Merchant Shipping
Directorate

Transport Malta

Non-Convention Vessel (NCV) Code

Revision 1

The Non-Convention Vessel (NCV) Code is applicable to all Non-Convention Vessels ≥ 15m in length overall (LoA).

For the purpose of this Code a **Non-Convention vessel means a commercial vessel > 15m LoA which**

- **is a non-SOLAS vessel (< 500GT) engaged on international navigation, which, depending on its GT, may or may not be covered by the provisions of other IMO Conventions; AND/OR**
- **is a vessel operating exclusively on domestic voyages, irrespective of its GT (including vessels operating exclusively in Maltese Waters).**

For the purpose of this Code the term ***Maltese Waters*** shall mean *Maltese Ports*, *Maltese Internal Waters and Maltese Territorial Waters.*

This Code is being issued without prejudice to other applicable requirements.

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1 FOREWORD

1.1 The NCV Code has been drawn up by the Merchant Shipping Directorate, within Transport Malta, in consultation with various industry stake holders including builders, repair yards, specialised service providers and manufacturers, Recognised Organisations and Appointed Surveyors, as a wider representation of the industry.

This new Code incorporates the requirements that were set by the CVC Code (Code of Practice for the Safety of Commercial Vessels) together with the requirements for Non-Convention Vessels, namely the IACS Recommendation No.99. The Non-Convention Vessel Survey Guidelines (IACS 99) and the CVC Code will no longer be applicable to the vessels falling under the remit of this Code.

This NCV Code is effective and comes into force on the **1st January 2019**.

Existing vessels shall comply with the Code by not later than the first periodical survey that is carried out on or after the **1st June 2019**.

In case of existing vessels, the Administration may accept existing equipment and arrangements, which are of a standard that does not pose increased risks in safety and pollution prevention. When replacing any equipment or arrangements, the new equipment and arrangements onboard existing vessels, shall conform to the standards set out by this Code.

This Code has been developed and is applicable to all Non-Convention Vessels ≥ 15m LoA, including commercial vessels ≥ 15m LoA which are certified and operating on domestic navigation including those vessel operating exclusively within Maltese waters and which are engaged in or intended for use in any trade, business or calling or operating for hire or reward, in the carriage of cargo/supplies/passengers or providing port services or services to other vessels.

This Code does not apply to:

a) Non-Convention Vessels < 15m LoA, for which the Non-Convention Vessel Survey Guidelines (IACS 99) will remain applicable,
b) Commercial vessels < 15m LoA which are certified and operating exclusively within Maltese waters for which the CVC Code will remain applicable.
c) All water sports vessels which are certified and operating exclusively within Maltese waters for which the CVC Code will remain applicable.
d) military vessels,
e) vessels belonging to the State and used for non-commercial purposes,
f) pleasure craft and yachts not employed in commercial use,
g) commercial yachts engaged in trade. The Malta Commercial Yacht Code applies in this case,
h) fishing vessels,
i) vessels owned or operated on non-commercial services.

Recognised Organisations and Appointed Surveyors Oversight Programme

The Administration has delegated surveys and certification activities related to this Code to Recognised Organisations and Appointed Surveyors. In order to ensure the correct implementation of these delegated services the Administration has established a Recognised

Organisations' and Appointed Surveyors' Oversight Programme in order to proactively oversee, monitor, audit and enforce the Statutory inspection being carried out onboard ships. The main objectives of this oversight programme is to ascertain that the ROs and Appointed Surveyors carry out their surveys in compliance with this Code; and to identify areas necessitating enforcement and improvement.

The Administration may use any of the following tools as part of the oversight process:-

a) Direct monitoring by carrying out vertical contract audits whilst the ship is under survey;
b) Indirect monitoring by reviewing the Certificates and Reports issued to the ship;
c) Indirect monitoring by analysing PSC and/or FSI detentions attributable to the responsibility of the RO or Appointed Surveyor; and/or high number of deficiencies (even if vessel is not detained).

Flag State Inspections (FSI)

From time to time, the Administration may decide to carry out Flag State Inspections (FSI) onboard ships in any port. These inspections are in addition to the required statutory surveys and shall only be carried out by authorised flag State Inspectors.

Ship masters/owners/managers shall give full co-operation and assistance to the attending Flag State Inspector.

Unless the ship is found with serious deficiencies which will require re-inspection, all costs related to the Flag State Inspection will be covered directly by the Administration.

Port State Control Inspections

Ship masters/owners/managers shall give full co-operation and assistance to any attending Port State Control Inspectors.

In case of a port State control detention, the owner or master of the ship is to immediately inform the Administration.

Accident or Incident Reporting to the Administration and to the Marine Safety Investigation Unit

In accordance with the mandatory reporting requirements under the provisions of the *Merchant Shipping Act*, the Owner, Operator, or Master of a ship are required to report any occurrence of a marine accident or incident to:

a) within 24hrs to the Maltese Authorities, in this case the Maltese Administration, on e-mail: mershipmalta.tm@transport.gov.mt and tech.tm@transport.gov.mt
b) the Marine Safety Investigation Unit by the quickest means available on e-mail: msiu.tm@transport.gov.mt

For accidents/Incidents happening in Maltese waters the VTS shall be immediately informed verbally, in view of safety of navigation within such waters and also in respect of any pollution to the marine environment. A written report shall be sent within 24 hrs.

Owners and Masters shall also be guided by Merchant Shipping Notice No. 94 and Section 307 of the Merchant Shipping Act.

Recognised Organisations and Appointed Surveyors Authorisations, Duties and Limitations

Appointed Surveyors and Recognised Organisations are authorised by this Administration to perform the required surveys leading to the issuance of the NCV Certificate.

Qualified, experienced and competent exclusive surveyors belonging to Recognised Organisations may carry out the full range of survey and certification processes pertaining to this Code.

Appointed Surveyors are authorised to carry out the survey and certification processes pertaining to this Code in the areas in which they are adequately skilled, experienced and qualified to act; and, besides Tonnage Certification, they may issue Statutory Certificates only to vessels operating within 30 nautical miles from Malta and to vessels engaged exclusively in tuna pen towage.

It is to be pointed out that the Appointed Surveyor or Recognised Organisation carrying out surveys and certification pertaining to this Code may be chosen by the owner/managers at their discretion. The owners/managers are not bound to utilise the services of the same Recognised Organisation Classing the vessel for surveys and certification, pertaining to this Code, for ISM Certification and for ISPS Certification, even though this Administration does recommend that the same Recognised Organisation carries out surveys and certification pertaining to this Code.

Any Recommendation raised by a specific Appointed Surveyor or RO shall, to the extent possible, be cleared by the same Appointed Surveyor or RO who raised the recommendation in the first place.

Appointed Surveyors shall follow the Code of Ethics and Conduct for Appointed Surveyors issued by the Administration whilst Recognised Organisations' Surveyors shall follow the relevant Recognised Organisation's own Code of Ethics. Recognised Organisations and Appointed Surveyors shall carry out the surveys and the subsequent reporting without undue delay.

1.2 This Code sets minimum standards, as applicable, for new and existing vessels and has been prepared taking into account the applicable provisions of the following Regulations, Recommendations, Port State Regulations and International Conventions and their Protocols:

a) The International Convention for the Safety of Life at Sea (SOLAS), 1974, as modified by its Protocol of 1988;
b) The International Convention on Load Lines (LL), 1966, as modified by its Protocol of 1988;
c) The International Convention on Standards of Training, Certification and Watchkeeping (STCW), 1978, as amended;
d) The International Convention for the Prevention of Pollution from Ships (MARPOL), 1973/78;
e) International Regulations for Preventing Collisions at Sea (COLREG), 1972;
f) IACS Recommendation No.99, as amended;
g) Merchant Shipping (Maritime Labour Convention) Rules, as amended;
h) The Commercial Vessels Regulations, 2002, as amended, and the Code of Practice for the Safety of Commercial Vessels (CVC).

1.3 Besides compliance with this Code, vessels are also required to comply with the various laws/regulations/requirements issued under the Merchant Shipping Act or any other International or National applicable legislation/requirements. In case of any conflict in requirements, the stricter requirement shall always be applicable.

1.4 This Code sets required standards of safety and pollution prevention in relation to the vessel's size, type, service and navigation notation.

1.5 An NCV Certificate will be issued to commercial vessels found in compliance with the standards set out in this Code.

1.6 The list of certificates required by this Code is summarised in Section 33 of this Code (List of certificates to be issued).

1.7 The primary aim in the development of this Code is to safeguard life and property at sea and for pollution prevention. The Code deals mainly with construction, machinery, equipment, stability, safety, manning, crew certification and operations of a vessel.

1.8 In addition to the requirements contained elsewhere in this Code, vessels shall be designed, constructed and maintained in compliance with the structural, mechanical and electrical requirements of a classification society recognised by the Administration. Designers and builders of new vessels falling under the requirements of this Code have to take into consideration any applicable certification requirements, the vessel's intended area of operation and its operating conditions when selecting the design, materials and equipment to be used in its construction.

1.9 Builders, repairers and owners of vessels falling under this Code, shall take all reasonable measures to ensure that any materials, equipment, machinery or appliances fitted onboard are in accordance with the requirements of this Code and are safe and suitable for their intended purpose.

1.10 Materials, Equipment, Machinery and Appliances required onboard are to comply with a applicable standards such as:

.1 a relevant standard or code of practice of a national standards body or equivalent;

.2 any relevant international standard recognised for use by the Authority (such as MED, Type Approval, ISO etc);

.3 traditional manufacturing procedures which are subject to detailed written technical description and surveys;

.4 a specification sufficiently detailed to permit the assessment of an innovative product or procedure and which fulfils the purpose and is equivalent to a recognised applicable standard.

1.11 Whilst all reasonable measures have been taken to develop standards which will enhance the safety and seaworthiness of vessels, total safety at sea can never be guaranteed. In this regards, owners of vessels shall take out a Policy of Insurance including coverage for all persons who are part of the vessel's complement. Such insurance shall provide sufficient cover for any claims which may arise. A copy of the valid Certificate of Insurance shall be maintained onboard and be readily available for inspection.

1.12 Compliance with this Code in no way exempts or supersedes the legal requirements for an owner and/or master to comply with any applicable additional EU or National requirements, laws, rules, regulations or directives.

1.13 The master of a vessel is responsible for the health and safety of anyone working on the vessel. Health and safety standards onboard shall be fully compliant with applicable international and local requirements.

Every employer shall be aware of any risks affecting workers onboard and has to ensure that appropriate measures are taken to minimise these risks. Employers shall identify these risks and train employees, that may be affected, in order to ensure their own safety and the safety of others.

1.14 This Code will be revised in the light of feedback and experience gained in its application.

1.15 In case of existing certified vessels, the Administration may accept existing equipment and arrangements, which are of a standard that does not pose increased risks in safety and pollution prevention. When replacing any equipment or arrangements onboard existing vessels, the replacement shall conform to the standards set out by this code.

1.16 The Administration, may, on a case by case basis, consider specific alternatives or equivalents to any standard mentioned in this Code. Any proposed alternative/equivalency or any request for exemption from any specific requirement of the Code is to be reviewed and accepted by the Administration.

1.17 The Administration may allow any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision to be made in that vessel, if it is satisfied by trial thereof or otherwise that such fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by the requirements of this Code.

SECTION 2
DEFINITIONS

2 DEFINITIONS

Note – where a definition is not provided within this Code, guidance shall be sought from definitions provided in International Codes and Conventions.

Accommodation Spaces are those spaces used as public spaces, lavatories, cabins, offices, medication areas, cinemas, entertainment rooms, health and beauty treatment areas, pantries containing no cooking appliances and similar spaces;

Administration shall, for the purpose of this Code, mean the Registrar-General of Shipping and Seaman;

Annual inspection/survey is a periodical survey consisting of a general inspection of the vessel, its machinery, equipment and appliances, to ascertain that it has been satisfactory maintained as required by this Code and that arrangements, appliances and equipment onboard are as documented in the appropriate form(s) and which are fit for the intended use.

The hull of the vessel shall be examined in drydock at intervals not exceeding 3 years. The Administration may consider bottom surveys to be carried out with the vessel afloat and/or stipulate a lesser interval after due consideration to hull construction material or the age or the type and service of the vessel;

Anniversary date means the day and the month of each year which will correspond to the date of expiry of the relevant certificate;

Appointed Surveyor means a government surveyor appointed by the Administration, in terms of the Merchant Shipping Act, who is authorised to carry out surveys and certification in compliance with applicable parts of this Code;

Approved in respect of materials or equipment means approved by the Administration or approved by another accepted administration or organisation which is formally recognized by the Administration or approved by Transport Malta;

Authority for the purpose of this Code refers to the **Authority for Transport in Malta** as established by Act XV of 2009, as amended.

Cargo for the purpose of this Code means all items which are transported by the vessel except fuel for the vessel, ballast, consumables to be used on board, permanent outfit and equipment of the vessel, stores and spare gear for the vessel, crew and their personal effects and passengers and their personal effects;

Cargo Gear means all cargo lifting equipment installed onboard and this includes deck cranes, derricks and other lifting appliances;

Certificate means the NCV Certificate issued to the vessel in accordance to this Code;

Certificate of Insurance means a certificate of insurance issued by an insurer in terms of the provisions contained in the Code;

Charter means an agreement between the owner and another party which allows the other party to operate the vessel, and the **Charterer** is that other party. It is the responsibility of the owner to ensure that vessel complies with the requirements prescribed in this Code;

"Classes of Passenger Ships" – refer to EU Directive 2009/45/EC, as amended.

"Code" means the NCV Code, unless another Code is specified**;**

"Commercial vessel" means a vessel which is engaged in or intended for use in any trade, business or calling or operating for hire or reward, in the carriage of cargo/supplies/passengers or providing port services or services to other vessels;

"Domestic Navigation" or **"National Navigation"** means the exclusive restricted navigation within the territorial waters of a single country, including navigation in ports, internal water ways, lakes, rivers of that country i.e. a form of navigation which is not an international navigation, as it is restricted only to the waters of a single country;

Domestic Voyage" means a voyage in sea areas from a port of a country to the same or other port within the same country;

"EPIRB" is a satellite emergency position-indicating radio beacon, which when activated emits emergency signals which are intended to facilitate search and rescue operations. The EPIRB must comply with performance standards adopted from time to time by the IMO, and being capable of :-

a. floating free and being automatically activated if the ship sinks, or
b. being manually activated by the persons onboard, and
c. must be able to be carried by one person;

"Existing vessel" means a Malta flag vessel which was already certified in accordance with the Code of Practice for the Safety of Commercial Vessels (CVC) or in accordance to the IACS Recommendation No.99 prior to the date of entry into force of the NCV Code, and which is not a **"new"** vessel;

"Freeboard" means the distance measured vertically downwards amidships from the lowest point of the upper edge of the freeboard deck to the waterline in still water, or from the upper edge of the deck line to the upper edge of the related load line, as appropriate;

"Freeboard Deck" has the meaning as given in Annex I of the International Load Line Convention (ILLC). The freeboard deck is normally the uppermost complete exposed deck which has permanent means of closing for all openings in the weather part thereof;

a) In a vessel having a discontinuous freeboard deck, the lowest line of the exposed deck and the continuation of that line parallel to the upper part of the deck is considered as the freeboard deck;
b) At the Owner request and subject to the approval of Transport Malta, a lower deck may be designated as the freeboard deck provided it is a complete and permanent deck continuous in a fore and aft directions at least between the machinery spaces and peak bulkheads whilst also being continuous athwart ships;
c) When a lower deck is designated as the freeboard deck, that part of the hull which extends above the freeboard deck is treated as a superstructure so far as concerns the application of the conditions of assignment and the calculation of freeboard. It is from this deck that the freeboard is measured and calculated;

"Garbage" means all kinds of victual, domestic and operational waste generated during the normal operation of the vessel and liable to be disposed of continuously or periodically, except sewage originating from vessels;

"GT (Gross Tonnage)" means the measure of the overall size of a vessel determined in accordance with the provisions of the International Convention on Tonnage Measurement of Ships, 1969 for vessels over 24 metres in length and for vessels under 24 metres in length determined in accordance with the Merchant Shipping (Tonnage)Regulations 2002, as amended;

"Hazardous Space" means a space or compartment in which combustible or explosive gases or vapours are liable to accumulate in dangerous concentrations;

"Passenger High-speed craft" means a high-speed craft as defined in Regulation X/1 of the 1974 SOLAS Convention, as amended, including dynamically supported craft, which carries more than 12 passengers;

"Cargo High-speed craft" means a high-speed craft as defined in Regulation X/1 of the 1974 SOLAS Convention, as amended, including dynamically supported craft, which carries cargo and/or less than 12 passengers.

"ILLC" and **"LL"** means the International Convention on Load Lines, 1966 as modified by the Protocol of 1988, as amended;

"IMO" means the International Maritime Organisation;

"Industrial Personnel" means all persons who are transported or accommodated onboard for the purpose of offshore industrial activities performed onboard other vessels and/or other offshore facilities;

"Internal Waters" means all water and waterways on the landward side of the baseline from which the territorial waters are measured;

"Insurer" means an insurance company which contracts to indemnify another party in the event of injury, loss or damage;

"Insurance Policy" means a policy of insurance which is issued by an insurer in compliance with the requirements of this Code;

"Length" or "Hull Length" or "Load Line Length" unless expressly provided otherwise, mean either 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or the length from the fore side of the stem to the axis of the rudder stock on that waterline, whichever is the greater. In a vessel with a rake of keel, the waterline on which this length is measured shall be parallel to the design waterline;

"Length Overall (LoA)" means the overall length from the foreside of the foremost fixed permanent structure to the aft side of the aftermost fixed permanent structure of the vessel;

"Lifeboat" means a lifeboat complying with the requirements of the IMO International Life-Saving Appliances Code;

"Lifebuoy" means a lifebuoy complying with the requirements of the IMO International Life-Saving Appliances Code;

"Lifejacket" means a lifejacket complying with the requirements of the IMO International Life-Saving Appliances Code;

"Liferaft" means a liferaft complying with the requirements of the IMO International Life Saving Appliances (LSA) Code;

"Line Throwing Appliance" means an appliance complying with the requirements of the IMO International Life-Saving Appliances Code;

"LSA Code" means the IMO International Life saving Appliance (LSA) code in it's up to date version;

"Low Flame Spread" means that the surface will adequately restrict the spread of flame, as determined by Part 5 of the IMO Fire Test Procedures Code or by an alternative established procedure to the satisfaction of the Administration;

"Machinery Spaces" are all machinery spaces of category A and all other spaces containing propulsion machinery, boilers, oil / fuel units, steam and internal combustion engines, generators and major electrical machinery, oil filling stations, refrigerating, stabilising, ventilation and air conditioning machinery;

"Machinery Spaces of Category A" are those spaces and access trunks which contain:-

a. internal combustion machinery used for main propulsion, or;
b. internal combustion machinery used for purposes other than main propulsion where such machinery has in the aggregate a total power output above 375Kw, or;
c. any oil fired boiler or oil fuel unit;

"Main Source of Electrical Power" is a source intended to supply electrical power to the main switchboard for distribution to all services necessary for maintaining the vessel in normal operation and in habitable conditions;

"Main Steering Gear" is the machinery, rudder, activators, steering power units and ancillary equipment and the means of applying the necessary torque to the rudder, necessary for effecting movement of the rudder;

"Main Switchboard" is a switchboard which is directly supplied by the main source of electrical power and is intended to distribute electrical energy to the vessel's services;

"Main Vertical Zone" is applicable to passenger vessels and means those sections into which the hull, superstructure and deckhouses are divided by A class divisions bulkheads, the mean length of which, on any deck, does not normally exceed 40 metres;

"Major Alteration/Modification/Conversion" means, namely, a substantial change in the vessel's dimensions and/or carriage capacity and/or the vessel's type;

"Maltese Territorial waters" means the territorial waters of Malta being all parts of the open sea within twelve nautical miles off the coast of Malta measured from baselines determined using the method of straight baselines joining appropriate points on the low-water line.

"**Maltese Waters**" means Maltese Ports, Maltese Internal Waters and Maltese Territorial Waters. **For the purpose of this Code the term Maltese waters shall mean Maltese Ports, Maltese Internal Waters and Maltese Territorial Waters**;

"MARPOL" means the International Convention for the Prevention of Pollution from Ships, 1973, as amended;

"Motorised Vessel" means a craft or a vessel propelled by mechanical means via an internal combustion engine or electric motor. This includes also sailing vessels that are fitted with auxiliary propulsion engines;

"Mile" means a nautical mile consisting of 1,852 metres;

"Non-Convention Vessel", for the purpose of this Code, means a commercial vessel > 15m LoA which

a) is a non-SOLAS vessel (< 500GT) engaged on international navigation, which, depending on its GT may or may not be covered by the provisions of other IMO Conventions; **AND/OR**
b) is a vessel operating exclusively on domestic voyages, irrespective of its GT;

"Navigation Notation" means the exclusive area in which a vessel is certified to operate and are namely:

a) "**Unrestricted Navigation**" meaning that the vessel is not a **Restricted Navigation** vessel and it may operate within any range specified in its certification.

b) **"Restricted Navigation"** means that the vessel is restricted to operate only in specified areas as detailed in the NCV Certificate. **Coastal Navigation** is also listed under the Restricted Navigation Notation and normally a coastal navigation notation is followed by the number of nautical miles from coast within which the vessel is certified to operate. **Daylight Navigation** and **Favourable Weather Navigation** fall also under the Restricted Navigation Notation. Daylight Navigation means that the vessel is allowed to operate only in daylight hours (i.e. no navigation during the dark).

c) **"Port"** meaning that the vessel may operate only in ports. In some cases the specific name of the port or bay where the vessel is certified to operate is also included on the NCV Certificate;

d) **"Internal Waters"** means that the vessel is restricted to operate in all waters and waterways on the landward side of the baseline from which the territorial waters are measured;

e) **"Maltese Territorial Waters"** means the territorial waters of Malta being all parts of the open sea within twelve nautical miles off the coast of Malta measured from baselines determined using the method of straight baselines joining appropriate points on the low-water line. For the purpose of this Code the term **Maltese Waters** shall also infer and include Maltese Ports, Maltese Internal Waters and Maltese Territorial Waters;

f) **"Domestic Navigation"** or **"National Navigation"** means the exclusive navigation within the territorial waters of a single country, including navigation in ports, internal water ways, lakes, rivers of that country i.e. a form of restricted navigation which is not an international navigation, as it is restricted only to the waters of a single country.

"New Vessel" means:

a) a vessel to which this Code applies; having the keel laid or construction started on or after the date of entry into force of this Code, or

b) an already built (existing) vessel requiring certification in accordance with this Code on a date subsequent to the date of entry into force of the Code, excluding those existing Malta flag vessels which were already certified in accordance to the Code of Practice for the Safety of Commercial Vessels (CVC) or to the Non-Convention Survey Guidelines (IACS 99), prior to the date of entry into force of the Code;

"Non-Motorised Vessel" means a craft or vessel which is not a motorised vessel;

"Not Readily Ignitable" means that the surface thus described will not continue to burn for more than 20 seconds after removal of a suitable impinging test flame;

"Notified Body" means an approved organisation which certifies yachts to the Recreational Craft Directive 2013/53/EU, as amended, and the Marine Equipment Directive 2104/90/EC, as amended;

"Offshore Industrial Activities" are the construction, maintenance, operation or servicing of offshore facilities related, but not limited, to exploration, the renewable or hydrocarbon energy sectors, aquaculture, ocean mining or similar activities;

"Open Boat/Vessel" means a boat/vessel open to the weather with little or no deck or superstructure, to drain water overboard.

"Open Decks include open deck spaces and enclosed promenades having no fire risk. Air spaces (the space outside superstructures and deckhouses);

"Owner means the registered owner or the owner or the managing operator of the registered owner or owner, or Master of the vessel;

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

a. a person employed or engaged in any capacity on board the vessel on the business of the vessel;
b. a person on board the vessel either in pursuance of the obligation laid upon the master to carry shipwrecked, distressed or other persons, or by reason of any circumstances that neither the master nor the owner nor the charterer (if any) could have prevented, and;
c. a child under one year of age;

"Passenger ship" means a ship which carries more than 12 passengers and a **"Ro-Ro Passenger ship"** means a ship carrying more than 12 passengers having ro-ro cargo spaces or special category spaces,

"Person" means a person over the age of one year;

"Persons with Reduced Mobility" means anyone who has a particular difficulty when using public transport, including elderly persons, disabled persons, persons with sensory impairments and wheelchair users, pregnant women and persons accompanying small children;

"Position 1" means upon exposed freeboard and raised quarter decks and upon exposed superstructure decks situated forward of a point located a quarter of the ship's length from the forward perpendicular;

"Position 2" means upon exposed superstructure decks situated abaft a quarter of the ship's length from the forward perpendicular;

"Public Transport" means conveyance, either publicly or privately owned, provided to the general public or special service (but not including charter or sightseeing services) on a scheduled route between at least two different locations on a regular and continuous basis;

"Radar Reflector" means a device installed on board a vessel not built of metal to give a good target on a radar screen;

"Radar Transponder" means a radar transponder for use in survival craft to facilitate location of survival craft during rescue operations;

"Recess" means an indentation or depression in a deck and which is surrounded by the deck and has no boundary common with the shell of the vessel;

"Recreational Craft Directive (RCD) or CE Certification" is the EC Directive 2013/53/EU in it's up to date version;

"Recognised Organisation or **Classification Society (referred also as 'RO' and/or 'Class')"** is a non-governmental international recognised organisation that is principally involved with the surveying and certification of vessels against defined Classification Rules, International Rules and Regulations and Statutory Codes and Requirements. The updated list of approved recognised Certification Societies is provided on the Authority's website;

"Registrar-General" means the "Registrar-General of Shipping and Seamen" as established in the Merchant Shipping Act,(CAP.234);

"Rescue Boat" means a boat complying with the requirements of the IMO International Life-Saving Appliances Code and designed to rescue persons in distress and for the marshalling of liferafts;

"Retro-reflective Materials" means a material which reflects in the opposite direction a beam of light directed on it;

"Rocket Parachute Flare" means a pyrotechnic signal complying with the requirements of the IMO International Life-Saving Appliances Code;

"Safe haven" means a harbour or shelter of any kind which affords entry, subject to prudence in the prevailing weather conditions, which offers protection from the force of the weather, and which has a safe access to disembark persons;

"Sailing Vessel" means a vessel designed to carry sail, whether as a sole means of propulsion or as a supplementary means;

"Sea Area A1" means an area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available;

"Sea Area A2" means an area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available;

"Sea Area A3" means an area, excluding sea areas A1 and A2, within the coverage of an Inmarsat geostationary satellite in which continuous alerting is available;

"Sea Area A4" means an area outside sea areas A1, A2 and A3;

"Seafarer" or **"Crew"** means a person who is employed or engaged in any capacity onboard the vessel on the business of the vessel;

"Self-Activating Smoke Signal" means a signal complying with the requirements of the IMO International Life

Saving Appliances (LSA) Code;

"Self-Igniting Light" means a light complying with the requirements of the IMO International Life-Saving Appliances Code;

"Service Spaces (high risk)" Galleys, pantries containing cooking appliances, saunas, paint lockers and storage spaces having an area of 4 m^2 or more; including spaces for the storage of flammable liquids, workshops other than those forming part of the machinery spaces and spaces for the storage of jet skis or tender operated with gasoline fuel;

"Service spaces (low risk)" Lockers and store-rooms not having provisions for the storage of flammable liquids and having area less than 4 m^2, including drying rooms and laundries.

In terms of the requirements of this Code, a galley may be assumed to fall under low risk service space category if:-

Coffee machines, toasters, dish washers, microwave ovens, water heaters and similar appliances, each have a maximum power rating not exceeding 5kW and electric cookers and electric hotplates, each having a maximum power rating of 2kW and a surface temperature not exceeding 150 degrees Celsius.

Appliances such as deep frying equipment and open flame cooking appliances qualify the galley as a high risk service space;

"SOLAS" means the International Convention for the Safety of Life at Sea, 1974, as amended;

"SOLAS A Pack" means a liferaft emergency pack complying with the requirements of the IMO International Life Saving Appliances (LSA) Code;

"SOLAS B Pack" means a liferaft emergency pack complying with the requirements of the IMO International Life Saving Appliances (LSA) Code;

"Stairways" means Interior stairways, lifts, totally enclosed emergency escape trunks, and escalators other than (those wholly contained within the machinery spaces) and enclosures thereto.
In this connection, a stairway which is enclosed only at one level shall be regarded as part of the space from which it is not separated by a fire door;

"Standard Fire Test" means a test in which specimens of the relevant bulkheads, decks or other constructions are exposed in a test furnace by a specified test method in accordance with the IMO Fire Test Procedures (FTP) Code;

"STCW" means the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, as amended;

"Superstructure" has the meaning given in Annex I to International Load Line Convention, as amended;

"Survival Craft" means a craft capable of sustaining the lives of persons in distress from the time of abandoning ship;

"Tender" means one or more inflatable or rigid crafts which are not liferafts, stowed in a position providing for easy side-to-side transfer which may not engage in separate commercial activities from that of the mother vessel;

"Technical Spaces" are those spaces, other than Category A Machinery Spaces, that contain mechanical and/or electrical equipment with heat dissipating characteristics;

"Territorial Waters" means Territorial Waters extending to twelve (12) nautical miles from an established baseline;

"Traditional Build Vessels" means timber vessels having the same design and construction details as those making part of the maritime heritage. Replica vessels made of materials other than timber are not considered as being Traditional Build vessels;

"Training Manual" with regard to live-saving appliances means a manual complying with the requirements of SOLAS III/Part B – Life-Saving Appliances and Arrangements, Regulation 35;

"Two-way VHF Radiotelephone" set means a portable or a fixed portable two-way VHF radiotelephone apparatus used for on-scene communications and conforming to IMO performances standard A.809 (19) as may be amended, Annex I or Annex 2, as applicable;

"Type Approved" means an item/equipment that has been approved and/or certified by an organisation/body recognised by the Authority such as an IACS Member Certification, MED Certification, ISO Certification and another Administration Certification;

"**Unrestricted Navigation**" meaning that the vessel is not a **Restricted Navigation** vessel and it may operate within any range specified in its certification.

"Vessel" - For the purposes of this Code, unless expressly and explicitly defined otherwise, the term 'vessel' shall normally refer to a commercial non-convention vessel.

"Watertight" means capable of preventing the passage of water through the structure in either direction with a proper margin of resistance under the pressure due to the maximum head of water which it might have to sustain;

"Weatherdeck" means the uppermost complete weathertight deck fitted as an integral part of the vessel's structure and which is exposed to the sea and weather;

"Weathertight" has the meaning given in Annex I of the ICLL. Weathertight means that in any sea conditions water will not penetrate into the ship;

"Wheelhouse" means the control position occupied by the officer of the watch who is responsible for the safe navigation of the vessel;

"Window" means a vessel's window, being any window, regardless of shape, suitable for installation onboard vessels;

"Work boat" means a vessel used for commercial purposes to carry out work and/or provide services at sea. Workboats maybe vessels such as, but not limited to: Tugs, Pilot Boats, Conveyance vessels etc.

“>” means greater than;
“<” means less than;
“≥” means equal and greater than;
“≤” means equal and less than.

SECTION 3
APPLICATIONS AND INTERPRETATION

3 APPLICATION AND INTERPRETATION

3.1 Application

3.1.1 This first edition of the Non-Convention Vessel Code has been drawn up by the Merchant Shipping Directorate, within Transport Malta, in consultation with various industry stake holders including owners, vessel repair yards, specialised service providers, Appointed surveyors and Recognised Organisations.

The main references utilised in setting up this Code are the Malta Commercial Vessels Regulations, National and International Conventions and Protocols.

For the purpose of this Code the term Maltese waters shall mean Maltese Ports, Maltese Internal Waters and Maltese Territorial Waters.

3.1.2 This Code is applicable to all Non-Convention vessels ≥ 15m LoA which include:

a) Monohull and Multihull vessels ≥ 15m LoA & < 500 GT operating in both Restricted and Unrestricted Navigation;
b) Vessels ≥ 15m LoA & < 500 GT trading internationally and to vessels ≥ 15m LoA, regardless of their GT, operating on Domestic Navigation including those operating exclusively in Maltese Waters (Maltese Ports, Internal Waters and Territorial Waters) which are engaged in or intended for use in any trade, business or calling or operating for hire or reward, in the carriage of cargo/supplies/passengers or providing port services or services to other vessels;

The above includes also vessels ≥ 15m LoA, which do not carry cargo and/or passengers and which are in commercial use, such as, but not limited to pilot boats, tugboats, workboats, barges, dredgers, floating cranes.

Vessels carrying dangerous goods, chemicals and/or liquefied gases in bulk, shall also comply with the IMDG, IGC and IBC Codes, as applicable.

Vessels operating in Inland Waterways shall also comply with Inland Waterway requirements as applicable.

The Type of Non-Convention vessels to which this Code is applicable are :

.1 Vessels ≥ 15m LoA which carry passengers;
.2 Vessels ≥ 15m LoA which carry cargo;
.3 Vessels ≥ 15m LoA which carry cargo and/or passengers;
.4 Pilot boats ≥ 15m LoA;

.5 Vessels ≥ 15m LoA, which do not carry cargo and/or passengers and which are in commercial use, such as, but not limited to tugboats, workboats, dredgers, floating cranes etc.

3.1.3 This Code does not apply to pleasure craft, commercial yachts, fishing vessels, water sports vessels (operating in Maltese waters) and vessels owned or operated on non-commercial services.

3.1.4 The hull, machinery, and all equipment of every vessel should be constructed and installed so as to be capable of being regularly maintained to ensure that they are at all times, in all respects, satisfactory for the vessel's intended service.

3.1.5 All applicable provisions of this Code shall be deemed to be a requirement.

3.1.6 All vessels shall comply with the requirements of the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs), as amended.

3.2 Interpretation

Where there is a question of application of this Code, or of the interpretation of a part of this Code, the owner/operator of the vessel concerned shall seek clarification from an Appointed Surveyor or from a Recognised Organisation. In situations where it is not possible to resolve an issue of interpretation, a decision may be obtained after submitting a written application to the Administration.

3.3 Area of Operation

A vessel issued with a Non-Convention Vessel (NCV) certificate is allowed to operate at sea within the assigned area of operation as indicated on the NCV certificate. Operating routes and landing places are in certain cases also indicated on the certificate, as deemed necessary.

3.4 Certification

Upon the satisfactory completion of the designated survey and inspections, a vessel complying with the standards set out in this Code, shall be issued with a NCV Certificate which will include the vessel's area and type of operation.

3.5 Verification by the Administration

Certificates presented in conjunction to a request for the issuance of a Non-Convention Vessel Certificate may be subject to a verification inspection by the Administration and/or by an Appointed surveyor or a Recognised Organisation.

3.6 Updating of this Code

The requirements of this Code will be reviewed and updated as required from time to time. Any amendments which are required before such time will be promulgated by the issue of relative Notices.

3.7 Alternatives/Equivalents

When the Code requires that a particular piece of equipment or machinery shall be provided or carried in a vessel or that any particular provision should be made, to a specified standard, the Administration may permit any other piece of equipment or machinery to be provided or carried, or any other provision to be made, or any other standard, provided that the Administration is satisfied by trials or otherwise that the alternative/equivalent is at least as effective as that required by the Code.

3.8 Exemptions

Exemptions shall be granted only by the Administration.

Applications for any exemption shall be made to the Administration and shall be supported by a reasonable justification for the exemption. The granting of exemptions shall be regarded as exceptional.

3.9 Existing vessels

When an existing vessel does not meet a particular clause of this Code and when it can be demonstrated that compliance with this particular clause is neither reasonable nor practical, proposals for alternative/equivalent arrangements shall be submitted to the Administration for approval. If the alternative/equivalent proposal is not acceptable, the Administration, at its discretion, may give consideration to a proposal from the owner to phase in the requirements within an agreed time scale that does not exceed 12 months.

The Administration shall take into consideration the vessel's service history and operational history and any other factors relating to the particular vessel.

Repairs, alterations and refurbishments, onboard existing vessels, shall comply with the same requirements and standards applicable to new vessels.

3.10 Mooring/Berthing Requirements for vessels operating in Maltese Waters

Upon application for the issuance of an NCV Certificate, owners/operators of vessels operating in Maltese Waters shall provide proof of a valid mooring/berthing permit/agreement issued by the Authority or by a Private Marina/Operator. If the vessel will be slipped or hauled ashore (not berthed or moored) on a daily basis, then a declaration by the owners/operators shall be provided in this regards and the owners/operators declaration shall also clearly state that no mooring or berth is required for the indicated vessel.

SECTION 4
STRUCTURAL STRENGTH AND WATERTIGHT INTEGRITY

4 STRUCTURAL STRENGTH AND WATERTIGHT INTEGRITY

4.1 General Requirements

The objective of this section is to ensure that all vessels are constructed to an applicable standard in respect of structural strength and watertight integrity.

4.1.1 New vessels ≥ 24m in length, shall be issued with a valid Classification Certificate (covering both Hull and Machinery). The Class Certificate shall be issued by a Recognised Organisation and shall be maintained valid throughout the validity of the NCV Certificate.

4.1.2 Existing vessels ≥ 24m in length, already issued with a Class Certificate by a Recognised Organisation, shall maintain the Class Certificate's validity throughout the validity of the NCV Certificate.

4.1.3 Traditional Build vessels, built predominantly from timber, need not be Classed or be built to a Recognised Organisation's Rules, however, they must be presented for a full NCV Initial Survey prior to being accepted by the Administration and certified. Replica vessels made of materials other than timber shall not be considered as Traditional Build vessels.

4.1.4 Vessels ≥ 15m LoA & < 24m in length need not be Classed or built in accordance to Class Rules even though the Administration recommends it. These vessels shall comply with the applicable requirements set out in this Code.

4.2 Load Line Convention

Vessels ≥ 24m in length with keel laid after the 21st July 1968 and vessels ≥ 150GT with keel laid before the 21st July 1968 shall conform to the requirements of the Load Line Convention, as amended and shall be issued with a Freeboard Assignment Report and a Load Line Certificate. Vessels which do not fall under the above criteria (including vessels < 24m in length) shall be issued with a Freeboard Assignment Certificate.

Note: For vessels engaged on Unrestricted Navigation, for which the Load Line Convention (ILLC) is fully applicable; where there is a conflict between the requirements of this NCV Code and the Load Line Convention, the most demanding requirement shall prevail.

4.2.1 Vessels shall be constructed with a watertight deck over the length of the vessel and be of adequate structural strength to withstand the sea and weather conditions likely to be encountered in the area of operation.

4.2.2 A vessel which is not fitted with a full watertight weather deck along all the length of the vessel, in accordance with the above shall be limited to operate in a restricted area (restricted navigation) and in favourable weather conditions and shall be provided with reserves of buoyancy and stability for the vessel with its full complement of cargo/persons to survive the consequences of swamping. Open boats and sailing vessels which are not fitted with a watertight weather deck shall normally be restricted to operate in restricted areas and in favourable weather conditions.

4.2.3 An open boat shall not carry cargo, or a combination of passengers and cargo, weighing in excess of 1000kg. (One passenger is assumed to weigh 75kg). Such a vessel shall not be fitted with a lifting device or be engaged in towing operations. Open boats carrying passengers and restricted to operate in the daylight hours, in favourable weather conditions and within 3miles from a safe haven within the Maltese waters may be specially considered.

4.2.4 A vessel which has practical, restrictive and limiting conditions shall be specially considered by the Administration.

4.2.5 The declared area(s) of operation and any other conditions which restrict the use of the vessel at sea shall be clearly identified and recorded on the Non-Convention Vessel (NCV) Certificate.

4.2.6 The choice of hull construction materials affects fire protection. Reference shall be made to the Section dedicated to Structural Fire Protection.

4.3 Structural Strength

4.3.1 The hull structural design and construction shall provide strength, stability and a reliable service life for the safe operation of a vessel, at its service draught and maximum service speed, in order to withstand the sea and weather conditions likely to be encountered in its intended area of operation.

4.4 Construction materials

4.4.1 **General**

4.4.1.1 A vessel may be constructed of timber, fibre/glass reinforced plastic (FRP and GRP), aluminium alloy or steel or a combination of such materials.

4.4.1. Proposals to use any other construction materials shall be submitted and approved by the Recognised Organisation or Appointed Surveyor. The Administration shall be informed of such approvals.

4.4.2 New vessels

4.4.2.1 New vessels shall comply with the above mentioned certification requirements and with those mentioned in Section 33 of the Code

4.4.3 Existing Vessels

4.4.3.1 Existing vessels which undergo major alterations/modifications shall be considered as new vessels and thus need to comply with the requirements as stated here above. A major alteration/modification means, namely, a substantial change in the vessel's dimensions, carriage capacity and the vessel's type.

