



**JABATAN LAUT MALAYSIA**  
**MARINE DEPARTMENT MALAYSIA**

**MALAYSIAN SHIPPING NOTICE**

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Notis kepada pemilik kapal serta orang yang mempunyai kepentingan kepada kebenaran pengeluaran sijil-sijil statutory.

*Notice to ship owners and persons with interest toward the delegation of statutory certification.*

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**IMPLEMENTATION OF THE INTERNATIONAL CONVENTION FOR THE SAFETY  
OF LIFE AT SEA (SOLAS) 1974/78 AS AMENDED**

1. International Convention for the Safety of Life at Sea (SOLAS) 1974/78 came into effect for Malaysia since 19<sup>th</sup> January 1984. The enforcement of the SOLAS for Malaysia is done by way of the Merchant Shipping Ordinance 1952.
2. Pursuant to the above, the detail requirements and standards for the implementation of the SOLAS 1974/78 **Chapter III - Life-saving appliances and arrangements** for Malaysian Ship as attached in **Appendix 1**
3. This notice is applicable throughout Malaysia and to all Malaysian ships and all ships while in Malaysian waters.

**Ketua Pengarah Laut/ Director General of Marine**  
**Tarikh/Date: 24 DECEMBER 2008**

## Appendix 1

## Chapter III - Life-saving appliances and arrangements

## Part A - General

## Regulation 1 - Application

1. Unless expressly provided otherwise, this chapter shall apply to ships the keels of which are laid or which are at a similar stage of construction on or after 1 July 1998.
2. For the purpose of this chapter, the term a *similar stage of construction* means the stage at which:
  - .1. construction identifiable with a specific ship begins; and
  - .2. assembly of that ship has commenced comprising at least 50 tonnes or 1% of the estimated mass of all structural material, whichever is less.
3. For the purpose of this chapter:
  - .1. the expression *ships constructed* means ships the keels of which are laid or which are at a similar stage of construction;
  - .2. the expression *all ships* means ships constructed before, on or after 1 July 1998; the expressions *all passenger ships* and *all cargo ships* shall be construed accordingly;
  - .3. a cargo ship, whenever built, which is converted to a passenger ship shall be treated as a passenger ship constructed on the date on which such a conversion commences.
4. For ships constructed before 1 July 1998, the Surveyor General shall:
  - .1. ensure that, subject to the provisions of paragraph 4.2, the requirements which are applicable under chapter III of the International Convention for the Safety of Life at Sea, 1974, in force prior to 1 July 1998 to new or existing ships as prescribed by that chapter are complied with; and
  - .2. ensure that when life-saving appliances or arrangements on such ships are replaced or such ships undergo repairs, alterations or modifications of a major character which involve replacement of, or any addition to, their existing life-saving appliances or arrangements, such life-saving appliances or arrangements, in so far as is reasonable and practicable, comply with the requirements of this chapter. However, if a survival craft other than an inflatable liferaft is replaced without replacing its launching appliance, or vice versa, the survival craft or launching appliance may be of the same type as that replaced.

## Regulation 2 - Exemptions

1. The Surveyor General may, if it considers that the sheltered nature and conditions of the voyage are such as to render the application of any specific requirements of this chapter unreasonable or unnecessary, exempt from those requirements individual ships or classes of ships which, in the course of their voyage, do not proceed more than 20 miles from the nearest land.

2. In the case of passenger ships which are employed in special trades for the carriage of large numbers of special trade passengers, such as the pilgrim trade, the Surveyor General, if satisfied that it is impracticable to enforce compliance with the requirements of this chapter, may exempt such ships from those requirements, provided that such ships comply fully with the provisions of:
- .1. the rules annexed to the Special Trade Passenger Ships Agreement, 1971; and
  - .2. the rules annexed to the Protocol on Space Requirements for Special Trade Passenger Ships, 1973

### **Regulation 3 - Definitions**

For the purpose of this chapter, unless expressly provided otherwise:

1. *Anti-exposure suit* is a protective suit designed for use by rescue boat crews and marine evacuation system parties.
2. *Certificated person* is a person who holds a certificate of proficiency in survival craft issued under the authority of, or recognized as valid by, the Director General in accordance with the requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, in force; or a person who holds a certificate issued or recognized by the Director General of a State not a Party to that Convention for the same purpose as the convention certificate.
3. *Detection* is the determination of the location of survivors or survival craft.
4. *Embarkation ladder* is the ladder provided at survival craft embarkation stations to permit safe access to survival craft after launching.
5. *Float-free launching* is that method of launching a survival craft whereby the craft is automatically released from a sinking ship and is ready for use.
6. *Free-fall launching* is that method of launching a survival craft whereby the craft with its complement of persons and equipment on board is released and allowed to fall into the sea without any restraining apparatus.
7. *Immersion suit* is a protective suit which reduces the body heat loss of a person wearing it in cold water.
8. *Inflatable appliance* is an appliance which depends upon non-rigid, gas-filled chambers for buoyancy and which is normally kept uninflated until ready for use.
9. *Inflated appliance* is an appliance which depends upon non-rigid, gas-filled chambers for buoyancy and which is kept inflated and ready for use at all times.
10. *International Life-Saving Appliance (LSA) Code* (referred to as "the Code" in this chapter) means the International Life-Saving Appliances (LSA) Code adopted by the Maritime Safety Committee of the International Maritime Organization by resolution MSC.48(66), as it may be amended by the International Maritime Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I.

11. *Launching appliance or arrangement* is a means of transferring a survival craft or rescue boat from its stowed position safely to the water.
12. *Length* is 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, if that be greater. In ships designed with a rake of keel the waterline on which this is measured shall be parallel to the designed waterline.
13. *Lightest sea going condition* is the loading condition with the ship on even keel, without cargo, with 10% stores and fuel remaining and in the case of a passenger ship with the full number of passengers and crew and their luggage.
14. *Marine evacuation system* is an appliance for the rapid transfer of persons from the embarkation deck of a ship to a floating survival craft.
15. *Moulded depth*
  - .1. The *moulded depth* is the vertical distance measured from the top of the keel to the top of the freeboard deck beam at side. In wood and composite ships the distance is measured from the lower edge of the keel rabbet. Where the form at the lower part of the midship section is of a hollow character, or where thick garboards are fitted, the distance is measured from the point where the line of the flat of the bottom continued inwards cuts the side of the keel.
  - .2. In ships having rounded gunwales, the *moulded depth* shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the line extending as though the gunwale were of angular design.
  - .3. Where the freeboard deck is stepped and the raised part of the deck extends over the point at which the moulded depth is to be determined, the *moulded depth* shall be measured to a line of reference extending from the lower part of the deck along a line parallel with the raised part.
16. *Novel life-saving appliance or arrangement* is a life-saving appliance or arrangement which embodies new features not fully covered by the provisions of this chapter or the Code but which provides an equal or higher standard of safety.
17. *Positive stability* is the ability of a craft to return to its original position after the removal of a heeling moment.
18. *Recovery time* for a rescue boat is the time required to raise the boat to a position where persons on board can disembark to the deck of the ship. Recovery time includes the time required to make preparations for recovery on board the rescue boat such as passing and securing a painter, connecting the rescue boat to the launching appliance, and the time to raise the rescue boat. Recovery time does not include the time needed to lower the launching appliance into position to recover the rescue boat.
19. *Rescue boat* is a boat designed to rescue persons in distress and to marshal survival craft.
20. *Retrieval* is the safe recovery of survivors.
21. *Ro-ro passenger ship* means a passenger ship with ro-ro cargo spaces or special category spaces as defined in regulation II-2/3.

22. *Short international voyage* is an international voyage in the course of which a ship is not more than 200 miles from a port or place in which the passengers and crew could be placed in safety. Neither the distance between the last port of call in the country in which the voyage begins and the final port of destination nor the return voyage shall exceed 600 miles. The final port of destination is the last port of call in the scheduled voyage at which the ship commences its return voyage to the country in which the voyage began.
23. *Survival craft* is a craft capable of sustaining the lives of persons in distress from the time of abandoning the ship.
24. *Thermal protective aid* is a bag or suit made of waterproof material with low thermal conductance.

#### **Regulation 4 - Evaluation, testing and approval of life-saving appliances and arrangements**

1. Except as provided in paragraphs 5 and 6, life-saving appliances and arrangements required by this chapter shall be approved by the Surveyor General .
2. Before giving approval to life-saving appliances and arrangements, the Surveyor General shall ensure that such life-saving appliances and arrangements:
  - .1. are tested, to confirm that they comply with the requirements of this chapter and the Code, in accordance with the recommendations of the International Maritime Organization; or
  - .2. have successfully undergone, to the satisfaction of the Surveyor General , tests which are substantially equivalent to those specified in those recommendations.
3. Before giving approval to novel life-saving appliances or arrangements, the Surveyor General shall ensure that such appliances or arrangements:
  - .1. provide safety standards at least equivalent to the requirements of this chapter and the Code and have been evaluated and tested in accordance with the recommendations of the International Maritime Organization refer to MSN /08 or
  - .2. have successfully undergone, to the satisfaction of the Surveyor General , evaluation and tests which are substantially equivalent to those recommendations.
4. Procedures adopted by the Surveyor General for approval shall also include the conditions whereby approval would continue or would be withdrawn.
5. The Surveyor General shall be satisfied that life-saving appliances and arrangements comply with the requirements of this chapter and the Code before accepting life-saving appliances and arrangements that have not been previously approved.
6. Life-saving appliances required by this chapter for which detailed specifications are not included in the Code shall be to the satisfaction of the Surveyor General.

