

# **Procedure for Watchkeeping on Ships<sup>1</sup>**

Regulation of the Minister of Economic Affairs and Communications No. 34 of 21 May 2013  
This Regulation is established on the basis of § 30 (3) of the Maritime Safety Act.

## **Chapter 1 GENERAL PROVISIONS**

### **§ 1. Scope of Regulation**

- (1) This Regulation provides the requirements for arrangement of watchkeeping on ships in accordance with the Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 (hereinafter *STCW Convention*) and its subsequent amendments.
- (2) When arranging watchkeeping on ships, the guidance in Section B-VIII of the STCW Code supplementing the STCW Convention shall be taken into account.

## **Chapter 2 ARRANGEMENT OF WATCHKEEPING**

### **§ 2. General Principles of Watchkeeping**

- (1) The master of the ship shall ensure that watchkeeping arrangements on the ship are adequate for safe navigation. The master shall ensure that watch systems are arranged in such a way that the efficiency of watchkeeping personnel is not impaired by fatigue, and that duties are organised in such a way that the first watch at the start of a voyage and subsequent relieving watches are sufficiently rested and otherwise fit for duty.
- (2) Under the master's general direction, the officers of the navigational watch shall be responsible for navigating the ship safely during their periods of duty.
- (3) The chief engineer of every ship at sea shall ensure, in consultation with the master, that watchkeeping arrangements are adequate to maintain a safe engineering watch.
- (4) In arranging watchkeeping, the following general requirements shall be observed:
  - 1) proper arrangements for watchkeeping personnel shall be ensured in accordance with the situations;
  - 2) the competence and fitness of individuals shall be taken into account when deploying watchkeeping personnel;
  - 3) understanding of watchkeeping personnel regarding their individual and team roles and responsibility shall be established;
  - 4) the master, chief engineer officer and the officers in charge of watch duties shall maintain a proper watch, making the most effective use of the resources available, such as information, installations, equipment, other personnel, etc.;
  - 5) watchkeeping personnel shall understand the functions and operation of shipboard installations/equipment and be familiar with handling them;
  - 6) watchkeeping personnel shall understand the readings and signals of shipboard installations/equipment as well as the information given by other crew members, and know how to respond to these;
  - 7) the information identified in clause 6 shall be appropriately shared by all the watchkeeping personnel;

- 8) watchkeeping personnel shall maintain an exchange of appropriate communication in any situation;
  - 9) watchkeeping personnel shall notify the master, chief engineer officer or officers in charge of watch duties when in any doubt as to what action to take in the interest of safety.
- (5) The master of the ship, officers and the rest of the crew shall be aware of the effects of pollution of the marine environment and shall take all possible precautions to prevent such pollution.

### **§ 3. Obligations of the Company**

- (1) The company shall ensure:
  - 1) the preparation of watch schedules and the posting of these on notice boards, and the preparation of watch schedules in the working language of the ship as well as in English in ships on international voyages;
  - 2) the maintenance of the records of daily working hours and hours of rest in the working language of the ship as well as in English in ships on international voyages. The seafarers shall receive at least once a month a copy of the records pertaining to them, which shall be endorsed by the master or by a person authorised by the master and signed by the seafarers.
- (2) When manning a ship the company shall take into consideration the general requirements established in § 2 (4) of this Regulation and the dangers posed by fatigue of seafarers whose duties involve the safe and secure operation of a ship.

### **§ 4. Working Hours and Hours of Rest of Watchkeeping Personnel**

- (1) The working hours and the hours of rest of watchkeeping personnel shall be regulated by the Seafarers Employment Act.
- (2) The master of a ship may require a seafarer to perform watchkeeping duties during the seafarer's hours of rest if it is necessary for the immediate safety of the ship, persons or cargo on board, or for the purpose of giving assistance to other ships or persons in distress at sea. The master may suspend the schedule of hours of rest and require a seafarer to perform any hours of work until the normal situation has been restored.

### **§ 5. Voyage Planning**

- (1) The intended voyage shall be planned in advance, taking into consideration all pertinent information. The course laid down on the navigational chart shall be checked before the voyage commences.
- (2) The chief engineer shall, in consultation with the master, determine in advance the needs for fuel, water, lubricants, chemicals, expendable and other spare parts, tools and any other supplies.
- (3) Prior to each voyage the master shall ensure that the intended route from the port of departure to the first port of call is planned using adequate and appropriate charts and other nautical publications necessary for the intended voyage, containing accurate, complete and up-to-date information about the navigational limitations and hazards which are relevant to the safe navigation of the ship.

### **§ 6. Laying Down the Intended Course on the Navigational Chart, Checking the Course Laid Down on the Navigational Chart and Planning a New Course**

- (1) The intended route shall be laid down on the appropriate navigational charts which shall be accessible to the officer of the navigational watch at any time. The officer of the navigational watch shall verify the courses displayed on the navigational chart for his period of duty prior to using the course during the voyage.
- (2) If a decision is made during a voyage to change the planned route, or if it is necessary for the ship to deviate from the planned route for substantial reasons, an amended route shall be planned prior to deviating from the original course.

