

GOVERNMENT NOTICE No. 483 published on 21/7/2023

THE MERCHANT SHIPPING ACT,
(CAP. 165)

REGULATIONS

(Made under section 222)

THE MERCHANT SHIPPING (SAFETY OF NAVIGATION) REGULATIONS, 2023

ARRANGEMENT OF REGULATIONS

Regulation Title

PART I
PRELIMINARY PROVISIONS

1. Citation.
2. Application.
3. Interpretation.

PART II
SAFETY OF NAVIGATION REQUIREMENTS

4. Search and rescue services.
5. Ship routing.
6. Ship reporting system.
7. Working language.
8. Principles relating to bridge design, design and arrangement of navigational systems and equipment and bridge procedures.
9. Electromagnetic compatibility.
10. Approval, surveys and performance standards of navigational systems and equipment and voyage data recorder.
11. Carriage requirements for shipborne navigational systems and equipment.
12. Long-range identification and tracking of ships.
13. Voyage data recorder.
14. International Code of Signals and IAMSAR Manual.
15. Navigation bridge visibility.

16. Pilot transfer arrangement application.
17. Pilot transfer equipment and arrangements.
18. Rigging of pilot transfer arrangements.
19. Pilot ladder.
20. Application for transfer arrangements.
21. Use of heading and track control systems.
22. Operation of steering gear.
23. Steering gear testing and drills.
24. Nautical charts and publications.
25. Records of navigational activities and daily reporting.
26. Life-saving signals to be used by ship, aircraft or person in distress.
27. Operational limitations.
28. Danger messages.
29. Information required in danger messages .
30. Distress situations obligations and procedures.
31. Safe navigation and avoidance of dangerous situations.
32. Master discretion.
33. Misuse of distress signals.
34. Exemptions.
35. Exemption or waiver.
36. Equivalents.
37. Approvals.

PART III
GENERAL PROVISIONS

38. Offences and penalties.
39. Detention.
40. Evaluation and reporting.

—————
SCHEDULES
—————

THE MERCHANT SHIPPING ACT,
(CAP. 165)

REGULATIONS

(Made under section 222)

THE MERCHANT SHIPPING (SAFETY OF NAVIGATION) REGULATIONS, 2023

PART I
PRELIMINARY PROVISIONS

- Citation 1. These Regulations may be cited as the Merchant Shipping (Safety of Navigation) Regulations, 2023.
- Application 2.-(1) These Regulations shall apply-
- (a) in respect of giving effect to Chapter V of the Safety Convention;
 - (b) to Tanzanian ship engaged on international voyages, wherever it may be;
 - (c) to non-Tanzanian ship while within Tanzanian waters; and
 - (d) a non-Tanzanian ship flying the flag of a State which is not a party to the Safety Convention if it would not have been in Tanzanian waters but for stress of weather or any other circumstances which neither the master nor the owner or the charterer could have prevented.
- (2) Where a person is on board a ship as a consequence of the circumstances described under subregulation (1)(d), or an obligation laid upon the master to carry shipwrecked or other person, such person shall not be taken into account for the purpose of determining the application to that ship of any provision of these Regulations.
- (3) Without prejudice to the generality of subregulation (1), these Regulations shall not apply to-
- (a) warship or naval auxiliary; or

(b) vessel owned or operated by the Government on non-commercial service.

Interpretation

3. In these Regulations, unless the context otherwise requires-

GN. No.
63 of 2019

“Category A, B, C or D waters” means the waters specified as such in the Merchant Shipping (Load Line) Regulations;

“AIS” means Automatic Identification System;

“sea” includes any estuary or arm of the sea but does not include Category A, B, C or D waters;

“BNWAS” means Bridge Navigational Watch Alarm System;

“ECDIS” means Electronic Chart Display and Information System;

“sea area A1” means an area, within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available, as may be defined by a Contracting Government;

“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, as may be defined by a Contracting Government;

“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;

“Search and Rescue Region (SRR)” means an area of defined dimensions associated with a rescue coordination center within which search and rescue services are provided;

“Organisation” means the International Maritime Organisation;

“company” means the owner of the ship or any other organisation or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship and who on assuming such

responsibility has agreed to take over all the duties and responsibilities imposed by the International Safety Management Code;

“Administration” means the Government of the State whose flag the ship is entitled to fly;

“passenger ship” means a ship which carries more than twelve passengers;

Cap. 165

“Tanzanian ship” means a ship registered or licensed under the provisions of the Act, at a port in the United Republic;

“Safety Convention” means the International Convention for the Safety of Life at Sea, 1974 and its Protocols of 1978 and 1988, together with such amendments thereof, or replacements thereof as may be in effect in respect of Tanzania;

“IAMSAR Manual” means International Aeronautical and Maritime Search and Rescue Manual adopted by the Member States of the International Maritime Organisation and the International Civil Aviation Organization in 2000;

“Safety Convention country” means a country the Government of which has adopted the Safety Convention and which has not denounced that Convention or a territory of such Country to which the Convention extends and remains extended;

“Merchant Shipping Notice” means a Notice described as such issued by the Registrar and includes a reference to any document amending or replacing that Notice;

“international voyage” means a voyage from a port or place in the United Republic to a port or place outside the territorial limits of the United Republic, or conversely;

Cap. 165

“Act” means the Merchant Shipping Act;

Cap. 415

“Corporation” means the Tanzania Shipping Agencies Corporation established under section 4 of the Tanzania Shipping Agencies Act;

“S-VDR” means Simplified Voyage Data Recorder;

- GN. No.
196 of 2005
- “gross tons” means gross tonnage ascertained under regulations 6 and 12(1) of the Merchant Shipping (Tonnage) Regulations;
- “first safety equipment survey” means the first annual survey, the first periodical survey or the first renewal survey for safety equipment, whichever is due first after 1st July 2004 and, in addition, in the case of ships under construction, the initial survey;
- “length of a ship” means its length overall;
- “sea-going” means operating outside Category A, B, C or D waters;
- GN. No.
63 of 2019
- “pleasure vessel” means a vessel specified as such in Merchant Shipping (Load Line) Regulations; na
- “Minister” means the Minister responsible for shipping.

PART II
SAFETY OF NAVIGATION REQUIREMENTS

Search and rescue
services

4.-(1) The Corporation shall ensure that necessary arrangements are made for distress communication and coordination in the Tanzania Search and Rescue Region and for the rescue of persons in distress at sea around its coast.

(2) The arrangements referred to in subregulation (1) shall include the establishment, operation and maintenance of such search and rescue facilities as are deemed practicable and necessary, having regard to the density of the seagoing traffic and the navigational dangers and shall, so far as possible, provide adequate means of locating and rescuing such persons.

(3) The Corporation shall make available information to the Organization concerning the existing search and rescue facilities and the plans for changes therein, if any.

(4) A passenger ship shall have on board a plan for co-operation with appropriate search and rescue services in event of an emergency developed in co-operation between the ship, the company and search and rescue services.

- (5) The plan referred to under subregulation (4) shall-
- (a) include provisions for periodic exercises to be undertaken to test its effectiveness; and
 - (b) be prepared based on the guidelines developed by the Organization.

Ship routing

5.-(1) A ship shall use a mandatory ships' routing system adopted by the Organisation as required for its category or cargo carried and in accordance with the provisions in force unless there are compelling reasons not to use a particular ship's routing system.

(2) Subject to subregulation (1), any compelling reason provided shall be recorded in the ship's official logbook.

Ship reporting system

6.-(1) A ship, category of ships or ship carrying certain cargo shall use a reporting system adopted and implemented in accordance with the guidelines and criteria developed by the Organisation subject to the provisions of that system.

(2) A master shall comply with the requirements of an adopted ship reporting system and report to the appropriate authority all information required in accordance with the provisions of such system.

Working language

7.-(1) A ship owner or master shall determine and establish a working language which shall be recorded in the ship's official logbook to ensure:

- (a) effective performance in safety matters; and
- (b) that each seafarer understands and where appropriate, gives orders and instructions and reports back in that language.

(2) Where the working language is not English, all plans and lists required to be posted shall include a translation into the working language.

(3) English shall be used on the bridge as the working language for bridge-to-bridge and bridge-to-shore safety communications as well as for

communications on board between the pilot and bridge watchkeeping personnel.

(4) Subject to subregulation (3), the Standard Marine Communications Phrases in IMO MSC/Circ.794, as amended may be used, unless those directly involved in the communication speak a common language other than English.

Principles relating to bridge design, design and arrangement of navigational systems and equipment and bridge procedures

8. A decision which is made for the purpose of applying the requirements of regulations 11, 15, 21, 22, 24 and 25 of these Regulations and which affect bridge design, the design and arrangement of navigational systems and equipment on the bridge and bridge procedures shall be taken with the aim of:

- (a) facilitating the tasks to be performed by the bridge team and the pilot in making full appraisal of the situation and in navigating the ship safely under all operational conditions;
- (b) promoting effective and safe bridge resource management;
- (c) enabling the bridge team and the pilot to have convenient and continuous access to essential information which is presented in a clear and unambiguous manner, using standardised symbols and coding systems for controls and displays;
- (d) indicating the operational status of automated functions and integrated components, systems or sub-systems;
- (e) allowing for expeditious, continuous and effective information processing and decision-making by the bridge team and the pilot;
- (f) preventing or minimising excessive or unnecessary work and any conditions or distractions on the bridge which may cause fatigue or interfere with the vigilance of the bridge team and the pilot; and
- (g) minimising the risk of human error and detecting such error if it occurs, through monitoring and alarm systems, in time for the

bridge team and the pilot to take appropriate action.

Electromagnetic compatibility

9.-(1) A ship owner shall ensure that electrical and electronic equipment on the bridge or in the vicinity of the bridge, on ships constructed on or after 1st July 2002, is tested for electromagnetic compatibility taking into account the recommendations adopted by the Organisation.

(2) Subject to subregulation (1), electrical and electronic equipment shall be installed such that electromagnetic interference does not affect the proper function of navigational systems and equipment.

(3) Portable electrical and electronic equipment shall not be operated on the bridge if it may affect the proper function of navigational systems and equipment.

Approval, surveys and performance standards of navigational systems and equipment and voyage data recorder

10.-(1) Systems and equipment required to meet the requirements of regulations 11, 12 and 13, shall be of a type approved by the Corporation.

(2) The Corporation shall approve voyage data recorder, navigational system and equipment required to meet the carriage requirements for shipborne navigational systems and equipment.