#### **Regulation 5 - Production tests**

The Surveyor General shall require life-saving appliances to be subjected to such production tests as are necessary to ensure that the life-saving appliances are manufactured to the same standard as the approved prototype.

## **Part B - Requirements for ships and life-saving appliances**

### **Section I - Passenger Ships and Cargo Ships**

#### **Regulation 6 - Communications**

1. Paragraph 2 applies to all passenger ships and to all cargo ships of 300 gross tonnage and upwards.

#### **2 Radio life-saving appliances**

##### **2.1 Two-way VHF radiotelephone apparatus**

2.1.1. At least 3 two-way VHF radiotelephone apparatus shall be provided on every passenger ship and on every cargo ship of 500 gross tonnage and upwards. At least 2 two-way VHF radiotelephone apparatus shall be provided on every cargo ship of 300 gross tonnage and upwards but less than 500 gross tonnage. Such apparatus shall conform to performance standards not inferior to those adopted by the International Maritime Organization refer to IMO Resolution A.809 (19). If a fixed two-way VHF radiotelephone apparatus is fitted in a survival craft it shall conform to performance standards not inferior to those adopted by International Maritime Organization.

2.1.2. Two-way VHF radiotelephone apparatus provided on board ships prior to 1 February 1992 and not complying fully with the performance standards adopted by the International Maritime Organization may be accepted by the Surveyor General until 1 February 1999 provided the Surveyor General is satisfied that they are compatible with approved two-way VHF radiotelephone apparatus.

##### **2.2 Radar transponders**

At least one radar transponder shall be carried on each side of every passenger ship and of every cargo ship of 500 gross tonnage and upwards. At least one radar transponder shall be carried on every cargo ship of 300 gross tonnage and upwards but less than 500 gross tonnage. Such radar transponders shall conform to performance standards not inferior to those adopted by the International Maritime Organization refer to IMO Resolution A.802(19). The radar transponders shall be stowed in such locations that they can be rapidly placed in any survival craft other than the liferaft or liferafts required by regulation 31.1.4. Alternatively one radar transponder shall be stowed in each survival craft other than those required by regulation 31.1.4. On ships carrying at least two radar transponders and equipped with free-fall lifeboats one of the radar transponders shall be stowed in a free-fall lifeboat and the other located in the immediate vicinity of the navigation bridge so that it can be utilized on board and ready for transfer to any of the other survival craft.

#### **3 Distress flares**

Not less than 12 rocket parachute flares, complying with the requirements of section 3.1 of the Code, shall be carried and be stowed on or near the navigation bridge.

#### **4 On-board communications and alarm systems**

- 4.1. An emergency means comprised of either fixed or portable equipment or both shall be provided for two-way communications between emergency control stations, muster and embarkation stations and strategic positions on board.

- 4.2. A general emergency alarm system complying with the requirements of paragraph 7.2.1 of the Code shall be provided and shall be used for summoning passengers and crew to muster stations and to initiate the actions included in the muster list. The system shall be supplemented by either a public address system complying with the requirements of paragraph 7.2.2 of the Code or other suitable means of communication. Entertainment sound systems shall automatically be turned off when the general emergency alarm system is activated.
- 4.3. On passenger ships the general emergency alarm system shall be audible on all open decks.
- 4.4. On ships fitted with a marine evacuation system communication between the embarkation station and the platform or the survival craft shall be ensured.

## 5 Public address systems on passenger ships

- 5.1. In addition to the requirements of regulation II-2/40.5 or regulation II-2/41.2, as appropriate, and of paragraph 4.2, all passenger ships shall be fitted with a public address system. With respect to passenger ships constructed before 1 July 1997 the requirements of paragraphs 5.2 and 5.4, subject to the provisions of paragraph 5.5, shall apply not later than the date of the first periodical survey after 1 July 1997.
- 5.2. The public address system shall be clearly audible above the ambient noise in all spaces, prescribed by paragraph 7.2.2.1 of the Code, and shall be provided with an override function controlled from one location on the navigation bridge and such other places on board as the Surveyor General deems necessary, so that all emergency messages will be broadcast if any loudspeaker in the spaces concerned has been switched off, its volume has been turned down or the public address system is used for other purposes.
- 5.3. On passenger ships constructed on or after 1 July 1997:
- .1. the public address system shall have at least two loops which shall be sufficiently separated throughout their length and have two separate and independent amplifiers; and
  - .2. the public address system and its performance standards shall be approved by the Surveyor General having regard to the recommendations adopted by the International Maritime Organization refer to MSC/Circular.808.
- 5.4. The public address system shall be connected to the emergency source of electrical power required by regulation II-1/42.2.2.
- 5.5. Ships constructed before 1 July 1997 which are already fitted with the public address system approved by the Surveyor General which complies substantially with those required by sections 5.2 and 5.4 and paragraph 7.2.2.1 of the Code are not required to change their system.

## Regulation 7 - Personal life-saving appliances

### 1 Lifebuoys

- 1.1. Lifebuoys complying with the requirements of paragraph 2.1.1 of the Code shall be:

- .1. so distributed as to be readily available on both sides of the ship and as far as practicable on all open decks extending to the ship's side; at least one shall be placed in the vicinity of the stern; and
  - .2. so stowed as to be capable of being rapidly cast loose, and not permanently secured in any way.
- 1.2. At least one lifebuoy on each side of the ship shall be fitted with a buoyant lifeline complying with the requirements of paragraph 2.1.4 of the Code equal in length to not less than twice the height at which it is stowed above the waterline in the lightest seagoing condition, or 30 m, whichever is the greater.
- 1.3. Not less than one half of the total number of lifebuoys shall be provided with lifebuoy self-igniting lights complying with the requirements of paragraph 2.1.2 of the Code; not less than two of these shall also be provided with lifebuoy self-activating smoke signals complying with the requirements of paragraph 2.1.3 of the Code and be capable of quick release from the navigation bridge; lifebuoys with lights and those with lights and smoke signals shall be equally distributed on both sides of the ship and shall not be the lifebuoys provided with lifelines in compliance with the requirements of paragraph 1.2.
- 1.4. Each lifebuoy shall be marked in block capitals of the Roman alphabet with the name and port of registry of the ship on which it is carried.

## 2 Lifejackets

- 2.1. A lifejacket complying with the requirements of paragraph 2.2.1 or 2.2.2 of the Code shall be provided for every person on board the ship and, in addition:
- .1. a number of lifejackets suitable for children equal to at least 10% of the number of passengers on board shall be provided or such greater number as may be required to provide a lifejacket for each child; and
  - .2. a sufficient number of lifejackets shall be carried for persons on watch and for use at remotely located survival craft stations. The lifejackets carried for persons on watch should be stowed on the bridge, in the engine control room and at any other manned watch station.
- 2.2. Lifejackets shall be so placed as to be readily accessible and their position shall be plainly indicated. Where, due to the particular arrangements of the ship, the lifejackets provided in compliance with the requirements of paragraph 2.1 may become inaccessible, alternative provisions shall be made to the satisfaction of the Surveyor General which may include an increase in the number of lifejackets to be carried.
- 2.3. The lifejackets used in totally enclosed lifeboats, except free-fall lifeboats, shall not impede entry into the lifeboat or seating, including operation of the seat belts in the lifeboat.
- 2.4. Lifejackets selected for free-fall lifeboats, and the manner in which they are carried or worn, shall not interfere with entry into the lifeboat, occupant safety or operation of the lifeboat.

## 3 Immersion suits and anti-exposure suits

An immersion suit, complying with the requirements of section 2.3 of the Code or an anti-exposure suit complying with section 2.4 of the Code, of an appropriate size, shall be provided for every person assigned to crew the rescue boat or assigned to the marine evacuation system party. If the



ship is constantly engaged in warm climates refer to MSC/Circular.1046 where, in the opinion of the Surveyor General thermal protection is unnecessary, this protective clothing need not be carried.

### **Regulation 8 - Muster list and emergency instructions**

1. This regulation applies to all ships.
2. Clear instructions to be followed in the event of an emergency shall be provided for every person on board. In the case of passenger ships these instructions shall be drawn up in the language or languages required by the ship's flag State and in the English language.
3. Muster lists and emergency instructions complying with the requirements of regulation 37 shall be exhibited in conspicuous places throughout the ship including the navigating bridge, engine - room and crew accommodation spaces.
4. Illustrations and instructions in appropriate languages shall be posted in passenger cabins and be conspicuously displayed at muster stations and other passenger spaces to inform passengers of:
  - .1. their muster station;
  - .2. the essential actions they must take in an emergency; and
  - .3. the method of donning lifejackets.