4.5 Decks Requirements

4.5.1 Weather Deck

4.5.1.1 The weather deck shall be a watertight deck extending from stem to stern and have positive freeboard throughout in any loading condition.

4.5.1.2 A weather deck may be stepped, recessed or raised provided the stepped, recessed or raised portions are of weathertight construction.

4.5.1.3 Vessels not fitted with a watertight weather deck shall normally have their navigation restricted and be provided with adequate reserves of buoyancy and stability for the vessel with its full complement of persons to survive the consequences of swamping.

4.5.2 Recesses

4.5.2.1 Any recess in the weathertight deck shall be self-draining under all normal conditions of heel and trim of the vessel.

4.5.2.2 A swimming pool open to the elements shall be treated as a recess.

4.5.2.3 The means of drainage provided shall be capable of efficient operation when the vessel is heeled to an angle of 10^{o} in the case of a motor vessel and 30^{o} in the case of a sailing vessel.

The drainage arrangements shall have the capability of draining the recess (when full with water) within 3 minutes with the vessel in its upright position and at the load line draught. Means shall be provided to prevent the backflow of seawater into the recess.

4.5.2.4 When it is not practical to provide drainage which meets the above requirements, alternative safety measures may be proposed for approval by the Administration.

4.6 Watertight Bulkheads

4.6.1 New Vessels

4.6.1.1 With the exclusion of open type vessels and Traditional Build vessels built predominantly from timber; all other new vessels ≥ 15m LoA which are certified to carry 15 or more persons OR vessels which are certified to operate on Unrestricted Navigation shall be provided with watertight bulkheads.

Watertight bulkheads shall be fitted in accordance with the following requirements:

.1 A collision bulkhead is fitted in accordance to the Rules of a Recognised Organisation.

.2 The number and location of watertight bulkheads, their respective penetrations and the watertight integrity of the divisions shall be in accordance to the Rules of a Recognised Organisation;

.3 Openings in watertight bulkheads shall comply with the standards prescribed in SOLAS regulations II-1 for cargo vessels and a Recognised Organisation's Rules;

.4 When pipes, cables, etc. penetrate watertight bulkheads, they shall be provided with valves and/or type approved watertight penetrations as appropriate;

.5 A door fitted in a watertight bulkhead shall be of watertight construction and be kept closed at sea with an notice on site indicating that the door is to be kept closed at all times. A watertight bulkhead door may be opened at sea due to practical reasons only when and if :
(1) it is opened for access; and
(2) it is fitted with local and remote (for vessels ≥ 24m) means of closing; and
(3) vessels ≥ 24m are fitted with sensors giving an indication of its open/close status at the control position.

Sliding watertight doors, where fitted, shall be provided with suitable safety provisions to avoid injury to personnel by closure of the door.

4.6.1.2 Type Approved or Certified hinged doors may be used on watertight bulkheads. Such doors shall be kept closed at all times. Notices shall be fixed on both sides of these doors clearly indicating that these doors are to be kept closed at all times. Spring loaded doors may be accepted when fitted with appropriate audio and visual alarms on the bridge.

4.6.1.3 For any other vessel to which the provision of watertight bulkheads is not mandatory, when such bulkheads are fitted for the safety of the vessel they shall still satisfy the above requirements, as far as reasonable and practicable.

4.6.2 Existing Vessels

4.6.2.1 Watertight bulkheads in existing vessels shall comply with the above requirements, as far as practicable.

4.6.2.2 Existing vessels shall preferably be fitted with a Collision Bulkhead.

4.6.2.3 When the above requirements cannot be practically met, the Administration will consider accepting equivalencies and alternatives.

In considering the case the Administration shall take into consideration any proposed equivalencies, the vessel's past history and performance in the area(s) of operation and any other conditions or restrictions.

4.7 Enclosed Compartments within the hull and below the Freeboard Deck provided with Access Openings through the Hull

4.7.1 Any enclosed compartments having access through the hull and which are located below the freeboard deck shall be bound by a watertight boundary which shall have no other through openings. In cases where a through opening cannot be avoided than a sliding type watertight door or equivalent may be allowed.

4.7.2 Openings in the hull shall comply with SOLAS regulations and shall have provisions for manual and secondary means of closing.

4.8 Position of Freeboard Deck / Superstructure Height for vessels ≥ 24m in length

4.8.1 Where the actual freeboard to the weather deck exceeds that required by the ICLL by one standard superstructure height, openings on that deck located aft of the forward ¼ length (measured from the forward perpendicular) may be assumed to be in position 2.
For vessels up to 75 m in length the standard superstructure heights shall be taken as 1.8 m. For vessels over 125 m in length the standard superstructure height shall be taken as 2.3 m. Intermediate sizes shall be calculated by interpolation.

4.9 Hatchways, Hatches, Skylight Hatches and other Openings

4.9.1 General requirements

The following requirements are applicable to vessels ≥ 24m in length however vessels ≤ 24m in length shall also comply, as far as practicable.

4.9.1.1 All exposed hatchways which give access from position 1 and position 2 shall be weathertight. Weathertight hatch covers shall be permanently attached to the vessel and provided with adequate arrangements for securing the hatch in the closed position.

A hatchway which gives access to spaces below deck and which cannot be closed weathertight shall be enclosed within the superstructure or weathertight deck house in accordance to the Load Lines Convention.

4.9.1.2 All exposed hatchway covers shall be hinged, or sliding, or permanently secured by other equivalent means to the structure of the vessel and be provided with sufficient locking devices to enable them to be positively secured in the closed position.

4.9.1.3 A hatchway with a hinged cover which is located at position 1 of the vessel shall have the hinges fitted on the forward end.

4.9.1.4 Alternative arrangements for openings which do not comply with the above requirements may be considered by the Administration subject that these are fitted with an alarm giving status on the navigation bridge and a notice is posted stating that these openings are to be closed at sea.

4.9.1.5 Hatches that are designated for escape purposes shall be equipped with covers which can be opened from both sides and shall be fitted with permanent handles. Removable type handles may be accepted subject that the handles are stowed in a well marked and accessible location close to the hatch itself. The escape hatch shall be readily identified and a notice to this effect to be posted.

4.9.1.6 Hatches which are to be kept closed at sea shall have prominent notices indicating that they are to be kept closed whilst at sea.

4.9.2 Hatchways which are open at sea

4.9.2.1 Whereas safety considerations require that hatches shall be kept closed when a vessel is at sea, operational needs may exist for specified hatches to be open at sea for lengthy periods. Hatches which need to be opened at sea shall :-

.1 be kept as small as practicable, but never more than $1m^2$ in area at the top of the coaming;

.2 be located on the centre line of the vessel or as close thereto as practicable;

.3 have a coaming of at least 300mm above the top of the weather deck.

4.10 Doors and Companionways

4.10.1 Doorways located above the weather deck

4.10.1.1 A doorway located above the weather deck which gives access to spaces below shall be provided with a weathertight door. The door shall be of efficient construction, permanently attached to the bulkhead, does not open inwards, and sized such that the door overlaps the clear opening on all sides, and has efficient means of closure operable from both sides.

4.10.1.2 Door openings shall have coaming heights of at least:

.1 600mm when the door is in the forward quarter length of the vessel (Position 1) and when the door is used when the vessel is at sea;

.2 300 mm when the door is in an exposed forward facing location aft of the forward quarter length (Position 2);

.3 150mm above the surface of the deck when the door is in a protected location aft of the forward quarter length (Position 2).

4.10.1.3 Doorways shall be located as close as practicable to the centre line of the vessel. Weathertight doors shall be arranged to open outwards and when located on the sides, they shall be hinged at the forward end.

Alternative closing arrangements may be considered provided it can be demonstrated that the efficiency of the closing arrangements and their ability to prevent the ingress of water will not impair the safety of the vessel.

4.10.1.4 When access doors leading from the weather deck directly to the engine room are located in the forward quarter length of the vessel (Position 1), they shall be fitted with coamings having a height of 600mm. Doors leading to the engine room and fitted in places, other than Position 1, shall have be fitted with a 450mm high coaming.

4.10.1.5 Coaming heights, construction and securing arrangements for weathertight doors which are used solely when the vessel is in port or at anchor or used solely in calm sheltered waters and which are kept locked closed when the vessel is at sea, may be considered on a case by case basis.

4.10.2 Companionway Hatch Openings

4.10.2.1 Companionway hatch openings which give access to spaces below the weather deck shall be fitted with a coaming or washboard, the top of which shall be at least 300mm above the deck. The coaming may be fixed or portable.

4.10.2.2 Washboards may be used to close the vertical opening. When washboards are used they shall be so arranged and fitted that they will not be readily or accidentally dislodged in any event. Whilst stowed, provisions are to be made to ensure that they are retained in a secure position.

4.10.2.3 The maximum breadth of an opening in a companionway hatch leading below the weather deck shall not exceed 1000mm.

4.11 Skylights

4.11.1 Skylights shall be of efficient weathertight construction These shall be located on the centre line of the vessel, or as near thereto as practicable. Offsets from the centre line may only be allowed to provide a means of escape from a compartment below deck.

4.11.2 Openable skylight shall be able to be appropriately secured in the closed position.

4.11.3 Skylights that are designated as escape routes shall be openable from both sides and have permanently fixed handles on both sides. The Administration may accept removable type handles in case that such handles are stowed in an accessible location close to the skylight and the location is clearly marked. The escape hatch shall be readily identified and a notice to this effect shall be posted.

4.11.4 Skylights shall be constructed in accordance with a Recognised Organisation Rules or be Type Approved. CE Certified skylights may be accepted for vessels < 24m in length.

4.11.5 A portable cover/blank for each weatherdeck glass skylight shall be provided onboard. The cover/blank shall be able to be properly secured in case of damage to the glass panel. The Administration may dispense a vessel from this requirement in cases where the skylight strength is equivalent to the hull strength and in cases where the glass thickness has a minimum of 30% increase over and above the minimum standard glass thickness requirements.
The provisions for the carriage of portable covers/blanks may be dispensed with onboard vessels engaged in coastal navigation within 3 miles from shore.

4.12 Portlights

4.12.1 General

4.12.1.1 Portlights shall be Type Approved or Certified (CE Certified for vessels < 24m in length). They shall be of efficient construction and strength appropriate to their installation location onboard and appropriate to the vessel's intended area of operation.

4.12.1.2 Portlights shall not be fitted in Position 1. All portlights fitted below the weather deck in Position 2, shall be of a non-opening or of a non-readily openable type. Non-readily openable portlights may be accepted subject that they are fitted with a status indicator/alarm on the bridge and shall be secured closed during navigation. The portlights shall be of appropriate strength and shall be built and tested as per the herebelow requirements.

Portlights' deadlights fitted aft of the forward quarter length of the vessel (Position 2), may be omitted, at the discretion of the Administration, subject that the portlight strength is equivalent to the hull's strength and to RO standards. The glass pane of these portlights shall, at least, be of the laminated (shatterproof) type with a polycarbonate core of thickness greater than 3 mm.

Blanks shall be provided for 50% of the portlights fitted below weatherdeck and which are not equipped with deadlights.

Non-certified portlights fitted on existing vessels with over a 5 years' service period may be accepted subject to the satisfactory outcome of a watertightness test as defined by a RO Rules. All such portlights shall be fitted with deadlights.

4.12.1.3 Portlights shall not exceed 250mm glass diameter. Portlights with bigger dimensions shall be considered as windows.

4.12.1.4 No portlights shall be fitted in way of the machinery spaces.

4.12.1.5 The lower edge of the portlights shall be at least 500mm or 2.5% of the breadth of the vessel (whichever is the greatest) above the deep water line.

4.12.2 Vessels ≥ 24m in length

4.12.2.1 Portlights fitted on vessels of ≥ 24 metres in length shall be Type Approved or Certified in accordance with an RO's Rules.

4.12.3 Vessels ≥ 15m LoA & < 24m in length

4.12.3.1 Portlights fitted on vessels < 24m in length shall be Type Approved or CE Certified and be fitted with tempered and shatterproof glass of adequate strength. On existing vessels the portlights may be accepted after an adequate inspection and hose test in accordance to RO Rules.

Fixtures through which downflooding into the hull can occur shall be provided with weathertight covers. Such covers shall preferably be permanently attached but where this is not practical they shall be provided with means of securing that can be easily and quickly applied in adverse weather conditions.

4.13 Windows & Glass Bottoms

4.13.1 Windows fitted onboard vessels, below the weatherdeck, shall be accepted by the Administration on a case by case basis. These windows shall be of the non-opening type and shall also be approved by a RO (or by an Appointed Surveyor onboard vessels restricted to operate within 3 miles of a safe haven). They shall be of adequate strength taking into consideration their particular design and application, appropriately framed/glued and secured and their glass must be of the toughened safety glass type.

4.13.2 The lower edge of the windows shall be at least 500mm or 2.5% of the breadth of the vessel (whichever is the greatest) above the deep water line.

Portable blanks shall be carried onboard for all windows fitted below the weather deck. Portable blanks shall be stowed in the immediate proximity of the windows. Consideration shall be given in the Master's Operational Instructions as to when the portable blanks must be fitted.

4.13.3 Front and side windows fitted on the hull and/or in the superstructure at and above the weather deck and front windows at the 2nd tier of Unrestricted Navigation vessels shall be provided with storm shutters.

The Administration may consider alternative arrangements as mentioned herebelow, subject to the carriage of blanks as required to seal any size of window :-

1) A reduction in the amount and disposition of storm covers on the basis of interchangeability.
2) Exemption from the carriage of storm shutters on the basis of glass pane strength, glass type and glass thickness in excess of 30% from the equivalent toughened safety glass thickness.
3) Exemption from the carriage of storm shutters when the glazing is equivalent to storm shutters in accordance to RO Rules.

4.13.4 Glued glass panes may be accepted on new vessels, provided that a gluing test is carried out in accordance to ISO 12216 and the adhesive manufacturer's installation procedures are strictly followed.

Chemically toughened glass may be accepted, subject to being of a laminated type construction and having equivalent characteristics to standard toughened glass.

4.13.5 All glass affecting visibility from the main steering position shall be of the clear glass type only. Polarised or tinted glass or laying of tinted and/or polarised films are not allowed. Use of retractable sunscreens in compliance with ISO 8468 is permitted;

4.13.6 No windows shall be fitted in the main hull below the weather deck in the forward quarter length of the vessel.

4.13.7 Vessels fitted with glass bottoms shall be accepted by the Administration, on a case by case basis. The design, installation and testing of the glass bottom shall be in conformance with RO Rules and/or other applicable international standards, accepted by the Administration.

4.14 Ventilators and Exhausts

4.14.1 Adequate ventilation is to be provided throughout the vessel. The accommodation is to be protected from any ingress of gas and/or vapour fumes from machinery, exhaust and fuel systems. Exhaust pipes passing through the accommodation shall be avoided at all costs but when no alternatives are available than the exhaust pipe within the accommodation must pass through a gas tight trunk fitted with a CO (Carbon Monoxide) Detector.

4.14.2 Ventilators shall be appropriately constructed and provided with permanently attached means of weathertight closure. Such closing devices are to be easily accessible. The minimum coaming height above the weather deck shall be:-

.1 900mm in the forward quarter length of the vessel; and

.2 760mm elsewhere.

4.14.3 Ventilators shall be installed as far inboard as possible and in a way so as to prevent the ingress of water when the vessel heels.

Goose necks and ventilators fitted on the ¼ forward length shall be facing aft and be fitted with closing flaps.

4.14.4 Ventilators which must be kept normally open (such as in machinery spaces or for the discharge of noxious or flammable gases) shall be specially considered with respect to their location and their height above the weatherdeck. Special consideration is to be given to the downflooding angle. Additional means of closure for such ventilators shall be installed taking also in consideration the fire protection and any fire extinguishing medium provided in these particular spaces.

4.14.5 Engine exhaust ducts which penetrate the hull below the weather deck shall be of an equivalent strength and construction of the adjacent hull and be provided with anti-syphon equipment to avoid back flooding into the hull through the exhaust system. A mechanical means of closing the exhaust pipe(s) shall be fitted.
For vessels operating on domestic or restricted navigation, if an exhaust outlet closing device is not possible to be fitted then an anti-syphon loop having a minimum height of 1000mm may be considered.

4.14.6 Motor vessels fitted with engine air intakes in the hull side, which do not satisfy the requirements of the Code may be accepted by the Administration, but restrictions on operations may be necessary.

4.15 Air Vents/Pipes

4.15.1 When located on the weather deck, air vent shall be kept as far inboard as practicable and be fitted with a coaming of sufficient height to prevent downflooding.

4.15.2 An air vent fitted on the weatherdeck shall be installed taking into consideration any unwanted ingress of water below deck when the vessel is heeled. Air vents leading into tanks shall have minimum coaming heights as follows:

.1 760 mm when installed on the weather deck;

.2 450 mm elsewhere.

4.15.3 Air vents serving fuel and other tanks shall be of efficient construction, be adequately supported and be provided with permanently attached means of weathertight closure. Means of closure may be omitted if it can be shown that the open end of the air pipe is afforded adequate protection by other means, which prevent the ingress of water.

Closing appliances shall be of a type which will prevent excessive pressure on the tank boundaries. Provisions shall be made for relieving a vacuum when tanks are being drawn from or emptied. On vessels ≥ 24m length air pipes to fuel tanks shall terminate at a height of not less than 760mm above either, the top of the filler pipe for gravity filling tank or, the top of the overflow tank for pressure filling tank.
Air vents leading to fuel tanks or tanks containing flammable liquids shall be fitted with spark arrestors.

4.16 Scuppers, Sea Inlets and Discharges

4.16.1 In general the requirements of the Load Lines Convention (ILLC) shall be applied to every hull discharge outlet and inlet, as far as practicable. All sea inlets and overboard discharges shall be provided with a metallic seacock, metallic valve or other effective means of closure fitted in a position which is readily accessible at all times.

All sea inlets and overboard discharges below the waterline, or which can be below the waterline (during heeling), shall be provided with Type Approved or Certified metallic shut off valves.

A valve or similar fitting attached to the side of the vessel below the water line within the engine room or any other high fire risk area shall be of steel, bronze, brass or other approved metal. In general, the sealing of the valve shall be metal to metal. No plastic valves are allowed to be fitted on the hull below the weatherdeck.

4.16.2 All hull openings below the waterline for speed logs, underwater lights and/or hull penetrating accessories having a hull opening area larger than 20cm^2 shall be enclosed in a watertight box, unless having in-built watertightness, in order to ensure watertightness in case of damage. Retractable accessories must be fitted with appropriate valves. The hull penetrating accessories and/or underwater lights shall be type approved.

4.16.3 Inlet and discharges from water closets shall be provided with hull fittings as required above. When the rim of a toilet is either below or less than 300mm above the deepest waterline of the vessel, anti-syphon measures shall be provided.

4.17 Materials for Valves and Associated Piping

4.17.1 All Valves which are fitted below the waterline shall be of steel, bronze or other non-brittle fire resistant material or equivalent.

4.17.2 The associated piping shall, in areas as indicated above, be of steel, bronze, copper or other equivalent material whilst installations of piping made from non-metallic materials in high risk areas may be considered by the Administration subject to the material being Type Approved or Certified to the IMO Fire Test Procedures (FTP) code.
All couplings must be Type Approved or Certified and the pipes are to be adequately supported and protected against chafing.

4.17.3 The use of flexible piping shall be kept to a minimum. The Flexible piping and the means of joining it to its associated hard piping system shall be type approved or certified, be insulated against fire or be of fire resistant material. Means shall be provided to stop the ingress of water in the event of the pipe being damaged.

4.18 Water Freeing Arrangements

4.18.1 General

4.18.1.1 For new and existing vessels, the standards for water freeing arrangements shall comply with the requirements of the ILLC.

4.18.1.2 On a case by case basis where the requirements of the ILLC cannot be met, the Administration may consider alternative/equivalent arrangements that achieve adequate safety standards.

In considering these cases, account will be taken of the vessel's past performance in service and the declared area(s) of operation and any other conditions and/or restrictions.

4.18.2 Requirements for vessels < 24m in length

4.18.2.1 Bulwarks shall be provided with efficient freeing ports.

4.18.2.2 The area of the freeing ports shall be at least 4% of the bulwark area and be situated in the lower third of the bulwark height, as close to the deck as practicable.

4.18.2.3 If non-return flaps are fitted in way of the freeing ports these shall be kept free to move at all times by having sufficient clearance to prevent jamming whilst any hinges shall have pins or bearings of non-corrodible material.

4.18.2.4 When a vessel has only small side deck areas in which water can be trapped a smaller freeing port area may be accepted. The reduced area shall be based on the volume of water, which is likely to become trapped.

4.18.2.5 In a vessel in which freeing ports cannot be fitted, other efficient means of clearing trapped water from the vessel shall be provided.

4.18.2.6 Structures and spaces considered to be non-weathertight shall be provided with efficient drainage arrangements.

4.18.2.7 Where cargo is stowed on deck the stowage arrangement shall be such as to not impede the free flow of water from the deck.

4.18.2.8 Permanent doors in bulwarks may be accepted as freeing ports. However, for such doors to be designated as freeing ports they shall be provided with adequate securing devices to keep them in open position and temporary removable rails shall also be installed in the opening.

4.18.2.9 A decked vessel which does not comply with the freeboard requirements and which does not possess reserve buoyancy above the weather deck, shall be treated as an open boat and be provided with bilge pumping in accordance with the requirements set out in this Code.

4.19 Bulwarks and Guard Rails

4.19.1 Bulwarks and guard rails shall have a minimum height of 1000mm.
In the presence of raised areas with fixed items immediately adjacent to handrails, operational restrictions to the use of the unsafe area during navigation may be imposed whilst removable raised items adjacent to guard rails and raised items situated at least 500mm away from the guard rails may be accepted.

4.19.2 Toe rails or Foot Stops having a minimum height of 25mm for vessels < 24m in length and a minimum height of 40mm for vessels ≥ 24m in length, shall be installed in areas fitted with guard rails.
Intermediate guard lines are to be installed at a height not exceeding 300mm from the top of the toe rails. Stainless steel guard rails/lines shall have a minimum diameter of 5mm. Alternative, chaf resistant, guard line materials having an equivalent strength as a 5mm stainless steel guard line may be considered by the Administration. The horizontal spacing between stanchions and/or guard line supports must not exceed 2.2m.

4.20 Rigging on Sailing Vessels

4.20.1 General

4.20.1.1 The condition of the masts, booms and the rigging shall be the subject to a continuous monitoring and to a preventive maintenance schedule. The records of all inspections are to be recorded and inspected by the Appointed Surveyor or RO during each periodical survey.

4.20.1.2 Masts, their overall sail area, spar weights and dimensions shall be included in the vessel's Stability Booklet. Any rigging modifications which increase the overall sail area, or the weight/dimension of the rig aloft, shall be accompanied by an approved updating of the Stability Booklet.

4.20.2 Masts and Spars

4.20.2.1 For vessels ≥ 24m in length and for vessels not built in compliance with the Recreational Craft Directive, masts, their associated rigging and spars on new vessels shall be in accordance with the requirements of a Recognised Organisation rules, whilst the masts and spars on existing vessels shall be subjected to a thorough inspection by a professional rigger and the attending surveyor during the Initial Survey. Due consideration shall be given to the past performance and the declared areas of operation and the vessel's navigation notation.

4.20.2.2 The structure supporting the masts and spars shall be constructed to effectively carry and transmit all forces involved.

There shall be adequate access to inspect the condition of the masts in way where it passes through the deck and in way of the mast step.

4.20.3 Running and Standing rigging

4.20.3.1 Cables used for standing rigging shall be of sufficient strength that is equivalent or higher to the strength of non-flexible steel wire rope. The vessel shall carry a log of all rigging elements used whilst clearly recording when each element has been installed.

When solid rod is used for standing rigging the time when each element has been put in use shall be logged. The solid rods are to be renewed strictly within the time limit set by the manufacturers.

4.20.3.2 The strength of all parts of the rig, including blocks, shackles, rigging screws, cleats, running rigging, winches and all other associated fittings and attachment points shall exceed the breaking point of the rigging.

4.20.3.3 Chainplates for standing rigging shall be of strong construction and adequate to carry and transmit all forces involved. Adequate access is to be given to examine the attachment to the hull of all chainplates. Chainplates installed on new vessels ≥ 24m are to be approved by a Recognised Organisation.

4.20.3.4 When any part of the rigging is used as a lifesaving appliances launching device its material, construction and arrangement must meet the requirements and be inspected/tested in accordance to the Life Saving Appliances launching appliances requirements set out in this Code.

In this case the rig is to be subjected to the same periodical maintenance and inspections as those required by standard life saving appliances launching devices.

4.20.4 Sails

4.20.4.1 Adequate means of reefing or shortening sail shall be provided.

4.20.4.2 Vessels that are only engaged in day sailing trips need not carry storm canvas whilst all other vessels shall either be provided with separate storm sails or have specific sails designated and constructed to act as storm canvas.

SECTION 5
INTACT AND DAMAGE STABILITY

5 INTACT AND DAMAGE STABILITY

Mini Index:

5.1 – New Vessels

5.2 – Existing Vessels

5.3 – Damage Stability

5.4 – Inflatable Boats (new and existing)

5.5 – Vessels fitted with Cargo Gear Equipment

5.6 – Vessels engaged in Towing

5.7 – Approval of Intact and Damage Stability

5.8 – Stability Documents

5.9 – Builder's Plate

Besides the herebelow requirements, reference shall also be made to the 2008 Intact Stability Code (2008 IS Code). In case of any conflict in requirements, the stricter requirement shall always be applicable.

5.1 New Vessels

5.1.1 General

5.1.1.1 The Stability requirements to be met by a new vessel shall be dependent on:

a) Length;
b) Maximum number of persons carried onboard;
c) Maximum quantity of cargo carried onboard (where applicable);
d) Area of operation;
e) Any applicable Classification Requirements and International Conventions.

5.1.1.2 All types of vessels ≥ 15m LoA, shall be provided with an Approved Stability Booklet. The Stability Booklet shall be approved by an Appointed Surveyor (only for vessels < 500 GT) or by a Recognised Organisation.

5.1.1.3 For stability requirements for a decked vessel fitted with a cargo gear/lifting devices refer to Section 5.5, and for a decked vessel engaged in towing refer to Section 5.6.

5.1.1.4 Stability requirements being applied for vessels of unusual hull shape and/or arrangements and requirements for vessel types which are not mentioned in this Code shall be approved by an Appointed Surveyor (for vessels < 500 GT) or by a Recognised Organisation.

5.1.2 Intact Stability for new vessels ≥ 15m LoA

5.1.2.1 The lightship weight, vertical centre of gravity (KG) and longitudinal centre of gravity (LCG) of a monohull vessel shall be determined subsequent to an inclining experiment witnessed by an Appointed Surveyor or by a Recognised Organisation. At the discretion of the Administration, a lightship survey may be accepted in lieu of an inclining experiment in cases of sisterships, in

order to corroborate the results obtained from the inclining experiment carried out on the first sistership.

5.1.2.2 The lightship weight and longitudinal centre of gravity (LCG) of a multihull vessel shall be obtained by a displacement check or by weighing. The vertical centre of gravity (KG) shall be determined either by an inclining experiment or by calculation (if a conventional inclining experiment does not produce satisfactory results).

5.1.2.3 Curves of Statical Stability (GZ Curves) shall be produced for:

.1 Loaded departure, 100% consumables;

.2 Loaded arrival, 10% consumables;

.3 Anticipated service conditions;

.4 Conditions involving cargo gear/lifting appliances (when fitted).

5.1.2.3.1 In addition, simplified stability information in the form of a Maximum KG Curve shall be provided, including a worked example to illustrate its use.

5.1.2.4 The curves of Statical Stability for the loaded conditions shall meet the following criteria:

.1 The area under the righting lever curve (GZ curve) shall be not less than 0.055 metre-radians up to 30° angle of heel and not less than 0.09 metre-radians up to 40° angle of heel or the angle of down-flooding if this angle is less; and

.2 The area under the GZ curve between the angles of heel of 30° and 40° or between 30° and the angle of down-flooding if this is less than 40°, shall be not less than 0.03 metre-radians;

.3 The righting lever (GZ) shall be at least 0.20 metres at an angle of heel equal to or greater than 30°;

.4 The maximum GZ shall occur at an angle of heel of not less than 25°;

.5 After correction for free surface effects, the initial meta-centric height (GM) shall not be less than 0.35 metres. A meta-centric height (GM) less than 0.35 metres may be specially considered by the Administration.

5.1.2.5 If a vessel of catamaran or multihull type does not meet the stability criteria given in 5.1.2.4, the vessel shall, than, meet the following criteria:

.1 the area under the righting lever curve (GZ Curve) shall not be less than 0.085 metre-radians up to φ_{Gzmax} when $\varphi_{Gzmax} = 15^\circ$ and 0.055 metre-radians up to φ_{Gzmax} when $\varphi_{GZmax} = 30^\circ$.

When the maximum righting lever, GZmax, occurs between $\varphi = 15^\circ$ and $\varphi = 30^\circ$ the required area under the GZ Curve up to φ_{GZmax}, shall not be less than:

$A = 0.055 + 0.002(30^\circ - \varphi_{GZmax})$ metre-radians

Where φ_{GZmax} is the angle of heel in degrees at which the righting lever curve reaches its maximum;

.2 the area under the righting lever curve between $\varphi = 30^\circ$ and $\varphi = 40^\circ$ or between $\varphi = 30^\circ$ and the angle of down-flooding φ_f, if this angle is less than 40°, shall not be less than 0.03 metre-radians;

.3 the righting lever GZ shall not be less than 0.2m at an angle of heel of 30°;

.4 the maximum righting lever shall occur at an angle not less than 15°; and

.5 the initial meta-centric height GM, shall not be less than 0.35m.

5.1.2.6 A catamaran or multi-hull type vessel failing to comply with the requirements of either 5.1.2.4 or 5.1.2.5 may be given special consideration by the Administration after the presentation of an appropriate case study and calculations verified by the attending surveyor.

5.1.3 Stability Requirements for Open boats ≥ 15m LoA

5.1.3.1 An open boat, when loaded to its assigned freeboard, shall have sufficient buoyancy to be able to remain afloat and near upright when totally flooded. The open boat shall be surveyed by an Appointed Surveyor or Recognised Organisation to confirm that it has sufficient buoyancy. Detailed calculations shall be carried out to prove that :

Total Buoyancy ≥ Volume of displacement (to the freeboard mark draught) x *1.1 (cubic metres)*

5.1.3.2 An existing open boat that was already in service and covered by a Licence/Permit prior to the coming into force of this Code shall generally be considered compliant with the relevant requirements of this Code.

5.1.3.3 An open boat shall be deemed to have an acceptable standard of stability if the test shows that the angle of heel does not exceed 7° and the freeboard to the top of the gunwale is not less than 250mm at any point. Means to limit movement of persons onboard, such as railings, shall not be considered as crowding restrictions.

5.1.4 Intact Stability of New Sailing Vessels

5.1.4.1 **Monohulls**

Requirements for new vessels are:

.1 Curves of statical stability (GZ curves) for at least the loaded departure with 100% consumables and the loaded arrival with 10% consumables shall be produced.

.2 Generally, the required GZ curve shall have a positive range of not less than 90°. A positive range of less than 90° may be considered but subject to the imposition of operational limitation(s) imposed by the attending surveyor and accepted by the Administration.

.3 The angle of steady heel shall be greater than 15° (see figure). The angle of steady heel is obtained from the intersection of a "derived wind heeling lever" curve with the GZ curve.

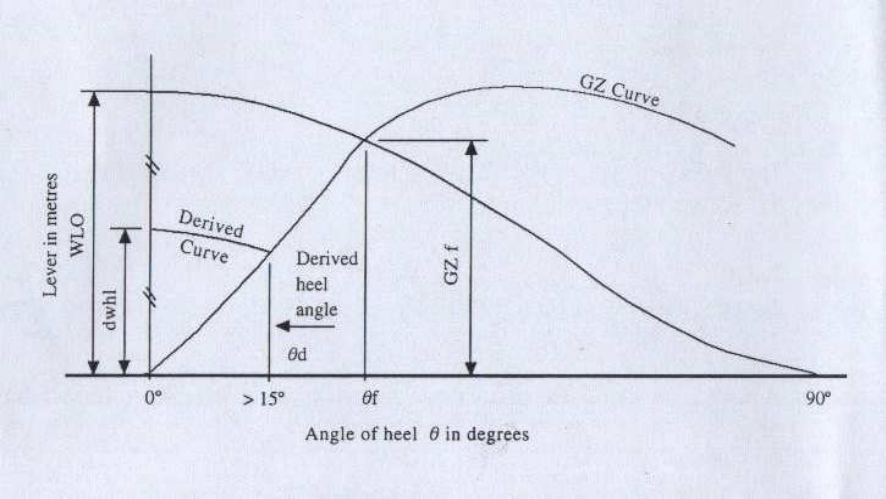
In the figure:

'dwhl' = the "derived wind heeling lever" at any angle φ°.

$= 0.5 \times WLO \times \cos^{1.3}\varphi$

where $WLO = \frac{GZ_f}{\cos^{1.3}\varphi_f}$

Noting that:



WLO is the magnitude of actual wind heeling lever at 0° which would cause the vessel to heel to the 'down flooding angle' (φ_f) or 60° whichever is the least.

GZ_f is the lever of the vessel's GZ at the 'down flooding angle' (φ_f) or 60° whichever is the least.

φ_d is the angle at which the "derived wind heeling lever" curve intersects the GZ curve. (If φ_d is less than 15° the vessel will be considered having insufficient stability for the purpose of this Code).

φ_f is the 'down-flooding angle'. Downflooding occurs when there is an immersion of openings on the side of the vessel and when these openings have an aggregate area greater than :

$$\frac{\text{vessel's displacement in tonnes}}{1500}$$

Downflooding Angle is moreover, the angle at which the lower edge of the actual opening which results in critical flooding becomes immersed. All regularly used openings for access and for ventilation shall be considered when determining the down-flooding angle. No opening regardless of size which may lead to progressive flooding shall be immersed at an angle of less than 40°. Air pipes leading to tanks may, however, be disregarded.

If as a result of immersion of openings in a deckhouse a vessel cannot meet the required standard, those deckhouse openings may be ignored and the openings in the weather deck used instead to determine φ_f. In such cases the GZ curve shall de derived without the benefit of the buoyancy of the deckhouse.

Provided the vessel complies with the prescribed requirements and it is operated with an angle of heel which is no greater than the 'derived angle of heel', the vessel shall be capable of withstanding a wind gust equal to 1.4 times the actual wind velocity (i.e. twice the actual wind pressure) without immersing the 'down flooding openings', or heeling to an angle greater than 60°.

5.1.4.2 Multihulls

5.1.4.2.1 New multihull vessels shall comply with the requirements set out in 5.1.2.

5.2 <u>Existing Vessels</u>

5.2.1 Intact Stability Requirements of existing vessels ≥ 15m LoA:

5.2.1.1 Unless an existing vessel is already provided with a Stability Booklet that is approved by an Appointed Surveyor or by a Recognised Organisation than, the vessel shall be treated as if it is a new vessel and it shall meet all the stability requirements of a new vessel.

5.2.2 Stability Requirements for Existing Sailing Vessels

5.2.2.1 **Existing Monohull Sailing Vessels**
Unless an existing monohull sailing vessel is already provided with a Stability Booklet that is approved by an Appointed Surveyor or by a Recognised Organisation then, the vessel shall be treated as if it is a new sailing vessel and it shall meet all the stability requirements of a new sailing vessel.

5.3 <u>Damage Stability</u>

5.3.1 Damage Stability Requirements for New Vessels:

a) certified to carry 15 or more persons onboard;
b) Vessels ≥ 15m in length but < 24m in length engaged in Unrestricted Navigation;
c) Vessels ≥ 24m in length

5.3.1.1 Vessels falling under this category shall be provided with watertight bulkheads which are arranged in such a way that a minor hull damage which results in the free-flooding of any one compartment, will not cause the vessel to float at a waterline which is less than 75mm below the weather deck at any point. Minor damage shall be assumed to occur anywhere in the length of the vessel but not directly on a watertight bulkhead. Standard permeabilities shall be used in this assessment as follows:

Space	Permeability %
Stores	60
Stores but not a substantial quantity thereof	95
Accommodation	95
Machinery	85
Liquids	95 or 0 whichever results in the more onerous requirements
Void Spaces	95

5.3.1.2 In the damaged condition, the residual stability shall be such that the angle of equilibrium does not exceed 7° from the upright, the resulting righting lever curve has a range to the down-flooding angle of at least 15° beyond the angle of equilibrium, the maximum righting lever within that range is not less than 100mm and the area under the curve is not less than 0.015 metre-radians.

5.3.1.3 A vessel ≥ 85m in length shall meet a 2 compartment standard of subdivision, calculated using the deterministic standard for subdivision.

5.3.2 Damage Stability Requirements for Existing Vessels

5.3.2.1 The Damage Stability Assessment of an existing vessel shall be the same as for a new vessel. The Damage Stability Report, prepared by an Appointed Surveyor or by a Recognised Organisation is to be by submitted to the Administration for consideration.

5.3.2.2 When an existing vessel does not meet the damage stability requirements of a new vessel, the Damage Stability Report shall include a detailed review of the consequences for overcoming the relevant deficiency, including any compensatory measures which exist or which are to be proposed.

5.3.2.3 The Administration may accept an existing vessel on the basis of assessment made whilst considering the application of operational limitations as compensation for deficiencies which cannot be overcome in a practical manner.

5.4 Stability Requirements for Inflatable boats

5.4.1 The requirements apply to new and existing inflatable boats and to rigid inflatable boats.

5.4.2 Inflatable boats and rigid inflatable boat shall be CE Certified in accordance to the Recreational Craft Directive or Certified/Type Approved in accordance with the LSA Code. In cases where the inflatable or rigid inflatable boat is not certified than the following Stability, Damage and Buoyancy tests shall be carried out.

5.4.3 Inflatable Boats Stability Tests

5.4.3.1 The tests shall be carried out with the engine and fuel tank fitted or replaced with an equivalent mass. Each person may be substituted by a mass of 75kg for the purpose of the tests.

5.4.3.2 The number of persons and the amount of cargo and stores for which an inflatable boat or rigid

inflatable boat is to be certified shall be moved to one side; half the number of persons to be carried shall be seated on the buoyancy tube.

5.4.3.3 This procedure shall be repeated with the persons and the cargo on the other side and similar tests shall be carried out with persons and cargo successfully at each end of the inflatable boat or rigid inflatable boat.

5.4.3.4 In each case the freeboard to the top of buoyancy tube shall be recorded. Under these conditions the freeboard shall be positive around the entire periphery of the inflatable boat or rigid inflatable boat.

5.4.3.5 Two persons shall recover a third person from the water into the inflatable boat or rigid inflatable boat.

5.4.3.6 The third person shall act as being unconscious and face back towards the inflatable boat or rigid inflatable boat so as not to assist the rescuers. Each person involved shall wear an approved lifejacket.

5.4.3.7 The stability of the inflatable boat or rigid inflatable boat shall remain positive throughout the recovery.

5.4.4 Inflatable Boats Damage Tests

5.4.4.1 The tests shall be carried out with an inflatable boat or rigid inflatable boat loaded with a number of persons (or equivalent mass) and cargo for which it is to be certified. The engine, fuel tank and full fuel shall be onboard, or replaced by an equivalent mass, and all equipment appropriate to the use of the inflatable boat or rigid inflatable boat shall be also placed onboard.

5.4.4.2 The tests will be successful if, for each simulated damage condition, the persons and/or cargo for which the inflatable boat or rigid inflatable boat is to be certified are supported within the inflatable boat or rigid inflatable boat. The damage conditions are:

.1 With the forward buoyancy compartment deflated;

.2 With the entire buoyancy on one side of the inflatable boat or rigid inflatable boat deflated;

.3 With the entire buoyancy on one side of the bow compartment deflated.

5.4.5 Inflatable Boats Buoyancy Tests

5.4.5.1 During this test the inflatable boat or rigid inflatable boat, shall be fully swamped, and, whilst swamped, it shall be capable of supporting its fully laden displacement.

5.4.5.2 In the swamped condition the inflatable boat or rigid inflatable boat shall not be seriously deformed.

5.4.5.3 The drainage system shall be demonstrated at the conclusion of this test.

5.5 Stability Requirements for vessels fitted with a deck crane or other lifting device or cargo gear

5.5.1 A vessel fitted with a deck crane or other lifting device or cargo gear shall comply with the requirements of this section.

Cranes and Cargo Gear fitted to the vessel subsequent to its construction shall be approved by an Appointed Surveyor or by a RO and, besides complying with the herebelow stability criteria, the approval shall also take into consideration the structural aspect of the installation.

In addition, the following requirements shall be complied with:

.1 With the vessel in the worst anticipated service condition for lifting operations, a practical test shall be undertaken to establish the maximum angle of heel and the minimum freeboard on the low side.