(3) Subject to subregulation (2), systems and equipment, including associated back-up arrangements, where applicable, installed on or after 1st July 2002 to perform the functional requirements of regulations 11, 12 and 13, shall conform to performance standards not inferior to those adopted by the Organisation.

(4) When a system and equipment is replaced or added on a ship constructed before 1st July 2002, such a system and equipment shall comply with the requirements of subregulation (3).

(5) When equipment, for which performance standards have been developed is carried on ship in addition to the equipment referred to under subregulation (3), such equipment shall be subject to the approval of the Corporation and shall comply with performance standards not inferior to those adopted by the Organisation.

(6) The voyage data recorder system including all sensors shall be subjected to an annual performance test conducted by an approved testing or servicing facility.

(7) The annual performance test referred to under subregulation (6), shall be conducted to verify the accuracy, duration and recoverability of the recorded data.

(8) The test and inspection shall be conducted to determine the serviceability of protective enclosures and devices fitted to aid location.

(9) The testing facility shall issue a certificate of compliance stating the date of compliance and applicable performance standards, a copy of which shall be retained on board the ship.

(10) The Automatic Identification System shall be subjected to an annual test to be conducted by an approved surveyor or testing or servicing facility.

(11) The test under subregulation (10) shall be conducted to-

- (a) verify the correct programming of the ship static information;
- (b) correct data exchange with connected sensors; and
- (c) verify the radio performance by radio frequency measurement and on-air test.

(12) Subject to subregulation (11), a copy of the test report shall be retained on board the ship.

Carriage requirements for shipborne navigational systems and equipment

11.-(1) A ship irrespective of size shall have the following shipborne navigational equipment and systems:

- (a) properly adjusted standard magnetic compass, or other means, independent of any power supply to determine the ship's heading and display the reading at the main steering position;
- (b) pelorus or compass bearing device, or other means, independent of any power supply to take bearings over an arc of the horizon of 360 degrees;
- (c) means of correcting heading and bearings to true at all times; and

- (d) nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage and in this regard-
 - (i) ECDIS shall be accepted as meeting the chart carriage requirements under this paragraph;
 - (ii) a ship engaged on an international voyage shall-
 - (aa) comply with the carriage requirements for ECDIS as assigned in regulation V/19.2.10 of the Safety Convention;
 - (bb) have back-up arrangements to meet the functional requirements under this paragraph if this function is partly or fully fulfilled by electronic means;
 - (cc) use appropriate folio of paper nautical charts as back-up where arrangement for ECDIS does not have an electronic back-up; and
 - (dd) use other back-up arrangements for ECDIS meeting the requirements of appendix 6 to IMO resolution A.817(19), where necessary;
- (e) a receiver for a global navigation satellite system or a terrestrial radio navigation system, or other means, suitable for use at all times throughout the intended voyage to establish and update the ship's position by automatic means;
- (f) a radar reflector, or other means for a ship of 150 gross tonnage and above to enable

detection by ship navigating by radar at both 9 and 3 GHz;

- (g) a sound reception system, or other means where the ship's bridge is totally enclosed and unless the Corporation determines otherwise, to enable the officer in charge of the navigational watch to hear sound signals and determine their direction; and
- (h) a telephone or other means, to communicate heading information to the emergency steering position, if applicable.

(2) A cargo ship of 150 gross tonnage and above and passenger ships irrespective of size shall, in addition to the requirements of subregulation (1), be fitted with:

- (a) a spare magnetic compass interchangeable with the magnetic compass, or other means to perform the function referred to in subregulation (1)(a) by means of replacement or duplicate equipment;
- (b) a signaling daylight lamp, or other means to communicate by light during day and night using an energy source of electrical power not solely dependent upon the ship's power supply;
- (c) BNWAS, which shall be in operation whenever a cargo ships of 150 gross tonnage and above and passenger ships irrespective of size, are underway at sea.

(3) A cargo ship of 300 gross tonnage and above and a passenger ship irrespective of size shall, in addition to the requirements of subregulation (2), be fitted with-

- (a) an echo sounding device or other electronic means to measure and display the available depth of water;
- (b) a 9 GHz radar, or other means for determining and displaying the range and bearing of radar transponders and of other surface craft, obstructions, buoys, shorelines and navigational marks for assisting in navigation and in collision avoidance;

- (c) an electronic plotting aid, or other means, to plot electronically the range and bearing of targets for determining collision risk;
- (d) speed and distance measuring device, or other means, for indicating speed and distance through the water; and
- (e) a properly adjusted transmitting heading device, or other means to transmit heading information for input to the equipment referred to under paragraphs (b) and (c) and subregulation (4).

(4) A cargo ship of 300 gross tonnage and above engaged on international voyages, cargo ship of 500 gross tonnage and above not engaged on international voyages and passenger ship, irrespective of size, shall be fitted with AIS.

(5) AIS shall-

- (a) provide automatically to appropriately equipped shore stations, other ship and aircraft information, including the ship's identity, type, position, course, speed, navigational status and other safety-related information;
- (b) receive automatically such information from a similarly fitted ship;
- (c) monitor and track ships; and
- (d) exchange data with shore-based facilities.

(6) The requirements of subregulation (5) shall not be applied to cases where international agreements, rules or standards provide for the protection of navigational information.

(7) A master shall operate a ship in accordance with the guidelines issued by the Organisation for the on-board operational use of shipborne AIS as set out in the First Schedule to these Regulations.

(8) A ship fitted with AIS shall maintain the system in operation at all times except where international agreements, rules or standards provide for the protection of navigational information.

(9) A ship of 500 gross tonnage and above shall, in addition to meeting the requirements of subregulation

(3) with the exception of the requirements subregulation (3)(c), (e) and (4), have-

- (a) a gyro compass, or other means, to determine and display their heading by shipborne non-magnetic means, being clearly readable by the helmsman at the main steering position and to transmit heading information for input to the equipment referred under subregulations (3)(b), (4) and paragraph (e);
- (b) a gyro compass heading repeater, or other means, to supply heading information visually at the emergency steering position if provided;
- (c) a gyro compass bearing repeater, or other means, to take bearings, over an arc of the horizon of 360 degrees using the gyro compass or other means referred to under paragraph (a) and a ship of 1,600 gross tonnage and above shall be fitted with such means where necessary;
- (d) rudder, propeller, thrust, pitch and operational mode indicators, or other means to determine and display rudder angle, propeller revolutions, the force and direction of thrust and where applicable, the force and direction of lateral thrust and the pitch and operational mode, all to be readable from the conning position; and
- (e) an automatic tracking aid or other means, to plot automatically the range and bearing of other targets for determining collision risk.

(10) Failure of one piece of equipment shall not reduce the ship's ability to meet the requirements of subregulation (1)(a), (b) and (d) for a ship of not less than 500 gross tonnage.

(11) A ship of 3,000 gross tonnage and above shall, in addition to the requirements of subregulation (9), have:

- (a) a 3 GHz radar or where considered appropriate by the Corporation a second 9 GHz radar, or other means to determine and display the range

and bearing of other surface craft, obstructions, buoys, shorelines and navigational marks to assist in navigation and in collision avoidance, which are functionally independent of those referred to under subregulation (5)(b); and

- (b) a second automatic tracking aid, or other means to plot automatically the range and bearing of other targets to determine collision risk which are functionally independent of those referred to under subregulation (9)(e).

(12) A ship of 10,000 gross tonnage and above shall, in addition to the requirements of subregulation (11) with the exception of subregulation (11)(b), have:

- (a) an automatic radar plotting aid, or other means, to plot automatically the range and bearing of at least 20 other targets, connected to a device to indicate speed and distance through the water, for determining collision risks and simulate a trial manoeuvre; and
- (b) a heading or track control system, or other means, to automatically control and keep to a heading and straight track.

(13) A ship of 50,000 gross tonnage and above shall, in addition to the requirements of subregulation (12), have-

- (a) a rate of turn indicator, or other means, to determine and display the rate of turn; and
- (b) a speed and distance measuring device, or other means, to indicate speed and distance over the ground in the forward and athwartship direction.

Long-range
identification and
tracking of ships

12.-(1) A ship owner or owner of a mobile offshore drilling unit and a master or operator of a mobile offshore drilling unit shall ensure that, a Long Range Identification and Tracking System is fitted in the following type of ship or unit engaged on international voyages-

- (a) passenger ship, including high-speed passenger craft;
- (b) cargo ships including high-speed craft, of 300 gross tonnage and above; and
- (c) mobile offshore drilling unit.

(2) For the purpose of this regulation, the term ship includes passenger and cargo ship, high speed craft and mobile offshore drilling unit which are subject to the provisions of this regulation.

(3) A ship, irrespective of a date of construction, fitted with AIS and operated exclusively within sea area A1, shall not be required to comply with the provisions of this regulation.

(4) Ships under subregulation (1), shall automatically transmit long-range identification and tracking information as follows:

- (a) the identity of the ship;
- (b) the position of the ship in latitude and longitude; and
- (c) the date and time of the position provided.

(5) A system and equipment used to meet the requirements of this regulation shall-

- (a) conform to performance standards and functional requirements not inferior to those adopted by the Organisation;
- (b) be of a type approved by the Corporation; and
- (c) be capable of being switched off on board or be capable of ceasing the distribution of long-range identification and tracking information-
 - (i) where international agreements, rules or standards provide for the protection of navigational information; or
 - (ii) in exceptional circumstances and for the shortest duration possible where the operation is considered by the master to compromise the safety or security of the ship, a master shall-
 - (aa) inform the Corporation without undue delay;

- (bb) make an entry in the record of navigational activities and incidents maintained in accordance with regulation 25 of these Regulations; and
- (cc) set out the reasons for the decision and indicate the period during which the system or equipment was switched off.

Voyage data recorder

13.-(1) A passenger ship and cargo ship of 3,000 gross tonnage and above engaged on any voyage, shall in order to assist in casualty investigations, be fitted with a Voyage Data Recorder.

(2) A cargo ship shall be fitted with a Voyage Data Recorder which may be S-VDR to assist in casualty investigations.

(3) The Corporation may exempt the ship other than a ro-ro passenger ship constructed before 1st July 2002 from being fitted with a Voyage Data Recorder where it can be demonstrated that interfacing a voyage data recorder with the existing equipment in the ship is impracticable.

International Code of Signals and IAMSAR Manual

14.-(1) A ship of 500 gross tonnage and above engaged on international voyages required to carry a radio installation shall carry an updated International Code of Signals.