### **Regulation 9 - Operating instructions**

1. This regulation applies to all ships.
2. Posters or signs shall be provided on or in the vicinity of survival craft and their launching controls and shall:
  - .1. illustrate the purpose of controls and the procedures for operating the appliance and give relevant instructions or warnings;
  - .2. be easily seen under emergency lighting conditions; and
  - .3. use symbols in accordance with the recommendations of the International Maritime Organization refer to IMO Resolution A.760(18).

### **Regulation 10 - Manning of survival craft and supervision**

1. This regulation applies to all ships.
2. There shall be a sufficient number of trained persons on board for mustering and assisting untrained persons.
3. There shall be a sufficient number of crew members, who may be deck officers or certificated persons, on board for operating the survival craft and launching arrangements required for abandonment by the total number of persons on board.
4. A deck officer or certificated person shall be placed in charge of each survival craft to be used. However, the Surveyor General, having due regard to the nature of the voyage, the number of persons on board and the characteristics of the ship, may permit persons practised in the

handling and operation of liferafts to be placed in charge of liferafts in lieu of persons qualified as above. A second-in-command shall also be nominated in the case of lifeboats.

5. The person in charge of the survival craft shall have a list of the survival craft crew and shall see that the crew under his command are acquainted with their duties. In lifeboats the second-in-command shall also have a list of the lifeboat crew.
6. Every motorized survival craft shall have a person assigned who is capable of operating the engine and carrying out minor adjustments.
7. The master shall ensure the equitable distribution of persons referred to in paragraphs 2, 3 and 4 among the ship's survival craft.

### **Regulation 11 - *Survival craft muster and embarkation arrangements***

1. Lifeboats and liferafts for which approved launching appliances are required shall be stowed as close to accommodation and service spaces as possible.
2. Muster stations shall be provided close to the embarkation stations. Each muster station shall have sufficient clear deck space to accommodate all persons assigned to muster at that station, but at least 0.35 m<sup>2</sup> per person.
3. Muster and embarkation stations shall be readily accessible from accommodation and work areas.
4. Muster and embarkation stations shall be adequately illuminated by lighting supplied from the emergency source of electrical power required by regulation II-1/42 or II-1/43, as appropriate.
5. Alleyways, stairways and exits giving access to the muster and embarkation stations shall be lighted. Such lighting shall be capable of being supplied by the emergency source of electrical power required by regulation II-1/42 or II-1/43, as appropriate. In addition to and as part of the markings required under regulation II-2/28.1.10-, routes to muster stations shall be indicated with the muster station symbol, intended for that purpose, in accordance with the recommendations of the International Maritime Organization refer to MSN /08.
6. Davit-launched and free-fall launched survival craft muster and embarkation stations shall be so arranged as to enable stretcher cases to be placed in survival craft.
7. An embarkation ladder complying with the requirements of paragraph 6.1.6 of the Code extending, in a single length, from the deck to the waterline in the lightest seagoing condition under unfavourable conditions of trim of up to 10° and a list of up to 20° either way shall be provided at each embarkation station or at every two adjacent embarkation stations for survival craft launched down the side of the ship. However, the Surveyor General may permit such ladders to be replaced by approved devices to afford access to the survival craft when waterborne, provided that there shall be at least one embarkation ladder on each side of the ship. Other means of embarkation enabling descent to the water in a controlled manner may be permitted for the liferafts required by regulation 31.1.4.
8. Where necessary, means shall be provided for bringing the davit-launched survival craft against the ship's side and holding them alongside so that persons can be safely embarked.

## Regulation 12 - *Launching stations*

Launching stations shall be in such positions as to ensure safe launching having particular regard to clearance from the propeller and steeply overhanging portions of the hull and so that, as far as possible, survival craft, except survival craft specially designed for free -fall launching, can be launched down the straight side of the ship. If positioned forward, they shall be located abaft the collision bulkhead in a sheltered position and, in this respect, the Surveyor General shall give special consideration to the strength of the launching appliance.

## Regulation 13 - *Stowage of survival craft*

1. Each survival craft shall be stowed:
  - .1. so that neither the survival craft nor its stowage arrangements will interfere with the operation of any other survival craft or rescue boat at any other launching station;
  - .2. as near the water surface as is safe and practicable and, in the case of a survival craft other than a liferaft intended for throw over board launching, in such a position that the survival craft in the embarkation position is not less than 2 m above the waterline with the ship in the fully loaded condition under unfavourable conditions of trim of up to 10° and listed up to 20° either way, or to the angle at which the ship's weatherdeck edge becomes submerged, whichever is less;
  - .3. in a state of continuous readiness so that two crew members can carry out preparations for embarkation and launching in less than 5 min;
  - .4. fully equipped as required by this chapter and the Code; and
  - .5. as far as practicable, in a secure and sheltered position and protected from damage by fire and explosion. In particular, survival craft on tankers, other than the liferafts required by regulation 31.1.4, shall not be stowed on or above a cargo tank, slop tank, or other tank containing explosive or hazardous cargoes.
2. Lifeboats for lowering down the ship's side shall be stowed as far forward of the propeller as practicable. On cargo ships of 80 m in length and upwards but less than 120 m in length, each lifeboat shall be so stowed that the after end of the lifeboat is not less than the length of the lifeboat forward of the propeller. On cargo ships of 120 m in length and upwards and passenger ships of 80 m in length and upwards, each lifeboat shall be so stowed that the after end of the lifeboat is not less than 1.5 times the length of the lifeboat forward of the propeller. Where appropriate, the ship shall be so arranged that lifeboats, in their stowed positions, are protected from damage by heavy seas.
3. Lifeboats shall be stowed attached to launching appliances.
  - 4.1. Every liferaft shall be stowed with its painter permanently attached to the ship.
  - 4.2. Each liferaft or group of liferafts, shall be stowed with a float-free arrangement complying with the requirements of paragraph 4.1.6 of the Code so that each floats free and, if inflatable, inflates automatically when the ship sinks.
  - 4.3. Liferafts shall be so stowed as to permit manual release of one raft or container at a time from their securing arrangements.
  - 4.4. Paragraphs 4.1 and 4.2 do not apply to liferafts required by regulation 31.1.4.

5. Davit-launched liferafts shall be stowed within reach of the lifting hooks, unless some means of transfer is provided which is not rendered inoperable within the limits of trim and list prescribed in paragraph 1.2 or by ship motion or power failure.
6. Liferafts intended for throw-overboard launching shall be so stowed as to be readily transferable for launching on either side of the ship unless liferafts, of the aggregate capacity required by regulation 31.1 to be capable of being launched on either side, are stowed on each side of the ship.

#### **Regulation 14 - Stowage of rescue boats**

Rescue boats shall be stowed:

- .1. in a state of continuous readiness for launching in not more than 5 min;
- .2. in a position suitable for launching and recovery;
- .3. so that neither the rescue boat nor its stowage arrangements will interfere with the operation of any survival craft at any other launching station; and
- .4. if it is also a lifeboat, in compliance with the requirements of regulation 13.

#### **Regulation 15 - Stowage of marine evacuation systems**

1. The ship's side shall not have any openings between the embarkation station of the marine evacuation system and the waterline in the lightest seagoing condition and means shall be provided to protect the system from any projections.
2. Marine evacuation systems shall be in such positions as to ensure safe launching having particular regard to clearance from the propeller and steeply overhanging positions of the hull and so that, as far as practicable, the system can be launched down the straight side of the ship.
3. Each marine evacuation system shall be stowed so that neither the passage or platform nor its stowage or operational arrangements will interfere with the operation of any other life-saving appliance at any other launching station.
4. Where appropriate, the ship shall be so arranged that the marine evacuation systems in their stowed positions are protected from damage by heavy seas.

#### **Regulation 16 - Survival craft launching and recovery arrangements**

1. Unless expressly provided otherwise, launching and embarkation appliances complying with the requirements of section 6.1 of the Code shall be provided for all survival craft except those which are:
  - .1. boarded from a position on deck less than 4.5 m above the waterline in the lightest seagoing condition and which have a mass of not more than 185 kg; or
  - .2. boarded from a position on deck less than 4.5 m above the waterline in the lightest seagoing condition and which are stowed for launching directly from the stowed position under unfavourable conditions of trim of up to 10° and list of up to 20° either way; or
  - .3. carried in excess of the survival craft for 200% of the total number of persons on board the ship and which have a mass of not more than 185 kg; or

- .4. carried in excess of the survival craft for 200% of the total number of persons on board the ship, are stowed for launching directly from the stowed position under unfavourable conditions of trim of up to 10° and list of up to 20° either way, or
  - .5. provided for use in conjunction with a marine evacuation system, complying with the requirements of section 6.2 of the Code and stowed for launching directly from the stowed position under unfavourable conditions of trim of up to 10° and list of up to 20° either way.
2. Each lifeboat shall be provided with an appliance which is capable of launching and recovering the lifeboat. In addition there shall be provision for hanging-off the lifeboat to free the release gear for maintenance.
  3. Launching and recovery arrangements shall be such that the appliance operator on the ship is able to observe the survival craft at all times during launching and for lifeboats during recovery.
  4. Only one type of release mechanism shall be used for similar survival craft carried on board the ship.
  5. Preparation and handling of survival craft at any one launching station shall not interfere with the prompt preparation and handling of any other survival craft or rescue boat at any other station.
  6. Falls, where used, shall be long enough for the survival craft to reach the water with the ship in its lightest seagoing condition, under unfavourable conditions of trim of up to 10° and list of up to 20° either way.
  7. During preparation and launching, the survival craft, its launching appliance, and the area of water into which it is to be launched shall be adequately illuminated by lighting supplied from the emergency source of electrical power required by regulation II-1/42 or II-1/43, as appropriate.
  8. Means shall be available to prevent any discharge of water onto survival craft during abandonment.
  9. If there is a danger of the survival craft being damaged by the ship's stabilizer wings, means shall be available, powered by an emergency source of energy, to bring the stabilizer wings inboard; indicators operated by an emergency source of energy shall be available on the navigation bridge to show the position of the stabilizer wings.
  10. If partially enclosed lifeboats complying with the requirements of section 4.5 of the Code are carried, a davit span shall be provided, fitted with not less than two lifelines of sufficient length to reach the water with the ship in its lightest seagoing condition, under unfavourable conditions of trim of up to 10° and list of up to 20° either way.