### **Chapter 3 NAVIGATIONAL WATCH**

#### **§ 7. Arrangement of Navigational Watch and Watchkeeping Personnel**

- (1) The master and the officer in charge of the navigational watch shall ensure that the composition of the navigational watch is adequate for safe navigation of the ship. The navigational watch shall consist of the master, navigating officers and the deck crew.
- (2) In order to ensure safe navigation the master shall, while assigning watchkeeping duties, take into account all relevant factors, including the following:
  - 1) visibility, state of weather and sea;
  - 2) traffic density and other activities occurring in the ship's area of navigation;
  - 3) the traffic requirements and conditions in or near the traffic separation schemes;
  - 4) the additional workload caused by the nature of the ship's functions;
  - 5) the preparedness for duty of any crew members on call who are assigned as members of the watch;
  - 6) the professional competence of the ship's officers and crew;
  - 7) the experience of the officer of the navigational watch, and the familiarity of the officer with the equipment and manoeuvrability of the ship;
  - 8) activities taking place on board the ship, including radiocommunication activities, and the availability of assistance to be summoned immediately to the bridge when necessary;
  - 9) the operational status of bridge instrumentation and controls, including alarm systems;
  - 10) rudder and propeller control and ship manoeuvring characteristics;
  - 11) the size of the ship and the field of vision available from the conning position;
  - 12) the configuration of the bridge, to the extent such configuration might inhibit a member of the watch from detecting by sight or hearing any external development;
  - 13) any other IMO standard, procedure or guidance relating to watchkeeping arrangements and requirements for watchkeeping personnel.
- (3) At no time shall the bridge be left unattended. When deciding the composition of the watch on the bridge, which may include appropriately qualified ratings, the following factors, *inter alia*, shall be taken into account:
  - 1) proximity of navigational hazards which may significantly complicate navigating the ship;
  - 2) use and operational condition of navigational aids (radar and electronic position-indicating devices) and any other equipment affecting the safe navigation of the ship;
  - 3) whether the ship is fitted with automatic steering;
  - 4) whether there are radio duties to be performed;
  - 5) unmanned machinery space (UMS) controls, alarms and indicators provided on the bridge, procedures for their use and limitations;
  - 6) any unusual demands on the navigational watch that may arise as a result of special operational circumstances.

- (4) On ships with automatic steering and with operational internal communication devices approved by the Estonian Transport Administration or by an authorised classification society, there shall be on the bridge, in addition to the officer of the navigational watch, at least one member of the deck crew to keep lookout or to be available to be summoned to the bridge ready to assume lookout duty immediately.
- (5) On ships without automatic steering and without operational internal communication devices approved by the Estonian Transport Administration or by an authorised classification society, except for ships that comply with the requirements stipulated in § 7 (6) of this Regulation or ships where these devices are not fully operational, there shall be on the bridge, in addition to the officer of the navigational watch, two members of the deck crew, with one of them stationed to steer the ship and the other to keep lookout or to be available to be summoned to the bridge ready to assume lookout duty immediately.
- (6) On ships where the bridge and its equipment are such that maritime safety is ensured by posting only one person on the bridge, and which are equipped with approved and fully operational automatic steering and internal communication devices, the master may, after careful consideration and taking into account the requirements stipulated in § 13 (1) of this Regulation, allow the navigational officer to keep watch alone in daylight.
- (7) § 7 (6) of this Regulation shall not be applied on passenger ships and tankers.

#### **§ 8. Watchkeeping Personnel on Passenger Ships on International Voyages and on Icebreakers Engaged in Icebreaking Activities**

Two officers of the watch shall be posted on passenger ships on international voyages and on icebreakers engaged in icebreaking activities.

#### **§ 9. Arrangement of Navigational Watch and Watchkeeping Personnel on Ships of Gross Tonnage Less Than 500 Making up to 12-Hour Voyages Between Ports**

- (1) On ships of gross tonnage less than 500 making up to 12-hour voyages between ports, there shall be on the bridge, in addition to the officer of the navigational watch, at least one member of the deck crew to keep lookout or to be available to be summoned to the bridge ready to assume lookout duty immediately.
- (2) As an exception, the master or skipper may, after careful consideration and taking into account the requirements stipulated in § 13 (1) of this Regulation, allow the navigational officer to keep watch alone in daylight, provided that:
  - 1) the design of the bridge and the location of the steering gear guarantee an unobstructed all-round view to keep track of the course of the ship, as well as manual steering and safe navigation and manoeuvring of the ship;
  - 2) the internal communication devices on board are fully operational.

#### **§ 10. Arrangement of Navigational Watch with Watch Officer and One Member of Deck Crew**

- (1) If a member of the deck crew is assigned to navigational watch together with the officer of the navigational watch on ships of gross tonnage 500 or more, he/she shall hold at least the certificate of watch rating of deck department.

- (2) If a member of the deck crew is assigned to navigational watch together with the officer of the navigational watch on ships of gross tonnage less than 500, he/she shall hold a certificate of ordinary seaman.
- (3) The requirement stipulated in § 10 (2) of this Regulation shall not apply to fishing vessels of gross tonnage less than 200 operating in the Baltic Sea.

#### **§ 11. Arrangement of Navigational Watch with Watch Officer and Two Members of Deck Crew**

- (1) If two members of the deck crew are assigned to navigational watch together with the officer of the navigational watch on ships of gross tonnage 500 or more, they shall hold at least the certificate of watch rating of deck department.
- (2) If two members of the deck crew are assigned to navigational watch together with the officer of the navigational watch on ships of gross tonnage less than 500, one of them shall hold at least a certificate of ordinary seaman and the other may be a crew member engaged in sea-going service.