(2) Subject to subregulation (1), the International Code of Signals shall be carried by any other ship which, in the opinion of the Corporation, has a need to use it.

(3) A ship shall carry an up-to-date copy of Volume III of the IAMSAR Manual.

Navigation bridge visibility

15.-(1) A ship of not less than 55 metres in length, constructed on or after 1 July 1998, shall meet the following requirements relating to navigation bridge visibility:

- (a) the view of the sea surface from the conning position shall not be obscured by more than two ship lengths, or 500 metres, whichever is the less, forward of the bow to 10 degrees on either side under all conditions of draught, trim and deck cargo;
- (b) no blind sector caused by cargo, cargo gear or other obstructions outside of the wheelhouse forward of the beam which obstructs the view of the sea surface as seen from the conning position, shall exceed 10 degrees;
- (c) the total arc of blind sectors shall not exceed 20 degrees;
- (d) the clear sectors between blind sectors shall be at least 5 degrees;
- (e) in the view described under this regulation, each individual blind sector shall not exceed 5 degrees;
- (f) the horizontal field of vision from the conning position shall extend over an arc of not less than 225 degrees, from right ahead to not less than 22.5 degrees abaft the beam on either side of the ship;
- (g) from each bridge wing the horizontal field of vision shall extend over an arc at least 225 degrees, from at least 45 degrees on the opposite bow through right ahead and from right ahead to right astern through 180 degrees on the same side of the ship;
- (h) from the main steering position the horizontal field of vision shall extend over an arc from right ahead to at least 60 degrees on each side of the ship;
- (i) the ship's side shall be visible from the bridge wing;
- (j) the height of the lower edge of the navigation bridge front windows above the bridge deck shall be kept as low as possible and the lower edge shall not obstruct the forward view;

- (k) the upper edge of the navigation bridge front windows shall allow a forward view of the horizon, for a person with a height of eye of 1,800 millimetres above the bridge deck at the conning position, when the ship is pitching in heavy seas;
- (l) the Corporation, if satisfied that a 1,800 millimetres height of eye is unreasonable and impractical, may allow reduction of the height of eye but not less than 1,600 millimetres;
- (m) windows shall meet the following requirements:
 - (i) the bridge front windows shall be inclined from the vertical plane top out, at an angle of not less than 10 degrees and not more than 25 degrees to avoid reflections;
 - (ii) framing between navigation bridge windows shall be kept to a minimum and not be installed immediately forward of any work station;
 - (iii) polarised and tinted windows shall not be fitted; and
 - (iv) a clear view through at least two of the navigation bridge front windows and, depending on the bridge configuration, an additional number of clear view windows shall be provided at all times, regardless of weather condition.

(2) A ship constructed before 1 July 1998 shall, where practicable, meet the requirements of subregulation (1)(a), (b), (c), (d) and (e), provided that, structural alterations or additional equipment may not be required.

(3) On a ship of unconventional design which, in the opinion of the Corporation, cannot comply with this regulation, arrangements shall be provided to achieve a level of visibility that is as near as practical to that prescribed in this regulation.

(4) Notwithstanding the requirements of subregulation (1)(a), (f), (g) and (h), ballast water exchange may be undertaken provided that-

- (a) the master has determined that it is safe to do so and take into consideration any increased blind sectors or reduced horizontal fields of vision resulting from the operation to ensure that a proper lookout is maintained at all times;
- (b) the operation is conducted in accordance with the ship's ballast water management plan, taking into account the recommendations on ballast water exchange adopted by the Organization; and
- (c) the commencement and termination of the operation are recorded in the ship's record of navigational activities pursuant to regulation 25.

Pilot transfer
arrangement
interpretation

16.-(1) A ship engaged on voyages in the course of which pilots may be employed shall be provided with pilot transfer arrangements.

(2) Subject to subregulation (1), the Corporation shall use the following interpretations for the term installed when applying to the provisions of regulations 18, 19, 20 and 21:

- (a) for a ship which the building contract is placed on or after 1 July 2012, or in the absence of the contract, constructed on or after 1 July 2012, "installed on or after 1 July 2012" means any installation on the ship; and
- (b) for ships other than those ships described in paragraph (a), "installed on or after 1 July 2012" means a contractual delivery date for the system, in its entirety or for individual components of the system, as relevant, to the ship on or after 1 July 2012 or, in the absence of a contractual delivery date, the actual delivery of the system, in its entirety or for individual components, to the ship on or after 1 July 2012.

Pilot transfer
equipment and
arrangements

17.-(1) Equipment and arrangements for pilot transfer which are installed on or after 1 July 2012 shall comply with the guidelines approved by the Corporation as set out in the Second Schedule.

(2) Except as provided otherwise, equipment and arrangement for pilot transfer which is provided on ships before 1 July 2012 shall comply with the requirements of this regulation and the guidelines approved by the Corporation as set out in the Second Schedule to these Regulations.

(3) Equipment and arrangements installed on or after 1 July 2012 which is a replacement of equipment and arrangements provided on ships before 1 July 2012 shall comply with the requirements of regulation 9 of these Regulations.

(4) Regulation 20(6) applies to all ships.

(5) Arrangements used for pilot transfer shall-

- (a) efficiently fulfil their purpose of enabling pilots to embark and disembark safely;
- (b) be kept clean, properly maintained and stowed and regularly inspected to ensure that they are safe for use; or
- (c) be used solely for embarkation and disembarkation of personnel.

Rigging of pilot
transfer
arrangements

18.-(1) The rigging of the pilot transfer arrangements and the embarkation of a pilot shall be supervised by a responsible officer-

- (a) having means of communication with the navigation bridge; and
- (b) who shall arrange for the escort of the pilot by a safe route to and from the navigation bridge.

(2) Personnel engaged in rigging and operating any mechanical equipment shall be instructed in the safe procedures and the equipment shall be tested prior to use.

Pilot ladder

19.-(1) A pilot ladder shall be certified by the manufacturer as complying with-

- (a) regulations 16, 17, 18, 19 and 20;
- (b) recommendations by the International Organization for Standardisation, in particular publication ISO 799:2004; or
- (c) other international standard acceptable to the Organization.

(2) Ladders shall be inspected in accordance with the provisions of the of regulations I/6, 7 and 8 of the Safety Convention.

(3) A pilot ladder used for pilot transfer shall be clearly identified with tags or other permanent marking so as to enable identification of each appliance for the purposes of survey, inspection and record keeping.

(4) The record under subregulation (3) shall be kept on the ship as to the date the identified ladder is placed into service and any repairs effected.

(5) Reference in regulation 20 to an accommodation ladder includes a sloping ladder used as part of the pilot transfer arrangements.

Application for
transfer
arrangements

20.-(1) The transfer arrangements shall be provided to enable the pilot to embark and disembark safely on either side of the ship.

(2) In a ship, where the distance from sea level to the point of access to, or egress from, the ship exceeds 9 metres, and when it is intended to embark and disembark pilots by means of the accommodation ladder, or other equally safe and convenient means in conjunction with a pilot ladder, the ship shall carry such equipment on each side, unless the equipment is capable of being transferred for use on either side.

(3) Safe and convenient access to, and egress from, the ship shall be provided by either-

- (a) a pilot ladder requiring a climb of not less than 1.5 metres and not more than 9 metres above the surface of the water so positioned and secured that-
 - (i) it is clear of any possible discharges from the ship;

- (ii) it is within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length of the ship;
 - (iii) each step rests firmly against the ship's side; where constructional features, such as rubbing bands, would prevent the implementation of this provision, special arrangements shall be made to ensure that persons are able to embark and disembark safely;
 - (iv) the single length of pilot ladder is capable of reaching the water from the point of access to, or egress from, the ship and due allowance is made for all conditions of loading and trim of the ship, and for an adverse list of 15 degrees, the securing strong point, shackles and securing ropes shall be at least as strong as the side ropes; or
- (b) an accommodation ladder in conjunction with the pilot ladder, or other equally safe and convenient means, whenever the distance from the surface of the water to the point of access to the ship is more than 9 metres which shall meet the following conditions-
- (i) be sited leading aft;
 - (ii) when in use, the lower end rest firmly against the ship's side within the parallel body length of the ship and, as far as is practicable, within the mid-ship half length and clear of all discharges;
 - (iii) when a combination arrangement is used for pilot access, means shall be provided to secure the pilot ladder and manropes to the ship's side at a point of nominally 1.5 metres above the bottom platform of the accommodation ladder; and

(iv) in the case of a combination arrangement using an accommodation ladder with trapdoor in the bottom platform including embarkation platform, the pilot ladder and man ropes shall be rigged through the trapdoor extending above the platform to the height of the handrail.

(4) For access to the ship's deck, means shall be provided to ensure safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the head of the pilot ladder, or of any accommodation ladder or other appliance, and the ship's deck.

(5) Where the passage referred to under subregulation (4), is by means of-

- (a) a gateway in the rails or bulwark, adequate handholds shall be provided;
- (b) a bulwark ladder, two handhold stanchions rigidly secured to the ship's structure at or near their bases and at higher points shall be fitted; and
- (c) the bulwark ladder shall be securely attached to the ship to prevent overturning.

(6) Shiplide doors used for pilot transfer shall not open outwards.

(7) Mechanical pilot hoists shall not be used for pilot transfer.

(8) The following associated equipment shall be kept at hand ready for immediate use where a person is being transferred:

- (a) two manropes of not less than 28 millimetres and not more than 32 millimetres in diameter properly secured to the ship, where required by a pilot; manropes shall be fixed at the rope end to the ring plate fixed on deck and shall be ready for use when the pilot disembarks, or upon request from a pilot approaching to board, the manropes shall reach the height of the stanchions or bulwarks at the point of

access to the deck before terminating at the ring plate on deck;

(b) a lifebuoy equipped with a self-igniting light; and

(c) a heaving line.

(9) When required by subregulation (4) stanchions and bulwark ladders, shall be provided.

(10) Adequate lighting shall be provided to illuminate the transfer arrangements overside and the position on deck where a person embarks or disembarks.

Use of heading and track control systems

21.-(1) In areas of high traffic density, conditions of restricted visibility and in all other hazardous navigational situations where heading and track control systems are in use, manual control of the ship's steering shall be established immediately.

(2) Subject to subregulation (1), the officer in charge of the navigational watch shall without delay obtain the services of a qualified helmsperson who shall be ready to take over steering control.

(3) The change over from automatic to manual steering and vice versa shall be made by or under the supervision of a responsible officer.