#### **Regulation 17 - *Rescue boat embarkation, launching and recovery arrangements***

1. The rescue boat embarkation and launching arrangements shall be such that the rescue boat can be boarded and launched in the shortest possible time.
2. If the rescue boat is one of the ship's survival craft, the embarkation arrangements and launching station shall comply with the requirements of regulations 11 and 12.
3. Launching arrangements shall comply with the requirements of regulation 16. However, all rescue boats shall be capable of being launched, where necessary utilizing painters, with the ship making headway at speeds up to 5 knots in calm water.

4. Recovery time of the rescue boat shall be not more than 5 min in moderate sea conditions when loaded with its full complement of persons and equipment. If the rescue boat is also a lifeboat, this recovery time shall be possible when loaded with its lifeboat equipment and the approved rescue boat complement of at least six persons.
5. Rescue boat embarkation and recovery arrangements shall allow for safe and efficient handling of a stretcher case. Foul weather recovery strops shall be provided for safety if heavy fall blocks constitute a danger.

### **Regulation 18 - *Line-throwing appliances***

A line-throwing appliance complying with the requirements of section 7.1 of the Code shall be provided.

### **Regulation 19 - *Emergency training and drills***

1. This regulation applies to all ships.

#### **2 Familiarity with safety installations and practice musters**

- 2.1. Every crew member with assigned emergency duties shall be familiar with these duties before the voyage begins.
- 2.2. On a ship engaged on a voyage where passengers are scheduled to be on board for more than 24 h, musters of the passengers shall take place within 24 h after their embarkation. Passengers shall be instructed in the use of the lifejackets and the action to take in an emergency.
- 2.3. Whenever new passengers embark, a passenger safety briefing shall be given immediately before sailing, or immediately after sailing. The briefing shall include the instructions required by regulations 8.2 and 8.4, and shall be made by means of an announcement, in one or more languages likely to be understood by the passengers. The announcement shall be made on the ship's public address system, or by other equivalent means likely to be heard at least by the passengers who have not yet heard it during the voyage. The briefing may be included in the muster required by paragraph 2.2 if the muster is held immediately upon departure. Information cards or posters or video programmes displayed on ships' video displays may be used to supplement the briefing, but may not be used to replace the announcement.

#### **3 Drills**

- 3.1. Drills shall, as far as practicable, be conducted as if there were an actual emergency.
- 3.2. Every crew member shall participate in at least one abandon ship drill and one fire drill every month. The drills of the crew shall take place within 24 h of the ship leaving a port if more than 25% of the crew have not participated in abandon ship and fire drills on board that particular ship in the previous month. When a ship enters service for the first time, after modification of a major character or when a new crew is engaged, these drills shall be held before sailing. The Surveyor General may accept other arrangements that are at least equivalent for those classes of ships for which this is impracticable.

### 3.3 Abandon ship drill

3.3.1. Each abandon ship drill shall include:

- .1. summoning of passengers and crew to muster stations with the alarm required by regulation 6.4.2 followed by drill announcement on the public address or other communication system and ensuring that they are made aware of the order to abandon ship;
- .2. reporting to stations and preparing for the duties described in the muster list;
- .3. checking that passengers and crew are suitably dressed;
- .4. checking that lifejackets are correctly donned;
- .5. lowering of at least one lifeboat after any necessary preparation for launching;
- .6. starting and operating the lifeboat engine;
- .7. operation of davits used for launching liferafts;
- .8. a mock search and rescue of passengers trapped in their staterooms; and
- .9. instruction in the use of radio life-saving appliances.

3.3.2. Different lifeboats shall, as far as practicable, be lowered in compliance with the requirements of paragraph 3.3.1.5 at successive drills.

3.3.3. Except as provided in paragraphs 3.3.4 and 3.3.5, each lifeboat shall be launched, and manoeuvred in the water by its assigned operating crew, at least once every three months during an abandon ship drill.

3.3.4. In the case of a lifeboat arranged for free-fall launching, at least once every three months during an abandon ship drill the crew shall board the lifeboat, properly secure themselves in their seats and commence launch procedures up to but not including the actual release of the lifeboat (i.e., the release hook shall not be released). The lifeboat shall then either be free-fall launched with only the required operating crew on board, or lowered into the water by means of the secondary means of launching with or without the operating crew on board. In both cases the lifeboat shall thereafter be manoeuvred in the water by the operating crew. At intervals of not more than six months, the lifeboat shall either be launched by free-fall with only the operating crew on board, or simulated launching shall be carried out in accordance with the guidelines developed by the Organization refer to MSC.1/Circ.1206

3.3.5. The Surveyor General may allow ships operating on short international voyages not to launch the lifeboats on one side if their berthing arrangements in port and their trading patterns do not permit launching of lifeboats on that side. However, all such lifeboats shall be lowered at least once every three months and launched at least annually.

3.3.6. As far as is reasonable and practicable, rescue boats other than lifeboats which are also rescue boats, shall be launched each month with their assigned crew aboard and manoeuvred in the water. In all cases this requirement shall be complied with at least once every three months.

- 3.3.7. If lifeboat and rescue boat launching drills are carried out with the ship making headway, such drills shall, because of the dangers involved, be practised in sheltered waters only and under the supervision of an officer experienced in such drills refer to IMO Resolution A.624(15).
- 3.3.8. If a ship is fitted with marine evacuation systems, drills shall include exercising of the procedures required for the deployment of such a system up to the point immediately preceding actual deployment of the system. This aspect of drills should be augmented by regular instruction using the on-board training aids required by regulation 35.4. Additionally every system party member shall, as far as practicable, be further trained by participation in a full deployment of a similar system into water, either on board a ship or ashore, at intervals of not longer than two years, but in no case longer than three years. This training can be associated with the deployments required by regulation 20.8.2.
- 3.3.9. Emergency lighting for mustering and abandonment shall be tested at each abandon ship drill.

### 3.4 Fire drills

- 3.4.1. Fire drills should be planned in such a way that due consideration is given to regular practice in the various emergencies that may occur depending on the type of ships and the cargo.
- 3.4.2. Each fire drill shall include:
- .1. reporting to stations and preparing for the duties described in the muster list required by regulation 8;
  - .2. starting of a fire pump, using at least the two required jets of water to show that the system is in proper working order;
  - .3. checking of fireman's outfit and other personal rescue equipment;
  - .4. checking of relevant communication equipment;
  - .5. checking the operation of watertight doors, fire doors, fire dampers and main inlets and outlets of ventilation systems in the drill area; and
  - .6. checking the necessary arrangements for subsequent abandoning of the ship.
- 3.4.3. The equipment used during drills shall immediately be brought back to its fully operational condition and any faults and defects discovered during the drills shall be remedied as soon as possible.

## 4 On-board training and instructions

- 4.1. On-board training in the use of the ship's life-saving appliances, including survival craft equipment, and in the use of the ship's fire-extinguishing appliances shall be given as soon as possible but not later than two weeks after a crew member joins the ship. However, if the crew member is on a regularly scheduled rotating assignment to the ship, such training shall be given not later than two weeks after the time of first joining the ship. Instructions in the use of the ship's fire-extinguishing appliances, life-saving appliances, and in survival at sea shall be given at the same interval as the drills. Individual instruction may cover



different parts of the ship's life-saving and fire-extinguishing appliances, but all the ship's life-saving and fire-extinguishing appliances shall be covered within any period of two months.

- 4.2. Every crew member shall be given instructions which shall include but not necessarily be limited to:
  - .1. operation and use of the ship's inflatable liferafts;
  - .2. problems of hypothermia, first-aid treatment for hypothermia and other appropriate first-aid procedures;
  - .3. special instructions necessary for use of the ship's life-saving appliances in severe weather and severe sea conditions; and
  - .4. operation and use of fire-extinguishing appliances.
- 4.3. On-board training in the use of davit-launched liferafts shall take place at intervals of not more than four months on every ship fitted with such appliances. Whenever practicable this shall include the inflation and lowering of a liferaft. This liferaft may be a special liferaft intended for training purposes only, which is not part of the ship's life-saving equipment; such a special liferaft shall be conspicuously marked.