.2 With the crane or other lifting device or cargo gear operating at its maximum load moment, the angle of heel generally shall not exceed 7° or that angle of heel which results in a freeboard on the low side of 250mm, whichever is the lesser angle. (Consideration shall be given to the operating performance of cranes or other lifting devices of the variable load-radius type).

.3 When the angle of heel is greater than 7 ° but does not exceed 10 °, the Administration may consider accepting this lifting condition provided that all the following criteria are fully satisfied when the crane or other lifting device or cargo gear is operating at its maximum load moment:

.1 The range of stability from the angle of static equilibrium to downflooding or angle of vanishing stability, whichever is the lesser, is ≥ 20 °;

.2 The area under the curve of the residual righting lever, up to 40° from the angle of static equilibrium or the down-flooding angle, if this is less than 40 °, is ≥ 0.1 metre-radians;

.3 The minimum freeboard to deck edge fore and aft throughout the lifting operations shall not be less than half the assigned freeboard to deck edge at amidships. For vessels with less than 1000mm assigned freeboard amidships the freeboard fore or aft shall not be less than 500mm.

.4 The freeboard to deck edge anywhere on the periphery of the vessel is at least 250mm.

5.5.2 Detailed information and instructions about the effects and use of the deck crane or other lifting device or cargo gear shall be included in the Stability Booklet. The information and instructions shall include:

.1 The maximum permitted load and outreach which satisfy the requirements above, or the Safe Working Load (SWL), whichever is the lesser (operating performance data for a crane or other lifting device or cargo gear of variable load-radius type shall be included as appropriate);

.2 Details of all openings leading below deck which shall be secured weathertight; and

.3 The need for all personnel to be above deck before lifting operations commence.

5.5.3 Requirements for a lifting system which incorporates counterbalance weight(s) shall be specially considered by the Administration.

5.6 Stability Requirements for Vessels Engaged in Towing (except for open boats engaged in

water sport activities)

5.6.1 Reference shall be made to the relevant section detailing requirements specific to use of vessel), and to the section detailing requirements for safety standards other than stability for a vessel engaged in towing.

5.6.2 Generally, a vessel engaged in towing shall be a decked vessel shall and comply with the general requirements of this Chapter as appropriate to the vessel.

5.6.3 The danger to safety of deck edge immersion makes an open boat unsuitable for towing other vessels or floating objects.

5.7 Approval of Intact and Damage Stability

5.7.1 Requirements for vessels that are required to have Approved Stability Booklets.

5.7.1.1 The owners/managers shall be responsible for organising the inclining test (and relevant calculations) of a vessel.

5.7.1.2 The Appointed Surveyor or RO shall witness the inclining test of the vessel and be satisfied as to conditions and the manner in which the test is conducted. The Appointed Surveyor or Recognised Organisation shall approve the Stability Booklet.

5.7.1.3 The owner/manager of a vessel shall be responsible for placing a copy of the Approved Stability Booklet and Inclining Experiment Report onboard and for retaining a copy in the office.

5.7.2 Vessels required to have Approved Damage Stability Booklets

5.7.2.1 The owner/managers of a vessel shall be responsible for the submission and approval of the Damage Stability Calculations by an Appointed Surveyor or by a Recognised Organisation.

5.7.2.2 The Appointed Surveyor or Recognised Organisation shall approve the Damage Stability Booklets provided that the damage stability cases meet the requirements defined in this Section.

5.7.2.3 The owner/manager of a vessel shall be responsible for placing a copy of the Approved Damage Stability Booklet onboard and for retaining a copy in the office.

5.8 Stability Documentation

5.8.1 A vessel shall be provided with a Stability Booklet which is approved by an Appointed Surveyor or by a Recognised Organisation.

5.8.2 The content, form, loading conditions and presentation of the Stability Booklet shall be based on a model appropriate for the vessel's type.

5.8.3 A vessel with a previously approved Stability Booklet which undergoes a major refit or alterations shall be subjected to a complete re-assessment of stability and provided with newly approved Stability Booklet.

New stability calculations (for vessels < 24m) and a new inclining experiment and Stability Booklet (for vessels ≥ 24m) shall be required if there is either a change in the lightship weight ≥ 2% and/or a shift in the longitudinal centre of gravity ≥ 1% (measured from the aft perpendicular) and / or the calculated vertical gravity rises by 0.25% and above (measured from the keel) OR a substantial change in the vessel's dimensions, carriage capacity and the vessel's type.

5.8.4 On sailing vessels a copy of the Curves of Maximum Steady Heel Angle to Prevent down-flooding in Squalls shall be posted at the navigation position for the crew's immediate reference.

5.9 Builder's Plate

All vessels < 24m in length shall be fitted with a Builder's Plate in accordance to ISO 14945, as amended. The Builder's Plate shall, at least, contain:

1) the builder's name;
2) Design Category (maximum wind and wave height limitations);
3) the builder's maximum recommended load;
4) the maximum number of persons that may be carried onboard;
5) the maximum recommended engine(s) power.

5.9.1 Existing vessels not fitted with a Builder's Plate shall comply with the above within 12 months of the entry into force of the Code.

5.9.2 In cases when the builder/manufacturer is not available to issue the Builder's Plate than such plate information may be issued by an Appointed Surveyor or an RO following ISO 14945, as amended.

5.9.3 For vessels ≥ 24m official document(s) containing, inter alia, the above builder's plate information shall be available onboard.

5.9.4 Besides the standard Builder's Plate in accordance to ISO 14945, as amended; vessels carrying divers and their equipment shall have appropriate information about the maximum number of divers (including their diving equipment) that may be carried onboard.

SECTION 6
MACHINERY

MACHINERY

Mini Index

6 *General Requirements for all vessels*

6.1 Machinery installations shall comply with the requirements of this Code. Any alternative and/or equivalent arrangements may be specially considered by the Administration, provided that full information is presented for evaluation.

6.2 Machinery spaces shall be totally enclosed, gas-tight (except openings via the appropriate ventilators) and insulated against heat and excessive noise. The materials used shall be of the type that do not absorb oil and be of low fire spread.

6.3 Bilge, Fire and Fuel lines shall preferably be metallic, however, non-metallic piping meeting the requirements of the IMO (FTP) Fire Test Procedures Code (and CE Certified Fuel hoses on vessels < 24m length) may be accepted by Administration, depending on the vessel's area of operation, type, cargo/passengers, operational history etc.

6.4 Vessels shall be fitted with a diesel powered inboard engines, suitable for marine use, (on vessels < 24m in length and operating on restricted navigation, diesel/petrol outboard engines may be accepted) and of an adequate power to safely navigate the vessel. Petrol inboard engines are not allowed to power the vessels whilst other types of fuels may be considered by the Administration on a case by case basis. The fuel tanks capacity shall be sufficient for the vessel's area of operation. Other different engine configurations may be accepted by the Administration on a case by case basis.

6.5 The machinery installation shall be adequately designed and outfitted for the intended use. The design and outfit shall be such that all parts are properly shielded and protected to minimise the danger of personal injury. Due regard is to be given to moving parts, hot surfaces and other hazards.

6.6 The fuel delivery line shall be fitted with a shut-off valve, at the exit of the pipe from the fuel tank. The shut off valve shall be capable of being operated both locally and remotely from outside the engine room.

6.7 Fuel filling pipes and air vents serving fuel tanks shall be of efficient construction, be adequately supported and be provided with permanently attached means of weathertight closure. The closing appliances shall be of a type which will prevent excessive pressure on the tank boundaries. Provisions shall be made for relieving a vacuum when tanks are being drawn from or emptied. Air vents leading to fuel tanks or tanks containing flammable liquids shall be fitted with spark arrestors.

6.8 Where the oil/fuel level gauges penetrate below tank top, the valves are to be of self-closing type.

6.9 In a fuel supply system if short flexible hoses/piping are used, such hoses shall be made of fire resistant/metal reinforced material and shall be certified for such use. The end connections shall be of an adequate crimped and threaded couplings. No temporary fittings shall be allowed. All materials used on fuel systems shall be of an approved type and certified. Heavy duty clamps may be accepted although they must be used sparingly.

6.10 Means shall be provided to ensure that the machinery can be brought in to operation from a dead ship condition without external aid. Engines may be started manually, mechanically or by batteries. When the sole means of starting is by battery, the battery shall be in duplicate and connected to the starter motor via a change over switch so that either battery or set of batteries can be used for starting either engine. Charging facilities for the batteries shall be available on board. Batteries shall be located above the floor plates in the machinery space. If location above floor plates is not possible, batteries shall be located in a water tight box below the floor plates. The water tight box shall be properly ventilated above floor plates.

6.11 Save-alls or equivalent means of containment of spillage shall be provided below fuel pumps, purifiers and filters.

6.12 When the fuel system is provided with water separator filters which have non-metallic plastic bowls, thermal shut-off valves shall be fitted to the inlet side of the filters. The setting of the thermal shut-off valves shall be less than the failure temperature of the bowl material.

6.13 Gas welding and cutting equipment, shall be stowed in a secure manner on the open deck at a safe distance away from any potential source of fire and shall be capable of being readily jettisoned overboard if necessary.

6.14 *Steering Gear Systems*

6.14.1 All vessels shall be fitted with efficient main and emergency steering systems. These shall be of adequate strength and design to enable the heading and direction of the vessel to be effectively controlled at all operating speeds.

6.14.2 The control position shall be located so that the person conning the vessel has a clear view for the safe navigation of the vessel.

6.14.3 The Main and Emergency Steering systems shall be Type Approved or Certified or compliant with an International Standard or RO Rules.

6.14.4 Emergency steering arrangements may take the form of one of the following arrangements, and be to the satisfaction of the Administration:

.1 a rod attachment which may be fitted to a Z-drive framework (vessels <24m);

.2 a tiller (vessels < 24m);

.3 in the case of twin screw vessels, manipulation of the power distribution between the drives (in case of twin stern-drive arrangements, means shall be provided to lock the drives in the midships position);

.4 in the case of a vessel fitted with outboard(s), a means to control the direction of thrust;

.5 local manual/mechanical/hydraulic control of the steering mechanism from the steering gear compartment itself.

Appropriate emergency steering gear operating instructions shall be posted onboard.

6.14.6 In case of existing vessels and in case the steering arrangements do not fully meet the above requirements, the Administration may take into consideration the existing arrangements and the vessel's operational history with due regard to safety. In these cases sea trials will be carried out to confirm the efficiency of the existing steering system.

6.14.7 For vessels ≥ 24m in length & < 500GT the steering gear shall be capable of turning the rudder from 35° on one side to 35° on the other side at the maximum ahead service speed of the vessel.

For vessels ≥ 500GT the steering gear and its installation shall also meet the requirements of SOLAS regulations II-1/Part C – Machinery installations.

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6.15 *Rudder System*

6.15.1 As appropriate to the type of vessel, the rudder, rudder stock construction and supporting structure materials and design shall be in accordance to a Recognised Organisation's rules.

6.16 *Propeller System*

6.16.1 As appropriate to the type of vessel, the propeller, propeller shaft(s) construction materials and design (including shaft brackets, propeller securing, bearings, stern-tube and thrust block) and supporting structures shall be in accordance to a Recognised Organisation's rules.

6.17 *Bilge Pumping Arrangements*

6.17.1 All decked vessels shall be provided with efficient means for removal of bilge water entering any compartment below the weather deck. An open boat shall also be provided with efficient arrangements for dealing with bilge water.

6.17.2 Provided that the safety of the vessel is not impaired, the Administration may permit dispensation from the means of pumping or drainage of particular compartments onboard.

6.17.3 On vessels < 500 GT the bilge lines shall preferably be metallic, however an equivalent material in compliance with the IMO FTP - Fire Test Procedures Code may be considered for use. The suction pipes shall be so arranged that any compartment can be pumped dry when the vessel is heeled up to an angle of 10°. The diameter of the main bilge line shall be calculated as follows:-

$$d = 25 + 1.68 \sqrt{L(B + D)}$$

where d = diameter of bilge main in mm

L = length of vessel in metres

B = breadth of vessel in metres

D = moulded depth of vessel in metres

6.17.4 The bilge lines shall be fitted with strum boxes and any bilge suction valves shall be of the non-return type.

6.17.5 For motor vessels, all compartments shall be able of being drained when the vessel is heeled up to an angle of 10° on either side.

6.17.6 *Bilge Pumping Requirements for vessels ≥ 15m LoA & < 50m length & < 500GT*

6.17.6.1 The bilge pumping system onboard vessels shall be in compliance with the requirements of a Recognised Organisation's Rules. If the vessel is not in Class, then a Statement of Compliance to a Recognised Organisation rules is to be issued by a Recognised Organisation or by an Appointed Surveyor.

6.17.6.2 A vessel shall have at least two bilge pumps with a combined capacity of not less than 140l/min ($8.5m^3$/hr). Both pumps must be able to take suction from all of the compartments and the bilge pump switch shall be operable from the main steering position. Bilge Pumps with Automatic Controls shall be provided with a manual override switch. Automatic controls shall be provided with a visual indication showing that the pump is set and ready to operate in automatic mode.

6.17.6.3 Vessels having unmanned machinery spaces shall be fitted with high level bilge alarms. The alarms shall provide an audible and visual warning in the wheelhouse or steering/control position. The audible and visual alarms may be accepted elsewhere if it is considered that such a location may be more appropriate.

6.17.6.4 Pumping and piping arrangements for bilges into which fuel or other oils of similar or higher fire risk could collect, under either normal or fault conditions, shall be kept clear of accommodation spaces and separate from accommodation bilge systems. High level bilge alarms shall be fitted to all bilges in spaces which are unmanned at any time.

6.17.6.5 To prevent pollution, bilge alarms in compartments containing pollutants shall not start bilge pumps automatically.

6.17.6.7 An auto start bilge pump serving a clean compartment shall be fitted with an audible and visual alarm in the wheelhouse or steering/control position so that the reason for pumping may be investigated.

6.17.7 *Bilge Pumping Requirements for vessels ≥ 50m in length & ≥ 500 GT*

6.17.7.1 For existing and new vessels, the bilge pumping system shall be in compliance with the requirements of a Recognised Organisation's Rules and also meet the standards of SOLAS regulations II-1/Part B – Subdivision and Stability.

6A ***Machinery Requirements for vessels < 24m in length***

6A.1.1 The main propulsion machinery and all auxiliary machinery essential to the propulsion and the safety of the vessel shall be designed to operate when the vessel is upright and when inclined at an angle of heel and trim up to and including 15° and 7.5° respectively under static conditions.
In sailing vessels, the main propulsion machinery and all auxiliary machinery essential to the propulsion and the safety of the vessel shall be operational when the vessel is upright and when inclined at any angle of heel up to and including 15° either way under static conditions and 22.5° either way under dynamic rolling conditions and simultaneously inclined 7.5° by bow or stern under dynamic pitching conditions.

6A.1.2 The fuel air vent highest point shall be located at a higher position than the fuel filler pipe topmost opening.

6A.2 *Petrol Engines on <u>New</u> Vessels < 24m length*

6A.2.1 Petrol inboard engines shall not be installed onboard unless in exceptional cases when approved by the Administration.

6A.2.2 In vessels which are fitted with a watertight weather deck, <u>outboard</u> petrol engines may be accepted provided that:-

.1 a fixed fuel tank complying with 6A.2.3.1 and 6A.2.3.2 is fitted below the weather deck and is designed in such a way that any fuel spillage/overflow drains directly overboard; or

.2 a fixed fuel tank complying with 6A.2.3.1 is fitted above the weather deck and is designed in such a way that any fuel spillage/overflow drains directly overboard; or

.3 fuel is supplied to the engine from a portable tank ≤ 27 litre capacity which complies with the requirements of ISO 13591, as amended – Portable fuel systems for outboard motors.

.4 suitable mechanical and natural ventilation is provided for the fuel tanks compartment located below the weather deck. The mechanical ventilation shall be switched on prior to the starting of the engines and during the operation of the engines.

.5 all electrical equipment and connections located in the same compartment of the fuel tank shall be intrinsically safe.

.6 a hydrocarbon gas detector is fitted in the compartment adjacent to the fuel tank and where hydrocarbon gas is likely to accumulate.

6A.2.3 In vessels which do not have a watertight weatherdeck and on open boats outboard petrol engines may be accepted provided that :-

.1 fuel is supplied to the engine from a portable tank ≤ 27 litre capacity which complies with the requirements of ISO 13591 (Portable Fuel System for Outboard Motors); or

.2 fuel is supplied from a fixed inboard tank (not applicable for inflatable boats that do not have rigid hulls) that shall be constructed from mild steel (hot dipped galvanised after fabrication), or stainless steel, with rounded corners and edges (for explosion proofing purposes), and the fuel tank installation shall comply with the Fuel System Installation requirements in Section 6A.4 below;
Note: a non-certified tank shall be tested to at least 0.3 bar

.3 suitable ventilation is provided;

.4 all electrical equipment and connections located adjacent to the fuel tank shall be intrinsically safe.

6A.2.4 A small marinised petrol engine (not exceeding 7.5 kW) manufactured with an integral fuel tank may be accepted for either outboard propulsion or as a portable power plant provided that safety warning signs are clearly displayed with details of appropriate precautions to be taken and instructions to be followed when filling the fuel tank.

6A.3 *Petrol Engines on Existing vessels < 24m length*

6A.3.1 Inboard petrol engines on existing vessels may be accepted provided that the engines are located in an enclosed compartment and provided that:-

.1 a fixed fire extinguishing system is fitted;

.2 suitable mechanical and natural ventilation is provided. The mechanical ventilation shall be switched on prior to the starting of the engines and during the operation of the engines;

.3 all electrical equipment and connections located adjacent to the fuel tank shall be intrinsically safe;

.4 fuel is stored in a fixed inboard petrol tank complying with 6A.2.3.2, 6A.2.3.3 and 6A.1.2; or

.4 fuel is stored in a portable petrol tank complying with 6A.2.2.3.

.5 a hydrocarbon gas detector is fitted in the engine compartment where hydrocarbon gas is likely to accumulate.

6A.3.2 Outboard petrol engines may be accepted on existing vessels < 24m in length operating in restricted navigation, provided that the requirements of 6A.3.1.3 or 6A.2.4 are met.

6A.3.3 Onboard an existing inflatable boat or rigid inflatable boat, a petrol engine installation may be accepted and shall meet the requirements of 6A.2.3 or 6A.2.4.

6A.4 *Fuel System Installation*

6A.4.1 Petrol tanks (except those integral with small engines – see 6A.2.4) for new and existing vessels shall have all connections and fittings at the top of the tank. (See ISO 10088:2013, as amended – Permanently installed fuel systems).

6A.4.2 Means shall be provided to isolate a source of fuel which may feed a fire in an engine space fire situation. A valve or cock, which is capable of being remotely closed from a position outside the engine space, shall be fitted in the fuel feed pipe as close as possible to the fuel tank.

6A.5 *Portable Power Plant*

6A.5.1 When portable power plant powered by a petrol engine is provided, the unit shall be stored on the weather deck.

6A.5.2 A deck locker or protective enclosure for the portable plant shall have no openings to enclosed spaces within the hull of the vessel and the locker or protective enclosure shall be adequately ventilated and drained.

6A.5.3 Petrol tanks provided for the propulsion engine shall comply with the appropriate requirements of 6A.3.1 and 6A.2.4.

6A.6 *Stowage of Petrol*

6A.6.1 When spare petrol is carried on board in portable containers for any purpose, the containers shall be clearly marked and shall be stowed on the weather deck where they can be readily jettisoned and where spillage will drain directly overboard. The quantity of petrol and number of containers shall be kept to a minimum.

6B Machinery - Requirements for vessels ≥ 24m & < 50m in length

6B.1 The machinery and its installation shall be in accordance to a Recognised Organisation Rules. For existing and new vessels which operate with periodically unattended machinery spaces, the machinery and its installation shall also meet the standards of SOLAS regulations II-1/Part E – Additional requirements for periodically unattended machinery spaces, so far as it is reasonable and practicable to do so.

6B.2 No petrol engines may be fitted on vessels ≥ 24m & < 50m in length unless these engines are fitted onboard tenders or personal watercraft which are stowed on the vessel.

6B.3 Means shall be provided to isolate a source of fuel which may feed a fire in an engine space fire situation. A valve or cock, which is capable of being remotely closed from a position outside the engine space, shall be fitted in the fuel feed pipe as close as possible to the fuel tank.

6B.4 Fuel gauges shall be of an approved type and where glass fuel level gauges are fitted they shall be of the “flat glass” type with self-closing valves between the gauge and the tank.

6C Machinery – Requirements for vessels ≥ 50m in length or ≥ 500GT

6C.1 No petrol engines may be fitted on vessels ≥ 50m in length or ≥ 500GT unless these engines are fitted onboard tenders or personal watercraft which are stowed on the vessel.

6C.2 For existing and new vessels, the machinery, equipment and installation shall meet the requirements of SOLAS Regulations II-1/Part C – Machinery installations and II-1/Part E – Additional requirements for periodically unattended machinery spaces (when appropriate).
Any equivalencies shall be accepted by the Administration.

SECTION 7
ELECTRICAL INSTALLATIONS

7 ELECTRICAL INSTALLATIONS

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7.1 General Requirements

7.1.1 The electrical installation shall be designed such that:-

a) All electrical auxiliary services necessary for maintaining the vessel in normal, operational and habitable conditions shall be ensured without relying on the emergency source of power.

b) Electrical services essential for the safety of the vessel and personnel on board shall be operable under various emergency conditions.

c) The vessel and personnel on board shall be protected from electrical hazards.

7.1.2 Tanks, machinery or other metallic objects which do not have good electrical continuity with the water surrounding the hull, shall have special earthing arrangements.

7.2 Requirements for Vessels < 500GT

7.2.1 General

7.2.1.1 The electrical system onboard these vessels shall be designed and outfitted in compliance with the Rules of a Recognised Organisation. The electrical system installed onboard vessels built in compliance with the Recreational Craft Directive 2013/53/EU, as amended, may be accepted, at the discretion of the attending surveyor.

7.2.1.2 The electrical system shall be provided with overload and short circuit protection for all circuits with the exception of the engine starting circuits through the batteries.

7.2.1.3 Lighting circuits shall be distributed through all spaces and in such a manner that a total black-out cannot occur due to the tripping of a single protective device.

7.2.1.4 Electrical devices working in potentially hazardous areas into which petroleum vapour or other hydrocarbon gas may leak and accumulate, shall be provided with protection against the risk ignition.

7.2.1.5 Short-circuit or overload protective devices shall not interrupt earthed lines, unless all the non-earthed lines are disconnected at the same time by multipole switching devices

7.2.2 **Batteries**

7.2.2.1 Batteries suitable for marine use and not easily susceptible to leak shall be used onboard. The battery terminals shall be protected against accidental contact with metallic objects.

7.2.2.2 A battery cut-off switch shall be provided for all systems. It is preferable that this switch acts as an isolator i.e. it is double pole. If a battery changeover switch is fitted and is provided with an 'Off' position, this may serve as the cut-out switch also.

7.2.2.3 Batteries shall be secured firmly to avoid movement when the vessel is subjected to sudden acceleration or deceleration, a large angle of heel, trim etc.

7.2.2.4 Batteries installed on sailing vessels shall be of a sealed type to prevent electrolytic loss in the event of a knockdown or immersion.

7.2.2.5 Battery charging systems shall be fitted with circuitry to prevent overcharging.

7.2.2.6 Areas in which batteries are stowed shall be provided with adequate ventilation to avoid the accumulation and build up of explosive gases. Battery lockers and containers shall be exhausted from the highest point of the container, whilst air shall be supplied at a level below the top of the batteries. If mechanical means are employed to ventilate the battery compartment directly, then the components shall be of the intrinsically safe/explosion proof type in compliance with the ATEX Directive 2014/34/EU, as amended.

7.2.2.7 Batteries supplying essential services shall be located in a position not likely to flood in normal operations or in the event of damage.

7.2.3 Cables

7.2.3.1 All wiring shall be carried out using appropriate certified flame retardant marine cables.

7.2.3.2 Cables and wiring serving essential or emergency power, lighting, internal communications or signals shall be routed clear of galleys, laundries, machinery spaces of Category A and any other high fire risk areas. Watertight bulkhead penetrations shall be Type Approved or Certified.

7.2.3.3 Adequate provisions shall be made for securing electrical connections.

7.2.4 Lighting and Emergency Lighting

7.2.4.1 A single hazardous event shall not be capable of disabling all lighting systems onboard.

7.2.4.2 Lighting circuits shall be distributed throughout the vessel's subdivisions so that a total blackout cannot occur due to the failure of a single protective device.

7.2.4.3 Where general lighting is provided by a single centralised source, an alternative source of lighting shall also be provided and shall be sufficient to enable persons to make their way to the open deck or to permit work on essential machinery.

7.2.4.4 An emergency source of lighting shall be provided. This shall be independent and distinct from the general lighting.

7.2.4.5 The emergency source of lighting shall be sufficient to allow everyone to evacuate from all enclosed spaces onboard to the muster stations. The emergency lighting shall illuminate, for at least 3hrs, the herebelow areas and shall switch on automatically in the event of a failure of the main power supply:

a) escape routes from all enclosed spaces to the muster stations including the disembarkation positions over the sides;
b) machinery spaces and the navigation bridge;
c) main and emergency switchboard and the storage and operation areas of any portable fire/bilge pump, where applicable;
d) navigation lights and other lights required by COLREGs.

7.2.4.6 The emergency lighting power source shall be totally separate from the main power supply, external to the engine room and with an independent distribution. The source shall be sufficient for up to 3 hrs duration.

7.2.5 Switchboards

7.2.5.1 Switchboards shall be installed away from water, oil or fuel pipes so that any leakage from any pipe will not spray on the main switchboard.
On vessels ≥ 24m the switchboards shall be built in conformance with a RO Rules and IEE Regulations, as amended.

7.2.6 Emergency Electrical Power

7.2.6.1 The emergency source of electrical power shall be totally separate from the main power supply, external to the engine room, with an independent distribution and accessible from the weather deck.

7.2.6.2 *Vessels < 24m in length*

7.2.6.2.1 For all vessels, excluding open boats and excluding vessels operating within ports and internal waters, an emergency source of power shall be available onboard. This source of power shall be enough to provide emergency power to the radio installation and to essential emergency equipment and navigation aids (including the GPS, echo sounder and AIS, if fitted). The emergency source of electrical power shall be totally separate from the main power supply, external to the engine room, with an independent distribution and accessible from the weather deck.

7.2.6.3 *Vessels ≥ 24m in length& < 500 GT*

7.2.6.3.1 The emergency source of electrical power shall be totally separate from the main power supply, external to the engine room, with an independent distribution and accessible from the weather deck and shall automatically switch on in the event of a failure to the main power supply.

7.2.6.3.2 An emergency source of electrical power in conformance with a Recognised Organisation's rules shall be installed and be readily available onboard. Besides providing power to the emergency lighting as mentioned hereabove, the emergency source of power shall also be readily available to automatically and simultaneously provide emergency power, for at least 3hrs, to operate the:

a) navigation aids (including the GPS, echo sounder and AIS);
b) the radio communication equipment
c) the control and alarm system of the fixed firefighting system;
d) the fire detection and fire alarm system;
e) emergency equipment fitted such as bilge pumps, fire pumps, rescue boat davit, watertight doors etc.

7.2.7 Hazardous Spaces

7.2.7.1 Where practicable, electrical equipment shall not be installed in spaces where petroleum vapour or other hydrocarbon gas may accumulate. When equipment is installed in such spaces the equipment must be intrinsically safe.

7.2.7.2 Any compartment which contains any gas consuming appliance or any compartment into which flammable gases may leak or accumulate, shall be provided with hydrocarbon gas detectors and alarms. The detectors and alarms shall be designed to comply with recognised international standards.

7.2.8 Lightning Protection

7.2.8.1 Lightning strike protection shall be in place on all vessels where a considerable risk of lightning strike is identified.

7.3 Requirements for Vessels ≥ 500GT Engaged in Domestic Navigation Including Those Operating Exclusively Within Maltese Waters

7.3.1 The emergency generator shall be situated above the weather deck and the emergency source of power shall automatically switch on in the event of a failure to the main power supply.

7.3.2 The electrical equipment and its installation shall meet the standards of a Recognised Organisation's Rules and of SOLAS Chapter II-1 Part D and II-1 Part E (where applicable). Besides providing power to emergency lighting as mentioned hereabove, the emergency source of power shall also be readily available to automatically and simultaneously provide emergency power, for at least 18 hrs, to:

a) navigation aids (including the GPS, echo sounder and AIS);
b) the radio communication equipment;
c) the control and alarm system of the fixed fire extinguishing system;
d) emergency equipment fitted such as bilge pumps, fire pumps, rescue boat davit, watertight doors etc.;
e) the general alarm system;
f) the public address system;
g) the means of communication between the navigation bridge and the machinery spaces and steering gear compartment;
h) the ship's whistle, all manually operated call points and all internal signals required in an emergency.

SECTION 8
FREEBOARD AND FREEBOARD MARKING

8 FREEBOARD AND FREEBOARD MARKING

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8.1 General Requirements for all Vessels

8.1.1 All vessels ≥ 24m in length shall comply with the International Load Lines Convention (ILLC) Chapter III for the assignment of the freeboard mark which corresponds to the deepest load condition. Vessels ≥ 24m in length shall be issued with a Freeboard Assignment Report and an International Load Line Certificate.

8.1.2 All vessels ≥ 15m LoA & < 24m in length shall have a deck line and freeboard markings on each side at midships and shall be issued with a Freeboard Assignment Certificate. Inflatable boats or rigid inflatable boats and vessels operating in protected waters and/or restricted service covered by Section 8.5 are exempted from this requirement.

8.1.3 The International Load Line Certificate and the Freeboard Assignment Certificate shall be issued by an Appointed Surveyor* or by a Recognised Organisation.

(*)- refer to limitations on the issuance of Statutory Certificates by Appointed Surveyors detailed in Section 33.

8.1.4 The assigned freeboard shall be compatible with the hull structure's length, and the intact and damage stability requirements for the vessel. The minimum bow height criteria shall be met, however the Administration, on a case by case basis, may accept vessels which do not fully comply with the minimum bow height criteria subject to alternative/equivalent arrangements and/or operational restrictions.

8.1.5 The freeboard allowance for fresh water shall also be marked on those vessels operating in fresh water.

8.1.6 The assigned freeboard shall never be less than the draught of the vessel in sea water when fully loaded, reducing 25mm. Depending on the type of vessel, this shall also never be less than the minimum freeboard required by 8.2.2, 8.2.3 and 8.2.4.

A copy of the Freeboard Assignment particulars shall be retained onboard.

8.2 Minimum Freeboard

8.2.1 **General**

8.2.1.1 A vessel shall not operate in any condition which will result in the freeboard marks being submerged when the vessel is moored in calm water. The assigned freeboard shall not be less than that determined by the following requirements:

8.2.2 Minimum Freeboard for <u>New</u> vessels carrying cargo or a combination of passengers and cargo weighing ≤ 1000kg and being < 24m in length

8.2.2.1 A new vessel, other than an inflatable or rigid inflatable boat, in still sea water of relative density of 1.025 and fully loaded with passengers/cargo and non-cargo deadweight items shall be upright and:

.1 A vessel with a continuous watertight weather deck which is neither stepped nor recessed nor raised, shall have a freeboard, measured down from the lowest point of the weather deck, of not less than 627mm for vessels 15m in length and not less than 750mm for vessels ≥ 18m in length. The freeboard for vessels of intermediate length shall be determined by linear interpolation.

.2 A vessel with a continuous watertight weather deck which is stepped, recessed or raised, shall have a freeboard, measured down from the lowest point of the weather deck, of not less than 345mm for vessels 15m and not less than 400mm for vessels ≥ 18m in length. The freeboard for vessels of intermediate length shall be determined by linear interpolation. The raised portion(s) of the watertight weather deck shall extend across the full breadth of the vessel and the average freeboard over the length of the vessel shall comply with .1 above for vessels with a continuous watertight weather deck;

.3 Open boats shall have a clear height of side/freeboard (i.e. the distance between the waterline and the lowest point of the gunwale*) of not less than 690mm for open boats 15m in length and not less than 800mm for open boats ≥ 18m in length. The freeboard for vessels of intermediate length shall be determined by linear interpolation.

(*)The clear height of the side shall be measured to the top of the gunwale or capping or to the top of the wash strake if one is fitted above the capping.

8.2.3 Minimum Freeboard for <u>existing</u> vessels carrying cargo or a combination of passengers and cargo weighing ≤ 1000kg and being < 24m in length

8.2.3.1 Existing vessels shall comply with 8.2.2.

8.2.3.2 In the case of existing vessels which are unable to fully comply with 8.2.2, the Administration may, on a case by case basis, consider a lesser “operational freeboard” or “clear height of side”.

In such cases a detailed operational history of the vessel shall be provided to the Administration.

The detailed operational history shall also include details about the sea areas where the vessel is/was in operation. It shall also include details about the loaded draught/freeboard/height of side, number of persons usually carried, cargo, number of years employed in this way, together with other details which may be considered relevant.

The area of operation for the vessel may be restricted to correspond to the operational service history. The restricted area of operation will be recorded on the NCV Certificate.

8.2.4 Minimum Freeboard for New and Existing vessels carrying cargo or a combination of passengers and cargo weighing ≥ 1000kg excluding open type vessels.

8.2.4.1 Freeboard shall be assigned in accordance with the Merchant Shipping Act and shall comply with the relevant requirements prescribed in the ILLC, as far as practicable. Vessels falling under this category and being ≥ 24m in length shall comply fully with the ILLC.

8.2.5 Datum Draught Marks

8.2.5.1 Vessels shall have a scale of datum draught marks that are clearly marked both at the bow and stern and on port and starboard sides. The draught marks shall be permanent and easily read and shall be located above, but within 1000mm, of the deepest loaded waterline. The datum draught marks are also to be shown, together with the freeboard mark, on a diagram to be included in the Stability Booklet. Vessels < 24m in length may be exempted from this requirement at the discretion of the attending surveyor and the Administration is to be duly informed.

8.3 Freeboard Marks and Loading

8.3.1 The freeboard mark shall comply with Part B Regulations 5 & 6 of the ILLC and shall be an all seasons mark positioned port and starboard at amidships along the load line length. The mark shall be permanent and be of contrasting colour to the hull of the vessel. Vessels < 500GT which operate in territorial waters are not required to fully comply with Part B Regulations 5 & 6 of the ICLL, but in any case the inner diameter of the plimsoll mark shall not be less than 150mm.

8.3.2 A freeboard mark is not required on inflatable and rigid-inflatable boats. The minimum freeboard and the permissible maximum weight which can be carried, shall be recorded and posted onboard.

8.4 Ship's Marking

All vessels shall be marked in accordance with the requirements of Section 15 of the Merchant Shipping Act, 1973, as amended (Chapter 234). Vessels < 24m in length may be exempted from parts of this requirement at the discretion of the Administration.

The IMO number shall be assigned and marked in accordance with SOLAS Ch.XI-1 Reg.3.

SECTION 9
FIRE PROTECTION

9 FIRE PROTECTION

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9.1 General Requirements for All Vessels

9.1.1 The purpose of this section is to provide the basic principles and minimum expected fire safety including prevention, detection and extinction.

9.1.2 *Alternative and Equivalent Arrangements*

Recognising that the particular design and operational characteristics of certain non-convention vessels may require a specific approach to ensure an adequate level of fire protection, this code seeks to establish the highest possible fire protection standard through a combination of passive and active fire protection, detection and suppression measures. This Administration, may therefore consider equivalent or alternative specific arrangements designed to satisfy minimum standards set in this section. It is assumed, that all fire safety appliances and systems shall comply with the requirements of the International Code for Fire Safety Systems and the International Code for Application of Fire Test Procedures, in their up to date version. For the consideration of alternative arrangements or equivalencies Recognised organisations or Appointed surveyors must submit a Fire Safety Case Study which shall include the proposed design and arrangement philosophy, supported by any related studies and a risk assessment. The Administration may request specific simulations and tests to be conducted.

9.2 Fire Control Plan(s)

9.2.1 Fire Control Plan, depicting the appropriate IMO symbols, shall be permanently exhibited for the guidance of the Master and crew of the vessel. The content of the plan shall adequately show and describe (in English) the principle fire prevention and protection equipment and materials.

For each deck, the plan, inter alia, shall show the position of control stations; sections of the vessel which are enclosed respectively by “A” class fire rated divisions and “B” class fire rated divisions; location of flammable liquid storage; particulars of and locations of fire alarms, fire detection systems, sprinkler installations, fixed and portable fire extinguishing appliances;

fireman's outfit(s); means of access and emergency escapes for compartment and decks; locations and means of control of systems and openings which shall be closed down in a fire emergency.

Reference to ISO 17631:2002, as amended, and the relevant IMO Resolutions shall be made.

9.2.2 The Fire Control Plan shall be kept up to date. Up-dating alterations shall be updated on all copies of the plan(s) without delay. Each plan shall include a list of alterations and the date on which each alteration was applied.

9.2.3 A duplicate set of the plan(s) shall be permanently stored in a prominently marked weathertight enclosure readily accessible to assist any external fire-fighting personnel who may board the vessel in a fire emergency.

9.2.4 Valid instructions for the maintenance and operation of all the equipment and installations on board for the fighting and containment of fire shall be kept in one document holder, readily available in an accessible location.

9.2.5 Fire Control Plans onboard vessels carrying passengers shall be approved by an RO or an Appointed Surveyor.

9.2.6 The Fire Control Plan may be combined with the safety plan as a "Fire and Safety Plan".

9.3 Machinery Spaces

9.3.1 Openable unconventional fixtures such as skylights shall be designed to be closed from outside the machinery spaces in case of emergency. Ventilation ducts in machinery spaces of Category A shall be fitted with fire dampers that can be safely closed from outside the machinery spaces. Means of remotely shutting down any forced ventilation shall also be provided.

9.3.2 No portlights or windows shall be fitted on the boundary of the machinery spaces. Notwithstanding the aforementioned, the fitting of an observation port having a maximum diameter of 150mm may be allowed in internal doors leading to the engine room. Such an observation port is to be of the non-opening type having a steel frame (or equivalent material) and be supplied with a permanently attached cover with closing devices. The glass material is to be fire rated and toughened (rated A0 in accordance with the FTP Code).

9.3.3 The boundary of the machinery spaces shall be arranged to contain the fire extinguishing medium i.e. the machinery spaces shall be capable of being closed down in order that the fire extinguishing medium cannot escape. Any fans located within or feeding a machinery space shall be capable of being stopped remotely from outside the space in the event of a fire. Systems compromising automatic stopping fans in the event of a fire shall be supplemented with a manual override.

9.3.4 Where it is not practical to have a machinery space, the engine(s) shall be enclosed in a compartment such as a box casing.

The box casing shall perform the same function as the machinery space boundary as mentioned above.

9.3.5 Combustible materials and liquids shall not be stowed in the engine space. If non-combustible materials are stowed in the engine space, they shall be kept to a minimum and shall be adequately secured against falling on machinery and cause no obstruction to access to or from the space.

9.4 Piping Systems

9.4.1 Pipes carrying oil or combustible liquids shall be metallic. Non-metallic pipes, certified in compliance with the FTP Code may be accepted by the Administration.

9.4.2 Use of materials that can be easily rendered ineffective by heat are not permitted to be used for scupper pipes, sanitary discharges and other discharges close to the load line, since flooding may result if these pipes are rendered ineffective by heat/fire.

9.4.3 Fuel gauges shall be of an approved type and where glass fuel level gauges are fitted they shall be of the "flat glass" type with self-closing valves between the gauge and the tank.

9.5 Fire Prevention

9.5.1 Stowage of Petrol and Other Highly Flammable Liquids

9.5.1.1 Special consideration shall be given to safe conditions of carriage of petrol and other highly flammable liquids either in hand portable containers/tanks or in the tanks of vehicles (such as personal water craft and motor cars) which may be transported from time to time.

9.5.1.2 The quantity of petrol and/or highly flammable liquids carried shall be kept to a minimum.

9.5.1.3 Containers used for the carriage of flammable liquids shall be constructed to a recognised standard appropriate to the contents. Each container shall be clearly marked to indicate its contents.

9.5.1.4 Enclosed spaces having an area ≥ 4m^2 designated as storage for flammable liquids shall comply with the requirements for SOLAS for Paint Lockers.

