lower third of the bulwark height.

C3.2 The attending surveyor shall confirm, as far as reasonably practicable, that the yacht has not been modified from its original build standard. Any modification shall be identified in the survey report and shown to be equivalent to the RCD requirements.

C4 Machinery and Electrical Installations

C4.1 Machinery spaces shall be enclosed and watertight except for openings with appropriate closing arrangements. Machinery and electrical installations shall meet the relevant ISO standards under Directive 2013/53/EU, or RO rules.

C4.2 Lithium-ion batteries used for propulsion, hybrid propulsion or main electrical supply shall meet ISO 23625 or RO rules and the compartment requirements of Part B paragraph 27.4.2,

with a hydrocarbon gas, smoke and heat detection system and an automatic fixed fire-extinguishing system that, on activation of two detectors, raises alarms, isolates electrical systems, shuts down and closes ventilation and releases the extinguishing medium. The charging and storage provisions of Part B Section 27.5 apply.

C4.3 Enclosed spaces, fuel lockers and garages in which craft containing fuel with a flash point below 60 °C are stowed shall have ventilation to ISO 11105, intrinsically safe electrical equipment (minimum IP55) fitted at least 450 mm above the deck, a petrol fume detector (an alarm at the bridge and crew accommodation is recommended), no-smoking signs, a fire detection and alarm system (battery-operated systems accepted), and a manual or automatic fixed fire-fighting system, preferably pressure water-spraying.

C5 Stability and Freeboard

C5.1 Stability shall meet ISO 12217 for the yacht's Design Category, or the criteria of Part B Section 11 where the yacht holds a class or Part B stability booklet. A stability booklet or the Owner's Manual stability information shall be kept on board.

C5.2 Freeboard marks and datum draught marks shall be applied where required by Part B Section 9 or by the Administration.

C6 Life-Saving Appliances

C6.1 All life-saving appliances shall be CE marked or wheel marked. ISO 9650-1 Type 1 Group B liferafts are accepted on yachts with Coastal, Short Range or Extended Short Range notations, but not on Unrestricted yachts. All life-saving equipment shall carry retro-reflective tape.

C6.2 Liferafts shall be float-free with hydrostatic release units, painters attached as the manufacturer instructs and weak links fitted. Restricted navigation yachts shall carry SOLAS B packs (which may be stowed in a grab bag beside the liferaft) and Unrestricted yachts SOLAS A packs. Liferafts, HRUs (other than disposable units) and inflatable lifejackets shall be serviced annually by approved stations, except where extended servicing intervals are approved; ISO liferafts at intervals not exceeding 24 months or the manufacturer's interval, if shorter.

C6.3 An embarkation ladder is required where the distance from the lowest embarkation deck to the top of the floating liferaft tube exceeds 1,000 mm. Where it exceeds 4,500 mm, davit-launched liferafts are required. Survival craft for all persons shall be capable of being launched within 30 minutes of the abandon-ship signal.

C6.4 Minimum carriage requirements:

Table C6 – Minimum life-saving, safety and navigation equipment

Item	Restricted navigation (Coastal, Short Range, Extended Short Range)	Unrestricted
Liferafts	100 % of persons each side (100 % aggregate if easily transferable side to side on one deck level)	Same
Lifebuoys	2 (1 with self-igniting light, 1 with 18 m buoyant line)	2
Adult lifejackets	120 %	120 %
Child and infant lifejackets	100 % of children and infants on board	Same
Immersion suits or thermal protective aids	100 % of persons (not required where sea	Same

Item	Restricted navigation (Coastal, Short Range, Extended Short Range)	Unrestricted
	temperature does not normally fall below 20 °C or on summer-only operation; immersion suits required at ≤ 10 °C)	
Safety harnesses (sailing yachts)	100 % of persons	100 %
Parachute flares	4	6
Hand-held flares	4	4
Buoyant smoke signals	2	2
GNSS	1	1
AIS Class B	1	1
MSI receiver	1 (not required on Coastal; equivalent weather forecast means accepted on Short Range)	1
EPIRB or AIS-EPIRB (registered with the Administration)	1	1
SART or AIS-SART	1	1
Dan buoy (sailing yachts)	1	1
Life-saving signals poster, operating instructions, training manual, maintenance instructions, muster list, Owner's Manual	1 each	1 each

C6.5 Lifejackets shall be wheel marked, fitted with light and whistle, and marked with the yacht's name and port of registry. Where adult lifejackets are not designed for persons up to 140 kg and 1,750 mm chest girth, suitable additional lifejackets shall be carried. Water-sports personal flotation equipment shall be stowed apart from life-saving equipment.

C6.6 **Drills.** Every crew member shall take part in a fire drill and an abandon-ship drill at least once every fortnight, and before departure when 25 % or more of the crew has changed. Emergency steering drills are required at least every three months and oil pollution drills at least every three months. Drills shall be recorded.

C6.7 **Musters and briefing.** Passengers shall receive a safety briefing immediately before or after departure, in a language they are likely to understand. Where passengers will be on board for more than 24 hours, a muster shall be held before or immediately on departure.

C6.8 On-board training in the life-saving and fire-fighting equipment shall be given within two weeks of a crew member joining. Emergency instructions and muster lists shall be displayed on the bridge, in machinery spaces, accommodation and mess rooms, passenger cabins and on open decks.

C7 Fire Protection, Detection and Extinction

C7.1 Fire protection, detection and extinction shall meet Directive 2013/53/EU and ISO 9094, and this Section. A fire control plan (which may be combined with a safety plan) shall be carried.

C7.2 Two means of escape shall be provided from accommodation spaces used for sleeping or rest, from other high fire-risk accommodation spaces, and from machinery spaces other than those only occasionally attended with a readily available single escape. Escape routes shall be marked on both sides, kept clear and tested at drills; lifts are not a means of escape; carpets over escape hatches shall be cut to allow opening.

C7.3 Machinery spaces shall be fitted with a certified fire and smoke detection and alarm system, with the main panel at the main steering position and a repeater where it cannot be heard in crew quarters. On yachts with total installed power of less than 750 kW, stand-alone battery-operated detectors may be accepted.

C7.4 An automatic or manual fixed fire-extinguishing system shall be fitted in engine spaces. Overhung automatic extinguishers may be accepted on sailing yachts and yachts with compact machinery spaces. Visual and audible alarms are required where hazardous extinguishing gases are used. Certified aerosol systems may be accepted. Extended Short Range and Unrestricted yachts with gas fixed systems shall have machinery space ventilation capable of being closed from outside the space; this is recommended for Coastal and Short Range yachts.

C7.5 A fire pump located outside the engine spaces (a portable pump may be accepted), with a sea suction, at least one hydrant reaching every part of the yacht, and a hose with jet/spray nozzle stowed near each hydrant, shall be provided.

C7.6 The minimum portable fire extinguishers are:

Space	Minimum
Accommodation and service spaces	2 × 5 kg CO_2 or 2 × 5 kg dry powder, not more than 10 m apart
Bridge	1 × 5 kg CO_2 or 1 × 5 kg dry powder
Machinery spaces	1 extinguisher for oil fires and 1 × 5 kg CO_2 or 1 × 5 kg dry powder
Galley	1 fire blanket of adequate size (and a Class F extinguisher where deep-fat cooking is carried out)

C7.7 Fire-fighting equipment shall be serviced by certified shore-based stations in accordance with the manufacturer's instructions, at intervals not exceeding 12 months.

C8 Anchors, Cables and Lifts

C8.1 Anchors, chain and mooring equipment shall meet ISO 15084 or RO rules for the yacht. Passenger and service lifts shall be installed, inspected and certified in accordance with the manufacturer's instructions and a recognized standard.

C9 Accommodation and Crew Welfare

C9.1 Crew accommodation, hours of rest, food and medical care shall comply with the Dominica MLC requirements as they apply to yachts under 24 m. Part B paragraph 27.14.3 applies to hours of rest.

C10 Protection of Personnel

C10.1 Guardrails, bulwarks, handholds, non-slip surfaces, means of reboarding a conscious person from the water, and safe access to the yacht shall meet ISO 15085 or an equivalent standard. Enclosed spaces shall be tested for oxygen and flammable or toxic gases before entry.

C11 Navigation and Communication

C11.1 Every Small Commercial Yacht shall carry: a calibrated magnetic compass (or satellite compass) displaying heading at the main steering position, with a spare compass on yachts of 150 GT and over; an echo sounder visible from the navigation position; a GNSS receiver; a speed and distance device; engine revolution and propeller/pitch indicators at the steering position (except outboards); a searchlight (a powerful torch is accepted); a waterproof Morse

signaling torch; an AIS Class B; a radar reflector on non-metallic hulls; a barometer; an anemometer and inclinometer on sailing yachts; binoculars; and a whistle or horn.

C11.2 Navigation lights shall comply with COLREGs, with main and emergency supply. Yachts of 150 GT and over shall be fitted with a BNWAS in operation whenever underway at sea.

C11.3 The radio installation shall be as follows. Equipment marked * shall have an independent emergency source of power with automatic charging.

Notation	Required radio equipment
Coastal (≤ 20 nm from shore)	VHF DSC/RT; EPIRB or AIS-EPIRB; SART or AIS-SART; 2 portable GMDSS VHF; AIS Class B; GNSS
Short Range – Sea Area A1 (≤ 60 nm)	VHF DSC/RT*; means of receiving MSI and SAR information; SART or AIS-SART; EPIRB or AIS-EPIRB; 2 portable GMDSS VHF; AIS Class B*; X-band radar; GNSS*
Extended Short Range – A1 + A2 (≤ 150 nm)	As Short Range, plus a wheel-marked MF DSC/RT or a wheel-marked SES*
Unrestricted – A1 + A2 + A3 (+ A4)	As Extended Short Range, plus a second VHF DSC/RT* and a second MF/HF DSC/RT or SES* (SES capable of operation above 70° latitude for A4)

C11.4 Equipment on Unrestricted yachts shall be wheel marked. On restricted-notation yachts, CE, ISO or other recognized certification is accepted, except that EPIRBs, SARTs and portable GMDSS VHF shall be wheel marked on every yacht.

C11.5 The reserve source of energy for the radio installation shall operate the required equipment for at least 1 hour where an emergency source of electrical power is fitted and 6 hours where it is not. Batteries shall be recharged to minimum capacity within 10 hours and installed as high as practicable. A continuous watch shall be maintained on VHF Channel 16, VHF DSC Channel 70 and the other frequencies required for the installation fitted.

C11.6 Charts and publications appropriate to the area (sailing directions, lists of lights, notices to mariners, tide tables, radio aids and port information) shall be carried.

C12 Pollution Prevention

C12.1 Small Commercial Yachts shall comply with MARPOL as it applies to their size. Yachts fitted with toilets shall have a holding tank or equivalent arrangement. Yachts certified to carry more than 15 persons shall hold an ISPP Certificate, and yachts certified to carry 15 persons or more a Garbage Management Plan. Garbage placards shall be displayed. An AFS declaration shall be carried.

C13 Manning and Crew Certification

C13.1 The minimum safe manning scale for Small Commercial Yachts is in Part G Section 2, Table G2.3. Small Commercial Yachts are not required to hold a Minimum Safe Manning Certificate, but the crew complement shall never be less than two seafarers. Crew certificates are as specified in CDP-300Y.

C14 Bareboat Charters and Special Category Yachts

C14.1 Part A Section 7A.4 and Part G Section 4 apply to Small Commercial Yachts.

C15 Medical Stores

C15.1 Part B paragraph 27.13.1 applies.

C16 Tenders and Extended Range Tenders

C16.1 Part B Section 27.11 applies. Tenders shall be CE certified, fitted with a Builder's Plate and marked "T/T [name of mother yacht]".

C17 Static Chartering

C17.1 Part B Section 27.12 applies, with the passenger and person limits in the Static Charter Statement not exceeding the limits on the Builder's Plate and CE certificate.

C18 Survey and Certification

C18.1 The Small Commercial Yacht Certificate is issued only by the Administration and is valid for five years, subject to an intermediate and a renewal survey. Surveys are carried out by an RO or an Authorized Surveyor. The RO or Authorized Surveyor shall request a certification authorization from the Administration before the initial survey.

C18.2 **Initial survey.** The survey shall include: a survey of hull, machinery and all equipment to the criteria of a renewal survey; a dry-docking survey (or, if not possible, an afloat survey with internal hull inspection and dry-docking within six months, extendable by six months); moisture readings on composite hulls where the surveyor considers it necessary; thickness gauging on steel hulls more than five years old; a full survey and operational test of safety equipment, life-saving appliances and fire detection and fire-fighting equipment; freeboard and water-freeing arrangements; and, on sailing yachts, a rigging survey. A photographic report and copies of the CE certificate and Declaration of Conformity shall accompany the survey report.

C18.3 **Intermediate survey.** An intermediate survey shall be carried out within a window opening three months before the second anniversary and closing three months after the third anniversary of the initial or renewal survey. It shall include freeboard and water-freeing arrangements, a full survey and operational test of safety, life-saving and fire-fighting equipment, a rigging survey on sailing yachts, and a check of documents and seafarer certification.

C18.4 **Renewal survey.** A renewal survey shall be carried out within the three months before expiry of the certificate, to the scope of C18.2.

C18.5 **Bottom surveys.** At least two inspections of the bottom in dry dock shall be carried out in each five-year period, not more than 36 months apart, one at the initial or renewal survey and one in the intermediate survey window. An in-water survey may be accepted in lieu of one inspection, provided the interval between dry-dock inspections does not exceed 60 months. Class bottom surveys are accepted.

C18.6 **Radio.** An annual inspection of the EPIRB and AIS shall be carried out by an approved service supplier.

C18.7 Failure to carry out the intermediate or renewal survey within its window results in automatic suspension of the certificate, unless the Administration has granted an extension. The certificate is reinstated when the overdue survey is completed.

PART D: PASSENGER YACHTS (13 TO 36 PASSENGERS)

D1 Application and Principles

D1.1 This Part applies to Passenger Yachts: yachts engaged in trade on international voyages carrying more than 12 and not more than 36 passengers and not more than 200 persons in total, and carrying no cargo. It adopts the Transport Malta Passenger Yacht Code (PYC), with Dominica administrative provisions.

D1.2 A Passenger Yacht shall meet SOLAS and the other applicable Conventions as a passenger ship carrying not more than 36 passengers. In place of certain requirements that are disproportionately onerous for yachts, the Passenger Yacht may meet the equivalent requirements in this Part, which are notified to IMO under Article 8 of the Load Line Convention and SOLAS Regulation I/5.

D1.3 The equivalencies available under this Part are:
.1 enhanced safety and survivability requirements in lieu of the carriage of lifeboats (D4.2);
.2 SOLAS 90 double bottom requirements in lieu of SOLAS Regulation II-1/9.1;
.3 SOLAS 90 subdivision and stability requirements in lieu of SOLAS Regulations II-1/6, 7 and 8, for Passenger Yachts of less than 80 m Length;
.4 alternative requirements to SOLAS Chapter II-2 for materials of bulkheads, subdivisions, furniture and furnishings on open decks and cabin balconies;
.5 alternative requirements to SOLAS Chapter II-2 for low flame-spread characteristics of exposed surfaces in owner and passenger areas;
.6 enhanced safety and survivability requirements in lieu of the Safe Return to Port requirements of SOLAS Regulations II-1/8-1.2, II-2/21 and II-2/22, for yachts on short international voyages;
.7 navigation bridge visibility arrangements in relation to SOLAS Regulation V/22; and
.8 alternative Load Line requirements for sill and coaming heights, freeboard (Plimsoll) markings and glazing.

D1.4 Each equivalency applied shall be approved by the RO, listed on the Passenger Yacht Certificate, and noted on the Passenger Ship Safety Certificate and Load Line Certificate as set out in D9.

D1.5 Navigation notations for Passenger Yachts are Unrestricted (international) or Short International Voyage as defined in SOLAS.

D1.6 Plan approval, surveys, audits and certification under this Part are carried out only by ROs. Authorized Surveyors are not Authorized to act under this Part.

D2 Construction, Subdivision and Stability

D2.1 Passenger Yachts shall be designed, built and maintained to the rules of an RO for passenger ships and assigned a passenger ship class notation. Classification rules for commercial yachts or pleasure yachts are not accepted. Traditional-build timber vessels shall also be classed.

D2.2 Passenger Yachts shall comply with SOLAS Chapter II-1 for passenger ships, except where the equivalencies in D1.3.2 and D1.3.3 are applied. Intact stability shall meet the 2008 IS

Code, including Part A Chapter 3 (special criteria for passenger ships), with loading conditions that include passenger crowding.

D2.3 Load lines shall be assigned under the Load Line Convention, with any alternative arrangements approved under D1.3.8.

D3 Machinery, Electrical Installations and Fire Safety

D3.1 Machinery and electrical installations shall comply with SOLAS Chapter II-1 Parts C, D and E for passenger ships and RO rules. Part B Sections 27.4 to 27.6 apply to battery installations, battery charging and alternative power systems.

D3.2 Fire protection, detection and extinction shall comply with SOLAS Chapter II-2 for passenger ships carrying not more than 36 passengers, except where the equivalencies in D1.3.4 and D1.3.5 are applied following a risk assessment that identifies all hazards and puts mitigating measures in place.

D4 Life-Saving Appliances

D4.1 Passenger Yachts shall comply with SOLAS Chapter III for passenger ships carrying not more than 36 passengers. Passenger Yachts of less than 500 GT carrying fewer than 200 persons shall comply with SOLAS Regulation III/21.1.4: liferafts on each side for the total persons on board, or 150 % on each side unless the liferafts can be transferred easily side to side at one open deck level, and sufficient capacity on each side if any one survival craft is lost.