(4) The manual steering shall be tested after prolonged use of heading and track control systems, and before entering areas where navigation demands special caution.

Operation of steering gear

22. In areas where navigation demands special caution, ships shall have more than one steering gear power unit in operation when such units are capable of simultaneous operation.

Steering gear testing and drills

23.-(1) A ship steering gear shall be checked and tested by the ship crew within twelve hours before departure and the test procedure shall include the operation of the following-

(a) main steering gear;

(b) auxiliary steering gear;

(c) remote steering gear control systems;

- (d) steering positions located on the navigation bridge;
- (e) emergency power supply;
- (f) rudder angle indicators in relation to the actual position of the rudder;
- (g) remote steering gear control system power failure alarms;
- (h) steering gear power unit failure alarms; and
- (i) automatic isolating arrangements and other automatic equipment.

(2) The checks and tests referred to under subregulation (1), shall include:

- (a) the full movement of the rudder according to the required capabilities of the steering gear;
- (b) a visual inspection for the steering gear and its connecting linkage; and
- (c) the operation of the means of communication between the navigation bridge and steering gear compartment.

(3) Simple operating instructions with a block diagram showing the change-over procedures for remote steering gear control systems and steering gear power units shall be permanently displayed on the navigation bridge and in the steering compartment.

(4) A ship officer concerned with the operation and maintenance of steering gear shall be familiar with the operation of the steering systems fitted on the ship and with the procedures for changing from one system to another.

(5) In addition to the routine checks and tests prescribed under subregulations (1) and (2), emergency steering drills shall take place at least once every three months in order to practice emergency steering procedures.

(6) The drills under subregulation (5) shall include direct control within the steering gear compartment, the communications procedure with the navigation bridge and, where applicable the operation of alternative power supplies.

(7) The Corporation may waive the requirements to carry out the checks and tests prescribed under subregulations (1) and (2), for a ship which regularly engages in voyages of short duration where such a ship shall carry out these checks and tests at least once every week.

(8) The date upon which the checks and tests prescribed under subregulations (1) and (2), are carried out and the date and details of emergency steering drills carried out under subregulation (4), shall be recorded.

Nautical charts and publications

24. Nautical charts and publications, including sailing directions, lists of lights, notices to mariners, tide tables and other nautical publications necessary for the intended voyage, shall be adequate and up to date.

Records of navigational activities and daily reporting

25.-(1) A ship engaged on international voyages shall keep on board a record of navigational activities and incidents which are of importance to safety of navigation and which shall contain sufficient details to restore a complete record of the voyage, taking into account to the guidelines issued by the Corporation based on IMO Resolution A.916(22).

(2) When the records under subregulation (1), are not maintained in the ship logbook, it shall be maintained in another form approved by the Corporation.

(3) Every ship of 500 gross tonnage and above engaged on international voyages exceeding forty eight hours shall submit a daily report to its company and retain subsequent daily reports for the duration of the voyage.

(4) A daily report referred to under subregulation (3) may be transmitted by any means, provided that it is transmitted to the company, where practicable, after determination of the position in the report.

(5) An automated reporting system may be used, provided that it includes a recording function of its transmission and that those functions and interfaces with position fixing equipment are subjected to regular verification by the master.

- (6) The report under subregulation (3) shall contain the following:
- (a) ship position;
 - (b) ship course and speed; and
 - (c) details of any external or internal conditions that are affecting the ship voyage or the normal safe operation of the ship.

Life-saving signals to be used by ship, aircraft or person in distress

26. -(1) An illustrated table describing the life-saving signals shall be readily available to the officer of the watch on board a ship to which these Regulations applies.

(2) The signals referred to under subregulation (1), shall be used by a ship or person in distress when communicating with life-saving station, maritime rescue unit and aircraft engaged in search and rescue operations and such life-saving signals shall be as described in IAMSAR Manual Vol. III and illustrated in the International Code of Signals.

Operational limitations

27.-(1) A passenger ship engaged on international voyages shall before it is put in service have a list of limitations on the operation of the passenger ship including-

- (a) exemptions from any of these Regulations;
- (b) restrictions including operating areas, weather, sea state, permissible loads, trims and speed; and
- (c) whether imposed by the Corporation or established during the design or the building stages, shall be compiled before the passenger ship is put in service.

(2) The list referred to under subregulation (1), and necessary explanations shall be documented in a form acceptable to the Corporation and be kept on board readily available to the master.

(3) The list referred to under subregulation (1), shall be kept updated, and if the language used is not English, the list shall be provided in the English language.

Danger messages

28.-(1) A master of a ship which meets with danger to navigation shall be bound to communicate the information by all means at his disposal to ships in the vicinity and to the competent authorities.

(2) The danger to navigation under subregulation (1), includes ice, dangerous derelict, tropical storm, sub-freezing air temperatures associated with gale force winds causing severe ice accretion on superstructures, or winds of force 10 or above on the Beaufort scale for which no storm warning has been received.

(3) Subject to subregulation (1), the information may be transmitted using plain language in English or by means of the International Code of Signals.

(4) The Corporation shall take necessary steps to ensure that when intelgency of any of the danger specified under subregulation (2), is received, it will be promptly brought to the knowledge of those concerned and communicated to other interested Government.

(5) A radio message issued under subregulation (3), shall be preceded by the safety signal, using the procedure as prescribed by the Radio Regulations annexed to, or regarded as being annexed to the most recent International Telecommunication Convention which is in force at any time.

Information required in danger messages

29.-(1) The information required in danger messages are as follows:

- (a) ice, derelicts and other direct dangers to navigation including the-
 - (i) kind of ice, derelict or danger observed;
 - (ii) position of the ice, derelict or danger when last observed; and
 - (iii) time and date in Universal Co-ordinated Time when the danger was last observed;
- (b) tropical cyclones including-
 - (i) a statement that a tropical cyclone has been encountered or whenever the master has good reason to believe that

- a tropical cyclone is developing or exists in the neighbourhood;
- (ii) time, date in Universal Co-ordinated Time and position of ship when the observation was taken;
- (iii) messages on tropical cyclone may include the following information:
 - (aa) barometric pressure in hectopascals or millibars, preferably corrected and stating whether corrected or uncorrected;
 - (bb) barometric tendency which is the change in barometric pressure during the past three hours;
 - (cc) true wind direction;
 - (dd) wind force in Beaufort scale;
 - (ee) state of the sea whether smooth, moderate, rough or high;
 - (ff) swell whether slight, moderate or heavy and the true direction from which it comes and period or length of swell whether short, average or long; and
 - (gg) true course and speed of the ship.

(2) Where a master has reported a tropical cyclone or other dangerous storm he may ensure that further observations are made and transmitted hourly where practicable, but in any case at intervals of not more than three hours, so long as the ship remains under the influence of the storm.

(3) Wind of force 10 or above on the Beaufort scale for which no storm warning has been received that is other than the tropical cyclones referred to under subregulation (1)(b), when such a storm is encountered, the message shall contain similar information to that listed

under subregulation (1)(b), but excluding the details concerning sea and swell.

(4) Sub-freezing air temperatures associated with gale force wind causing severe ice accretion on superstructures including:

- (a) time and date in Universal Co-ordinated Time;
- (b) air temperature;
- (c) sea temperature where practicable; and
- (d) wind force and direction.

Distress situations
obligations and
procedures

30.-(1) A master of a ship at sea who is in a position to provide assistance in receiving information from any source that persons are in distress at sea, shall-

- (a) be bound to proceed with all speed to their assistance; and
- (b) inform the persons in distress or the search and rescue service that the ship is providing assistance.

(2) The obligation to provide assistance applies regardless of the nationality or status of such persons or the circumstances in which they are found.

(3) Where the ship receiving the distress alert is unable or, in the special circumstances of the case, considers it unreasonable or unnecessary to proceed to their assistance, the master shall enter in the logbook the reason for failing to proceed to the assistance of the persons in distress, taking into account the recommendation of the Organisation to inform the appropriate search and rescue service accordingly.

(4) The master of a ship in distress or the search and rescue service concerned, after consultation with the masters of ships which answer the distress alert, shall requisition one or more of those ships as the master of the ship in distress or the search and rescue service considers best to render assistance.

(5) The master of the ship requisitioned under subregulation (4), shall comply with the requisition by continuing to proceed with all speed to the assistance of persons in distress.

(6) The master shall be released from the obligation imposed under subregulation (1) and, if his ship has been requisitioned, from the obligation imposed under subregulation (5), on being informed by the persons in distress or by the search and rescue service or by the master of another ship which has reached such persons that assistance is no longer necessary.

(7) The master of the ship who has embarked persons in distress at sea shall treat them with humanity, within the capabilities and limitations of the ship.

Safe navigation
and avoidance of
dangerous
situations

31.-(1) Prior to proceeding to sea, the master shall ensure that the intended voyage has been planned using the appropriate nautical charts and nautical publications for the area concerned taking into account Resolution A.893(21) on guidelines for voyage planning adopted by the Organisation.

(2) Subject to subregulation (1), the voyage plan shall identify a route that-

- (a) takes into account any relevant ships' routing systems;
- (b) ensures sufficient sea room for the safe passage of the ship throughout the voyage;
- (c) anticipates all known navigational hazards and adverse weather conditions; and
- (d) takes into account the marine environmental protection measures that apply, and avoids actions and activities which may cause damage to the environment.

Master discretion

32. A ship owner, charterer, company operating the ship or any other person shall not prevent or restrict the master of the ship from taking or executing any decision which, in the master's professional judgement, is necessary for safety of life at sea and protection of marine environment.

Misuse of distress
signals

33. The use of an international distress signal except for the purpose of indicating that a person or

persons are in distress and any signal which may be confused with an international distress are prohibited.

Exeptions

34.-(1) The requirements referred to under this Part are subject to the following exceptions:

- (a) in so far as they relate to systems and equipment regulated by regulations 10, 11 and 13 shall not apply to ships below 150 gross tons engaged on any voyage;
- (b) regulation 11 shall not apply to-
 - (i) fishing vessels;
 - (ii) pleasure vessels below 150 gross tons engaged on any voyage, except for subregulation (1)(f);
 - (iii) ships which are not sea-going, except for subregulation (1) paragraphs (a) to (g);
- (c) subregulation (2)(c) shall not apply to ships-
 - (i) below 150 gross tons engaged on any voyage;
 - (ii) below 500 gross tons not engaged on international voyages;
- (d) subregulation 14(1) shall not apply to ships below 150 gross tons engaged on any voyage;
- (e) subregulation 14(3) shall not apply to-
 - (i) ships below 150 gross tons engaged on any voyage;
 - (ii) ships below 500 gross tons not engaged on international voyages;
 - (iii) fishing vessels;
- (f) regulation 16 shall not apply to-
 - (i) ships below 150 gross tons engaged on any voyage;
 - (ii) ships below 500 gross tons not engaged on international voyages;
 - (iii) fishing vessels;
- (g) regulations 21 to 24 shall not apply to-
 - (i) pleasure vessels below 150 gross tons engaged on any voyage;
 - (ii) ships which are not sea-going; and

(h) regulation 25(1) and (2) shall not apply to any ship below 150 gross tons engaged on any voyage.