#### **§ 12. Posting Lookout**

The master of the ship may on an exceptional basis, upon prior instruction, post one crew member to keep the lookout defined in § 7 (4) and (5) and § 9 (1) of this Regulation (hereinafter *the lookout*).

#### **§ 13. Watch Officer, Lookout and Helmsperson**

- (1) The officer of the navigational watch shall be directly responsible for the safe navigation of the ship and compliance with the International Regulations for preventing Collisions at Sea, 1972, as amended.
- (2) The lookout shall give full attention to keeping of a proper lookout and no other duties shall be undertaken or assigned which could interfere with that task.
- (3) The duties of the lookout and helmsperson are separate. The helmsperson shall not be considered to be the lookout while steering.
- (4) In small ships where an unobstructed all-round view is provided at the steering position and there is no impediment to the keeping of proper lookout, the helmsperson may also be assigned the duties of the lookout.
- (5) The officer in charge of the navigational watch may be the sole lookout in daylight provided that:
  - 1) the situation has been carefully assessed;
  - 2) full account has been taken of the state of weather, visibility, traffic density, proximity of dangers to navigation, and navigation in or near traffic separation schemes;
  - 3) assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

#### **§ 14. Handing Over and Taking Over Navigational Watch**

- (1) The officer on charge of the navigational watch shall not hand over the watch to the relieving officer if there is reason to believe that the latter is not capable of carrying out the watchkeeping duties effectively, in which case the master shall be notified.

- (2) The relieving officer shall ensure that the members of the relieving watch are fully capable of performing their duties. Relieving officers shall not take over the watch until their vision is fully adjusted to the light conditions.
- (3) Prior to taking over the watch, relieving officers shall satisfy themselves as to the ship's position and confirm its intended track, course and speed, and UMS controls as appropriate and shall note any dangers to navigation expected to be encountered during their watch.
- (4) Relieving officers shall personally satisfy themselves regarding the following:
  - 1) standing orders and other special instructions of the master relating to navigation of the ship;
  - 2) position, course, speed, the depths of the location and draught of the ship;
  - 3) tides, currents, weather, visibility and the effect of these factors upon course and speed;
  - 4) procedures for the use of main engines to manoeuvre;
  - 5) navigational situation, including the operational condition of navigational and safety equipment, the errors of gyro- and magnetic compasses, the presence and movement of ships in the vicinity, the conditions and hazards likely to be encountered during the watch, and the possible effects of heel, trim, water density and squat on under-keel clearance.
- (5) If the officer in charge of the navigational watch is to be relieved when a manoeuvre or another action to avoid any hazard is taking place, the relief of that officer shall be deferred until such an action has been completed.

#### **§ 15. Responsibilities of Watch Officer Performing Navigational Watch**

- (1) The officer in charge of the navigational watch shall:
  - 1) keep the watch on the bridge;
  - 2) in no circumstances leave the bridge until properly relieved;
  - 3) continue to be responsible for the safe navigation of the ship, despite the presence of the master on the bridge, until informed specifically that the master has assumed the responsibility and this is mutually understood. When the master of the ship takes over navigation of the ship, the officer of the navigational watch shall continue to carry out his/her regular duties.
- (2) During the watch, the course steered, position and speed shall be checked at sufficiently frequent intervals, using any available navigational aids necessary, to ensure that the ship follows the planned course.
- (3) The officer in charge of navigational watch shall have full knowledge of the location and operating limitations of all safety and navigational equipment on board the ship and shall be able to use it.
- (4) The officer in charge of the navigational watch shall not be assigned or undertake any duties which would interfere with the safe navigation of the ship.
- (5) When using radar, the officer in charge of the navigational watch shall bear in mind the necessity to comply at all times with the provisions on the use of radar contained in the International Regulations for Preventing Collisions at Sea, 1972, as amended.
- (6) In cases of need, the officer in charge of the navigational watch shall not hesitate to use the helm, engines and sound signalling apparatus. Timely notice of intended variations of engine speed shall be given in accordance with the situation.

- (7) Officers of the navigational watch shall know the handling characteristics of their ship, including its stopping distances, and shall take account of those characteristics.
- (8) A proper record shall be kept during the watch of the movements and activities relating to the navigation of the ship.
- (9) In a ship with a separate chartroom, the officer in charge of the navigational watch may visit the chartroom, when essential, for a short period for the necessary performance of navigational duties, but shall first ensure that it is safe to do so and that proper lookout is maintained.