D4.2 **Equivalency to lifeboats.** A Passenger Yacht of 500 GT and over may carry davit-launched liferafts (DLLs), or a combination of DLLs and marine evacuation systems (MESs), in lieu of lifeboats, subject to all of the following:
.1 total capacity on each side for 150 % of persons on board; where MESs are fitted, DLLs alone on each side for at least 100 %;
.2 MESs shall not be the sole means of abandonment, and only dry-shod MESs are accepted;
.3 all liferafts shall be MED certified, canopied, inflatable, equipped with a SOLAS A pack, and arranged to float free and inflate automatically;
.4 at least 100 % capacity shall remain on each side after the loss of any one liferaft or MES;
.5 each liferaft shall have a dedicated 9 GHz SART or AIS-SART and a portable GMDSS VHF, marked to the liferaft and stowed in a weathertight cabinet at its launching station;
.6 each of the two rescue boats shall have a 406 MHz EPIRB, a SART or AIS-SART, an aero VHF (121.5 and 123.1 MHz), a portable GMDSS VHF and a GNSS receiver, with fuel for 24 hours at 2 knots towing the largest loaded liferaft, and at least 20 liters of drinking water; and
.7 a portable satellite telephone, kept charged on the bridge or safety center with the Designated Person Ashore's 24-hour number stored and displayed, shall be taken into a rescue boat on abandonment.

D4.3 Each MES shall be deployed at least once every five years in the presence of the RO, as a training exercise.

D4.4 Passenger Yachts operating in polar waters shall carry life-saving appliances complying with the Polar Code.

D5 Radio, Navigation and Bridge Visibility

D5.1 Passenger Yachts shall comply with SOLAS Chapter IV for passenger ships and SOLAS Chapter V, except that bridge visibility arrangements may be approved under D1.3.7.

D6 Tenders, ISM, ISPS, MLC, Protection of Personnel and Pollution

D6.1 Part B Section 27.11 applies to tenders and ancillary craft. Tenders shall be surveyed with the mother yacht.

D6.2 Every Passenger Yacht, irrespective of tonnage, shall comply with the ISM Code and the ISPS Code, with a Document of Compliance, Safety Management Certificate and International Ship Security Certificate issued by an RO or Recognized Security Organization.

D6.3 Every Passenger Yacht shall comply with the Dominica MLC requirements. A Maritime Labour Certificate and Declaration of Maritime Labour Compliance are required for Passenger Yachts of 500 GT and over.

D6.4 Part B Sections 23 and 27.13 apply to protection of personnel and medical stores. MARPOL, AFS and BWM requirements apply as for a passenger ship of the same tonnage.

D7 Manning and Crew Certification

D7.1 A Passenger Yacht shall hold a Minimum Safe Manning Certificate (Part G Section 2.5). The number of trained seafarers shall be sufficient to assist all passengers on board at any time.

D7.2 Masters, officers and crew with assigned safety duties shall hold the Passenger Yacht (PAXY) endorsement under CDP-300Y: STCW Regulation V/2 training in crowd management, passenger safety, cargo safety and hull integrity as applicable, and crisis management and human behavior. All crew, including cooks and stewards, shall hold Basic Training and Security Awareness.

D8 Insurance

D8.1 Every Passenger Yacht shall carry a valid certificate of insurance for third-party liability covering: death or bodily injury to any person, including passengers and crew; loss of or damage to third-party property; salvage and wreck removal; and pollution damage and preventive measures. The certificate shall state the yacht's particulars and any limitations and shall be valid at all times during operation.

D9 Survey and Certification

D9.1 Passenger Yachts shall be surveyed, audited and certified as passenger ships carrying not more than 36 passengers, with all statutory certificates issued by an RO.

D9.2 The Passenger Ship Safety Certificate shall include Form P and a List of Limitations, and shall bear the note: "This is to certify that equivalencies in conformance with the Commonwealth of Dominica Yacht Code CDP-502, Part D, in accordance with SOLAS Regulation I/5, have been adopted and are detailed on the Passenger Yacht Certificate."

D9.3 The Load Line Certificate shall bear the note: "This is to certify that equivalencies in conformance with the Commonwealth of Dominica Yacht Code CDP-502, Part D, in accordance with Article 8 of the Load Line Convention, have been adopted and are detailed on the Passenger Yacht Certificate."

D9.4 On completion of all surveys and audits, the RO shall issue a Passenger Yacht Certificate

on the Administration's form, listing each equivalency applied, and send a copy to the Administration. The Passenger Yacht Certificate is valid for five years without annual endorsement.

D9.5 Occasional surveys, surveys following damage, port State control detention or recommendations, change of ownership, flag or class surveys, and surveys of major repairs, alterations or conversions shall be carried out by the RO. The owner shall inform the RO and the Administration after any damage or detention.

D9.6 Static charters (Part B Section 27.12), helicopter landing areas (Part F Section 1) and participation in races (Part A paragraph 7A.4.4) apply to Passenger Yachts, with the persons limits of this Part.

PART E: PRIVATE YACHTS

E1 Private Yachts of 24 m and Over

E1.1 A Private Yacht is not required to hold a Commercial Yacht Certificate. Private Yachts of less than 500 GT are strongly recommended to comply, as far as reasonable and practicable, with Part B. On the owner's or builder's request, after survey, the Administration may issue a Statement of Compliance with Part B.

E1.2 Private Yachts of 500 GT and over shall comply, as far as reasonable and practicable, with Part B, and shall undergo an initial survey by an RO or Authorized Surveyor to the criteria of an initial survey for a Commercial Yacht. A Statement of Compliance may be issued on request. A survey to renewal criteria every five years is strongly recommended.

E1.3 Every Private Yacht shall comply with the Conventions that apply to it irrespective of trade, including MARPOL, the AFS and BWM Conventions as applicable to its size, COLREGs, SOLAS Chapter V as it applies to all ships, and the radio requirements of the Administration. Yachts of 300 GT and over shall have an IMO number.

E1.4 The master and officers of a Private Yacht shall hold certificates acceptable for private yachts under CDP-300Y: a Private Yacht Certificate of Qualification, a commercial yacht certificate, or an STCW certificate, of the appropriate grade. A safe manning proposal is recommended for Private Yachts and required for Private Yachts of 500 GT and over.

E1.5 Owners of Private Yachts with crew are strongly recommended to apply the Dominica MLC requirements, including seafarer employment agreements, hours of rest and accommodation standards.

E2 Private Yacht Limited Charter (PYLC) and Yacht Engaged in Trade (YET)

E2.1 Purpose

E2.1.1 These regimes allow a Private Yacht of 24 m Length and over to engage in limited commercial activity without changing its registered status, provided it meets the safety standard of a Commercial Yacht for that activity.

E2.2 Private Yacht Limited Charter

E2.2.1 A Private Yacht may be chartered with crew for not more than 84 days in any calendar year**,** carrying not more than 12 passengers, if it holds a valid PYLC Compliance Certificate.

E2.2.2 To be issued a PYLC Compliance Certificate the yacht shall:
.1 be surveyed by an RO or Authorized Surveyor and found to comply with Part B to the extent of an initial survey for a Commercial Yacht of its size and navigation notation;
.2 meet the classification requirements of Part B Section 27.1;
.3 hold a Minimum Safe Manning Certificate and the statutory certificates required for a Commercial Yacht of its size;
.4 be manned, during every charter, by officers and crew holding commercial yacht certificates or STCW certificates under CDP-300Y, together with Basic Training and Security Awareness for all crew; Private Yacht Certificates of Qualification are not valid on a yacht under charter; and
.5 hold insurance meeting Part G Section 1 for commercial use.

E2.2.3 The master shall keep a charter record showing the start and end of each charter, the charterer, the number of passengers and the voyage. The owner shall notify the Administration of each charter before it begins and send the annual charter record with the application for the annual survey endorsement.

E2.2.4 The PYLC Compliance Certificate is valid for five years, subject to annual surveys on the same scope as a Commercial Yacht. It is withdrawn if the yacht exceeds the annual charter limit, fails a survey, or operates under charter without the required crew certificates. A yacht that expects to exceed the limit shall change to commercial status under Part A Section 5A.

E2.3 Yacht Engaged in Trade

E2.3.1 A Private Yacht that is to be engaged, for a defined period, in a trade other than charter (for example as a support, expedition, research or media platform carrying persons for reward) may be issued a YET Compliance Certificate.

E2.3.2 The conditions in E2.2.2 apply. The application shall describe the trade, the persons to be carried, the area and the period. The Administration states the conditions and validity on the certificate, not exceeding five years.

E2.4 Recognition

E2.4.1 A yacht transferring from the Marshall Islands with a valid RMI PYLC or YET Compliance Certificate may be issued a provisional Dominica PYLC or YET Compliance Certificate for three months, with the same limits, pending the initial survey.

E3 Pleasure Yachts of Less Than 24 m (Non-Mandatory Safety Guidelines)

E3.1 Status and Application

E3.1.1 This Section establishes a baseline framework for the safety of Pleasure Yachts and the prevention of pollution. It adopts the Transport Malta Non-Mandatory Safety Guidelines for Pleasure Yachts < 24 m Hull Length Rev.1. Adoption is voluntary except where a provision is stated as a requirement of Dominica law or of CDP-300Y.

E3.1.2 This Section may be applied to yachts that are of less than 24 m Hull Length, not engaged in trade, and registered with the Administration as pleasure yachts. A pleasure yacht of

more than 24 m Hull Length but less than 24 m Length may also adopt it.

E3.1.3 This Section does not apply to Small Commercial Yachts, Commercial Yachts, commercial vessels holding a non-convention vessel certificate or statement of compliance, fishing vessels, or pleasure yachts of 24 m Length and over.

E3.1.4 Compliance with this Section does not exempt a yacht from any requirement of an international Convention or of a port or coastal State in whose waters it navigates.

E3.1.5 The operator (the master, skipper, registered owner or any qualified person acting with authority to command) and the registered owner are responsible for the safe operation and maintenance of the yacht, and the operator has overriding authority to protect the yacht, the environment and all persons on board.

E3.2 CE Certification

E3.2.1 Pleasure yachts of less than 24 m Hull Length placed on the market in the European Union are required by Directive 2013/53/EU to be CE certified with a Builder's Declaration of Conformity. Pleasure yachts placed on the EU market before 1 May 2004 and timber pleasure craft of traditional build are not required to be CE certified. Safety, navigational and communication equipment should be CE marked or wheel marked.

E3.2.2 Any structural or technical modification that affects the original CE certification invalidates the CE certificate and Declaration of Conformity for the modified yacht and requires re-assessment. The yacht shall be operated and maintained in accordance with its Owner's Manual.

E3.2.3 A pleasure yacht that is not CE certified should be fitted with a Builder's Plate, approved by an RO or Authorized Surveyor, showing the Design Category, maximum number of persons, maximum load and maximum engine power in accordance with ISO 14945. A yacht placed on the EU market after 1 May 2004 that is not CE certified (other than timber traditional build) should undergo a post-construction assessment by an EU Notified Body; for a yacht already registered with the Administration, a statement of compliance with Directive 2013/53/EU issued by an RO, Authorized Surveyor or Notified Body may be accepted.

E3.3 Operator Competence

E3.3.1 The operator of a motorized Pleasure Yacht with engine power, or combined power, of 30 HP (approximately 22.4 kW) or more shall hold a PY-1 Yacht Operator Certificate or higher certificate under CDP-300Y, or an International Certificate of Competence (UN ECE Resolution 40) or equivalent recognized qualification, for the category and waters concerned. Below 30 HP, such a qualification is strongly recommended.

E3.3.2 The operator is responsible for ensuring that his or her own and any crew qualifications are appropriate to the yacht and the intended area, and that there are qualified, medically fit and sufficient persons on board for the voyage, having regard to the Design Category, forecast weather and sea conditions and distance from safe harbors.

E3.4 Basic Requirements

E3.4.1 The owner and operator shall ensure that every Pleasure Yacht is properly maintained; seaworthy for its purpose and conditions; fitted with a Builder's Plate; not overloaded and not carrying more persons than stated on the Builder's Plate; fitted with engines not exceeding the

power certified; operated within its Design Category (Table E3.4); provided with a means of reboarding for a conscious person in the water; and equipped in accordance with E3.8.

Table E3.4 – Design categories

Design Category	Wind force (Beaufort)	Significant wave height
A	Exceeding 8	Exceeding 4 m
B	Up to and including 8	Up to and including 4 m
C	Up to and including 6	Up to and including 2 m
D	Up to and including 4	Up to and including 0.3 m

E3.5 Voyage Planning

E3.5.1 Before departure a voyage plan should be developed, assessing navigational hazards, weather forecasts, tidal conditions, security, the communication and life-saving equipment available, and the capabilities of the crew and the yacht.

E3.6 Pollution Prevention

E3.6.1 Pleasure Yachts with toilets should have a black water holding tank or equivalent arrangement with a discharge shut-off valve. Pleasure Yachts carrying more than 15 persons shall hold an International Sewage Pollution Prevention Certificate. Pleasure Yachts of 100 GT and over, and those certified to carry 15 persons or more, shall have a Garbage Management Plan. Garbage placards should be displayed on all yachts.

E3.7 LPG Systems and Lithium Batteries

E3.7.1 LPG and carbon monoxide detectors should be installed where LPG is consumed. Gas cylinders should be secured in a well-ventilated location and fitted with shut-off valves. Part F Section 3 applies to open flame installations.

E3.7.2 Lithium batteries used for propulsion, hotel services and water toys present a significant fire risk from thermal runaway. Owners and operators should use only original certified chargers, avoid unattended charging, and consider fire-rated ventilated storage. Installing or modifying lithium battery systems other than in accordance with recognized standards may void CE certification.

E3.8 Equipment Schedule

E3.8.1 All equipment should be appropriate to the yacht's size, design, persons carried and area; maintained in good working order and ready for immediate use; properly stowed and identifiable; and, when newly fitted or replaced, of an approved type and CE marked where applicable.

E3.8.2 Portable fire extinguishers, fixed fire-extinguishing systems and liferafts should be professionally serviced annually, with servicing certificates. Items with expiry dates should be inspected regularly.

Table E3.8 – Minimum equipment for Pleasure Yachts

Item	Quantity
Lifejackets (CE or wheel marked) with light and whistle	1 per person
Liferaft(s) for all persons on board (yachts ≥ 12 m LH)	Capacity for all persons
Lifebuoy with buoyant line	1
Dan buoy (sailing yachts ≥ 12 m LH)	1
Navigation lights and sound signals to COLREGs	As required

Item	Quantity
Magnetic compass	1
Portable or fixed GPS	1
Class B AIS transponder (yachts ≥ 150 GT)	1
Binoculars	1
Radar reflector (yachts < 150 GT)	1
Up-to-date charts (paper, electronic or equivalent) for the intended area	As required
Portable VHF radio	1
Fixed VHF DSC/RT (yachts ≥ 12 m LH)	1
Hand-held flares	2
Parachute flares	2
Buoyant orange smoke signals	2
Waterproof signaling torch	1
Sound signal or horn	1
EPIRB or AIS-EPIRB (yachts navigating more than 60 nm from shore)	1
Portable fire extinguishers, distributed to accommodation, machinery and galley	At least 2
Fire blanket (yachts with a galley)	1
Bilge pumping system and a bailer	1
Anchor with not less than 50 m of chain (or a chain/rope combination with chain not less than twice the yacht's length)	1
First aid kit appropriate to persons and voyage	1
Wire or rod cutting equipment (sailing yachts)	1
Potable water	1 liter per person
Means of reboarding	1

E3.8.3 Equivalent arrangements may be accepted where they give an equivalent level of safety. Machinery spaces and bilges should be kept clean and free of oil.

E3.9 Tenders

E3.9.1 Tenders should be CE certified, fitted with a Builder's Plate, marked "T/T [name of mother yacht]", and operated within 3 nautical miles of the mother yacht. Tenders need not meet the equipment schedule except for personal safety equipment. Tenders with outboards, personal watercraft and other motorized toys should have a kill cord. Tenders used in dark hours should carry navigation lights; personal watercraft should not be used in dark hours. Tender operators should hold appropriate qualifications.

E3.10 Third-Party Insurance

E3.10.1 Pleasure Yachts with engine power of 10 HP (approximately 7.5 kW) or more should hold third-party liability insurance from a reputable insurer, valid throughout registration and operation; below 10 HP it is strongly recommended. Tenders may be insured separately or under the mother yacht's policy.

E3.11 Voluntary Survey and Certification

E3.11.1 An owner may apply for voluntary survey to this Section and be issued a Pleasure Yacht Safety Certificate valid for five years from the initial or renewal survey.

E3.11.2 The survey regime is: an initial survey on entry into the scheme; an intermediate survey within a window of the second and third anniversary dates (± 3 months); and a renewal survey by the fifth anniversary date (− 3 months). Due dates are shown on the certificate.

E3.11.3 Surveys are carried out, and the certificate issued, by an RO or Authorized Surveyor on the Administration's survey form and certificate template. The RO or Authorized Surveyor shall

send electronic copies of the survey form and certificate to the Administration within three days of issue. A copy of the survey form shall be kept on board with the certificate.

PART F: ADDITIONAL TECHNICAL REQUIREMENTS

Section 1. Technical standards for helicopter landing areas and helicopter operating standards

1 Applicability

1.1

This Annex outlines the minimum standards for helicopter landing areas, and associated facilities on board vessels within the scope of this Code where helicopter operations to/from the yacht are required. It also addresses operational considerations as related to the yacht crew.