(2) Regulations 21 to 23 are subject to any special rules made by any person empowered by law for roadsteads or ports navigable by sea-going vessels.

Exemption or waiver

35.-(1) Subject to subregulation (4), the Registrar may exempt from any requirement of a provision in Part II of these Regulations:

(a) a ship which does not normally engage on international voyages but is, in exceptional circumstances, required to undertake a single international voyage;

(b) a ship engaged on a voyage where-

(i) the maximum distance of the ship from the shore;

(ii) the length and nature of the voyage;

(iii) the absence of general navigational hazards; and

(iv) other conditions affecting safety are such as to render compliance with those provisions unreasonable or unnecessary.

(2) Subject to subregulation (4), the Registrar may exempt a ship without mechanical means of propulsion from any requirement of provisions of regulations 8, 9, 11, 13, 15, 21, 22, 23, 24, 25 and 37 of these Regulations.

(3) The Registrar may exempt from, or waive, specified requirements of the provisions in Chapter V of the Convention referred to in regulation 5 where such requirements are subject to a power to-

(a) exempt from those requirements; or

(b) waive those requirements,

in relation to a ship, or category of ship, if satisfied that the conditions prescribed by those provisions are met.

(4) An exemption under subregulation (1) or (2), or exemption or waiver under subregulation (3), may be-

(a) granted subject to such safety requirements as the Registrar thinks fit to ensure the overall safety of the ship; and

(b) on the giving of reasonable notice, altered or cancelled.

(5) An exemption granted under subregulation (1) or (2), or exemption or waiver granted under paragraph (3), or an alteration or cancellation under subregulation (4)(b), shall-

(a) be in writing;

(b) specify the date on which it takes effect; and

(c) specify the terms, if any, on which it is given.

(6) The requirement that the exemption granted under subregulation (1) or (2), or exemption or waiver granted under subregulation (3), or an alteration or cancellation under subregulation (4)(b), be in writing is satisfied where the text of the approval is-

(a) transmitted by electronic means;

(b) received in legible form; and

(c) capable of being used for subsequent reference.

(7) Where an exemption or waiver is granted subject to safety requirements, the exemption or waiver ceases to have effect if those requirements are not complied with.

Equivalents

36. Where the provisions of this Part require that-

(a) a particular fitting, material, appliance or apparatus be fitted on, or carried in, a ship;

(b) any particular arrangement be made on, or in relation to, a ship; or

(c) any particular provision be made in relation to a ship,

the Registrar may approve any other fitting, material, appliance, apparatus, arrangement or other provision if satisfied that it is at least as effective as that required by the provisions of this Part.

(2) The Registrar may approve an equivalent of a partial or conditional nature to a ship engaged on a voyage where-

(a) the maximum distance of the ship from the shore;
(b) the length and nature of the voyage;
(c) the absence of general navigational hazards;
and
(d) other conditions affecting safety,
make, in the opinion of the Registrar, compliance with the provisions of this Part unreasonable or unnecessary taking into account the effect such an approval may have on the safety of other ships.

(3) An approval given under subregulation (1) or (2) may, on the giving of reasonable notice, be continued, altered or cancelled.

(4) Any approval given under subregulation (1) or (2), or a continuation, alteration or cancellation under subregulation (3), shall-

- (a) be in writing;
- (b) specify the date on which it takes effect; and
- (c) specify the terms, if any, on which it is given.

(5) The requirement that the approval referred to in subregulation (1) or (2), or a continuation, alteration or cancellation in subregulation (3), be in writing is satisfied where the text of the approval is-

- (a) transmitted by electronic means;
- (b) received in legible form; and
- (c) capable of being used for subsequent reference.

Approvals

37.-(1) The Registrar or any person authorised by the Minister, may grant an approval in relation to a Tanzania ship in these Regulations requiring it to be-

- (a) approved by the Administration;
 - (b) done to the satisfaction of Administration;
- and
- (c) acceptable to the Administration.

(2) An approval given under subregulation (1) may, on the giving of reasonable notice, be continued, altered or cancelled.

(3) Any approval given under subregulation (1), or a continuation, alteration or cancellation under subregulation (2), shall-

- (a) be in writing;
- (b) specify the date on which it takes effect; and
- (c) specify the terms, if any, on which it is given.

(4) The requirement that the approval referred to in subregulation (1), or the continuation, alteration or cancellation under subregulation (2), be in writing shall be satisfied where the text of the approval is-

- (a) transmitted by electronic means;
- (b) received in legible form; and
- (c) capable of being used for subsequent reference.

PART III GENERAL PROVISIONS

Offences and
penalties

38.-(1) A shipowner or master who contravenes the provisions of regulations 4(4) and (5), 10, 11, 13 and 27 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar three thousand or its equivalent in Tanzania Shillings or to imprisonment for a term not exceeding twelve months or to both.-

(2) A master who contravenes the provisions of regulations 6, 25, 28 (1) and (5), 29, 30, 31 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar two thousand or its equivalent in Tanzania Shillings or to imprisonment for a term not exceeding twelve months or to both.

(3) A master or a any other person who contravenes the provisions of regulations 21, 22,23,25 and 26 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar two thousand or its equivalent in Tanzania Shillings or to imprisonment for a term not exceeding twelve months or to both.

(4) A person who contravenes the provisions of regulations 32,33 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar two thousand or its equivalent in Tanzania Shillings or to imprisonment for a term not exceeding twelve months or to both.

(5) A ship owner and master who contravenes the provisions of regulations 9, 12 and 13 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar two thousand or its equivalent in Tanzania Shillings.

(6) A ship owner or master or any other person who contravene the provisions of regulations 5 and 16 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar three thousand or its equivalent in Tanzania Shillings or to imprisonment for a term not exceeding twelve months or to both.

(7) A ship owner or master who contravenes the provisions of regulation 7 of these Regulations commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar three thousand or its equivalent in Tanzania Shillings.

(8) A ship owner, master or any other person who contravenes the provision of regulation 14, 15 and 27 of these Regulation commits an offence and upon conviction shall be liable to a fine of not less than the United States Dollar three thousand or its equivalent in Tanzania Shillings.

Detention

39.-(1) A ship which fails to comply with the provisions of Part II of these Regulations may be detained.

(2) Where the ship is detained under subregulation (1), the provisions of section 409 of the Act shall apply.

(3) Where a ship is liable to be detained under this regulation, the person detaining the ship shall serve on the master a detention notice which-

(a) states the grounds of the detention; and

(b) requires the terms of the notice to be

complied with until the ship is released by

any person referred to under section 409(1) of the Act.

(4) Where a ship other than a Tanzanian ship is detained, the Corporation shall immediately inform the ship's flag administration in writing.

(5) Where it is not possible to inform the ship's flag administration in accordance with subregulation (4), the Corporation shall inform the Consular of the State of the flag administration, or in the absence of a Consular, the nearest diplomatic representative of the State of the flag administration.

(6) For the purposes of subregulations (4) and (5), "flag administration" in relation to a ship means the administration of the State whose flag the ship is entitled to fly.

Evaluation and reporting

40.-(1) The Registrar shall-

- (a) carry out an evaluation of the regulatory provisions contained in these Regulations;
- (b) prepare a report of the evaluation process and setting out the conclusions of the review; and
- (c) submit the report to the Minister.

(2) The first report shall be submitted to the Minister within five years from the date of publication of these Regulations.

(3) Subsequent reports shall be submitted at the interval not exceeding five years.

(4) The report under this regulation shall, in particular-

- (a) set out the objectives intended to be achieved by the regulatory provision referred to in subregulation (1)(a);
- (b) assess the extent to which those objectives are achieved;
- (c) assess whether those objectives remain appropriate, and if so, assess the extent to which they could be achieved with a system that imposes less regulation.

FIRST SCHEDULE

(Made under regulation 11(7))

GUIDELINES FOR THE ONBOARD OPERATIONAL USE OF SHIPBORNE AUTOMATIC IDENTIFICATION SYSTEMS (AIS)

1. AIS is intended to enhance: safety of life at sea; the safety and efficiency of navigation; and the protection of the marine environment. SOLAS regulation V/19 requires that AIS exchange data ship-to-ship and with shore-based facilities. Therefore, the purpose of AIS is to help identify vessels; assist in target tracking; simplify information exchange (e.g. reduce verbal mandatory ship reporting); and provide additional information to assist situation awareness. In general, data received via AIS will improve the quality of the information available to the OOW, whether at a shore surveillance station or on board a ship. AIS should become a useful source of supplementary information to that derived from navigational systems (including radar) and therefore an important 'tool' in enhancing situation awareness of traffic confronting users.

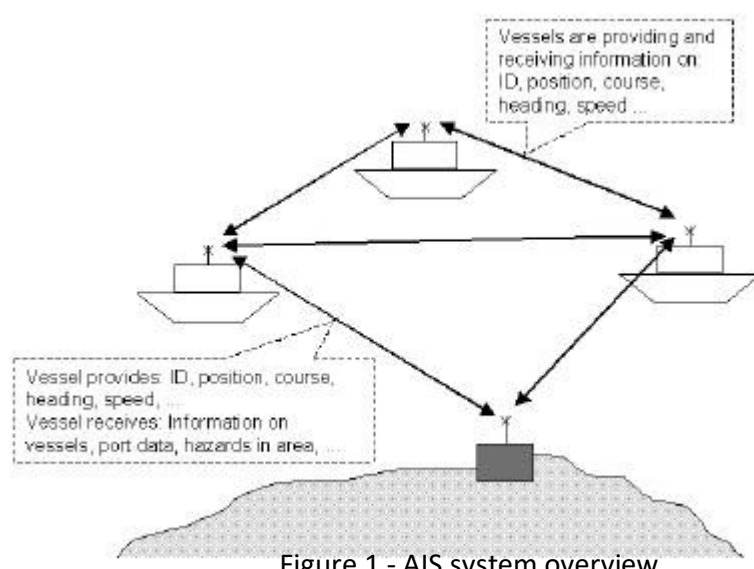


Figure 1 - AIS system overview

5 Shipborne AIS (see Figure 1):

- continuously transmits ship's own data to other vessels and VTS stations;
- continuously receives data of other vessels and VTS stations; and
- displays this data.