## 5 Records

The date when musters are held, details of abandon ship drills and fire drills, drills of other life-saving appliances and on-board training shall be recorded in such log-book as may be prescribed by the Surveyor General. If a full muster, drill or training session is not held at the appointed time, an entry shall be made in the log-book stating the circumstances and the extent of the muster, drill or training session held.

## Regulation 20 - *Operational readiness, maintenance and inspections*

1. This regulation applies to all ships. The requirements of paragraphs 3.2, 3.3 and 6.2 shall be complied with, as far as is practicable, on ships constructed before 1 July 1986.

### 2 Operational readiness

Before the ship leaves port and at all times during the voyage, all life-saving appliances shall be in working order and ready for immediate use.

### 3 Maintenance

- 3.1. Maintenance, testing and inspections of life-saving appliances shall be carried out based on the guidelines developed by the International Maritime Organization refer to MSC/Circular.1093 and MSC.1/Circular 1206 and in a manner having due regard to ensuring reliability of such appliances.
- 3.2. Instructions for on-board maintenance of life-saving appliances complying with regulation 36 shall be provided and maintenance shall be carried out accordingly.
- 3.3. The Surveyor General may accept, in compliance with the requirements of paragraph 3.2, a shipboard planned maintenance programme, which includes the requirements of regulation 36."

## 4 Maintenance of falls

- 4.1. Falls used in launching shall be turned end for end at intervals of not more than 30 months and be renewed when necessary due to deterioration of the falls or at intervals of not more than five years, whichever is the earlier.
- 4.2. The Surveyor General may accept in lieu of the "end for ending" required in paragraph 4.1, periodic inspection of the falls and their renewal whenever necessary due to deterioration or at intervals of not more than four years, whichever one is earlier.

## 5 Spares and repair equipment

Spares and repair equipment shall be provided for life-saving appliances and their components which are subject to excessive wear or consumption and need to be replaced regularly.

## 6 Weekly inspection

The following tests and inspections shall be carried out weekly and a report of the inspection shall be entered in the log-book:

- .1. all survival craft, rescue boats and launching appliances shall be visually inspected to ensure that they are ready for use. The inspection shall include, but is not limited to, the condition of hooks, their attachment to the lifeboat and the on-load release gear being properly and completely reset;
- .2. all engines in lifeboats and rescue boats shall be run for a total period of not less than 3 min, provided the ambient temperature is above the minimum temperature required for starting and running the engine. During this period of time it should be demonstrated that the gear box and gear box train are engaging satisfactorily. If the special characteristics of an outboard motor fitted to a rescue boat would not allow it to be run other than with its propeller submerged for a period of 3 min, it should be run for such a period as prescribed in the manufacturer's handbook. In special cases the Surveyor General may waive this requirement for ships constructed before 1 July 1986;
- .3. lifeboats, except free-fall lifeboats, on cargo ships shall be moved from their stowed position, without any persons on board, to the extent necessary to demonstrate satisfactory operation of launching appliances, if weather and sea conditions so allow; and
- .4. the general emergency alarm shall be tested.

## 7 Monthly inspections

- 7.1. All lifeboats, except free-fall lifeboats, shall be turned out from their stowed position, without any persons on board if weather and sea conditions so allow.
- 7.2. Inspection of the life-saving appliances, including lifeboat equipment, shall be carried out monthly using the checklist required by regulation 36.1 to ensure that they are complete and in good order. A report of the inspection shall be entered in the log-book.

## 8 Servicing of inflatable liferafts, inflatable lifejackets, marine evacuation systems, and inflated rescue boats.

- 8.1. Every inflatable liferaft, inflatable lifejacket, and marine evacuation system shall be serviced:

- .1. at intervals not exceeding 12 months, provided where in any case this is impracticable, the Surveyor General may extend this period to 17 months; and
- .2. at an approved servicing station which is competent to service them, maintains proper servicing facilities and uses only properly trained personnel -.

## **8.2 Rotational deployment of marine evacuation systems**

In addition to or in conjunction with the servicing intervals of marine evacuation systems required by paragraph 8.1, each marine evacuation system should be deployed from the ship on a rotational basis at intervals to be agreed by the Surveyor General provided that each system is to be deployed at least once every six years.

8.3. The Surveyor General which approves new and novel inflatable liferaft arrangements pursuant to regulation 4 may allow for extended service intervals on the following conditions:

8.3.1. The new and novel liferaft arrangement has proved to maintain the same standard, as required by testing procedure, during extended service intervals.

8.3.2. The liferaft system shall be checked on board by certified personnel according to paragraph 8.1.1.

8.3.3. Service at intervals not exceeding five years shall be carried out in accordance with the recommendations of the International Maritime Organization -.

8.4. All repairs and maintenance of inflated rescue boats shall be carried out in accordance with the manufacturer's instructions. Emergency repairs may be carried out on board the ship; however, permanent repairs shall be effected at an approved servicing station.

8.5. The Surveyor General which permits extension of liferaft service intervals in accordance with paragraph 8.3 shall notify the International Maritime Organization of such action in accordance with regulation I/5(b).

## **9 Periodic servicing of hydrostatic release units**

Hydrostatic release units, other than disposable hydrostatic release units, shall be serviced:

- .1. at intervals not exceeding 12 months, provided where in any case this is impracticable, the Surveyor General may extend this period to 17 months; -and
- .2. at a servicing station which is competent to service them, maintains proper servicing facilities and uses only properly trained personnel.

## **10 Marking of stowage locations**

Containers, brackets, racks, and other similar stowage locations for life-saving equipment, shall be marked with symbols in accordance with the recommendations of the International Maritime Organization -, indicating the devices stowed in that location for that purpose. If more than one device is stowed in that location, the number of devices shall also be indicated.

## **11 Periodic servicing of launching appliances and on-load release gear**

11.1. Launching appliances shall be:

- .1. maintained in accordance with instructions for on-board maintenance as required by regulation 36;
  - .2. subject to a thorough examination at the annual surveys required by regulations I/7 or I/8, as applicable; and
  - .3. upon completion of the examination referred to in .2 subjected to a dynamic test of the winch brake at maximum lowering speed. The load to be applied shall be the mass of the survival craft or rescue boat without persons on board, except that, at intervals not exceeding five years, the test shall be carried out with a proof load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment.
- 11.2. Lifeboat or rescue boat on-load release gear, including free-fall lifeboat release systems, shall be:
- .1. maintained in accordance with instructions for on-board maintenance as required by regulation 36;
  - .2. subject to a thorough examination and operational test during the annual surveys required by regulation I/7 and I/8 by properly trained personnel familiar with the system; and
  - .3. operationally tested under a load of 1.1 times the total mass of the boat when loaded with its full complement of persons and equipment whenever the release gear is overhauled. Such over-hauling and test shall be carried out at least once every five years refer to Resolution MSC.81(70)
- 11.3. Davit-launched liferaft automatic release hooks shall be:
- .1. maintained in accordance with instructions for on-board maintenance as required by regulation 36;
  - .2. subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8 by properly trained personnel familiar with the system; and
  - .3. operationally tested under a load of 1.1 times the total mass of the liferaft when loaded with its full complement of persons and equipment whenever the automatic release hook is overhauled. Such over-hauling and test shall be carried out at least once every five years. refer to Resolution MSC.81(70)

## **Regulation 21 - *Survival craft and rescue boats***

### **1 Survival craft**

- 1.1. Passenger ships engaged on international voyages which are not short international voyages shall carry:
- .1. partially or totally enclosed lifeboats complying with the requirements of section 4.5 or 4.6 of the Code on each side of such aggregate capacity as will accommodate not less than 50% of the total number of persons on board. The Surveyor General may permit the substitution of lifeboats by liferafts of equivalent total capacity provided that there shall never be less than sufficient lifeboats on each side of the ship to accommodate

37.5% of the total number of persons on board. The inflatable or rigid liferafts shall comply with the requirements of section 4.2 or 4.3 of the Code and shall be served by launching appliances equally distributed on each side of the ship, and

- .2. in addition, inflatable or rigid liferafts complying with the requirements of section 4.2 or 4.3 of the Code of such aggregate capacity as will accommodate at least 25% of the total number of persons on board. These liferafts shall be served by at least one launching appliance on each side which may be those provided in compliance with the requirements of paragraph 1.1.1 or equivalent approved appliances capable of being used on both sides. However, stowage of these liferafts need not comply with the requirements of regulation 13.5.

