

**SMALL COMMERCIAL VESSEL CODE
BAILIWICK OF GUERNSEY
(SCV (BoG) CODE)**

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PREAMBLE

The aim of this Code is to prescribe standards of construction, manning and emergency equipment for small commercial vessels operating from a harbour within the Bailiwick of Guernsey. The Code is given legal effect by the [x] Regulations, 2017, which creates criminal offences in respect of breaches of, and non-compliance with, the Code.

The standards in this Code have been developed by the States of Guernsey Harbour Master, in consultation with the appropriate authorities in Sark and Alderney and are directly linked to United Kingdom (UK) requirements. Where this Code does not provide specific requirements to be complied with, it highlights where those requirements may be found.

The builder, owner/operator and master of the vessel, as appropriate, shall take all reasonable measures to ensure that the vessel is constructed, maintained and operated in accordance with the requirements of this Code and is suitable for the purpose intended, having regard to the area the vessel will be operating in.

It is important to stress that, whilst all reasonable measures may have been taken to ensure a safe vessel, total safety can never be guaranteed.

Compliance with the Code in no way obviates the need for vessels and Masters to comply with any applicable legislation.

1. APPLICATION AND INTERPRETATION

1.1 Application

1.1.1 The Code applies to:

Vessels operating commercially from a harbour within the Bailiwick of Guernsey, which are less than 24 metres in loadline length (L) and which, if carrying more than 12 passengers, operate within 15 miles of the nearest harbour or safe refuge, and carry not more than 250 passengers.

1.1.2 The Code shall not apply to:

- fishing or pleasure vessels;
- a vessel holding a valid International Passenger Vessel Safety Certificate issued under the provisions of the International Convention on the Safety of Life at Sea, 1974, as amended (SOLAS);
- a boat forming part of a vessel's lifesaving equipment that is used to carry passengers in emergencies, during emergency exercises and as a tender between vessel and shore for not more than 72 hours;
- a vessel of another jurisdiction, whose government has inspection laws approximating those of this Code or through bilateral or multilateral agreement, which has on board a current valid safety certificate, certificate of inspection, or other certificates permitting the carrying of passengers, or cargo in the appropriate sea areas, issued by its Government, unless there are clear grounds for believing that the condition of the vessel or of its equipment does not correspond substantially with the particulars of any of the certificates or is such that the vessel is not fit to proceed to sea without presenting an unreasonable threat to the safety of the vessel or its seafarers and passengers or the environment;
- a vessel constructed or adapted for the carriage in bulk of liquid cargoes of a flammable or toxic nature (tanker).

1.1.3 Unless otherwise specified the Code applies to both new and existing vessels. Those items specified for new vessels may, where appropriate, be applied to existing vessels.

1.2 Definitions

“Accident” has the same meaning as in the Merchant Shipping (Accident Reporting and Investigation) (Bailiwick of Guernsey) Regulations 2009,

“Administration” means the States' Trading Supervisory Board,

“Approved” means approved by, or on behalf of, or otherwise acceptable to the Harbourmaster under Merchant Shipping legislation, unless otherwise specified in this Code,

“Certifying Authority” means one of the organisations authorised by the Administration to undertake survey and certification work.

“Code” means this Code unless another Code is specified,

“Control position” means a conning position which is continuously manned whilst the vessel is under way,

“Crew” means a person employed or engaged in any capacity on board a vessel in the business of the vessel,

“Dangerous Goods” are items as defined by the IMO International Dangerous Goods (IMDG) Code,

“Daylight” means between one hour before sunrise and one hour after sunset,

“Decked vessel” means a vessel with a continuous watertight weather deck which extends from stem to stern and has positive freeboard throughout, in any condition of loading of the vessel,

“Draught” or “Draft” unless stated otherwise, means the vertical distance from the underside of keel amidships to the deepest subdivision load waterline or freeboard mark, as appropriate,

“person with reduced mobility” means any person whose mobility when using transport is reduced as a result of any physical disability (sensory or locomotive, permanent or temporary), intellectual disability or impairment, or any other cause of disability, or as a result of age, and whose situation needs appropriate attention and adaption to their particular needs of the service made available to all passengers,

“Freeboard” means the distance measured vertically downwards from the lowest point of the upper edge of the weather deck to the waterline in still water or, for an open boat, the distance measured vertically downwards from the lowest point of the gunwale to the waterline,

“Harbour Master” means the States of Guernsey Harbour Master as appointed,

“Length” means the length of vessel measured between perpendiculars taken at extremities of the deepest subdivision load waterline or freeboard mark, as appropriate,

“LOA” means the distance between the foreside of the stem and the aft side of the stern,

“Master” includes every person (except a pilot) having command or charge of a vessel,

“Machinery space” means any space which contains propelling machinery, boilers, oil fuel units, steam, internal combustion engines, generators and major electrical machinery, oil filling stations, refrigerating, stabilizing, ventilation and air conditioning machinery, and similar spaces, and trunks to such spaces,

“Margin line” means a line drawn at least 76mm below the upper surface of the bulkhead deck at side,

“Marine Guidance Note” (MGN) means a Note described as such and issued by the MCA.

“MCA” means the Maritime and Coastguard Agency, an executive agency of the UK Department for Transport,

“MED” means the EU Directive on Marine Equipment 96/98/EC and “MED approved” means approved in accordance with the requirements of that Directive,

“Merchant Shipping Notice” (MSN) means a Notice described as such and issued by the MCA,

“Mobile phone” means a portable telephone which must be maintained charged and operational,

“New vessel” for the purpose of this Code means a vessel in respect of which there does not exist, on the date that this Code comes into force, a valid Passenger Certificate issued by the Administration,

Any vessel may be treated as an “existing vessel” if it has previously been certificated as a Passenger Vessel and it was laid up on a day that falls within the period of five years prior to the date this Code enters into force in respect of which the Harbour Master has issued a determination in writing to the effect that the vessel cannot reasonably be expected to comply with the mandatory safety requirements; and it is made subject to an initial Passenger Vessel survey under this Code and in respect of which, in consequence of the completion of that survey, a Passenger Certificate was issued not more than five years after the day it was laid up or two years after the date this Code enters into force, whichever is the earlier,

“Open vessel” for the purpose of this Code means a vessel which is:

- not fitted with a watertight deck; or
- is fitted with a watertight deck over part of its length; or
- is fitted with a watertight deck over the whole of its length but the freeboard to the deck does not meet the minimum requirement for freeboard,

"Passenger" means any person carried on a vessel except:

- a member of the vessel's crew,
- a person on board the vessel either in pursuance of the obligation laid upon the Master to carry vessel wrecked, distressed or other persons, or by reason of any circumstance that neither the Master nor the owner nor the charterer (if any) could have prevented or forestalled,
- a child of under one year of age,

"Passenger deck" means any deck space to which passengers have access,

“Similar stage of construction” means the stage at which:

- construction identifiable with a specific vessel begins; and

- assembly of that vessel has commenced comprising at least 50 tonnes or one percent of the estimated mass of all structural material, whichever is less,

“Steel or other equivalent material” - in the context of ‘steel or other equivalent material’, ‘equivalent material’ means any non-combustible material which, by itself, or due to insulation provided, has structural integrity properties equivalent to steel at the end of the applicable exposure to the standard fire test. Aluminium is the only common constructional material that may be considered equivalent to steel.

“Surveyor” means any surveyor appointed and approved by the Administration, or a surveyor from the UK MCA or a UK Classification Society,

“Vessel” includes every description of a vessel used in navigation,

"Watertight" in relation to structure means capable of preventing the passage of water in either direction under the head of water likely to occur in the intact or damaged condition,

"Weather deck" means the main deck which is exposed to the elements,

"Weathertight" means capable of preventing the admission of a significant quantity of water into the vessel when subjected to a hose test,

"Workers" include every person employed or engaged in any capacity on board any vessel,

2. VESSEL SURVEY AND CERTIFICATION

2.1 Introduction

A certificate confirming compliance with this Code is required by all commercial vessels to which this Code applies.

A vessel carrying 12 or less passengers requires a **Code Compliance Certificate**.

A vessel carrying more than 12 passengers requires a **Code Compliance Passenger Vessel Certificate**.

2.2 Code Compliance Certificates and Code Compliance Passenger Vessel Certificates

2.2.1 A vessel to which this Code applies shall not be operated without having on board a valid Code Compliance Certificate or Code Compliance Passenger Vessel Certificate, as appropriate, issued by the Administration following –

- (a) in the case of a Code Compliance Passenger Vessel Certificate, a satisfactory inspection of the vessel, and
- (b) in the case of a Code Compliance Certificate, receipt of a valid Small Commercial Vessel Certificate (SCVC) and corresponding Document of Compliance (Form SCV2) relating to that vessel as issued by a recognised Certifying Authority as per section 2.5.

2.2.2 Every vessel to which a Code Compliance Certificate or Code Compliance Passenger Vessel Certificate has been issued shall conform to this Code and any additional measures deemed appropriate by the Harbour Master throughout the period of validity of the certificate.

Periods of validity of Certificates

2.2.3 A Code Compliance Passenger Vessel Certificate shall remain valid for the period specified on its face which may not exceed one year. A Code Compliance Certificate shall remain valid for the period specified on its face which may not exceed five years. These periods

of validity for all vessels apply from the date of issue (unless revoked by the Administration) provided that, in the case of a Code Compliance Certificate, an owner's declaration is completed annually.

Code Compliance Certificates – annual owner's declarations

2.2.4 In the case of a vessel which is issued with a Code Compliance Certificate which is valid for more than one year, the day and month of that expiry date of that certificate shall be defined as the vessel's anniversary date. The owner's declaration must be submitted to the Administration during the period of six months extending from three months before to three months after the anniversary date in each year until the renewal date of the certificate. The owner's declaration shall be sufficient to establish that the vessel continues to meet the requirements of the Code.

2.2.5 A Code Compliance Certificate which is not endorsed to show the completion of the required owner's declaration is invalid.

Renewal of Certificates

2.2.6 A Code Compliance Passenger Vessel Certificate may not be renewed without the vessel to which it relates having undergone a successful inspection (section 2.2.1 (a) refers), which shall be conducted up to three months prior to the expiry of the certificate. The inspection shall be sufficient to establish that the vessel continues to meet the requirements of the Code. Renewal certificates may be issued for the same periods of validity as original certificates, as set out in section 2.2.3.

2.2.7 A Code Compliance Certificate may not be renewed without the vessel to which it relates having undergone a successful SCV2 survey (section 2.2.1 (b) refers), which shall be conducted up to three months prior to the expiry of the certificate. The survey shall be sufficient to establish that the vessel continues to meet the requirements of the Code. Renewal certificates may be issued for the same periods of validity as original certificates, as set out in section 2.2.3.