9.5.1.5 Enclosed spaces having an area < 4m^2 designated for the safe carriage of petrol or similar fuel or vehicles with fuel in their tanks shall be fitted with:-

.1 A fixed fire detection and fire alarm system complying with the requirements of SOLAS regulations II-2/Part A;

.2 A manually activated deluge water spray system of capacity to cover the total area of deck and container/vehicle support platform(s) (if any) at a rate of 3.5litres/m^2 per minute; or

.3 For a space in which the provision of a deluge system would be inappropriate/impractical, alternative provisions shall be made to the satisfaction of the Administration. (Consideration shall be given to the provision of a water spray from at least one fire hose fitted with a jet/spray nozzle designed to bear on any part of the fuel stowage from the entrance(s) to the space);

.4 Adequate provision for drainage of water introduced into this space. Drainage shall not lead to machinery or other spaces where a source of ignition may exist;

.5 A ducted mechanical continuous supply of air ventilation, which is isolated from other ventilated spaces, to provide at least 6 air changes per hour (based on the empty space) and for which reduction of the airflow shall be signalled by an audible and visual alarm on the navigating bridge and at the "in port" control station(s). The ventilation system shall be capable of rapid shut down and effective closure in event of fire.

9.5.1.6 Electrical equipment shall be located well clear of those areas where flammable gases are likely to accumulate within the space and be so constructed as to prevent the escape of sparks and be intrinsically safe.

9.5.1.7 The location of fuel stowage, quantities of fuel and procedures to be followed in an emergency shall be approved and clearly marked on the fire safety plan and/or safety manual, as appropriate.

9.5.1.8 No fuel or flammable liquids having a flash point below 60°C may be stored in the machinery spaces.

9.5.2 LPG or equivalent Installations

9.5.2.1 Any LPG installation shall be approved by a Recognised Organisation or Appointed Surveyor. All open flame appliances shall be certified in compliance with the requirements of EC Directive on 'Appliances Burning Gaseous Fuel' - 2016/426/EC, as amended. Gas detectors and CO detectors shall be installed in the areas where LPG is used.

9.5.2.2 The dangers arising and to be avoided, from the use of liquid petroleum gas (LPG) open flame appliances in the marine environment include fire, explosion and asphyxiation due to leakage of gas from the installation.

9.5.2.3 It is dangerous to sleep in spaces where gas-consuming open-flame appliances are left burning, because of the risk of carbon monoxide poisoning. LPG is heavier than air and if released, may travel some distance whilst seeking the lowest part of a space. Therefore, it is possible for gas to accumulate in relatively inaccessible areas, such as bilges, and diffuse to form an explosive mixture with air, this is also the case with petrol vapours.

9.5.2.4 LPG cylinders, regulators and safety devices shall be stowed on the open deck (where leakage will not accumulate) or in a compartment that is vapour-tight to the vessel's interior and fitted with a vent and drain, so that gas which may leak can disperse overboard.
The vent and drain shall not be less than 19 mm in diameter, run to the outside of the craft and terminate 75 mm or more above the waterline. The drain and locker ventilation shall be 500 mm or more from any opening to the vessel's interior.

9.5.2.5 The cylinders and associated fittings shall be positively secured against movement and protected from damage in any foreseeable event.

9.5.2.6 Any electrical equipment located in cylinder lockers shall be certified and intrinsically safe for use in the potentially explosive atmosphere.

9.5.2.7 If gas fired heaters are used on board they shall be installed and secured in a position away from soft furnishings, curtains etc.

9.5.2.8 For rigid pipe work systems, the pipes shall be made from solid drawn copper alloy or stainless steel tube. Steel tubing or aluminium or any materials having a low melting point shall not be used.

9.5.2.9 Connection between rigid pipe sections shall be made with hard solder (minimum melting point 450^{o}C), appropriate compression or screwed fittings are recommended for general use for pipe work in LPG installations.

9.5.2.10 Where a flexible hose is used, the length shall be kept to a minimum, it shall be protected from inadvertent damage where appropriate, it shall meet the requirement of 'Rubber and plastics tubing, hoses and assemblies for use with commercial propane, commercial butane and their mixtures in the vapour phase. Requirements for rubber and plastics tubing and hoses' - EN 1763, as amended, or equivalent and be installed in a manner that gives access for inspection along its whole length.

9.5.2.11 There shall be no joints in the pipe work in the engine spaces.

9.5.2.12 Clearly marked gas shut-off valves shall be fitted in the gas locker and also near the connected equipment/appliances.

9.5.2.13 In multiple cylinder installations, in addition to each cylinder shutoff valve there shall be non-return valves near the stop valves. Where there is a change over device (automatic or manual) it shall be provided with non-return valves to isolate any depleted container.

9.5.2.14 When more than one container can supply a system, the system shall not be used with a container removed unless the unattached pipe is fitted with a suitable gas tight plug arrangement.

9.5.2.15 Containers not in use or not being fitted into an installation shall have the protecting cap in place over the container valve.

9.5.2.16 The gas line couplings shall be crimped and threaded. Non-metallic hoses by virtue of their definite life require to be replaced at regular intervals as recommended by the manufacturer. In case of copper piping periodical inspections shall be undertaken.

9.5.2.17 All unattended appliances shall be of the room sealed type. Cookers and hobs are not considered to be unattended appliances.

9.5.2.18 All gas burners and pilot flames shall be fitted with a flame supervision device which will shut off the gas supply to the burner or pilot flame in the event of flame failure.

9.5.3 Ventilation

9.5.3.1 The ventilation requirements of a space containing a LPG appliance shall be assessed against an appropriate standard (e.g. Annex B of ISO 10239) and shall take into account gas burning equipment and persons occupying that space.

9.5.3.2 Where ventilators required for LPG appliances in intermittent use can be closed, there shall be appropriate signs at the appliance warning of the need to have those ventilators open before the appliance is used.

9.5.4 Gas Detection

9.5.4.1 Suitable means for detecting the leakage of gas shall be provided in a compartment containing a gas-consuming appliance or in any adjoining space or compartment into which the gas, of greater density than air, may seep.

9.5.4.2 Gas detector heads shall be securely fixed in the lower part of the compartment in the vicinity of the gas-consuming appliance and other space(s) into which gas may seep. In areas where the detector head is susceptible to damage in the lowest part of the compartment the detector head shall at least be fitted below the lowest point of ignition.

9.5.4.3 A gas detector system of a suitable type shall, preferably, be actuated promptly and automatically by the presence of a gas concentration in air of not greater than 0.5 per cent (representing approximately 25 per cent of the lower explosive limit). The detection system shall incorporate a visible and audible alarm, which can be heard in the space concerned and the control position with the vessel in operation.

9.5.4.4 Gas detection system components (i.e. gas detector head) likely to be in an explosive air/gas atmosphere shall not be capable of igniting that atmosphere.

9.5.4.5 In all cases, the arrangements shall be such that the detection system can be tested frequently whilst the vessel is in service and shall include a test of the detector head operation as well as the alarm circuit, in accordance with the manufacturer's instructions.

9.5.4.6 The detection equipment shall be maintained in accordance with the manufacturer's requirements.

9.5.5 Emergency Action Given by Gas Detection System

9.5.5.1 A suitable notice, detailing the action to be taken when an alarm is given by the gas detection system, shall be displayed prominently in the vessel.

The information given shall include the following:-

.1 The need to be ever alert for gas leakage; and

.2 When leakage is detected or suspected, all gas-consuming appliances shall be shut off at the main supply from the container(s). No Smoking shall be permitted until it is safe to do so (i.e. the gas leakage has been eliminated and the spaces fully ventilated);

.3 Naked lights shall never be used as a means to check and locate gas leaks.

9.5.6 Gas System Owner/Operator Testing

9.5.6.1 It is strongly recommended that LPG systems are tested for leakage regularly. All connections shall be checked by:

.1 routine observation of the bubble leak detector (if fitted),

.2 observation of the pressure gauge for pressure drop with the appliance valves closed and cylinder valve opened then closed (if fitted with gauge on supply pressure side),

.3 visual inspection,

.3 manual leak testing, (without breaking into the system)

.4 testing with soapy water or detergent solution (with appliance-burner valves closed, and cylinder and system valves open). Solutions containing ammonia shall not be used.

If leakage is present, the cylinder valve shall be closed and the system repaired before further use.

9.6 STRUCTURAL FIRE PROTECTION

Definitions

Terms used in this Section shall have the same meaning as defined in SOLAS, and as follows:

"Fire Rated Area" means an area enclosed/surrounded on any or all sides by a fire rated bulkhead and/or deck as required in Tables 1 and 2 of this Section;

"Low flame spread" means that the surface thus described will adequately restrict the spread of flame;

"Main Vertical Zone (MVZ)" is applicable to Passenger vessels (including Ro-Ro Passenger vessels) and means those sections into which the hull, superstructure and deck-houses are divided by Class A fire rated divisions, the mean length of which on any deck does not normally exceed 40 metres; and

"Not readily ignitable" means that the surface thus described will not continue to burn for more than 20 seconds after removal of a suitable impinging test flame.

"Class A" Fire Rated bulkheads and decks are categorised by Classes as detailed herebelow, and must comply with the following :

1. they are constructed of steel or other equivalent material;
2. they are suitably stiffened;
3. they are insulated with Type Approved or Certified non-combustible materials such that, in the presence of fire on one side, the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature, at any one point, including at any joint, rise more than 180°C above the original temperature, within the time listed below:
   Class "A-60" - 60 min
   Class "A-30" - 30 min
   Class "A-15" - 15 min
   Class "A-0" - 0 min

4. they are constructed being capable of preventing the passage of smoke and flame to the end of the one-hour standard fire test;

5. the Administration may require a test of a prototype bulkhead or deck in accordance with the International Code for Application of Fire Test Procedures to ensure the above requirements for integrity and temperature rise are met.

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

1. they are constructed of Type Approved or Certified non-combustible materials, with the exception that combustible veneers may be permitted provided they meet the requirements set out in Chapter II-2 of the SOLAS Convention;
2. they have an insulation value such that the average temperature of the unexposed side will not rise more than 140°C above the original temperature, nor will the temperature at any one point, including at any joint, rise more than 225°C above the original temperature, within the time listed below:

   Class "B-0" - 0 min
   Class "B-15" - 15 min
   Class "B-30" - 30 min
3. they are constructed as to be capable of preventing the passage of flame to the end of the first half hour of the standard fire test;
4. the Administration may require a test of a prototype division in accordance with the Fire Test Procedures Code to ensure that the above requirements for integrity and temperature rise are met.

"Class C" Fire rated divisions are divisions constructed of approved non-combustible materials. They are not required to meet the requirements relative to the passage of smoke and flame and neither have any limitations relative to the temperature rise. Combustible veneers are permitted provided they meet the requirements set out in Chapter II-2 of the SOLAS Convention.

"Class F" Fire rated divisions are those divisions formed by bulkheads, decks, ceiling or linings which comply with the following:

1. they 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;

2. they shall have an insulation value such that the average temperature of the unexposed side will not rise more than 139°C above the original temperature, nor will the temperature at any one point, including at any joint, rise more than 225°C above the original temperature, up to the end of the first one-half hour of the standard fire test.

9.6.1 Structural Fire Protection for Vessels < 50m in length

9.6.1.1 The boundaries of a space containing internal combustion propulsion machinery or oil fired boilers on a new vessel shall be:

.1 Gas tight;

.2 Capable of preventing the passage of smoke and flame and be fire rated to A-60 for steel vessels and B-30 for FRP, Aluminium and Timber vessels in accordance with Table 1 – Fire Integrity of Bulkheads separating adjacent spaces.

9.6.1.2 When machinery spaces' boundaries are constructed of materials other than those mentioned above, calculation methods may be used where appropriate to determine compliance with the above.

9.6.1.3 Fuel tanks and associated pipes and fittings shall be located to reduce to a minimum the risk of fire or explosion. Spaces containing such items shall be provided with an adequate and efficient ventilation system.

9.6.1.4 In vessels provided with a fixed gas extinguishing system in the machinery spaces, local and remote closing arrangements shall be provided for the closure of all ventilation openings leading into the machinery space. Local and remote means shall also be provided for stopping all ventilation fans supplying the machinery space. Local and remote fuel shut-off valves shall also be provided.

9.6.1.5 Surfaces with temperatures above 220°C which may be impinged as a result of a fuel system failure shall be properly insulated. Precautions shall be taken to prevent any oil that may escape under pressure from any pump, filter or heater from coming into contact with heated surfaces.

9.6.1.7 On vessels ≥ 150 GT, external high-pressure fuel delivery lines between the high pressure fuel pumps and fuel injectors shall be protected with a jacketed piping system capable of containing fuel from a high-pressure line failure. A suitable enclosure on engines having an output ≤ 375 kW having fuel injection pumps serving more than one injector may be used as an alternative to the jacketed piping system.

19.6.1.8 Any fitted thermal or acoustic insulation shall be of a type which is not readily ignitable and, where fitted within machinery spaces which do not contain either internal combustion propulsion machinery or oil fired boilers, the surface of the insulation material shall be impervious to oil and oil vapour.

Insulation provided within machinery spaces, which contain either internal combustion propulsion machinery or oil fired boilers, must be type approved or certified, be of a non-combustible type and the surface of the insulation is also to be impervious to oil and oil vapour.

9.6.1.9 Paints, varnishes and other finishes which offer an undue fire hazard, shall not be used in the engine room or galley or in other areas of high fire risk. Elsewhere such finishes shall be kept to a minimum.

9.6.1.10 Upholstery composites (fabric in association with any backing or padding material) used throughout the vessel shall be of the Combustion Modified High Resilient (CMHR) type. On existing vessels this requirement may be delayed until the materials are due for renewal.

9.6.1.11 Organic foams used in upholstered furniture and mattresses shall be of the Combustion Modified High Resilient (CMHR) type.

9.6.1.12 Suspended textile materials such as curtains or drapes shall be made of materials having low flame spread characteristics.

9.6.1.13 Fabrics shall satisfy the Flammability Cigarette and Butane tests. On existing vessels this requirement may be delayed until the materials are due for renewal subject that the fabrics are treated or are of the not readily ignitable type.

9.6.1.14 Linings on bulkheads and ceilings around galley equipment shall be made with non-combustible materials having a fire rating. Non-certified combustible materials within the following distances, shall be protected :-

.1 400mm vertically above the cooking range or cooking accessories;

.2 150mm horizontally on the sides of the cooking range or cooking accessories;

.3 curtains or any other suspended materials shall not be fitted within 600mm of the top of the cooking range or cooking accessories.

9.6.1.15 The installation of deep fat frying equipment shall be avoided however the installation may be carried out subject that a fixed fire extinguishing system complying with SOLAS II-2/10.6.4 is installed. For deep frying equipment of upto 15 litres cooking oil capacity a suitably sized Class F Fire Extinguisher and a manual shut-off of the electrical power supply may be accepted.

9.6.1.16 Galley door(s) are to remain closed and if necessary be fitted with a spring loaded closing mechanism or fitted with a magnetic switch that closes the galley door(s) once the fire alarm is activated.

9.6.1.17 On wooden vessels, measures shall be taken to prevent the absorption of oil into the structure. Metal drip trays shall be installed under engines and under other equipment/machinery that could drip oil. Such drip trays shall have draining facilities so that they can be drained in appropriate containers. Such containers shall be properly disposed of ashore at oil reception facilities. Engine rooms shall be kept clean and free from oily waste, oily rags and other combustible materials.

9.6.1.18 All boundaries of any saunas and steam rooms must be insulated to at least B-15 and protected by a fire detection and alarm system. The boundaries adjacent to the sauna oven and the steam generator must be insulated to A-0 or equivalent. Wooden linings on ceilings and bulkheads are allowed. The ceiling above the sauna oven shall be lined with a non-combustible plate with an air gap of at least 30mm whilst the distance from the hot surfaces to combustible materials shall be at least 500mm. The sauna door shall always open outwards by pushing.

9.6.1.19 An open flame gas appliance provided for cooking, heating or any other purpose shall comply with the requirements for LPG installations mentioned above.

9.6.1.20 A fire detection and fire alarm system shall be fitted. It shall be provided with a control panel located in the navigation bridge, and with audible alarms provided in locations where they are most likely to be heard, including in the accommodation. Detectors shall, at least, be fitted in the machinery spaces and the galley, and onboard vessels ≥ 30m in length, suitable detectors shall be fitted in all enclosed spaces except those which afford no substantial fire risk.

9.6.1.21 In the exceptional case of a space/compartment having only one means of escape, the integrity of the escape route shall be protected by the installation of smoke detectors which shall give early warning of danger by means of audible and visual alarms both on the bridge and along the escape route.

9.6.1.22 Galley exhaust ducts must have means of access in order for them to be periodically cleaned from the accumulation of oily residues. Ventilation ducts from machinery spaces, galleys and any other high risk areas are generally not to pass through accommodation areas. If it is inevitable that such ventilation ducting passes through accommodation spaces then:-

.1 the material of the ventilation ducting passing through the accommodation spaces including galley exhaust shall be made of metal (galvanised steel or equivalent) having a thickness of at least 3mm, and shall be thermally insulated to the same standard as the machinery spaces;

.2 automatic temperature activated dampers shall be fitted inside the trunking at the place where the ventilation ducts pass from the 'high risk' zones to the accommodation spaces. These dampers shall have manual controls as well;

.3 a fixed fire extinguishing system shall be installed in the galley exhaust ducts. The activation point of the galley exhaust duct fixed fire extinguishing system must be located outside of the galley. Fire dampers shall be installed in the lower and upper parts of the galley exhaust in order to enable the fixed fire-extinguishing system to be effective and efficient.

9.6.1.23 Laundry rooms ventilation ducts must have means of access in order for them to be periodically cleaned from the accumulation of textile fibres. Laundry rooms shall be fitted with smoke detectors located above the dryers. On existing vessels, stand alone battery operated smoke detectors, may be accepted.

9.6.1.24 Ventilation ducts shall be made of metal (galvanised steel or equivalent).

9.6.2.1 Structural Fire Protection on <u>Existing</u> Vessels ≥ 50m in length including existing vessels ≥ 500 GT which are engaged on domestic navigation including those operating exclusively in the Maltese Waters

9.6.2.1.1 All the above mentioned requirements for vessels < 50m in length (Section 9.6.1) shall be duly complied with and, in addition:

.1 Evidence of precautions taken to reduce the passage of flame throughout accommodation and service spaces shall be submitted to the Recognised Organisation or Appointed Surveyor for approval. Such precautions may include the enclosure of stairways and appropriate protection of escape routes.

.2 A fixed fire detection system and fire alarm system of an approved type and complying with the requirements of SOLAS regulations II-2/Part A shall also be installed in order to detect the presence of fire in all accommodation and service spaces (except those which afford no substantial fire risk).

.3 The vessel shall be manned at all times so as to ensure that any initial fire alarm is immediately acknowledged by a responsible member of the crew.

.4 Furniture in corridors and escape routes shall be used sparingly and shall be of a type and quantity not likely to obstruct the escape route.

9.6.2.2 Structural Fire Protection on <u>New</u> Vessels ≥ 50m in length including new vessels ≥ 500 GT which are engaged on domestic navigation including those operating exclusively in the Maltese Waters

9.6.2.2.1 All the above mentioned requirements for vessels < 50m in length (Section 9.6.1) shall be duly complied with and, in addition:

9.6.2.3 Ventilation Systems

9.6.2.3.1 Ventilation ducts shall be of non-combustible material.

9.6.2.3.2 Pipes or ducts penetrating Class A or Class B fire rated divisions shall be made of metal or of an equivalent Type Approved or Certified material and must be of a structural construction designed to withstand the same conditions as the divisions they penetrate. This will ensure that heat from a fire is not transmitted through any uninsulated boundaries. Where the insulation installed does not achieve this, arrangements shall be made to prevent the heat transmission by insulating the horizontal and vertical boundaries or penetrations for a distance of at least 450mm.

9.6.2.3.3 Any non-metallic ventilation ducts with a free cross-sectional area exceeding 0.02m^2 passing through Class B fire rated bulkheads shall be lined with steel sheet sleeves of 900mm in length divided preferably into 450mm on each side of the bulkheads.

9.6.2.3.4 The ventilation of control stations situated outside machinery spaces shall be in such a way that, in the event of a fire inside the machinery spaces, the control station remains free from fire and smoke so that the machinery and equipment contained in the control station may be supervised and continue to function effectively. At least two separate means of air supply inlets shall be provided into the control station. These requirements need not apply to control stations situated on, and opening onto, an open deck, or where local closing arrangements would be equally effective.

9.6.2.3.5 When it is necessary for a ventilation duct to pass through a boundary of a MVZ, a fail-safe automatic closing fire damper shall be fitted adjacent to the division. The damper shall also be capable of being manually closed from each side of the MVZ. The operating position shall be readily accessible and be marked in red light-reflecting colour. The duct passing through the MVZ boundary shall be made of steel and be insulated to the same fire rating of the MVZ. The fire damper shall have an indicator showing whether or not the damper is in the open or closed position.

9.6.2.3.6 Inlets and outlets of ventilation systems shall be capable of being closed from outside the space being ventilated.

9.6.2.3.7 Forced ventilation of accommodation spaces, service spaces, galleys, control stations and machinery spaces shall be capable of being remotely stopped from an easily accessible position being located outside the space being served. The remote shut-off shall be safely accessed in the

event of a fire in the spaces served. The machinery spaces remote ventilation shut-off shall be separate from the ventilation shut-off of other spaces onboard.

9.6.3 Additional Structural Fire Protection (all vessels)

9.6.3.1 The hull, superstructures, structural bulkheads, decks and deckhouses shall be constructed of steel or other equivalent material.

9.6.3.2 However, in cases where any part of the structure is of aluminium alloy, the following shall apply:

.1 Insulation of structural aluminium alloy components having Class A or Class B fire ratings shall be such that the temperature of the aluminium structural core does not rise more than 200°C above the ambient temperature at any time during the applicable fire exposure to the standard fire test. This requirement is not applicable to those aluminium sections which, in the opinion of the Appointed Surveyor or Recognised Organisation, are non-load bearing.

.2 Special attention shall be given to the insulation of aluminium alloy components of columns, stanchions and other structural members required to support lifeboats and liferafts in launching and embarkation areas which are located in Class A and Class B fire rated areas. The following insulating parameters shall be followed:

i In a Class A division the temperature of the aluminium structural core shall not rise more than 200°C above the ambient temperature for at least 60 minutes whilst being exposed to fire (in accordance to the FTP Code).

ii In a Class B division the temperature of the aluminium structural core shall not rise more than 200°C above the ambient temperature for at least 30 minutes whilst being exposed to fire (in accordance to the FTP Code).

9.6.3.3 Engine room casings of category A machinery spaces shall be of steel construction and be adequately insulted. Any openings therein shall be suitably arranged and protected to prevent the spread of fire.

9.6.4 Fire Rated Areas, Main Vertical Zones (MVZs) and Horizontal Zones

9.6.4.1 Hull superstructure and deckhouses in way of accommodation and service spaces shall be enclosed in structural fire rated areas or MVZs, on passenger vessels. These divisions shall have insulation values in accordance with Tables 1 and 2 of this Section.

9.6.4.2 As far as practicable, the bulkheads forming the boundaries of MVZs, shall be in line with watertight subdivision bulkheads. Such bulkheads shall fully extend from deck to deck and to the shell or other boundaries.

9.6.4.3 When a Class A fire rated bulkhead serves the purpose of providing an appropriate barrier between sprinkler protected spaces and spaces without sprinklers, which subdivides a fire rated area or a MVZ, these divisions shall be insulated in accordance with the fire insulation and integrity values given in Tables 1 and 2 of this Section.

9.6.5 Bulkheads within Fire Rated Areas and Main Vertical Zones (MVZs)

9.6.5.1 All bulkheads within accommodation and service spaces which are not required to be Class A fire rated shall at least have Class B or Class C fire rating as prescribed in Tables 1 and 2 of this Section.

9.6.5.2 All corridor bulkheads (when not required to have a fire rating of Class A or Class B) shall extend from deck to deck except:

.1 When continuous Class B fire rated ceilings or linings are fitted on both sides of the bulkhead, the section of the bulkhead behind the continuous ceilings or linings shall be of material which, in thickness and composition, is equivalent to a Class B fire rated division, as far as practicable;

.2 In spaces protected by an automatic sprinkler, fire detection and fire alarm systems, the Class B fire rated corridor bulkheads may terminate at the ceiling provided that the ceiling is also Class B fire rated. All doors and frames in such bulkheads shall have the same fire rating as the bulkhead itself.

9.6.5.3 All bulkheads required to be Class B fire rated, except corridor bulkheads, shall extend from deck to deck and to the shell or other boundaries unless continuous Class B fire rated ceilings or linings are fitted on both sides of the bulkhead, in which case the bulkhead may terminate at the continuous ceiling or lining.

9.6.6 Fire integrity of Decks and Bulkheads

9.6.6.1 In addition to complying with the specific provisions for fire integrity of decks and bulkheads mentioned in other parts of this Section, the minimum fire integrity of bulkheads and decks shall be as prescribed in Tables 1 and 2 of this Section.

9.6.6.2 The following requirements shall govern application of the Tables:

.1 Tables 1 and 2, of this Section, shall apply respectively to the bulkheads and decks separating adjacent spaces.

.2 In order to determine the appropriate fire integrity standards to be applied to divisions between adjacent spaces, such spaces are classified according to their fire risk as shown in categories (1) to (9) below. The title of each category is intended to be typical rather than restrictive. The number in parentheses preceding each category refers to the applicable column or row in the Tables.

(1) Control Stations

- Spaces containing emergency sources of power and lighting.
- Wheelhouse and chartroom.
- Spaces containing the vessel's radio equipment.
- Fire extinguishing rooms, fire control rooms and fire-recording stations.
- Control room for propulsion machinery when located outside the machinery space.
- Spaces containing centralized fire alarm equipment.

(2) Corridors and lobbies

(3) Accommodation spaces

- Spaces so defined, excluding corridors.

(4) Stairways

- Interior stairways, lifts and escalators (other than those wholly contained within the machinery space(s)) and enclosures thereto.

- In this connection, a stairway which is enclosed only at one level shall be regarded as part of the space from which it is not separated by a fire door.

(5) Service spaces (low risk)

- Lockers and store-rooms where no flammable liquids are stored and where the area < $4m^2$.
- Drying rooms and laundries.

(6) Machinery spaces of Category A

(7) Other machinery spaces

- Machinery Spaces, excluding machinery spaces of Category A.

(8) Service spaces (high risk)

- Galleys, pantries containing cooking appliances, paint and lamp rooms, lockers and store-rooms having areas ≥ $4m^2$, spaces for the storage of flammable liquids, and workshops other than those forming part of the machinery spaces.

(9) Open decks

- Open deck spaces and enclosed promenades having no fire risk.

.3 In determining the applicable fire integrity standard of a boundary between two spaces within a fire rated area, a MVZ or a horizontal zone, which is not protected by a sprinkler system, the higher fire rating as shown in the Tables shall apply.

.4 In determining the applicable fire integrity standard between two spaces within a fire rated area, a MVZ or a horizontal zone which is protected by a sprinkler system, the lesser of the two fire ratings as shown in the Tables shall apply.

Where a sprinkler protected zone and a zone without sprinklers meet within accommodation and service spaces, the higher of the two fire rating values given in the Tables shall apply to the division between the zones.

9.6.6.3 Continuous Class B fire rated ceilings or linings, running along decks or bulkheads, may be accepted as contributing, fully or in part, to the required insulation and fire rating of the division.

9.6.6.4 External boundaries which are required to be of steel or other equivalent material may be fitted with windows and side scuttles provided that there is no requirement for such boundaries to have a Class A fire rating. Similarly, in such boundaries, which are not required to have any fire rating, the doors may be constructed of combustible materials.

9.6.6.5 For structures in contact with sea-water, the required insulation shall extend at least 300mm below the lightest waterline. In spaces where penetration of oil products or oil vapours is possible, the surface of the insulation is to be impervious to oil or oil vapours. Arrangements shall be made in such a way as to avoid that the insulation gets in contact with any oil leakages/spillages.

9.6.6.6 Composite, aluminium and wooden vessels having an engine power < 375 kW are required to have their machinery spaces boundaries insulated to minimum B-15. Where fire insulation is fitted in these spaces, and when these spaces extend below the waterline, then the insulation has to extend, at least, to 300mm below the water line.

A waiver from this requirement may be considered by the Administration subject to:
a) the fuel tanks and the operation of the remote quick closing valves are located outside the engine room,
b) not more than 100 litres of fuel is carried inside the engine room,
c) no escape route is directly adjacent to the engine room.

9.6.6.7 On a case by case basis, certain spaces fitted with type approved and/or certified sprinkler systems or water mist systems, onboard aluminium superstructure and aluminium accommodation vessels, may be exempted from the fire rating requirements of Table 1 and Table 2, at the discretion of the Administration.

Table 1 - Fire integrity of Bulkheads separating adjacent spaces

Spaces	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Control stations (1)	A-0_c	A-0	A-60	A-0	A-15	A-60	A-15	A-60	*
Corridors and lobbies (2)		C_e	B-0_e	A-0_a B-0_e	B-0_e	A-60	A-0	A-15 A-0_d	*
Accommodation spaces (3)			C_e	A-0_a B-0_e	B-0_e	A-60	A-0	A-15 A-0_d	*
Stairways (4)				A-0_a B-0_e	A-0_a B-0_e	A-60	A-0	A-15 A-0_d	* *
Services spaces (low risk) (5)					C_e	A-60	A-0	A-0	*
Machinery spaces of category “A” (6)						*	A-0	A-60 B-30	*
Other machinery spaces (7)							A-0_b	A-0	*
Service spaces (8)								A-0_b	*
Open decks (9)									

See the relevant applicable Notes that follow Table 2.

Table 2 – Fire integrity of Decks separating adjacent spaces

Spaces above Spaces below	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**
Control stations (1)	A-0$_c$	A-0	A-0	A-0	A-0	A-60	A-0	A-0	*
Corridors and lobbies (2)	A-0	+	+	A-0	+	A-60	A-0	A-0	*
Accommodation spaces (3)	A-60	A-0	+	A-0	+	A-60	A-0	A-0	*
Stairways (4)	A-0	A-0	A-0	+	A-0	A-60	A-0	A-0	*
Services spaces (low risk) (5)	A-15	A-0	A-0	A-0	+	A-60	A-0	A-0	*
Machinery spaces of category “A” (6)	A-60	A-60	A-60	A-60	A-60	+	A-60$_f$	A-60	*
Other machinery spaces (7)	A-15	A-0	A-0	A-0	A-0	A-0	+	A-0	*
Service spaces (8)	A-60	A-30 A-0$_d$	A-30 A-0$_d$	A-30 A-0$_d$	A-0	A-60	A-0	A-0	*
Open decks (9)	*	*	*	*	*	*	*	*	*

Notes: To be applied to both Tables 1 and 2, as appropriate.

a. For clarifications refer to the section concerning Bulkheads within, Fire Rated Areas and MVZs and the section concerning Protection of Stairways and lifts in accommodation and service spaces.
b. Where spaces are of the same numerical category and subscript $_b$ is indicated, than a bulkhead or deck of the rating shown in the Tables is only required when the adjacent spaces are for a different purpose, e.g. in category (9), a galley next to a galley does not require a bulkhead but a galley next to a paint room requires a Class "A-0" bulkhead.
c. Bulkheads separating the wheelhouse and chartroom from each other may be Class "B-0".
d. See Sections 9.6.6.3 and 9.6.6.4
e. Class "A-0" if the boundary forms part of a MVZ.
f. Fire insulation need not be fitted in the machinery space in category (7), if in the opinion of Recognised Organisation or Appointed Surveyor these spaces, have little or no fire risk.
g. For non-steel vessels the fire rating of the machinery spaces shall be "B-30" instead of "A-60".
* Where an asterisk appears in the tables, the division/bulkhead shall be made of steel or other equivalent material but is not required to be Class A fire rated. A B-15 Class division fire rating is required for vessels constructed in a material other than steel.
\+ As required in 9.6.4.1 a plus sign, where appearing in table 2, shall read as Class "A-0".

Note: *In case of aluminium superstructures reference is to be made to MSC/Circ.1120 of the 2nd June 2004 Part C Regulation 11.3.1*

9.7 Means of escape

9.7.1 The arrangements of the vessel shall ensure that all compartments have means of escape in case of emergency. Stairways, corridors and ladders shall provide means of escape to embarkation deck.

9.7.2 Escape routes from the accommodation spaces shall not pass through any high risk areas such as the machinery space, galley and storage areas.

9.7.3 All accommodation spaces used for sleeping or rest, other accommodation spaces affected by a fire risk and machinery spaces shall have two distinct and easily openable and accessible means of escape. The escape routes shall be clearly indicated and marked by means of adequately sized and visible IMO signs on all sides.

9.7.4 In exceptional cases, the Administration may accept one means of escape:

.1 if the means of escape provided leads directly to the open air and does not pass through any high risk spaces,
.2 the space concerned is only occasionally manned during normal operations,
.3 if it can be demonstrated that the provision of a second means of escape would be detrimental to the overall safety of the vessel,
.4 if those spaces where any person entering and moving about the space is within 5 metres of the single escape, at all times.

In the exceptional case where a single means of escape from accommodation spaces is accepted, an efficient system of fire detectors shall be provided in order to provide an early warning of a fire emergency which could cut off the single means of escape.

9.7.5 For vessels < 24m in length, all escape openings onboard shall not be less than 400mm x 400mm whilst for vessels ≥ 24m in length all escape openings shall not be less than 600mm x 600mm.

9.7.6 No escape route shall be obstructed by furniture or fittings.

9.7.7 Multi-hull vessels shall have additional means of escape through each hull.

9.7.8 All sailing multihulls shall be fitted with an emergency escape hatch in each main inhabited watertight compartment to permit the exit of personnel in the event of an inversion. Such escape hatches shall be located above both upright and inverted waterlines.

9.7.9 Stairways and ladders shall be arranged to provide ready means of escape to the lifeboat and/or liferaft embarkation deck from all accommodation and service spaces other than machinery spaces. In particular, the following provisions shall be complied with:

.1 Below the lowest open deck, two means of escape shall be provided (one of which shall be independent of any watertight doors) from each watertight compartment, MVZ or similarly restricted group of spaces.

.2 Above the lowest open deck there shall be, at least, two means of escape from each MVZ or similarly restricted group of spaces.

.3 Within each MVZ or similarly restricted group of spaces, there shall be at least one readily accessible enclosed stairway providing continuous fire shelter, where practical at all levels up to the appropriate lifeboat and liferaft embarkation decks or the highest level served by the stairway, whichever level is the highest. The width, number and continuity of the stairways shall be appropriate for the number of persons likely to use them.

.4 Access from the stairway enclosures to the lifeboat and liferaft embarkation areas shall avoid any high fire risk areas.

.5 Stairways serving only a space and a balcony in that space shall not be considered as forming one of the required means of escape.

.6 If a radio room or wheelhouse has no direct access to the open deck, two means of escape shall be provided, one of which may be a window of sufficient size.

9.7.10 Two means of escape shall be provided from each machinery space. In particular, the following provisions shall be complied with:

.1 The two means of escape shall consist of either:

(a) two sets of steel ladders as widely separated as possible, leading to doors in the upper part of the space similarly separated and from which access is provided to the appropriate lifeboat and liferaft embarkation decks. One of these ladders shall provide continuous fire shelter from the lower part of the space to a safe position outside the space; or

(b) one steel ladder leading to a door in the upper part of the space from which access is provided to the embarkation deck and additionally, in the lower part of the space and in a position well separated from the ladder referred to, a steel door capable of being operated from each side and which provides access to a safe escape route from the lower part of the space to the embarkation deck.

.2 Two means of escape shall be provided from a machinery control room located within a machinery space, at least one of which shall provide continuous fire shelter to a safe position outside the machinery space.

9.7.11 In no case shall lifts be considered as forming part of the required means of escape.

9.8 Protection of stairways and lifts in accommodation and service spaces

9.8.1 A stairway shall be of steel frame construction except when other equivalent materials are accepted by the Administration. The stairway shall be located within enclosures formed from a Class A fire rated division, with positive means of closure at all openings, except the following cases:

.1 A stairway which penetrates only a single deck may be protected at one level only by a Class B fire rated division and self-closing door(s); and

.2 Stairways may be fitted in the open in a public space, provided they lie wholly within such public space.

9.8.2 A stairway enclosure shall have direct communication with the corridors and be of sufficient cross-sectional area to prevent congestion, taking into consideration the number of persons likely to use the stairway in case of an emergency. Stairway enclosures shall not give direct access to cabins, service lockers, or other enclosed spaces containing combustibles in which a fire is likely to originate.

9.8.3 A lift trunk shall be so fitted to prevent the passage of flame from one tween-deck to another and shall be provided with means of closing to permit the control of draught and smoke.

9.9 Openings in Class A fire rated Boundaries

9.9.1 Except for hatches between store and baggage spaces, and between such spaces and the weather decks, all openings shall be provided with permanently attached means of closing which shall be Type Approved or Certified and have the same fire rating as the boundaries themselves.

9.9.2 The construction of all doors and door frames in Class A fire rated boundaries, shall be Type Approved or Certified and have the same fire rating as the boundaries themselves and be provided with efficient means of closing. Such doors and door frames shall be constructed of steel or other equivalent material. Watertight doors need not be insulated.

9.9.3 Fire doors shall be openable from both sides of the fire rated bulkhead by one person only.

9.9.4 Fire doors in fire rated areas and MVZ bulkheads and stairway enclosures, other than power operated watertight doors and those which are normally locked, shall be of the self-closing type capable of closing against an inclination of 3.5° opposing closure. The speed of door closure shall, if necessary, be controlled to prevent undue danger to persons. All such doors, except those that are normally closed, shall all be capable of release from a control station, either simultaneously or in groups, and also individually from a position adjacent to the fire door. The release mechanism shall be so designed that the door will automatically close in the event of disruption of the control system. Approved power-operated watertight doors shall be considered acceptable for this purpose. Hold-back hooks not subject to control station release shall not be permitted. When double swing doors are permitted, they shall have a latch arrangement, which is automatically engaged by the operation of the door release system.

9.9.5 When a space is protected by an automatic sprinkler system or is fitted with a continuous Class B fire rated ceiling, openings in decks not forming parts of any fire rated area or MVZ or horizontal zone shall be closed and such decks shall meet a Class A fire rating in so far as is reasonable and practical.

9.10 Openings in Class B fire rated Boundaries

9.10.1 Doors and door frames in Class B fire rated boundaries, when closed, shall provide the same fire resistance as the boundary itself, except that a ventilation opening may be permitted in the lower portion of such doors. When such an opening is in or under a door the total net area of the opening(s) shall not exceed 0.05m^2. The vent opening shall be fitted with steel gauze. The doors and their frames shall be non-combustible.

9.10.2 When a sprinkler system is fitted, openings in decks not forming parts of a MVZ or of a main horizontal zone shall be Class B fire rated.

9.11 Windows and Side Scuttles

9.11.1 All windows and side scuttles in bulkheads within accommodation service spaces and control stations shall be Type Approved or Certified and have the same fire rating as the bulkheads into which they are fitted.

9.12 Restricted use of Combustible Materials

9.12.1 Except in baggage rooms, or refrigerated compartments in service spaces, all linings, grounds, draught stops and ceilings shall be made from non-combustible materials.

9.12.2 Vapour barriers and adhesives used in conjunction with insulation, as well as insulation of pipe fittings for cold service systems need not be non-combustible, but they shall be kept to the minimum quantity practicable, and their exposed surfaces shall be of the low flame spread type.

9.12.3 The following surfaces shall be of the low flame spread type:

.1 Exposed surfaces in corridors, stairway enclosures and bulkheads including wall and ceiling linings in all service spaces and control stations;

.2 Concealed or inaccessible spaces in accommodation, service spaces and control stations; and

.3 Exposed surfaces of bulkheads, wall and ceiling linings in accommodation spaces not protected by a sprinkler system.

9.12.4 The total volume of combustible facings, mouldings, decorations and veneers in any accommodation and service space not protected by a sprinkler system, shall not exceed a volume equivalent to 2.5mm veneer on the combined area of the walls and ceilings.

9.12.5 Veneers used on surfaces and linings shall have a calorific value not exceeding 45MJ/m^2 of the area for the thickness used.

9.12.6 Furniture in the corridors and escape routes shall be of a type and quantity not likely to obstruct access.

9.12.7 Primary deck coverings, if applied within accommodation and service spaces and control rooms, shall be of material which will not readily ignite.

9.12.8 Upholstery composites (fabric in association with any backing or padding material) used throughout the vessel shall be of an approved standard to ensure ignition resistance.

.1 Organic foams used in upholstered furniture and mattresses shall be of the combustion modified type; and

.2 Suspended textile materials such as curtains and drapes shall be of a fire retardant type or be treated to become fire retardant.

9.13 Construction details

9.13.1 In accommodation and service spaces, control stations, corridors and stairways:

.1 Air spaces enclosed behind ceilings, panelling or linings shall be suitably divided by close-fitting draught stops spaced at not more than 7m apart; and

.2 In the vertical direction, enclosed air spaces, including those behind linings of stairways, trunks, etc, shall be closed at each deck.