- 6 When used with the appropriate graphical display, shipborne AIS enables provision of fast, automatic information by calculating Closest Point of Approach (CPA) and Time to Closest Point of Approach (TCPA) from the position information transmitted by the target vessels.
- 7 AIS operates primarily on two dedicated VHF channels. Where these channels are not available regionally, the AIS is capable of being automatically switched to designated alternate channels by means of a message from a shore facility. Where no shore based AIS or GMDSS sea Area A1 station is in place, the AIS should be switched manually.
- 8 In practice, the capacity of the system is unlimited, allowing for a great number of ships to be accommodated at the same time.
- 9 The AIS is able to detect ships within VHF/FM range around bends and behind islands, if the landmasses are not too high. A typical value to be expected at sea is 20 to 30 nautical miles depending on antenna height. With the help of repeater stations, the coverage for both ship and VTS stations can be improved.
- 10 Information from a shipborne AIS is transmitted continuously and automatically without any intervention or knowledge of the OOW. An AIS shore station might require updated information from a specific ship by “polling” that ship, or alternatively, might wish to “poll” all ships within a defined sea area. However, the shore station can only increase the ships’ reporting rate, not decrease it.
- 11 The AIS information transmitted by a ship is of three different types:
 - fixed or static information, which is entered into the AIS on installation and need only be changed if the ship changes its name or undergoes a major conversion from one ship type to another;
 - dynamic information, which, apart from ‘Navigational status’ information, is automatically updated from the ship sensors connected to AIS; and
 - voyage-related information, which might need to be manually entered and updated during the voyage.
- 12 Details of the information referred to above are given in table 1 below:

Merchant Shipping (Safety of Navigation)

GN. NO. 483 (Contd.)

Information item	Information generation, type and quality of information
Static	
MMSI (Maritime Mobile Service Identity)	Set on installation Note that this might need amending if the ship changes ownership
Call sign and name	Set on installation Note that this might need amending if the ship changes ownership
IMO Number	Set on installation
Length and beam	Set on installation or if changed
Type of ship	Select from pre-installed list
Location of position-fixing antenna	Set on installation or may be changed for bi-directional vessels or those fitted with multiple antennae

Dynamic	
Ship's position with accuracy indication and integrity status	Automatically updated from the position sensor connected to AIS The accuracy indication is for better or worse than 10 m.
Position Time stamp in UTC	Automatically updated from ship's main position sensor connected to AIS
Course over ground (COG)	Automatically updated from ship's main position sensor connected to AIS, if that sensor calculates COG This information might not be available
Speed over ground (SOG)	Automatically updated from the position sensor connected to AIS This information might not be available
Heading	Automatically updated from the ship's heading sensor connected to AIS
Navigational status	Navigational status information has to be manually entered by the OOW and changed as necessary, for example: <ul style="list-style-type: none"> - underway by engines - at anchor - not under command (NUC) - restricted in ability to manoeuvre (RIATM)
	<ul style="list-style-type: none"> - moored - constrained by draught - aground - engaged in fishing - underway by sail <p>In practice, since all these relate to the COLREGs, any change that is needed could be undertaken at the same time that the lights or shapes were changed</p>

Merchant Shipping (Safety of Navigation)

GN. NO. 483 (Contd.)

Rate of turn (ROT)	Automatically updated from the ship's ROT sensor or derived from the gyro This information might not be available
Voyage-related	
Ship's draught	To be manually entered at the start of the voyage using the maximum draft for the voyage and amended as required (e.g. – result of de-ballasting prior to port entry)
Hazardous cargo (type)	To be manually entered at the start of the voyage confirming whether or not hazardous cargo is being carried, namely: DG (Dangerous goods) HS (Harmful substances) MP (Marine pollutants) Indications of quantities are not required
Destination and ETA	To be manually entered at the start of the voyage and kept up to date as necessary
Route plan (waypoints)	To be manually entered at the start of the voyage, at the discretion of the master, and updated when required
Short safety-related messages	
	Free format short text messages would be manually entered, addressed either a specific addressee or broadcast to all ships and shore stations

Table 1 - Data sent by ship

- 13 The data is autonomously sent at different update rates:
- dynamic information dependent on speed and course alteration (see table 2),
 - static and voyage-related data every 6 minutes or on request (AIS responds automatically without user action).

Type of ship	General reporting interval
Ship at anchor	3 min
Ship 0-14 knots	12 sec
Ship 0-14 knots and changing course	4 sec
Ship 14-23 knots	6 sec
Ship 14-23 knots and changing course	2 sec
Ship >23 knots	3 sec
Ship >23 knots and changing course	2 sec

Table 2 - Report rate of dynamic information

Short Safety-related messages

- 14 Short safety-related messages are fixed or free format text messages addressed either to a specified destination (MMSI) or all ships in the area. Their content should be relevant to the safety of navigation, e.g. an iceberg sighted or a buoy not on station. Messages should be kept as short as possible. The system allows up to 158 characters per message but the shorter the message the more easily it will find free space for transmission. At present these messages are not further regulated, to keep all possibilities open.
- 15 Operator acknowledgement may be requested by a text message.
- 16 Short safety-related messages are only an additional means of broadcasting maritime safety information. Whilst their importance should not be underestimated, use of such messages does not remove any of the requirements of the Global Maritime Distress and Safety System (GMDSS).
- 17 The operator should ensure that he displays and considers incoming safety-related messages and should send safety-related messages as required.
- 18 According to SOLAS regulation V/31 (Danger messages)
- “The master of every ship which meets with dangerous ice, a dangerous derelict, or any other direct danger to navigation, or ...is bound to communicate the information by all the means at his disposal to ships at his vicinity, and also to the competent authorities...”*
- 19 Normally this is done via VHF voice communication, but “by all the means” now implies the additional use of the AIS short messages application, which has the advantage of reducing difficulties in understanding, especially when noting down the correct position.
- 20 When entering any data manually, consideration should be given to the confidentiality of this information, especially when international agreements, rules or standards provide for the protection of navigational information.
- 21 AIS should always be in operation when ships are underway or at anchor. If the master believes that the continual operation of AIS might compromise the safety or security of his/her ship, the AIS may be switched off. This might be the case in sea areas where pirates and armed robbers are known to operate. Actions of this nature should always be recorded in the ship’s logbook together with the reason for doing so. The master should however restart the AIS as soon as the source of danger has disappeared. If the AIS is shut down, static data and voyage related information remains stored. Restart is done by switching on the power to the AIS unit. Ship’s own data will be transmitted after a two minute initialization period. In ports AIS operation should be in accordance with port requirements.
- 22 The OOW should manually input the following data at the start of the voyage and whenever changes occur, using an input device such as a keyboard:
- ship’s draught;
 - hazardous cargo;

- destination and ETA;
 - route plan (way points);
 - the correct navigational status; and
 - short safety-related messages.
- 23 To ensure that own ship's static information is correct and up-to-date, the OOW should check the data whenever there is a reason for it. As a minimum, this should be done once per voyage or once per month, whichever is shorter. The data may be changed only on the authority of the master.
- 24 The OOW should also periodically check the following dynamic information:
- positions given according to WGS 84;
 - speed over ground; and
 - sensor information.
- 25 After activation, an automatic built-in integrity test (BIIT) is performed. In the case of any AIS malfunction an alarm is provided and the unit should stop transmitting.
- 26 The quality or accuracy of the ship sensor data input into AIS would not however be checked by the BIIT circuitry before being broadcast to other ships and shore stations. The ship should therefore carry out regular routine checks during a voyage to validate the accuracy of the information being transmitted. The frequency of those checks would need to be increased in coastal waters.
- 27 The AIS provides data that can be presented on the minimum display or on any suitable display device as described in annex 1.
- 28 The minimum mandated display provides not less than three lines of data consisting of bearing, range and name of a selected ship. Other data of the ship can be displayed by horizontal scrolling of data, but scrolling of bearing and range is not possible. Vertical scrolling will show all the other ships known to the AIS.
- 29 Where AIS information is used with a graphical display, the following target types are recommended for display:
- | | |
|------------------|--|
| Sleeping target | A sleeping target indicates only the presence of a vessel equipped with AIS in a certain location. No additional information is presented until activated, thus avoiding information overload. |
| Activated target | If the user wants to know more about a vessel's motion, he has simply to activate the target (sleeping), so that the display shows immediately: |

	a vector (speed and course over ground), the heading, and ROT indication (if available) to display actually initiated course changes.
Selected target	If the user wants detailed information on a target (activated or sleeping), he may select it. Then the data received, as well as the calculated CPA and TCPA values, will be shown in an alpha-numeric window. The special navigation status will also be indicated in the alpha numeric data field and not together with the target directly.
Dangerous target	If an AIS target (activated or not) is calculated to pass pre-set CPA and TCPA limits, it will be classified and displayed as a dangerous target and an alarm will be given.
Lost target	If a signal of any AIS target at a distance of less than a preset value is not received, a lost target symbol will appear at the latest position and an alarm will be given.

Symbols

- 30 The user should be familiar with the symbology used in the graphical display provided.
- 31 The officer of the watch (OOW) should always be aware that other ships, in particular leisure craft, fishing boats and warships, and some coastal shore stations including Vessel Traffic Service (VTS) centres, might not be fitted with AIS.
- 32 The OOW should always be aware that other ships fitted with AIS as a mandatory carriage requirement might switch off AIS under certain circumstances by professional judgement of the master.
- 33 In other words, the information given by the AIS may not be a complete picture of the situation around the ship.
- 34 The users must be aware that transmission of erroneous information implies a risk to other ships as well as their own. The users remain responsible for all information entered into the system and the information added by the sensors.
- 35 The accuracy of AIS information received is only as good as the accuracy of the AIS information transmitted.
- 36 The OOW should be aware that poorly configured or calibrated ship sensors (position, speed and heading sensors) might lead to incorrect information being transmitted. Incorrect information about one ship displayed on the bridge of another could be dangerously confusing.
- 37 If no sensor is installed or if the sensor (*e.g.* the gyro) fails to provide data, the AIS automatically transmits the "not available" data value. However, the built-in integrity check cannot validate the contents of the data processed by the AIS.
- 38 It would not be prudent for the OOW to assume that the information received from other ships is of a comparable quality and accuracy to that which might be available on own ship.