- 2.2.8 An application for inspection of a vessel being newly constructed or converted shall be submitted to the Administration prior to the start of the construction or conversion.

2.4 Posting of certificates, permits and stability letters

- 2.4.1 The Code Compliance Certificate or Code Compliance Passenger Vessel Certificate and any stability letters shall be posted under glass or other suitable transparent material, such that all pages are visible, in a conspicuous place on the vessel where observation by passengers is likely. Where posting is impracticable, the certificates shall be kept on board in a weathertight container readily available for presentation to passengers and officials of the flag State or port State when requested.

2.5 Small Commercial Vessel Certificate of Compliance

- 2.5.1 Any vessel carrying 12 persons or less, in addition to a Code Compliance Certificate, shall also carry a valid Small Commercial vessel Certificate of Compliance, as issued by a recognised Certifying Authority (CA).
- 2.5.2 Recognised CA's are listed below:
- American Bureau of Shipping (ABS)
 - Bureau Veritas (BV)
 - Det Norske Veritas (DNV)/Germanischer Lloyd (GM)
 - Lloyd's Register of Shipping (Lloyd's EMEA)
 - Registro Italiano Navale (RINA)
 - Royal Yachting Association (RYA)
 - Yacht Brokers, Designers & Surveyors Association (YBDSA/YDSA)
 - Marine Engineers Certifying Authority Limited (MECAL)
 - International Institute of Marine Surveying (IIMS)

2.6 General Survey Requirements

- 2.6.1 Where this Code does not provide specific requirements to be complied with, the relevant United Kingdom construction standards and related Instructions to Surveyors should be referred to.

2.7 Initial and Renewal Surveys

- 2.7.1 All commercial vessels shall be subject to an initial survey before entry into service. This survey will be undertaken by a surveyor approved by the Administration who will survey the vessel against the requirements of this Code.
- 2.7.2 For vessels carrying more than 12 passengers, provided the surveyor is content that the vessel complies with all relevant requirements of this Code, the surveyor will issue a Declaration of Survey to inform the Administration that the vessel may be issued a Code Compliance Passenger Vessel Certificate.
- 2.7.3 For vessels carrying less than 12 passengers, provided the surveyor is content that the vessel complies with all relevant requirements of this Code, the CA will issue a Small Commercial Vessel Certificate (SCVC) and corresponding Document of Compliance (Form SCV2. This should be provided to the Administration so that a Code Compliance Certificate may be issued.

2.8 Verification of the Safety Management System

- 2.8.1 The validity of a Code Compliance Passenger Vessel Certificate is subject to satisfactory verification of the Safety Management System as required by the Safety Management Code For Domestic Passenger Vessels In The Bailiwick of Guernsey.
- 2.9.8 At the Survey the surveyor is to satisfy himself that the vessel complies with the requirements of this Code.

2.10 Extension of Certificates

- 2.10.1 If a renewal survey has been completed and a new certificate cannot be issued or placed on board the vessel before the expiry date of the existing certificate, the Harbour Master may endorse the existing certificate as valid for a period not exceeding 5 months from the expiry date.

2.11 Inspection of the Outside of the Vessel's Underwater Area

- 2.11.1 For vessels carrying more than 12 passengers, an inspection of the outside of the vessel's underwater area is required at every Renewal

Survey. This should be undertaken with the vessel out of the water unless alternative arrangements have been agreed by the Administration.

2.12 Survey of Propeller Shafts

- 2.12.1 The surveyor shall be satisfied that the stern gear, including the propeller shaft, is in good working order and will continue to be in a serviceable condition for the period covered by the annual survey. If there is any reasonable doubt, the propeller shaft shall be removed and inspected. In any case the propeller shafts shall be removed and inspected at least once in any five year period.
- 2.12.2 In order to assess whether the propeller shafts shall be removed, the surveyor shall consider:
- i. the date the propeller shaft was last withdrawn;
 - ii. the date the propeller shaft was last replaced or reconditioned;
 - iii. any records of excessive noise/vibration;
 - iv. any indication that the propeller shaft is bent;
 - v. any evidence of the intermediate bearings (if any) between the engine (or gearbox) and the stern tube running hot;
 - vi. any evidence of oil consumption in oil lubricated stern gear systems;
 - vii. any evidence of water in the oil reservoir;
 - viii. any evidence of oil leakage past an internal seal;
 - ix. evidence, documented or otherwise, of maintenance work carried out on the stern gear;
 - x. any comments by the owner/Master regarding the running condition of the stern gear; and
 - xi. wherever possible, prior to slipping, the surveyor shall see the engine run with the stern gear engaged to assist in assessing its running condition.
- 2.12.3 In the case of other propulsion types, the surveyor shall assess whether maintenance or servicing is required, in any case the advice of the manufacturer shall be followed.

2.13 Additional Surveys

- 2.13.1 The Harbour Master may require an additional survey of the vessel to be undertaken following the report of any incident or defect which affects the safety of the vessel or following an accident that has been reported.
- 2.13.2 An additional survey, either general or partial, according to the circumstances, shall be made following an important repair or renewal. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively carried out, that the material and workmanship are in all respects satisfactory, and that the vessel complies with the provisions of the relevant regulations.

2.14 Maintenance of Conditions after Survey

- 2.14.1 The owner and master are responsible for ensuring:
- i. that the vessel and its equipment is maintained so as to ensure that the vessel in all respects remains fit to proceed to sea without danger to the vessel or persons on board; and
 - ii. that no change is made in the structural arrangements, machinery, equipment and other items covered by the Code, without the approval of the CA, except by direct replacement.
- 2.14.2 If a vessel does not continue to comply with the Code, after being certificated, its certification under this Code may be withdrawn or cancelled by the CA.

3. GENERAL REQUIREMENTS – APPROVALS AND ASSESSMENTS

3.1 Requirement for a Partial/Declaration of Survey

- 3.1.1 The Administration does not generally produce technical standards for hulls and watertight integrity, machinery, control systems, electrical systems or bilge pumping arrangements. Therefore hull, machinery, control systems, electrical systems and bilge pumping arrangements shall be in accordance with recognised standards as outlined below.
- 3.1.2 The recognised standards are the appropriate Rules and Regulations of any of the UK authorised Classification Societies listed below.
- 3.1.3 The UK Authorised Classification Societies are:
- American Bureau of Shipping
Bureau Veritas
DNVGL
Lloyds Register of Shipping
Nippon Kaiji Kyokai
Registro Italiano Navale
- 3.1.4 The plan approval and survey work during design and build shall normally be undertaken by the Classification Society that the vessel owner has chosen to engage. The Classification Society representative will issue a Partial Declaration of Survey to verify that the hull construction and watertight integrity, machinery, control systems, electrical systems and bilge pumping arrangements are in accordance with the recognised standards.
- 3.1.5 The plan approval and survey may be undertaken by the MCA, subject to prior agreement by the MCA. In this case the vessel will be assessed against the recognised standards of Lloyds Register Rules for Special Service Craft. Where MCA carries out the surveys, the verification of compliance with the recognised standards forms part of the Declaration of Survey completed by the MCA Surveyor and there is no separate Partial Declaration.

- 3.1.6 Construction plans and relevant calculations for new vessels shall be produced in accordance with the requirements specified by the Classification Society's Rules, or Lloyd's Register Rules for Special Service Craft when under survey by MCA, as appropriate. Plans shall be submitted allowing adequate time for plan appraisal to be completed before construction begins. It is essential that the surveyor appointed by the Classification Society to validate the standard of construction is involved at the outset of the new build project.
- 3.1.7 Where a Classification Society is engaged to conduct a partial survey of the vessel, it shall mutually agree clear lines of survey authority with the MCA to ensure that no survey requirements are missed.

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4. ACCESS FOR PERSONS WITH REDUCED MOBILITY

- 4.1** Vessels should be designed and operated to accommodate the needs of persons of reduced mobility (PRM) as far as is practicable. The guidance in this section is not mandatory for non-steel vessels but should be observed and implemented unless there are specific aspects of the vessel which prevent doing so.
- 4.2** Persons of reduced mobility could include, and should not be limited to: wheelchair users, the elderly, passengers travelling with young children, passengers with impaired hearing or vision or physical or mental disability.
- 4.3** Vessels should be constructed and equipped in such a way that a person with reduced mobility can embark, disembark and move around the vessel easily and safely. Guidance can be found in MGN 306 - Designing and Operating Smaller Passenger Vessels: Guidance on meeting the needs of passengers with reduced mobility.
- 4.4** Passenger areas should meet the needs of persons with reduced mobility as far as practicable.
- 4.5** In order to help set passenger expectations and to reduce boarding problems, operators of Passenger Vessels are strongly recommended to:
- 4.5.1** Include limitations, procedures, processes and training requirements within their Domestic Safety Management (DSM) Systems for the assessment, boarding, welfare and safety of PRMs travelling on their vessels.
 - 4.5.2** Include limitations and conditions of travel for PRMs in the Company Terms and Conditions of travel and reflect these, with sensitivity, in publicity and marketing material. In particular PRMs should be encouraged to contact operators in the first instance to discuss their requirements to see if they can be practically and safely achieved.
 - 4.5.3** Refer to The UK Small Seagoing Passenger Vessel Code (as amended from time to time) for relevant standards.

5. WATERTIGHT INTEGRITY

- 5.1** Refer to relevant UK standards (as amended from time to time).

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6. MACHINERY

6.1 Refer to relevant UK standards (as amended from time to time).

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7. ELECTRICAL ARRANGEMENT

- 7.1.** Refer to relevant UK standards (as amended from time to time).

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8. BILGE PUMPING

- 8.1** Refer to relevant UK standards (as amended from time to time).

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9. INTACT AND DAMAGE STABILITY CRITERIA

9.1 Refer to relevant UK standards (as amended from time to time).

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10. FREEBOARD AND FREEBOARD MARKING

10.1 Refer to relevant UK standards (as amended from time to time).

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11. SAFETY, LIFE SAVING APPLIANCES AND EQUIPMENT

11.1 The following lifesaving appliances shall be carried in accordance with the requirements listed below:

- Liferafts
- Lifejackets
- Lifebuoys
- Pyrotechnics - including distress flares, hand flares, smoke signals and line throwing appliances

Radio Lifesaving Equipment including Search and Rescue Location Devices (eg radar-SART (Search and Rescue Transponder), AIS-SART (Search and Rescue Transmitter) or EPIRB and VHF handsets

Details on specific requirements are contained within this section.

11.2 Liferafts

11.2.1 The vessel shall carry liferafts sufficient in number, logically distributed over the vessel, such that, in the event of any one raft being lost or rendered unserviceable, the remaining liferafts can be launched for persons to embark and accommodate the number of persons the vessel is certified to carry.