#### **§ 16. Checking and Using Navigational Equipment on Board**

- (1) Prior to arrival at and departure from port, as well as at sea while approaching hazardous locations, and as frequently as practicable and as circumstances permit, operational tests of shipboard navigational equipment shall be carried out, and these tests shall be recorded.
- (2) The officer in charge of the navigational watch shall make regular checks to ensure that:
  - 1) the person steering the ship or the automatic pilot is steering the correct course;
  - 2) the standard compass error is determined at least once during a watch and, when possible, after any major alteration of course, and the errors are recorded;
  - 3) the standard and gyro-compasses are frequently compared;
  - 4) the automatic pilot is tested manually at least once during a watch;
  - 5) the navigation and signal lights and other navigational equipment are functioning properly;
  - 6) the radio equipment is functioning properly;
  - 7) the UMS controls, alarms and indicators are functioning properly.
- (3) The officer in charge of the navigational watch shall bear in mind the necessity to comply at all times with the requirements in force of the International Convention for the Safety of Life at Sea, 1974, and its 1978 protocol, as well as all subsequent amendments to these (hereinafter *the SOLAS Convention*), while taking into account the need to station a person to steer the ship and to put the steering into manual control in good time to allow any potentially hazardous situation to be dealt with in a safe manner.
- (4) Officers of the navigational watch shall be thoroughly familiar with the use of all electronic navigational aids carried, including their capabilities and limitations, and shall use each of these aids when appropriate.
- (5) The officer in charge of the navigational watch shall use radar whenever restricted visibility is encountered or expected, and at all times in congested waters, having due regard to its limitations.
- (6) The officer in charge of the navigational watch shall ensure that the range scales employed are changed at sufficiently frequent intervals so that echoes are detected as early as possible. It shall be borne in mind that small or poor echoes may escape detection.
- (7) Whenever radar is in use, the officer in charge of the navigational watch shall select an appropriate range scale and observe the display carefully, and shall ensure that plotting or systematic analysis is commenced in ample time.

#### **§ 17. Reports by Watch Officer**

- (1) The officer in charge of the navigational watch shall notify the master immediately:
  - 1) if restricted visibility is encountered or expected;

- 2) if the traffic conditions or the movements of other ships are causing concern;
  - 3) if difficulty is experienced in maintaining the planned course;
  - 4) on failure to sight land, or a navigation mark or to obtain the expected soundings;
  - 5) if, unexpectedly, land or a navigation mark is sighted or a change in soundings occurs;
  - 6) on breakdown of the engines, propulsion machinery remote control, steering gear or any essential navigational equipment, alarm or indicator;
  - 7) if the radio equipment malfunctions;
  - 8) of stormy weather;
  - 9) if the ship meets any hazard to navigation, such as ice or a derelict;
  - 10) in any other emergency or if in any doubt about factors that may affect the safety or security of the ship.
- (2) Despite the requirement to notify the master immediately as stipulated in subsection 1 of this section, the officer in charge of the navigational watch shall, without waiting for the master to arrive on the bridge, not hesitate to take immediate action for the safety of the ship, where circumstances so require.

#### **§ 18. Responsibilities in Ensuring Safe Vessel Traffic**

- (1) The officer in charge of the navigational watch shall give watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe watch.
- (2) The officer in charge of the navigational watch shall take frequent and accurate compass bearings of approaching ships as a means of early detection of risk of collision. The officer in charge of the navigational watch shall also take early and positive action in compliance with the applicable International Regulations for Preventing Collisions at Sea, 1972, as amended and subsequently check that such action is having the desired effect.
- (3) In clear weather, whenever possible, the officer in charge of the navigational watch shall carry out radar practice.
- (4) When restricted visibility is encountered or expected, the first responsibility of the officer in charge of the navigational watch is to comply with the relevant rules of the International Regulations for Preventing Collisions at Sea, 1972, as amended with particular regard to the sounding of fog signals, proceeding at a safe speed and having the engines ready for immediate manoeuvre. In addition, the officer in charge of the navigational watch shall:
  - 1) inform the master;
  - 2) summon a proper lookout if there is none on the bridge;
  - 3) exhibit navigation lights;
  - 4) operate and use the radar.
- (5) In hours of darkness, the master and the officer in charge of the navigational watch, when arranging lookout duty, shall have due regard to the bridge equipment and navigational aids available for use, their limitations, procedures and safeguards implemented.
- (6) The largest scale chart on board, suitable for the area and corrected with the latest available information, shall be used on near-coastal voyages and on waterways with dense vessel traffic. Fixes shall be taken at frequent intervals, and shall be carried out by more than one method whenever circumstances allow. When using ECDIS, appropriate usage code (scale) electronic navigational charts shall be used and the ship's position shall be checked by an independent means of position fixing at appropriate intervals.



- (7) The officer in charge of the navigational watch shall positively identify all relevant navigation marks.
- (8) Despite the duties and obligations of pilots, their presence on board does not relieve the master or the officer in charge of the navigational watch from their duties and obligations for the safety of the ship. The master and the pilot shall exchange information regarding navigation procedures, local conditions and the ship's characteristics. The master and/or the officer in charge of the navigational watch shall co-operate closely with the pilot and maintain an accurate check on the ship's position and movement.
- (9) If in any doubt as to the pilot's actions or intentions, the officer in charge of the navigational watch shall seek clarification from the pilot and, if necessary, shall notify the master immediately and take whatever action is necessary before the master arrives.

#### **§ 19. Navigational Watch on a Ship at Anchor**

- (1) If the master considers it necessary, a continuous navigational watch shall be maintained at anchor.
- (2) While at anchor, the officer in charge of the navigational watch shall:
  - 1) determine and plot the ship's position on the appropriate chart as soon as practicable;
  - 2) check at sufficiently frequent intervals whether the ship remains securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects;
  - 3) ensure that proper lookout is maintained;
  - 4) ensure that inspection rounds of the ship are made periodically;
  - 5) observe meteorological and tidal conditions and the state of the sea;
  - 6) notify the master and undertake all necessary measures if the ship drags anchor;
  - 7) ensure that the state of readiness of the main engines and other machinery is in accordance with the master's instructions;
  - 8) notify the master if visibility deteriorates;
  - 9) ensure that the ship exhibits the appropriate lights and shapes and that appropriate sound signals are made in accordance with all applicable regulations;
  - 10) take measures to protect the environment from pollution by the ship and comply with applicable pollution regulations.