1.2. Passenger ships engaged on short international voyages and complying with the special standards of subdivision prescribed by regulation II-1/6.5 shall carry:

- .1. partially or totally enclosed lifeboats complying with the requirements of section 4.5 or 4.6 of the Code of such aggregate capacity as will accommodate at least 30% of the total number of persons on board. The lifeboats shall, as far as practicable, be equally distributed on each side of the ship. In addition inflatable or rigid liferafts complying with the requirements of section 4.2 or 4.3 of the Code shall be carried of such aggregate capacity that, together with the lifeboat capacity, the survival craft will accommodate the total number of persons on board. The liferafts shall be served by launching appliances equally distributed on each side of the ship; and
- .2. in addition, inflatable or rigid liferafts complying with the requirements of section 4.2 or 4.3 of the Code of such aggregate capacity as will accommodate at least 25% of the total number of persons on board. These liferafts shall be served by at least one launching appliance on each side which may be those provided in compliance with the requirements of paragraph 1.2.1 or equivalent approved appliances capable of being used on both sides. However, stowage of these liferafts need not comply with the requirements of regulation 13.5.

1.3. Passenger ships engaged on short international voyages and not complying with the special standards of subdivision prescribed by regulation II-1/6.5, shall carry survival craft complying with the requirements of paragraph 1.1.

1.4. All survival craft required to provide for abandonment by the total number of persons on board shall be capable of being launched with their full complement of persons and equipment within a period of 30 min from the time the abandon ship signal is given.

1.5. In lieu of meeting the requirements of paragraph 1.1, 1.2 or 1.3, passenger ships of less than 500 gross tonnage where the total number of persons on board is less than 200, may comply with the following:

- .1. They shall carry on each side of the ship, inflatable or rigid liferafts complying with the requirements of section 4.2 or 4.3 of the Code and of such aggregate capacity as will accommodate the total number of persons on board;
- .2. Unless the liferafts required by paragraph 1.5.1 are stowed in a position providing for easy side-to-side transfer at a single open deck level, additional liferafts shall be provided so that the total capacity available on each side will accommodate 150% of the total number of persons on board.

- .3. If the rescue boat required by paragraph 2.2 is also a partially or totally enclosed lifeboat complying with the requirements of section 4.5 or 4.6 of the Code, it may be included in the aggregate capacity required by paragraph 1.5.1, provided that the total capacity available on either side of the ship is at least 150% of the total number of persons on board; and
  - .4. In the event of any one survival craft being lost or rendered unserviceable, there shall be sufficient survival craft available for use on each side, including those which are stowed in a position providing for easy side-to-side transfer at a single open deck level, to accommodate the total number of persons on board.
- 1.6. A marine evacuation system or systems complying with section 6.2 of the Code may be substituted for the equivalent capacity of liferafts and launching appliances required by paragraph 1.1.1 or 1.2.1.

## 2 Rescue boats

- 2.1. Passenger ships of 500 gross tonnage and over shall carry at least one rescue boat complying with the requirements of section 5.1 of the Code on each side of the ship.
- 2.2. Passenger ships of less than 500 gross tonnage shall carry at least one rescue boat complying with the requirements of section 5.1 of the Code.
- 2.3. A lifeboat may be accepted as a rescue boat provided it also complies with the requirements for a rescue boat.

## 3 Marshalling of liferafts

- 3.1. The number of lifeboats and rescue boats that are carried on passenger ships shall be sufficient to ensure that in providing for abandonment by the total number of persons on board not more than six liferafts need be marshalled by each lifeboat or rescue boat.
- 3.2. The number of lifeboats and rescue boats that are carried on passenger ships engaged on short international voyages and complying with the special standards of subdivision prescribed by regulation II-1/6.5 shall be sufficient to ensure that in providing for abandonment by the total number of persons on board not more than nine liferafts need be marshalled by each lifeboat or rescue boat.

## Regulation 22 - *Personal life-saving appliances*

### 1 Lifebuoys

- 1.1. A passenger ship shall carry not less than the number of lifebuoys complying with the requirements of regulation 7.1 and section 2.1 of the Code prescribed in the following table:

Length of ship in metres	Minimum number of lifebuoys
Under 60	8
60 and under 120	12
120 and under 180	18
180 and under 240	24

240 and over

30

- 1.2. Notwithstanding regulation 7.1.3, passenger ships of under 60 m in length shall carry not less than six lifebuoys provided with self-igniting lights.

## 2 Lifejackets

- 2.1. In addition to the lifejackets required by regulation 7.2, every passenger ship shall carry lifejackets for not less than 5% of the total number of persons on board. These lifejackets shall be stowed in conspicuous places on deck or at muster stations.
- 2.2. Where lifejackets for passengers are stowed in staterooms which are located remotely from direct routes between public spaces and muster stations, the additional lifejackets for these passengers required under regulation 7.2.2, shall be stowed either in the public spaces, the muster stations, or on direct routes between them. The lifejackets shall be stowed so that their distribution and donning does not impede orderly movement to muster stations and survival craft embarkation stations.

## 3 Lifejacket lights

- 3.1. On all passenger ships each lifejacket shall be fitted with a light complying with the requirements of paragraph 2.2.3 of the Code.
- 3.2. Lights fitted on lifejackets on board passenger ships prior to 1 July 1998 and not complying fully with paragraph 2.2.3 of the Code may be accepted by the Surveyor General until the lifejacket light would normally be replaced or until the first periodical survey after 1 July 2002, whichever is the earliest.

## 4 Immersion suits and thermal protective aids

- 4.1. All passenger ships shall carry for each lifeboat on the ship at least three immersion suits complying with the requirements of section 2.3 of the Code and, in addition, a thermal protective aid complying with the requirements of section 2.5 of the Code for every person to be accommodated in the lifeboat and not provided with an immersion suit. These immersion suits and thermal protective aids need not be carried:
- .1. for persons to be accommodated in totally or partially enclosed lifeboats; or
  - .2. if the ship is constantly engaged on voyages in warm climates—where, in the opinion of the Surveyor General, they are unnecessary.
- 4.2. The provisions of paragraph 4.1.1 also apply to partially or totally enclosed lifeboats not complying with the requirements of section 4.5 or 4.6 of the Code, provided they are carried on ships constructed before 1 July 1986.

### **Regulation 23 - Survival craft and rescue boat embarkation arrangements**

1. On passenger ships, survival craft embarkation arrangements shall be designed for:
- .1. all lifeboats to be boarded and launched either directly from the stowed position or from an embarkation deck but not both; and

- .2. davit-launched liferafts to be boarded and launched from a position immediately adjacent to the stowed position or from a position to which, in compliance with the requirements of regulation 13.5, the liferaft is transferred prior to launching.
2. Rescue boat arrangements shall be such that the rescue boat can be boarded and launched directly from the stowed position with the number of persons assigned to crew the rescue boat on board. Notwithstanding the requirements of paragraph 1.1, if the rescue boat is also a lifeboat and the other lifeboats are boarded and launched from an embarkation deck, the arrangements shall be such that the rescue boat can also be boarded and launched from the embarkation deck.

### **Regulation 24 - Stowage of survival craft**

The stowage height of a survival craft on a passenger ship shall take into account the requirements of regulation 13.1.2, the escape provisions of regulation II-2/28, the size of the ship, and the weather conditions likely to be encountered in its intended area of operation. For a davit-launched survival craft, the height of the davit head with the survival craft in embarkation position, shall, as far as practicable, not exceed 15 m to the waterline when the ship is in its lightest seagoing condition.

### **Regulation 25 - Muster stations**

Every passenger ship shall, in addition to complying with the requirements of regulation 11, have passenger muster stations which shall:

- .1. be in the vicinity of, and permit ready access for the passengers to, the embarkation stations unless in the same location; and
- .2. have ample room for marshalling and instruction of the passengers, but at least 0.35 m<sup>2</sup> per passenger.

### **Regulation 26 - Additional requirements for ro-ro passenger ships**

1. This regulation applies to all ro-ro passenger ships. Ro-ro passenger ships constructed:
- .1. on or after 1 July 1998 shall comply with the requirements of paragraphs 2.3, 2.4, 3.1, 3.2, 3.3, 4 and 5;
  - .2. on or after 1 July 1986 and before 1 July 1998 shall comply with the requirements of paragraph 5 not later than the first periodical survey after 1 July 1998 and with the requirements of paragraphs 2.3, 2.4, 3 and 4 not later than the first periodical survey after 1 July 2000; and
  - .3. before 1 July 1986 shall comply with the requirements of paragraph 5 not later than the first periodical survey after 1 July 1998 and with the requirements of paragraphs 2.1, 2.2, 2.3, 2.4, 3 and 4 not later than the first periodical survey after 1 July 2000.
  - .4. before 1 July 2004 shall comply with the requirements of paragraph 2.5 not later than the first survey on or after that date.

## **2 Liferafts**

- 2.1. The ro-ro passenger ship's liferafts shall be served by marine evacuation systems complying with the requirements of section 6.2 of the Code or launching appliances



complying with the requirements of paragraph 6.1.5 of the Code, equally distributed on each side of the ship.