- 39 The potential of AIS as an anti-collision device is recognized and AIS may be recommended as such a device in due time.
- 40 Nevertheless, AIS information may be used to assist in collision avoidance decisionmaking. When using the AIS in the ship-to-ship mode for anti-collision purposes, the following cautionary points should be borne in mind:
1. AIS is an additional source of navigational information. It does not replace, but supports, navigational systems such as radar target-tracking and VTS; and
 2. the use of AIS does not negate the responsibility of the OOW to comply at all times with the Collision Regulations.
- 41 The user should not rely on AIS as the sole information system, but should make use of all safety-relevant information available.
- 42 The use of AIS on board ship is not intended to have any special impact on the composition of the navigational watch, which should continue to be determined in accordance with the STCW Convention.
- 43 Once a ship has been detected, AIS can assist in tracking it as a target. By monitoring the information broadcast by that target, its actions can also be monitored. Changes in heading and course are, for example, immediately apparent, and many of the problems common to tracking targets by radar, namely clutter, target swap as ships pass close by and target loss following a fast manoeuvre, do not affect AIS. AIS can also assist in the identification of targets, by name or call sign and by ship type and navigational status.
- 44 VTS centres may send information about vessels which are not carrying AIS and which are tracked only by VTS radar via the AIS to vessels equipped with AIS. Any pseudo AIS target broadcast by VTS should be clearly identified as such. Particular care should always be taken when using information which has been relayed by a third party. Accuracy of these targets may not be as complete as actual directly-received targets, and the information content may not be as extensive.
- 45 VTS centres may also send short messages either to one ship, all ships, or ships within a certain range or in a special area, e.g.:
- (local) navigational warnings;
 - traffic management information; and
 - port management information.
- 46 A VTS operator may request, by a text message, an acknowledgement from the ship's operator.

Note: The VTS should continue to communicate via voice VHF. The importance of verbal communication should not be underestimated. This is important to enable the VTS operator to:

- assess vessels' communicative ability; and

- establish a direct communication link which would be needed in critical situations.

47 (D)GNSS corrections may be sent by VTS centres via AIS.

48 AIS is expected to play a major role in ship reporting systems. The information required by coastal authorities in such systems is typically included in the static voyage-related and dynamic data automatically provided by the AIS system. The use of the AIS long-range feature, where information is exchanged via communications satellite, may be implemented to satisfy the requirements of some ship reporting systems.

49 AIS may be used in search and rescue operations, especially in combined helicopter and surface searches. AIS allows the direct presentation of the position of the vessel in distress on other displays such as radar or ECS/ECDIS, which facilitates the task of SAR craft. For ships in distress not equipped with AIS, the On Scene Co-ordinator (OSC) could create a pseudo AIS target.

50 AIS, when fitted to selected fixed and floating aids to navigation can provide information to the mariner such as:

- position;
- status;
- tidal and current data; and
- weather and visibility conditions.

51 AIS will play a role in an overall international maritime information system, supporting voyage planning and monitoring. This will help Administrations to monitor all the vessels in their areas of concern and to track dangerous cargo.

ANNEX 1

DESCRIPTION OF AIS

COMPONENTS

1 In general, an onboard AIS (see figure 1) consists of:

- antennas;
- one VHF transmitter;
- two multi-channel VHF receivers;
- one channel 70 VHF receiver for channel management;
- a central processing unit (CPU);
- an electronic position-fixing system, Global Navigation Satellite System (GNSS) receiver for timing purposes and position redundancy;
- interfaces to heading and speed devices and to other shipborne sensors;
- interfaces to radar/Automatic Radar Plotting Aids (ARPA), Electronic Chart System/Electronic Chart Display and Information System (ECS/ECDIS) and Integrated Navigation Systems (INS);
- BIIT (built-in integrity test); and

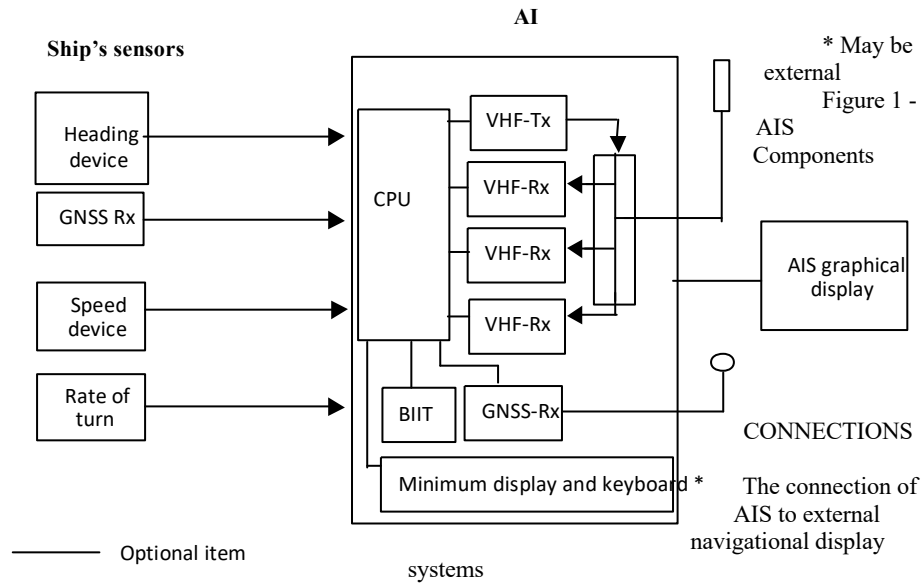
- minimum display and keyboard to input and retrieve data.

With the integral minimum display and keyboard unit, the AIS would be able to operate as a stand-alone system. A stand-alone graphical display or the integration of the AIS data display into other devices such as INS, ECS/ECDIS or a radar/ARPA display would significantly increase the effectiveness of AIS, when achievable.

2 All onboard sensors must comply with the relevant IMO standards concerning availability, accuracy, discrimination, integrity, update rates, failure alarms, interfacing and type-testing.

3 AIS provides:

- a built in integrity test (BIIT) running continuously or at appropriate intervals;
- monitoring of the availability of data;
- an error detection mechanism of the transmitted data; and
- an error check on the received data.



4 The AIS can be connected either to an additional dedicated AIS display unit, possibly one with a large graphic display, or to an existing navigational system such as radar or an electronic chart, but in the later case only as part of an integrated navigation system.

The connection of AIS to external portable navigational equipment

5 It is becoming common practice for pilots to possess their own portable navigational equipment, which they carry on board. Such devices can be connected to shipborne AIS equipment and display the targets they receive.

The connection of AIS to external long-range radiocommunication devices

6 AIS is provided with a two-way interface for connecting to long-range radiocommunication equipment. Initially, it is not envisaged that AIS would be able to be directly connected to such equipment.

7 A shore station would first need to request that the ship makes a long-range AIS information transmission. Any ship-to-shore communication would always be made point-to-point, and not broadcast, and once communication had been established, the ship would have the option of setting its AIS to respond automatically to any subsequent request for a ship report from that shore station.

8 Users are reminded that SOLAS regulation V/11.10 provides that the participation of ships in IMO-adopted ship reporting systems shall be free of charge to the ships concerned.

ANNEX 2

TECHNICAL DESCRIPTION

1 AIS operates primarily on two dedicated VHF channels (AIS1 - 161,975 MHz and AIS2 - 162,025 MHz). Where these channels are not available regionally, the AIS is capable of automatically switching to alternate designated channels.

2 The required ship reporting capacity according to the IMO performance standard amounts to a minimum of 2000 time slots per minute (see figure 2). The ITU Technical Standard for the Universal AIS provides 4500 time slots per minute. The broadcast mode is based on a principle called (S)TDMA (Self-organized Time Division Multiple Access) that allows the system to be overloaded by 400 to 500% and still provide nearly 100% throughput for ships closer than 8 to 10 NM to each other in a ship-to-ship mode. In the event of system overload, only targets far away will be subject to drop-out in order to give preference to targets close by that are a primary concern for ship-to-ship operation of AIS. In practice, the capacity of the system is unlimited, allowing for a great number of ships to be accommodated at the same time.

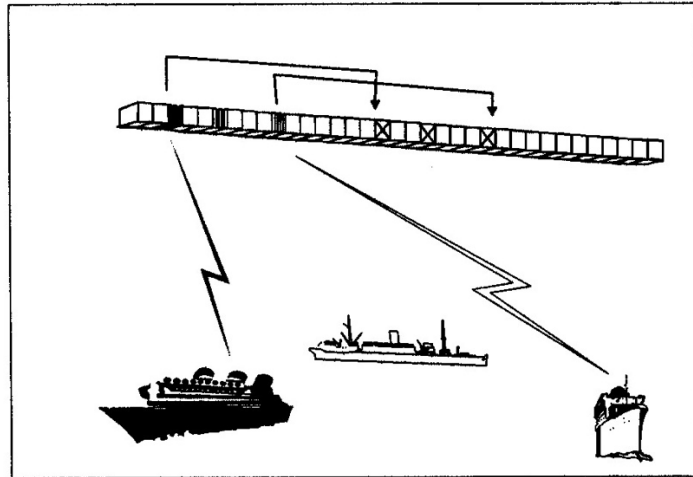


Figure 2 - Principles of TDMA

SECOND SCHEDULE

(Made under regulation 17)

GUIDELINES FOR PILOT TRANSFER ARRANGEMENTS

1 Ship designers are encouraged to consider all aspects of pilot transfer arrangements at an early stage in design. Equipment designers and manufacturers are similarly encouraged, particularly with respect to the provisions of paragraphs 2.1.2, 3.1 and 3.3.

2 A pilot ladder should be certified by the manufacturer as complying with this section or with the requirements of an international standard acceptable to the Corporation.

2.1 Position and construction

2.1.1 The securing strong points, shackles and securing ropes should be at least as strong as the side ropes specified in section 2.2 below.

2.1.2 The steps of the pilot ladders should comply with the following requirements:

- (a) if made of hardwood, they should be made in one piece, free of knots;
- (b) if made of material other than hardwood, they should be of equivalent strength, stiffness and durability to the satisfaction of the Corporation;
- (c) the four lowest steps may be of rubber of sufficient strength and stiffness or other material to the satisfaction of the Corporation;
- (d) they should have an efficient non-slip surface;
- (e) they should be not less than 400 mm between the side ropes, 115 mm wide and 25 mm in depth, excluding any non-slip device or grooving;
- (f) they should be equally spaced not less than 310 mm or more than 350 mm apart; and
- (g) they should be secured in such a manner that each will remain horizontal.