11.2.2 Liferafts shall be SOLAS standard.

11.2.3 Vessels shall be provided with at least one immersion suit to allow the crew to right and bail out a potentially upturned raft.

11.3 Liferaft Assembly, Evacuation, Stowage and Embarkation arrangements

11.3.1 The practicalities of safe evacuation of the vessel should be considered from the earliest design stage, with particular attention given to the optimum position of liferafts and the ease of both launching and entering the rafts from the launch area. It is appreciated that within the confines of small vessel design the optimum placement from a safety point of view is not always possible, however it should be taken into consideration when finalising the layout with the aim of facilitating timely and efficient evacuation insofar as is possible.

- 11.3.2 The minimum criteria that shall be applied:
- i. Liferafts shall be stowed so that they are float free and that one person may launch the liferaft into the water in an emergency.
 - ii. Suitable embarkation arrangements shall be provided to ensure safe and efficient dry shod evacuation of passengers.
- 11.3.3 Liferaft embarkation arrangements shall comply with the following:
- i. Where the distance between the embarkation deck and the top of the liferaft buoyancy tube exceeds 1 metre with the vessel in its lightest condition, either an evacuation slide or SOLAS type embarkation ladder is to be provided.
 - ii. Where the distance between the embarkation deck and the top of the liferaft buoyancy tube exceeds 4.5 metres with the vessel in its lightest condition, davit launched liferafts and at least one launching appliance shall be provided on each side of the vessel.
- 11.3.4 Embarkation and assembly stations shall not be located in way of the machinery spaces or other spaces with a high fire risk unless the boundaries between the high risk areas and the embarkation and assembly station is insulated to the A-30 standard of fire protection.
- 11.3.5 Assembly points shall be readily identifiable by signage. All routes to the assembly station for liferafts shall be clearly marked.
- 11.3.6 The liferafts shall be in a secure position as to ensure safe launching. Care shall also be given to avoid overboard discharges and the vessel's side in way of a machinery space or other space with a high fire risk unless the side of the vessel is insulated to the A-30 fire protection standard. Lifesaving appliances shall be stowed abaft the collision bulkhead.
- 11.3.7 Handling of liferafts at any one launching station shall not interfere with the handling of liferafts at another launching station.
- 11.3.8 Liferafts and buoyant apparatus shall be so stowed that they can be released safely even under unfavourable conditions of trim and of up to 15 degrees of list either way.

- 11.3.9 Liferrafts shall be stowed so they can be released manually. Each liferaft shall automatically inflate on reaching the water with its painter permanently attached to the vessel, with a suitable weak link able to break under the force of the buoyancy of the liferaft. The painter should be arranged to allow the safe operation of the liferaft and facilitate quick launching.

11.4 Lifejackets

- 11.4.1 There shall be sufficient suitable lifejackets in number for 105% of the passengers and the minimum provision for infants, children and oversized passengers shall be as follows:
- i. A number of child size life jackets shall be carried equal to at least 10% of the total number of persons carried or such greater number as may be required to provide a lifejacket for each child.
 - ii. In addition, a number of infant size life jackets shall be carried equal to at least 2.5% of the total number of persons carried or such greater number as may be required to provide a lifejacket for each infant.
 - iii. A sufficient number shall be suitable for securing to oversize passengers.
- 11.4.2 Lifejackets shall be stored where they are readily accessible and their location clearly marked. They shall be stowed with straps in their most relaxed positions for easy donning and clear guidance on donning fastening and tightening shall be provided nearby.
- 11.4.3 Lifejackets shall be stowed throughout the passenger accommodation. The distribution of lifejackets around the vessel shall follow approximately the distribution of passengers.
- 11.4.4. Lifejackets shall be provided with a MED approved light.

11.5 Lifebuoys

- 11.5.1 At least two of the lifebuoys shall be provided with lifelines and two with self-activating lights. At least 50% of any additional lifebuoys carried shall be fitted with lights.

11.6 Distress Flares and Pyrotechnics

- 12 parachute distress flares
- 2 hand flares
- 2 buoyant smoke signals of 3 minute duration
- 1 line throwing appliance

11.7 Radio Lifesaving Equipment

- 11.7.1 EPIRB, Search and Rescue Locating Device and Hand Held VHF sets in accordance with Section 12.

11.8 Means of Recovery of Persons from the Water

- 11.8.1 A rescue retrieval system approved by the Administration shall be provided for the retrieval of persons from the water in order to bring a person on board from the water within 15 minutes.
- 11.8.2 A vessel which is accepted as being able to act as its own rescue boat shall demonstrate the practical effectiveness of the retrieval arrangements provided on board by functional tests carried out under controlled safe conditions to the satisfaction of the Administration.
- 11.8.3 When a vessel is manned by the helmsman and one seafarer, the demonstration required above shall include retrieval of the seafarer from the water (the seafarer can be assumed to be conscious).
- 11.8.4 Operators must carry out a risk assessment to determine the means necessary to effect rescue of persons incapable of self-recovery from the water, including, whether or not the requirement for the carriage of a rescue boat may be relaxed.
- 11.8.5 Vessels shall be so designed to enable the safe recovery of persons from the water. Arrangements will be dependent on the individual vessels, but vessels with good manoeuvrability, together with adequate on board equipment (such as a boom with a lifting device or a recovery cradle and boathooks) will provide the best platform from which to recover a person from the water.

- 11.8.6 The means of recovery of persons from the water must be satisfactorily demonstrated to the surveyor.

11.9 Operational Requirements

- 11.9.1 Posters and signs shall be provided in the vicinity of rescue boats and liferafts illustrating the purpose of the controls and the procedures for launching and manoeuvring the liferaft/rescue boat.
- 11.9.2 Liferafts shall be serviced in accordance with the manufacturer's instructions and at least twice in every 5 year period for the first 10 years of service life. Thereafter, such liferafts shall be serviced annually, in accordance with the manufacturer's instructions.
- 11.9.3 Inflatable lifejackets shall be serviced in accordance with the manufacturer's instructions and at least every 2 years. Where any inflatable lifejackets are used as PPE on a regular basis, they shall be serviced annually. Lifejackets on a two yearly servicing regime shall be inspected annually to the manufacturer's recommendations.
- 11.9.4 Life-saving appliances shall be fitted with retroreflective material.
- 11.9.5 All Lifesaving appliances shall be maintained and be ready for immediate use.
- 11.9.6 All periodic tests and inspections by vessel's and company staff shall be recorded in a maintenance log or schedule.
- 11.9.7 All crew shall be familiar with the equipment. Drills and training shall be conducted and recorded in accordance with company and statutory requirements.

12. COMMUNICATIONS

12.1 Every vessel shall be provided with radio communications equipment complying with the following functional requirements such that while at sea the vessel shall be capable:

- i. of transmitting vessel-to-shore distress alerts by at least two separate and independent means, each using a different radio communication service;
- ii. of receiving shore-to-vessel distress alerts;
- iii. of transmitting and receiving vessel-to-vessel distress alerts;
- iv. of transmitting and receiving search and rescue coordinating communications ;
- v. of transmitting and receiving on-scene communications;
- vi. of transmitting and receiving signals for locating;
- vii. of transmitting and receiving maritime safety information;
- viii. of transmitting and receiving general radio communications to and from shore-based radio systems or networks; and
- ix. of transmitting and receiving bridge-to-bridge communications.

12.2 Radio Installation

12.2.1 Every radio installation shall:

- i. be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;
- ii. be so located as to ensure the greatest possible degree of safety and operational availability;
- iii. be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;
- iv. be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls for operating the radio installation; and
- v. be clearly marked with the call sign, the vessel station identity and other codes as applicable for the use of the radio installation.

12.3 Radio equipment

- 12.3.1 All vessels shall be capable of initiating a distress call/alert by at least two separate and independent means, one of which must be VHF, the second means should not be VHF. The second means may be met by the parachute rocket flares, subject to vessel being in visible range of land. There should be at least two VHF radio sets provided, ie one fixed and one portable.
- 12.3.2 All vessels shall carry as a minimum the radio and emergency communication equipment detailed in sections 12.4, 12.5 and 12.6.

12.4 Distress alerting

- 12.4.1 1 x Fixed GMDSS VHF radio installation.
- 12.4.2 1 x VHF Channel 70 DSC watch installation which may be incorporated with above. An open vessel may have the “fixed” VHF DSC fitted into a waterproof case on the bridge. Any such kit, however, must have a spare battery and a means of charging it, as well as a means of charging the spare battery.
- 12.4.3 2 x Hand held VHF radios which may also be used in survival craft. VHF must operate on channel 16 and one other and be of a type specifically designed for operation in survival craft. In particular, the equipment should be fully waterproof. For radios already provided in waterproof cases, these may continue to be accepted until replaced. A spare, fully charged battery should be available in case of emergency. This may be combined in the total number of hand held radios if all compatible type (ie all VHF).
- 12.4.4 12 x Rocket parachute flares.
- 12.4.5 1 x Float-free 406 MHz EPIRB with a 121.5 MHz homing device. The EPIRB should be installed in an easily accessible position where it can be manually released and placed in a liferaft.

12.5 “Last mile” Pin-point homing

- 12.5.1 2 x Hand flares.
- 12.5.2 1 x SART (Radar or AIS) or GPS facility incorporated in 406MHz EPIRB

12.6 Other items

- 12.6.1 1 x Reserve power supply capable of supplying the fixed VHF installation continuously for a period of at least six hours. This may be via the battery charger where a “fixed” VHF DSC is battery powered.
- 12.6.2 1 x Battery charger capable of fully charging the battery within a period of not more than 16 hours.
- 12.6.3 3 x Hand held waterproofed two-way radiotelephone apparatus for use in survival craft. These radios are required in addition to the hand held VHF unless the VHF and survival craft radios can communicate with each other on at least 2 channels. The total number of radios for use in survival craft need not be more than the total number of survival craft (1 raft = 1 radio, 2 rafts = 2 radios etc).

12.7 Maintenance requirements

- 12.7.1 Equipment shall be readily accessible for inspection and on-board maintenance purposes.
- 12.7.2 Adequate information shall be provided to enable the equipment to be properly operated and maintained.
- 12.7.3 EPIRBs shall be:
 - i. annually tested for all aspects of operational efficiency, with special emphasis on checking the emission on operational frequencies, coding and registration. The test may be conducted on board the vessel or at an approved testing station; and subject to maintenance at intervals not exceeding five years, to be performed at an approved shore-based maintenance facility.

12.8 Radio personnel

- 12.8.1 Every vessel shall carry personnel qualified for distress and safety radio communication purposes to the satisfaction of the Administration.