- 2.2. Every liferaft on ro-ro passenger ships shall be provided with float-free stowage arrangements complying with the requirements of regulation 13.4.
- 2.3. Every liferaft on ro-ro passenger ships shall be of a type fitted with a boarding ramp complying with the requirements of paragraph 4.2.4.1 or 4.3.4.1 of the Code, as appropriate.
- 2.4. Every liferaft on ro-ro passenger ships shall either be automatically self-righting or be a canopied reversible liferaft which is stable in a seaway and is capable of operating safely whichever way up it is floating. Alternatively, the ship shall carry automatically self-righting liferafts or canopied reversible liferafts, in addition to its normal complement of liferafts, of such aggregate capacity as will accommodate at least 50% of the persons not accommodated in lifeboats. This additional liferaft capacity shall be determined on the basis of the difference between the total number of persons on board and the number of persons accommodated in lifeboats. Every such liferaft shall be approved by the Surveyor General having regard to the recommendations adopted by the International Maritime Organization -
- 2.5. Liferafts carried on ro-ro passenger ships shall be fitted with a radar transponder -in the ratio of one transponder for every four liferafts. The transponder shall be mounted inside the liferaft so its antenna is more than one metre above the sea level when the liferaft is deployed, except that for canopied reversible liferafts the transponder shall be so arranged as to be readily accessed and erected by survivors. Each transponder shall be arranged to be manually erected when the liferaft is deployed. Containers of liferafts fitted with transponders shall be clearly marked.

### 3 Fast rescue boats

- 3.1. At least one of the rescue boats on a ro-ro passenger ship shall be a fast rescue boat approved by the Surveyor General having regard to the recommendations adopted by the International Maritime Organization Refer to MSC/Circ.809.
- 3.2. Each fast rescue boat shall be served by a suitable launching appliance approved by the Surveyor General. When approving such launching appliances, the Surveyor General shall take into account that the fast rescue boat is intended to be launched and retrieved even under severe adverse weather conditions, and also shall have regard to the recommendations adopted by the International Maritime Organization -.
- 3.3. At least two crews of each fast rescue boat shall be trained and drilled regularly having regard to the Seafarers Training, Certification and Watchkeeping (STCW) Code and recommendations adopted by the International Maritime Organization, -including all aspects of rescue, handling, manoeuvring, operating these craft in various conditions, and righting them after capsized.
- 3.4. In the case where the arrangement or size of a ro-ro passenger ship, constructed before 1 July 1997, is such as to prevent the installation of the fast rescue boat required by paragraph 3.1, the fast rescue boat may be installed in place of an existing lifeboat which is accepted as a rescue boat or, in the case of ships constructed prior to 1 July 1986, boats for use in an emergency, provided that all of the following conditions are met:

- .1. the fast rescue boat installed is served by a launching appliance complying with the provisions of paragraph 3.2;
- .2. the capacity of the survival craft lost by the above substitution is compensated by the installation of liferafts capable of carrying at least an equal number of persons served by the lifeboat replaced; and
- .3. such liferafts are served by the existing launching appliances or marine evacuation systems.

#### **4 Means of rescue** Refer to MSC/Circ.810

- 4.1. Each ro-ro passenger ship shall be equipped with efficient means for rapidly recovering survivors from the water and transferring survivors from rescue units or survival craft to the ship.
- 4.2. The means of transfer of survivors to the ship may be part of a marine evacuation system, or may be part of a system designed for rescue purposes.
- 4.3. If the slide of a marine evacuation system is intended to provide the means of transfer of survivors to the deck of the ship, the slide shall be equipped with handlines or ladders to aid in climbing up the slide.

#### **5 Lifejackets**

- 5.1. Notwithstanding the requirements of regulations 7.2 and 22.2, a sufficient number of lifejackets shall be stowed in the vicinity of the muster stations so that passengers do not have to return to their cabins to collect their lifejackets.
- 5.2. In ro-ro passenger ships, each lifejacket shall be fitted with a light complying with the requirements of paragraph 2.2.3 of the Code.

#### **Regulation 27 - Information on passengers**

1. All persons on board all passenger ships shall be counted prior to departure.
2. Details of persons who have declared a need for special care or assistance in emergency situations shall be recorded and communicated to the master prior to departure.
3. In addition, not later than 1 January 1999, the names and gender of all persons on board, distinguishing between adults, children and infants shall be recorded for search and rescue purposes.
4. The information required by paragraphs 1, 2 and 3 shall be kept ashore and made readily available to search and rescue services when needed.
5. Surveyor General may exempt passenger ships from the requirements of paragraph 3, if the scheduled voyages of such ships render it impracticable for them to prepare such records.

#### **Regulation 28 - Helicopter landing and pick-up areas**

1. All ro-ro passenger ships, shall be provided with a helicopter pick-up area approved by the Surveyor General having regard to the recommendations adopted by the International Maritime Organization.

2. Ro-ro-passenger ships of 130 m in length and upwards, constructed on or after 1 July 1999, shall be fitted with a helicopter landing area approved by the Surveyor General having regard to the recommendations adopted by the International Maritime Organization Refer to MSC/Circ.907.

### **Regulation 29 - Decision support system for masters of passenger ships**

1. This regulation applies to all passenger ships. Passenger ships constructed before 1 July 1997 shall comply with the requirements of this regulation not later than the date of the first periodical survey after 1 July 1999.
2. In all passenger ships, a decision support system for emergency management shall be provided on the navigation bridge.
3. The system shall, as a minimum, consist of a printed emergency plan or plans refer to IMO Resolution A.852(20). All foreseeable emergency situations shall be identified in the emergency plan or plans, including, but not limited to, the following main groups of emergencies:
  - .1. fire;
  - .2. damage to ship;
  - .3. pollution;
  - .4. unlawful acts threatening the safety of the ship and the security of its passengers and crew;
  - .5. personnel accidents;
  - .6. cargo-related accidents; and
  - .7. emergency assistance to other ships.
4. The emergency procedures established in the emergency plan or plans shall provide decision support to masters for handling any combination of emergency situations.
5. The emergency plan or plans shall have a uniform structure and be easy to use. Where applicable, the actual loading condition as calculated for the passenger ship's voyage stability shall be used for damage control purposes.
6. In addition to the printed emergency plan or plans, the Surveyor General may also accept the use of a computer-based decision support system on the navigation bridge which provides all the information contained in the emergency plan or plans, procedures, checklists, etc., which is able to present a list of recommended actions to be carried out in foreseeable emergencies.

### **Regulation 30 - Drills**

1. This regulation applies to all passenger ships.
2. On passenger ships, an abandon ship drill and fire drill shall take place weekly. The entire crew need not be involved in every drill, but each crew member must participate in an abandon ship drill and a fire drill each month as required in regulation 19.3.2. Passengers shall be strongly encouraged to attend these drills.

## Section III - Cargo Ships (Additional Requirements)

### Regulation 31 - *Survival craft and rescue boats*

#### 1 Survival craft

##### 1.1. Cargo ships shall carry:

- .1. one or more totally enclosed lifeboats complying with the requirements of section 4.6 of the Code of such aggregate capacity on each side of the ship as will accommodate the total number of persons on board; and
- .2. in addition, one or more inflatable or rigid liferafts, complying with the requirements of section 4.2 or 4.3 of the Code, stowed in a position providing for easy side -to-side transfer at a single open deck level, and of such aggregate capacity as will accommodate the total number of persons on board. If the liferaft or liferafts are not stowed in a position providing for easy side -to-side transfer at a single open deck level, the total capacity available on each side shall be sufficient to accommodate the total number of persons on board.

##### 1.2. In lieu of meeting the requirements of paragraph 1.1, cargo ships may carry:

- .1. one or more free-fall lifeboats, complying with the requirements of section 4.7 of the Code, capable of being free-fall launched over the stern of the ship of such aggregate capacity as will accommodate the total number of persons on board; and
- .2. in addition, one or more inflatable or rigid liferafts complying with the requirements of section 4.2 or 4.3 of the Code, on each side of the ship, of such aggregate capacity as will accommodate the total number of persons on board. The liferafts on at least one side of the ship shall be served by launching appliances.

##### 1.3. In lieu of meeting the requirements of paragraph 1.1 or 1.2, cargo ships of less than 85 m in length other than oil tankers, chemical tankers and gas carriers, may comply with the following:

- .1. they shall carry on each side of the ship, one or more inflatable or rigid liferafts complying with the requirements of section 4.2 or 4.3 of the Code and of such aggregate capacity as will accommodate the total number of persons on board;
- .2. unless the liferafts required by paragraph 1.3.1 are stowed in a position providing for easy side-to-side transfer at a single open deck level, additional liferafts shall be provided so that the total capacity available on each side will accommodate 150% of the total number of persons on board;
- .3. if the rescue boat required by paragraph 2 is also a totally enclosed lifeboat complying with the requirements of section 4.6 of the Code, it may be included in the aggregate capacity required by paragraph 1.3.1, provided that the total capacity available on either side of the ship is at least 150% of the total number of persons on board; and
- .4. in the event of any one survival craft being lost or rendered unserviceable, there shall be sufficient survival craft available for use on each side, including any which are stowed in a position providing for easy side-to-side transfer at a single open deck level, to accommodate the total number of persons on board.