### **Chapter 4 ENGINEERING WATCH**

#### **§ 20. Arrangement of Engineering Watch**

- (1) The engineering watch means either a person or a group of personnel comprising the watch or a period of responsibility for an engineer officer during which the physical presence in machinery spaces of that officer may or may not be required. The engineering watch shall be comprised of the chief engineer, engineers and the engineering crew. The chief engineer and the officer in charge of the engineering watch shall be satisfied that the composition of the engineering watch is adequate to ensure the safe and efficient operation and upkeep of all machinery affecting the operation of the ship.
- (2) The officer in charge of the engineering watch is primarily responsible, at all times, for the safe and efficient operation and upkeep of the ship's machinery during his watch. The officer in charge of the engineering watch is also responsible for the inspection, operation and testing, as required, of all machinery and equipment under the responsibility of the engineering watch.

- (3) When deciding the composition of the engineering watch the following criteria, *inter alia*, shall be taken into account:
  - 1) the type of ship and the type and condition of the machinery;
  - 2) the adequate supervision, at all times, of machinery affecting the safe operation of the ship;
  - 3) any special modes of operation dictated by conditions such as the state of weather, ice conditions, polluted water, shallow water, emergency conditions, damage containment or pollution abatement;
  - 4) the qualifications and experience of the engineering watch;
  - 5) the safety of life, ship, cargo and port, and protection of the environment;
  - 6) the observance of international, national and local regulations;
  - 7) the requirements for safe operation of the ship.
- (4) The transition from the approved periodically unmanned engine room watch arrangement to the unmanned machinery space (UMS) watch arrangement shall be properly prepared and the necessary precautions shall be taken.

#### **§ 21. Handing Over and Taking Over Engineering Watch**

- (1) The officer in charge of the engineering watch shall not hand over the watch to the relieving officer if there is reason to believe that the latter is obviously not capable of carrying out the watchkeeping duties effectively, in which case the chief engineer officer shall be notified.
- (2) The relieving officer of the engineering watch shall ensure that the members of the relieving engineering watch are apparently fully capable of performing their duties effectively.
- (3) Prior to taking over the engineering watch, relieving officers shall satisfy themselves regarding the following:
  - 1) the standing orders and special instructions of the chief engineer officer relating to the operation of the ship's systems and machinery;
  - 2) the nature of all work being performed on machinery and systems;
  - 3) the level of water bilges, ballast tanks, slop tanks, reserve tanks, fresh water tanks and sewage tanks;
  - 4) the level of fuel in the reserve tanks, settling tank, day tank and other fuel storage facilities;
  - 5) any special requirements relating to sanitary system disposals;
  - 6) condition and mode of operation of the various main and auxiliary systems, including the electrical power distribution system;
  - 7) the technical condition of monitoring and control console equipment;
  - 8) the condition and mode of operation of automatic boiler controls such as flame safeguard control systems, limit control systems, combustion control systems, fuel-supply control systems and other equipment related to the operation of steam boilers;
  - 9) any potentially adverse conditions resulting from bad weather, ice, or polluted or shallow water;
  - 10) any special modes of operation dictated by equipment failure;
  - 11) the type and availability of fire-fighting appliances;
  - 12) the reports of engine-room ratings relating to their assigned duties;
  - 13) the state of completion of the engine-room log.

#### **§ 22. Responsibilities of Watch Engineer Performing Navigational Watch**

- (1) The officer in charge of the engineering watch shall ensure that the established watchkeeping arrangements are maintained and that, under direction, engine-room ratings, if forming part of

the engineering watch, assist in the safe and efficient operation of the propulsion machinery and auxiliary equipment.

- (2) The officer in charge of the engineering watch shall continue to be responsible for machinery space operations, despite the presence of the chief engineer officer in the machinery spaces, until specifically informed that the chief engineer officer has assumed that responsibility and this is mutually understood. When the chief engineer takes over the responsibility for machinery space operations, the watch engineer shall continue to carry out his regular duties.
- (3) All members of the engineering watch shall be familiar with their assigned watchkeeping duties. In addition, every member shall have knowledge of:
  - 1) the use of appropriate internal communication systems;
  - 2) the escape routes from machinery spaces;
  - 3) the engine room alarm systems and be able to distinguish between the various alarms, with special reference to the fire-extinguishing media alarm;
  - 4) the number, location and types of fire-fighting equipment and damage control gear in the machinery spaces, together with their use and the various safety precautions to be observed.
- (4) Any machinery not functioning properly, expected to malfunction or requiring special service shall be noted in written form in the engine room log with any action already taken. Plans shall be made for any further action if required.
- (5) When the machinery spaces are in the manned condition, the officer in charge of the engineering watch shall at all times be readily capable of operating the propulsion equipment in response to needs for changes in direction or speed.
- (6) When the machinery spaces are in the periodic unmanned condition, the designated duty officer in charge of the engineering watch shall be immediately available and on call to attend the machinery spaces.
- (7) All bridge orders shall be promptly executed.