12.9 Radio Records

- 12.9.1 A record shall be kept as required by the Radio Regulations, of all incidents connected with the radio communication service which appear to be of importance to safety of life at sea.

12.10 Position Updating

- 12.10.1 The Primary VHF equipment carried on board a vessel to which this chapter applies which is capable of automatically including the vessel's position in the distress alert shall be automatically provided with this information from an internal or external Electronic Position Fixing System receiver, if either is installed.

12.11 Watches

- 12.11.1 Every vessel, while at sea, shall maintain a continuous watch on VHF DSC channel 70.

12.12 Portable Communication

- 12.12.1 A portable VHF shall be provided for each liferaft. These are to be portable, waterproof and shall be stowed in a protected and easily accessible position.

13. EMERGENCY INFORMATION FOR PASSENGERS

- 13.1** A member of the crew must be able to broadcast a safety or emergency message that can be heard by all persons on board the vessel.

13.2 Public Address Systems

- 13.2.1 Vessels are to be provided with a public address system, operable from at least one point that can be heard by all persons on board.
- 13.2.2 In vessels carrying not more than 60 passengers in which the passengers have access to only one passenger compartment or space, a portable loud hailer may be carried in lieu of the a public address system.
- 13.2.3 In vessels carrying not more than 12 passengers, verbal communication with persons on board is acceptable to the Administration.
- 13.2.4 Arrangements and procedures must be in place to silence entertainment systems (such as amplifiers, musical equipment etc) and entertainers when the public address system is to be used. The ability to turn off electronic entertainment systems must be available at the point of operation of the public address system. Manual shut off shall be available on vessels with loud hailers.

13.3 System Requirements

- 13.3.1 The system shall be used to inform the passengers of the action they shall take in the event of an emergency which could lead to the vessel being abandoned. This information shall be given either prior to or immediately on leaving the berth.
- 13.3.2 The speakers in the public address system must be so located that broadcasts will be audible in all public spaces, including open decks, to which passengers have access.
- 13.3.3 A public address system shall be powered from the main source of electrical power and from an alternative source of electrical power situated in a location remote from the main source. Battery back-up or spare batteries shall be carried for loudhailers.

13.4 Passenger Emergency Instructions Notices

13.4.1 Passenger Emergency Instructions notices shall be displayed in each passenger compartment. The number to be displayed will depend on the layout of the compartments and the service the vessel is engaged in. Notices shall also be provided in waiting rooms and terminals, where practicable. The information provided in a notice shall include:

- The method to be used to inform passengers that an emergency has occurred.
- The action they will be required to take.
- How to use the life-saving equipment.
- How to don a lifejacket; and
- Where lifejackets are carried.

13.5 Passenger Emergency Instructions Announcement

13.5.1 The announcement required to be made at the commencement of each voyage shall contain as a minimum:

- The method to be used to inform passengers that an emergency has occurred.
- The type of life-saving appliances on board.
- Action to take in event of an emergency; and
- How to use the life-saving appliances.

13.5.2 Announcements shall be made in a clear and simple manner bearing in mind that in some services a significant number of foreign tourists may be carried. Announcements shall be brief in order to convey sufficient information to assist all concerned in the event of an emergency.

13.5.3 Announcements shall be prefaced by a special signal followed by a request for everyone's attention.

14. MEANS OF ESCAPE

- 14.1** All persons on board should be able to escape from any space which may be occupied under normal operational circumstances readily in an emergency.
- 14.2** Every vessel shall provide means of escape from all crew and passenger spaces. These escapes may be in the form of doorways, stairways, ladder ways and, in fully enclosed vessels, emergency windows. They shall lead to embarkation points close to the stowage position of life saving appliances or assembly areas. There shall be at least two widely separated escapes from each space although in small spaces normally occupied by crew only this may be reduced to one.
- 14.3** In fully enclosed spaces, there shall be at least two escapes on each side of the vessel on each deck.
- 14.4** The means of escape shall be so designed and constructed as to be capable of being easily used by the persons for whom they are intended.
- 14.5** Where escapes are in the form of doors or windows they shall be capable of being opened from either side.
- 14.6** All escapes shall be clearly marked.
- 14.7** Main and emergency lighting shall be provided at each escape point.
- 14.8** Refer to The UK Small Seagoing Passenger Vessel Code (as amended from time to time) for relevant standards.
- 14.9** All doors provided for passenger use and leading from passenger compartments to open decks shall be clearly indicated with one or more signs marked "EXIT". Any doors, windows, or other openings provided for emergency escape purposes but normally used for passengers shall be clearly indicated with one or more signs marked "EMERGENCY ESCAPE DOOR" or "EMERGENCY ESCAPE WINDOW" as appropriate.
- 14.10** Signs shall be:
- i. Inherently luminous or electrically powered by an internal power source which is maintained and charged in normal service.

- ii. Located over the door, window or escape where possible. Where a door is not readily visible from within the space it serves, a further sign shall be provided to indicate the direction in which the door lies. Signs shall not be on doors except in cases where a door is never in the open position when the vessel is in service. Signs shall be composed of white or light coloured letters on a green background.

14.11 The means of escape from any public room which may be used for entertainment shall be adequate. The seating shall be arranged to ensure free access to the exits. All doors shall be constructed to open in the direction of escape.

14.12 All decked machinery spaces, shaft tunnels, boiler rooms or similar shall be provided with two means of escape as widely separated as practicable. The means of escape shall consist of steel ladders leading directly or indirectly to the stowage position of the LSA or assembly areas. In any such vessel the surveyor may permit one of the means of escape required by this paragraph to be dispensed with having regard to the size, nature and location of the space and whether persons are normally employed in that space. Where only one means of escape is permitted it should lead as directly as possible to an open deck or assembly point.

15. SEARCH AND RESCUE (SAR) REQUIREMENTS

15.1 SAR Plan

- 15.1.1 The aim of the SAR co-operation plan is to ensure that, in the event of an emergency, vessels' staff, the company response team ashore and SAR services are able to work efficiently together to respond to an emergency.
- 15.1.2 All vessels must carry an approved up to date plan for co-operation with relevant SAR services for the vessel's area of operation. Brief details of the passenger vessel, the company and the SAR services must be exchanged and maintained ready for use and shall include direct contact details.
- 15.1.3 The SAR plan shall be of the format detailed in MSN 1823.
- 15.1.4 Copies of the approved SAR co-operation plan shall be held on board, in the company office and at Guernsey Coastguard.

15.2 SAR Exercises

- 15.2.1 Exercising the SAR Plan regularly tests the plan's effectiveness.
- 15.2.2 Exercises shall be undertaken to test the plan's effectiveness periodically. These shall be combined with any other exercise programs, to test SAR services and co-operation arrangements without imposing an additional burden on vessels' staff.
- 15.2.3 For companies which operate six or more vessels, an overall program of exercises shall be developed by the company and the relevant SAR services, to ensure all staff participate. Where possible, it is recommended that joint exercises with the relevant SAR services shall be undertaken annually. In most cases this can take the form of a simple tabletop exercise.
- 15.2.4 The fundamental principles of the SAR plan will be discussed at the annual survey to demonstrate procedures are clearly understood, are readily accessible and contain up-to-date information.
- 15.2.5 Records of such exercises and names of participants shall be recorded in the Safety Management System.

17. FIRE SAFETY

- 17.1** There must be sufficient fire protection of high risk fire areas to prevent the rapid spread of heat, flame and smoke into passenger spaces in order to extinguish a fire or, if firefighting fails, to allow sufficient time to evacuate the vessel.
- 17.2** High risk boundaries shall be so constructed as to be capable of preventing the passage of flame to the end of the first half-hour of the standard fire test.
- 17.3** They shall have an insulation value such that the average temperature of the unexposed side to the fire will not rise more than 140°C above the original temperature, nor will the temperature at any one point, including any joint, rise more than 180°C above the original temperature, to the end of the first half-hour of the standard fire test provided the material concerned is capable of withstanding that temperature without affecting the structural integrity of the vessel.
- 17.4** Machinery spaces shall be able to be rapidly closed down to contain a fire, before extinguishing agent is applied. In lower risk areas, such as voids, public toilets and similar spaces, fire should not be able to rapidly take hold.
- 17.5** Crew are not expected to carry out sustained firefighting on board vessels to which this Code applies.
- 17.6** Refer to relevant UK standards (as amended from time to time).

18. SAFETY MANAGEMENT SYSTEM

18.1 Domestic Safety Management (DSM) Certificate

- 18.1.1 A vessel to which the Code applies carrying more than 12 passengers, shall not be operated without having on board a valid Domestic Vessel Safety Management Certificate (DSSMC) as required by the Safety Management Code for Domestic Passenger Vessels in the Bailiwick of Guernsey following a satisfactory inspection.
- 18.1.2 The initial audit, to assess compliance with the Code, shall be carried out before issue of the SCV Safety Certificate. On satisfactory completion of this audit, a DSSMC for each vessel, shall be issued. The period of validity of this certificate is subject to a mid-term audit.
- 18.1.3 A mid- term audit, when the vessel is in service, shall be carried out between 3 and 6 months after the issue of the SCV Safety Certificate, to assess whether the safety management system is functioning effectively. If successful, the DSSMC shall be endorsed to this effect and its period of validity shall become the same as that of the SCV Safety Certificate.
- 18.1.4 Where the in service/mid-term audit is unsuccessful, enforcement procedures shall be followed to ensure that deficiencies are rectified.
- 18.1.5 The on board audits will be carried out when the vessel is in service and will be according to an agreed schedule depending upon the number of vessels operated by the company.

18.2 Exemptions

- 18.2.1 Exemptions to these arrangements shall be considered on a case by case basis by the Administration.

19. ACCESS AND MOORING

19.1 Means of Access

- 19.1.1 It is the responsibility of the owner/operator and master to ensure a safe means of access between the vessel and any quay, pontoon or similar structure or another vessel, alongside to which the vessel is secured, and in particular:
- i. that any equipment is placed in position promptly after the vessel has been secured and remains in position while the vessel is so secured;
 - ii. that access equipment is:
 - properly rigged, secured, deployed, and is safe to use;
 - adjusted from time to time as to maintain safety of access;
 - are adequately illuminated along with immediate approaches; and
 - of good construction, of sound material, of adequate strength for the purposes for which it is used, free from patent defect and property maintained (includes any safety net).
- 19.1.2 It is the responsibility of the owner/operator and master to provide safe access to and from the shore if the vessel is not secured alongside a fixed berth but access between shore and vessel is necessary.
- 19.1.3 Guidance is provided in The Code of Safe Working Practices for Merchant Seamen. If there is any risk of falling between the quayside and the vessel, safety nets should be rigged where appropriate.
- 19.1.4 Where accommodation ladders are fitted they should comply with the specifications in The Code of Safe Working Practices for Merchant Seamen.