1.2

This Annex does not address helicopter flight operations in any detail. It is intended as a technical standard for the landing area and associated on-board helicopter facilities. The helicopter pilot/operator is responsible for ensuring that the requirements of the Administration with which the helicopter is registered and the requirements of the Administration responsible for the airspace in which the helicopter is operating are complied with in full. The Aviation Inspection Body may provide further guidance.

1.3

Enquiries regarding operational (flight) limitations based on non-compliances of the landing area should be directed to the Aviation Inspection Body.

2 General Considerations

2.1

Requirements for helicopter landing areas on vessels results from the need to ensure that helicopters are afforded sufficient space to be able to operate safely at all times in the varying conditions experienced.

2.2

In order to ensure safe operation it is envisaged that limitations regarding the availability of the landing area will be applied by the Aviation Inspection Body on behalf of the Administration.

2.3

The helicopter's performance requirements and handling techniques are contained in, and governed by, the Rotorcraft Flight Manual and/or the operator's Operations Manual.

2.4

In all cases, a formal and documented risk assessment should be carried out by a suitably experienced and qualified individual authorized by the Administration. The risk assessment

should establish the hazards and resultant risks associated with the operation of each helicopter type that it is planned to utilize with the yacht. This should include the physical requirements for the characteristics of the landing area.

3 Helicopter Landing Areas - Physical Characteristics

3.1 General

This section provides information on physical requirements for the characteristics of helicopter landing areas on a yacht within the scope of the Code.

3.1.1 The risk assessment carried out as above in order to establish the adequacy of the landing area should include, for each helicopter landing area, the proposed
maximum size of helicopter in terms of "D"-value and the proposed maximum takeoff weight of the heaviest helicopter in terms of "t" value for which it is proposed each landing area is certificated with regard to size and strength.

In addition to the risk assessment, the following plans and particulars should be submitted to the Aviation Inspection Body, Certifying Authority and Administration (as appropriate) for approval:

.1 Hangar general arrangement (showing dimensions and structural considerations) .
.2 Helicopter lift and movement arrangements (if appropriate).
.3 Structural fire protection.
.4 Fire detection and extinguishing arrangements

3.1.2 The criteria which follow are based on helicopter size and weight and are for guidance only.

Table 1- "D"-value and Helicopter Type Criteria (Not exhaustive)

Type	D value (m)	Perimeter 'D' marking	Rotor diameter (m)	Max weight (kg)	't' value	Landing net size
Eurocopter EC120	11.52	12	10.00	1715	1.7	Not required
Bell 206 B3	11.96	12	10.16	1451/1519	1.5	Not required
Bell 206 L4	12.91	13	11.28	2018	2.0	Not required
Bell 407	12.61	13	10.66	2268	2.3	Not required
Eurocopter EC130	12.64	13	10.69	2400	2.4	Not required
Eurocopter AS350B3	12.94	13	10.69	2250	2.3	Not required
Eurocopter AS355	12.94	13	10.69	2600	2.6	Not required
Eurocopter EC135	12.10	12	10.20	2720	2.7	Not required
Agusta A119	13.02	13	10.83	2720	2.7	Not required
Bell 427	13.00	13	11.28	2971	3.0	Not required
Eurocopter EC145	13.03	13	11.00	3585	3.6	Not required
Agusta A109	13.04	13	11.00	2850	2.9	Small
Agusta Grand	12.96	13	10.83	3175	3.2	Small
Eurocopter AS365 N3	13.73	14	11.94	4300	4.3	Small
Eurocopter EC155 B1	14.30	14	12.60	4920	4.9	Medium
Sikorsky S76	16.00	16	13.40	5318	5.3	Medium
Agusta Westland 139	16.66	17	13.80	6400	6.4	Medium
Bell 412	17.10	17	14.02	5398	5.4	Not required

3.1.3 Where skid fitted helicopters are used routinely, landing nets are not recommended.

3.2 Helicopter Landing Area Design Considerations - Environmental Effects

3.2.1 Introduction

The safety of helicopter flight operations can be seriously degraded by environmental effects that may be present around vessels. The term "environmental effects" describes the effects of the vessel, its systems, and forces in the surrounding environment, which result in a degraded local environment in which the helicopter is expected to operate. These environmental effects are typified by structure-induced turbulence, and turbulence/thermal effects caused by exhaust emissions. Controls in the form of landing area availability restrictions may be necessary and should be imposed via the Aviation Inspection Body. Such restrictions can be minimized by careful attention to the design and layout of the vessel topsides and, in particular, the location of the helicopter landing area.

3.2.2 GUIDANCE FOR LANDING AREA DESIGN CONSIDERATIONS

3.2.2.1 Guidance for landing area design considerations are given in UK Civil Aviation Authority Paper 2004/02 which should be consulted by designers of helicopter landing areas at the

earliest possible stage of the design process and is available through the CM website (www.caa.co.uk).

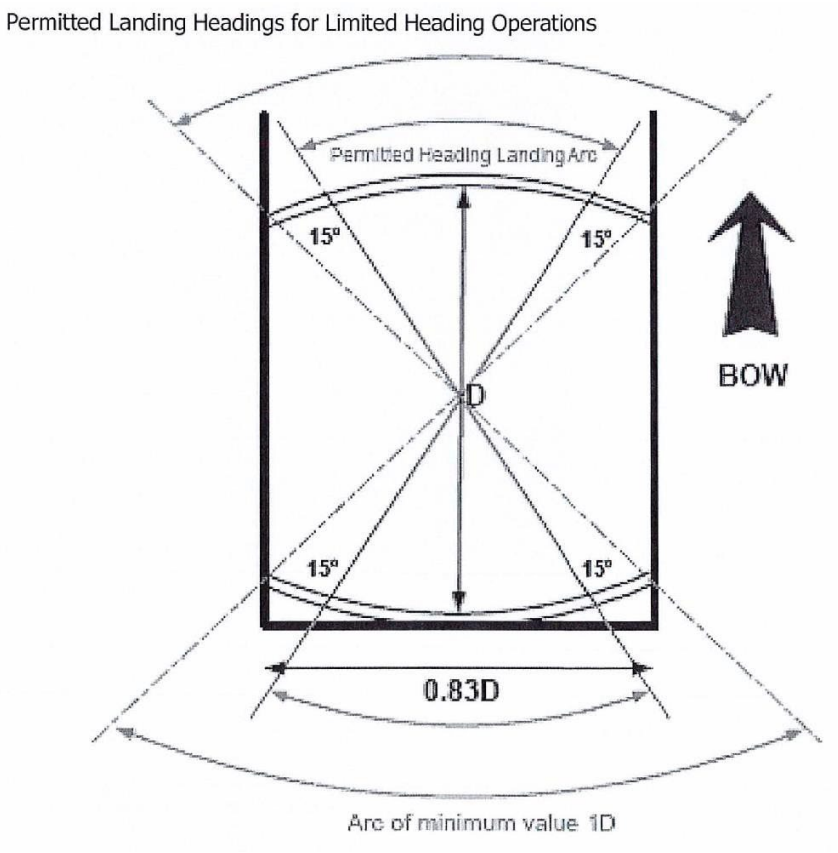
3.2.2.2 All new helicopter landing areas, or modifications to existing topside arrangements which could potentially have an effect on the environmental conditions due to turbulence around an existing helicopter landing area, or helicopter landing areas where operational experience has highlighted potential airflow problems should be subject to appropriate wind tunnel testing or CFD studies to establish the wind environment in which helicopters will be expected to operate. As a general rule the standard deviation of the vertical airflow velocity should be limited to 1.75m/s. The helicopter pilot/operator and Aviation Inspection Body should be informed at the earliest opportunity of any wind conditions for which this criterion is not met in order to allow the appropriate platform availability restrictions/limitations to be defined if necessary.

3.2.2.3 Designers of helicopter landing areas should commission a survey of ambient temperature rise based on a Gaussian dispersion model and supported by wind tunnel tests or CFD studies for new build helicopter landing areas, modifications to existing topside arrangements, or for helicopter landing areas where operational experience has highlighted potential thermal problems. When the results of such modelling and/or testing indicate that there may be a rise of air temperature of more than 2°C (averaged over a 3 second time interval), the helicopter pilot/operator and Aviation Inspection Body should be consulted at the earliest opportunity so that appropriate platform availability restrictions/limitations may be applied if necessary.

3.2.3 SIZE OF LANDING AREA AND OBSTACLE PROTECTED SURFACES

For any particular type of single main rotor helicopter, the helicopter landing area should, wherever possible, be sufficiently large to contain a circle of diameter D equal to the largest dimension of the helicopter when the rotors are turning. This "D" circle should be totally unobstructed (see Table 1 for "D"-values). Due to the actual shape of most helicopter landing areas the "D" circle will be 'imaginary' but the helicopter landing area shape should be capable of accommodating such a circle within its physical boundaries. It is possible to reduce the width to a value equivalent of 0.83D but the longitudinal length must be at least equivalent to 1.0D.

3.2.3.1 For operations with limited touchdown directions, contain an area within which can be accommodated two opposing arcs of a circle with a diameter of not less than 1D in the helicopter's longitudinal direction. The minimum width of the landing area shall be not less than O.83D. In such arrangements of landing areas, the yacht will need to be maneuvered to ensure that the relative wind is appropriate to the direction of the helicopter touchdown heading. The touchdown heading of the helicopter is limited to the angular distance subtended by the 1D arcs headings, minus 15 degrees at each end of the arc. See diagram below.



3.2.3.2 From any point on the periphery of the above mentioned "D" circle an obstacle- free approach and take-off sector should be provided which totally encompasses the safe landing area (and "D" circle) and which extends over a sector of at least 210°. Within this sector, from the periphery of the landing area and out to a distance that will allow for an unobstructed departure path appropriate to the helicopter that the landing area is intended to serve, only the following items may exceed the height of the landing area, but should not do so by more than 250 millimeters (no infringements within the "D" circle):

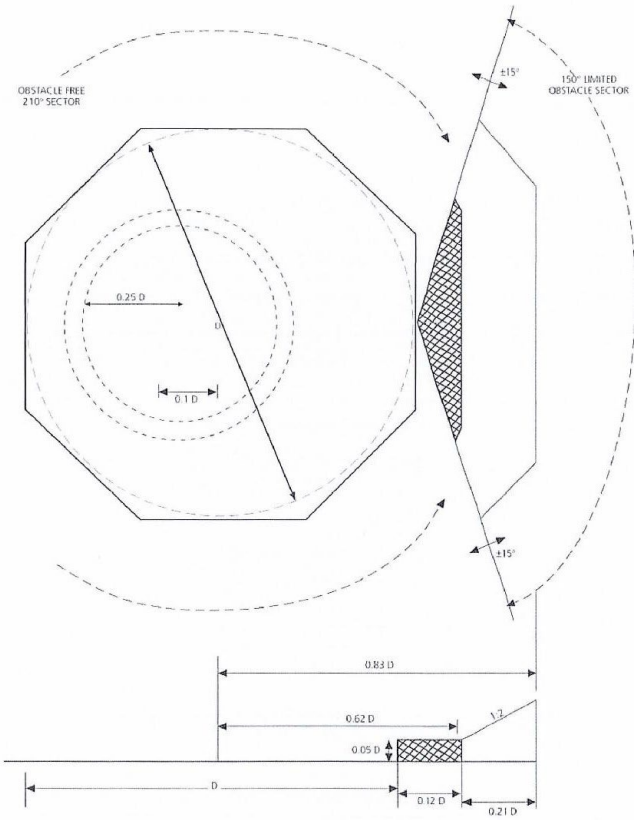
- The guttering (associated with the requirements in paragraph 3.2.4.2);
- The lighting required by paragraph 3.7;
- The foam monitors;
- Those handrails and other items associated with the landing area which are incapable of complete retraction or lowering for helicopter operations.

3.2.3.3 The bisector of the 210° obstacle free sector (OFS) should normally pass through the center of the "D" circle. The sector may be 'swung' by up to 15° as shown in Figure 1 below. Acceptance of the 'swung' criteria will normally only be applicable to existing vessels.

3.2.3.4 The diagram at Figure 1 shows the extent of the two segments of the 150° Limited Obstacle Sector (LOS) and how these are measured from the center of the (imaginary) 'D' circle and from the perimeter of the safe landing area (SLA). This diagram assumes, since helicopter landing areas are designed to the minimum requirement of accommodating a 1 'D' Circle, that the 'D' circle perimeter and SLA perimeter are coincidental. No objects above 0.050 are permitted in the first (hatched area in Figure 1) segment of the LOS. The first segment extends out to 0.62D from the center of the 'D' Circle, or 0.120 from the SLA perimeter marking. The

second segment of the LOS, in which no obstacles are permitted within a rising 1:2 slope from the upper surface of the first segment, extends out to 0.830 from the center of the 'D' Circle, or a further 0.210 from the edge of the first segment of the LOS. The exact point of origin of the LOS is assumed to be at the periphery of the 'D' Circle.

Figure 1 - Obstacle Limitation showing position of Aiming Circle



Drawing not to scale.

3.2.3.5 Some helicopter landing areas are able to accommodate a SLA which covers a larger area than the declared 'D' value; a simple example being a rectangular deck with the minor dimension able to contain the 'D' circle. In such cases it is important to ensure that the origin of the LOS (and OFS) is at the SLA perimeter as marked by the perimeter line. Any SLA perimeter should guarantee the obstacle protection afforded by both segments of the LOS. The respective measurements of 0.12D from the SLA perimeter line, plus a further 0.21D are to be applied. On these larger decks there is thus some flexibility in deciding the position of the perimeter line and SLA in order to meet the LOS requirements and when considering the position and height of fixed obstacles. Separating the origin of the LOS from the perimeter of the 'D' circle in Figure 1 and moving it to the right of the page will demonstrate how this might apply on a rectangular SLA.

3.2.3.6 The extent of the LOS segments will, in all cases, be lines parallel to the SLA perimeter line and follow the boundaries of the SLA perimeter (see Figure 1 above). Only in cases where the SLA perimeter is circular will the extent be in the form of arcs to the 'D' circle. However, taking the example of an octagonal SLA as drawn at Figure 1, it would be possible to replace the angled corners of the two LOS segments with arcs of 0.12D and 0.33D centered on the two adjacent corners of the SLA; thus cutting off the angled corners of the LOS segments.
If these arcs are applied they should not extend beyond the two corners of each LOS segment so that minimum clearances of 0.12D and 0.33D from the corners of the SLA are maintained. Similar geometric construction may be made to a square or rectangular SLA but care should be taken to ensure that the LOS protected surfaces minima can be satisfied from all points on the SLA perimeter.

3.2.4 LANDING AREA SURFACE 3.2.4.1

The landing area should have an overall coating of non-slip material and all markings on the surface of the landing area should be made with the same non- slip materials. Whilst extruded section or grid construction aluminum (or other) decks may incorporate adequate non-slip profiles in their design, it is preferable that they are also coated with a non-slip material unless adequate friction properties have been designed into the construction. It is important that the friction properties exist in all directions. Over-painting friction surfaces on such designs may compromise the friction properties. Recognized surface friction material is available commercially.

3.2.4.2 Helicopter landing areas should be cambered to a maximum gradient of 1:100. Any distortion of the helicopter landing area surface due to, for example, loads from a helicopter at rest should not modify the landing area drainage system to the extent of allowing spilled fuel to remain on the deck. A system of guttering should be provided around the perimeter to prevent spilled fuel from falling on to other parts of the vessel and to conduct the spillage to an appropriate drainage system. The capacity of the drainage system should be sufficient to contain the maximum likely spillage of fuel on the deck. The calculation of the amount of spillage to be contained should be based on an analysis of helicopter type, fuel capacity, typical fuel loads and uplifts. The design of the drainage system should preclude blockage by debris. The helicopter landing area should be properly sealed so that spillage will only route into the drainage system.

3.2.4.3 For operations in adverse weather conditions a tautly-stretched rope netting should be

provided to aid the landing of helicopters with wheeled undercarriages. The intersections should be knotted or otherwise secured to prevent distortion of the mesh. It is preferable that the rope be 20 mm diameter sisal, with a maximum mesh size of 200 mm. The rope should be secured every 1.5 meters round the landing area perimeter and tensioned to at least 2225 N. Netting made of material other than sisal may be considered but netting should not be constructed of polypropylene type material which is known to rapidly deteriorate and flake when exposed to weather. As a general rule, it should not be possible to raise any part of the net by more than approximately 250 mm above the helicopter landing area surface when applying a vigorous vertical pull by hand. The location of the net should ensure coverage of the area of the aiming circle but should not cover the helicopter landing area identification marking or 't' value markings. Some nets may require modification to outboard corners so as to keep the identification marking uncovered. In such circumstances the dimensions given in Table 2 below may be modified.

3.2.4.4 There are three sizes of netting as listed below in Table 2. The minimum size depends upon the type of helicopter for which the landing area is to be used as indicated in Table 1. Sizes are presented here for guidance only and nets of other sizes may be acceptable providing arrangements cover the whole of the aiming circle without obscuring the landing area identification markings.