### **§ 23. Technical Maintenance**

- (1) Due attention shall be paid to the ongoing maintenance and support of all machinery, including mechanical, electrical, electronic, hydraulic and pneumatic systems, their control apparatus and associated safety equipment, all accommodation service systems equipment and the recording of stores and spare gear usage.
- (2) The chief engineer officer shall ensure that the officer in charge of the engineering watch is informed of all preventive maintenance, damage control, or repair operations to be performed during the engineering watch. The officer in charge of the engineering watch shall be responsible for the isolation, bypassing and adjustment of all machinery under the responsibility of the engineering watch that is to be worked on, and shall record all work carried out.

### **§ 24. Responsibilities of Watch Engineer Under Standby and Regular Maintenance Conditions**

- (1) When the engine room is put in a stand-by condition, the officer in charge of the engineering watch shall ensure that all machinery and equipment which may be used during manoeuvring is in a state of immediate readiness and that an adequate reserve of power is available for steering gear and other requirements.

- (2) Officers in charge of an engineering watch shall not be assigned or undertake any duties which would interfere with their supervisory duties in respect of the main propulsion system and ancillary equipment. They shall keep the main propulsion plant and auxiliary systems under constant supervision until properly relieved, and shall periodically inspect the machinery in their charge. They shall also ensure that adequate rounds of the machinery and steering gear spaces are made for the purpose of observing and reporting equipment malfunctions or breakdowns, performing or directing routine adjustments, required upkeep and any other necessary tasks.
- (3) Officers in charge of an engineering watch shall direct any other member of the engineering watch to inform them of potentially hazardous conditions which may adversely affect the machinery or jeopardize the safety of life or of the ship.
- (4) The officer in charge of the engineering watch shall ensure that the machinery space watch is supervised, and shall arrange for substitute personnel in the event of the incapacity of any engineering watch personnel.
- (5) The officer in charge of the engineering watch shall take necessary action to contain the effects of damage resulting from equipment breakdown, fire, flooding, rupture, collision, stranding, or other cause.
- (6) Before going off duty, the officer in charge of the engineering watch shall ensure that all events related to the main and auxiliary machinery which have occurred during the engineering watch are suitably recorded.
- (7) The officer in charge of the engineering watch shall cooperate with any engineer in charge of maintenance work during all preventive maintenance, damage control or repairs. This shall include, but not necessarily be limited to:
  - 1) isolating and bypassing machinery to be worked on;
  - 2) adjusting the remaining plant to function adequately and safely during the maintenance period;
  - 3) recording in the engine-room log the equipment worked on and the personnel involved, and which safety steps have been taken and by whom, for the benefit of relieving officers and for record purposes;
  - 4) testing and putting into service the repaired machinery or equipment.
- (8) The officer in charge of the engineering watch shall ensure that any engine-room ratings who perform maintenance duties are available to assist in the manual operation of machinery in the event of automatic equipment failure.
- (9) The officer in charge of the engineering watch shall bear in mind that changes in speed, resulting from machinery malfunction, or any loss of steering may imperil the safety of the ship and life at sea. The bridge shall be immediately notified in the event of fire and of any impending action in machinery spaces that may cause reduction in the ship's speed, imminent steering failure, stoppage of the ship's propulsion system or any alteration in the generation of electric power or similar threat to safety, to avoid a potential marine casualty.
- (10) The officer in charge of the engineering watch shall notify the chief engineer officer without delay:
  - 1) when engine damage or a malfunction occurs which may be such as to endanger the safe operation of the ship;

- 2) when any malfunction occurs which, it is believed, may cause damage or breakdown of propulsion machinery, auxiliary machinery or monitoring and governing systems;
  - 3) in any emergency or if in any doubt as to what decision or measures to take.
- (11) Despite the requirement to notify the chief engineer officer as stipulated in § 24 (10) of this Regulation, the officer in charge of the engineering watch shall not hesitate to take immediate action for the safety of the ship, its machinery and crew where circumstances require.
- (12) The officer in charge of the engineering watch shall give the watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe engineering watch. Detailed repair maintenance involving repairs to electrical, mechanical, hydraulic, pneumatic or applicable electronic equipment throughout the ship shall be performed with the cognizance of the officer in charge of the engineering watch and chief engineer officer.
- (13) The officer in charge of the engineering watch shall ensure that permanent air or steam pressure is available for sound signals.
- (14) The officer in charge of the engineering watch shall ensure that all machinery involved with the manoeuvring of the ship can immediately be placed in the manual mode of operation when notified that the ship is in congested waters. The officer in charge of the engineering watch shall also ensure that an adequate reserve of power is available for steering and other manoeuvring requirements. Emergency steering and other auxiliary equipment shall be ready for immediate operation.

#### **§ 25. Engineering Watch on a Ship at Anchor**

When a ship is at anchor the engineer officer in charge of the engineering watch shall ensure that:

- 1) an efficient engineering watch is kept;
- 2) periodic inspection is made of all operating and stand-by machinery;
- 3) main and auxiliary machinery is maintained in a state of readiness in accordance with orders from the bridge;
- 4) measures are taken to ensure that applicable pollution prevention regulations are complied with;
- 5) all damage control and fire-fighting systems are in readiness.