20. DANGEROUS CARGOES

20.1 Carriage of dangerous goods

- 20.1.1 Every vessel carrying more than 12 passengers shall not carry dangerous goods.
- 20.1.2 Any vessels carrying 12 or less passengers may be permitted to carry dangerous goods.
- 20.1.3 These requirements apply to all carriage of dangerous goods, including activity related equipment, materials for commercial use, etc as well as the transport of cargoes.
- 20.1.4 Vessel stores, which are dangerous goods but carried for use during the voyage are exempt from the requirements of this Section, but should be appropriately used and stowed.
- 20.1.5 Dangerous goods are only to be carried on deck.
- 20.1.6 The packing, stowage and segregation requirements of the International Maritime Dangerous Goods (IMDG) Code should apply.
- 20.1.7 The scupper and drainage arrangements are to be directed overboard with no connections to internal spaces.
- 20.1.8 When packaged dangerous goods are carried, details of the emergency firefighting equipment and First Aid medical procedures should be provided on board, with additional equipment if required under the IMDG Code, to ensure that if an emergency occurs, it can be dealt with effectively.
- 20.1.9 When carrying packaged dangerous goods, a full manifest of the cargo shall be retained ashore by the vessel's owner, or other designated person, in case of an incident. This person ashore should have a list of contact numbers for the emergency services and relevant manufacturers/suppliers of the dangerous goods. The designated person should be made aware of the details of the voyage.

21. NAVIGATION

21.1 This chapter is to provide suitable equipment and shipboard facilities and arrangements and to have in place navigational operational procedures in accordance with International (implemented by national regulation) and any local requirements to navigate the vessel safely in the intended area of operation.

21.2 Navigational Equipment

21.2.1 Some of the navigational equipment specified in section 21.2.2 need not be carried in circumstances where it can be demonstrated by risk assessment to the satisfaction of the Administration that the vessel can be safely operated and navigating without that equipment. The risk assessment shall be appraised by the Harbour Master in such a case and, if agreed, an exemption from the specific requirement may be issued. This concession has been included to recognise that the risks of specific vessel operations may vary significantly and it may not be appropriate to fit all specified equipment on certain vessels operating a limited or restricted operation. The exemption is to be specific to the intended area of operation and will be withdrawn if the vessel is relocated.

21.2.2 A vessel shall be provided with the following:

- i. Searchlight - Every vessel shall carry an efficient searchlight suitable for man-overboard and other search and rescue operations.
- ii. Navigation Lights and Shapes - Complying with the Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations 1996.
- iii. Signalling Lamp - Every vessel shall carry a daylight signalling lamp, or other means to communicate by light during day and night using an emergency source of electrical power not solely dependent upon the vessel's power supply. The signalling lamp may be the searchlight required by (i).
- iv. Whistle - Every vessel shall carry a whistle capable of conducting sound signals at the frequency and range of audibility to the satisfaction of the surveyor and in order to comply with the Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations 1996.
- v. Appropriate navigational charts and publications for the area of operation.

- vi. A properly adjusted magnetic compass or other means, independent of any power supply, to determine the vessel's heading. The magnetic compass or repeater shall be so positioned as to be clearly readable by the helmsman at the main steering position. It shall also be provided with an electric light, the electric power supply of which shall be of the twin wire type. This may be met by the use of a Transmitting Electronic Heading Device ("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.
- vii. An echo-sounding device, or other electronic means, to measure and display the available depth of water.
- viii. 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 vessel's position by automatic means.
- ix. A speed measuring log.
- x. A rudder angle indicator.
- xi. A 9 GHz (3cm) radar, or other means to determine and display the range and bearing of radar transponders and other surface craft, obstructions, buoys, shorelines and navigational marks to assist in navigation and collision avoidance.
- xii. A radar reflector and if practicable, a radar reflector, or other means, to enable detection by vessels navigating by radar at both 9 and 3 GHz.
- xiii. Means for taking bearings as near as practicable over an arc of the horizon of 360°. This requirement may be met by the fitting of a pelorus, or, on a vessel other than a steel vessel, with a hand bearing compass.
- xiv. A second radar to provide redundancy should the primary radar fail whilst on passage.

21.2.3 Vessels shall be fitted with an approved automatic identification system (AIS). The AIS shall:

- i. Provide automatically to appropriately equipped shore stations, other vessels and aircraft, information including the vessels

- identity, type, position, course, speed, navigational status and other safety related information.
- ii. Receive automatically such information from similarly fitted vessels monitor and track vessels.
- iii. Exchange data with shore-based facilities.

21.3 Navigation Lights, Shapes and Sound Signals

- 21.3.1 Vessels shall comply with the requirements of the International Regulations for Preventing Collisions At Sea, 1972, as amended, (the COLREGS) implemented by The Merchant Shipping (Bailiwick of Guernsey Law, 2002.
- 21.3.2 All navigation lights shall be provided with main and emergency power supply.
- 21.3.3 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.

21.5 Dedicated lookout

- 21.5.1 Any dedicated lookout shall –
 - i. have the sole duty, while the vessel is underway, of maintaining a lookout;
 - ii. be positioned outside the passenger spaces, and
 - iii. be instructed by the master to keep a continuous lookout, and in particular over any or all additional areas where the helmsman cannot see.
- 21.5.2 The dedicated lookout may be in the wheelhouse, but if positioned outside the wheelhouse and remote from the helmsman, the lookout shall be provided with a suitable and effective means of communication with the helmsman.

21.6 Cameras, mirrors and other aids

- 21.6.1 Aids such as cameras and mirrors may be provided to assist the helmsman in close-quarters manoeuvring, such as berthing, and to fill blind zones eg within the permitted two vessel's lengths/200m of the vessel, but they must not be relied upon to assist in the situational awareness or replace all-round visibility of the helmsman.

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22. GENERAL SAFETY

22.1 Safe Movement of Passengers and Crew

- 22.1.1 To aid the safe movement of passengers and crew, vessels shall;
- i. Be fitted with slip resistant external decks and stairways.
 - ii. Be fitted with an adequate number of handrails and handholds.
 - iii. Minimise potential tripping hazards.
- 22.1.2 Access areas, walkways and working areas shall be adequately lit.

22.2 First Aid Kits

- 22.2.1 Vessels must comply with the UK Merchant Shipping and Fishing Vessels (Medical Stores) Regulations 1995 (SI 1995/1802), as amended. MSN 1768 (M+F) provides further guidance.

22.3 Carriage Of The Code Of Safe Working Practices For Merchant Seamen (COSWP)

- 22.3.1 Workers on every vessel shall have access to a copy of the COSWP and it shall be clearly stated in the vessels Safety Management System where each copy of the COSWP is kept.

23. MANNING

23.1 Minimum Manning Levels

- 23.1.1 A vessel shall be safely manned.
- 23.1.2 The manning matrix at Annex 1 should be used to determine minimum manning levels in all cases. However, the operator shall consider the specific operation of the vessel and provide additional manning as appropriate.
- 23.1.3 Factors which may merit the need for additional crew might include, but are not limited to, vessels carrying a rescue boat or ro-ro operations. In considering the need for additional crew, attention shall be made to the ability to safely navigate the vessel and deal with emergency situations effectively.
- 23.1.4 The owner/operator shall submit the proposed crew numbers to the Harbour Master. If acceptable to the Harbour Master an approval will be given in writing, which will specify the date which it takes effect and will include any conditions on which it is given.
- 23.1.5 The number of crew may vary according to the number of passengers carried at any one time.
- 23.1.6 Where persons are engaged on board, in addition to the operational crews, eg waiters, bar staff, entertainers etc, they should be treated as passengers unless they are fully trained as a member of crew who can assist passengers in an emergency.

23.2 Hours of Work Provisions

- 23.2.1 The hours of work provisions of this Code shall:
 - i. apply to all seafarers (including masters) employed or engaged in any capacity on board a vessel to which this Code is applicable;
 - ii. provide for a minimum of 10 hours rest in any 24 hour period and 77 hours in any 7-day period and 4 weeks annual paid leave;
 - iii. provide for 2 periods of unbroken rest, 1 of which shall be for at least 6 hours.
 - iv. require records of hours of rest to be maintained; and
 - v. provide for inspection and enforcement by the Administration.

23.3 Records of Hours of Work

- 23.3.1 The employer is required to keep records of hours worked by employees but these records do not have to be specially created or dedicated to this purpose - they may be included in personnel records, or records kept for the purposes of determining pay. Nor is there any mandatory format for the records. They must however provide sufficient information to allow the surveyor, or an employment tribunal, to investigate any claim of a breach of the regulations.

23.4 Alcohol and Drugs

- 23.4.1 The Merchant Shipping (Commercial Vessels) (Safety and Crewing) (Bailiwick of Guernsey) Regulations 2017 states that any professional master or crew member commits an offence if his/her ability to carry out his duties is impaired because of drink or drugs.
- 23.4.2 The prescribed limits and enforcement details can be found in regulation [x] of the regulations.
- 23.4.3 Operators are encouraged to implement an appropriate drink/drugs policy through the Safety Management System.

23.5 Emergency Station Bill

- 23.5.1 A station bill shall be posted by the master.
- 23.5.2 The station bill shall set forth the special duties and duty station of each seafarer for various emergencies. The duties shall, as far as possible, be consistent with the regular work of the individual. The duties shall include at least the following and any other duties necessary for the proper handling of a particular emergency:
- i. the closing of hatches, fire dampers, watertight doors, air vents, scuppers, and valves;
 - ii. for intake and discharge lines that penetrate the hull, the stopping of fans and ventilating systems, and the operating of all safety equipment;
 - iii. the preparing and launching of survival craft and rescue boats;
 - iv. the extinguishing of fire;
 - v. the mustering of passengers including the following:
 - warning the passengers;

- assembling the passengers and directing them to their appointed stations; and
- keeping order in the passageways and stairways and generally controlling the movement of the passengers.

23.5.3 The station bill shall be posted at the operating station and in a conspicuous location in each seafarer accommodation space.

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24. LICENCING OF BOATMASTERS, ENGINEERS AND CREW

24.1 Master

24.1.1 A commercial vessel shall carry in command a person who is qualified as follows:

- i. he or she is the holder of a licence issued by the Harbour Master stating that he or she is qualified to have command of such a vessel;
- ii. the licence is in force and is of a grade appropriate in respect to the waters in which the vessel is being navigated, the size of the vessel and the number of passengers carried;
- iii. the vessel is in an area specified in the licence as one in which a vessel may be navigated under the command of the holder;
- iv. he or she is the holder of the additional qualifications identified in Annexes 5 & 6; and
- v. he or she is the holder of a local knowledge endorsement (LKE) appropriate to the area of operation.