Table 2 - Helicopter Deck Netting

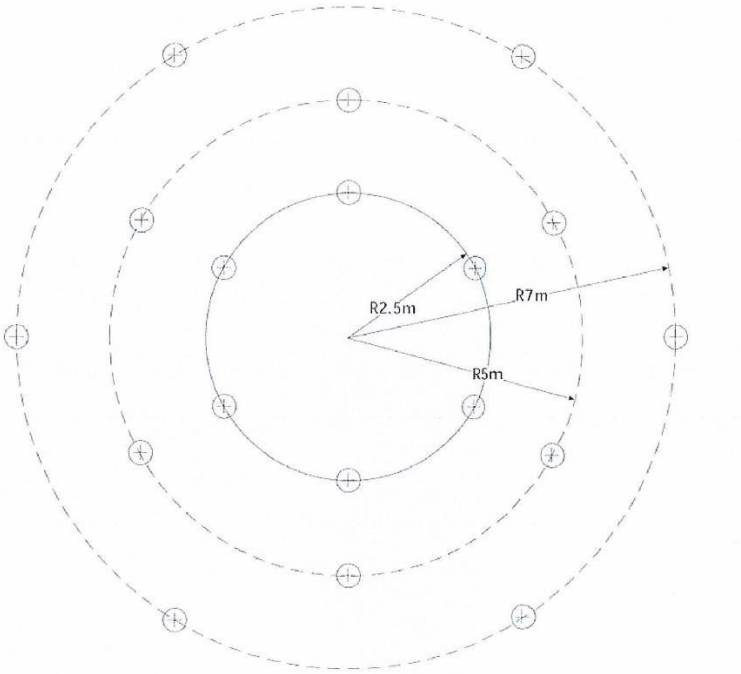
Small	9 meters by 9 meters
Medium	12 meters by 12 meters
Large	15 meters by 15 meters

3.3 Helicopter Tie-Down Points

3.3.1 Sufficient flush-fitting (when not in use) or removable semi-recessed tie-down points should be provided for securing the maximum sized helicopter for which the helicopter landing area is designed. They should be so located and be of such strength and construction to secure the helicopter when subjected to expected weather conditions. They should also take into account the inertial forces resulting from the movement of the vessel.

3.3.2 Tie-down rings should be compatible with the dimensions of tie-down strop attachments. Tie-down rings and strops should be of such strength and construction so as to secure the helicopter when subjected to expected weather conditions. The maximum bar diameter of the tie-down ring should be compatible with the strop hook dimension of the tie down strops carried by the helicopter operator. An example of a suitable tie-down configuration is shown at Figure 3. The Aviation Inspection Body or helicopter operator will provide guidance on the configuration of the tie-down points for specific helicopter types.

Figure 3 Example of Suitable Tie-down Configuration



Notes:
1. The tie-down configuration should be based on the centre of the Aiming Circle marking.
2. Additional tie-downs will be required in a parking area.
3. The outer circle is not required for 'D'-values of less than 22.2 m.

3.4 Safety Net

3.4.1 Safety nets for personnel protection should be installed around the landing area where there is a danger of personnel falling overboard. This should be looked at on an individual basis and a suitable risk assessment conducted. Where adequate structural protection against falls exists or adequate helideck procedures are in place with an appropriate risk assessment conducted and approved by the Administration, then safety nets may be omitted. If fitted, the netting used should be of a flexible nature, with the inboard edge fastened level, just below the edge of the helicopter landing area. The net itself should extend 1.5 meters in the horizontal plane and be arranged so that the outboard edge is not above the level of the landing area so that it has an upward and outward slope of at least 10°. It may be possible to incorporate dropped rails in place of a safety net but the dimensions and guidance above pertaining to safety net should be adhered to.

3.5 Access Points

3.5.1 Many helicopters have passenger access on one side only and helicopter landing orientation in relation to landing area access points becomes important because it is necessary to ensure that embarking and disembarking passengers are not required to pass around the helicopter tail rotor, or under the front of the main rotor of those helicopters with a low profile rotor, should a 'rotors-running turn-round' be conducted.

3.5.2 There should be a minimum of two access/egress routes to the helicopter landing area- these should be 180º apart. The arrangements should be optimized to ensure that, in the event of an accident or incident on the helicopter landing area, personnel will be able to escape upwind of the landing area. Adequacy of the emergency escape arrangements from the helicopter landing area should be included in any evacuation, escape and rescue analysis for the vessel, and may require a third escape route to be provided.

3.5.3 Where foam monitors are co-located with access points, care should be taken to ensure that no monitor is so close to an access point as to cause injury to escaping personnel by operation of the monitor in an emergency situation.

3.5.4 Where handrails associated with landing area access/escape points exceed the height limitations given at paragraph 3.2.3.2 and 3.2.3.4 they should be retractable, collapsible or removable. When retracted, collapsed or removed the rails should not impede access/egress. Handrails which are retractable, collapsible and removable should be painted in a contrasting color scheme. Procedures should be in place to retract, collapse, or remove them prior to helicopter arrival. Once the helicopter has landed, and the crew has indicated that passenger movement may commence, the handrails may be raised and locked in position. The handrails should be retracted, collapsed, or removed again prior to the helicopter taking-off.

Where anti-collision lights are utilized, the helicopter crew will ensure they are switched off before the movement of passengers and/or freight takes place.

3.6 Visual Aids

3.6.1 The following sections outline the requirements for helicopter landing area markings which should be permanently painted on the deck. Plans of the marking arrangements including dimensions should be submitted to the Aviation Inspection Body for approval.

3.6.2 Helicopter landing area perimeter line marking and lighting serves to identify the limits of the Safe Landing Area (SLA) for day and night operations.

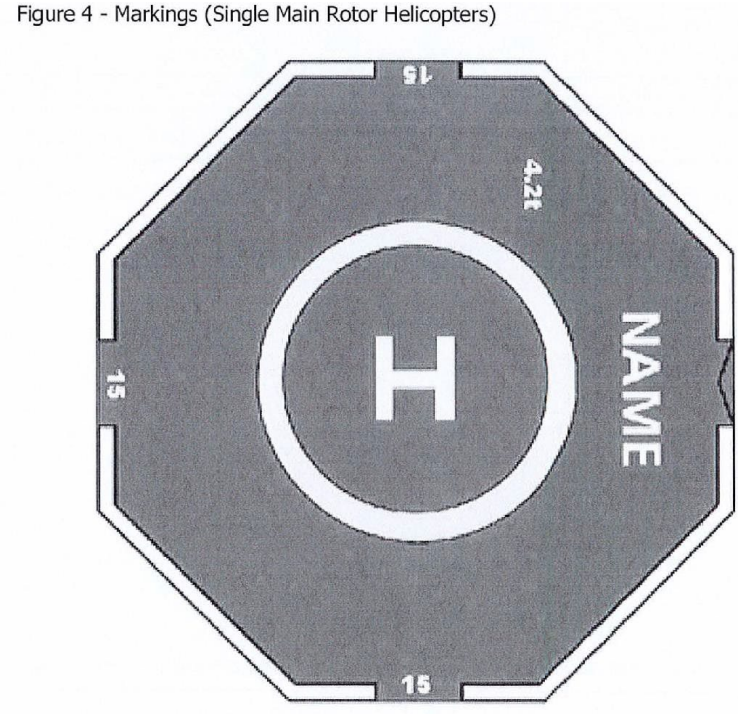
3.6.3 A wind direction indicator (windsock) should be provided during helicopter operations and located so as to indicate the clear area wind conditions at the vessel location.

It is often inappropriate to locate the windsock as close to the helicopter landing area as possible where it may compromise obstacle protected surfaces, create its own dominant obstacle or be subjected to the effects of turbulence from structures resulting in an unclear wind indication. The windsock should be illuminated for night operations.

3.6.4 HELICOPTER LANDING AREA MARKINGS (SEE FIGURE 4 BELOW)

For the smallest landing areas (typically < 16 m) it may be necessary to reduce the size of the helideck markings appropriately. In such circumstances, the Aviation Inspection Body should be consulted as soon as possible. The color of the helicopter landing area should where possible be a contrasting color to the rest of the vessel's deck. The perimeter of the SLA should be clearly marked with a painted line 0.3 meters wide in a contrasting color to the helideck.

Figure 4 - Markings (Single Main Rotor Helicopters)



3.6.4.1 The light grey color of aluminum may be acceptable in specific helicopter landing area applications where these are agreed with the Aviation Inspection Body. This should be discussed in the early design phase. In such cases the conspicuity of the helicopter landing area markings may need to be enhanced by, for example, outlining the deck marking lines and characters with a thin black line.
Alternatively, conspicuity may be enhanced by overlaying white markings on a painted black background.

3.6.4.2 A maximum allowable mass marking should be marked on the helicopter landing area in a position which is readable from the preferred final approach direction i.e. towards the obstacle-free sector origin. The marking should consist of a two or three digit number expressed to one decimal place rounded to the nearest 100 kg and followed by the letter 't' to indicate the allowable helicopter weight in tons (1000 kg). The height of the figures should be 0.9 meters with a line width of approximately 0.12 meters and be in a color which contrasts with the helicopter landing area surface (preferably white: avoid black or grey).

3.6.4.3 An aiming circle (touchdown/positioning marking) for each helicopter landing area should be provided as follows: (see Figures 4 and 5).

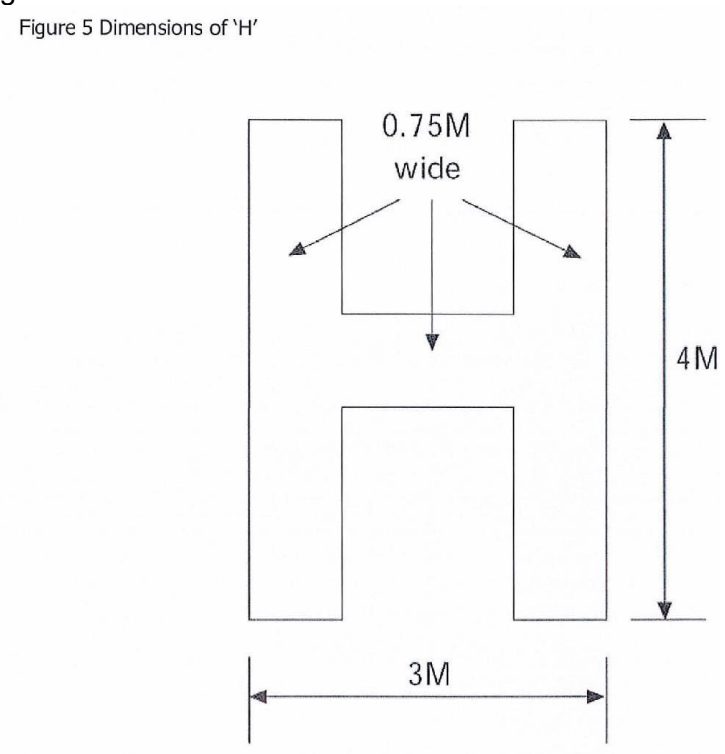
3.6.4.3.1 On smaller helicopter landing areas with a "D"-value up to and including 16.00 m and

for bow-mounted helicopter landing areas the aiming circle should be concentric with the helicopter landing area center to ensure maximization of space all around for safe personnel movement and optimization of the visual cueing environment.
On larger areas with a "D"-value greater than 16.00 m, the center of the aiming circle should be displaced 0.1 D from the center of the "D" circle towards the outboard edge of the helicopter landing area along the bisector of the obstacle free sector in order to achieve an increased safety margin for tail rotor clearance. The marking should be a circle with an inner diameter of 0.5 times the certificated "D"- value of the helicopter landing area and a line width of not less than 0.5 m for landing areas with a "D"-value up to and including 16.00 m and not less than 1.0 m for landing areas with a "D"- value greater than 16.00 m. The circle should be in a contrasting color to the helideck.

3.6.4.3.2 On those decks where the aiming circle is concentric with the center of the D circle or SLA, the need for some mitigation against concerns over tail rotor clearances should be considered; either by achieving more obstacle clearance in the 150º LOS or by adopting appropriate operational procedures (e.g. vessel to provide relative wind from beam or stern).

3.6.4.3.3 An "H" painted in a color contrasting with the deck (preferably white) should be co-located with the aiming circle with the cross bar of the "H" lying along the bisector of the obstacle-free sector. The minimum H dimensions are shown in brackets for landing areas with a "D"-value up to and including 16.00 m, and without brackets for landing areas with a "D"-value greater than 16.00 m.

Figure 5 Dimensions of 'H'



3.6.4.3.4 Where the obstacle-free sector has been swung in accordance with Section 3 paragraph 3.2.3.3 the positioning of the aiming circle and "H" should comply with the normal unswung criteria. The "H" should, however, be orientated so that the bar is parallel to the bisector of the swung sector.

3.7 Lighting

3.7.1 The safe landing area (SLA) should be delineated by green perimeter lights visible omni directionally from on or above the landing area. These lights should be above the level of the deck but should not exceed the height limitations in paragraph 3.2.3.2. The lights should be equally spaced at intervals of not more than three meters around the perimeter of the SLA, coincident with the white delineating the perimeter (see para 3.6.2 and 3.6.4).

3.7.2 In the case of square or rectangular decks there should be a minimum of four lights along each side including a light at each corner of the safe landing area. The 'main beam' of the green perimeter lights should be of at least 30 candelas intensity (the full vertical beam spread specification is shown in Table 3). Flush fitting lights may be used at the inboard (150º LOS origin) edge of the SLA.

3.7.3 Where the declared "D"-value of the helicopter landing area is less than the physical helicopter landing area, the perimeter lights should delineate the limit of the safe landing area (SLA) so that the helicopter may land safely by reference to the perimeter lights on the limited obstacle sector (LOS -150°) 'inboard' side of the helicopter landing area without risk of main rotor collision with obstructions in this sector.

By applying the LOS clearances (given in Section 3 paragraph 3.2.3.4) from the perimeter marking, adequate main rotor to obstruction separation should be achieved. Touchdown for normal landing should be made by reference to the aiming circle.

On helicopter landing areas where insufficient clearance exists in the LOS, a suitable temporary arrangement to modify the lighting delineation of the SLA, where this is found to be marked too generously, should be agreed with the Aviation Inspection Body by replacing existing green lights with red lights of 30 candelas intensity around the 'unsafe' portion of the SLA (the vertical beam spread characteristics for red lights should also comply with Table 3).

The perimeter line, however, should be repainted in the correct position immediately and the area of deck between the old and new perimeter lines should be painted in a color that contrasts with the main helicopter landing area. Use of flush fitting lights in the 150° sector perimeter will provide adequate illumination while causing minimum obstruction to personnel and equipment movement.

Table 3: ISO-candela diagram for helicopter landing area perimeter lights

Elevation	Intensity
0º - 90º	60cd max*
>20º - 90º	3cd min
>10º - 20º	15cd min
0º -10º	30cd min
-180º	Azimuth +180º

3.7.4 The whole of the safe landing area (SLA) should be adequately illuminated if intended for night use. In the past, owners and operators have sought to achieve compliance by providing deck level floodlights around the perimeter of the SLA and/or by mounting floodlights at an elevated location 'inboard' from the SLA, e.g. floodlights angled down from the top of a bridge or hangar.

Experience has shown that floodlighting systems, even when properly aligned, can adversely affect the visual cueing environment by reducing the conspicuity of helicopter landing area perimeter lights during the approach, and by causing glare and loss of pilots' night vision during hover and landing. Furthermore, floodlighting systems often fail to provide adequate illumination of the center of the landing area leading to the so-called 'black-hole effect'. It is essential therefore, that any floodlighting arrangements take full account of these problems.

3.7.5 The floodlighting should be arranged so as not to dazzle the pilot and, if elevated and located off the landing area clear of the LOS, the system should not present a hazard to helicopters landing and taking off from the helicopter landing area. All floodlights should be capable of being switched on and off at the pilot's request. Setting up of lights should be undertaken with care to ensure that the issues of adequate illumination and glare are properly addressed and regularly checked.

Adequate shielding of 'polluting' light sources can easily be achieved early on in the design stage, but can also be implemented on existing installations using simple measures. Temporary working lights which pollute the helicopter landing area lighting environment should be switched *off* during helicopter operations.

3.7.6 It is important to confine the helicopter landing area lighting to the landing area, since any light overspill may cause reflections from the sea. The floodlighting controls should be accessible to, and controlled by, the officer(s) in charge of the landing area operations team(s).

3.7.7 In seeking to develop an alternative system to conventional floodlighting, it has been demonstrated that arrays of segmented point source lighting (ASPSL) in the form of encapsulated strips of light emitting diodes (LEOs) can be used to illuminate the aiming circle and landing area identification marking (H'). This arrangement has been found to provide the visual cues required by the pilot earlier on in the approach and more effectively than by using floodlighting, and without the disadvantages associated with floodlighting such as glare. Large yacht owners are encouraged to consider appropriate systems in lieu of conventional floodlighting.

3.7.8 The quoted intensity values for lights apply to the intensity of the light emitted from the unit when fitted with all necessary filters and shades.

3.7.9 The emergency power supply of the vessel should include the helicopter landing area lighting. Any failures or outages should be reported immediately to the helicopter pilot/operator. The lighting should be fed from an Uninterrupted Power Supply (UPS) system capable of providing the required load for at least 15 minutes. This can be a standalone supply or be an additional loading requirement for the vessel's emergency power supplies.

3.8 Obstacles - Marking and Lighting

3.8.1 Fixed obstacles identified as a hazard to helicopters by the helicopter pilot/operator, or by the Aviation Inspection Body, should be clearly defined in any operations manual (ISM procedure or Yacht Aviation File).

3.8.2 Omnidirectional red lights of at least 10 candelas intensity should be fitted at suitable locations to provide the helicopter pilot with visual information on the proximity and height of objects which are higher than the landing area and which are close to it or to the LOS boundary. Objects which are more than 15 meters higher than the landing area should be fitted with intermediate red lights of the same intensity spaced at 10 meter intervals down to the level of the landing area (except where such lights would be obscured by other objects).

3.8.3 An omnidirectional red light of intensity 25 to 200 candelas should be fitted to the highest point of the vessel. Where this is not practicable, the light should be fitted as near to the extremity as possible.