9.13.2 Without impairing the efficiency of the fire protection, the construction of ceilings and bulkheads, shall allow a fire patrol to detect any smoke originating in concealed and inaccessible places (except in spaces where there is no risk of fire originating in such places).

9.14 Fire Detection, Fire Alarm and Sprinkler Systems

9.14.1 Each separate zone in the accommodation and service spaces (except those spaces which afford no substantial fire risk such as void spaces and sanitary spaces) shall be provided throughout with either:

.1 A type approved addressable fixed fire detection and fire alarm system, complying with the requirements of SOLAS regulation II-2/7.5.3.1; or

.2 A type approved automatic sprinkler, fire detection and fire alarm system complying with the requirements of SOLAS regulation II-2/7.5.3.2.
In addition, a type approved fixed fire detection and fire alarm system complying with the requirements of SOLAS regulation II-2/7.5.3 shall be installed and arranged to provide smoke detection in corridors, stairways and escape routes within the accommodation spaces; or

.3 A type approved addressable fixed fire detection and alarm system complying with the requirements of SOLAS regulation II-2/7.5 in combination with a type approved manual dry pipe sprinkler system, either complying with the requirements of IMO Resolution MSC.44(65) or complying to an equivalent standard accepted by the attending Appointed Surveyor or Recognised Organisation.

9.14.2 Manually operated call points complying with the requirements of SOLAS regulation II-2/7.7 shall be installed.

9.15 Fire Fighting Appliances

9.15.1 All vessels shall be provided with efficient and approved fire fighting equipment. All equipment shall be kept in good working order at all times and shall be serviced regularly by qualified and certified shore-based servicing stations in accordance to manufacturer's instructions, international regulations and Administration requirements, namely MSD Technical Notices SLS.6 – 'Fire Protection systems, appliances and compressed gas cylinders periodic maintenance, inspection and testing. The use of disposable aerosol-generator type fire extinguishers or similar shall not be allowed onboard'.

9.15.2 Open vessels & Inflatable Boats

9.15.2.1 An open vessel or an inflatable boat with no cooking appliances, shall be fitted with a minimum of two portable fire extinguishers. One of the portable fire extinguishers shall be suitably sized and capable of discharging into the engine space.

9.15.2.2 No fire extinguisher is required for non-decked (or partially decked) sailing vessels with no engines and no cooking appliances.

9.15.3 Minimum Fire Appliances Requirements onboard Vessels < 50m in length & < 500 GT

9.15.3.1 The provision of fire fighting appliances onboard vessels < 50m in length and < 500 GT shall be in accordance with Table 3 and to the detailed specific requirements herebelow.

Table 3 – Fire Appliances Requirement – Vessels < 50m in length & < 500 GT

Fire Appliances Required	Minimum Number
Water jet sufficient to reach any part of a vessel < 150GT *	**1**
Water jets sufficient to reach any part of a vessel ≥ 150GT*	**2**
Main Fire Pump*	**1**
Emergency fire pump* *For vessels < 150 GT fitted with an approved fixed fire-extinguishing system in the engine room, the emergency fire pump may be omitted*	**1**
Fire Main with Isolation Valve*	**1**
Hydrants complete with valves and fire hose couplings*	**2**
Hoses with jet/spray nozzles*	**3**
Portable Fire Extinguishers for use in the bridge	**1 CO_2 & 1 powder**
Portable Fire Extinguishers for use in accommodation and service spaces	**3**
Fixed Fire Extinguishing System in Category A Machinery Spaces* *Not applicable for Existing vessels < 150GT*	**1**
A portable fire extinguisher shall be available for every 375 kW of internal combustion engine power (at least 2 portable extinguishers adequate for oil fires shall be available). In addition 1 foam extinguisher of 45lt capacity OR a 1 CO_2 extinguisher of 16kg capacity shall also be provided.	**2 + 1**
Emergency Escape Breathing Device (EEBD)	**4**
Fireman's Outfit (in compliance with the IMO FSS Code) including one breathing apparatus - required onboard vessels ≥ 150 GT	**1**
Galley Fire Blanket	**1**
Fire buckets with lanyards	**2**

Note (*****) – Refer to Specific Requirements herebelow

9.15.3.2 All fire-fighting appliances onboard shall be MED Certified or Type Approved and all equipment is to be clearly marked.

9.15.4 (*) Specific Fire Appliances Requirements for Vessels < 50m in length & < 500 GT

9.15.4.1 *Provisions for water jets*

9.15.4.1.1 At least two fire hydrants shall be installed, provided all spaces are easily reachable as mentioned in the sub-paragraph dedicated to '*Fire Mains and Hydrants*' below.

9.15.4.2 *Fire Pumps*

9.15.4.2.1 The main fire pump shall be engine driven or independently powered and capable of delivering a jet of water to any part of the vessel. The power driven fire pump shall have a capacity of:

9.15.4.2.2 $2.6 \times \{1+ 0.066 \times (L[B+D])^{0.5}\}^2$ m^3/ hour

where: L is the length
B is the greatest moulded breadth
D is the moulded depth measured to the bulkhead deck at amidships.

9.15.4.2.3 When discharging at full capacity through two adjacent fire hydrants, the pump shall be capable of maintaining a water pressure of $0.2N/mm^2$ at each hydrant, provided the fire hose can be effectively controlled at this pressure.

9.15.4.2.4 Sanitary, ballast, bilge or general service pumps may be accepted as fire pumps, provided that they are not normally used for pumping oil.

9.15.4.2.5 Relief valves shall be provided in conjunction with any fire pump if the pump is capable of developing a pressure exceeding the design pressure of the water service pipes, hydrants and hoses. These valves shall be so placed and adjusted as to prevent excessive pressure in any part of the fire main system.

9.15.4.2.6 Where a centrifugal pump is fitted, a non-return valve shall be fitted.

9.15.4.2.7 In vessels designed for navigation in ice, the fire pump sea inlet valves shall be provided with ice clearing arrangements.

9.15.4.2.8 An emergency, self-priming, manual or power driven fire pump shall be available onboard all vessels. For vessels < 150 GT fitted with an approved fixed fire-extinguishing system in the engine room, the emergency fire pump may be omitted.
The emergency fire pump shall comply with the herebelow requirements, as applicable, depending on the type of pump and prime mover installed:

.1 produce a jet of water with enough range so as to reach and be directed to any part of the vessel from the installed hydrants. In any case the capacity of a power driven emergency fire pump shall not be less than 80% of the main fire pump;
.2 take suction from a location outside the machinery spaces;
.3 The pump, its source of power and sea connection shall be located in accessible positions, outside the compartment housing the main fire pump;
.4 have a separate source of power (unless it is manual pump);
.5 be self-priming;
.6 except for electric and manual pumps, the pump set shall have its own fuel tank of sufficient capacity to operate the pump for three hours. Electric pumps' batteries shall have sufficient capacity for three hours.

.7 except for electric and manual pumps, details of the fuel type and storage location shall be carefully considered. If the fuel type has a flashpoint below 60°C, further consideration to the fire safety aspects shall be given.

.8 a portable emergency fire pump set shall be stored in a secure, safe and enclosed space, accessible from open deck and clear of the Category 'A' machinery space.

.9 a portable emergency fire pump set shall be easily moved and operated by two persons and be readily available for immediate use.

.10 arrangements shall be provided to secure any portable emergency fire pump at its anticipated operating position(s).

.11 the overboard suction hose of a portable emergency fire pump shall be non-collapsible and of sufficient length, to ensure suction under all operating conditions. A suitable strainer shall be fitted at the inlet end of the hose.

.12 any diesel-driven power source for the pump shall be capable of being readily started in its cold condition by hand (manual) cranking. If this is impracticable, consideration shall be given to the provision and maintenance of heating arrangements, so that immediate starting is ensured.

.13 the sea valve shall be capable of being operated from a position near the pump.

.14 the room where the emergency fire pump prime mover is located shall be illuminated from the emergency source of electrical power and be well ventilated.

.15 if the emergency fire pump is required to supply water for a fixed fire-extinguishing system in the space where the main fire pump is situated, it shall be capable of simultaneously supplying water to this system and the fire main at the required rates.

9.15.4.2.9 *Note: The emergency fire pump may act also as an emergency bilge pump, when fitted with a suitable change over arrangement which is readily accessible.*

9.15.4.3 *Fire Mains and Hydrants*

9.15.4.3.1 An appropriate fire main fitted with fire hydrants shall be fitted onboard.

9.15.4.3.2 The fire main and its connections to the hydrants shall be sized for the maximum discharge rate of the fire pump(s).

9.15.4.3.3 The fire main and fire hydrants shall be:

.1 dedicated solely for the intended purpose; not be rendered ineffective by heat;

.2 metallic (or an equivalent material in accordance with the FTP Code) and protected against corrosion;

.3 protected against freezing.

9.15.4.3.4 Both the main and emergency fire pumps shall be connected to the same fire main.

9.15.4.3.5 An isolation valve shall be installed in the fire main, in an easily accessible position and shall be operable from outside of the engine room.

9.15.4.3.6 A portable dedicated emergency fire-pump shall be provided with the appropriate hydrant coupling so that it may be connected to the fire line.

9.15.4.3.7 The fire main shall have no other connections other than those necessary for fire-fighting or washing down.

9.15.4.3.8 Materials readily rendered ineffective by heat shall not be used for fire mains. Where steel pipes are used, they shall be galvanized internally and externally. Cast iron pipes are not acceptable. The pipes and hydrants shall be placed so that the fire-hoses may be easily coupled/connected to them. The arrangement of pipes and hydrants shall be such as to avoid the possibility of freezing. In vessels where cargo may be carried on deck, the positions of the hydrants shall always be readily accessible. The pipes shall be arranged, as far as practicable, to avoid risk of damage by such cargo. All hose couplings and nozzles shall be interchangeable.

9.15.4.3.9 Fire hydrants shall be located for easy attachment of fire hoses, protected from damage and distributed in such a way, that the fire hoses can reach any part of the vessel.

9.15.4.3.10 Fire hydrants shall be fitted with valves and couplings to quickly attach fire hoses whilst the fire pump is operational and whilst the fire main is under pressure.

9.15.4.3.11 For vessels < 150 GT the number and position of the hydrants shall be such that at least one jet of water reaches any part of the vessel normally accessible by the crew during navigation including any empty cargo spaces. Furthermore, such hydrants shall be positioned near the accesses to the protected spaces. (At least one hydrant shall be provided in each Category 'A' machinery space).

9.15.4.3.12 For vessels ≥ 150 GT the number and position of hydrants shall be such that at least two jets of water not emanating from the same hydrant, one of which shall be from a single length of hose, may reach any part of the vessel normally accessible by the crew during navigation including any empty cargo spaces. Furthermore, such hydrants shall be positioned near the accesses to the protected spaces.

9.15.4.4 *Fire Hoses*

9.15.4.4.1 Fire-hoses shall be type approved and/or MED certified and be made of non-perishable material. The hoses shall be sufficient in length to project a jet of water to any space in which they are required to be used. Their length, in general, shall not exceed 18 m and generally, the diameter of a lined hose for use with a powered pump shall not be less than 45mm. Each hose shall be provided with a spray/jet nozzle and the necessary couplings.

9.15.4.4.2 Fire hoses and associated tools and fittings shall be kept in well marked, readily accessible and known locations close to the hydrants or connections on which they will be used.

Hoses supplied from a powered pump shall have dual purpose type jet/spray nozzles incorporating a shut-off facility of diameter 19mm, 16mm or 12mm depending on fire fighting purposes. (For accommodation and service spaces, the diameter of nozzles need not exceed 12mm). The size of nozzles used in conjunction with a portable fire pump need not exceed 12 mm.

9.15.4.4.3 For vessels < 150 GT, one hose shall be provided for each hydrant. In addition one spare hose shall be provided onboard.

9.15.4.4.4 For vessels ≥ 150 GT the number of fire hoses provided shall be a hose for each 30 m length of the ship and one spare, but in no case less than three in all. At least one hose and dual type nozzle shall be provided for each hydrant on the ship and the hoses and nozzles shall be completely interchangeable.

9.15.4.4.5 Hydrants or connections in interior locations on the vessel shall have hoses connected at all times.

9.15.4.5 *Portable Fire Extinguishers for use in Accommodation and Service Spaces*

9.15.4.5.1 The number, location, fire extinguishing medium type and capacity shall be selected according to the perceived fire risk but at least 3 portable fire extinguishers shall be provided. As far as practical, the fire extinguishers provided shall have a uniform method of operation.

9.15.4.5.2 Extinguishers shall be stowed in readily accessible and marked locations and be located adjacent to the entrance of the space being served.

9.15.4.5.3 Portable fire extinguishers' spare charges shall be provided on board for at least 50% of each type and capacity of portable fire extinguishers. When an extinguisher is not of a type which is rechargeable whilst the vessel is at sea, an additional portable fire extinguisher of the same type (or its equivalent) shall be kept onboard.

9.15.4.6 *Fire Extinguishing in Machinery Spaces*

9.15.4.6.1 In Category A machinery spaces containing internal combustion engines the minimum fire extinguishing appliances shall be in accordance with requirements mentioned of Table 3- Fire Appliances.

9.15.4.6.2 In Category A machinery spaces onboard <u>new</u> vessels < 150GT, a manual or automatic fixed fire extinguishing shall be system installed. The system may consist of a portable fire extinguisher(s) suitably secured, rigged and arranged to discharge into the engine spaces. A manual discharge system shall be capable of being activated remotely.

9.15.4.6.3 In Category A machinery spaces onboard vessels ≥ 150 GT a type approved fixed fire extinguishing system in compliance with SOLAS and the International Code for Fire Safety Systems (FSS) requirements shall be installed.

9.15.4.7 *Emergency Escape Breathing Devices (EEBDs)*

9.15.4.7.1 At least four EEBDs shall be carried onboard. Two EEBDs should be installed in the accommodation spaces and another two in the engine room spaces.

9.15.4.7.2 In all passenger ships, at least two EEBDs shall be carried in each MVZ.

9.15.4.7.3 The EEBDs installed in the accommodation and machinery spaces shall be located in positions which can be easily reached at all times in the event of fire. The number and location of the EEBDs shall take into account the layout of the accommodation and machinery spaces and the number of persons normally using these spaces.

9.15.5 Fire Protection Requirements onboard All vessels ≥ 50m in length; and vessels which are ≥ 500 GT and are engaged in domestic navigation including those operating exclusively within Maltese Waters

9.15.5.1 New and existing vessels ≥ 50m in length; and vessels which are ≥ 500 GT and are engaged in domestic navigation including those operating exclusively within Maltese Waters shall have their Fire Detection and Extinction equipment fitted onboard in compliance with SOLAS Regulations II-2.

In no case shall the standards applied be less than those applied to a vessel < 50m in length.

9.15.6 Additional Fire Protection Requirements for Tankers and Bunker Barges and for vessels carrying Dangerous Goods and Hazardous Substances

9.15.6.1 Additional Fire Protection Requirements as detailed in Section 28 for Tankers and Bunker Barges and in Section 29 for vessels carrying Dangerous Goods and Hazardous Substances shall be provided/installed onboard.

SECTION 10
LIFE-SAVING APPLIANCES

10 LIFE-SAVING APPLIANCES

10.1 General requirements

10.1.1 Life saving equipment shall be provided onboard in accordance to Table 1. All equipment shall be MED certified and in conformance with the LSA Code. On vessels < 24m in length Type Approved or CE Certified equipment may also be considered acceptable.

10.1.2 When personal safety equipment is provided for use in water sports activities, its stowage arrangements shall ensure that they are not mistaken for life-saving equipment in an emergency situation.

10.1.3 All life-saving equipment carried onboard shall be fitted with retro-reflective tape or material taking note of IMO Resolution A.658(16) on the use and fitting of retro-reflective materials on life saving appliances.

10.1.4 In the case of vessels engaged on voyages of such a nature and duration that, in the opinion of the Administration, the application of the requirements of parts of this Section is unreasonable or impractical, the Administration, on a case by case basis and at its own discretion, may approve alternative/equivalent standards.

10.2 Servicing of inflatable liferafts, inflatable lifejackets and inflatable rescue boats

10.2.1 Every inflatable liferaft and inflatable lifejacket shall be serviced:

.1 at intervals not exceeding twelve months (for ISO liferafts on vessels < 24m in length servicing shall be carried out at periods not exceeding 24 months but in any case not exceeding the manufacturer's servicing recommendations), except those which are approved by the Administration allowing for Extended Servicing Intervals;

.2 at a service station approved by the manufacturer or by the Administration or by a Recognised Organisation;

.3 maintenance of equipment shall be carried out in accordance with the manufacturer's recommendations and the instructions for on board maintenance.

10.2.2 All repairs and maintenance of inflatable rescue boats shall be carried out in accordance with the manufacturer's instructions. Emergency repairs may be carried out on board the vessel, however, permanent repairs shall be effected at an approved service station.

10.2.3 The stowage and installation of all life-saving appliances shall be in accordance to the manufacturer's recommendations, the LSA Code and to the satisfaction of the attending

Appointed Surveyor or Recognised Organisation.

10.2.4 All lifejackets carried onboard shall be certified and be in accordance with SOLAS/MED requirements and be fitted with light and whistle and marked with the vessel's name and Port of Registry. In case the adult lifejackets provided onboard are not designed to fit persons weighing up to 140kg and with a chest girth of up to 1,750mm, a sufficient number of appropriate lifejackets shall be provided.

10.2.5 All life-saving appliances shall be in good state of maintenance, fully functional and ready for immediate use at all times.

10.2.6 Vessels equipped with stabiliser fins or having other projections in the sides of the hull shall follow special procedures in order to avoid any possible interference during the evacuation of the vessel in an emergency.

10.2.7 Means shall be provided to prevent overboard discharge of water into survival craft.

Table 1 - Life Saving Appliances, Systems and Equipment

Vessel's length	Vessels < 24m	Vessels < 24m	Vessels ≥ 24m
GT	**< 500 GT**	**< 500 GT**	**< 500 GT**
Area of Operation	**Domestic including within Maltese Waters**	**Outside Maltese Waters**	**Within and Outside Maltese Waters**
Equipment	**Requirements**		
Lifeboats*	-- (refer to specific requirements for Oil Tankers, Chemical Tankers and Gas Carriers)	-- (refer to specific requirements for Oil Tankers, Chemical Tankers and Gas Carriers)	*Only on vessels ≥ 85m* 100% Capacity on each side. (refer to specific requirements for Oil Tankers, Chemical Tankers and Gas Carriers)
Liferafts*	100 % Capacity on each side (excluding open boats/vessels carrying less than 6 persons)	100 % Capacity on each side	100 % Capacity on each side
Rigid Buoyant Apparatus in lieu of liferafts (Accepted by the Administration, on a case by case basis, only onboard existing vessels operating in Maltese Waters). *Refer to Phase-Out Notification herebelow*.	150 % aggregate capacity *Refer to Phase-Out Notification herebelow*	--	*Only on vessels < 85m* 150 % aggregate capacity *Refer to Phase-Out Notification herebelow*
Total number of Lifebuoys	2	3 if < 15 Persons & 5 if ≥ 15 Persons	6 if < 60m 10 if ≥ 60m 14 if ≥ 120m
.1) Lifebuoys with Light and Smoke	--	1	2
.2) Lifebuoys with Light	1	1 if < 15 Persons & 2 if ≥ 15 Persons	2 if < 60m 4 if ≥ 60m 7 if ≥ 120m
.3) Lifebuoys with Buoyant Line	1	1 if < 15 Persons & 3 if ≥ 15 Persons	2 if < 60m 4 if ≥ 60m 5 if ≥ 120m
Lifejackets* with light and whistle	120% of total persons onboard	120% of total persons onboard	120% of total persons onboard
Children Lifejackets (when applicable)	100% of the no. of children onboard	100% of the no. of children onboard	100% of the no. of children onboard
Line Throwing Appliance	--	1	1
Parachute Flares	4	12	12
Red Hand Held Flares	6 (2 for vessels operating within 1 mile from shore)	6	6
Smoke Signals	2	2	2

Vessel's length	Vessels < 24m	Vessels < 24m	Vessels ≥ 24m
GT	**< 500 GT**	**< 500 GT**	**< 500 GT**
Area of Operation	**Domestic including within Maltese Waters**	**Outside Maltese Waters**	**Within and Outside Maltese Waters**
Equipment	**Requirements**		
EPIRB	1 (for vessels operating > 3miles from a safe haven)	1	1
SART	1 (for vessels operating > 3miles from a safe haven)	1	1
Portable and Fixed VHF with DSC units	Requirements as in Section 12 of the Code	Requirements as in Section 12 of the Code	Requirements as in Section 12 of the Code
Radar Reflector (vessels < 150GT)	1	1	1
Means of Recovering Persons from the Water	1	1	1
General Alarm	--	Yes	Yes
Emergency Lighting	Yes	Yes	Yes
General Positioning Satellite (GPS)	1	1	2
SOLAS life Saving Signals and Rescue Poster	Yes	Yes	Yes
Training Manual	Yes	Yes	Yes
Instructions for Onboard Maintenance	Yes	Yes	Yes
Emergency Instructions and Muster Lists	Yes	Yes	Yes
Thermal Protective Aids*	--	LSA compliment as per SOLAS	LSA compliment as per SOLAS
Immersion or Anti Exposure Suits*	--	100% of persons onboard	100% of persons onboard
Rescue Boat & Rigid/Inflatable Boat Requirements Vessel's length/GT →	Vessels < 24m operating on Domestic Navigation including within Maltese Waters	Vessels < 20m operating Outside Maltese Waters	Vessels ≥ 20m operating outside Maltese Waters AND Vessels ≥ 24m & < 500GT operating on Domestic Navigation including within Maltese Waters
Rescue Boat* (SOLAS/MED)	--	--	Yes
Rigid/Inflatable Boat*	Yes (excluding vessels operating within 1 mile from shore)	Yes	--

(*) – Check the specific & dedicated requirements in the herebelow sections/paragraphs

10.3 EQUIPMENT

10.3.1 Lifeboats

10.3.1.1 Lifeboats shall be carried on all vessels ≥ 85m in length and be fitted with type approved launching appliances complying with the requirements of the Life Saving Appliances (LSA) Code. The contents of the lifeboat shall be as per SOLAS requirements.

10.3.1.2 The number/size of lifeboats carried onboard shall, at least, cater for 100% of the number persons (for which the vessel is certified to carry) on each side. (i.e. 200% in total).

10.3.1.3 Where it is impractical to carry lifeboats, the Administration may consider, alternative and/or equivalent arrangements. Alternative arrangements to the carriage of lifeboats may be considered in the following instances:

a) Installation of a Type Approved MES System; or
b) Substitution of lifeboats by liferafts where the vessel complies with a SOLAS two compartment subdivision standard; or
c) Substitution of lifeboats by a sufficient number of davit launched liferafts such that in the event of any one liferaft being lost or rendered unserviceable, sufficient aggregate capacity remains on either side for all persons onboard. Additionally, one approved rescue boat shall be provided on each side of the vessel.

10.3.1.4 All lifeboats and their launching appliances shall be Type Approved and MED Certified, shall comply with the LSA Code, and shall be serviced annually by the manufacturer or by an approved servicing company authorised by the manufacturer.
Lifeboats and their launching appliances shall be subjected to quinquennial 110% dynamic overload test and this test shall be witnessed by the attending Appointed Surveyor or Recognised Organisation.
Lifeboats galvanised steel falls shall be renewed at intervals not exceeding five years. The new galvanised wire rope shall be of the same (or higher) strength as the existing wire rope and shall be certified by a Recognised Organisation.

10.3.1.5 Oil tankers, chemical tankers and gas carriers carrying cargoes having a flashpoint not exceeding 60°C (closed-cup test), irrespective of size, not engaged on International voyages, shall be provided with totally enclosed fire protected lifeboats capable of accommodating the total number of persons on board on each side of the vessel or a single free-fall lifeboat.

10.3.1.6 Chemical tankers and gas carriers, irrespective of size, not engaged on International voyages, carrying cargoes emitting toxic vapours or gases shall carry lifeboats as above with the addition of a self-contained air support system.

10.3.1.7 Oil tankers, chemical tankers and gas carriers, carrying cargoes having a flashpoint not exceeding 60°C (closed-cup test), irrespective of size, engaged on International voyages, shall comply with the requirements of SOLAS, IBC and IGS Codes, as applicable.

10.3.1.8 Lifeboat launching appliances shall be so arranged that the lifeboat with its full compliment is safely launched against the worst unfavourable conditions of trim and list.

10.3.1.9 Besides any ancillary electric or hydraulic powered systems, in case of power failure, the

lifeboat launching appliances shall not depend on any means other than gravity or stored mechanical power (which is independent of the ship's power supplies) to launch the lifeboat it serves in the fully loaded and equipped condition and also in the light condition.

10.3.2 Liferafts

10.3.2.1 All liferafts carried onboard shall be Type Approved or MED Certified and they shall be stowed in GRP containers. The liferafts shall be of the SOLAS A Pack Type. ISO liferafts and SOLAS B Pack liferafts may only be fitted onboard vessels < 24m in length engaged on Domestic Navigation including those navigating exclusively within Maltese Waters.

10.3.2.2 All liferafts onboard shall be float free and each be fitted with a hydrostatic release unit (including weak link).

10.3.2.3 The number/size of liferafts carried onboard shall, at least cater for 100% of the number persons (for which the vessel is certified to carry) on each side.

On vessels < 85m in length, if the liferafts are easily transferable from side to side, then, a 100% aggregate capacity plus an additional liferaft may be considered sufficient i.e. in the event of any one liferaft being lost or rendered unserviceable, 100% aggregate capacity of liferafts still remains.

10.3.2.4 Liferaft embarkation arrangements shall comply with the following:

a) 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, an embarkation ladder is to be provided.
b) 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, at least one launching appliance for launching a davit-launched liferaft is to be provided on each side of the vessel.

10.3.2.5 When lifeboats are fitted onboard, sufficient liferafts are to be fitted on each side of the vessel capable of accommodating 100% of the total number of persons on board. If the liferafts are readily transferable for launching on either side of the vessel than a 50% capacity may be accepted.

10.3.2.6 All liferafts and their launching appliances (where fitted) shall be Type Approved or MED Certified and shall comply with the LSA Code.

10.3.2.7 Liferafts launching appliances (where fitted) shall be subjected to annual inspections and to quinquennial 110% dynamic overload test and this test shall be witnessed by the attending Appointed Surveyor or Recognised Organisation.

10.3.2.8 Liferafts launching appliances galvanised steel wire rope shall be renewed at intervals not exceeding five years. The new galvanised wire rope shall be of the same (or higher) strength as the existing wire rope and shall be certified by a Recognised Organisation.

10.3.2.9 Liferafts launching appliances which are used also as cranes shall comply with the requirements of the LSA Code.

10.3.2.10 Oil tankers, chemical tankers and gas carriers, not engaged on International voyages, fitted with free-fall lifeboats shall be provided with liferafts for 200% of the persons onboard.

10.3.3 Rigid buoyant apparatus (only on existing vessels and subject to Phase-Out)

10.3.3.1 Within 12 months from the entry into force of this Code, all rigid buoyant apparatus, fitted onboard existing vessels, shall be replaced with liferafts in accordance to the requirements of Table 1 of the Code.

10.3.3.2 Existing vessels < 85m in length operating exclusively in the Maltese Waters may carry rigid buoyant apparatus instead of liferafts, until the phase-out date mentioned above. The rigid buoyant apparatus must cater for at least 150% of the vessel's total compliment. The rigid buoyant apparatus must be stowed on open decks in spaces where it can float free. If the buoyant apparatus is tied down than HRUs must be fitted.

10.3.3.3 New vessels shall not be permitted to carry any rigid buoyant apparatus.

10.3.4 Rescue boats and rigid/inflatable boats

10.3.4.1 Vessels < 20m in length operating outside Maltese waters and vessels < 24m in length operating on domestic navigation including those operating exclusively within Maltese waters shall carry a rigid/inflatable boat which is at least a CE Certified Design Category C boat.

10.3.4.2 A rescue boat shall be carried on all vessels ≥ 20m in length operating outside Maltese waters and vessels ≥ 24m in length operating on domestic navigation including those operating exclusively within Maltese waters. The rescue boat, its launching appliances and its equipment shall comply with the SOLAS and LSA Code requirements and be MED type approved.

10.3.4.3 On vessels equipped with a rescue boat (which is not one of the vessel's survival craft) weighing < 5,500 N in the fully equipped condition with the engine, but without the crew, the launching appliance of the crane does not need to be fitted with stored mechanical power. Slewing of the launching appliance shall be possible by one person against the adverse list of 20 degrees and trim of 10 degrees.

10.3.4.4 The rescue boat and its launching appliances shall be serviced and tested in accordance with SOLAS requirements.

10.3.4.5 Vessels engaged exclusively in tuna pen towage, operating outside Maltese Waters, during the tuna season, may be exempted from carrying a rescue boat provided that:

- acceptable alternative arrangements are provided onboard;
- the area of operation is restricted to Maltese Waters and Mediterranean Sea's International Waters*;
- the period of operation is during the tuna season which usually runs between the months of May and September (the tuna season starts and ends subject to change on an annual basis), and a
- Authorisation is issued by the Fisheries Department.

(*) - Operations will be limited to Radio Sea Area A1 or A1+A2 or A1+A2+A3 depending on the radio equipment fitted onboard and depending on the crews' qualifications.

Carriage of a rescue boat shall be required if a vessel engaged exclusively in tuna pen towage travels to other countries or to ports located outside Maltese Waters and/or operates out of the tuna season and/or carries out commercial operations other than the towing of tuna pens.

10.3.5 Lifejackets

10.3.5.1 A vessel shall carry one adult lifejacket for each person onboard plus spare adult lifejackets sufficient for at least 20% of the total number of persons onboard (120% in total).

10.3.5.2 Two of the lifejackets carried onboard shall be shall be allocated for persons on watch.

10.3.5.3 Each lifejacket shall be fitted with a light and whistle. The name of the vessel and port of registry shall be clearly marked on all lifejackets.

10.3.5.4 Children's Lifejackets

In addition to the adult lifejackets, a sufficient number of children's lifejackets shall be provided for children onboard the vessel.

On passenger vessels, the number of approved children's lifejackets on board shall not be less than 15% of the total number of persons for which the vessel is certified to carry

10.3.6 Lifebuoys

10.3.6.1 Lifebuoys fitted on port and starboard and provided with combined light and smoke signals shall be capable of quick release from the navigation bridge. When this is impractical, they may be stowed at the side of the vessel and provided with conventional fast release arrangements.

10.3.6.2 On vessels < 24m in length the lifebuoy buoyant line shall not be less than 18m in length whilst on vessels ≥ of 24m in length the lifebuoy buoyant line shall not be less than 30m in length.

10.3.6.3 All lifebuoys shall be marked with the vessel's name and port of registry and be fitted with retro-reflective material.

10.3.7 Means to recover a person from the water

10.3.7.1 The man overboard retrieval system shall be of an approved type and effective for the type and design of the vessel on which it is installed. The system shall be simple to operate in all weather conditions and capable of easy rescue of a weak or unconscious person.

10.3.8 Portable VHF

If a fixed VHF is fitted on vessels operating solely in sheltered waters a portable VHF is not required.

Portable (hand-held) VHF sets are to be waterproof resistant and MED type approved.

Spare batteries for portable VHFs shall be carried onboard.

Brief and clear operating instructions shall be provided for the portable VHFs.

10.3.9 406MHz EPIRB

The EPIRB shall be installed in an easily accessible float free position ready to be automatically or manually released.

10.3.10 SART (Radar Transponder)

The SART is to be stowed in an easily accessible position so that it can be rapidly placed on any survival craft.

10.3.11 General Alarm

10.3.11.1 Every vessel shall be provided with a general emergency alarm system capable of sounding the general alarm signal normally consisting of seven or more short blasts followed by one long blast on the ship's whistle or siren. The system shall be capable of operating from the navigation bridge or control position as appropriate and shall be audible throughout all accommodation and normal working spaces and open decks.

10.3.11.2 For vessels < 50m in length the general alarm may consist of the ship's whistle or siren.

10.3.11.3 For vessels ≥ 50m in length the general alarm shall be an electrically operated bell or Klaxon system, which is to be powered from both the vessel's main supply and also the emergency source of power.

10.3.11.4 For all passenger vessels and all other vessels ≥ 24m in length, in addition to the requirements of 10.3.11.3 a public address system or other suitable means of communication shall be provided.

10.3.12 Lighting

10.3.12.1 Alleyways, internal and external stairways and exits giving access to and including the muster and embarkation stations shall be adequately lit. Onboard vessels ≥ 50m in length the lighting system shall also be supplied from the emergency source of power.

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

10.3.13 Training Manual

10.3.13.1 A training and instruction manual shall contain instructions and information on the life-saving appliances provided onboard the vessel and also contain information on the best methods of survival.

10.3.13.2 The training manual may take the form of instructions from the manufacturers of the life-saving

equipment provided with the following explained in detail:

.1 donning of lifejackets;
.2 boarding, launching and clearing the survival craft from the vessel;
.3 illumination in launching areas;
.4 use of all survival equipment;
.5 use of all detection equipment;
.6 with the assistance of illustrations, the use of radio life-saving appliances;
.7 use of sea anchors;
.8 recovery of persons from the water;
.9 hazards of exposure and the need for warm clothing;
.10 best use of the survival craft facilities;
.11 methods of retrieval, including the use of helicopter rescue gear (slings, baskets, stretchers) breeches-buoy and shore life-saving apparatus;
.12 instructions for emergency repair of the life-saving appliances;
.13 personal survival at sea.

10.3.14 Instructions for onboard maintenance

10.3.14.1 These shall contain instructions for onboard maintenance of the life-saving appliances and shall include the following where applicable:

.1 a check list for use when carrying out the required inspections;
.2 maintenance and repair instructions;
.3 schedule of periodic maintenance;
.4 list of replaceable parts;
.5 list of sources for spare parts;
.6 log of records of inspection and maintenance.

10.3.15 Emergency Instructions and Muster Lists

10.3.15.1 Clear Emergency Instructions and Muster Lists, in compliance with SOLAS requirements, to be followed in the event of an emergency shall be provided and exhibited in conspicuous places throughout the vessel including the navigation bridge, machinery spaces, accommodation spaces, mess rooms, passenger cabins and open decks.

10.3.15.2 The emergency instructions and Muster Lists shall specify details of the general emergency alarm prescribed in 10.3.11 and action to be taken by crew, passengers or other persons on board when the alarm is sounded. Instructions on the signal for fire onboard and the order to abandon ship shall be specified.

10.3.15.3 Muster Lists and Emergency Instructions shall include illustrations and instructions and shall be conspicuously displayed to inform all onboard of:

- Their muster station
- The essential actions they should take in an emergency; and
- The method of donning lifejackets.

The attention of the crew/passengers shall be drawn to the vessel's Emergency Instructions and Muster Lists.

10.3.16 Emergency Training and Drills

10.3.16.1 In all vessels training in the procedures specified in accordance with 10.3.15.1 shall be carried out at least once a month. The Administration may accept other equivalent procedures or training arrangements for specific vessels.

10.3.16.2 Training drills shall as far as practicable be conducted as if these were an actual emergency and all drills shall be recorded in the vessel's logbook.

10.3.16.3 Where lifeboats are fitted each lifeboat shall be launched and manoeuvred in the water at least once every three months during an abandon ship drill.

10.3.16.4 Rescue boat and lifeboat drill shall be carried out, at least, every month. At least once in every three months the drill shall consist of the rescue boat or lifeboat being launched in water and manoeuvred. Freefall lifeboats shall be launched in water at least, once in every six months.

10.3.16.5 Onboard familiarisation training in the use of the vessel's lifesaving appliances, including survival craft equipment, shall be given as soon as possible but not later than two weeks after a crew member or person joins the vessel.

10.3.16.6 The dates when training in the procedures specified in 10.3.16 are held shall be recorded in the vessel's logbook.

10.3.17 Thermal Protective Aids

10.3.17.1 MED approved Thermal Protective Aids are required when forming part of the lifesaving appliances' equipment compliment, in accordance with SOLAS.

10.3.18 Immersion Suits or Anti Exposure Suits

10.3.18.1 All vessels, excluding vessels operating exclusively within 30Nm from Malta, shall carry immersion suits or anti exposure suits (which may include those provided for the rescue boat crew) for all persons onboard as required by SOLAS. Vessels may be exempted from this requirement in line with the MSD Technical Notice SLS.8, as amended.
Where totally enclosed lifeboats and/or davit launched liferafts are provided a minimum of 3 immersion suits shall be provided.

SECTION 11
NAVIGATION AIDS AND EQUIPMENT

11 NAVIGATION AIDS & EQUIPMENT

11.1 All vessels shall comply with the requirements of SOLAS Ch.V, and with the requirements set out in this section. All vessels shall be equipped with adequate navigational aids, equipment and navigational and hydrographic charts/data to ensure safe operation and safe navigation. All equipment listed within this section is to be certified in accordance with the Marine Equipment Directive (MED), as amended.

11.2 Nautical Charts

11.2.1 All vessels shall carry on board adequate and updated Nautical Charts for the intended voyages. Vessels fitted with an approved Electronic Chart Display and Information System (ECDIS), are accepted as meeting the chart carriage requirements when navigating within waters covered by electronic chart officially issued and/or approved by an authorised Hydrographic Office subject to suitable duplicate/back-up arrangements being provided.

11.2.2 The following arrangements are accepted as fulfilling the duplicate/back-up requirements:

1. an appropriate folio of up-to-date paper nautical charts; or
2. a second type approved ECDIS; or
3. a Type Approved or Certified electronic back-up arrangement for ECDIS mode of operation (using electronic chart).

Both the primary and secondary (alternative (2)) electronic charts shall be fully independent and both supplied from the vessel's main and emergency source of power. In addition, a reserve power source (UPS mode) with a capacity of at least 30 minutes is to be provided if change-over of the source of power entails restarting of ECDIS.

For alternatives 2 and 3 above, an appropriate folio of up-to-date paper charts is to be available to enable the vessel to safely reach a port within or adjacent to its trading areas when coverage by electronic charts is not available.

When paper nautical charts serve as the only back-up arrangement (alternative 1), the charts shall be up to-date and include the planned route and, when navigating within restricted waters, the vessel's position is to be regularly updated to ensure a safe take-over of ECDIS functions shall the need arise.

11.3 Magnetic Compass

11.3.1 All vessels shall be fitted with a properly calibrated magnetic compass, independent of any power supply, that may determine the ship's heading and that displays the heading at the main steering position. A valid deviation card shall also be available onboard and shall be renewed, at least, every three years. Vessels ≥ 150 GT shall have a spare magnetic compass interchangeable with the main magnetic compass.

11.3.2 In a steel vessel, it shall be possible to correct the compass for coefficients B, C and D and heeling error.

11.3.3 The magnetic compass or a repeater shall be fitted with an electric light and so positioned as to be clearly readable by the helmsman at the main steering position.

11.3.4 Means shall be provided for taking bearings as nearly as practicable over an arc of the horizon of 360°. This requirement may be met by the fitting of a Pelorus or, in a vessel other than a steel vessel, a hand bearing compass.

11.4 Echo Sounder

11.4.1 Passenger vessels and vessels ≥ 300 GT shall be fitted with an echo sounder or other means, to measure the available depth of water.

11.5 Additional Equipment

11.5.1 Vessels shall be provided with the following additional equipment, as applicable:

.1 All vessels shall be fitted with a receiver for a global navigation satellite system (GPS) or other means, suitable for use at all times throughout the intended voyage, in order to be able to establish and automatically update the vessel's position;

.2 Passenger Vessels and Vessels ≥ 300 GT shall be fitted with a speed and distance measuring device;

.3 Vessels ≥ 150 GT shall be fitted with a spare magnetic compass;

.4 Vessels ≥ 300 GT shall be fitted with a rudder angle indicator;

.5 Vessels ≥ 300 GT and all passenger vessels (irrespective of size) shall be fitted with a properly adjusted transmitting heading device, or other means, to transmit heading information to the equipment referred to in SOLAS Ch.V.

.6 All vessels, excluding vessels operating exclusively within ports and internal waters, shall be equipped with a 9 GHz X-Band radar capable of triggering SARTs and beacons;

.7 Binoculars;

.8 Engine(s) revolution, propeller/pitch counter/indicator (except for outboard engines);

.9 Vessels ≥ 300 GT and all passenger vessels shall be fitted with an Electronic Plotting Aid, or other means, to plot electronically the range and bearing of targets to determine collision risk;

.10 Telephone, or other means, to communicate heading information to the emergency steering position;

.11 A sound reception system or similar means, if and as necessary.