24.2 Engineers

24.2.1 A commercial vessel fitted with main propulsion machinery units of up to 750 kW each, shall carry as engineer a person who is qualified as follows:

- i. he or she is the holder of a licence issued by the Harbour Master stating that he or she is qualified to be in charge of the main and auxiliary machinery of such a vessel;
- ii. the licence is in force and is of a grade appropriate in respect to the waters in which the vessel is being navigated;
- iii. the vessel is in an area specified in the licence as one in which a vessel may be operated under the charge of the holder; and
- iv. he or she is the holder of the additional qualifications identified in section Annex 5.

24.2.2 Except as authorised by the Harbour Master, vessels having main propulsion machinery units of power of 750 kW each and over shall carry engineers qualified in accordance with the STCW Convention.

24.3 Competent Crew

- 24.3.1 A commercial vessel may be required by the Harbour Master to carry competent crew in addition to a Boatmaster and Boat Engineer. A competent crew shall hold the additional qualifications identified in Annex 5.
- 24.3.2 A commercial vessel required to carry competent crew shall carry a person who is qualified as follows:
- i. be sixteen years of age or over;
 - ii. he or she is the holder of a licence issued by the Harbour Master stating that he or she is trained in accordance with the syllabus at Annex 5.
 - iii. he or she is the holder of the additional qualifications identified in Annex 5.

24.4 Licence Issue, Standards and Conditions

- 24.4.1 The Harbour Master may issue licences as Boatmaster, Boat Engineer or Competent Crew, as appropriate to persons who meet the requirements of this Code.
- 24.4.2 An application for a licence under this Code shall be made in such form as the Administration may from time to time specify.
- 24.4.3 Notwithstanding that an applicant for a licence under this regulation complies with the standards and satisfies the conditions specified by the Harbour Master, the Harbour Master shall not issue such a licence to the applicant unless he is satisfied, having regard to all the relevant circumstances, that the applicant is a fit person to be the holder of such a licence.

24.5 Grades and Vessel Restrictions of Boatmaster Licences

- 24.5.1 A licence as a Master issued under this Code shall bear the title “Boatmaster Licence” and shall be of one of the following grades, which shall be stated in the licence:

Boatmaster Licence, Grade 1
Boatmaster Licence, Grade 2

- 24.5.2 Table 24-1 details the grade requirements for Boatmaster licences in respect of the size and type of vessel. The holder of a Grade 1 licence will be licenced to operate all sizes and types of vessel.

Table 24-1

Size and type of vessel	Minimum Grade of Licence
≤ 12 passengers, < 12 m length	2
≤ 12 passengers, 12 to 24 m length	1
> 12 passengers, ≤ 24 m length	1

- 24.5.3 Where a vessel, the master of which is required to hold a licence, has sails as its principal means of propulsion a sail endorsement is required. The requirement for a sail endorsement is a practical test on boat handling as detailed in Annex 2, Section C.
- 24.5.4 A Boatmaster licence of any grade shall be subject to such restriction as the Harbour Master may determine as to the area or areas in which a vessel may be navigated under the command of the holder; and every such restriction shall be stated in the licence.

24.6 Requirements for Obtaining a Boatmaster Licence

- 24.6.1 In order to obtain a Boatmaster Licence Grade 2 an applicant shall:
- be eighteen years of age or over;
 - have submitted a valid medical certificate in compliance with section 24.15;
 - have completed a course of ten hours of practical instruction under a licenced Boatmaster in sail or power vessels of appropriate size;
 - produce documentary evidence of having obtained the additional qualifications stated in Annexes 5 & 6;
 - have passed an examination for Boatmaster Grade 2.

24.6.2 In order to obtain a Boatmaster Licence Grade 1 an applicant shall:

- i. be twenty one years of age;
- ii. have completed a course of ten hours of practical instruction under a licenced operator in sail or power vessels of appropriate size;
- iii. have completed seagoing service of not less than 3 months;
- iv. have submitted a valid medical certificate in compliance with section 24.15;
- v. produce documentary evidence of having obtained the additional qualifications stated in Annexes 5 & 6;
- vi. have passed the examination for Boatmaster Grade 1.

24.7 Practical instruction

24.7.1 Where an applicant is required to have had practical instruction this will be construed as his or her having enough experience to demonstrate proper boat handling skills in whatever craft or vessel the experience may have been given. However, it should be borne in mind that the prospective licence holder needs to demonstrate adequate knowledge of the methods of controlling, handling and directing vessels in emergencies, on the vessels, which he will be entitled to command.

24.8 Examination for Boatmaster Licences

24.8.1 A Boatmaster examination for Grade 2 consists of two parts. The first is an oral examination in which applicants will be tested on their knowledge of safety, navigation, rule of the road and seamanship subjects and also how they respond to certain emergency situations. The second part consists of a practical test carried out on the size of vessel for which the applicant needs a licence. This test requires applicants to demonstrate their ability to handle the vessel in various circumstances.

24.8.2 The Boatmaster examination for Grade 1 consists of three parts. The first part of which is an oral examination in which applicants will be tested on their knowledge of safety, rule of the road and seamanship subjects and also how they respond to certain emergency situations. The second part consists of a practical test in chartwork and the use of electronic aids to navigation. The third part is a practical test carried out on a vessel of 12m to 24m in

length. This test requires applicants to demonstrate their ability to handle the vessel in various circumstances.

24.8.3 An applicant passing only one part of the examination will be allowed to retain the pass in that part for a period of six months subject to the applicant being the holder of a valid medical fitness certificate when re-sitting the other part.

24.8.4 Details of the syllabus for each grade are contained in Annex 2.

24.9 Grade and Vessel Restrictions of Boat Engineer Licences

24.9.1 A licence as engineer issued under this Code shall bear the title “Boat Engineer Licence” and shall be of one of the following grades, which shall be stated in the licence.

Boat Engineer Licence, Grade 1

Boat Engineer Licence, Grade 2

24.9.2 Table 24-2 details the grade requirements for Boat Engineer licences in respect of the size and type of vessel. The holder of a Grade 1 licence will be licenced to operate all sizes and types of vessel.

TABLE 24-2

Size and type of vessel	Minimum Grade of Licence
≤ 12 passengers, < 12 m length	2
≤ 12 passengers, 12 to 24 m length	1
> 12 passengers, ≤ 24 m length	1

24.9.3 A Boat Engineer licence of any grade shall be subject to such restriction as the Administration may determine as to the area or areas in which a vessel may be operated under the charge of the holder; and every such restriction shall be stated in the licence.

24.10 Requirements for Obtaining a Boat Engineer Licence

- 24.10.1 In order to obtain a Boat Engineer Licence of Grade 1 or Grade 2 an applicant shall:
- i. be sixteen years or over for a Boat Engineer Licence Grade 2, and be eighteen years of age or over for a Boat Engineer Licence Grade 1;
 - ii. have completed an approved course on the repair and maintenance of engines and associated systems on seagoing vessels as required for the Grade of Licence sought;
 - iii. have submitted a valid medical certificate in compliance with section 24.15;
 - iv. produce documentary evidence of having obtained the additional qualifications stated in Annexes 5 & 6; and
 - v. have passed the examination for Boat Engineer Grade 1 or Grade 2 as appropriate.

24.11 Approved Course

- 24.11.1 An approved course is a course approved by the Administration, which is listed in Annex 5. A Certificate of Attendance will be given by the course organisers to persons satisfactorily completing the course.
- 24.11.2 The courses listed in Annex 5 shall be completed at intervals not exceeding five years.
- 24.11.3 Persons who are able to demonstrate to the satisfaction of the Administration that they have appropriate engineering experience may be granted an exemption from the requirement to attend an approved course.

24.12 Examination for Boat Engineer Licences

- 24.12.1 A Boat Engineer examination for Grades 1 and 2 consists of an oral examination in which applicants shall be tested on their knowledge of marine engines, propulsion systems, auxiliary machinery systems outboard engines, safe working practices and how the candidate responds to certain emergency situations.
- 24.11.2 The examination for a Boat Engineer Licence shall be based on the syllabus given in Annex 3 at a level appropriate to the Grade of Licence applied for and its range of application.

- 24.11.3 A candidate who is unsuccessful in the examination shall resit the entire examination.
- 24.11.4 Administrations may utilise written examination or computer based assessment to assist with assessment in oral examinations.

24.13 Existing Licences

- 24.13.1 On the application of the holder of an existing valid licence to operate commercial vessels, the Harbour Master shall issue to that person a licence under this Chapter; and the licence shall be of the grade which is appropriate in respect of:
- i. the type of vessel when being navigated/operated by the licence holder;
 - ii. the size and type of vessel which in the period of 12 months before the coming into force of the Code was navigated/operated by the holder of the existing licence.
- 24.13.2 A person to be issued a licence under this Code must hold the additional qualifications identified in Annex 5 and Annex 6 and have appropriate knowledge of the Code, to the satisfaction of the Harbour Master.

24.14 Period of Validity and Renewal of Licence

- 24.14.1 Licences shall be subject to re-validation every 5 years. Re-validation will be subject to the holder having proof that he or she has had at least 15 days service in the previous 12 months in vessels for which the licence is valid during that time. Revalidation is also subject to the submission of a medical certificate in accordance with section 24.15.
- 24.14.2 Applicants unable to provide proof of service shall satisfy the Administration of continued professional competence through test or re-examination.
- 24.14.3 A licence shall only remain valid so long as the person to whom it is issued holds a valid medical fitness certificate.

24.15 Medical Fitness Certificate

- 24.15.1 A medical fitness certificate in accordance with the requirements of the Administration shall be submitted with the initial application for a licence and for the re-validation of a licence. The Administration accepts medical fitness certificates ML5 and ENG1.

24.16 Record and Surrender of Licences

- 24.16.1 The Administration shall make and, during the period of the licence, retain a copy of every licence issued under this Chapter.

- 24.16.2 A record of:

- i. every licence issued under this Part; and
- ii. every suspension, cancellation or alteration of and any other matter affecting such a licence;

shall be kept, in such manner as the Administration may require, by the Registrar of Shipping or by such other person as the Administration may direct.

ANNEX 1 - MANNING MATRIX

Introduction

This matrix is designed to calculate the minimum number of crew required to handle a commercial vessel effectively and deal with any emergency situation on that vessel.

Additional staff will be required to ensure the safety of passengers in certain circumstances, including vessels holding functions on board or carrying passengers with

special needs. Any event at which passengers are not seated in an orderly fashion may be considered to be a function.