3.8.4 Red lights should be arranged so that the location of the objects which they delineate are visible from all directions above the landing area.

3.8.5 The emergency power supply of the yacht should include all forms of obstruction lighting. Any failures or outages should be reported immediately to the helicopter pilot/operator. The lighting should be fed from an Uninterrupted Power Supply (UPS) system capable of providing the required load for at least 15 minutes. This can be a standalone supply or be an additional loading requirement for the yacht's emergency power supplies.

4 Helicopter Landing Area Operational Standards

4.1 Helicopter Landing Area Movement

4.1.1 Yachts experience dynamic motions due to wave action which represent a potential hazard to helicopter operations. Operational limitations based on limited pitch, roll, heave, may therefore be applied to the landing area by the Aviation Inspection Body. Helicopter landing area downtime due to excessive deck motion can be minimized by careful consideration of the location of the landing area on the vessel at the design stage. Guidance on helicopter landing area location and how to assess the impact of the resulting motion on operability is presented in UK CM Paper 2004/02 "Helideck Landing Area Design Considerations - Environmental Effects" which is available on the Publications section of the UK CAA website at www.caa.co.uk. Designers of helicopter landing areas should consult UK CAA Paper 2004/02 at the earliest possible stage of the design process.

4.1.2 The helicopter landing area will be limited to receiving helicopters in the conditions agreed by the Aviation Inspection Body.

4.1.3 It is necessary for details of pitch, roll, and heave motions to be recorded on the vessel prior to, and during, all helicopter movements. Pitch and roll reports to helicopters should include values, in degrees, about both axes of the true vertical datum (i.e. relative to the true horizon) and be expressed in relation to the vessel's head.

Roll should be expressed in terms of 'port' and 'starboard'; pitch should be expressed in terms of 'up' and 'down'; heave should be reported in a single figure, being the total heave motion of the helicopter landing area rounded up to the nearest meter. Heave is to be taken as the vertical difference between the highest and lowest points of any single cycle of the helicopter landing area movement. The parameters reported should be the maximum peak levels recorded during the ten minute period prior to commencement of helicopter operations.

4.1.4 The helicopter pilot is concerned, in order to make vital safety decisions, with the amount of 'slope' on, and the rate of movement of, the helicopter landing area surface. It is therefore important that the roll values are only related to the true vertical and do not relate to any 'false' datum (i.e. a 'list') created, for example, by anchor patterns or displacement. There are circumstances in which a pilot can be aided by amplification of the heave measurement by reference to the time period (seconds) in terms of 'peak to peak'.

4.1.5 Reporting Format:
A standard radio message should be passed to the helicopter which contains the information on helicopter landing area movement in an unambiguous format. This will, in most cases, be sufficient to enable the helicopter crew to make safety decisions. Should the helicopter crew require other motion information or amplification of the standard message, the crew will request it (for example, yaw and heading information).

Standard report example:
Situation: The maximum vessel movement (over the preceding ten minute period) about the roll axis is 1° to port and 3° to starboard (i.e. this vessel may have a permanent list of 1° to starboard and is rolling a further 2° either side of this 'false' datum). The maximum vessel movement (over the preceding ten minute period) about the pitch axis is 2° up and 2° down. The maximum recorded heave amplitude over a single cycle (over the preceding ten minute period) is 1.5 meters.
Report: *'Roll* 1 ° *left and 3° right; Pitch 2° up and 2° down; heave two meters'*

4.1.6 It is important to ensure that the deck motions reported to the helicopter pilot relate to the motion at the helicopter landing area. Very often pitch, roll and heave measurements are taken from a source far removed from the helicopter landing area location. If this source should happen to be amidships and the helicopter landing area is located, for example, high up on the bow, the actual heave (and, in future accelerations) at the helicopter landing area are likely to be far in excess of the source measurement. Software packages are available to provide helicopter landing area location corrected movement data from a source at a different location. Ideally, deck motion measuring equipment should be located at (attached to the underside of) the helicopter landing area.

4.2 Aircraft Operational Data - Reporting and Recording

4.2.1 In addition to the data covered by paragraph 4.1.3 above, it is essential that yachts are provided with means of ascertaining and reporting at any time:

.1 The wind speed and direction using aviation approved equipment to ICAO standard;
.2 The air temperature;
.3 The barometric pressure using aviation approved equipment to ICAO standard;
.4 The visibility, cloud base and cover; and
.5 The sea state.

4.2.2 Air temperature and barometric pressure should be measured by conventional instruments approved to ICAO standards. An indication of wind speed and direction will be provided visually to the pilot by the provision of a windsock colored so as to give maximum contrast with the background. However, for recording purposes, an anemometer positioned in an unrestricted airflow is required. A second anemometer, located at a suitable height and position can give useful information on wind velocity at hover height over the helicopter landing area in the event of turbulent or deflected airflows over the deck. Visibility, cloud conditions, and sea state will normally be assessed by visual observations.

4.2.3 Measuring instruments used to provide the data listed in paragraph 3.1 above should be periodically calibrated in accordance with the manufacturer's recommendations in order to provide continuing accuracy.

4.3 Helicopter Landing Area Operations Manual and General Requirements

4.3.1 The maximum helicopter weight and 'D'-value for which the helicopter landing area has been designed and the maximum size and weight of helicopter for which the vessel is certificated should be included in the Helicopter Landing Area Operations Manual and Landing Area Certificate. The extent of the obstacle-free area should also be stated and reference made to any helicopter landing area operating limitation imposed by helicopter operators or the Aviation Inspection Body as a result of non-compliances. Details of non-compliances themselves should also be listed.

4.4 Helicopter Operations Support Equipment

4.4.1 Provision should be made for equipment needed for use in connection with helicopter operations including:

.1 Chocks and tie-down strop;

.2 Heavy-duty, calibrated, accurate scales for passenger baggage and freight weighing;

.3 A suitable power source for starting helicopters if helicopter shut-down is seen as an operational requirement; and

.4 Equipment for clearing the helicopter landing area of snow and ice and other contaminants.

4.4.2 Chocks should be compatible with helicopter undercarriage/wheel configurations. Helicopter operating experience has shown that the most effective chock for use on helicopter landing areas is the 'rubber triangular' or ' single piece fore and aft' type chocks may be used as long as they are suited to all helicopters likely to operate to the helicopter landing area. The 'rubber triangular' chock is generally only effective on decks without nets.

4.4.3 For securing helicopters to the helicopter landing area only adjustable tie-down strops should be used.

4.5 Radio Communication Equipment

4.5.1 At least one aeronautical frequency radio licensed by the Administration responsible for the airspace in which the helicopter is intended to operate when approaching the vessel should be fitted on board the vessel.

4.5.2 Radio operators of offshore aeronautical radio stations are required to hold a Certificate of Competence. Further information can be found in CAA Publication CAP 452 'Aeronautical Radio Station Operator's Guide'.

4.6 Risk assessment

4.6.1 A full risk assessment should be carried out addressing all the operations anticipated with helicopter operations on board a yacht. This should include:

- Landing and securing
- Preparing for take-off and taking off
- Unloading passengers, baggage and stores
- Refueling
- Securing
- Safe movement of personnel

4.6.2 The risk assessment should be submitted to the Administration. The risk assessment to address the safe movement of personnel on the helicopter landing area should also be submitted for approval by the Aviation Inspection Body to demonstrate that safe passenger movement may take place without endangering the safety of the helicopter or the life of personnel on-board. The risk assessment of passenger movement described above should be used to demonstrate full mitigation of associated risks should non-fitment of a safety net as described in
3.4.1 above be requested.

4.7 Crew Training

4.7.1 The yacht crew, as appropriate, should be trained to deal with normal helicopter movements as well as abnormal and emergency situations. The training should include dealing with fires and other possible emergency scenarios.

4.7.2 Specific training should be provided to the Helicopter Landing Officer (HLO) by an appropriate training provider. Where there are refueling facilities on board, at least one member of crew should be trained in the handling of aviation (JetA1) fuel and associated quality control procedures.

4.7.3 Training of crewmembers and the HLO should include both practical and theoretical sessions and, wherever possible, practical training should be carried out on board by suitably trained personnel.

4.7.4 The crew should practice dealing with the possible emergency scenarios through regular drills on board with an annual inspection by an external auditor.

4.7.5 The emergency scenarios should be addressed in the yacht's contingency plans and similar documents.

5 Example Inspection Checklist

5.1 General

The following checklist indicates in general terms the minimum number of helicopter landing area physical characteristics which the Administration considers should be examined during initial inspection and periodic surveys carried out by the Aviation Inspection Body to confirm that there has been no alteration or deterioration in condition.

5.2 Helicopter Landing Area Dimensions:

.1 "D"-value as measured;
.2 Declared "D"-value;
.3 Deck shape;
.4 Scale drawings of deck arrangement.

5.3 Helicopter Landing Area Conditions:

.1 Type of surface, condition, friction, contaminant free;
.2 Fuel retention;
.3 Deck landing area net;
.4 Perimeter safety netting;
.5 Tie-down points.

5.4 Environment:

.1 Machinery exhausts;
.2 Hot and cold gas emissions;

.3 Presence of turbulence;

5.5 Obstacle Protected Surfaces (Minima):

.1 Obstacle free sector (210°);
.2 Limited obstacle sector (150°);
.3 Note if .1 above is swung from normal axis.

5.6 Visual Aids:

.1 Deck surface;
.2 General condition of painted markings;
.3 Location of H;
.4 Aiming circle;
.5 Maximum allowable weight marking;
.6 Conspicuity of painted markings;
.7 Wind indicator;
.8 Perimeter lighting;
.9 Floodlighting;
.10 Obstruction lighting;
.11 Marking of dominant obstacles;
.12 Shielding of working lights (helicopter landing area light pollution).

5.7 Fuel System:

.1 Jet A-l installation;
.2 Hose;
.3 Earthing equipment;
.4 Fuel Records.

5.8 Rescue and Fire Fighting Facilities:

.1 Principal agent
.2 Complementary media
.3 Rescue equipment
.4 Personal protective equipment

5.9 Crew Training Certification:

.1 Training records

6 Helicopter Hangar Facilities

6.1 General

6.1.1 Helicopter hangar arrangements on board should be in accordance with requirements for helicopter refueling and hangar facilities contained within
SOLAS II-2, Regulation I8.7. Helicopter fueling facilities on board should be in accordance with requirements for helicopter refueling and hangar facilities in SOLAS II -2, Regulation I8.7.

In addition, the requirements outlined in this section of the Code should be complied with in full unless a safety case is made to, and approved by, the Administration, based on an alternative arrangement according to Classification Society Rules or guidance from the Aviation or Petro-Chemical industries. The requirements in this section are based upon the use of helicopters run on Jet Al fuel. When developing hangar arrangements, consideration should be given to the type of fuel on which the helicopter to be stowed is run.

6.1.2 The following plans and particulars are to be submitted to the Classification Society and Administration for approval:

.1 Hangar general arrangement and structure;
.2 Helicopter lift, hoist, and movement arrangements (if appropriate);
.3 Structural fire protection;
.4 Fire detection and extinguishing arrangements;
.5 Ventilation arrangements.

6.2 Hangar Design Considerations

6.2.1 Helicopter hangar(s) on board should be positioned, as far as is practicable, so as to preclude excessive movement and acceleration forces. Guidance on this should be sought from the helicopter manufacturer/operator. Where possible, the positioning of hangar(s) should be determined through the use of computer modelling and/or wind tunnel testing (refer also to 3.2.2 above).

6.2.2 The perimeter of hangar(s) and any associated entrance or hatchway inclusive of helicopter lift arrangements should provide a stowage/maintenance box allowing for a minimum 0.5m clearance at any point around the helicopter and rotors when the helicopter is in its stowed condition.

6.2.3 Where appropriate CCTV should be used to ensure visibility of the aircraft at all times.

7 Helicopter Fueling Facilities

7.1 General

This section outlines the requirements for the storage and transfer of Jet A1 fuel. When developing fueling arrangements, consideration should be given to the type of fuel on which the helicopter to be operated is run. In addition, all facilities for the storage and handling of aviation fuels on board should be grade identified using the appropriate American Petroleum Industry (API) markings for the grade of fuel used. Aviation fuel facilities should also be fully segregated from any other fuel system.

7.2

Refueling and defueling operational considerations should be agreed with the helicopter pilot/operator and Aviation Inspection Body.

7.3

The following plans and particulars are to be submitted to the Aviation Inspection Body and Classification Society for approval:

.1 Description of fuel with statement of minimum flash point (closed cup test);
.2 Arrangement of fuel storage and piping;
.3 Arrangements for drainage, ventilation and sounding of spaces adjacent to storage tanks;
.4 Details and approval certification of pumping units;
.5 Structural fire protection arrangements of all spaces to contain aviation fuel;
.6 Fire detection and extinguishing arrangements;
.7 Ventilation arrangements.

7.3

Attention is also drawn to section 14.1 above which addresses "Protection of spaces containing vehicles or craft with fuel in their tanks or lockers storing such fuels."

7.4

When developing operational procedures for the movement of aviation fuel onboard, the restricted use of radio frequency equipment including portable phones with regard to transmission sparks should be considered.

7.5 Storage of Aviation Fuel

7.5.1 Fuel storage tanks should be of *baffle-free,* stainless steel, cylindrical construction, located in a designated area as remote as practicable from machinery and accommodation spaces, and be suitably isolated from areas where there are sources of ignition.

7.5.2 Fuel storage tanks should be provided with an intrinsically safe level indicator fitted through the top of the tank, and a 3/4 inch sampling valve at the bottom of the tank (low end) to allow for samples to be taken as per paragraph 7.8.3 of this section. The minimum slope of the tank to the sampling point should be 1:30.

7.5.3 The storage and handling area should be permanently marked. Instructions for filling fuel

and, if appropriate, emptying fuel, should be posted in the vicinity of the filling area.

7.5.4 Tank ventilation (breather) pipes should be fitted with an approved vent head with pressure-vacuum valve, flame arrester, and desiccant. The vent outlet should be located no less than 2.3m above the weather deck in a safe position away from accommodation spaces, ventilation intakes and equipment that may constitute an ignition hazard. Particular attention should also be directed to the height of the tank vent and overflow with respect to the design head of the tank.

7.5.5 High level alarm arrangements should be provided to indicate when fuel storage tanks are close to being filled in excess of maximum operating levels. Alternative arrangements for tank venting may be accepted subject to approval from the Administration.

7.5.6 A coaming surrounding the fuel storage tanks, associated piping and the pumping unit should be provided. The height of this coaming should be at least 150 mm, so as to contain fuel spillage as well as fire extinguishing agents. Where the pumping unit is situated at a remote distance from the fuel storage tank, a separate coaming of the same minimum height should be provided around the pumping unit. For tanks forming an integral part of the vessel's structure, cofferdams with permanently fitted gas detectors should be provided as necessary to contain leakage and prevent contamination of the fuel. Also, it should be ensured that there is no common boundary between the fuel storage tank and accommodation or high fire risk spaces.

7.5.7 Arrangements for drainage from within the coaming area described in 7.5.6 above should be as follows:

.1 Permanent piping and a suitable holding (waste) tank (compliant with 7.1 and 7.5) should be fitted so that drainage can be either led to the holding tank (for draining fuel) or discharged overboard (for draining water) through a three-way valve. No other valve should be permitted in the drain piping. The holding tank should be clearly labeled to distinguish between itself and the main storage tank.

.2 The cross sectional area of the drain pipe should be twice that of the storage tank outlet pipe.

.3 The area within the coaming should be sloped towards the drain pipe.

7.5.8 Drainage of cofferdam spaces should be entirely separate from the machinery space drainage arrangements. As far as is practicable, fuel sampling points should be low points on piping and should provide a "closed sampling" visi-jar system fitted with arrangements to prevent the spring-loaded valve from being locked in an open position.

7.5.9 Air pipes for the cofferdam space should be led to a point at least 2.3m above the weather deck through a safe space and fitted with an approved air pipe head fit for purpose and having a wire gauze diaphragm of corrosion resistant material.

7.5.10 Access to each cofferdam should be provided by at least two manholes from the open deck, each fitted with gas-tight manhole covers. Cofferdams should be cleaned prior to opening manhole covers, using an induced draught certified safe ventilation fan for a minimum of 20 minutes. A notice to this effect should be fitted to each manhole.

7.6 Fuel Pumping and Storage Tank Filling

7.6.1 All tank outlet valves and filling valves should be mounted directly onto the tank and be

capable of being closed from a remote location outside the compartment in the event of a fire in the compartment. Ball valves are to be of the stainless steel, antistatic, fire tested type.

7.6.2 If more than one storage tank is fitted then fuel should be pumped through suitable filtration if it is to be transferred from one tank to another.

7.6.3 Filling arrangements for fuel tanks should be through closed piping systems with outlet ends configured to reduce turbulence and foaming of the fuel. If the storage tank(s) are filled from the top, the filler pipe should pass through the tank to the bottom and terminate with a 90 degree bend so that fuel flows over the bottom of the tank to reduce the possibility of a build-up of static charge.

7.6.4 Pumping units should be easily accessible and capable of being controlled from both the fuel station and a position remote from the fuel station. The device to prevent over-pressurization as required by SOLAS 11-2, Regulation 4 .2.2.4 should be fitted with a relief valve to discharge either to the suction side of the pump(s) or to a holding tank complying with the arrangements of 7.5 of this section.