### **Chapter 5 RADIO WATCH**

#### **§ 26. Arrangement of Radio Watch**

- (1) In deciding the arrangements for the radio watch, the master of every seagoing ship shall:
  - 1) ensure that the radio watch is maintained in accordance with the relevant provisions of the Radio Regulations and the SOLAS Convention;
  - 2) ensure that the primary duties for radio watchkeeping are not adversely affected by attending to radio traffic not relevant to the safe movement of the ship and safety of navigation;
  - 3) take into account the radio equipment fitted on board and its operational status.
- (2) The radio operator performing radio watchkeeping duties shall:
  - 1) ensure that watch is maintained on the frequencies specified in the Radio Regulations and the SOLAS Convention;
  - 2) while on duty, regularly check the operation of the radio equipment and its sources of energy and report to the master any observed failure of this equipment.

**§ 27. Maintaining Radio Log**

- (1) Radio records shall be maintained in compliance with the requirements of the Radio Regulations and the SOLAS Convention.
- (2) The maintenance of radio records, in compliance with the requirements of the Radio Regulations and the SOLAS Convention, is the responsibility of the radio operator designated as having primary responsibility for radiocommunications during distress incidents. The following shall be recorded:
  - 1) a summary of distress, urgency and safety radiocommunications;
  - 2) important incidents relating to the radio service;
  - 3) where appropriate, the position of the ship at least once per day;
  - 4) a summary of the condition of the radio equipment, including its sources of energy.

**§ 28. Keeping Radio Log**

The radio records shall be kept at the distress communications operating position, and shall be made available for the master of the ship and the ship control inspector.

**Chapter 6 WATCHKEEPING IN PORT****§ 29. Arrangement of Watchkeeping in Port and Watchkeeping Personnel**

- (1) On any ship safely moored or safely at anchor under normal circumstances in port, the master shall arrange for an appropriate and effective watch to be maintained for the purpose of safety. Special requirements may be necessary for special types of ships' propulsion systems or ancillary equipment and for ships carrying hazardous cargo.
- (2) Arrangements for keeping a deck watch when the ship is in port shall at all times be adequate to:
  - 1) ensure the safety of life, of the ship, the cargo, the port and the environment;
  - 2) ensure the safe operation of all machinery related to cargo operation;
  - 3) observe international, national and local rules;
  - 4) maintain order and the normal routine of the ship.
- (3) The master shall decide the composition and duration of the deck watch depending on the conditions of mooring, type of the ship and character of duties.
- (4) The master shall appoint a qualified officer in charge of the deck watch.
- (5) The necessary equipment shall be so arranged as to provide for efficient watchkeeping.
- (6) The chief engineer officer, in consultation with the master, shall ensure that engineering watchkeeping arrangements are adequate to maintain a safe engineering watch while in port. When deciding the composition of the engineering watch the following criteria shall be taken into account:
  - 1) on all ships of 3,000 kW propulsion power and more there shall always be an officer in charge of the engineering watch;
  - 2) on ships of less than 3,000 kW propulsion power there may be, at the master's discretion, no officer in charge of the engineering watch;
  - 3) officers, while in charge of an engineering watch, shall not be assigned or undertake any task or duty which would interfere with their supervisory duty in respect of the ship's machinery system.

**§ 30. Handing Over and Taking Over Watch in Port**

- (1) Officers in charge of the deck or engineering watch shall not hand over the watch to their relieving officer if they have any reason to believe that the latter is obviously not capable of carrying out watchkeeping duties effectively, in which case the master or chief engineer shall be notified immediately. Relieving officers of the deck or engineering watch shall ensure that all members of their watch are apparently fully capable of performing their duties effectively.
- (2) If, at the moment of handing over the deck or engineering watch, an important operation is being performed, it shall be concluded by the officer being relieved, except when ordered otherwise by the master or chief engineer officer.
- (3) Prior to taking over the deck watch, the relieving officer shall be informed by the officer in charge of the deck watch as to the following:
  - 1) the depth of the water at the berth or anchorage, the ship's draught, the level and time of high and low waters; the securing of the moorings, the arrangement of anchors and the scope of the anchor chain, and other mooring features important to the safety of the ship; the state of main engines and their availability for emergency use;
  - 2) the nature, amount and disposition of cargo and all work to be performed on board the ship;
  - 3) the level of water in bilges and ballast tanks;
  - 4) the signals or lights being exhibited or sounded;
  - 5) the number of crew members required to be on board and the presence of any other persons on board;
  - 6) the state of fire-fighting appliances;
  - 7) any special port regulations;
  - 8) the master's standing and special orders;
  - 9) the lines of communication available between the ship and shore personnel, including in the event of an emergency arising;
  - 10) any other circumstances of importance to the safety of the ship, its crew, cargo or protection of the environment from pollution;
  - 11) the procedures for notifying the port authority of any environmental pollution resulting from ship activities.
- (4) Relieving officers, before assuming charge of the deck watch, shall verify that:
  - 1) the securing of moorings and anchor chain is adequate;
  - 2) the appropriate signals or lights are properly exhibited or sounded;
  - 3) safety measures and fire-protection regulations are being maintained;
  - 4) they are aware of the nature of any hazardous or dangerous cargo being loaded or discharged and the appropriate action to be taken to ensure safety;
  - 5) no external conditions or circumstances imperil the ship and that it does not imperil others.
- (5) Prior to taking over the engineering watch, the relieving officer shall be informed by the officer in charge of the engineering watch as to:
  - 1) the standing orders of the day, any special orders relating to the ship operations, maintenance functions, repairs to the ship's machinery or control equipment;
  - 2) the nature of all work being performed on machinery and systems on board ship, the personnel involved and potential hazards;
  - 3) the level of water in bilges and reserve tanks and special requirements for the use or disposal of the contents thereof;
  - 4) any special requirements relating to sanitary system disposals;