The minimum number of crew calculated by this matrix is the total, including the Boatmaster and Boat Engineer.

Contributing Factors

The matrix considers the following factors when determining the appropriate number of crew for a passenger vessel. This is driven primarily by the need to ensure that all passengers can be kept informed and remain under supervision in the event of an emergency.

Passenger Numbers

It must be possible to inform, instruct and control all passengers with the crew available.

Survivability Standard

In the event of a collision or other failure of the hull structure this will determine the likelihood of having to evacuate the vessel.

Nocturnal Operation

Communication with passengers over distance will be more difficult at night with greater scope for confusion. The availability of, and response time from, other vessels will differ from that during the day.

Number of Passenger Decks

This affects the ability of passengers to hear or see instructions and reassurance from crew and rescue services, as well as the ability to ensure the vessel is cleared of crew and passengers.

LSA

In the event of an evacuation there must be sufficient crew to direct and assist passengers and operate the LSA fitted to the vessel in the correct manner. Only the liferafts needed to carry the total persons on board need be counted for establishing the weighting for LSA: the additional raft required in the event of “any one raft being lost or rendered unserviceable” need not be counted.

Fire Fighting

In the event of a fire the number of crew required to operate equipment, availability of fixed systems and handling of pumps and hoses etc.

Function

This takes into account the distribution of passengers, and the effects as appropriate of noise and alcohol, which will reduce the ability of crew to attract and keep the attention of passengers.

Use of the Matrix

In order to achieve a minimum manning level for a particular vessel, the table below needs to be consulted using the following procedure:

- i. Work down the table, matching each variable to applicable weightings.
- ii. Total up the weightings for each of the variables.
- iii. Use the sum of all the weightings in the index table to achieve the proposed minimum crew numbers required.

Vessels which have varying manning modes of operation due to additional risks involved eg day/night or passenger numbers shall be calculated separately for each mode.

Matrix Table

VARIABLE	WEIGHTING	
Number of Passengers	Passenger Numbers	Weighting
	<60	8
	61-100	12
	101-150	16
	151-200	24
	201-300	32
	301-400	40
Survivability	Type	Weighting
	2 compartment	8
	1 compartment	16
	Buoyancy test	20
Day/Night Operation	Time	Weighting
	Day	8
	Night	20
Functions	Weighting	
	No	0
	Yes	20
LSA	Liferafts	Weighting
	1	4
	2	8
	3	12
	4	16
	5	20
	6	24
	>7	Refer to MCA
Number of Passenger Decks	Decks	Weighting
	1	4
	2	8
	3	12

The resultant index for individual vessels is translated into the number of crew as follows:-

Index	Number of Crew
77 and under	2
78-98	3
99-110	4
111-130	5
131 and over	6

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ANNEX 2 - BOATMASTER LICENCE SYLLABUS

Syllabus Requirements

The syllabus below will be modified by the Examiner to take into account the equipment on board the vessel.

Syllabus Content				2	1
A.	PRACTICAL TEST (This test should take place on a vessel of a type for which the applicant is requiring a licence)				
	1	<i>Boat Handling</i>			
	.1	Berthing and unberthing		Y	Y
	.2	Coming to and weighing anchor		Y	Y
	.3	Make fast to and leaving a buoy		Y	Y
	.4	Boat manoeuvring in confined waters		Y	Y
	.5	Turning short round		Y	Y
	.6	Knowledge and effect of transverse thrust		Y	Y
	.7	Steering a compass course and taking a rough bearing		Y	Y
	.8	Practical demonstration on the use of VHF on board the applicant's vessel. The holder must have knowledge of procedures used in radio telephone (VHF) communications, particularly with respect to distress, urgency, safety and navigational messages and of the adverse effect of misuse of such equipment.		Y	Y
B.	ORAL EXAMINATION				
	1	<i>Emergency Situations</i>			
	.1	Recovery of man overboard		Y	Y
	.2	Loss of engines		Y	Y
	.3	Loss of steering ability		Y	Y
	.4	Action to take in the event of collision		Y	Y
	.5	Grounding		Y	Y
	.6	Accident to seafarer or passenger		Y	Y
	.7	Use of extinguishing appliances		Y	Y
	.8	Use of lifesaving appliances		Y	Y
	.9	Search and rescue techniques in bad weather or reduced visibility		Y	Y
	.10	Choosing an appropriate area for beaching		Y	Y

Syllabus Content				2	1
B.	ORAL EXAMINATION (continued)				
	2	Regulations for Preventing Collisions at Sea			
	.1	A practical knowledge of the Rule of the Road as appropriate to the area of operation	Y	Y	
	.2	A full knowledge of the Regulations	Y	Y	
	.3	Keeping a good lookout	Y	Y	
	.4	Keep of a Deck Log	Y	Y	
	3	Local Knowledge and Regulations			
	.1	Actions to be taken in the event of injury or loss of life to a Seafarer	Y	Y	
	.2	Certification required by the vessel	Y	Y	
	.3	Limits as to vessel operation	Y	Y	
	4	Seamanship			
	.1	Common nautical terms	Y	Y	
	.2	Interaction with other vessels	Y	Y	
	.3	The effect of wind and tide on the manoeuvrability	Y	Y	
	.4	Securing and stowage of anchors and cable	Y	Y	
	.5	Selection of a proper anchorage	Y	Y	
	.6	The importance of navigating at reduced speed to avoid damage caused by own vessels bow or stern wave	Y	Y	
	.7	The difference in handling of single screw and twin screw boats	Y	Y	
	5	Chart work			
	.1	The meaning of common chart symbols	Y	Y	
	.2	The use of Tidal Diamonds	Y	Y	
	.3	Position fixing	Y	Y	
	.4	Courses to steer allowing for current and leeway	Y	Y	
	.5	Familiarity with the use of parallel rules, dividers, compasses, etc	Y	Y	
	6	Lifesaving and Fire-Fighting Appliances			
	.1	A knowledge of the statutory requirements and appreciation of the fact that the person in charge of a vessel must be satisfied that the lifesaving and fire-fighting appliances are properly maintained	Y	Y	
	.2	Use and deployment of inflatable liferafts and inflatable or rescue boats	Y	Y	
	.3	Inflatable liferaft and boat servicing requirements	Y	Y	
	.4	Hydrostatic release units	Y	Y	
	.5	Maintenance and care of buoyant apparatus	Y	Y	

Syllabus Content				2	1
B.	ORAL EXAMINATION (continued)				
	7	Distress Signals			
	.1	A knowledge of the contents of Annex IV of the Collision Regulations and the operation of the signals and equipment required to be carried in the applicant's vessel	Y	Y	
	.2	Coastguard response to distress signals	Y	Y	
	8	Passenger Safety			
	.1	Safety announcements	Y	Y	
	.2	Disposition of passengers and seafarers to ensure stability and trim	Y	Y	
	.3	Passenger numbers and reporting systems	Y	Y	
	.4	Knowledge of emergency instructions and methods of orderly evacuation following any emergency, having regard to the size of the vessel concerned and its operational area	Y	Y	
	.5	Ability to demonstrate to passengers the use of personal lifesaving appliances	Y	Y	
	9	Legal Responsibilities Towards Passengers and Seafarers			
	.1	Safe access	Y	Y	
	.2	Safe working practices	Y	Y	
	.3	SCV Safety Certificate and regulations relating thereto	Y	Y	
	.4	Code Compliance and Code Compliance Passenger Certificates	Y	Y	
	10	Weather			
	.1	Sources of information	Y	Y	
	.2	Local conditions and effects	Y	Y	
	.3	Signs of approaching bad weather	Y	Y	
	11	Engineering Knowledge			
	.1	Basic knowledge of day to day engine and battery checks	Y	Y	
	.2	Knowledge of the servicing and routine maintenance of propulsion and auxiliary machinery	Y	Y	
	.3	Knowledge of safety and shut off devices	Y	Y	
	.4	Basic knowledge of running checks	Y	Y	
	.5	Methods of fault detection, correction and emergency repairs	Y	Y	

Syllabus Content				2	1
B.	ORAL EXAMINATION (continued)				
	12	<i>Publications</i>			
	.1	Merchant Shipping Notices (as applicable)	Y	Y	
	.2	Regulations (as applicable)	Y	Y	
	13	<i>Prevention of Pollution</i>			
	.1	A general appreciation of pollution prevention	Y	Y	
	.2	Knowledge of the factors contributing to and precautions to be observed to prevent marine pollution when pumping out bilges and particularly when changing lubricating oil	Y	Y	
	.3	Knowledge that disposal into the sea of all plastics, including but not limited to, synthetic ropes, plastic sheeting and garbage bags etc, is prohibited	Y	Y	
	14	<i>Electronic Aids to Navigation</i>			
	.1	Knowledge of the use of Radar, Echo Sounder and Satellite navigation or other position finding device fitted on board the applicant's vessel	Y	Y	
	15	<i>Basic Knowledge of Vessel Construction and Stability</i>			
	.1	General ideas on vessel construction and on plans available on board the vessel where these are carried	Y	Y	
	.2	Maintaining watertight sub-division	Y	Y	
	.3	General pumping arrangements	Y	Y	
	.4	General principles of vessel stability	Y	Y	
	.5	Heeling/Listing forces and their causes	Y	Y	
	.6	Application and effects of asymmetric loading	Y	Y	
	.7	Overtight mooring	Y	Y	
	.8	Equilibrium in the heeled/listing condition		Y	
	.9	Effect of liquid free surface and its control	Y	Y	
	.10	Cranes, their operation and safe operating limits		Y	
	.11	Outline knowledge of freeboard and trim	Y	Y	
	.12	The use of stability and hydrostatic data where provided		Y	
	.13	Knowledge of the effect of severe wind and rolling in associated sea conditions, especially in following seas	Y	Y	

Syllabus Content			2	1
C.	PRACTICAL SAIL BOAT TEST (This test is to take place on a vessel of a size for which the applicant is licenced.)			
	.1	Getting the boat away from a pier or wharf	Y	Y
	.2	Bring the boat alongside a pier or wharf	Y	Y
	.3	Securing to a pier or wharf	Y	Y
	.4	Manoeuvring the boat to pick up a man overboard	Y	Y
	.5	Manoeuvring the boat to pick up a mooring buoy or marker	Y	Y
	.6	Be able to change tack	Y	Y
	.7	Be able to sail to all points of the wind	Y	Y
	.8	Anchoring and retrieving anchor	Y	Y

ANNEX 3 - BOAT ENGINEER LICENCE SYLLABUS

Syllabus Requirements

The syllabus below will be modified by the Examiner to take into account the equipment on board the vessel.