7.6.5 When not in use, fuel filling equipment should be stowed in a locker that is well ventilated and drained.

7.6.6 Suitable filtration arrangements in accordance with appropriate American Petroleum Industry (API) and British Energy Institute (or equivalent) standards should be provided to reduce the level of water and particulate contamination of the fuel to within the limits specified by the helicopter manufacturer.
The minimum requirements are; delivery into storage through a filter water separator (FWS), filtration out of storage through filter water separator (FWS), filtration at the point of filling (e.g. on the helicopter landing area), via a filter monitor (FM). Filter vessels should be fitted with a differential pressure gauge and automatic air eliminator.

7.6.7 In general, all piping systems should be located clear of accommodation spaces, escape routes, embarkation stations and ventilation openings and should not pass through category A machinery spaces. However, where arrangements are such that piping has to pass through accommodation spaces, service spaces, escape routes, or embarkation stations double skinned piping is to be used or pipes should be enclosed in a cofferdam.

7.6.8 Means should be provided for keeping deck spills away from accommodation and service areas.

7.6.9 Drip trays for collecting replenishment oil residues in pipelines and hoses should be provided beneath pipe and hose connections in the manifold area. Drainage should be designed and constructed in order to avoid leakage overboard.

7.6.10 It is recommended that a "Y" strainer should be fitted on the pump suction to protect the pump itself.

7.7 Refueling and Defueling Helicopters

7.7.1 Refueling and defueling hoses should be of one continuous length, smooth bore, synthetic

rubber construction, and semi-conducting, conforming to EN 1361 type C or API standards. A hose end pressure controller should also be provided for fueling hoses to prevent the possibility of the helicopter fuel tanks being subject to excessive pressure. Delivery Nozzles should be fitted with minimum 100 mesh strainer element, and in the case of gravity over-wing nozzles, they should be situated in the spout. Trigger mechanisms should not have hold-open ratchets.

7.7.2 Provision should be made to electrically bond the helicopter to the vessel prior to commencement, and throughout the process of, any refueling and defueling procedures. The maximum resistance of such bonding systems should be less than
0.5 ohms.

7.7.3 Where appropriate CCTV should be used to ensure full view from the bridge of all helicopter refueling activities that would normally be hidden from view.

7.8 Prevention of Fuel Contamination

7.8.1 Materials and/or their surface treatment used for the storage and distribution of fuel should be selected such that they do not introduce contamination or modify the properties of the fuel. The use of copper or zinc compounds in fuel piping systems where they may come into contact with fuel is not permitted. Copper-nickel materials are permissible but should be limited to positions after filtration and water absorption equipment.

7.8.2 The location and arrangement of air pipes for fuel tanks are to be such that in the event of a broken vent pipe, this does not directly lead to ingress of seawater or rain water.

7.8.3 Fuel samples should be taken on a daily basis throughout the fuel handling, storage, and distribution process from the tank in use, all filter vessels, and at the hose end. Fuel samples should be recorded and kept for 24 hours in a 1 US Gallon glass jar then disposed of in the aviation fuel waste/holding tank referred to in paragraph

7.5.7 A record should be kept of all fuel movements on board.

Guidance on how to take fuel samples and record fuel movements may be obtained from Chapter 4 of UK CAA CAP 748 which is accessible via the UK CAA website www.caa.co.uk. Fuel in the holding tank may be passed to the main tank provided that suitable filtration in accordance with paragraphs contained within 7.6 and to the satisfaction of the aviation inspection body.

7.8.4 At least one member of crew on-board the vessel should be trained in the handling of aviation (JetA1) fuel and associated quality control procedures. This person(s) should oversee all operations involving the movement of aviation fuel on-board.
Further guidance on such training may be obtained from the fuel supplier and marine aviation consultants.

7.9 Fuel Pumping Spaces/Compartments

7.9.1 Where it is intended to install fuel transfer pumps for handling aviation fuel in a separate compartment, the pump room(s) should be totally enclosed and have no direct communication, through e.g. bilge piping systems and ventilation systems

with machinery spaces; should be situated adjacent to the fuel storage tanks; and should be provided with ready means of access from the weather deck.

7.9.2 Alarms and safety arrangements should be provided as indicated in 7.5.5 and Table 4, below.

Table 4 – Alarms

Item	Alarm	Note
Bulkhead gland temperature	High (See Note 1)	Any machinery item
Pump bearing and casing temperature	High (See Note 1)	Any machinery item
Bilge level	High	—
Hydrocarbon concentration	High (See Note 2)	> 10% LEL

Notes:

1. The alarm signal is to trigger continuous visual and audible alarms in the pump room or the pump control station.
2. This alarm signal is to trigger a continuous audible and visual alarm in the pump room, pump control station and machinery control room.

7.9.3 A system for continuously monitoring the concentrations of hydrocarbon gases within the pump room should be fitted. Monitoring paints are to be located in positions where potentially dangerous concentrations may be readily detected.

7.10 Ventilation

7.10.1 Fuel pump room(s), fuel storage room(s) and other closed spaces which contain fuel handling equipment, and to which regular access is required during fuel handling operations, are to be provided with permanent ventilation system(s) of the mechanical extraction type.

7.10.2 The ventilation system(s) should be capable of being operated from outside the compartment being ventilated and a notice should be fixed near the entrance stating that no person is to enter the space until the ventilation system has been in operation for at least 15 minutes.

7.10.3 The ventilation system(s) should be capable of 20 air changes per hour, based on the gross volume of the pump room or space.

7.10.4 Protection screens of not more than 13 mm square mesh should be fitted in outside openings of ventilation ducts, and ventilation intakes should be so arranged as to minimize the possibility of re-cycling hazardous vapors from any ventilation discharge opening. Vent exits are to be arranged to discharge upwards.

7.10.5 The ventilation should be interlocked to the lighting system (except emergency lighting)

such that the pump room lighting may only come on when the ventilation is in operation. Failure of the ventilation system is not to cause the lighting to go out and failure of the lighting system is not to cause loss of the ventilation system.

7.11 Non-Sparking Fans for Hazardous Areas

7.11.1 The air gap between impeller and housing of ventilation fans should be not less than 0.1 of the impeller shaft bearing diameter or 2 mm whichever is the larger, subject also to compliance with 7.3. Generally, however, the air gap need be no more than 13 mm.

7.11.2 The following combinations of materials are permissible for the impeller and the housing in way of the impeller:

.1 Impellers and/or housings of non-metallic material, due regard being paid to the elimination of static electricity;

.2 Impellers and housings of non-ferrous metals;

. 3 Impellers and housings of austenitic stainless steel;

.4 Impellers of aluminum alloys or magnesium alloys and a ferrous housing provided that a ring of suitable thickness of non-ferrous material is fitted in way of the impeller;

.5 Any combination of ferrous impellers and housings with not less than 13 mm tip clearance; and

. 6 Any combination of materials for the impeller and housing which are demonstrated as being spark proof by appropriate rubbing tests.

7.11.3 The following combinations of materials for impellers and housing are not considered spark proof and should not be permitted:

.1 Impellers of an aluminum alloy or magnesium alloy and a ferrous housing, irrespective of tip clearance;

. 2 Impellers of a ferrous material and housings made of an aluminum alloy, irrespective of tip clearance;

. 3 Any combination of ferrous impeller and housing with less than 13 mm tip clearance, other than permitted by 7.3.

7.11.4 Electrostatic charges both in the rotating body and the casing should be prevented by the use of antistatic materials (i.e. materials having an electrical resistance between 5 x 104 ohms and 108 ohms), or special means should be provided to avoid dangerous electrical charges on the surface of the material.

7.11.5 Type approval tests on the complete fan should be carried out to the satisfaction of the Classification Society.

7.11.6 Protection screens of not more than 13 mm square mesh should be fitted in the inlet and outlet of ventilation ducts to prevent the entry of objects into the fan housing.

7.11.7 The installation of the ventilation units on board should be such as to ensure the safe bonding to the hull of the units themselves.

Part F, Section 2 Submersibles

2.1 Applicability

2.1.1 This section outlines the minimum standards for operating submersibles from a yacht, and for the facilities on board yachts within the scope of this Code where operations of submersibles to/from the yacht are required.

2.1.2 This section does not address the construction of the submersible or its operation in any detail. The operator of the submersible is responsible for ensuring that the requirements of the Administration with which the submersible is registered are met and that the laws of the State in whose waters the submersible is operated are complied with in full.

2.1.3 The operator should verify that the Administration with which the submersible is registered is acceptable to the Administration of the yacht.

2.2 General Considerations

2.2.1 The construction and operational standards of a submersible should meet the requirements of the Administration with which the submersible is registered, including the standards set by the applicable Classification Society, and should address the guidelines provided by the IMO, and industry organizations such as the International Marine Contractors Association.

2.2.2 The primary consideration is to ensure the safe launch, operation recovery and stowage of a submersible and the maintenance of the submersible and the associated support facilities while it is on board.

2.2.3 A formal and documented risk assessment should be carried out by a suitably experienced and qualified individual authorized by the Administration. The risk assessment should establish the hazards and resultant risks associated with the launch, recovery, operation and stowage of the submersible that it is planned to utilize with the yacht. This should include the requirements for maintenance of the submersible and of the associated support facilities on board the yacht as well as the training of the yacht crew.

2.3 Launch and Recovery

2.3.1 The yacht should be fitted with suitable lifting appliances (handling systems) to safely launch and recover the submersible to the satisfaction of the Administration.

2.3.2 The handling systems should be tested prior to initial use and at defined intervals in accordance with the requirements of the Administration. The testing requirements should be in accordance with Part B, Section 4.6 of the Code.

2.3.3 The method of launching and recovery should ensure the safety of the crew of the submersible and passengers and should provide for suitable boarding arrangements.

2.3.4 Where a "moon pool" or equivalent facility is used to launch or recover the submersible, the construction shall be to the satisfaction of the Administration.

2.4 Stowage

2.4.1 The yacht should be fitted with suitable securing arrangements for the submersible to adequately support the structure and to prevent excessive movement in poor weather.

2.4.2 The yacht should be constructed to accept the maximum anticipated loadings from a fully equipped submersible. Calculations of deck and other loads should be provided to the Administration.

2.5 Support Facilities

2.5.1 Where the yacht has support facilities such as high pressure air, oxygen, power, umbilical's etc*.,* the facilities should be installed and operated to the satisfaction of the Administration taking into accounts the hazards and associated risks.

2.5.2 Where fuel is carried, the storage and refueling facilities shall at least meet the requirements stated in Part B, Section 14 of the Code.

2.6 Maintenance

2.6.1 A suitable maintenance program should be provided and implemented which addresses the maintenance of the submersible and its equipment, including all safety equipment, the handling system, and the support facilities on board the yacht.

2.6.2 The maintenance program should be at least equivalent to programs required by Classification Societies for similar types of equipment.

2.7 Operations

2.7.1 Procedures for normal, abnormal and emergency scenarios should be developed and implemented. These may be included in an Operations Manual or a similar document and should be addressed within the yacht's safety management system (see Part C, Section 4).

2.7.2 The procedures for safe operation should ensure:

- The submersible meets all applicable national and international regulations prior to use;
- Weather and other ambient conditions are suitable;
- All necessary equipment is available for use;
- Adequate and effective means of communication and means of recording information between the submersible and the yacht;
- The appointment of a suitably qualified/experienced individual to control the

operation;
- The appointment of a suitably qualified pilot(s) (this should not normally be the master or senior officers of the yacht);
- The appointment of suitably qualified additional personnel to ensure safe operations;
- The submersible crew and the involved yacht crew are suitably familiar with operations;
- Pre-dive and post- dive checks;
- Maintenance of the submersible structure and equipment and the yachts' support equipment, including lifting appliances;
- Reporting to authorities in which waters the submersible is operating;
- Appropriate records of operations, including information on crew and passengers on each dive;
- Arrangements for contingencies, including reporting incidents.

2.8 Risk assessment

2.8.1 A full risk assessment should be carried out addressing all the operations anticipated with the submersible(s) associated with the yacht. This should consider:
- Launching and recovery;
- Securing;
- Loading and unloading crew, passengers and equipment and spares;
- Use of support facilities;
- Refueling;
- Maintenance of the submersible while on board;
- Maintenance of the support facilities on board the yacht;
- Weather limitations;
- Emergency situations;
- Training of the crew.

2.8.2 The risk assessment should be submitted to the Administration for approval.

2.9 Crew Training

2.9.1 The yacht crew, as appropriate, should be trained to deal with normal submersible operations as well as abnormal and emergency situations. The training should include dealing with loss of communications, damage to the submersible, medical problems and other possible emergency scenarios.

2.9.2 The crew should practice dealing with the possible emergency scenarios through regular drills on board.

2.9.3 The emergency scenarios should be addressed in the yacht's contingency plans and similar documents.

2.9.4 While members of the yacht crew, when suitably trained, may man the submersible, the requirements of the yacht's Safe Manning Document shall always be met.

Part F: Section 3 Open Flame Installations

1 General Information

1.1

Possible dangers arising from the use of open flame appliances in the marine environment include fire and, in addition, with respect to liquid petroleum gas (LPG), explosion and asphyxiation due to leakage of gas from the installation.

1.2

Consequently, the siting of open flame appliances, gas-consuming appliances and storage containers and the provision of adequate ventilation to spaces containing them, is most important.

1.3

Open flame appliances such as barbeques should not be sited close to flammable parts of the structure or fittings, and should be supervised at all times. They should be structurally suitable for the marine environment and secured to prevent movement in a seaway.

1.4

It is dangerous to sleep in spaces where gas-consuming open flame appliances are left burning, because of the risk of carbon monoxide poisoning.

1.5

LPG, which is heavier than air, when released, may travel some distance while seeking the lowest part of a space. Therefore, it is possible for gas to accumulate in relatively inaccessible areas, such as bilges, and diffuse to form an explosive mixture with air, as in the case of petroleum vapor.

1.6

A frequent cause of accidents involving LPG installations is the use of unsuitable fittings and improvised "temporary" repairs.

2 Stowage of Gas Containers

2.1

Gas containers should be stowed on the open deck or in an enclosure opening only to the deck or overboard and otherwise gastight, so that any gas, which may leak from the containers, can disperse overboard.

2.2

The vent and drain should not be less than 19 mm in diameter, run to the outside of the craft

and terminate 75 mm or more above the 'at rest' waterline. The drain and locker ventilation should be 500 mm or more from any opening to the yacht's interior.

2.3

The cylinders and associated fittings should be positively secured against movement and protected from damage in any foreseeable event.

2.4

Any electrical equipment located in cylinder lockers should be certified for use in the potential explosive atmosphere.

2.5

In multiple container installations a non-return valve should be placed in the supply line near to the stop valve on each container. If a changeover device is used, it should be provided with non-return valves to isolate any depleted container.

2.6

Where more than one (1) container can supply a system, the system should not be used with a container removed.

2.7

Containers not in use or not being fitted into an installation should have the protecting cap in place over the container valve.

3 Fittings and Pipework

3.1

Solid drawn copper alloy or stainless steel tube with appropriate compression or screwed fittings is recommended for general use for pipework in LPG installations.

3.2

Aluminum or steel tubing, or any material having a low melting point, such as rubber or plastic, should not be used, except as permitted by paragraph 3.3.

3.3

Lengths of flexible piping (if required for flexible connections) should be kept as short as possible and be protected from inadvertent damage. Also, the piping should conform to an appropriate standard. Proposals for a more extensive use of flexible piping (which conforms to an internationally recognized standard for its application) should be submitted to the Administration via its Authorized Surveyor for approval on an individual basis.

4 Open Flame Heaters and Gas Refrigerators

4.1

When such appliances are installed, they should be well secured to avoid movement and, preferably, be of a type where the gas flames are isolated in a totally enclosed shield where the air supply and combustion gas outlets are piped to open air.

4.2

In refrigerators, where the burners are fitted with flame arrester gauze, shielding of the flame may be an optional feature.

4.3

Refrigerators should be fitted with a flame failure device.

4.4

Flue-less heaters should be selected only if fitted with atmosphere-sensitive cut-off devices to shut off the gas supply at a carbon dioxide concentration of not more than 1.5% by volume.

4.5

Heaters of a catalytic type should not be used.

5 Flame Failure Devices

All gas consuming devices should be fitted, where practicable, with an automatic gas shut-off device that operates in the event of flame failure.

6 Ventilation

The ventilation requirements of a space containing an LPG appliance should be assessed against an appropriate standard and should take into account gas burning equipment and persons occupying that space.

7 Gas Detection

7.1

Suitable means for detecting the leakage of gas should be provided in any compartment containing a gas-consuming appliance, or in any adjoining space of a compartment into which the gas (more dense than air) may seep.

7.2

Gas detectors should be securely fixed in the lower part of the compartment in the vicinity of the gas-consuming appliance and in other space(s) into which gas may seep.

7.3

Any gas detector should, preferably, be of a type that will be actuated promptly, and

automatically by the presence of a gas concentration in air of not greater than 0.5% (representing approximately 25% of the lower explosive limit) and should incorporate an audible and a visible alarm.

7.4

Where electrical detection equipment is fitted, it should be certified as being flameproof or intrinsically safe for the gas being used.

7.5

In all cases, the arrangements should be such that the detection system can be tested frequently while the yacht is in service.

8 Emergency Action

8.1

A suitable notice, detailing the action to be taken when an alarm is given by the gas detection system, should be displayed prominently in the yacht.

8.2

The information given should include the following:
(a) The need to be ever alert for gas leakage; and
(b) When leakage is detected or suspected, all gas-consuming appliances should be shut off at the main supply from the containers, and NO SMOKING should be permitted until it is safe to do so.
(c) Naked lights should never be used as a means of locating gas leaks.

Part F: Section 4 Safety Management

4.1

The purpose of this section is to provide guidance on how to develop and implement an effective safety management system for yachts under 500GT, where full certification to the International Safety Management Code is not a requirement.