11.6 Bridge Navigational Watch Alarm System

11.6.1 Passenger vessels and vessels ≥ 150 GT shall be fitted with a Bridge Navigational Watch Alarm System (BNWAS) in accordance with SOLAS Chapter V. The BNWAS system shall be certified in compliance with the performance standards laid down in IMO's Performance standards for a Bridge Navigational Watch Alarm System (BNWAS) adopted by Resolution MSC.128(75), as amended.

11.6.2 Vessels required to be fitted with BNWAS which do not have the system yet installed, shall carry out the installation by the next periodical survey.

On a case by case basis and at the discretion of the Administration a bridge navigational watch alarm system (BNWAS) installed prior to 1st July 2011 may be exempted from full compliance with the standards mentioned above.

11.7 AIS, VDR and LRIT

11.7.1 All vessels, excluding open boats, shall be fitted with an Automatic Identification System (AIS).

11.7.2 All Cargo ships ≥ 3,000 GT shall be fitted with a Simplified Voyage Data Recorder (S-VDR). Passenger ships navigating with an "Unrestricted" Navigation Notation and Passenger ships ≥ 500 GT navigating with a "Restricted" Navigation Notation shall be fitted with a Voyage Data Recorder (VDR).

11.7.3 All vessels ≥ 300 GT shall be fitted with a Long-Range Identification and Tracking (LRIT) system. Vessels certified to operate exclusively within Sea Area A1, which are fitted with an AIS, and which are under continuous AIS coverage shall not be required to install an LRIT system. Reference is also to be made to the Malta Merchant Shipping Notices No.77 and No.78.

11.8 Alternative Arrangements

11.8.1 Where it is considered unreasonable and/or impracticable to have onboard the equipment prescribed in this Section, alternative equivalent arrangements shall be proposed for approval to the Administration. The Administration may consider the application of restrictions to the service area of the vessel.

11.9 Nautical Publications

.1 Every vessel shall have the necessary publications appropriate to the type of the vessel and its intended area of operation including a copy of the International Code of Signals and the IAMSAR Manual Vol.III. Other publications which may be required onboard subject to the area of operation are:

- Sailing Directions
- List of Lights
- Notices to Mariners
- Pilot Books
- Tide Tables
- Radio Aids to Navigation
- Port Information Guide

.2 Charts and publications shall be kept up to date. Back-up systems for any electronic nautical publications shall be available.

.3 The owner is to ensure that updated copies of Notices to Mariners, Port Notices and Navigational Warnings are forwarded to the vessel.

11.10 Daylight Signalling Lamp

11.10.1 Every vessel shall carry an approved daylight signalling lamp. On vessels < 150 GT the signalling lamp may consist of an efficient waterproof electric torch suitable for Morse signalling.

11.11 Measuring Instruments

11.11.1
- Every vessel shall carry a barometer.
- Every sailing vessel, excluding open boats, shall carry an anemometer and an inclinometer.

11.12 Searchlight

11.12.1 Every vessel shall carry an efficient fixed or portable searchlight suitable for manoeuvre search and rescue operations. This may be the approved signalling lamp prescribed above.

11.13 Radar Reflector

11.13.1 All vessels < 150 GT shall be equipped with an efficient radar reflector.

11.14 VESSELS' PLANS, SIGNS, INSTRUCTION MANUALS, NAME PLATES, WORKING LANGUAGE AND RECORD KEEPING

11.14.1 All vessels shall have their name plates, signs, notices, plans, manuals and documents relating to the safety and operation of the vessel drawn up both in the vessel's working language and in english (if the working language onboard is different than english).

11.14.2 Self-propelled vessels shall carry adequate information including drawings, plans and instruction manuals necessary for their safe operation and safety of the vessel and of life at sea.

11.14.3 The Master of the vessel shall be responsible for ensuring that records are maintained onboard in accordance to the requirements of this Code and to the satisfaction of the Administration.

SECTION 12
RADIO COMMUNICATION EQUIPMENT

12 RADIO EQUIPMENT

12.1 General requirements

12.1.1 All vessels ≥ 300 GT shall comply with SOLAS Ch.IV whilst vessels < 300 GT shall comply with the requirements set out herebelow.

12.1.2 Vessels ≥ 300 GT shall be issued and carry a Radio Station Licence whilst those vessels < 300 GT which are fitted with an MF/HF system shall also carry a Radio Station Licence.

12.1.3 All vessels shall carry radio transmitting and receiving equipment for the area and range of operation. No provision in this Code shall prevent the use by a vessel or survival craft in distress of any means at its disposal to attract attention to make known its position and to obtain help.

12.1.4 Radio equipment carried by a vessel shall be capable of fulfilling the following functional requirements with respect to distress and safety communications when the vessel is in port and at sea:

.1 Provide for the safety of the vessel by:
- Transmitting ship-to-shore distress alerting;
- Transmitting ship-to-ship distress alerting;
- Transmitting and receiving on-scene communications, including appropriate search and rescue co-ordinating communications;
- Transmitting locating signals.

.2 Assist other vessels in distress by:
- Receiving shore-to-ship distress alerting;
- Receiving ship-to-ship distress alerting.

.3 Receive navigational and meteorological warnings and urgent safety information.

12.2 Radio Installations

12.2.1 Open boats/vessels and vessels operating in Maltese waters within 3 miles from shore are required to carry 2 portable VHF units.

12.2.2 **Vessels < 300 GT operating exclusively within Maltese Waters (excluding open boats operating and vessels operating less than 3 miles from the Maltese shore)**

All vessels < 300 GT operating exclusively within Maltese Waters (excluding open boats operating in ports and those vessels operating less than 3 miles from shore) shall be fitted with:

a) a fixed VHF Radiotelephone with Digital Selective Calling;
b) a SART;
c) an EPIRB;
d) 2 portable GMDSS VHF units.

Where it is unreasonable or impracticable to do so, the Administration, may consider alternative arrangements.

12.2.3 **Vessels < 300GT operating within Sea Area A 1 (excluding vessels falling under Section 12.2.1)**

All vessels navigating in Sea Area A 1 shall be fitted with:

.1 A VHF/RT radio installation capable of transmitting Digital Selective Calling (DSC) on Channel 70. It shall also be possible to initiate transmission of distress alerts on Channel 70.

.2 In addition to point (1) above, a VHF DSC watch receiver has to be fitted. This unit may be combined with the unit specified in point (1) above.

.3 A NAVTEX receiver. Additional means of receiving MSI transmissions (such as INMARSAT EGC System) must be installed should the vessel be operating in areas where NAVTEX coverage is not available.

.4 A Search and Rescue Transponder (SART).

.5 A COSPAS-SARSAT 406 MHz satellite Emergency Position-Indicating Radio Beacon (satellite EPIRB), programmed with the vessel's MMSI number.

.6 Two portable VHF (GMDSS) units.

12.2.4 **Vessels < 300GT operating within Sea Area A1 + A 2**

In addition to the equipment prescribed above for **Sea Area A1**, vessels navigating in Sea Area A 2 shall be fitted with:

.1 An MF DSC/RT installation also having DSC Watch keeping capability on frequency 2187.5Khz

.2 Alternatively to point (1) above, an INMARSAT-C unit complete with EGC receiver.

.3 A valid Shore based maintenance agreement.

12.2.5 **Vessels < 300GT operating within Sea Area A1 + A2 + A 3**

In addition to the equipment prescribed above for vessels navigating in Sea Area A 1, vessels navigating in Sea Area A 3 shall also have:

.1 An additional VHF DSC/RT unit.

.2 An INMARSAT-C unit with Enhanced Group Call (EGC) receiver capability.

.3 An MF/HF DSC/RT installation also having DSC watch keeping capability on 2187.5KHz, 8414.5KHz and at least one other DSC distress & safety frequencies within the HF marine band.

.4 Alternatively to point (3) above, an additional INMARSAT-C unit complete with EGC receiver may be installed.

.5 A valid Shore based maintenance agreement.

12.2.6 **Vessels < 300GT operating within Sea Area A1 + A2 + A3 + A4**

In addition to the equipment and requirements specified for vessels operating in Sea Area A3 an additional COSPAS-SARSAT satellite EPIRB is to be provided.

Note: The option provided at 12.2.4.4 is not applicable for a Sea Area A 4 installation.

12.3 Operational performance

12.3.1 All radio communications equipment shall be SOLAS approved and/or certified in accordance to the Marine Equipment Directive (MED), or to equivalent standards, accepted by the Administration.

12.4 Installation

12.4.1 The radio installation shall:

.1 Be so located to ensure the greatest possible degree of safety and operational availability;

.2 Be protected against harmful effect of water, extremes of temperature and other adverse environmental conditions;

.3 be clearly marked with the Call Sign, the MMSI No., IMO No. (if applicable) and any other codes as applicable to the use of the radio installation.

12.4.2 Aerials shall be mounted as high as is practicable to maximise performance. Onboard sailing vessels, if the radio antenna is fitted on the mast, then an emergency antenna is to be provided onboard.

12.4.3 A safety card giving a clear summary of the radio-telephone distress, urgency and safety procedures shall be displayed in full view of the radio-telephone operating position.

12.5 Sources of energy

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

12.5.2 A dedicated reserve source of energy, independent of the propelling power of the vessel and its electrical system, shall be provided for the purpose of conducting distress and safety radio communications in the event of failure of the main and emergency source of electrical power. This shall have a minimum capacity for operating the radio equipment for a period of at least :

.1 1 hour on vessels provided with an emergency source of electrical power, and;

.2 1 hour on vessels operating on Domestic Navigation including those operating exclusively within Maltese Waters, and;

.3 6 hours on vessels, operating outside Maltese Waters, not provided with an emergency source of electrical power.

Vessels < 24m in length operating with a Restricted Navigation Notation within 3 miles from shore may be exempted from this requirement.

12.5.3 If an uninterrupted input of information from the vessel's navigational or other equipment to a radio installation as required by this section, including the navigational receiver, is needed to ensure its proper performance; means shall be provided to ensure the continuous supply of such information in the event of failure of the ship's main and/or emergency source of electrical power.

12.5.4 When the dedicated reserve source of energy consists of a rechargeable accumulator battery, an independent means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 hours.

12.5.5 All accumulator batteries for the radio installation shall be installed as high as possible in the vessel so that any form of flooding will not affect the efficiency of the batteries.

12.6 Watches

12.6.1 A vessel while at sea, shall as far as practicable maintain a continuous listening watch on:

.1 VHF Channel 16;

.2 VHF Channel 13;

.3 VHF (DSC), Channel 70;

.4 MF (when fitted) on the on the distress and safety DSC frequency 2187.5KHz

.5 HF (when fitted) on the distress and safety distress frequencies 8414.5KHz and at least on one other DSC distress & safety frequency within the HF marine band.

.6 Satellite shore to ship distress alerts if fitted with a radio facility for reception of maritime safety information by INMARSAT enhanced group calling systems.

SECTION 13
NAVIGATION LIGHTS, SHAPES AND SOUND SIGNALS

13 NAVIGATIONAL LIGHTS, SHAPES AND SOUND SIGNALS

13.1 All vessels shall comply with the requirements of the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs), as amended.

13.2 Type Approved and/or MED Certified Navigation Lights shall be provided with main and emergency power supply. If navigation lights are not fitted with duplicate bulbs, spare bulbs shall be carried onboard and, in case of bulb failure, it shall be easily replaced in a short period of time.

13.3 Onboard vessels ≥ 50m in length a Navigation Lights Controller (NLC) shall be installed, in accordance to IMO Res.MSC.253(83), as amended. The NLC shall provide switching 'on/off' functions, visual 'on/off' status indication, power supply failure alarm and lamp failure alarm.

13.4 Sound signalling equipment shall be installed onboard and shall comply with the prescribed regulations.

SECTION 14
ANCHORS, CABLES AND LIFTS

14 ANCHORS, CABLES, LIFTS and LIFTING EQUIPMENT

14.1 General

14.1.1 Every vessel shall be provided with at least two anchors of sufficient weight and cables of adequate strength, length and size. On vessels < 24m in length, at least one anchor shall be rigged and ready for use at all times. On vessels ≥ 24m in length both anchors shall be rigged and ready for use at all times.

14.1.2 Windlass, capstan, winches, fairleads, bollards, mooring bits and other anchoring, mooring, towing and hauling equipment shall be:

.1 properly designed to meet all foreseeable operational loads and conditions;

.2 correctly seated;

.3 effectively secured to a part of the vessel's structure which is suitably strengthened.

14.1.3 Electrically operated anchor windlasses shall be supplied by an emergency source of power or be able to be manually operated.

14.2 Cables

14.2.1 The length of an anchor cable attached to an anchor shall be appropriate to the area of operation but generally shall be not less than 4 x (four times) the vessel's overall length or 30m, whichever is the longer.

14.2.2 The cable of main anchors and for kedge anchors shall be chain.

14.2.3 The strength, form and material of the anchor cable and its attachments to the anchor and the vessel shall be in accordance with a Recognised Organisation's Rules.

14.2.4 Anchoring systems incorporating a windlass shall have the bitter end of the chain secured to the vessel's structure and capable of being released in an emergency.

14.3 Equipment

14.3.1 All vessels shall have the herebelow mentioned equipment, as applicable, fitted in accordance with a Recognised Organisation's Rules.

14.4 Sailing Vessels

14.4.1 The size of anchors and cables for sailing vessels shall take into account the vessel's size, additional windage effect of the masts and the rigging.

14.4.2 Sailing vessels shall carry efficient storm sails. These shall be proven capable to take the vessel to windward in cases of heavy weather. In case of sails that can be furled, additional storm sails may not be carried.

14.4.3 All sailing vessels shall carry adequately sized wire cutters suitable for the largest size of rigging wire used on board. In case of solid rod rigging, adequate rod cutting equipment must be placed onboard for emergency use.

14.5 Towline and Towing Arrangements

14.5.1 Vessels shall be provided with a towline having a length and diameter adequate for the size of the vessel. The anchor cable may be used as the towline.

14.5.2 Accessible efficient strong securing points shall be provided for the attachment of towlines for the vessel to tow and be towed.

14.6 Lifts

14.6.1 Lifts including dumbwaiters shall be inspected annually by the manufacturer or by an approved service provider. A suitable means of escape from the lift capsule and the lift shaft shall be provided together with an internal lift alarm and lift telephone system. A notice stating that the lift is not to be used in case of fire or in case of abandon ship is to be posted.

SECTION 15
MERCHANT SHIPPING (MARITIME LABOUR CONVENTION) RULES 2013

15 Merchant Shipping (Maritime Labour Convention) Rules 2013 – (Transposition of MLC 2006 into Maltese Law)

15.1 Requirements for all vessels

15.1.1 All vessels shall comply with the Merchant Shipping (Maritime Labour Convention) Rules 2013, as amended, except for the vessels as detailed in Section 15.1.2.

15.1.2 In accordance with MS Notice 105, the herebelow listed vessels are not required to comply with the requirements Merchant Shipping (Maritime Labour Convention) Rules 2013, as amended:

1) Vessels which are trading and/or operating exclusively between ports and facilities within Malta;
2) Offshore units whose primary service is drilling operations for the exploration, exploitation or production of resources beneath the sea bed and are not ordinarily engaged in navigation or international voyages;
3) Fishing Vessels;
4) Yachts in commercial use of any size.

15.1.2.1 Vessels which are trading and/or operating exclusively between ports and facilities within Malta shall comply with the requirements of Section 15.2 of the Code.

15.1.3 The Registrar-General may, after consultation with the shipowners' and the *bona fide* seafarers' organisations concerned, exempt ships < 200GT, where it is reasonable to do so, taking account of the size of the ship and the number of persons on board in relation to the requirements of the herebelow provisions contained in the Fourth Schedule of the Merchant Shipping (Maritime Labour Convention) Rules 2013:

(a) paragraphs 2.2, 6.4 and 8.1; and
(*b*) paragraphs 4.6 and 4.8 to 4.12 inclusive, with respect to floor area only

15.1.4 Requirements for vessels operating within 30 nautical miles from the coast of Malta

15.1.4.1 Vessels operating within 30 nautical miles from the coast of Malta are not required to comply with Merchant Shipping (Maritime Labour Convention) Rules 2013 concerning the Accommodation and instead shall comply with Section 15.2 of the Code.

15.1.5 Requirements for vessels engaged exclusively in tuna pen towage, outside Maltese Waters, during the tuna season

15.1.5.1 Vessels engaged exclusively in tuna pen towage, operating outside Maltese Waters, during the tuna season, are not required to comply with the Merchant Shipping (Maritime Labour Convention) Rules 2013 concerning the Accommodation and instead shall comply with Section 15.2 of the Code.

Navigation for these type of vessels/operations is restricted to Sea Areas A1+A2+A3 located within Maltese waters and the Mediterranean Sea's international waters only.
The tuna season changes on an annual basis and normally runs between May to September (subject to confirmation by the Fisheries Department).

15.1.5.2 Full compliance with the Accommodation section of the Merchant Shipping (Maritime Labour Convention) Rules 2013 shall be required if a vessel engaged exclusively in tuna pen towage travels to other countries or to ports located outside Maltese Waters and/or operates out of the tuna season and/or carries out commercial operations other than the towing of tuna pens.

15.2 Accommodation Requirements for:

a) vessels trading and/or operating exclusively between ports and facilities within Malta (in accordance to MS Notice 105);

b) vessels operating within 30 nautical miles from the coast of Malta;

c) vessels engaged exclusively in tuna pen towing operations during the tuna season.

15.2.1 Accommodation

15.2.2.1 An adequate standard of accommodation shall be provided to ensure the comfort, recreation and health & safety of all persons on board in all weather conditions.

15.2.3 Hand holds and grab-rails

15.2.3.1 There shall be sufficient handholds and grab-rails within the accommodation to allow safe movement onboard.

15.2.4 Securing of heavy equipment

15.2.4.1 Heavy items of equipment such as furniture, batteries, cooking appliances etc., shall be securely fastened in place to prevent movement due to severe motions of the vessel. Special precautions shall be taken onboard sailing vessels as the severe motions could also include motions leading to inversion.

15.2.4.2 Stowage lockers containing heavy items shall have lids or doors with secure fastening.

15.2.5 Access/escape arrangements

15.2.5.1 Manned enclosed compartments/spaces and accommodation spaces shall have at least two means of escape.

15.2.6 Vessels at sea for more than 24 hours

15.2.6.1 When a vessel is intended to be at sea for more than 24 hours an adequate standard of accommodation for all persons onboard shall be provided with the primary concerns being directed towards ensuring the health and safety aspects of persons such as, but not limited to, the ventilation, lighting, water services, galley services, rest places and the access/escape arrangements.

15.2.7 Ventilation

15.2.7.1 Adequate ventilation shall be provided in all accommodation spaces and in other spaces which are normally entered by persons on board.

15.2.7.2 Where air conditioning systems are not fitted, mechanical ventilation shall be provided to accommodation spaces which are situated completely below the weather deck. Mechanical ventilation shall be capable of providing 6 air changes per hour when the access openings to the spaces are closed.

15.2.7.3 Enclosed galleys, where air conditioning systems are not fitted, shall be provided with mechanical ventilation with a capacity of 20 air changes per hour and a mechanical exhaust capable of 30 air changes per hour.

15.2.8 Lighting

15.2.8.1 An electric lighting system shall be installed which is capable of supplying adequate light to all enclosed accommodation and working spaces.

15.2.9 Water Services

15.2.9.1 An adequate supply of free fresh drinking water shall be provided and piped to convenient positions throughout the accommodation spaces. The fresh water system shall be maintained in a clean condition to protect against the contamination of the water.

15.2.9.2 In addition, an emergency supply of drinking water shall be carried at the rate of 2 litres per person on board.

15.2.10 Sleeping Accommodation

15.2.10.1 A bunk shall be provided for each person on board.

15.2.11 Galley

15.2.11.1 A galley, suitable for shipboard use, shall be fitted with means for cooking and with a washing basin and have adequate clean working surfaces for the preparation of food. The floor of the galley shall be of the non-skid type. All furniture and fittings in the galley shall be made of materials which are impervious to dirt and moisture. Only non-rusting metals shall be used in the galley.

15.2.11.2 When gimballed cooking appliances are provided, these shall be provided with a crash bar or by other means to retain the cooking equipment lying on top of the appliances in order to avoid personal injury. Means shall be provided to lock the gimballed mechanism.

15.2.11.3 There shall be secure hygienic storage for food in the vicinity of the galley. Means shall be provided for the storage of garbage which will not in any way contaminate the storage of food.

15.2.12 Messing Facilities

15.2.12.1 Adequate messing facilities shall be provided. Each messing area shall be large enough to accommodate the greatest number of persons likely to make use of it at any time.

15.2.13 Toilet Facilities

15.2.13.1 Adequate toilet facilities shall be provided on board.

15.2.13.2 Onboard all vessels a minimum of one toilet, one wash basin and one tub and/or shower shall be provided at a convenient location(s) for every 6 (six) persons or less who do not have their own onboard personal facilities.

15.2.13.3 In case when the sanitary system includes a holding tank, care shall be taken to ensure that no toxic or foul fumes or odours would leak from any part of the system to the toilet and into the accommodation spaces.

15.2.14 Stowage of Personal Effects

15.2.14.1 Adequate stowage facilities for clothing and personal effects shall be provided for each person on board.

15.2.15 **Requirements for Conveyance Vessels**

15.2.15.1 Conveyance vessels shall be equipped with the necessary facilities in order to safely cater for the accommodation needs of all the persons being transported or accommodated onboard.

SECTION 16
PROTECTION OF PERSONNEL

16 PROTECTION OF PERSONNEL

Note: These requirements are in addition to those required by the Merchant Shipping (Maritime Labour Convention) Rules 2013 and the MLC 2006. Should there be any conflict between requirements, the most demanding requirements shall prevail.

16.1 Deckhouses and Superstructures

16.1.1 A deckhouse used for accommodation of persons shall be of efficient construction and appropriate to the vessel and its area of operation and shall be of adequate strength to withstand the sea and weather forces which the vessel may encounter.

16.1.2 In vessels ≥ 24m in length the structural strength of any deckhouse or superstructure shall comply with the requirements of a Recognised Organisations' Rules.

16.2 Bulwarks, Guard Rails and Hand Rails

16.2.1 The perimeter of an exposed deck shall be fitted with bulwarks, guard rails or guard wires of sufficient strength and height for the safety of persons on deck. Bulwarks, guardrails and guard wires shall be supported efficiently by stays or stanchions. When application of such measures would impede the proper working of the vessel, alternative safety measures shall be considered.

16.2.2 To protect persons from falling overboard, and when the proper working of the vessel is not impeded and there are persons frequently on deck, bulwarks or three courses of rails or taut wires shall be provided and the bulwark top or top course shall be not less than 1000mm above the deck (in accordance with Load Line rules). The distance between the lowest course and the deck shall not exceed 230mm and the distance between other courses shall not exceed 380mm.

In vessels fitted with a cockpit which opens aft to the sea, additional guardrails, shall be fitted so that there is no unprotected vertical opening greater than 500mm in width.

16.2.3 Access stairways, ladder ways, passageways and decks without bulwarks or guardrails shall be provided with handrails. This provision shall not be used in lieu of guardrails and bulwarks where required by the Code.

16.2.4 In an inflatable boat or a semi-rigid inflatable boat, handgrips, toeholds and handrails shall be provided as necessary to ensure safety of all persons on board during transit and the worst weather conditions likely to be encountered in the intended area of operation.

16.2.5 Where the function of the vessel would be impeded by the provision of bulwarks and/or guardrails, alternative proposals providing an equivalent safety for persons onboard, shall be

submitted to the Administration for approval.

16.3 Gangways, Passarelles, Accommodation Ladders etc.

16.3.1 A safe means of access is to be provided whilst the vessel is moored in port.

16.3.2 Any gangways, passarelles and accommodation ladders shall be manufactured to adequate and recognised standards/rules. They shall be clearly marked with the number of persons and the total weight that can be safely carried.

In case such equipment has no details about Safe Working Load, then a load test shall be carried out and witnessed by an Appointed Surveyor or Recognised Organisation.

The test shall:-

a) be carried out to 120% of the rated load at mid span (75kg per person is to be assumed);

b) during which deflections shall be measured; and

c) confirmation that no permanent deformations are present after the test

A test certificate shall be issued and retained on board.

16.4 Pilot Vessels and Conveyance Vessels

16.4.1 Safe boarding arrangements for pilots shall be provided.

Due consideration shall be given to any Port State Requirements in the vessel's trading area.

16.4.2 The requirements of **IMO MSC-MEPC.7/Circ.10 – "Guidance on Safety When Transferring Persons at Sea"** shall be applicable to all conveyance vessels.

16.4.3 The vessel shall be equipped with the necessary facilities in order to safely cater for the needs of all the persons being transported or accommodated onboard.

16.5 Safe Work Aloft and Overside

16.5.1 When access to the rig is an operational necessity, provision shall be made to enable people to work safely aloft and out on the bowsprit.

16.5.2 The arrangements provided shall be based on established safe working practices for the type of vessel. The arrangements may include but not be limited to:

.1 Safety nets below the bowsprit;

.2 Safety grab-rails in wood (or jackstays in metal) fixed along the bowsprit to act as handholds and safety points for safety harnesses;

.3 Mandatory use of safety harnesses aloft and for work on the bowsprit;

.4 Sufficient footropes and horses in wire (or rope) permanently rigged to enable seamen to stand on them whilst working out on the yards or on the bowsprit;

.5 Safety jackstays (in metal) fixed along the top of the yards, to provide handholds and act as strong points for safety harnesses;

.6 Means of safely climbing aloft, such as:

(i) fixed metal steps or ladders attached to the mast; or

(ii) traditional ratlines (rope) or, rattling bars (wood/steel), fixed across the shrouds to form a permanent ladder.

16.5.3 Any newly installed rail and trolley systems used for working over the side shall be tested, certified and approved to a recognised EU standard for fall protection equipment (EN795; 1996; Class D) and shall display the MED or CE mark.

Existing rail and trolley systems shall be tested to a recognised EU standard for fall protection equipment. The test is to be witnessed by an Appointed Surveyor or Recognised Organisation and the test certificate is to be retained onboard.

16.5.4 A vessel shall be provided with a "Training Manual" which shall include details of established safe working practices specific to the vessel, guidance on training for members of the crew and personal clothing and protection from injury.

16.6 Surface of Working Decks

16.6.1 The surface of a working deck shall be non-slip.

16.6.2 Acceptable surfaces are: chequered plate; unpainted wood; a non-skid pattern moulded into fibre-reinforced plastic (FRP); non-slip deck paint; or an efficient non-slip covering.

16.6.3 Particular attention shall be paid to the surface finish of a hatch cover when it is fitted on a working deck.

16.6.4 In an inflatable boat or semi-rigid inflatable boat the upper surface of the inflated buoyancy tube shall be provided with a non-slip finish.

16.7 Toe Rails

16.7.1 When appropriate to the working of a vessel provided with a sailing rig, a toe rail of not less than 25mm in height shall be fitted around the working deck.

16.8 Recovery of Persons from the Water

16.8.1 Means shall be provided for the recovery of a person from the sea to the vessel. The means shall assume that the person is unconscious or unable to assist in the rescue.

The means of recovery shall be demonstrated to the satisfaction of the attending surveyor.

16.8.2 If an over-side boarding ladder or scrambling net is provided to assist in the recovery of an unconscious person from the water, the ladder or net shall extend from the weather deck to at least 600mm below the lowest operational waterline.

16.9 Personal Clothing

16.9.1 Each person on board shall be provided with the necessary protective clothing suitable to undertake his/her necessary duties onboard.

16.9.2 All persons on board shall be provided with suitable protective clothing and equipment appropriate also to the prevailing air and sea temperatures and weather conditions.

16.9.3 It is strongly recommended that all persons on board wear footwear provided with non-slip soles, particularly on the open deck.

16.10 Noise

16.10.1 Noise levels onboard vessels shall be kept to the lowest possible levels and shall comply with the MLC 2006 requirements and to the requirements herebelow (whichever is the more demanding).

The application of recommended noise levels is intended to protect the crew from the risk of noise-induced hearing loss.

16.10.2 In order to ensure safe navigation, it is desirable that a noise level of 65dB(A) at the navigation position is not exceeded so that sound signals and VHF communications can be heard.

16.10.3 Signs and warning notices to wear ear protectors shall be displayed at all the entrances to enclosed spaces in which noise levels exceed 85dB(A).

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

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

16.10.4 Vessels shall not produce any noises (including but not limited to loud music and machinery noises) at levels that are so loud as to cause nuisance to those persons onboard and to others in the vicinity.

16.11 Chemicals

16.11.1 Each crew member shall be given suitable protective clothing and equipment for protection against the effects of corrosive chemicals that may be used for onboard maintenance. This may include special gloves, goggles, eyewash and chemical showers, as applicable.

SECTION 17
MEDICAL STORES

17 MEDICAL STORES

17.1 General

17.1.1 All vessels shall carry adequate medical stores suitable for their area and range of operation.

17.1.2 The Master shall ensure that any necessary medical attention given on board the vessel is given either by him or under his supervision

17.1.3 The Master is also responsible for the management of the medical supplies and in ensuring that they are maintained in good condition and within their reference expiry date.

17.1.4 Every vessel shall maintain and updated Medical Stores List in which all medical stores are listed and in which any expiry dates are clearly mentioned.

17.1.5 Lifeboats, rescue boats and life rafts shall carry their own medical stores as required by international standards.

17.1.6 All packaging and relevant containers shall contain clear directions for use and clearly indicate the relevant expiry date, as applicable.

17.2 Medical Supplies' requirements for vessels ≥ 24m in length and not operating exclusively within Maltese Waters

17.2.1 Medical supplies' requirements for vessels ≥ 24m in length not operating exclusively within Maltese Waters, shall comply with the Merchant Shipping (Maritime Labour Convention) Rules, as amended. At the discretion of the Administration, special considerations may be considered for vessels operating exclusively near shore facilities and when the seafarers do not sleep onboard.

17.2.2 A valid Medical Stores Certificate including the full list of the medical stores and any relevant expiry dates shall be issued by a qualified medical doctor or pharmacist, and which shall be kept onboard. The Medical Stores Certificate shall be renewed, at least, every two years.

17.3 Medical First Aid Kit for vessels < 24m in length

17.3.1 A First Aid Kit shall be carried onboard all vessels < 24m in length. The First Aid Kit shall be kept in a damp proof strong canvas bag, satchel or a box with a carrying strap and shall, at least, contain the following items:-

Item	Quantity Required
- Triangular bandages with sides of about 90cm and a base of about 127cm	4
- Standard dressings No.8 or 13 BPC	6
- Standard dressings No.9 or 14 BPC	2
- Extra-large sterile unmedicated dressings 28cm x 17.7cm	2
- Medium size safety pins, rustless	6
- Assorted adhesive dressing strips medicated BPC	19
- Sterile pads with attachments	2
- Packages each containing 15g sterile cotton wool	2
- Pair of large disposable polythene gloves	5
- Paracetamol – 500mg tablets	50
- Seasickness Remedy tablets (Hycoscine hydrobromide 0.3mg recommended)	50
- Butterfly Closures – Adhesive skin closures approx. 5cm length sealed and sterile	19
- Forceps – Epilation with oblique ends, 12.5cm of stainless steel throughout	1
- Scissors (approved medical type) about 18cm, one blade sharp pointed and the other round ended	1
- Thermometer – Ordinary range clinical thermometer, stubby bulb pattern	1
- First Aid Manual (Published by an appropriate Body or Authority)	1

17.4 Medical Supplies' requirements for vessels ≥ 24m in length engaged in Domestic Navigation including those operating exclusively in Maltese Waters

17.4.1 Vessels shall maintain on board the medical supplies and medical equipment prescribed in Table 1 - Medical Supplies and Table 2 - Medical Equipment herebelow.

Table 1 – Medical Supplies

REF NO.	TREATMENT REQUIREMENTS	RECOMMENDED MEDICINE AND DOSAGE STRENGTH REPRESENTING BEST PRACTICE	RECOMMENDED QUANTITY FOR EVERY 10 PERSONS ONBOARD OR FOR A LIFEBOAT/ LIFERAFT
1	**Cardio vascular**		
1.1	Anti-angina preparations	Glycerol Trinitrate Spray 400 micrograms/metered 200 dose aerosol or transdermal patches 5mg x 2	1
1.2	Anti-haemorrhagics (including uterotonics if there are women with potential for child bearing working on board)	a) Phytomenadione (Vitamin K1) 0.2 ml (1 ampoule Paediatric injection) b) Ergometrine Maleate 500mg injection. c) Oxytocin 5 units in 1ml ampoule	1 1 1
2	**Gastro intestinal system**		
2.1	Anti-emetics	Hyoscine hydrobromide 0.3 mg tabs	60
2.2	Anti-diarrhoeals	Codeine Phosphate 30mg tablets	20
3	**Analgesics and Anti-spasmodics**		
3.1	Analgesics	a) Paracetamol 500mg tablets b) Codeine Phosphate (See 2.2)	50 Use 2.2
4	**Nervous system**		
4.1	Seasickness remedies	Hyoscine hydrobromide (See 2.1)	Use 2.1
5	**Medicines for External Use**		
5.1	Skin medicines		
5.1.1	Antiseptic solutions	100ml solution or pre-impregnated wipes containing 0.015% w/v chlorhexidine and 0.15% w/v Cetrimide	1 bottle or 1 pack wipes
5.1.2	Burn preparations	Cetrimide Cream 50g tube	1

Table 2 - Medical Equipment

	STATUTORY TREATMENT REQUIREMENTS	RECOMMENDED SPECIFICATION	QUANTITY
1	**Resuscitation Equipment**		
	Mask for mouth to-mouth resuscitation	Laedal Pocket Mask	1
2	**Dressing and suturing equipment**		
	Adhesive elastic bandage	Adhesive Elastic Bandage 7.5cm x 4m	1
	Disposable polyethylene gloves	Large size	5 pairs
	Adhesive dressings	Assorted sterile	20
	Sterile compression bandages and unmedicated dressings	Medium, 10 x 8 cms Large, 13 x 9 cms Extra-large, 28 x 17.5 cms	6 2 2
	Adhesive sutures or zinc oxide bandages	75mm adhesive suture strips	6
	Sterile Gauze Compresses	Packet containing 5 sterile gauze pads size 7.5cms x 7.5cms	1
		Recommended Additional Items	
		Scissors stainless steel/or sterile disposable	1 pair
		Calico triangular bandages about 90cm x 127 cm	4
		Medium safety pins, rustless	6
		Sterile paraffin gauze dressings	10
		Plastic burn bags	1

17.5 Passenger Vessels - First Aid Kits

17.5.1 Further to the Medical Stores and Medical Equipment mentioned hereabove, all passenger vessels (including HSC and Ro-Ro Passenger vessels) shall carry one first aid kit for every 100 persons for which they are licensed to carry (e.g. 250 persons require three kits).

17.5.2 The first aid kit shall, at least, contain the following items which shall be kept in a separate portable waterproof container:

Item	Quantity Required
- Triangular bandages with sides of about 90cm and a base of about 127cm	4
- Medium Sterile bandages with unmedicated dressings, 10x8cms	6
- Large sterile bandages with unmedicated dressings, 13x9 cms	2
- Extra-large unmedicated dressings, 28cmsx17.5 cms	2
- Medium size safety pins, which do not rust	6
- Assorted adhesive dressing strips medicated BPC	20
- Sterile pads with attachments	2
- Packages each containing 15g sterile cotton wool	2
- Pair of large disposable polythene gloves	5
- Butterfly Closures – Adhesive skin closures approx 5cm length sealed and sterile	19
- Forceps – Epilation with oblique ends, 12.5cm of stainless steel throughout	1
- Scissors (approved medical type) about 18cm, one blade sharp pointed and the other round ended	1
- Thermometer – Ordinary range clinical thermometer, stubby bulb pattern	1
- First Aid Manual (Published by an appropriate Body or Authority)	1

17.6 Medicines to be carried onboard vessels transporting dangerous substances

17.6.1 Vessels certified and authorised to carry dangerous substances shall retain on board the correct antidote and equipment to the substance(s) being carried. The correct antidote can be found in the IMO Medical First Aid Guide for Ships (MFAG), as amended.

17.6.2 The quantities of any medicines to be carried aboard shall be based on an estimate of risks, taking account of such factors as number of crew, passengers, length of voyage and risk of accidental exposure.

17.6.3 Where medical supplies or equipment are already included in the vessels medical store, separate stocks are not required.

SECTION 18
MARINE POLLUTION PREVENTION, AFS and BWM

18 MARINE POLLUTION PREVENTION

18.1 General

18.1.1 All vessels complying with this Code shall meet international, national, regional, local and port state requirements/legislation for the prevention of marine pollution which are applicable to the area in which the vessel is operating.

18.1.2 Oil Tankers ≥ 150 GT and all Other Vessels ≥ 400 GT shall comply with the applicable survey and certification requirements in accordance to the MARPOL Convention requirements.

18.1.3 It is the responsibility of the crew and all persons on board the vessel to comply with the applicable requirements of this section at all times.

Requirements for Preventing Pollution of the Sea

18.2. Oil Pollution Prevention – MARPOL Annex I

18.2.1 All vessels are prohibited from discharging unfiltered oily bilge water overboard as defined in MARPOL. Vessels are prohibited from discharging any effluent overboard in accordance with MARPOL. Tanks of adequate capacity shall be provided for retention of all oil residues and effluent and these tanks shall be emptied only to appropriate shore reception facilities.

18.2.2 Where a vessel is fitted with oil filtering equipment, it shall be ensured that the equipment is Type Approved or Certified and that the calibration and testing of the equipment is carried out at intervals as per the manufacturer's recommendations, but in any case at intervals not exceeding 5 years.

18.2.3 Tankers ≥ 150GT and other Vessels ≥ 400 GT shall be surveyed and certified in line with MARPOL Annex I requirements and shall carry onboard an approved SOPEP Manual. The SOPEP shall also include details about crew training. MARPOL drills are to be carried out in accordance to the drills and training requirements specified in the SOPEP manual (however not less than once every three months) to ensure the effectiveness of the Plan. Records of these drills shall be maintained in the vessel's logbook.

18.2.4 All vessels shall, prior and during cargo and bunkering operations, comply with the applicable requirements of the Dangerous Cargo Ships, Marine Terminals and Facilities and Bunkering Regulations, 1996 as amended.

18.2.5 All anti-pollution seals affixed by the Authority to overboard discharge valves (including machinery space bilges), sludge, slop or oily-water holding tank overboard valves, onboard vessels operating exclusively in Maltese Waters, shall be maintained intact and in place. If for

any reason these seals are removed or are accidentally damaged, the Master of the vessel shall immediately inform the Authority giving the reason for such an occurrence.

18.3 Prevention of Pollution by Sewage – MARPOL Annex IV

18.3.1 Vessels ≥ 400 GT and vessels certified to carry more than 15 persons are required to be surveyed and certified in line with Marpol Annex IV.

18.3.2 In areas where direct overboard discharge from a water closet is prohibited, dedicated holding tanks of sufficient capacity to store waste for discharge to shore facilities shall be available onboard.

18.3.3 Sewage holding tanks shall be constructed with a sloping bottom arranged such that the outlet is at the lowest point. Ventilation arrangements shall be routed well clear of accommodation and sleeping quarters. Outlets from ventilation shall not be near ventilation or machinery inlets and shall not pose a danger to other vessels alongside. Tanks shall be manufactured from material not susceptible to corrosion in anaerobic decomposition conditions and shall be provided with means to view and/or measure its contents.

18.4 Prevention of Pollution by Garbage – MARPOL Annex V

18.4.1 Disposal of garbage at sea is prohibited, except as otherwise stated under MARPOL Annex V.

18.4.2 All vessels are required to comply with the applicable provisions of MARPOL Annex V. Vessels ≥ 100GT carrying 15 or more persons onboard shall be provided with a Garbage Management Plan (*) and vessels ≥ 400GT carrying 15 or more persons onboard shall be provided with a Garbage Record Book (GRB) in the form specified in MARPOL Annex V.

The Administration, upon request, may waive the requirements for the GRB for vessels engaged in voyages of 1 hour or less in duration.

18.4.3 All vessels shall display Garbage Disposal placards which notify the crew and any passengers about the appropriate disposal of garbage onboard. Such placards shall be written in English and the working language of the crew.

18.4.4 The master shall maintain a record and receipts of all garbage transferred ashore. Records and receipts shall be kept onboard the vessel for at least 12 months.

(*) *Refer to guidelines for the development of garbage management plans adopted by MEPC resolution MEPC 71(88).*

18.5 Prevention of Air Pollution and Energy Efficiency – MARPOL Annex VI

18.5.1 Vessels ≥ 400 GT are required to be surveyed and certified in line with Marpol Annex VI.

18.5.2 Vessels having equipment containing Ozone Depleting Substances (ODS) shall maintain an ODS Record book (can be in electronic format) where entries and records of repairs or maintenance of such equipment, recharge and discharge of ODS can be made.