2.1.3 No pilot ladder should have more than two replacement steps which are secured in position by a method different from that used in the original construction of the ladder, and any steps so secured should be replaced as soon as reasonably practicable by steps secured in position by the method used in the original construction of the pilot ladder. When any replacement step is secured to the side ropes of the pilot ladder by means of grooves in the sides of the step, such grooves should be in the longer sides of the step.

2.1.4 Pilot ladders with more than five steps should have spreader steps not less than 1.8 m long provided at such intervals as will prevent the pilot ladder from twisting. The lowest spreader step should be the fifth step from the bottom of the ladder and the interval between any spreader step and the next should not exceed nine steps.

2.1.5 When a retrieval line is considered necessary to ensure the safe rigging of a pilot ladder, the line should be fastened at or above the last spreader step and should lead forward. The retrieval line should not hinder the pilot nor obstruct the safe approach of the pilot boat.

2.1.6 A permanent marking should be provided at regular intervals (e.g. 1 m) throughout the length of the ladder consistent with ladder design, use and maintenance in order to facilitate the rigging of the ladder to the required height.

2.2.1 The side ropes of the pilot ladder should consist of two uncovered ropes not less than 18 mm in diameter on each side and should be continuous, with no joints and have a breaking strength of at least 24 Kilo Newtons per side rope. The two side ropes should each consist of one continuous length of rope, the midpoint half-length being located on a thimble large enough to accommodate at least two passes of side rope.

2.2.2 Side ropes should be made of manila or other material of equivalent strength, durability, elongation characteristics and grip which has been protected against actinic degradation and is satisfactory to the Corporation.

2.2.3 Each pair of side ropes should be secured together both above and below each step with a mechanical clamping device properly designed for this purpose, or seizing method with step fixtures (chocks or widgets), which holds each step level when the ladder is hanging freely. The preferred method is seizing.²

3 ACCOMMODATION LADDERS USED IN CONJUNCTION WITH PILOT LADDERS

3.1 Arrangements which may be more suitable for special types of ships may be accepted, provided that they are equally safe.

3.2 The length of the accommodation ladder should be sufficient to ensure that its angle of slope does not exceed 45°. In ships with large draft ranges, several pilot ladders hanging positions may be provided, resulting in lesser angles of slope. The accommodation ladder should be at least 600 mm in width.

3.3 The lower platform of the accommodation ladder should be in a horizontal position and secured to the ship's side when in use. The lower platform should be a minimum of 5 m above sea level.

3.4 Intermediate platforms, if fitted, should be self-levelling. Treads and steps of the accommodation ladder should be so designed that an adequate and safe foothold is given at the operative angles.

□ Refer to the recommendations by the International Organization for Standardization, in particular publication ISO 799:2004, Ships and marine technology -Pilot ladders, part 4.3a and part 3, paragraph 3.2.1.

3.5 The ladder and platform should be equipped on both sides with stanchions and rigid handrails, but if hand ropes are used, they should be tight and properly secured. The vertical space between the handrail or hand rope and the stringers of the ladder should be securely fenced.

3.6 The pilot ladder should be rigged immediately adjacent to the lower platform of the accommodation ladder and the upper end should extend at least 2 m above the lower platform. The horizontal distance between the pilot ladder and the lower platform should be between 0.1 and 0.2 m.

3.7 If a trapdoor is fitted in the lower platform to allow access from and to the pilot ladder, the aperture should not be less than 750 mm x 750 mm. The trapdoor should open upwards and be secured either flat on the embarkation platform or against the rails at the aft end or outboard side of the platform and should not form part of the handholds. In this case the after part of the lower platform should also be fenced as specified in paragraph 3.5 above, and the pilot ladder should extend above

the lower platform to the height of the handrail and remain in alignment with and against the ship's side.

3.8 Accommodation ladders, together with any suspension arrangements or attachments fitted and intended for use in accordance with this recommendation, should be to the satisfaction of the Corporation³.

4 MECHANICAL PILOT HOISTS

The use of mechanical pilot hoists is prohibited by SOLAS regulation V/23.

5 ACCESS TO DECK

5.1 A gateway in the rails or bulwark, adequate handholds should be provided at the point of embarking on or disembarking from the ship on each side which should be not less than 0.7 m or more than 0.8 m apart. Each handhold should be rigidly secured to the ship's structure at or near its base and also at a higher point, should be not less than 32 mm in diameter and should extend not less than 1.2 m above the deck to which it is fitted; and

5.2 A bulwark ladder, two separate handhold stanchions should be fitted at the point of embarking on or disembarking from the ship on each side which should be not less than 0.7 m or more than 0.8 m apart. The bulwark ladder should be securely attached to the ship to prevent overturning. Each stanchion should be rigidly secured to the ship's structure at or near its base and also at a higher point, should be not less than 32 mm in diameter and should extend not less than 1.2 m above the top of the bulwarks. Stanchions or handrails should not be attached to the bulwark ladder.

3 Refer to SOLAS regulation II-1/3-9 concerning accommodation ladders.

6 SAFE APPROACH OF THE PILOT BOAT

Where rubbing bands or other constructional features might prevent the safe approach of a pilot boat, these should be cut back to provide at least 6 metres of unobstructed ship's side. Specialized offshore ships less than 90 m or other similar ships less than 90 m for which a 6 m gap in the rubbing bands would not be practicable, as determined by the Corporation, do not have to comply with this requirement. In this case, other appropriate measures should be taken to ensure that persons are able to embark and disembark safely.

7 INSTALLATION OF PILOT LADDER WINCH REELS

7.1 Point of access

7.1.1 When a pilot ladder winch reel is provided it should be situated at a position which will ensure persons embarking on, or disembarking from, the ship between the pilot ladder and the point of access to the ship, have safe, convenient and unobstructed access to or egress from the ship.

7.1.2 The point of access to or egress from the ship may be by a ship's side opening, an accommodation ladder when a combination arrangement is provided, or a single section of pilot ladder.

7.1.3 The access position and adjacent area should be clear of obstructions, including the pilot ladder winch reel, for distances as follows:

- (a) a distance of 915 mm in width measured longitudinally;
- (b) a distance of 915 mm in depth, measured from the ship's side plating inwards; and
- (c) a distance of 2,200 mm in height, measured vertically from the access deck.

7.2 Physical positioning of pilot ladder winch reels

7.2.1 Pilot ladder winch reels are generally fitted on the ship's upper (main) deck or at a ship's side opening which may include side doors, gangway locations or bunkering points. Winch reels fitted on the upper deck may result in very long pilot ladders.

7.2.2 Pilot ladder winch reels which are fitted on a ship's upper deck for the purpose of providing a pilot ladder which services a ship side opening below the upper deck or, alternatively, an accommodation ladder when a combination arrangement is provided should:

- (a) be situated at a location on the upper deck from which the pilot ladder is able to be suspended vertically, in a straight line, to a point adjacent to the ship side opening access point or the lower platform of the accommodation ladder;
- (b) be situated at a location which provides a safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the pilot ladder and the place of access on the ship;
- (c) be situated so that safe and convenient access is provided between the pilot ladder and the ship's side opening by means of a platform which should extend outboard from the ship's side for a minimum distance of 750 mm, with a longitudinal length of a minimum of 750 mm. The platform should be securely guarded by handrails;
- (d) safely secure the pilot ladder and manropes to the ship's side at a point on the ship's side at a distance of 1,500 mm above the platform access point to the ship side opening or the lower platform of the accommodation ladder; and
- (e) if a combination arrangement is provided, have the accommodation ladder secured to the ship's side at or close to the lower platform so as to ensure that the accommodation ladder rests firmly against the ship's side.

7.2.3 Pilot ladder winch reels fitted inside a ship's side opening should:

- (a) be situated at a position which provides a safe, convenient and unobstructed passage for any person embarking on, or disembarking from, the ship between the pilot ladder and the place of access on the ship;
- (b) be situated at a position which provides an unobstructed clear area with a minimum length of 915 mm and minimum width of 915 mm and minimum vertical height of 2,200 mm; and
- (c) if situated at a position which necessitates a section of the pilot ladder to be partially secured in a horizontal position on the deck so as to provide a clear access as described above, then allowance should be made so that this section of the pilot ladder may be covered with a rigid platform for a minimum distance of 915 mm measured horizontally from the ship's side inwards.

7.3 Handrails and handgrips

Handrails and handgrips should be provided in accordance with section 5 to assist the pilot to safely transfer between the pilot ladder and the ship, except as noted in paragraph 7.2.2.3 for arrangements with platforms extending outboard. The horizontal distance between the handrails and/or the handgrips should be not less than 0.7 m or more than 0.8 m apart.

7.4 Securing of the pilot ladder

Where the pilot ladder is stowed on a pilot ladder winch reel which is located either within the ship's side opening or on the upper deck:

- (a) the pilot ladder winch reel should not be relied upon to support the pilot ladder when the pilot ladder is in use;
- (b) the pilot ladder should be secured to a strong point, independent of the pilot ladder winch reel; and
- (c) the pilot ladder should be secured at deck level inside the ship side opening or, when located on the ship's upper deck, at a distance of not less than 915 mm measured horizontally from the ship's side inwards.

7.5 Mechanical securing of pilot ladder winch reel

7.5.1 All pilot ladder winch reels should have means of preventing the winch reel from being accidentally operated as a result of mechanical failure or human error.

7.5.2 Pilot ladder winch reels may be manually operated or, alternatively, powered by either electrical, hydraulic or pneumatic means.

7.5.3 Manually operated pilot ladder winch reels should be provided with a brake or other suitable arrangements to control the lowering of the pilot ladder and to lock the winch reel in position once the pilot ladder is lowered into position.

7.5.4 Electrical, hydraulic or pneumatically driven pilot ladder winch reels should be fitted with safety devices which are capable of cutting off the power supply to the winch reel and thus locking the winch reel in position.

7.5.5 Powered winch reels should have clearly marked control levers or handles which may be locked in a neutral position.

7.5.6 A mechanical device or locking pin should also be utilized to lock powered winch reels.

Dodoma,
28th June, 2023

MAKAME M. MBARAWA,
Minister for Works and Transport