- 5) the condition and state of readiness of portable fire-extinguishing equipment and fixed fire-extinguishing installations and fire-detection systems;
  - 6) authorized repair personnel on board engaged in engineering activities, their work locations and repair functions;
  - 7) any port regulations pertaining to ship readiness during potential bad weather conditions;
  - 8) the lines of communication available between the ship and shore personnel, including port authorities, in the event of an emergency arising or assistance being required;
  - 9) any other circumstance of importance to the safety of the ship, its crew, cargo or the protection of the environment from pollution;
  - 10) the procedures for notifying the port authority of any environmental pollution resulting from ship activities.
- (6) Relieving officers, before assuming charge of the engineering watch, shall satisfy themselves that they are fully informed by the officer being relieved, as outlined above in § 30 (5), and shall:
- 1) be familiar with the existing and potential sources of power, heat and lighting and their distribution;
  - 2) know the availability and condition of the ship's fuel, lubricants and all water supplies;
  - 3) be ready to prepare the ship and its machinery, as far as is possible, for stand-by or emergency conditions as required.

### **§ 31. Responsibilities of Deck Watch and Engineering Watch**

- (1) The officer in charge of the deck watch shall make rounds to inspect the ship at appropriate intervals and pay particular attention to:
- 1) the condition and securing of the gangway, anchor chain and moorings;
  - 2) the draught, under-keel clearance and the general state of the ship, to avoid dangerous listing or trim during cargo handling or ballasting;
  - 3) the weather conditions;
  - 4) the observance of all regulations concerning safety and fire protection;
  - 5) the water level in bilges and tanks;
  - 6) all persons on board and their location, especially those in remote or enclosed spaces;
  - 7) the exhibition and sounding of required lights and signals.
- (2) The officer in charge of the deck watch shall:
- 1) in bad weather, or on receiving a storm warning, take the necessary measures to protect the ship, persons on board and cargo;
  - 2) take every precaution to prevent pollution of the environment by the ship;
  - 3) in an emergency threatening the safety of the ship, raise the alarm, inform the master, take all possible measures to prevent any damage to the ship, its cargo and persons on board, and, if necessary, request assistance from the shore authorities or neighbouring ships;
  - 4) be aware of the ship's stability condition so that, in the event of fire, the shore fire-fighting authority may be advised of the approximate quantity of water that can be pumped on board without endangering the ship;
  - 5) offer assistance to ships or persons in distress;
  - 6) take necessary precautions to prevent accidents or damage when propellers are to be turned;
  - 7) enter, in the appropriate log-book, all important events affecting the ship.
- (3) Officers in charge of the engineering watch shall pay particular attention to:
- 1) the observance of all orders, special operating procedures and regulations concerning the safety of the ship, shipboard installations and all persons on board;



- 2) the instrumentation and control systems, monitoring of all power supplies, components and systems in operation;
  - 3) the techniques, methods and procedures necessary to prevent violation of the pollution regulations of the local authorities;
  - 4) the state of the bilges.
- (4) In addition to the obligations listed in § 31 (3), the officers in charge of the engineering watch shall:
- 1) in emergencies, raise the alarm and take all possible measures to prevent damage to the ship, persons on board and cargo;
  - 2) be aware of the deck officer's needs relating to the equipment required in the loading or unloading of the cargo and the additional requirements of the ballast and other ship stability control systems;
  - 3) make frequent rounds of inspection to determine possible equipment malfunction or failure, and take immediate remedial action to ensure the safety of the ship, of cargo operations, of the port and the environment;
  - 4) ensure that the necessary precautions are taken, within their area of responsibility, to prevent accidents or damage to the various electrical, electronic, hydraulic, pneumatic and mechanical systems of the ship;
  - 5) ensure that all important events affecting the operation, adjustment or repair of the ship's machinery are satisfactorily recorded.

### **§ 32. Watchkeeping on Ships Carrying Hazardous Cargo**

- (1) The master of every ship carrying hazardous cargo shall ensure that safe watchkeeping arrangements are maintained, taking full account of the peculiarities regarding hazardous cargo.
- (2) On ships carrying hazardous cargo in bulk, safe watchkeeping arrangements shall be achieved by the ready availability on board of a duly qualified officer or officers, and ratings where appropriate, even when the ship is safely moored or safely at anchor in port.
- (3) On ships carrying hazardous cargo the master and crew members shall take full account of the nature, quantity, packing and stowage of the hazardous cargo and of any special conditions regarding the hazardous cargo on board.

### **§ 33. Cargo Watch**

Officers with responsibility for the planning and conduct of cargo operations shall ensure that such operations are conducted safely through the control of the specific risks, including when non-ship's personnel are involved.

### **§ 34. Repeal of Regulation**

Regulation of the Minister of Economic Affairs and Communications No. 80 of 30 December 2002 "Procedure for Watchkeeping on Ships" shall be repealed.

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<sup>1</sup> Directive 2012/35/EU of the European Parliament and of the Council of 21 November 2012 amending Directive 2008/106/EC on the minimum level of training of seafarers (Supplement to the Official Journal of the European Union 343, 14.12.2012, pp 78-105)