4.2 General

Each operator should create a safe working environment, which should include the following:

4.2.1 A health and safety protection policy.

4.2.1.1 This must address the issues of health, safety and the environment as they affect the company and its staff, both ashore and afloat. Such a policy might read along the following lines:

"The policy of (name of Company/Owner) is to conduct its activities taking full account of the health and safety of its employees and of all persons using or connected with the Company/Owner. In implementing this policy, *(name of Company/Owner) will ensure that the [yacht] is, at all times, properly maintained and operated by qualified personnel in full compliance with relevant legislation. In particular the [Company/Owner} will carry out an assessment of the risks to the health and safety of workers and others affected by [the operations) and will take the necessary measures to minimize the risks identified."*

4.2.1.2 The owner/operator is recommended to develop and implement an oil management plan to the same standard as the garbage management plan and to integrate it with the Health and ' Safety Protection Policy. This is not required for yachts over 400GT, for which an IOPP certificate is required.

4.2.2 Procedures to ensure safe operation of yachts in compliance with the regulations and rules.

4.2.2.1 The regulations and rules, not addressed by this Code, which apply to all yachts include, but are not limited to:

- International Regulations for Preventing Collisions at Sea;
- Local Navigation Rules;
- National health and safety regulations;
- The Code of Safe Working Practices for Merchant Seamen, or equivalent;
- All relevant national shipping or guidance notices.

4.2.2.2 The company should draw up simple procedures to ensure that safe working practices are carried out in the operation of the yacht. These may be in the form of checklists which can be followed by all personnel.

4.2.2.3 For some yachts, it might be appropriate to have permanently exhibited checklists, e.g. in the wheelhouse for navigational items. Alternatively, in a smaller yacht, the record could take any suitable form such as a diary as distinct from a specially printed logbook. Whatever form the record takes, such entries should be accepted as evidence of compliance with the requirements for on board procedures.

4.2.3 Lines of communication between personnel, ashore and afloat. Responsibility and authority of each employee should be clear. This may be best illustrated in a simple diagram, showing who reports to whom.

4.2.4 Procedures for reporting accidents.

4.2.4.1 The requirement for reporting accidents should be well understood by all personnel and in so doing improve the safety culture practiced on board.

4.2.5 Procedures for responding to emergency situations.

4.2.5.1 There should be clearly stated procedures for responding to emergency situations. These may include but not be limited to:

- Fire
- Collision
- Grounding
- Violent act
- Main propulsion or steering failure
- Man overboard

4.2.5.2 Checklists may be useful in this regard.

4.3 Health and Safety Protection Policy

4.3.1 One or more competent persons should be delegated to take responsibility for health and safety, and that person/persons should be clearly identified. It is the responsibility of the owner/operator to ensure that the policy is complied with, and that the responsibilities are understood.

4.3.2 The company/owner should develop a policy on prevention of alcohol and drug abuse.

4.3.3 All personnel both ashore and afloat have a duty to take care of themselves and other persons who may be affected by their acts or omissions.

4.3.4 It is essential that, in the event of an emergency, there is the ability to communicate with the emergency services via a shore base. The shore base may be the company office ashore, the local Coastguard, Police or Fire Station, or another office as may be agreed between the yacht and the shore base.

4.4 Responsibilities

4.4.1 The Master must have authority at all times, to make decisions with regard to the safety of the yacht and the persons on board. To ensure that there is no ambiguity regarding the authority of the Master, there should be a simple written statement to this effect.

4.5 Personnel and Training

4.5.1 All personnel should receive training appropriate to the tasks they undertake. It is the responsibility of the company/owner to ensure that this training is given, and that the personnel

have an understanding of the relevant regulations and rules.

4.5.2 As a minimum, this means:
- For the master, the relevant qualifications;
- For the crew, relevant qualifications and any additional training appropriate to their designated duties.

4.5.3 Prior to the first occasion of working on the yacht, each employee must receive appropriate familiarization training and proper instruction in onboard procedures. This could include, but not necessarily be, limited to:
- Mooring and unmooring;
- Launching and recovery of survival craft;
- Evacuation from all areas of the yacht;
- Donning of lifejackets; and
- Use and handling of firefighting equipment.

4.5.4 In addition to the safety issues and the frequent need for training in the operation of equipment, special consideration must be taken of local, national and international regulations associated with these activities.

4.6 On Board Procedures

4.6.1 Simple procedures should be developed for the operation of the yacht. These should include, but not be limited to:
- Testing of equipment, including steering gear, prior to commencing a passage;
- Navigation and handling of the yacht;
- Maintenance routines;
- Bunkering operations;
- Watertight/weathertight integrity;
- Stability of the yacht;
- Conduct of passengers and crew while on board;
- Operation of helicopters, submersibles, tenders, RIBS, and other motor boats carrying passengers;
- Operation of water craft such as jet skis, sailing boats, windsurfers;
- Diving, paragliding, fishing.

4.7 Preparation for Emergencies

4.7.1 The potential emergencies likely to be encountered by the yacht should be considered. Exercises should then be carried out in the handling of these emergencies and evacuation from the yacht.

4.7.2 Where possible, all personnel should be involved in these exercises, both ashore and afloat.

4.7.3 The roles and responsibilities of all personnel in an emergency situation should be defined.

4.7.4 The exercises should be recorded. The names of those who participated should also be recorded.

4.8 Reporting of Accidents

4.8.1 Yachts operating under this Code are required to report any accidents to the Administration and the company must therefore have a procedure in place. Additionally, all accidents and near accidents should be recorded and reported to the operator/owner, who should implement corrective action, with the aim of improving safety.

4.9 Maintenance of the Yacht and Equipment

4.9.1 Maintenance of the yacht and equipment is an essential ingredient of safety management. The equipment should be checked and tested daily when in use, in addition to the tests referred to in the on board procedures section of the Code.

4.9.2 There should be procedures for a more detailed inspection and maintenance program of the yacht and equipment.

4.9.3 The frequency of the inspections should be determined by the owner/operator, but every event should be recorded.

4.9.4 A checklist could be employed as an aide memoir for the inspection of equipment.

4.10 Review

Every company/owner should undertake a review of the safety management system of all yachts at least once in every three years.

Part F: Section 5 Security

5.1

While it is not a requirement for yachts to which the Code applies to comply with the IMO International Ship and Port Facility Security (ISPS) Code, it is recommended that the owner(s), operator(s), manager(s) develops and implements security procedures. These may be partially integrated into the safety management system referred to in Part F, Section 4 with some security elements being held separately, being confidential documents. The confidential elements may include:

- Details of security equipment in use on board and methods of use and testing;
- Information on any weapons on board;
- Specific plans for dealing with security incidents including contact details for specialized support;
- Reporting procedures;
- Security records.

5.2

In order to ensure *effective* implementation of the security procedures, crewmembers should be trained in the key elements. The training should be reinforced by regular exercises and drills which may be integrated with those required by SOLAS.

5.3

It is recommended that the *effective* implementation of security procedures is considered by builders, owners, operators and managers at the design stage, throughout the build and when considering the manning of the yacht.

Part F: Section 6 Guidelines for Sporting and Leisure Activities

In view of the increasing number and nature of the sporting and leisure activities being conducted either on yachts or utilizing yachts as their base, particularly in the case of super and large yachts in commercial use, we perceive that there is a need to issue some guidelines on this topic.

1 Responsibility

Owner(s), operator(s), manager(s) and master of each yacht should ensure that all such activities carried out onboard a yacht or utilizing the yacht as a base are conducted in a safe manner bearing in mind any certification requirements and are supervised at all times by suitably qualified personnel. Furthermore, they should be in full compliance with the laws, regulations and guidelines applicable in the area of the yacht's operation as well as any applicable sections of this Code and referenced documents.

2 Safety

2.1

We wish to draw attention to the U.K.'s Code for Safe Working Practices for Merchant Seamen, as amended, and in particular to: Chapter 1 Risk Assessment; Chapter 5 Safety Signs; Chapter 7 Work Equipment; Chapter 9 Fire Precautions; Chapter 19 Manual Handling; Chapter 21 Lifting plant.

2.2

The conduct of such activities as well as the maintenance, storage, securing etc. of related equipment should be incorporated into the yacht's safety management system and certified under the ISM Code.

2.3 Drug and Alcohol abuse

2.3.1 According to the American Red Cross, more than 50% of drownings result from boating incidents involving alcohol. The U.S. Coast Guard believes that alcohol involvement in recreational boating accidents is under-reported and remains a significant factor in recreational boating accidents and deaths.

Drug and alcohol abuse directly affect the fitness and ability of a seafarer to perform watchkeeping duties in impairing judgement, balance and coordination.
Seafarers found to be under the influence of drugs or alcohol should not be permitted to perform watchkeeping or other duties until they are no longer impaired in their ability to perform those duties.

2.3.2 As guidance, the consumption of alcohol within four hours prior to serving as member of a watch or being on duty should be prohibited. Similarly, the consumption of alcohol by those participating in yacht-based sporting activities, should be discouraged. Typically, the maximum blood alcohol level (BAC) during work or when engaged in sport should be no more than 0.08%.

2.4 Barbecues

These are considered potentially hazardous and their use is discouraged. However, should you decide to use one, refer to Part F Section 3 "Open Flame Installations."

3 Specific Guidelines for particular Activities

Apart from the use of helicopters and submersibles which have been addressed elsewhere within this Code, the following activities have been identified as being quite prevalent on yachts:

- Scuba diving and snorkeling;
- Sport fishing;
- Jet skiing;
- Water skiing;
- Para-sailing.

Consequently, we have drawn up some specific guidelines for those owners, operators, managers who will provide such activities on or from their yachts. These guidelines are intended as initial guides and do not obviate the need to consult the manufacturers of particular equipment and organizations/associations specializing in these activities as well as verifying the local regulations which may govern the activity.

4 Insurance

The requirements for yacht registration referred to in Part G Section 1 include important provisions for insurance, both in respect of hull and machinery of the yacht itself and any other equipment carried thereon e.g. jet skis, as well as third party liability insurance, including cover for all persons who are part of the yacht's complement onboard, and in respect of any sporting activities in which any persons onboard may engage.

PART G: ADMINISTRATIVE STANDARDS Section 1 - Yacht Registration with the Commonwealth of Dominica, Summary of Requirements

1 Introduction

This Section summarizes the requirements for the registration of a yacht at DMRI.

2 Application for Registration

Applications may be submitted to DMRI's Registration Department at registration@dominica-registry.com

3 Maritime Legislation

Copies of Commonwealth of Dominica Maritime Legislation is available on the website: www.dominica-registry.com

4 Eligibility

Any person or body corporate of any nationality may apply for the registration of a yacht in Dominica.

5 Registration

This may be a provisional or permanent registration, however, the owner may wish to proceed with permanent registration from the outset providing all applicable requirements are met.

5.1 Commercial Provisional Registration (CDVR-6001)

Provisional Registration is valid for up to 3 months. Compliance with the following is required:

- Application for Official Yacht Number and Call Sign
- Proof of Ownership
- Dominica IBC Application or Foreign Maritime Entity (FME) Application
- Evidence of Authority to Sign Registration Applications (usually a Power of Attorney)
- Tonnage Certificate
- Payment of Registration Fees
- Application for Ship Station License (Required for all yachts with radio station on board)
- Application for Minimum Safe Manning Certificate
- Copy of Previous Declaration of Maritime Labor Compliance (DMLC) Part II
- Request for Issuance of DMLC Part I
- Load Line Certificate

5.2 Commercial Permanent Registration (CDVR-6001)

Compliance with the following is required:
- Deletion Certificate from Previous Flag
- Completed Carving and Markings Note
- Vessel and Owner Contact Sheet
- Copy of Classification Certificates (if applicable)
- Proof of Liability Insurance (P&I Cover Note)

5.3 Private Provisional Registration (CDVR-6002)

Provisional Registration is valid for up to 3 months. Compliance with the following is required:
- Application for Official Yacht Number and Call Sign
- Application for Ship Station License
- Declaration of Private Use
- Proof of Ownership
- Dominica IBC Application or Foreign Maritime Entity (FME) Application
- Evidence of Authority to Sign Registration Applications (usually a Power of Attorney)
- Tonnage Certificate
- Copy of Classification and/or Statutory Certificates (if applicable
- Payment of Registration Fees

5.4 Private Permanent Registration (CDVR-6002)

Compliance with the following is required:
- Deletion Certificate from Previous Flag
- Completed Carving and Markings Note
- Vessel and Owner Contact Sheet
- Proof of Liability Insurance (P&I Cover Note)

Part G: Section 2 Manning and Personnel Certification

G2.1 Principles of Safe Manning

G2.1.1 The owner, company, master and operator are responsible for ensuring that the yacht is safely manned and operated at all times, in compliance with this Code, the applicable Conventions, the laws of the Commonwealth of Dominica and the Minimum Safe Manning Certificate. Manning shall follow the IMO Principles of Minimum Safe Manning (Resolution A.1047(27)).

G2.1.2 In determining minimum safe manning the Administration takes into account: gross tonnage; main propulsion power; the length and nature of voyages with passengers; frequency of port calls; area of operation, environmental conditions and season; size, age and type of yacht, rig, equipment, automation and layout; STCW requirements; the crew needed to keep a safe navigational and engineering watch, to handle emergencies, and to muster and evacuate all persons on board; and any helicopter, submersible or tender operations.

G2.1.3 The number of trained seafarers shall always be sufficient to assist all passengers who may be on board at any one time. During lay-up the crew may be reduced, provided enough crew able to handle emergencies remain on board and port and insurance requirements are met.

G2.1.4 The scales in this Section are the typical minimum the Administration will accept. The level of automation or complexity of a rig, the operation of helicopters, submersibles or tenders, or a high number of passengers may require additional crew.

G2.2 Minimum Safe Manning Certificate

G2.2.1 Every Commercial Yacht, PYLC or YET yacht and Passenger Yacht shall carry a Minimum Safe Manning Certificate issued by the Administration. Small Commercial Yachts are not required to hold one. Private Yachts of 500 GT and over shall submit a safe manning proposal **[Proposed]**.

G2.2.2 The application, made by the owner, operator or manager, shall state the proposed manning, explain how it was determined, show that it takes account of hours of rest, and enclose copies of the crew certificates. A new application is required after any change in area, construction, machinery, equipment, operation or maintenance that may affect manning. The Administration may withdraw the certificate if a required new application is not made.

G2.3 Qualifications

G2.3.1 Crew certificates are issued and recognized under CDP-300Y and CDP-300. The grade codes used in this Section are those of CDP-300Y: commercial yacht deck certificates CYD-1 to CYD-7, commercial yacht engineer certificates CYE-1 to CYE-5, Yacht Rating (Deck) YR-D and Yacht Engine Rating YR-E. A higher grade, or an STCW certificate of equivalent or higher scope issued or endorsed under CDP-300, may be used in place of the grade shown.

G2.3.2 Private Yacht Certificates of Qualification (PY grades) are valid only on Pleasure Yachts and Private Yachts that are not engaged in trade. They are not valid on any yacht certified under Parts B, C or D, or on a PYLC or YET yacht while engaged in trade.

G2.3.3 All crew members, including cooks and stewards, shall hold a valid medical fitness

certificate (ILO/IMO Guidelines), revalidated every two years (annually from age 61), and Basic Training under STCW Regulation VI/1 (personal survival techniques, fire prevention and fire fighting, elementary first aid, personal safety and social responsibilities). Security Awareness training is required on yachts of 500 GT and over and on Passenger Yachts.

G2.3.4 An officer who holds a Notice of Eligibility, or a written statement that he or she is progressing towards a required certificate, may be accepted in the capacity sought for a limited period stated by the Administration.

G2.4 Commercial Yachts – Manning Scales

Table G2.4a – Minimum safe manning, motor yachts (Part B)

Navigation notation	Position	< 200 GT	≥ 200 GT and < 500 GT	≥ 500 GT
Short Range (≤ 60 nm)	Master	1	1	1
	Chief Officer	–	1	1
	Chief Engineer (a)	1	1	1
	Assistant Engineer	–	1 (b)	1
	Yacht Rating	1	2	2
Extended Short Range (≤ 150 nm)	Master	1	1	1
	Chief Officer	1	1	1
	Chief Engineer (a)	1	1	1
	Second Engineer	–	–	1
	Assistant Engineer	–	1	–
	Yacht Rating	1	2	2
Unrestricted	Master	1	1	1
	Chief Officer	1	1	1
	OOW (Navigation)	–	1	1
	Chief Engineer (a)	1	1	1
	Second Engineer	–	1	1
	Assistant Engineer	1	–	–
	Yacht Rating	2	2	2

Table G2.4b – Minimum safe manning, sailing yachts (Part B), standard rig

Navigation notation	Position	< 200 GT	≥ 200 GT and < 500 GT	≥ 500 GT
Short Range (≤ 60 nm)	Master	1	1	1
	Chief Officer	–	1	1
	Chief Engineer	1 (c)	1 (c)	1
	Assistant Engineer	–	1 (b)	1
	Yacht Rating	2	2	3
Extended Short Range (≤ 150 nm)	Master	1	1	1

Navigation notation	Position	< 200 GT	≥ 200 GT and < 500 GT	≥ 500 GT
	Chief Officer	1	1	1
	Chief Engineer	1 (c)	1 (c)	1
	Second Engineer	–	–	1
	Assistant Engineer	–	1 (d)	–
	Yacht Rating	2	2	3
Unrestricted	Master	1	1	1
	Chief Officer	1	1	1
	OOW (Navigation)	–	1	1
	Chief Engineer	1	1	1
	Second Engineer	–	–	1
	Assistant Engineer	1 (d)	1 (d)	–
	Yacht Rating	2	2	3

Notes to Tables G2.4a and G2.4b:

1. On yachts with gas turbine propulsion the Chief Engineer shall hold the Gas Turbine endorsement, and on yachts with LNG or dual-fuel engines the IGF endorsement, under CDP-300Y.
2. For Short Range yachts of less than 500 GT, an Assistant Engineer holding CYE-1 is required unless any two of the following apply: the machinery spaces are unmanned (UMS); there is a valid engine maintenance agreement with the engine makers or an approved service station; no engine has an individual power exceeding 500 kW.
3. On sailing yachts the Chief Engineer may be omitted where the power is less than 300 kW per engine, another crew member holds CYE-1, and the main engine indicators are displayed at the cockpit.
4. The Assistant Engineer may be omitted on sailing yachts where the power is more than 300 kW but less than 500 kW per engine.