Syllabus Content			2	1
A.	ORAL EXAMINATION			
	1	<i>Compression Ignition Engine</i>		
	.1	The general principles of the compression ignition engine c.f. spark ignition	Y	Y
	2	<i>Cycle of Operation and Constructional Details</i>		
	.1	Engine cycles explained: Four Stroke and Two Stroke	Y	Y
	.2	The essential engine components identified and the acquisition of basic terminology	Y	Y
	.3	The meaning of engine terms such as: top dead centre, bottom dead centre, stroke, bore, swept volume, engine capacity, clearance volume, power, specific Fuel Oil Consumption (SFOC) and compression ratio		Y
	.4	Engine configurations: in line and 'V' engine types, side and overhead camshafts engines		Y
	.5	Engine performance data: interpretation of revs, torque and power curves; specific fuel oil consumption		Y
	.6	Two and four stroke engines	Y	Y
	3	<i>The Fuel System</i>		
	.1	The nature of diesel engine fuels; gas oils and DERV and their related origins. The importance of fuel cleanliness and the avoidance of water ingress. Explanation of the conditions which lead to microbiological contaminations. Risks and consequences of fuel leakage contaminating the lubricating oil	Y	Y
	.2	The fuel tank: filling, venting and isolating arrangements; the importance of weather tight sealing of filling cap. Adequacy of mounting and support arrangements and the importance of accurate indication of fuel contents	Y	Y
	.3	Fuel pre-filter and water coalescer/separator	Y	Y
	.4	Fuel lift pumps of diaphragm and plunger types		Y

Syllabus Content				2	1
A.	ORAL EXAMINATION (continued)				
	.5	Fine paper element filters			Y
	.6	Fuel injection pumps: in line jerk type and distributor pumping action. Fuel metering: helical, groove and metering valve (DPA)			Y
	.7	Common rail system			Y
	.8	Fuel injectors and the importance of good atomisation to the clean and efficient running of the engine			Y
	.9	Fuel system safety	Y		Y
	.10	The importance of maintaining an adequate reserve of fuel and the consequences of allowing the level to fall too low	Y		Y
	.11	Bleeding the fuel system			Y
	4	<i>The Lubrication System</i>			
	.1	The nature of friction, the composition of bearing materials and the role of lubricating oil in minimising the former and dissipating the heat produced	Y		Y
	.2	The route of lubricating oil through the engine and the importance of maintaining oil at the correct level and in an adequate state of cleanliness	Y		Y
	.3	Lubricating oil pumps of gear and lobe types			Y
	.4	Lubricating oil filters and the action of the pressure relief valve			Y
	5	<i>Engine Electrical Systems</i>			
	.1	Batteries: Lead Acid, Lithium-ion and Alkaline, their materials of construction, the electro-chemical processes and the explosive dangers of Hydrogen gas	Y		Y
	.2	The rating of batteries: Ampere-hour and cold cranking capacity for engine starting duties and deep cycling requirements for ancillary loads such as navigation lights and domestic requirements			Y
	.3	Basic appreciation of the battery discharge versus recharge relationship. Simple calculations to show the importance of maintaining batteries in an adequate state of charge			Y
	.4	Twin battery installations and split charging arrangements			Y
	.5	The ac generator (Alternator) and its drive belt checks and maintenance			Y
	.6	Pre-engaged starter motors			Y

Syllabus Content				2	1
A.	ORAL EXAMINATION (continued)				
	.7	Engine stopping arrangements - manual and solenoid operated. Emergency stopping by obstructing the air intake or shutting off fuel supply		Y	Y
	.8	Cold starting aids			Y
	.9	Basic circuit diagrams and engine instrumentation - sender units and their locations			Y
	.10	Safety features in the electrical distribution system such as fuses and breakers and the importance of bonding/earthing			Y
	6	<i>Power Transmission</i>			
	.1	Reduction/reverse gear boxes and plate clutches. Mechanical and hydraulic modes of operation			Y
	.2	Control systems: Bowden cables and rods. Safety considerations			Y
	.3	Propeller shafting and couplings. The importance of accurate alignment and engine mountings - both rigid and flexible			Y
	.4	Stern tube bearings and sealing arrangements - both traditional packed glands and seals such as Deep Sea Seals			Y
	.5	Introduction to the basics of propeller matching to hull speed and engine power and revolutions			Y
	7	<i>Hull Fittings</i>			
	.1	The maintenance of sea cocks and the importance of annual inspection		Y	Y
	.2	Zinc anodes and Cathodic Protection systems and associated bonding circuits			Y

Syllabus Content				2	1
A.	ORAL EXAMINATION (continued)				
	8	<i>General</i>			
		.1	Marine pollution prevention	Y	Y
		.2	Code of Safe Working Practices including entry into dangerous (enclosed) spaces, safety consciousness and awareness of potential fire hazards.	Y	Y
		.3	The use and hazards of fixed fire extinguishing systems	Y	Y
		.4	Basic rope-work	Y	Y
		.5	Vessel knowledge – common terms	Y	Y
		.6	Emergency procedures and duties – Fire, MOB, flood	Y	Y

NOTE:

Fault finding and rectification will be covered within each part of the syllabus as the individual topics are covered.

ANNEX 4 - COMPETENT CREW LICENCE SYLLABUS

Syllabus Requirements

Competent Crew training is the minimum level of training that a person shall receive before being recognised as part of the permanent crew for the purpose of the minimum manning recorded on the Code Compliance Certificate/Code Compliance Passenger Vessel Certificate.

The syllabus below will be modified by the Examiner to take into account the equipment on board the vessel.

SUBJECT
Vessel Specific Familiarisation Training Completed
Location and use of Lifesaving Appliances
Knowledge of abandon vessel procedures
The difference between a lifejacket and buoyancy aid
The correct method of fitting a lifejacket and buoyancy aid
Man overboard procedures including deployment of lifebuoy and raising the alarm
Demonstrate knowledge of the location and use of lifesaving equipment carried on the vessel
Identify markings on liferafts (or other survival equipment) with regards to number of occupants
Location and use of Fire Fighting Appliances
Operation of alarm bells (if fitted)
Knowledge of vessel fire procedures
Under supervision, operation of fire pump and hoses
Knowledge of the location and use of firefighting equipment carried on the Vessel
Identify differing types of fire extinguisher and what type of fire each would be used on
Use of ancillary equipment as carried (foam applicators etc)
Action in event of emergency
Means of recovery of person(s) from the water
Action in the event of collision at operational level
Prepare a liferaft or other survival craft for launching
Man overboard procedures including dropping of lifebuoy and raising the alarm
Method used to indicate the vessel is in need of urgent assistance and to summon help

SUBJECT
Personal safety and social responsibility
Observe safe working practices
Comply with emergency procedures
Contribute to effective human relations on board
Take precautions to prevent pollution of the marine environment
Understand orders and be understood in relation to board duties
Seamanship
A working knowledge of nautical terms
Demonstrate knowledge of the general layout of the vessel
Knowledge of bends and hitches commonly used on board
Correct use of ropes and rigging of fenders
Handling, care and stowage of chains and anchors
Handling, care and use of mooring lines
Assist in opening, closing and securing of doors, ramps and other hatches and access ways
Understand safe means of access and be able to rig accordingly
Understand helm orders and be able to steer a course under direction
Understand the duties of lookout and the reporting of lights and objects
Basic understanding of the collision regulations (carriage of lights, shapes and sound signals)
Responsibilities and Regulations
Basic understanding of an employee's obligations
Reporting defects and mechanical/electrical faults
Understand on board line of responsibility and communications
Requirements for reporting accidents and incidents to the master or responsible person on board
Code of Safe Working Practices
Understand the risks of falling into the water
Understand the importance of work place cleanliness
Demonstrate the use and care of personal protective equipment
Understand the principles for protection of the environment from pollution
Understand the methods for the prevention of accumulation of rubbish and debris
Precautions to be taken when using calor gas installations and use of gas alarms and testing
Understand the principles of a confined space and the precautions to be taken prior to entry

SUBJECT
Communications
Knowledge of external means of communication available on board the vessel
Knowledge of internal means of communication available on board the vessel
Passenger care & control
Passenger safety briefing
Passenger counting and number recording procedures
Duties with respect to passenger muster and evacuation at operational level

STCW certificates are accepted as equivalent training in the corresponding subject if held, and in date.

ANNEX 5 - ANCILLARY CERTIFICATES

Safety Certification

Additional safety training and certification is required depending on the licence type.

The table below details the requirements for each of the safety certificates required.

Course/Training	Applicable Licence
Basic Sea Survival - IMO Model Course 1.19	All
Elementary First Aid - IMO Model Course 1.13	Boatmaster Boat Engineer
Basic Firefighting Course - IMO Model Course 1.20	Boatmaster - Grade 1 Boat Engineer - Grade 1 Competent Crew (<i>within 12 months of licence issue</i>)
Personal Safety and Social Responsibility - IMO Model Course 1.21	Boatmaster - Grade 1 Boat Engineer - Grade 1 (<i>within 12 months of licence issue</i>) Competent Crew (<i>within 12 months of licence issue</i>)
Local Knowledge Endorsement	Boatmaster
GMDSS Radio Operator	Boatmaster
RYA Radar Operator Course	Boatmaster
MCA Approved Engineer Course	Boat Engineer – Grade 1
RYA Diesel Engine Maintenance Course	Boat Engineer – Grade 2

ANNEX 6 - RECOGNISED PROFESSIONAL QUALIFICATIONS FOR BOATMASTERS

Masters of vessels in commercial use under 24m in loadline length shall hold one of the following qualifications, in addition to a Boatmaster licence issued by the Administration:

- IYT Master of Yachts 200 tons (Coastal) and 3 months relevant experience
- IYT Master of Yachts 200 tons (Limited) and 3 months relevant experience
- IYT Master of Yachts 200 tons (Unlimited) and 3 months relevant experience
- RYA Advanced Powerboat Certificate of Competency with commercial endorsement
- RYA Day Skipper - Theory & Practical Certificate with commercial endorsement and 3 months relevant experience
- RYA Yachtmaster Coastal Certificate of Competency or Service with commercial endorsement and 3 months relevant experience
- RYA Yachtmaster Ocean Certificate of Competency with commercial endorsement and 3 month relevant experience
- RYA Yachtmaster Offshore Certificate of Competency with commercial endorsement and 3 months relevant experience
- UK Certificate of Competency - Master Code Vessel less than 200gt (unlimited or limited to 150 miles from a safe haven)
- UK Certificates of Competency (STCW Class II/1, II/2 or II/3, except Master Code Vessel less than 200gt)
- UK Certificates of Equivalent Competency (STCW Class II/1, II/2 or II/3)
- UK Fishing Deck Certificates of Competency Class 1 or 2 (or pre 1984 equivalent)