- 1.4. Cargo ships where the horizontal distance from the extreme end of the stem or stern of the ship to the nearest end of the closest survival craft is more than 100 m shall carry, in addition to the liferafts required by paragraphs 1.1.2 and 1.2.2, a liferaft stowed as far forward or aft, or one as far forward and another as far aft, as is reasonable and practicable. Such liferaft or liferafts may be securely fastened so as to permit manual release and need not be of the type which can be launched from an approved launching device.
- 1.5. With the exception of the survival craft referred to in regulation 16.1.1, all survival craft required to provide for abandonment by the total number of persons on board shall be capable of being launched with their full complement of persons and equipment within a period of 10 min from the time the abandon ship signal is given.
- 1.6. Chemical tankers and gas carriers carrying cargoes emitting toxic vapours or gases shall carry, in lieu of totally enclosed lifeboats complying with the requirements of section 4.6 of the Code, lifeboats with a self-contained air support system complying with the requirements of section 4.8 of the Code.
- 1.7. Oil tankers, chemical tankers and gas carriers carrying cargoes having a flashpoint not exceeding 60°C (closed-cup test) shall carry, in lieu of totally enclosed lifeboats complying with the requirements of section 4.6 of the Code, fire-protected lifeboats complying with the requirements of section 4.9 of the Code.
- 1.8. Notwithstanding the requirements of paragraph 1.1, bulk carriers as defined in regulation IX/1.6 constructed on or after 1 July 2006 shall comply with the requirements of paragraph 1.2.

## 2 Rescue boats

Cargo ships shall carry at least one rescue boat complying with the requirements of section 5.1 of the Code. A lifeboat may be accepted as a rescue boat, provided that it also complies with the requirements for a rescue boat.

## 3

In addition to their lifeboats, all cargo ships constructed before 1 July 1986 shall carry:

1. one or more liferafts capable of being launched on either side of the ship and of such aggregate capacity as will accommodate the total number of persons on board. The liferaft or liferafts shall be equipped with a lashing or an equivalent means of securing the liferaft which will automatically release it from a sinking ship; and
2. where the horizontal distance from the extreme end of the stem or stern of the ship to the nearest end of the closest survival craft is more than 100 m, in addition to the liferafts required by paragraph 3.1, a liferaft stowed as far forward or aft, or one as far forward and another as far aft, as is reasonable and practicable. Notwithstanding the requirements of paragraph 3.1, such liferaft or liferafts may be securely fastened so as to permit manual release.

## Regulation 32 - *Personal life-saving appliances*

### 1 Lifebuoys

1.1. Cargo ships shall carry not less than the number of lifebuoys complying with the requirements of regulation 7.1 and section 2.1 of the Code prescribed in the following table:

Length of ship in metres	Minimum number of lifebuoys
Under 100	8
100 and under 150	10
150 and under 200	12
200 and over	14

1.2. Self-igniting lights for lifebuoys on tankers required by regulation 7.1.3 shall be of an electric battery type.

## 2 Lifejacket lights

- 2.1. This paragraph applies to all cargo ships.
- 2.2. On cargo ships, each lifejacket shall be fitted with a lifejacket light complying with the requirements of paragraph 2.2.3 of the Code.
- 2.3. Lights fitted on lifejackets on board cargo ships prior to 1 July 1998 and not complying fully with paragraph 2.2.3 of the Code may be accepted by the Surveyor General until the lifejacket light would normally be replaced or until the first periodical survey after 1 July 2001, whichever is the earliest.

## 3 Immersion suits

- 3.1. This paragraph applies to all cargo ships. However, with respect to cargo ships constructed before 1 July 2006, paragraphs 3.2 to 3.5 shall be complied with not later than the first safety equipment survey on or after 1 July 2006.
- 3.2. An immersion suit complying with the requirements of section 2.3 of the Code shall be provided for every person on board the ship. However, for ships other than bulk carriers, as defined in regulation IX/1, these immersion suits need not be required if the ship is constantly engaged on voyages in warm climates -where, in the opinion of the Surveyor General, immersion suits are unnecessary.
- 3.3. If a ship has any watch or work stations which are located remotely from the place or places where immersion suits are normally stowed, additional immersion suits shall be provided at these locations for the number of persons normally on watch or working at those locations at any time.
- 3.4. Immersion suits shall be so placed as to be readily accessible and their position shall be plainly indicated.
- 3.5. The immersion suits required by this regulation may be used to comply with the requirements of regulation 7.3.

## Regulation 33 - *Survival craft embarkation and launching arrangements*

1. Cargo ship survival craft embarkation arrangements shall be so designed that lifeboats can be boarded and launched directly from the stowed position and davit-launched liferafts can be

boarded and launched from a position immediately adjacent to the stowed position or from a position to which the liferaft is transferred prior to launching in compliance with the requirements of regulation 13.5.

2. On cargo ships of 20,000 gross tonnage and upwards, lifeboats shall be capable of being launched, where necessary utilizing painters, with the ship making headway at speeds up to 5 knots in calm water.

#### **Section IV - Life-Saving Appliances and Arrangements Requirements**

##### **Regulation 34**

All life-saving appliances and arrangements shall comply with the applicable requirements of the Code.

#### **Section V - Miscellaneous**

##### **Regulation 35 - *Training manual and on-board training aids***

1. This regulation applies to all ships.
2. A training manual complying with the requirements of paragraph 3 shall be provided in each crew mess room and recreation room or in each crew cabin.
3. The training manual, which may comprise several volumes, shall contain instructions and information, in easily understood terms illustrated wherever possible, on the life-saving appliances provided in the ship and on the best methods of survival. Any part of such information may be provided in the form of audio-visual aids in lieu of the manual. The following shall be explained in detail:
  - .1. donning of lifejackets, immersion suits and anti-exposure suits, as appropriate;
  - .2. muster at the assigned stations;
  - .3. boarding, launching, and clearing the survival craft and rescue boats, including, where applicable, use of marine evacuation systems;
  - .4. method of launching from within the survival craft;
  - .5. release from launching appliances;
  - .6. methods and use of devices for protection in launching areas, where appropriate;
  - .7. illumination in launching areas;
  - .8. use of all survival equipment;
  - .9. use of all detection equipment;
  - .10. with the assistance of illustrations, the use of radio lifesaving appliances;
  - .11. use of drogues;
  - .12. use of engine and accessories;

- .13. recovery of survival craft and rescue boats including stowage and securing;
  - .14. hazards of exposure and the need for warm clothing;
  - .15. best use of the survival craft facilities in order to survive;
  - .16. methods of retrieval, including the use of helicopter rescue gear (slings, baskets, stretchers), breeches-buoy and shore life-saving apparatus and ship's line-throwing apparatus;
  - .17. all other functions contained in the muster list and emergency instructions; and
  - .18. instructions for emergency repair of the life-saving appliances.
4. Every ship fitted with a marine evacuation system shall be provided with on-board training aids in the use of the system.

#### **Regulation 36 - *Instructions for on-board maintenance***

Instructions for on-board maintenance of life-saving appliances shall be easily understood, illustrated wherever possible, and, as appropriate, shall include the following for each appliance:

- .1. a checklist for use when carrying out the inspections required by regulation 20.7;
- .2. maintenance and repair instructions;
- .3. schedule of periodic maintenance;
- .4. diagram of lubrication points with the recommended lubricants;
- .5. list of replaceable parts;
- .6. list of sources of spare parts; and
- .7. log for records of inspections and maintenance.

#### **Regulation 37 - *Muster list and emergency instructions***

1. The muster list shall specify details of the general emergency alarm and public address system prescribed by section 7.2 of the Code and also action to be taken by crew and passengers when this alarm is sounded. The muster list shall also specify how the order to abandon ship will be given.
2. Each passenger ship shall have procedures in place for locating and rescuing passengers trapped in their staterooms.
3. The muster list shall show the duties assigned to the different members of the crew including:
  - .1. closing of the watertight doors, fire doors, valves, scuppers, sidescuttles, skylights, portholes and other similar openings in the ship;
  - .2. equipping of the survival craft and other life-saving appliances;
  - .3. preparation and launching of survival craft;



- .4. general preparation of other life-saving appliances;
  - .5. muster of passengers;
  - .6. use of communication equipment;
  - .7. manning of fire parties assigned to deal with fires; and
  - .8. special duties assigned in respect to the use of fire -fighting equipment and installations.
4. The muster list shall specify which officers are assigned to ensure that life -saving and fire appliances are maintained in good condition and are ready for immediate use.
  5. The muster list shall specify substitutes for key persons who may become disabled, taking into account that different emergencies may call for different actions.
  6. The muster list shall show the duties assigned to members of the crew in relation to passengers in case of emergency. These duties shall include:
    - .1. warning the passengers;
    - .2. seeing that they are suitably clad and have donned their lifejackets correctly;
    - .3. assembling passengers at muster stations;
    - .4. keeping order in the passageways and on the stairways and generally controlling the movements of the passengers; and
    - .5. ensuring that a supply of blankets is taken to the survival craft.
  7. The muster list shall be prepared before the ship proceeds to sea. After the muster list has been prepared, if any change takes place in the crew which necessitates an alteration in the muster list, the master shall either revise the list or prepare a new list.
  8. The format of the muster list used on passenger ships shall be approved.