Table G2.4c – Minimum certificate for each position (Part B yachts)

Position	< 200 GT	≥ 200 GT and < 500 GT	≥ 500 GT and < 3,000 GT	≥ 3,000 GT
Master	CYD-2 (≤ 150 nm); CYD-3 (Unrestricted)	CYD-5	CYD-6	CYD-7
Chief Officer	CYD-2 or CYD-3 (≤ 150 nm only); CYD-4	CYD-4 (≤ 150 nm); CYD-5 (Unrestricted)	CYD-5	CYD-6
OOW (Navigation)	CYD-2, CYD-3 or CYD-4	CYD-2, CYD-3 or CYD-4	CYD-4	CYD-4
Chief Engineer	CYE-2 (< 1,500 kW); CYE-3	CYE-3	CYE-4 (< 3,000 kW); CYE-5	CYE-5 (< 9,000 kW); STCW III/2 above
Second Engineer	CYE-2	CYE-2	CYE-3	CYE-4
Assistant Engineer	CYE-1	CYE-1	CYE-1	CYE-2
Yacht Rating	YR-D or YR-E	YR-D or YR-E	YR-D or YR-E (STCW II/4 or III/4 if forming part of a watch)	STCW II/4 or III/4

All certificate requirements in Table G2.4c are **[Proposed]** pending confirmation of the CDP-300Y grade limits.

G2.5 Small Commercial Yachts – Manning Scale

Table G2.5 – Minimum safe manning, Small Commercial Yachts (Part C)

Navigation notation	Sailing and motor yachts	Minimum master certificate
Coastal (≤ 20 nm from shore)	Master + experienced seaman	CYD-1
Short Range (≤ 60 nm)	Master + experienced seaman	CYD-1
Extended Short Range (≤ 150 nm)	Master + Yacht Rating	CYD-2
Unrestricted	Master + OOW (Navigation); one crew member shall hold CYE-1	CYD-3; OOW: CYD-2 or higher

G2.5.1 The crew complement shall never be less than two seafarers. An experienced seaman is a crew member with Basic Training and not less than 6 months' sea service on yachts.

G2.6 Passenger Yachts

G2.6.1 Manning of Passenger Yachts is determined case by case under G2.1, and shall not be less than the scale for a Commercial Yacht of the same size and notation in Table G2.4a or G2.4b. In addition, the master and every officer and crew member with safety duties shall hold the PAXY endorsement, and at least one person shall hold the Medical Care certificate (STCW Regulation VI/4).

G2.7 Radio Personnel

Yacht	Minimum radio qualification
Small Commercial Yachts, Coastal and Short Range (Sea Area A1)	1 holder of GMDSS Short Range Certificate (SRC) or Restricted Operator's Certificate (ROC)
Small Commercial Yachts, Extended Short Range and Unrestricted	1 holder of General Operator's Certificate (GOC)
Commercial Yachts < 300 GT, Sea Area A1	1 holder of SRC or ROC
Commercial Yachts ≥ 300 GT and < 500 GT, Sea Area A1 only	1 holder of ROC
Commercial Yachts ≥ 300 GT and < 500 GT, beyond Sea Area A1	1 holder of GOC
Commercial Yachts ≥ 500 GT, and Passenger Yachts	2 deck officers holding GOC (ROC accepted for Sea Area A1 only)

G2.8 Dual Deck and Engineer Roles

G2.8.1 One officer, other than the master, may act in a dual deck and engineer role where the officer is qualified and experienced in both, and the yacht has a full UMS notation or has full main engine control from the bridge, high-level bilge alarms in machinery spaces, and engine and engine fire alarms relayed to the bridge. The crew complement shall never be less than three.

G2.9 Schedule of Duties and Hours of Rest

G2.9.1 The master shall keep a schedule of duties showing duties at sea and in port and the minimum hours of rest, available to all crew. Part B paragraph 27.14.3 applies to hours of rest.

Emergency drills shall be scheduled to minimize disturbance of rest. Records of actual hours of work shall be kept, including deviations in an emergency.

G2.10 Medical First Aid, Medical Care and Advanced Fire Fighting

G2.10.1 All officers on Commercial Yachts and Passenger Yachts shall hold Medical First Aid and Advanced Fire Fighting certificates (STCW Regulations VI/4 and VI/3). At least one person on board, normally the master, shall hold Medical Care where the yacht operates Unrestricted or is 500 GT and over.

G2.11 Crew Authorization Attestation

G2.11.1 Where a port authority requires a flag State attestation before issuing a charter license, the Administration will issue a Crew Authorization Attestation confirming that the crew on board meet this Code. The request shall be made by the yacht's RO, Authorized Surveyor or Authorized agent, who shall check completeness, and shall include: the Minimum Safe Manning Certificate; the crew list; the Dominica endorsements (or certificates of receipt of application) for all deck and engineer officers; the commercial yacht certificates of officers not requiring endorsement; the Assistant Engineer's certificate; Basic Training certificates of all ratings on the safe manning; and food handling or cook's certificates for cooks to be included. Documents shall be sent by a download link.

G2.12 Seafarer Identification

G2.12.1 All officers and ratings shall hold a Dominica Seafarer's Identification Book (SIB) or a seafarer's book issued by an Administration acceptable to the Administration (see CDP-300Y Section 4).

Part G: Section 3 Survey, Certification, Inspection and Maintenance

G3.1 General

G3.1.1 This Section applies to Commercial Yachts and PYLC and YET yachts certified under Part B. Part C Section C18 applies to Small Commercial Yachts, Part D Section D9 to Passenger Yachts, and Part E to Private and Pleasure Yachts.

G3.1.2 Every yacht shall be surveyed, certified and maintained to keep its certificate valid. Surveys are carried out by ROs and Authorized Surveyors. Authorized Surveyors may survey, issue statutory certificates and approve manuals and booklets only for yachts of less than 500 GT and only in the areas of their authorization. For yachts of 500 GT and over, all statutory certificates other than those issued by the Administration itself shall be issued by an RO.

G3.1.3 The crew on the Minimum Safe Manning Certificate shall be on board during surveys, so that equipment can be operated and tested, drills carried out and certificates checked.

G3.2 Initial Survey

G3.2.1 The initial survey shall include:
.1 a survey of hull, machinery and all equipment to the criteria of a renewal survey, with a brief photographic report;
.2 a dry-docking survey, unless the yacht is in class and was dry-docked for class in the

previous 12 months; where dry-docking is not possible, a survey afloat with internal hull and tank inspection, and dry-docking within six months (extendable by six months);
.3 moisture readings on composite hulls during dry-docking, and thickness gauging on steel hulls more than five years old by an approved service supplier, with the report kept on board;
.4 a full survey and operational test of safety and navigational equipment, life-saving appliances, fire detection and fire-fighting equipment and machinery, and of freeboard and water-freeing arrangements;
.5 verification of the stability booklet against Part B Section 11, with an inclining experiment where required (Part B paragraph 27.7.3);
.6 sea trials and operational tests (which may be dispensed with for a yacht in class for hull and machinery with an engine makers' servicing contract and maintenance records on board);
.7 a radio survey by a radio company approved by an RO, and a Cargo Ship Safety Radio Certificate for yachts of 300 GT and over;
.8 a load line survey and International Load Line Certificate;
.9 MARPOL, AFS, BWM and energy-efficiency surveys and certificates as listed in G3.10;
.10 ISM and ISPS audits for yachts of 500 GT and over;
.11 an MLC inspection under Part B Section 27.14; and
.12 on sailing yachts, a rigging survey under Part B Section 27.2.

G3.2.2 On satisfactory review of the survey reports, the Administration issues a Commercial Yacht Certificate valid for five years, stating the navigation notation and maximum number of passengers.

G3.2.3 **Provisional certificate.** A yacht certified under the Red Ensign Group Yacht Code, the Malta CYC, the Italian commercial yacht regulations or the Marshall Islands Yacht Code, holding a valid class certificate, may be issued a provisional Commercial Yacht Certificate valid for three months, with the same navigation range as the existing certification, pending completion of the initial survey. Yachts certified by other flags are considered case by case. Proof of the previous certification and a signed declaration of any equivalencies or exemptions are required.

G3.3 Annual Surveys

G3.3.1 Annual surveys shall be carried out within three months before or after each anniversary date. Subject to a satisfactory survey, the certificate is endorsed and a copy of the endorsed certificate and survey report sent to the Administration.

G3.3.2 A bottom survey shall be carried out at the second or third annual survey, unless done for class in the previous 12 months. The interval between bottom inspections shall not exceed 36 months; where an in-water survey is accepted in lieu, the interval between dry-dock inspections shall not exceed 60 months.

G3.3.3 On yachts of 300 GT and over an annual radio survey is required. The EPIRB and AIS on every yacht shall be inspected annually by an approved service supplier. On sailing yachts a rigging survey is required at the second or third annual survey.

G3.4 Renewal Survey

G3.4.1 A renewal survey shall be carried out within the three months before the certificate expires, to the scope of an initial survey (G3.2.1.1 to .12). Yachts not holding a valid class certificate shall have hull and machinery surveyed to the extent of a class renewal survey. A lightship survey is required under Part B Section 27.7.

G3.4.2 It is recommended that the validity of statutory certificates is harmonized with the Commercial Yacht Certificate and class certificate.

G3.5 Suspension

G3.5.1 Failure to carry out an annual or renewal survey within its window results in automatic suspension of the Commercial Yacht Certificate, unless the Administration has granted an extension. The certificate is reinstated after a renewal survey (without the need for dry-docking where the lapse was an annual survey), unless the Administration directs otherwise.

G3.6 Occasional Surveys, Damage and Port State Control

G3.6.1 The master, owner or manager shall inform the Administration after any damage affecting safety or seaworthiness and after any port State control detention. The Administration may require an occasional survey to confirm the validity of the certificate. Failure to inform the Administration may lead to suspension.

G3.7 Remote Surveys

G3.7.1 Remote surveys may be carried out where allowed by the Administration's technical notices.

G3.8 Major Repairs, Alterations and Sale

G3.8.1 Major repairs, alterations and refits shall be supervised by an RO or Authorized Surveyor and shall meet the requirements for a new yacht. The yacht shall be re-surveyed to the scope of a renewal survey before resuming commercial operation (Part A Section 4A.3).

G3.8.2 On sale of a yacht, the RO or Authorized Surveyor shall ensure that all certificates and documents reflect the change of ownership.

G3.9 Historical Yachts, Tenders and Extended Range Tenders

G3.9.1 Historical yachts are surveyed by an RO or Authorized Surveyor acting under the direction of the Administration. The initial survey shall establish the requirements and criteria, and the category, area, number of passengers, restrictions and equivalent arrangements shall be agreed with the Administration.

G3.9.2 Tenders and ancillary craft are surveyed with the mother yacht and listed on its certificate. Extended Range Tenders are surveyed under Part B paragraph 24.11.5 by the same RO or Authorized Surveyor that surveys the mother yacht, and the survey report, CE certificate and Declaration of Conformity are sent to the Administration for issue of the Extended Range Tender Certificate.

G3.10 Certificates and Documents to be Carried

Table G3.10 – Certificates and documents (Part B yachts)

Certificate or document	< 300 GT	≥ 300 GT and < 400 GT	≥ 400 GT and < 500 GT	≥ 500 GT
Commercial Yacht Certificate (or PYLC/YET Compliance Certificate) and Record of Equipment; survey report	✓	✓	✓	✓
Certificate of Registry	✓	✓	✓	✓
Insurance certificate and policy	✓	✓	✓	✓
Class certificate	See Part B 24.1	See Part B 24.1	See Part B 24.1	✓
Radio inspection report	✓	✓	✓	✓
International Tonnage Certificate	✓	✓	✓	✓
International Load Line Certificate and freeboard assignment report	✓	✓	✓	✓
Cargo Ship Safety Radio Certificate and Form R	–	✓	✓	✓
IOPP Certificate and supplement; IAPP; IEE	–	–	✓	✓
EIAPP (each diesel engine ≥ 130 kW)	✓	✓	✓	✓
ISPP Certificate	> 15 persons	> 15 persons	✓	✓
Cargo Ship Safety Construction Certificate; Safety Equipment Certificate and Form E	–	–	–	✓
Safety Management Certificate and copy of DOC; ISSC; Continuous Synopsis Record	–	–	–	✓
Minimum Safe Manning Certificate	✓	✓	✓	✓
AFS Declaration / AFS Certificate	Declaration	Declaration	Certificate	Certificate
BWM Certificate or Declaration of Non-Applicability	–	–	✓	✓
MLC inspection report and Statement of Compliance / Maritime Labour Certificate and DMLC	Report	Report	Report	Certificate and DMLC
Extended Range Tender Certificate(s), where applicable	✓	✓	✓	✓
Static Charter Statement, where applicable	✓	✓	✓	✓

G3.11 Endorsement of Statutory Certificates

G3.11.1 Safety construction, safety equipment and safety radio certificates issued to Commercial Yachts shall bear the endorsement: "This yacht complies with the requirements of the Commonwealth of Dominica Yacht Code CDP-502, as an equivalent to the International Convention for the Safety of Life at Sea, 1974, as amended, under the terms of IMO Circular SLS.14/Circ.298 dated 8 November 2007, as a 'yacht engaged in trade as a commercial vessel (12 passengers maximum)'."

G3.11.2 Load Line Certificates issued to Commercial Yachts shall bear the endorsement: "This yacht complies with the requirements of the Commonwealth of Dominica Yacht Code CDP-502, as an equivalent to the International Convention on Load Lines, 1966, as amended, under the terms of IMO Circular LL.3/Circ.172 dated 7 November 2007, as a 'yacht engaged in trade as a

commercial vessel (12 passengers maximum)'."

G3.11.3 Statutory surveys are carried out only where a Convention applies and a statutory certificate is required, at the frequency the Convention requires. A Document or Statement of Compliance may be issued for voluntary surveys against Conventions that do not apply to the yacht.

Part G: Section 4 Handover Procedure for Owners, Operators, Managers when Bareboat/Demise Chartering a Commercial Yacht

1 Familiarization

The owner, operator or manager or appointed representative with intimate knowledge of the yacht should be present at the hand-over of the yacht to the chartering skipper and crew in order to complete the following familiarization procedure:

.1 Demonstrate the stowage of all gear and the method of use of all lifesaving and firefighting appliances on board the yacht;

.2 Locate and explain the method of operation of all sea cocks and bilge pumps;

.3 Demonstrate use of all mechanical, electrical and electronic equipment to ensure familiarization;

.4 Provide details of routine maintenance required for any equipment;

.5 Demonstrate checks to be carried out on the engine prior to starting, while running and after stopping;

.6 Demonstrate the methods of setting, sheeting and reefing each sail.

2 Documentation

2.1

The owner, operator or manager or appointed representative, as detailed in Section 1.0 above, should ensure that the Yacht's File is presented to and reviewed with the chartering skipper. The Yacht's File should contain at least the following:

(a) Certificate of Registry;

(b) Copies of the insurance policy;

(c) Required certificates and licenses;

(d) Details of permitted operating area (Category);

(e) Training Manuals and maintenance instructions;

(f) Diagrams for electrical wiring and piping/plumbing;

(g) Equipment inventory;

(h) Plan(s) showing the stowage position of all the movable equipment necessary for the safe operation of the yacht;

(i) A list of names and telephone numbers (both during and after office hours) of persons who may be contacted if the chartering skipper or the yacht is in need of assistance.

2.2

The chartering skipper should sign an acceptance note after completion of the handover procedure with regard to inventory, condition of items demonstrated, and the amounts of fuel and other consumable items on board which might be chargeable.

3 Return Procedures

3.1

At the end of the bareboat/demise charter the owner, operator or manager or appointed representative together with the chartering skipper should be present and the following procedure conducted:

(a) Inspect the yacht;
(b) Check the yacht's inventory;
(c) List any damage, defect, losses, or need for repair.

3.2

The above details should be noted on a return report form signed by the owner, operator or manager or appointed representative and the chartering skipper.

Part G: Section 5 Accident Investigations

The Administration is obliged to investigate accidents or incidents in accordance with the requirements of SOLAS I Regulation 21 and MARPOL 73/78 article 8 of International Conventions. Apart from this legal requirement, our Administration investigates such occurrences as part of our policy to ensure effective control and accident prevention in the interests of safety at sea and the protection of the environment.

It is an offense for the yacht's master, skipper, owner, operator or manager not to inform the Administration of a reportable accident shortly after it occurs and to provide details so that an assessment of its severity can be made quickly. The Administration will appoint a suitable surveyor or inspector whenever an investigation is required. The Administration will then receive the surveyor's or the inspector's report and will take such measures or actions as it deems appropriate.

All serious casualties, in accordance with the IMO's definition thereof, should be reported to IMO by the Administration.