18.5.3 Storage, usage and handling of Fluorinated Greenhouse Gases (F-Gases) shall be carried out in accordance to EU Regulation 517/2014, as amended. The monitoring, recovery and recording of F-Gases is mandatory and this shall be reflected on the onboard maintenance instructions and procedures.

18.5.4 An International Energy Efficiency Certificate (IEEC) is to be issued, as applicable, in accordance to Annex VI.

18.6 Anti-Fouling Systems (AFS) Convention

18.6.1 The use of organotin compounds which act as biocides in anti-fouling systems is prohibited on all vessels. Vessels ≥ 400GT shall be issued with an AFS-Certificate and vessels < 400GT (>24m in length) shall be issued with an AFS Declaration as per Annex III of the International Antifouling System Convention.

18.7

Ballast Water Management (BWM) Convention

18.7.1

Vessels ≥ 400GT, engaged on international voyages, shall comply with the survey and certification requirements of the Ballast Water Management (BWM) Convention, as applicable, and be issued with an International Ballast Water Management Certificate. A Statement of Non-Applicability shall be issued, in case of the vessel's compliance with any one of the conditions as stipulated under Article 3.2 of the BWM Convention as follows:

(a) ships not designed or constructed to carry Ballast Water;
(b) ships of a Party which only operate in waters under the jurisdiction of that Party, unless the Party determines that the discharge of Ballast Water from such ships would impair or damage their environment, human health, property or resources, or those of adjacent or other States;
(c) ships of a Party which only operate in waters under the jurisdiction of another Party, subject to the authorization of the latter Party for such exclusion. No Party shall grant such authorization if doing so would impair or damage their environment, human health, property or resources, or those of adjacent or other States. Any Party not granting such authorization shall notify the Administration of the ship concerned that this Convention applies to such ship;
(d) ships which only operate in waters under the jurisdiction of one Party and on the high seas, except for ships not granted an authorization pursuant to sub-paragraph (c), unless such Party determines that the discharge of Ballast Water from such ships would impair or damage their environment, human health, property or resources, or those of adjacent of other States; and
(e) permanent Ballast Water in sealed tanks on ships, that is not subject to discharge.

18.8 MARPOL related manuals to be carried onboard, as applicable

18.8.1
a) SOPEP – Shipboard Oil Pollution Emergency Plan (including Drills Logbook)
b) SEEMP – Ship Energy Efficiency Plan
c) Garbage Management Plan
d) SMPEP – Shipboard Marine Pollution Emergency Plan
e) Garbage Record Book
f) ODS/F-Gases Record Book

SECTION 19
ISM CODE

19 ISM CODE

19.1 Compliance with the ISM Code shall be as prescribed in Regulation (EC) No 336/2006, as amended. This regulation shall apply to the following types of ships and to companies operating these types of ships:

.1 All Ro-Ro Passenger vessels, including those Ro-Ro Passenger vessels engaged on voyages exclusively within the Maltese Waters;

.2 Passenger vessels, Passenger Ferries and Passenger High Speed Craft (HSCs), excluding those vessels which are engaged exclusively on domestic voyages operating in sea areas of Class C and Class D Passenger Ships as defined in Directive 2009/45/EC, as amended, or as applicable by any national/port state requirements; and

.3 All vessels ≥ 500 GT, engaged on domestic navigation. For Passenger Vessels, Ro-Ro Passenger vessels and Passenger High Speed Craft refer to 19.1.1 and 19.1.2 above.

SECTION 20
ISPS CODE

20 ISPS CODE

20.1 Compliance with the ISPS Code shall be as prescribed in Regulation (EC) No 725/2004, as amended, in particular with Article 3 paragraph 2 which determines the application of the special measures to enhance maritime security of the SOLAS Convention and Part A of the ISPS Code, in accordance with the conditions and with respect to Class A passenger ships within the meaning of Article 4 of Council Directive 98/18/EC, as amended, on safety rules and standards for passenger ships operating domestic services and to their companies, as defined in regulation IX-1 of the SOLAS Convention.

20.2 Other types of vessels operating domestic services and their companies are to apply special security measures as may be determined by the respective Port State and/or Contracting Governments.

These vessels are to advise the Administration of the required compliance by providing a copy of the certificate as may be prescribed by the Port State and/or Contracting Government, or otherwise, a statement denoting that the Port State and/or Contracting Government has not determined special security measures to be applied when operating domestic services within their waters.

Vessels engaged in domestic voyages in Maltese Waters, shall comply with Port Notice 07/17, as amended and as applicable.

SECTION 21
MANNING AND SEAFARER CERTIFICATION

21 Manning and Seafarer Certification

21.1 All vessels shall carry onboard a Minimum Safe Manning Attestation issued by the Administration.

21.2 Every vessel to which this Code applies shall be sufficiently and efficiently manned.

21.3 In determining the minimum safe manning scales and requirements for a vessel, consideration will also be given to the type of vessel, the equipment available onboard, the area of operation and the workload likely to be undertaken.
During lay-up periods the number of seafarers may be reduced whilst an adequate and sufficient number of seafarers onboard, that are able to handle emergencies, are kept onboard.

21.4 Seafarer Certification onboard vessels, other than those operating in Maltese Waters, shall be in conformance to the STCW Convention, as amended. Officers' STCW Certificates shall be endorsed by the Administration. Details about recognition of non-Maltese Certificates of Competence for service on Maltese vessels may be found on the Merchant Shipping Notice No.92 (refer to the Authority's website – www.transport.gov.mt). Other equivalent marine qualifications may be accepted on a case by case basis.

Seafarer Certification onboard vessels operating exclusively in Maltese Waters shall be in conformance with the STCW Convention, as amended, OR with the requirements as set out in the Code of Practice for the Safety of Commercial Vessels (CVC), issued in terms of the Commercial Vessel Regulations.

21.5 All crew members, including cooks and stewardesses, shall hold a valid medical fitness certificate and a Basic Training Certificate in accordance with STCW Reg.VI/1 or a Certificate, recognised by the Administration, which proves basic training in:

a) Personal survival techniques,
b) Fire Prevention and Fire Fighting,
c) Elementary First Aid,
d) Personal Safety and Social Responsibility,
e) Security Awareness

21.6 Radio Personnel Qualifications

21.6.1 Vessels < 300 GT equipped and operating in Sea Area A1 require at least one operator to be in possession of a GMDSS Restricted Operator's Certificate (ROC).

21.6.2 Vessels ≥ 300 GT equipped and operating in Sea Area A1 require, at least, two operators to be in possession of a GMDSS Restricted Operator's Certificate (ROC) in accordance with STCW IV/2. The 2nd ROC holder may be dispensed with onboard vessels < 500GT operating with Restricted Navigation of up to 3 miles from coast in Sea Area A1.

21.6.3 Vessels < 300 GT equipped and operating beyond Sea Area A1, require at least one operator to be in possession of a GMDSS General Operator's Certificate (GOC) in accordance with STCW IV/12.

21.6.4 Vessels ≥ 300 GT equipped and operating beyond Sea Area A1, require at least two deck/navigation personnel to be in possession of a GMDSS General Operator's Certificate (GOC) in accordance with STCW IV/12.

21.7 Medical Fitness Certificates

21.7.1 Every person applying for employment on a non-convention vessel shall provide proof of physical and mental fitness by being in possession of a certificate from a medical doctor attesting that he has passed a medical examination covering in particular visual and auditory acuity, colour vision, mobility of the upper and lower limbs, the neuro-psychiatric state and cardiovascular condition.

21.7.2 For vessels operating exclusively within the Maltese Waters the dedicated medical report form TM/PYD/212 titled *Certificate of Medical Fitness for Persons serving on Commercial vessels operating within Ports, Internal and Territorial Waters of Malta* has to be duly filled in and signed by the examining doctor.

21.7.3 Medical certificates must be revalidated every 5 years. The medical practitioner, at his discretion, may prescribe a lesser period of validity.

21.7.4 On reaching the age of 61 years, the holder of a medical fitness certificate must, within the following three months and subsequently annually, undergo the medical examination referred to above.

21.8 Seafarer Certification onboard vessels operating in Maltese Waters

21.8.1 All seafarers employed onboard vessels operating in Maltese Waters shall hold a Certificate of Competence (CoC) or be in possession of an authorisation issued by the Ports and Yachting Directorate (PYD).

21.8.2 The PYD issues CoCs and authorisations in conformity with the requirements as set out in the Code of Practice for the Safety of Commercial Vessels, issued in terms of the Commercial Vessel Regulations OR on the basis of existing STCW Certification respectively.

21.8.3 The PYD certification and qualification system is intended to:

1. enable personnel serving on board commercial vessels to obtain a CoC or authorisation in order that they may be able to continue with their current employment;

2. provide a system of certification for new entrants wishing to serve on these vessels;

3. where the full requirements relating to a CoC or authorisation are not considered practical or relevant and in such cases these certificates shall have operational limits rather than those prescribed and shall have the word 'restricted' clearly marked on them.

21.8.4 No person shall be permitted to serve on board a commercial vessel as master or crew member unless such a person is deemed to be suitably qualified.

21.8.5 Acceptable qualifications are those issued in terms of section 21.8.1 and 21.8.2, or equivalent or higher certificates of competency and/or service issued under the Merchant Shipping (Training and Certification) Regulations or such other equivalent qualifications as may be recognised by the Administration, on a case by case basis.

21.8.6 Persons hiring or chartering vessels < 24m in length, for personal use, from a licensed operator need not be in possession of the qualifications, as outlined in the above regulation. Prior to the rental or chartering, the licensed operators shall:

1. provide to the hirer sufficient information and familiarisation about the operational characteristics of the vessel and its equipment;
2. provide information on the safety instructions in compliance with existing regulations;
3. provide information on the regulations concerning the topics of rental
4. or chartering;
5. explain the common courtesies of operating a vessel and the effect on the environment and other users; and
6. ensure that the hirer is competent to operate the vessel hired or chartered.

SECTION 22
PASSENGER VESSELS SPECIFIC REQUIREMENTS

22 **Passenger Vessels** (including Passenger High Speed Craft and Ro-Ro Passenger vessels) **– Specific Requirements**

22.1 **General**

22.1.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

22.1.2 The number of persons onboard a passenger vessel shall never exceed the number of persons (including passengers) for which the vessel is certified to carry.

22.2 **Definitions**

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

1) A person employed or engaged in any capacity onboard the vessel on the business of the vessel;
2) A person onboard the vessel either in pursuance of the obligation laid upon the master to carry shipwrecked, distressed or other persons, or by reason of any circumstances that neither the master nor the owner nor the charterer (if any) could have prevented; and,
3) A child under one year of age.

"passenger ship" means a vessel carrying more than 12 passengers

"a person employed or engaged in any capacity on board the vessel on the business of the vessel" may reasonably include:

1) Bona-fide members of the crew over the age of 16 who are properly employed on the operation of the vessel;
2) Person(s) employed onboard in connection with business interests and providing a service available to all passengers;
3) Person(s) employed onboard in relation to social activities on board and providing a service available to all passengers;
4) Person(s) employed in relation to the maintenance and upkeep of the vessel;
5) Person(s) employed onboard in relation to security services;

The above persons engaged on the business of the vessel shall be considered as crew and therefore shall be included in the crew lists.

22.3 Passenger Vessels

22.3.1 The construction of hull, main and auxiliary machinery and equipment shall be in compliance with a Recognised Organisation Rules (refer to Classification Requirements in Section 33). For vessels < 24m in length an equivalent standard may be accepted by the Administration.

22.3.2 Passenger vessels, as applicable, shall comply with the requirements of the Directive 2009/45/EC as amended, on safety rules and standards for passenger ships. Passenger vessels < 24m in length shall comply to the extent possible with the requirements of the Directive 2009/45/EC and shall also comply with the requirements for cargo vessels, as applicable, set out in the Code.

22.3.3 Passenger vessels not engaged on International Voyages and Passenger Vessels operating exclusively in the Maltese Waters, may be exempted from certain provisions required by 22.3.1 and 22.3.2 above, at the discretion of the Administration, taking into consideration various technical and operational conditions such as the size of vessels, area of operation, number of passengers, design of the vessel, period of operation, daylight or night-time navigation and trip duration.

22.3.4 Directive 2009/45/EC as amended, does not apply to:

a) Passenger Ships which are:
   i. ships of war and troopships;
   ii. ships not propelled by mechanical means;
   iii. vessels constructed from materials other than steel or equivalent and not covered by the standards concerning High Speed Craft (MSC 36(63)) or Dynamically Supported Craft (Res.A 373 (X));
   iv. wooden ships of primitive built;
   v. original, and individual replicas of, historical passenger ships designed before 1965, built predominantly with the original materials;
   vi. pleasure yachts unless they are or will be crewed and carrying more than 12 passengers for commercial purposes, or
   vii. ships exclusively engaged in port areas;
b) High Speed Passenger Craft which are:
   i. craft of war and troop craft;
   ii. pleasure craft unless they are or will be crewed and carrying more than 12 passengers for commercial purposes; or
   iii. craft exclusively engaged in port areas.

22.3.5 In any case the minimum safety standards onboard shall not be less than those prescribed in this Code.

22.4 Ro-Ro Passenger Vessels and High Speed Craft (HSC)

22.4.1 In addition to the requirements prescribed in the sub-section 22.3 above, Passenger Vessels, Ro-Ro Passenger vessels and High Speed Craft (HSC) shall also comply with the requirements of the ISM Code, as applicable.

22.5 Passenger High Speed Craft (HSC)

In addition to the applicable requirements prescribed above, a Passenger HSC shall be provided with:

.1 A valid High-Speed Craft Safety Certificate (SOLAS 1974 reg. X/3; HSC Code paragraph 1.8);

.2 A permit to operate High Speed Craft issued by the Administration;

.3 Masters and all officers onboard having an operational role onboard a Passenger HSC shall hold a valid Type Rating Certificate (TRC) as prescribed in the HSC Code paragraph 18.3.3.

22.6 Passenger List (applicable to all vessels carrying passengers including those carrying < 12 passengers)

22.6.1 Passenger vessels, Ro-Ro Passenger Ferries and Passenger HSCs operating on international voyages shall compile a detailed passenger list prior to the vessel's departure. The passenger list shall, at least, include the vessel's details, the total number of passengers, port of departure and port of arrival, passengers' names, nationality, date of birth, Identity document number and other relevant details. Preferably the IMO FAL Form 6 shall be utilised. The original passenger list shall be kept onboard whilst a copy shall be sent by electronic means to the company prior to the vessel's departure.

The requirements of SOLAS and of the EU Directive on the registration of persons sailing on board passenger ships operating to or from ports of the Member States of the Community, shall also be complied with, as applicable.

22.6.2 Passenger vessels, Ro-Ro Passenger Ferries and Passenger HSCs operating on domestic voyages including those operating exclusively in Maltese Waters shall compile a passenger record prior to the vessel's departure. The passenger record shall, at least, include the vessel's details and the total number of passengers onboard. The original passenger record shall be kept onboard whilst a copy shall be sent by electronic means to the company prior to the vessel's departure.

22.6.3 Passenger vessels, Ro-Ro Passenger Ferries and Passenger HSCs < 24m in length operating on domestic voyages including those operating exclusively in Maltese Waters, which are not fitted with equipment capable of transmitting a passenger record in electronic format, shall, at least, send the relevant information via sms ("Short Message Service" also referred to as "Text Message") to the company's DPA or other company designated person, prior to the vessel's departure.

22.6.4 Passenger vessels, Ro-Ro Passenger Ferries and Passenger HSCs operating exclusively within ports' boundaries and protected areas shall also keep a passenger record which, at least, includes the number of passengers onboard.

22.6.5 The details of every voyage/trip shall be entered in the vessel's Official Logbook and this shall at least include the number of passengers, port of departure details, destination details, time, date etc.

22.7 Safety Requirements for Persons with Reduced Mobility on Passenger Ships used for Public Transport

22.7.1 Passenger vessels and Passenger HSCs, used for public transport, the keel of which was laid or which were at a similar stage of construction on or after the 1st October 2004, shall also comply with safety requirements for persons with reduced mobility.

22.7.2 Passenger vessels and Passenger HSCs, used for public transport, the keel of which was laid before the 1st October 2004 shall comply as far as practicable and reasonable with the requirements set out in .1 above.

22.9 Safety Briefing for passenger vessels operating on domestic navigation including those operating exclusively within Maltese Waters

22.9.1 Before the commencement of any voyage the master shall ensure that all persons on board are briefed on the stowage and use of personal safety equipment such as life jackets and lifebuoys, and the procedures to be followed in cases of emergency.

Safety cards and/or audio visual aids will be considered to be an acceptable way of providing the Safety Briefing.

22.9.2 In addition to the above requirements, the master shall brief at least one other person who will be sailing on the voyage regarding the following:-

a) Location of liferafts and the method of launching;
b) Procedures for the recovery of a person from the sea;
c) Location and use of pyrotechnics;
d) Procedures and operation of radios carried on board;
e) Location of navigation and other light switches;
f) Location and use of fire-fighting equipment;
g) Method of starting, stopping and controlling the main engine;
h) Method of navigating to a suitable port of refuge; and
i) Method of initiating an emergency distress signal.

SECTION 23
CARGO VESSELS SPECIFIC REQUIREMENTS

23.1 Cargo Vessels – Specific Requirements

23.2 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

23.3 All cargo vessels shall have their cargo appropriately stowed and secured so that the safe operation of the vessel is not affected in any way.

23.4 Particular attention shall be paid to the means for securing the cargo, the strength of the relevant securing points, the free drainage of water, safe access in way of cargo area and unobstructed visibility from the wheelhouse.

23.5 Cargo hatchways leading to dry cargo holds or spaces shall be of efficient and weathertight construction.

In general, cargo hatch coamings shall be > 760mm in height. Hatch covers shall be designed to withstand (without any permanent deformation) a hydrostatic load > 1.5 tonnes/m^2 overall and associated buckling stress, and be fitted with efficient means to be closed and secured weathertight to the coaming. In any case, the coaming and hatch cover shall be sufficiently strong to withstand the hydrostatic loading and/or the loading due to cargo stowed on the hatch cover, whichever loading is limiting.

23.6 Proposals for equivalent/alternative cargo hatchways with reduced coaming heights or flat hatches shall be subject to special consideration by the Administration taking into consideration the type of cargo carried, the area of operation, the freeboard height of the vessel and the design of the vessel.

SECTION 24
INFLATABLE BOATS SPECIFIC REQUIREMENTS

24 Inflatable Boats – Specific Requirements

(This section is not applicable to inflatable boats and RIBs designated as life-saving appliances)

24.1 General

24.1.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

24.1.2 The following requirements shall apply to independent inflatable and to semi-rigid inflatable boats (RIB) which are proposed for operation under this Code and when the inflatable or semi-rigid inflatable boat (RIB) shall not be a designated life-saving appliance.

24.1.3 Generally, an inflatable boat or rigid hull inflatable boat which is to operate as an independent vessel under this Code (and is not a tender operating from a vessel) shall be of a design and construction which meets the requirements shall, at least, meet the EU Recreational Craft Directive for boats having Design Categories A or B. Design Category C may be allowed for boats operating within 3 miles from shore.

24.1.4 An inflatable boat or rigid hull inflatable boat built for commercial use to an approved international standard may also be accepted at the discretion of the Administration.

24.1.5 When production of boats is covered by a quality management system and when boats are built in batches to a standard design, prototype tests on one boat may be accepted for all boats of the same design submitted for compliance with this Code. A declaration of Conformity has to be issued by the manufacturer confirming that the boat has been built using the same design, materials, equipment, machinery and procedures as the prototype which has been tested.

24.1.6 A boat shall have sufficient strength to withstand the sea and weather conditions likely to be encountered in its area of operation.

24.1.7 An approved boat shall only be permitted to operate for the wind and wave conditions it is designed for.

24.2 Construction Materials

24.2.1 Construction materials shall be Type Approved and/or satisfy the requirements of SOLAS Chapter III, except that fire-retardant characteristics are not required for the hull material.

24.3 New Inflatable Boats (not designated as life-saving appliances)

24.3.1 A new inflatable boat or rigid hull inflatable boat shall, at least, be a Design Category A or Design Category B certified boat in accordance the EU Recreational Craft Directive. Design Category C may be allowed for boats operating within 3 miles from shore.

24.3.2 A new inflatable boat which is type approved as a rescue boat in accordance to SOLAS or which is provided with a letter of compliance for use as a fast rescue boat for offshore stand-by vessels, or any equivalent certification or compliance, shall be accepted as complying with the construction requirements of this Code.

24.3.3 A new boat which is not built in accordance with either of the above requirements may be specially considered, provided that full information (including calculations, drawings, details of materials and construction) is presented to and approved by an Appointed Surveyor or a RO and accepted by the Administration. Tests shall be conducted to verify strength of structure as per 24.3.1.

24.3.4 Any permanent shelter provided for the protection of persons onboard shall be of a construction adequate for the purpose and the area of operation.

24.4 Existing Inflatable Boats (not designated as life-saving appliances)

24.4.1 An existing inflatable boat or rigid hull inflatable boat shall be considered to be of acceptable structural strength if it is in a good state of maintenance and is :-

.1 Is certified Design Category A or Design Category B in accordance to the EU Recreational Craft Directive 2013/53/EC (Design Category C may be allowed for boats operating within 3 miles from shore); OR

.2 Is of a design with a record of at least five years history of safe operation in an area where the sea and weather conditions are no less severe than those likely to be encountered in the intended area of operation.

SECTION 25
INSURANCE REQUIREMENTS

25 Insurance Requirements

25.1 All vessels shall carry a valid dedicated certificate of insurance for third party liability in respect of:-

1) any liability which may be incurred in respect of the death or bodily injury to any person caused by or arising out of the use of the vessel (including, but not limited to: passengers, crew or any other persons engaged on the business of the vessel);
2) any liability which may be incurred in respect of loss or damage to property belonging to any third party arising out of the use of the vessel;
3) salvage and wreck removal cost;
4) pollution damage and costs of preventing or reducing damage resulting from the discharge or escape of dangerous or polluting goods.

25.2 The certificate of insurance shall contain the vessel's particulars and any limitations imposed by the insurer.

25.3 The certificate of insurance shall be valid at all times during the vessel's period of operations.

25.4 Every insurer issuing a certificate of insurance shall keep a record of the issued certificate including the herebelow particulars:-

.1 the full name and address of the person to whom the policy is issued;
.2 in the case of a policy relating to a specified vessel or to specified vessels the registration number of each vessel;
.3 the date on which the policy comes into force and the date on which it expires;
.4 the conditions subject to which the persons or classes of persons specified in the policy will be indemnified;
.5 such records shall be kept for a period of one year from the date of expiry of the policy.

25.5 Insurers shall, upon request and free of any charges, provide copies of a certificate of insurance to the Administration.

25.6 Where to the knowledge of an insurer a policy issued by him ceased to be effective without the consent of the person to whom it was issued otherwise than by effluxion of time or by reason of his death, the insurer shall forthwith notify the Administration of the date on which the policy ceased to be effective.

25.7 The minimum insurance liability limits shall be as those set by the Authority. These limits may be amended by the Authority from time to time.

SECTION 26
NON-SELF-PROPELLED VESSELS SPECIFIC REQUIREMENTS

26 Non-Self-Propelled Vessels – Specific Requirements

26.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

26.2 All Non-Convention Non-Self-Propelled vessels, floating objects of defined rigid form, a pontoon or barge or similar type of vessels fall under the requirements of this Code. These type of vessels shall be assessed for compliance with the parts of this Code which are appropriate and relevant to their design, type and commercial operation.

26.3 Non-Self–Propelled vessels shall have clearly marked draught marks at appropriate locations (both on port and stbd.).

SECTION 27
PILOT BOATS SPECIFIC REQUIREMENTS

27 Pilot Boats – Specific Requirements

27.1 General

27.1.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

27.1.2 "Pilot boat" means a vessel employed or intended to be employed in pilotage services.

27.1.3 The normal means of access from the open deck to the accommodation spaces provided for the use by pilots shall not be a forward facing door.

27.1.4 Pilot boarding activities shall be visible from the pilot boat helmsman's position. Visibility shall be adequate in both the vertical and the horizontal planes.

27.1.5 Pilot vessels shall comply with the Stability criteria prescribed in this Code.

27.1.6 A pilot boat need not be marked with a freeboard mark.

27.1.7 Rescue and Retrieval equipment shall be provided as follows:

.1 Transom steps and/or ladder or equivalent side ladder or scrambling net.

.2 At least 2 buoyant lifelines of not less than 18m in length. Each of the lifelines shall have an appropriate weight secured to one end.

.3 Means for the retrieval of any person who falls overboard and means to bring the person in the water to the retrieval point. As far as is reasonable and practicable the arrangement shall enable the person to be retrieved in the horizontal position, in order to reduce the risk of heart failure associated with hypothermia.

.4 All ladders and outside fittings such as over-side steps etc. shall be of suitable material, design and workmanship. Such equipment shall be inspected at regular intervals.

.5 Arrangements shall be provided to protect a person in the water from injury by the propeller(s). When it is impractical to fit a guard to the propeller(s), consideration shall be given to alternative measures such as the fitting of a drop down gate/ladder to screen propeller(s) or operational procedures which include the means to stop propellers immediately in case of a person overboard.

.6 Man overboard retrieval exercises shall be conducted by each pilot boat crew, at least, every 6 months.

27.1.8 A searchlight shall be provided which is permanently mounted so as to be capable of illuminating the ships side in way of the pilot ladder and the sea area around the boat.

27.1.9 For the safe access of personnel, the minimum width of the side deck inboard of the bulwark or toe-rail on new vessels shall be, at least, 400mm but regard shall be given to the height and shape of adjacent superstructure or deckhouse. Side decks shall be adequately illuminated.

27.1.10 An efficient, uninterrupted/continuous safety rail system for clip-on safety harnesses shall be provided. The system shall allow the harness traveller to move freely and without adjustment over the full length of the safety rail. The rail system, its attachment to the vessel structure and the clip-on safety harnesses shall be designed, constructed, installed, tested and maintained to in conformance to EN 795 or equivalent standard. The safety harnesses shall be Type Approved and serviced/inspected at intervals as recommended by the manufacturer. The safety rail system shall be subjected to a close-up inspection by the attending RO or Appointed Surveyor at intervals not exceeding 36 months. The safety rail close-up inspection shall also include the internal fastening points.

27.1.11 A pilot boat shall be manned by a minimum of 2 adult persons, namely a coxswain, and a deckhand who can assist the pilot when boarding or landing.

27.1.12 All pilot boat crew shall hold a valid and approved First Aid Certificate and shall have received training in emergency first aid.

SECTION 28
TANKERS AND BUNKER BARGES SPECIFIC REQUIREMENTS

28.1 General

28.1.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

28.1.2 Without prejudice to any other provisions contained in the Dangerous Cargo Ships, Marine Terminals and Facilities and Bunkering Regulations 1996 and to the general requirements of this Code, tankers and bunker barges shall comply with the following:

28.2 Oil Tankers

28.2.1 Phasing-in of double-hull or equivalent design requirements of single-hull oil tankers:

.1 Oil tankers ≥ 5,000 DWT, when carrying heavy grades of oil, shall comply with EC Regulation No 417/2002, as amended by EC Regulation No 1726/2003.

.2 No heavy grade oils shall be carried onboard single hull tankers ≥ 600 DWT.

In tankers < 5,000 DWT, wing tanks required for the protection of the cargo tanks in compliance with MARPOL Reg.21.4.2, may be used as cargo tanks for the carriage of oil other than heavy grade oils, provided the capacity of each of these cargo tanks does not exceed 700m^3.

28.3 Pump room/Pumps Compartment

28.3.1 Vessels carrying volatile dangerous liquid cargoes in bulk shall comply with the herebelow:

28.3.2 - be provided with an effective pump room constructed and outfitted to the standards required by a Recognised Organisation.

28.3.3 - tankers and bunker barges ≤ 150 DWT, whose pump room is located above main deck shall have the pump room enclosed in a steel compartment which shall be in turn fitted with a weathertight door and shall also have a ventilation system in compliance with a Recognised Organisation Rules. The pump room compartment shall have a cofferdam of at least 400mm in height located above main deck and between the main deck and the bottom of the pump room.

28.3.4 - the cargo pumps shall be located in an intrinsically safe environment and special consideration shall be given to the location of the cargo pumps prime movers so that the risk of explosion is minimised.

28.3.5 - the cargo pump room shall be fitted with a fixed fire detection and alarm system.

28.4 Cargo Lines / Piping

28.4.1 Bunker barges and tankers employed in the carriage of volatile and/or non-volatile dangerous liquid cargoes, shall have all cargo lines made of steel or other equivalent metallic material and the cargo lines shall be well supported, earthed and secured.

28.4.2 Cargo Lines shall be subject to inspection by the attending Appointed Surveyor or RO Surveyor. The scope and extent of the cargo lines' inspection shall include :

(a) visual inspection;

(b) vessels which are more than 10 years old or vessels which have been converted into tankers or bunker barges shall, at each drydocking survey, have sample lengths of weather deck cargo lines dismantled in order to allow for internal examination by the attending Appointed Surveyor or RO Surveyor. The minimum amount of cargo lines dismantling shall, at least, be 2 straight lengths of piping and 2 bends;

(c) subject to the surveyor's discretion, selected piping and bends may be tested by ultrasonic thickness gauging without the need of dismantling;

(d) vessels which are more than 15 years old shall have their cargo lines pressure tested to 150% of the lines rated safe working pressure at each docking survey.

28.5 Cargo System Integrity Protection

28.5.1 All cargo pipelines and systems shall be protected by type approved vacuum/pressure relief valves appropriate to the hazards involved.

28.5.2 All cargo tanks shall be protected by type approved pressure/vacuum relief valves appropriate to the hazards involved.

28.5.3 All valves and gauges required above shall be inspected and re-calibrated at each Docking Survey under the supervision of the attending Appointed Surveyor or RO Surveyor.

28.5.4 All cargo lines and associated piping and equipment shall be appropriately earthed in order to dissipate any static electricity.

28.5.5 An emergency stop button, located at the manifold station, shall be provided and be able to shut down the flow of cargo/bunkers.

28.6 Electrical Installations

28.6.1 All electrical equipment and wiring shall be type approved and the installation shall be appropriate to the hazard and class of cargo/gases involved.

28.6.2 Electrical insulation resistance readings shall be taken by a competent person under the supervision of the attending surveyor, at intervals not exceeding 12 months. Any circuits found with low insulation resistance shall be repaired/rectified immediately. Records of electrical insulation readings shall be maintained on board and made available during inspections.

28.6.3 Electrical installation shall be examined/inspected on an annual basis by the attending surveyor.

28.7 Cargo Handling Operations – Lighting

28.7.1 When cargo operations are undertaken during the dark hours (between sunset and sunrise), vessels shall be provided with fixed explosion-proof lighting that effectively illuminates:

.1 each cargo manifold;

.2 each cargo transfer operations work area;

28.7.2 Such lighting must be so placed or shielded such that it does not mislead or otherwise interfere with navigation lights required by COLREGs.

28.8 Cargo Handling Operations - Spill Avoidance

28.8.1 Vessels shall be fitted with the herebelow equipment and appliances:

28.8.2 Effective means of blocking all scuppers and openings which could permit any cargo from being spilled at sea.

28.8.3 Continuous sills around the perimeter of the main deck which are at least 76mm in height above the sheer strake or manifold.

28.8.4 An approved loading arm for vessels ≥ 500 DWT tonnes.

28.8.5 Each cargo manifold and loading arm area (i.e. that area on the vessel that is within the area traversed by the free end of the loading arm when moved from its normal stowed or idle position into a position for connection) shall have a permanent catchment area (drip tray) which is able to contain any oil leakages of at least the following capacities:

(a) 318 litres if the catchment serves one or more hoses of 102 mm internal diameter;

(b) 477 litres if the catchment serves one or more hoses of 152 mm internal diameter;

(c) 636 litres if the catchment serves one or more hoses 203 mm internal diameter and above;

28.8.6 Each cargo line shall be fitted with a calibrated line pressure gauge which is clearly visible at the main manifold station. The pressure gauges shall be re-calibrated and tested, by a competent organisation, during each drydocking survey and the calibration certificate shall be available onboard.

28.8.7 All tankers and bunker barges shall carry an Oil Record Book, which shall be kept onboard at all times.

28.9 Tanker and Bunker Vessels Cargo Tank Calibration Tables

28.9.1 All cargo tanks shall be calibrated by an Appointed Surveyor or Recognised Organisation.

28.9.2 The certified tank calibration tables shall be kept readily available on board the vessel at all times.

28.9.3 The cargo tank calibration tables shall contain the following:-

(1) name and Official/IMO number of the vessel;
(2) list/trim corrections;
(3) cargo tank measurements;
(4) Reference height of every tank;
(5) Name, stamp and signature of the surveyor who calibrated the tanks (the surveyor's stamp and signature shall be available on all pages);
(6) date of calibration;
(7) page number on every page and;
(8) tank capacity plan of the vessel.

28.9.4 The tank calibration tables shall be sealed and properly bound to prevent any unauthorised amendments.

28.9.5 Vessels shall have onboard only one operational certified copy of the tank calibration table for the cargo tanks, for purposes of quantity verification.

28.9.6 For vessels operating exclusively in the Maltese Waters, a true certified copy of the tank calibration table shall be deposited with the Authority.

28.9.7 Should there be any change in the tank(s) capacity of a vessel, the updated tank calibration tables and capacity plans are to be re-certified by an Appointed Surveyor or Recognised Organisation, prior to carrying out any cargo operations.

28.10 Tanker and Bunker Vessels Cargo Tank Sounding Pipes

28.10.1 Each cargo tank sounding pipe shall be permanently marked with the reference height as stated in the tank calibration tables.

28.11 Tankers and Bunker Barges Cargo Ullage and Temperature Measuring Devices

28.11.1 Tankers and Bunker Barges shall carry at least one type approved portable steel gauging tape with a 150 mm weight attached to one end.

28.11.2 Tankers and Bunker Barges shall carry onboard at least one type approved thermometer for manual cargo temperature measurement.

28.11.3 Tankers and Bunker Barges shall carry temperature/specific gravity/density correction tables for computing bunker supply volumes.

28.12 Tanker and Bunker Vessels Plans and Diagrams

28.12.1 The general arrangement (GA) plan shall be conspicuously displayed onboard the vessel. For vessels operating exclusively in the Maltese Waters, a full size true certified copy of the GA plan shall be provided to the Authority.

28.12.2 The tank capacity plan, piping diagram and trim and stability booklet shall always be available onboard. For vessels operating exclusively in the Maltese Waters, true copies shall be provided to the Authority.

28.13 Tanker and Bunker Vessels Delivery Sampling Equipment

28.13.1 Vessels delivering bunkers shall provide the receiver with at least three one-litre samples taken from the bottom of each supplying cargo tank.

28.13.2 Each sample container shall be sealed with tamper-proof seals that have unique numbers and the sample containers shall be fitted with tamper-proof caps.

28.14 Tankers and Bunker Vessels Fender System

28.14.1 Tankers and bunker vessels shall have an effective fender system in order to minimise any potential damage to either the receiving or mother ship during cargo and mooring or unmooring operations.

28.15 Tanker and Bunker Vessels Operational Safety

28.15.1 All tankers and bunkers vessels shall carry a copy of the latest editions of the OCIMF Ship to Ship Transfer Guides, OCIMF Barge Safety Book, the International Safety Guide for Oil Tankers and Terminals (ISGOTT) and the Dangerous Cargo Ships, Marine Terminals and Facilities and Bunkering Regulations.

28.15.2 An Oil Record Book shall be available onboard at all times.

28.15.3 Anti-Pollution Equipment, as required by international regulations, shall be available onboard.

28.15.4 Vessels operating in Maltese waters shall also comply with the local Bunkering Regulations.

28.16 Tanker and Bunker Vessels Navigation Lights and Signals

28.16.1 In addition to the requirements stipulated in this Code, tankers and bunker vessels shall also be provided with lights and flags as prescribed in Dangerous Cargo Ships, Marine Terminals and Facilities and Bunkering Regulations.

28.17 Tanker and Bunker Vessels Navigation Equipment

28.17.1 Tanker and Bunker vessels shall have onboard all equipment prescribed in regulation 63, paragraph (v) of the Dangerous Cargo Ships, Marine Terminals and Facilities and Bunkering Regulations.

28.18 Tanker and Bunker Vessels Fire Fighting Appliances

28.18.1 Tankers and bunker vessels shall carry or be fitted with:

.1 an approved cargo tank protection mobile foam appliance;

.2 an addressable fire detection and alarm system, complete with manual call points, protecting accommodation spaces, service areas, engine room and pump room;

.3 a fixed CO_2 or equivalent fixed fire extinguishing system, protecting the engine room and pump room;

.4 a remote emergency stop designed to shut down the flow of cargo to and from the cargo pumps.

28.19 Additional Fire Safety Measures for Tankers

28.19.1 **General**

28.19.1.1 The SOLAS Chapter II-2 requirements for tankers shall apply to tankers carrying crude oil and petroleum products, having a flash point not exceeding 60°C, and other liquid products having a similar fire hazard.

28.19.2 Application

28.19.2.1 The additional requirements for tankers of SOLAS Chapter II-2 shall apply to tankers carrying crude oil and petroleum products having a flash point not exceeding 60°C (closed cup test) and a Reid vapour pressure which is below atmospheric pressure, and other liquid products having a similar fire hazard.

28.19.2.2 Tankers carrying petroleum products having a flashpoint exceeding 60°C (closed cup test) shall comply with the requirements of cargo area deck protection detailed herebelow.

28.19.3 Cargo area deck protection

28.19.3.1 At least one mobile foam appliance shall be provided for use on the cargo tank deck including

the cargo manifolds. It shall be capable of simple and rapid operation. Where the appliance is of the inductor type it shall comply with the herebelow requirement. Self-contained appliances shall have a foam solution capacity of at least 135 litres.

28.19.3.2 A portable foam applicator unit shall consist of an air foam nozzle of an inductor type capable of being connected to the fire main by a fire hose, together with a portable tank containing at least 20 litres of foam-making liquid and one spare tank. The nozzle shall be capable of producing effective foam, suitable for extinguishing an oil fire, at the rate of at least 1.5m^3/min.

28.19.3.3 The type of foam used shall be suitable for the cargoes to be carried.

SECTION 29
VESSELS CARRYING DANGEROUS GOODS AND/OR HAZARDOUS SUBSTANCES SPECIFIC REQUIREMENTS

29 Vessels employed in the carriage of Dangerous Goods and/or Hazardous Substances – Specific Requirements

29.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

29.2 The vessels covered by this sub-section of the Code are those which carry Dangerous Goods and/or Hazardous or Noxious Substances that are listed in:

a) the list of Oils set out in Appendix I to Annex I of MARPOL 73/78, as amended, and;
b) the list of substances set out in appendices II and III to Annex II of MARPOL 73/78, as amended, and;
c) Chapters 17 and 18 of the IBC Code and;
d) Chapters VI and VII of the BCH Code and;
e) Dangerous Goods List contained in the IMDG Code, as amended.

29.3 Vessels employed in the carriage of cargo described in above shall be provided with:

a) Certificate of Fitness/Document of Compliance for the Carriage of Dangerous Goods in Bulk, or;
b) Certificate of Fitness/Document of Compliance for the Carriage of Noxious Liquid Substances in Bulk.

Note: Refer to Section 29.7 for the Carriage of Dangerous Goods in packaged form.

The Certificate/Document of Compliance shall clearly indicate the type, quantity and conditions under which such goods/substances may be carried. The Certificate/Document of Compliance shall be issued by an Appointed Surveyor* or by a Recognised Organisation.

(*)- refer to limitations on the issuance of Statutory Certificates by Appointed Surveyors detailed in Section 33.

29.4 The attending surveyor, responsible for the issuance of the Certificate of Fitness/Document of Compliance mentioned here above shall ensure that as far as is reasonable and practicable vessels shall comply with the relevant Articles of SOLAS 74, MARPOL 73/78 and IMO Codes, as amended.

29.5 The Administration may request, additional requirements and/or limitations whilst taking into consideration the type of cargo, amount of cargo, vessel details and the vessel's area of operation.

29.6 Vessels employed in the carriage of Dangerous Goods and/or Hazardous Substances shall carry onboard at all times the necessary anti-pollution equipment as required by national and international requirements/regulations.

29.7 Carriage of Packaged Dangerous Goods in Bulk (in packaged form)

29.7.1 Vessels carrying Dangerous Goods in bulk shall comply with the requirements of the International Maritime Dangerous Goods (IMDG) Code and Maritime Solid Bulk Cargoes (IMSBC) Code.

29.7.2 Vessels carrying both Dangerous Goods and passengers shall contact the Administration before commencing any operations for special permission. The Administration shall take into consideration, inter alia, the type of dangerous goods being carried, the number of passengers, the type and design of the vessel, the length of trip and the area of operation.

29.7.3 Dangerous goods are only to be carried on deck, unless the specific type of dangerous cargo is specifically recommended to be stowed under deck by the IMDG Code (provided that all provisions and precautions as required by SOLAS and the IMDG Code are met).

29.7.4 Stowage and segregation of the dangerous goods shall be in compliance with the requirements of the International Maritime Dangerous Goods (IMDG) Code.

29.7.5 When required, packaged dangerous goods shall be in United Nation's approved packaging.

29.7.6 When carrying dangerous cargo, the proper shipping name is to be used accompanied by the UN number, as clearly defined in the IMDG Code.

29.7.7 In addition to fire-fighting provisions mentioned in other sections of this Code, vessels carrying dangerous cargoes/goods shall also comply with the Fire Fighting and Emergency Schedules listed in the IMDG Code.

29.8 Scuppers and Drains

29.8.1 The scupper and drainage arrangements are to be directed overboard with no connections to internal spaces.

29.9 Electrical Equipment

29.9.1 Electrical equipment installed in the cargo space shall be of the certified safe type for the cargo being carried or be capable of being securely isolated during the carriage of packaged dangerous goods.

29.10 Structural Fire Protection

29.10.1 Bulkheads forming boundaries of spaces containing fuel tanks and machinery spaces shall be insulated to A-60 standard unless the dangerous goods are stowed, at least, three metres away from such bulkheads and boundaries.

29.11 Fire Fighting Equipment

29.11.1 There shall be an immediate availability of water from the fire main, provided by the vessel's main fire pump or by an additional emergency fire pump. The two pumps will be required when carrying Class 1 dangerous goods only. Each pump shall be capable of supplying the hoses and nozzles, required in accordance with the Code.

29.11.2 At least two portable dry powder extinguishers of appropriate capacity shall be provided and be readily available in the cargo area.

29.12 Crew Training

29.12.1 The crew shall undergo training in the carriage of dangerous goods and the IMDG Code, and records of the training undertaken shall be kept.

29.13 Vessel Certification

29.13.1 Prior to dangerous packaged goods being carried, the vessel shall be surveyed and shown to be suitable for the carriage of packaged dangerous goods.

29.13.2 Upon successful completion of a survey, a Document of Compliance will be issued to the vessel indicating the Class of goods that can be carried with a list of equipment fitted.

29.14 Cargo Documentation

29.14.1 When packaged dangerous goods are carried, details of the emergency fire-fighting equipment and First Aid medical procedures shall be provided onboard, with additional equipment if required under the IMDG Code, to ensure that if an emergency occurs, it can be dealt with effectively.

29.14.2 When carrying packaged dangerous goods, a full manifest of the cargo shall be retained ashore by the vessel's owner, or designated person, in case of an incident. This person ashore shall have a list of contact numbers for the emergency services and relevant manufacturers/suppliers of the dangerous goods. The designated person shall be employed by the vessel's owner and be aware of the details of the voyage.

29.15 Permitted Packaged Dangerous Goods

29.15.1 A restricted list of dangerous goods, as contained in the IMDG Code, shall be permitted as detailed herebelow:-

.1 Class 1 Explosives - when carrying explosives a qualified military or explosive expert shall be present when explosives are being loaded, carried and unloaded;
.2 Class 2.1 – permitted;
.3 Class 2.2 – permitted;
.4 Class 2.3 - prohibited;
.5 Class 3 Substances - the size of the container carrying Class 3 products will be limited to 30 litres;
.6 Class 4 Substances - prohibited;
.7 Class 5 Substances - prohibited;
.8 Class 6.1 Substances - packing group III substances only with a limit of 30 litres and 30 Kg;
.9 Class 6.2 Substances - prohibited;
.10 Class 7 Substances - prohibited;
.11 Class 8 Substances - packing group I and II substances prohibited, packing group III substances restricted to 30 litres max; and
.12 Class 9 Substances - permitted subject to container capacity, 30 litres liquid, and 30 kg weight.

29.15.2 Although the above table restricts the carriage of certain classes of dangerous goods, when these goods are carried in Limited Quantities as laid down in the IMDG Code, the restrictions do not apply, and the goods may be carried.

29.15.3 Should an operator want to carry prohibited packaged dangerous goods on a regular basis, then a submission, with a safety assessment, shall be submitted to the Administration for consideration.

29.15.4 For information purposes the title of the dangerous good classes is given below whilst for in detailed descriptions reference is to be made to the IMDG Code:-

Class 1 Explosives
Class 2 Gases
Class 2.1 Flammable gases
Class 2.2 Non-flammable, non-toxic gases
Class 2.3 Toxic gases
Class 3 Flammable Liquids
Class 4 Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water emit flammable gasses
Class 4.1 Flammable solids
Class 4.2 Substances liable to spontaneous combustion
Class 4.3 Substances which, in contact with water, emit flammable gases
Class 5 Oxidising substances and organic peroxides
Class 5.1 Oxidizing substances
Class 5.2 Organic peroxides

Class 6 Toxic and infectious substances
Class 6.1 Toxic substances
Class 6.2 Infectious substances
Class 7 Radioactive material
Class 8 Corrosive Substances
Class 9 Miscellaneous dangerous substances and articles

SECTION 30
VESSELS ENGAGED IN TOWING SPECIFIC REQUIREMENTS

30 Vessels Engaged in Towing – Specific Requirements

(The requirements of this section do not apply to vessels towing in an emergency situation)

30.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

30.2 Reference shall be made to the dedicated Chapters on Stability, Navigation Lights, Shapes and Sound Signals, for the requirements for towing and towed vessels.

30.3 The towing system of existing vessels which were and are used for towing and have, at least, a 5 year proven history of safe operation as a towing vessel shall be accepted by the Administration.

The towing system of new vessels shall be in conformance with a Recognised Organisation's Rules.

30.4 Towing arrangements shall be appropriate to the task in hand and maintained to ensure that they are in an efficient working condition at all times.

30.5 Towing vessels shall be manned by suitably experienced and qualified personnel competent for the area and the type of operation and size and type of the vessel.

30.6 The design of the towing gear shall be such as to minimise the overturning moment due to the lead of the towline. The towing hook or towline shall have a positive means of quick release which can be relied upon to function correctly under all operating conditions.

30.7 The towing hook (or equivalent fitting) and the supporting structure shall be strong enough to withstand loads imposed during towing operations.

30.8 The release mechanism shall be controlled from all conning positions and at the hook itself. The local control at the hook shall be of the direct mechanical type capable of independent operation.

30.9 When a pushing tug and a barge pushed ahead are rigidly connected in a composite unit, the tug-barge coupling system shall be capable of being controlled and powered from the tug.

30.10 Every tug shall be provided with at least one axe of sufficient size on each side which shall be readily available for cutting the towline free in an event of an emergency.

30.11 Towing strong points shall be marked with their rated SWL.

30.12 Towing vessels shall be provided with a Bollard Pull Certificate valid for not more than 5 years. The bollard pull certificate shall be issued by an RO or an Appointed Surveyor.

30.11 Weathertight Integrity

30.11.1 Doorways in superstructures, deckhouses and exposed machinery casings situated on the weather deck and which provide direct access to spaces below deck shall be provided with efficient weathertight doors. Weathertight doors shall be secured in the closed position when the vessel is towing and the doors shall be clearly marked to this effect.

30.11.2 Machinery air intakes and machinery space ventilators which must be kept open during towing operations shall be provided with high coamings in order to prevent any down-flooding.

30.11.3 Air pipes and air vents shall be kept as far inboard as possible and be fitted with automatic means of closure when downflooding to the compartments served would endanger the stability of the vessel.

30.11.4 The vessel shall be provided with the appropriate publications related to the use of tugs in port and to ship-handling with tugs.

30.12 Specific Requirements for Anchoring, Mooring and Towing Arrangements for Barges

30.12.1 Every barge shall be equipped with at least a suitable anchor for holding the barge in event of an emergency. The anchor shall be securely attached to a cable or wire rope and be ready for release in emergency conditions either by persons on the barge or by persons boarding the barge for such purpose. At least a windlass or winch shall be provided, as appropriate, to assist persons carrying out such operation. Suitable boarding facilities shall be provided for personnel from the towing vessel to board the barge in case of an emergency.

30.12.2 The towing and mooring arrangements and procedures shall cater for the safety of all personnel during the towing or mooring operations. Such arrangements shall be of adequate strength and suitable for the particular type of barge.

30.12.3 The design and arrangement of towing and mooring fittings or equipment of barges shall take into account both normal and emergency conditions and both normal and adverse weather conditions.

30.12.4 Sufficient spare equipment to repair or replace the towing and mooring arrangements of a barge shall be available onboard.

30.12.5 Secondary or emergency towing arrangements shall be fitted onboard the barge and these shall be readily available to be accessed and deployed in the event of parting of the main towing line or failure of any ancillary equipment.

SECTION 31
VESSELS FITTED WITH LIFTING APPLIANCES AND CARGO GEAR SPECIFIC REQUIREMENTS

31 Vessels Fitted with Lifting Appliances and Cargo Gear – Specific Requirements

31.1 The herebelow requirements are in addition to the requirements detailed in the other Sections of this Code. These dedicated requirements shall not be considered as the sole requirements and shall not be considered as a replacement of other requirements but shall be applied together with the requirements detailed in the other Sections of this Code. If any requirements present a contradiction than the more demanding requirement shall prevail and shall be applicable.

31.2 All vessels fitted with Lifting Appliances and Cargo Gear equipment shall carry onboard a Cargo Gear Register (Cargo Gear Booklet) together with the relevant rigging plans.

31.3 Stability calculations of the vessel shall cater and take into account the effects of the Lifting Appliances and Cargo Gear fitted onboard.

31.4 The vessel's structure, the lifting appliances/cargo gear themselves and the supporting structure shall be of sufficient strength to withstand the loads that will be imposed when operating at its maximum overturning moment and maximum vertical reaction.

Lifting appliances, cranes and Cargo Gear fitted to newbuildings and to existing vessels (subsequent to their construction) shall be approved by an Appointed Surveyor or by a RO. The approval shall cover both the vessel's stability criteria and also the structural aspect of the installation.

31.5 The SWL (Safe Working Load) shall be clearly marked on each Lifting Appliance/Cargo Gear.

31.6 All lifting appliances, cranes and cargo gear and every item of loose gear shall be thoroughly examined by an Appointed Surveyor or RO Surveyor, at least once every 12 months. The particulars of these thorough examinations shall be entered in the Cargo Gear Booklet.

31.7 Overload testing and thorough examination of all lifting appliances and every item of loose gear shall be carried out:

(a) after any substantial alteration or renewal, or after repair of any stress bearing part; and
(b) in the case of lifting appliances, cranes and cargo gear at least once every five years.

The five yearly overload testing and thorough examination shall be carried out under the direct supervision of the attending Appointed Surveyor or RO Surveyor. The particulars of the five yearly overload testing and thorough examination shall be entered in the Cargo Gear Booklet.

31.8 The overload testing shall follow the following overloading criteria. Every lifting appliance, crane and cargo gear shall be tested with a test load which shall exceed the safe working load (SWL) as follows:

a) Up to 20 tonnes SWL - 25 per cent in excess
b) 20 to 50 tonnes SWL - 5 tonnes in excess
c) Over 50 tonnes SWL - 10 per cent in excess

31.9 An inclinometer (pendulum) shall be provided onboard for guidance to the crane or lifting device operator when controlling the lifting items of unknown weight.

31.10 A prominent clear notice shall be posted on or near the crane or lifting device and contain the following information and instructions:-

1) the maximum permitted load and outreach and relevant safe working load (SWL), whichever is the lesser (operating performance data, i.e. load radius performance chart for a crane or other lifting device of variable load radius type shall be included as appropriate);

2) any crane whose safe working load varies with its operating radius shall be provided with a means of accurately determining the radius at any time, clearly visible or accessible to the driver of the crane, showing the radius of the load lifting attachments at any time. Provision shall be made to enable the driver to ascertain the safe working load corresponding to that particular radius;

3) details of all openings leading below deck shall be secured weathertight; and

4) instructions for all personnel to be above deck before lifting operations commence.

31.11 Life-saving launching appliances which are used also as cranes shall comply with the requirements of the LSA Code.

SECTION 32
CARRIAGE OF INDUSTRIAL PERSONNEL

32 SAFE CARRIAGE OF INDUSTRIAL PERSONNEL ONBOARD VESSELS

32.1 Industrial personnel means all persons who are transported or accommodated onboard for the purpose of offshore industrial activities performed on board other vessels and/or other offshore facilities and meet the criteria set out in this section.

32.2 Offshore Industrial Activities are the construction, maintenance, operation or servicing of offshore facilities related, but not limited, to exploration, the renewable or hydrocarbon energy sectors, aquaculture, ocean mining or similar activities.

32.3 Industrial Personnel shall not be considered or treated as passengers under SOLAS Regulation I/2(e).

32.4 All Industrial Personnel shall:

.1 be not less than 16 years of age;

.2 prior to boarding the vessel, receive appropriate safety training, meeting the standard in paragraph 2.1 of section A-VI/1 of the STCW Code. Other industrial training standards such as those of the Global Wind Organisation (GWO), Offshore Petroleum Industry Training Organisation (OPITO), Basic Offshore Safety Induction and Emergency Training (OPITO accredited) may be accepted;

.3 receive onboard vessel specific safety familiarisation that includes, but is not limited to, the layout of the vessel, and handling safety equipment, as appropriate. Paragraph 1 of section A-VI/1 of the STCW Code, or equivalent, may be used as a standard;

.4 be familiarised with specific procedures, e.g. transfer procedures on and off the vessel while at sea, as appropriate;

.5 be accounted for in the vessel's life-saving equipment and be equipped with personal protective clothing and equipment suitable for the safety risks to be encountered both while onboard the vessel and whilst being transferred at sea;

.6 meet appropriate medical standards in line with Section A-I/9 of the STCW Code, applicable to engineers, or equivalent.

32.5 The vessel shall be equipped with the necessary facilities in order to safely cater for the needs of the industrial personnel being transported or accommodated onboard.

32.6 IMO Guidelines or relevant industry standards shall be taken into account, to the extent possible, when transferring industrial personnel at sea.

32.7 Industrial personnel may be carried onboard vessels meeting the provisions of the 2008 SPS Code or other standards, provided they meet an equivalent and acceptable level of safety, taking into consideration the number of persons onboard.

32.8 The details of every voyage/trip shall be entered in the vessel's Official Logbook and this shall at least include the number of passengers, port/place of departure details, destination details, time, date etc.

32.9 The requirements of **IMO MSC-MEPC.7/Circ.10 – "Guidance on Safety When Transferring Persons at Sea"** and **IMO MSC.418(97)** shall also be applicable.

SECTION 33
SURVEY AND CERTIFICATION

33 SURVEY and CERTIFICATION

33.1 General

33.1.1 All non-convention vessels covered by this Code shall be surveyed, certified and maintained in accordance to their respective category requirements in order to maintain the validity of the Non-Convention Vessel Certificate (hereinafter referred to as the NCV Certificate).

33.1.2 The NCV Certificate shall be issued solely by the Administration and shall be valid for 5 years with the requirement of annual surveys.

33.1.3 Passenger Ships for which Directive 2009/45/EC, as amended, is applicable, shall be issued with a Passenger Ship Safety Certificate (PSSC), in lieu of the NCV Certificate. The PSSC shall be issued only by the Administration. Passenger vessels for which Directive 2009/45/EC is not applicable and passenger vessels < 24m in length, shall comply to the extent possible with the requirements of the Directive 2009/45/EC, as amended, and shall also comply with the Passenger Vessels Specific requirements (Section 22) and requirements for cargo vessels, as applicable, set out in the Code.

33.1.4 Appointed Surveyors and Recognised Organisations are authorised by this Administration to perform the required surveys leading to the issuance of the NCV Certificate.

Qualified, experienced and competent exclusive surveyors belonging to Recognised Organisations may carry out the full range of survey and certification processes pertaining to this Code.

Appointed Surveyors are authorised to carry out the survey and certification processes pertaining to this Code in the areas in which they are adequately skilled, experienced and qualified to act; and, besides Tonnage Certification, they may issue Statutory Certificates only to vessels operating within 30 nautical miles from Malta and to vessels engaged exclusively in tuna pen towage.

33.1.5 Appointed Surveyors shall follow the Code of Ethics and Conduct for Appointed Ship Surveyors issued by the Administration whilst Recognised Organisations' Surveyors are to follow the relevant Recognised Organisation's own Code of Ethics.

33.1.6 Recognised Organisations and Appointed Surveyors shall carry out the surveys and the subsequent reporting without undue delay.

33.2 Classification Requirements

33.2.1 New vessels ≥ 24m in length, shall be issued with a valid Classification Certificate (covering both Hull and Machinery). The Class Certificate shall be issued by a Recognised Organisation and shall be maintained valid throughout the validity of the NCV Certificate.

33.2.2 Existing vessels ≥ 24m in length, already issued with a Certificate of Class by a Recognised Organisation, shall maintain the Class Certificate's validity throughout the validity of the NCV Certificate.

33.2.3 Traditional Build vessels, built predominantly from timber need not be Classed, however, they must be presented for a full NCV Initial Survey prior to being accepted by the Administration and certified. Replica of traditional build vessels constructed of materials other than timber, shall not considered Traditional Build vessels.

33.2.4 Vessels ≥ 15m LoA & < 24m in length need not be Classed or built in accordance to Class Rules even though the Administration recommends it. These vessels shall comply with the applicable requirements set out in this Code.

33.3 Initial NCV Survey Requirements

33.3.1 A Survey Request shall be made by the vessel's owner/manager/legal representative to the Administration or to a Recognised Organisation or to an Appointed Surveyor.

33.3.2 As part of the Initial Survey the survey guidelines form: MSD NCV Initial Survey in conjunction with form: MSD NCV Survey Report shall be duly followed and filled in, as applicable, and the survey forms shall be submitted to the Administration.

33.3.3 If a new vessel < 24m has never been classed by a Recognised Organisation or if the vessel has not been built under the supervision of a Recognised Organisation, the herebelow drawings/calculations shall be submitted to a Recognised Organisation or an Appointed Surveyor for assessment and approval. The approval shall be carried out in conformance to a RO Rules:

- General Arrangement Plan
- Scantlings Plan (for steel or aluminium vessels) or Lamination Schedule for GRP Vessels (and relevant strength calculations)
- Bilge System
- Fire System including Fire Plan
- Black Water System
- Ventilation Plan
- Electrical System
- Fuel System
- Rigging Plan (for sailing vessels)
- Inclining Experiment Report/Calculations (as applicable)
- Stability Booklet
- Seating Plan (for passenger vessels)
- Midships Plan
- Tank Capacity Plan
- Lines Plan
- Navigation Lights Plan

- Life Saving Appliances Plan

- Emergency Escapes Plan

33.3.4 Vessels < 24m in length which can demonstrate to have at least a 5 year safe and satisfactory operational and service history may be dispensed from the above drawings assessment/approval requirement, at the sole discretion of the Administration

33.3.5 A detailed survey, having the same criteria of a Renewal Survey of the hull, the machinery and of all equipment shall be carried out. A Dry-docking Survey shall also be carried out unless the vessel holds a valid Class Certificate. If at the time of survey, it is not possible to carry out a Dry-docking Survey, then the vessel shall be surveyed afloat and the Dry-docking Survey of the underwater parts shall be carried out not later than 6 months from the date of the Initial Survey (which may be extended by the Administration for not more than a further 6 months) subject to an internal hull inspection (including internal inspection of any hull tanks) being carried out during the Initial Survey itself. Note that for an existing vessel changeover survey, carried out on or after the 1st June 2019, the scope of the Initial NCV Survey shall have the same scope of the due survey of the existing IACS99/CVC survey cycle. For these vessels the NCV Survey cycle will follow the previous IACS99/CVC survey cycle.

33.3.6 Thickness gauging shall be carried out onboard steel vessels, by an approved service supplier, in accordance to a RO Rules, unless the vessel is issued with a valid Class Certificate.

A copy of the thickness gauging report is to be kept onboard.

33.3.7 A full survey and operational test of safety equipment, life-saving appliances, fire detection and fire-fighting equipment shall be carried out.

33.3.8 All items relating to freeboard, water freeing arrangements and crew safety shall also be checked.

33.3.9 The stability calculation/booklet of the vessel shall be checked for compliance with the requirements set out in this Code. For vessels ≥ 24m in length, in the event that the vessel has not been issued with a Stability Booklet approved by a Recognised Organisation or by an Appointed Surveyor than an Inclining Experiment is to be carried out and subsequently a new approved Stability Booklet must be made available onboard. On vessels where the stability data onboard does not fulfil the full requirements of the Code a new inclining test shall be carried out and a new approved Stability Booklet shall be issued within 3 months.

33.3.10 On successful completion of the Initial survey the attending surveyor, shall report to the Administration. Subsequent to a satisfactory review of the survey reports and documentation, at its discretion, the Administration, will issue a NCV Certificate valid for 5 years (a PSSC will be issued for Passenger Ships in lieu of an NCV Certificate).

33.4 Renewal NCV Surveys

33.4.1 As part of the Renewal Survey the survey guidelines form: MSD NCV Survey Report shall be duly followed and filled in, as applicable, and the survey forms shall be submitted to the Administration.

33.4.2 A renewal survey shall be carried out within 3 months prior to the expiry of the NCV

Certificate. Failure to carry out the Renewal Survey within the NCV validity period will result in the automatic suspension of the NCV Certificate. Re-instatement of the NCV Certificate will be granted once the overdue renewal survey is carried out.

33.4.3 During a renewal survey a full inspection of the vessel shall be carried out. A Dry-docking Survey shall also be carried out, unless the vessel holds a valid Class Certificate. If at the time of survey, it is not possible to carry out a Dry-docking Survey, the vessel shall be surveyed afloat and the Dry-docking Survey of the underwater parts shall be carried out not later than 6 months from the date of the Renewal Survey (which may be extended by the Administration for not more than a further 6 months) subject to an internal hull inspection (including internal inspection of any hull tanks) being carried out during the Renewal Survey itself.

33.4.4 The hull, machinery, systems and equipment of the vessel shall be thoroughly inspected and tested. Vessels ≥ 24m in length which do not hold a valid Class Certificate shall also have their Hull & Machinery surveyed with the same extent and criteria as a Classification Society Hull and Machinery Renewal Survey, by the attending surveyor.

33.4.5 Steel vessels shall carry out full thickness gauging, by an approved service supplier, in accordance to RO Rules, unless the vessel is issued with a valid Class Certificate. A copy of the thickness gauging report is to be kept onboard.

33.4.6 The vessel's documents and certificates, including the seafarer's certification shall be reviewed.

33.4.7 Sea trials and operational tests shall also be carried out under supervision of the attending surveyor. Sea trails may be dispensed with on vessels holding a valid Class Certificate (covering also machinery) and on vessels having a valid servicing contract with the engine makers whilst also having all machinery/equipment maintenance records available onboard.

33.4.8 Any other statutory surveys which are applicable and due shall also be carried out during the NCV Renewal Surveys. The statutory certificates validity is to be fully maintained during the whole NCV Certificate's validity period. Radio Survey requirements: refer to detailed section below.

33.4.9 Statutory Certificates shall, to the extent possible, be harmonised with the NCV Certificate's validity.

33.4.10 On vessels ≥ 24m a lightship survey shall be carried out once in every ten years during a Renewal Survey and relevant records shall be retained onboard and a copy shall be sent to the Administration. A new inclining experiment and new approved stability booklet are required should the lightship survey result in a change in the lightship weight ≥ 2% and/or a shift in the longitudinal centre of gravity ≥ 1% (measured from the aft perpendicular) and / or the calculated vertical gravity rises by 0.25% and above (measured from the keel).

33.4.11 On successful completion of the renewal survey the attending surveyor, shall endorse the relevant section on the NCV Certificate and shall report to the Administration. Subsequent to a satisfactory review of the survey report and documentation, the Administration will issue a new NCV Certificate, valid for another 5 years (a PSSC will be issued for Passenger Ships in lieu of an NCV Certificate).

33.5 Annual NCV Surveys

33.5.1 As part of the Annual Survey the survey guidelines form: MSD NCV Survey Report shall be duly followed and filled in, as applicable, and the survey forms shall be submitted to the Administration.

33.5.2 All vessels shall carry out annual surveys during the 5 year validity of the NCV Certificate. Surveys shall be carried out by an Appointed Surveyor or by a Recognised Organisation. The Annual Surveys shall be carried out within 3 months before or after each anniversary date. A Renewal Survey shall be carried out within three months prior to the expiry of the NCV Certificate. Survey due dates are indicated on the NCV Certificate.

33.6 Passenger Ship Survey & Certification, Passenger Ship Safety Certificate (EU Directive 2009/45/EC, as amended) and International Passenger Ship Safety Certificate (SOLAS)

33.6.1 Besides meeting the Survey requirements for Cargo Vessels, as detailed hereabove and the Passenger Vessel Specific Requirements (Section 22), Passenger vessels and Passenger High Speed Craft ≥ 24m in length engaged on domestic navigation or operating exclusively within Maltese Waters shall be surveyed and issued with a Passenger Ship Safety Certificate in accordance to Directive 2009/45/EC, as amended. Passenger vessels for which Directive 2009/45/EC is not applicable and passenger vessels < 24m in length shall comply to the extent possible with the requirements of the Directive 2009/45/EC and shall also comply with the Passenger Vessel Specific Requirements (Section 22) and the requirements for cargo vessels, as applicable, set out in the Code.

The Passenger Safety Certificate shall be issued, by the Administration, in lieu of the NCV Certificate.

33.6.2 Passenger vessels and Passenger High Speed Craft ≥ 24m in length engaged in International Navigation do not fall under the remit of this Code and shall comply with requirements SOLAS and the other applicable conventions. These vessels shall be surveyed and issued with an International Passenger Ship Safety Certificate in accordance to the SOLAS Convention.

33.6.3 The validity period of the Passenger Ship Safety Certificate and International Passenger Ship Safety Certificate shall not exceed 1 year.

33.7 Bottom surveys

33.7.1 A minimum of two inspections of the outside of the vessel's bottom* shall be carried out, in dry dock, during any five-year period. The interval between any two such inspections shall not exceed 36 months. Consideration may be given to an alternate (in lieu) inspection being carried out with the vessel afloat (in-water survey) and in such cases the interval between consecutive inspections in dry dock shall not exceed 60 months. One of the two bottom inspections shall coincide with the NCV Certificate renewal survey whilst the other bottom survey shall be carried out during or between the 2nd and 3rd Annual Surveys. Bottom surveys carried out on vessels as part of the Classification process, onboard vessels holding a valid Class Certificate, shall be deemed to meet the requirements of this section.

33.7.2 Special consideration shall be given to vessels ≥ 15 years of age before being permitted to carry out bottom inspections afloat (In-Water Survey).

(*) Refer to IMO Resolution A.1104(29) on Survey Guidelines Under the Harmonized System of Survey and Certification, as amended.

33.8 Occasional Surveys, Surveys following Damage, Surveys following Port State Control, Surveys following Recommendations and Surveys for Single Transfer Voyages

33.8.1 Occasional Surveys, Surveys following Damage, Surveys following Recommendations and Surveys for Single Transfer Voyages shall be carried out by an Appointed Surveyor or by a Recognised Organisation.

33.8.2 Masters/Owners/Managers are required to contact the Administration following Damage and/or following a Port State Control Detention. On a case by case basis, the Administration will carry out additional/occasional surveys in order to confirm the validity of the NCV Certificate. Failure to inform the Administration about Damage and/or Port State Control Detention may lead to suspension of the NCV Certificate.

33.8.3 Any Recommendation raised by a specific Appointed Surveyor or RO shall be cleared by the same Appointed Surveyor or RO who raised the recommendation in the first place.

33.8.4 Single Transit Voyage Procedure:

1. Owners/Managers/Operators shall apply to the Merchant Shipping Directorate (MSD) for the issuance of a Single Transit Voyage Short Term NCV Certificate providing the reasons and full details/information/confirmations with regards to the request for the voyage.
2. Single transit voyages shall only be considered in the following cases:
    a. Vessel proceeding to a repair/refit yard;
    b. Vessel changing base port (re-positioning);
    c. Vessel being transferred subsequent to its sale and change of ownership;
    d. Other exceptional cases.
3. The request for a single transit voyage shall, at least, include details / information / confirmations as follows:
    a. Port of Departure and Port of Destination;
    b. ETD and ETA;
    c. A copy of the intended Passage Plan including maximum average distance from shore during the voyage,
    d. Confirmation that the necessary Contingency Plans for the single voyage are available;
    e. The anticipated weather conditions relevant to the area and the season during which the voyage will be executed;
    f. Confirmation that an appropriate Minimum Safe Manning Attestation is available for the intended voyage;
    g. Details regarding any additional equipment (including Life Saving Appliances, Navigational, Radio etc.) being installed onboard for the specific intention of the single transit voyage;

h. Confirmation if the trip will be carried out loaded or in ballast condition. *Note: Notwithstanding any previous non-Applicability Statements from the International Ballast Water Management Convention, it must be reminded that should the vessel carry out an international voyage were the mixing of unmanaged ballast water and sediments between different areas is expected, then such water will be subject to all the management requirements, in accordance with the provisions of the Convention;*

i. Confirmation that the vessel has the necessary fuel and reserve fuel capacity for the voyage. When there is insufficient fuel capacity, details of the planned en-route bunkering locations shall be provided;

j. Confirmation that the vessel has on board necessary and sufficient provisions to undertake the voyage;

k. Confirmation that the vessel carries onboard deadlights and storm shutters;

l. Confirmation that there is sufficient accommodation for all crew onboard;

m. Confirmation that no sleeping accommodation located below the waterline (if any) will be used during the single voyage;

n. Confirmation that all crew onboard have signed a Seaman's Employment Agreement relevant to the intended voyage;

o. Confirmation that all the publications and charts necessary for the single transit voyage are available onboard.

4. Should the Minimum Safe Manning Attestation, held onboard, not cater for the single transit voyage, owners/managers/operators shall apply to Transport Malta for the issuance of a revised Minimum Safe Manning Attestation. The application shall also include a Crew list and other details (qualifications and Certificates) regarding the crew;
5. Upon reviewing the single transit voyage request and all the provided details, as mentioned above; the MSD will inform the owners/managers/operators whether the request has been accepted and whether any other conditions and/or limitations together with any additional machinery, equipment, provisions, crew etc are to be installed/available onboard during the voyage;
6. When it is deemed necessary by the MSD, a Risk Assessment may be requested to be carried out by owners/managers/operators. The necessity to carry out the risk assessment shall be deemed when, amongst others the following may be encountered: inclement weather en-route, piracy/armed boarding, loss of communication, loss of navigational aids, on-board incidents including fire, collision, blackout, grounding, man overboard and injury or death.
7. A Radio Survey shall be carried out when the vessel proceeds outside its certified area of radio coverage and/or if new communication equipment has been installed onboard for the single transit voyage;
8. An occasional survey shall be carried out by a Government Appointed Surveyor or by a Class Surveyor in order to confirm that the above details and to ensure that any other MSD requirements have been complied with and to confirm that the vessel is **Fit** to undertake the single transit voyage. Any observations and restrictions, such as weather restrictions, distance from shore etc. are to be clearly mentioned on the surveyor's report/attestation.
9. The surveyor's report/attestation/statement shall clearly mention:
    a. that an occasional survey has been carried out onboard and that the vessel's compliance with the Code is confirmed,
    b. that the details/information/confirmation as required in the MSD Single Voyage procedure have been verified and found satisfactory,
    c. that the vessel is fit to carry out the single transit voyage,
    d. any restrictions (such as weather restrictions, distance from shore etc.) imposed by MSD or by the attending surveyor.

10. Once the Surveyor's Report together with (when applicable) the risk assessment are received and have been satisfactorily reviewed by the MSD, a Short Term NCV Certificate may be issued.

33.9 Major Repairs and/or Conversions

33.9.1 Major repairs and/or conversions must be carried out under the supervision of an Appointed Surveyor or a Recognised Organisation.

33.10 Sale of a vessel

33.10.1 When a vessel is sold the NCV Certificate becomes automatically invalid and the existing original NCV Certificate, together with all the relevant sale details, shall be returned to the Administration so that a new one is issued, if and as necessary.

33.11 Historical Vessels

33.11.1 Historical vessels shall be surveyed by an Appointed Surveyor or a Recognised Organisation acting under the direction of the Administration.

33.12 **Suspension of the NCV Certificate**

13.12.1 Failure to carry out Renewal or Annual Surveys within the specified survey window will result in the automatic suspension of the NCV Certificate. Re-instatement of the NCV Certificate will be granted once the overdue survey are carried out.

33.13 Cargo Ship Safety Construction Certificate (Vessels ≥ 500 GT engaged in domestic navigation or operating exclusively in the Maltese Waters)

33.13.1 A Recognised Organisation or an Appointed Surveyor* shall survey the vessel in accordance to the applicable SOLAS requirements and shall issue a Cargo Ship Safety Construction Certificate.
(*)- refer to limitations on the issuance of Statutory Certificates by Appointed Surveyors detailed in Section 33.1.4.

33.14 Cargo Ship Safety Equipment Certificate (Vessels ≥ 500 GT engaged in domestic navigation or operating exclusively in the Maltese Waters)

33.14.1 A Recognised Organisation or an Appointed Surveyor* shall survey the vessel in accordance to the applicable SOLAS requirements and shall issue a Cargo Ship Safety Equipment Certificate.
(*)- refer to limitations on the issuance of Statutory Certificates by Appointed Surveyors detailed in Section 33.1.4.

33.15 Radio Surveys and Cargo Ship Safety Radio Certificate (Vessels ≥ 300 GT)

33.15.1 Onboard vessels ≥ 300GT and onboard passenger vessels falling under the requirements of the EU Passenger Ship Directive 2009/45/EC an Appointed Surveyor* or Recognised organisation shall appoint an approved service supplier in order to carry out a radio survey in accordance to the applicable SOLAS requirements and shall issue a Cargo Ship Safety Radio Certificate.
(*)- refer to limitations on the issuance of Statutory Certificates by Appointed Surveyors detailed in Section 33.1.4.

33.15.2 Cargo vessels < 300GT and passenger vessels ≥ 15m LoA & < 24m length not falling under the requirements of the EU Passenger Ship Directive 2009/45/EC, certified to operate only in Sea

Area A1 (except those vessels operating less than 3 miles from the Maltese shore) shall be surveyed during their Initial and Renewal surveys (i.e. every 5 years) by an approved radio surveyor. A Radio Inspection Report shall be sent to the Administration.

33.15.3 Cargo vessels < 300GT and passenger vessels ≥ 15m LoA & < 24m in length not falling under the requirements of the EU Passenger Ship Directive 2009/45/EC, certified to operate in Sea Areas A2, A3 or A4, shall be surveyed on an annual basis by an approved radio surveyor. A Radio Inspection Report shall be sent to the Administration.

33.15.4 An annual inspection of EPIRB and AIS, when fitted, shall be carried out by an approved service supplier.

33.16 **ISM and ISPS Certification**

33.16.1 Refer to Sections 19 and 20 of the Code.

33.17 MARPOL Certificates (Tankers ≥ 150GT for MARPOL Annex I and other Vessels ≥ 400 GT)

33.17.1 An Appointed Surveyor* or Recognised Organisation shall survey the vessel in accordance to MARPOL requirements and shall issue the relevant applicable MARPOL Certificates as detailed in Section 18 of this Code.

(*)- refer to limitations on the issuance of Statutory Certificates by Appointed Surveyors detailed in Section 33.1.4.

33.18 Anti-Fouling Systems (AFS) Convention (Vessels ≥ 400 GT)

33.18.1 Vessels ≥ 400GT shall be issued with an AFS Certificate as per Annex III of EC Regulation 782/2003, as amended and the International Antifouling System Convention. Vessels < 400GT (>24m in length) shall be issued with an AFS Declaration.

33.19 Ballast Water Management (BWM) Convention (Vessels ≥ 400 GT)

33.19.1 Vessels ≥ 400GT, engaged on international voyages, shall comply with the survey and certification requirements of the Ballast Water Management (BWM) Convention, as applicable, and be issued with an International Ballast Water Management Certificate. A Statement of Non-Applicability shall be issued, in case of the vessel's compliance with any one of the conditions as stipulated under Article 3.2 of the BWM Convention.

33.20 Merchant Shipping (Maritime Labour Convention) Rules

33.20.1 Refer to Section 15 for MLC Survey and Requirements.

33.21 Load Line Surveys

33.21.1 A Load Line Survey shall be carried out and a Freeboard Assignment Report and an International Load Line Certificate is to be issued on all vessels ≥ 24m in length.

33.22 Tonnage Certificate (Vessels to which this Code applies)

33.22.1 An Appointed Surveyor or a Recognised Organisation shall carry out the necessary measurements and issue a Tonnage Certificate onboard vessels ≥ 24m in length.

33.22.2 Vessels < 24m in length shall be issued with a Certificate of Survey (Tonnage Measurement).

33.23 Minimum Safe Manning Attestation

33.23.1 A minimum safe manning attestation shall be kept on board the vessel at all times. Minimum Safe Manning Attestations are issued by the Administration.

33.23.2 Vessels which are accepted as "Suitable for Single Handed Operations" shall not be issued with a Minimum Safe Manning document.

33.24 Exemption from certain Regulations or Requirements

33.24.1 Exemptions from the application of specific Regulations and/or Requirements may be issued only by the Administration at the sole discretion of the Administration.

33.25 List of Certificates

A list of certificates that shall be provided onboard, as applicable, as provided in Table 1 below.

Table 1- List of Certificates to be issued to Non-Convention Vessels and to vessels operating exclusively within Maltese Waters

CERTIFICATION	SUBJECT AND CONVENTION	ISSUED BY	APPLICABLE VESSEL SIZE / GT	DETAIL & REMARKS
Class Certificate	Class Rules	RO	Refer to Section 33	
Tonnage Certificate	Tonnage ITC	Appointed Surveyor or RO	≥ 24 m	
Certificate of Survey (Tonnage Measurement)	Tonnage ITC	Appointed Surveyor or RO	≥ 15m LoA & < 24 m	
International Load Line Certificate or Assignment of Freeboard Certificate	Load line ILLC	Appointed Surveyor* or RO	≥ 24m (for keel laid on or after 01/07/1968) and ≥ 150 GT (for keel laid prior to 01/07/1968)	
Cargo Ship Safety Construction Certificate	SOLAS, as applicable	Appointed Surveyor* or RO	≥ 500 GT	Only for vessels operating on Domestic Navigation
Cargo Ship Safety Equipment Certificate	SOLAS , as applicable	Appointed Surveyor* or RO	≥ 500 GT	Only for vessels operating on Domestic Navigation
Passenger Ship Safety Certificate	SOLAS, as applicable	The Administration	Passenger vessels for which Directive 2009/45/EC is applicable	Only for vessels operating on Domestic Navigation
High-Speed Craft Safety Certificate	SOLAS HSC Code	Appointed Surveyor* or RO	All	
Cargo Ship Safety Radio Certificate	SOLAS	Appointed Surveyor* or RO	≥ 300GT	
Safety Radio Report		Radio Surveyor	Cargo vessels < 300GT and Passenger vessels < 24m not falling under the EU Passenger Ship Directive and certified to operate in Areas A2, A3 or A4.	

ISM	SOLAS	RO	Refer to Section 19	
ISPS	SOLAS	RO	Refer to Section 20	
MARPOL Certificates IOPP, ISPP, IAPP, IEEC (Section 18 of this Code)	MARPOL	Appointed Surveyor* or RO	All Vessels ≥ 400GT Oil Tanker and Bunker Barges ≥ 150GT in case of Marpol Annex I	
Anti-Fouling Systems (AFS) Certificate **OR** AFS Declaration	AFS	Appointed Surveyor* or RO	All Vessels ≥ 400GT	An AFS-Declaration shall be issued to vessels < 400GT and > 24m in length.
Ballast Water Management (BWM) Certificate **OR** Statement of Non-Applicability	BWM	Appointed Surveyor* or RO	All Vessels ≥ 400GT	Vessels operating exclusively on domestic navigation and vessels complying with one of the Conditions stipulated in Article 3.2 of the BWM Convention shall be issued with a Statement of Non-Applicability.
MLC	ILO	Appointed Surveyor* or RO	Refer to Section 15	
NCV Certificate	NCV Code	The Administration	All	
Minimum Safe Manning Attestation	Manning STCW/SOLAS & Domestic requirements	The Administration	All	

(*) – Appointed Surveyors are authorised to carry out the survey and certification processes pertaining to this Code in the areas in which they are adequately skilled, experienced and qualified to act; and, besides Tonnage Certification, they may issue Statutory Certificates only to vessels operating within 30 nautical miles from Malta and to vessels engaged exclusively in tuna pen towage.