

DEPARTMENT OF TRANSPORT

No. R. 1548

GG 20772 (RG 6707)

30 December 1999

As amended by

GNR501 GG23345 (RG 7336) 26 April 2002 (as corrected by GNR 893 GG 23546 (RG 7397) 28 June 2002)

MERCHANT SHIPPING ACT, 1951 (ACT No. 57 OF 1951)

MERCHANT SHIPPING (SAFE MANNING) REGULATIONS, 1999

The Minister of Transport has, under section 356 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951), made the regulations in the Schedule.

SCHEDULE

Arrangement of regulations

*Regulation
No.*

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Interpretation

1. (1) In these regulations, any word or expression given a meaning in the Act shall have that meaning and, unless the context indicates otherwise—

"accredited institution" means a training institution accredited under regulation 67 of the Training and Certification Regulations;

"approved" means approved by the Authority;

"certificated", except in relation to a radio operator, means duly certificated under the Act or deemed under the Act to be so certificated, and, in relation to a radio operator, means holding a valid appropriate certificate of proficiency issued or recognized by or on behalf of the Independent Communications Authority of South Africa;

[Definition of "certificated" substituted by reg 3(a), GNR501, GG23345, 26 April 2002]

"contravene", in relation to a provision of these regulations, includes failing or refusing to comply with that provision;

[Definition of "contravene" substituted by reg 3(a), GNR501, GG23345, 26 April 2002]

"defined fishing zone" means the sea area southwards from 15° S latitude and extending not further than 200 nautical miles offshore;

"examiner" means a person appointed under section 77(4) of the Act;

"fast rescue boat" means a rigid or semi-rigid inflatable boat used for rescue work and capable of manoeuvring, for at least 4 hours, at a speed of 20 knots in calm water with a crew of at least three persons and at a speed of at least 8 knots with a full complement;

"fishing vessel" means a ship that is used for catching fish or other living resources of the sea for financial gain or reward;

"GMDSS" means the global maritime distress and safety system;

"GT" means gross register ton, and in the case of a ship with dual tonnage, the higher tonnage;

"length of ship" means the length shown on the ship's certificate of registry or other official document;

"mining operations" means the exploitation, whether by mining or otherwise, of mineral resources of the seabed or subsoil thereof, excluding oil and gas resources;

"near-coastal voyage" means a voyage made exclusively within waters under South African jurisdiction by a ship of less than 500 GT;

[Definition of "near-coastal voyage" substitute by reg 3(b), GNR501, GG23345, 26 April 2002]

"offshore" means seaward measured from the low-water line (as defined in section 1 of the Maritime Zones Act, 1994 (Act No. 15 of 1994)) along the coast of the African continent;

"port operations" means voyages confined to the sea area within a radius of 15 nautical miles measured—

- (a) in the case of the port of Saldanha Bay, from the mid-point of an imaginary line joining the North Head and South Head lights; and
- (b) in the case of any other port in the Republic, from the outermost breakwater light;

[Definition of "port operations" substituted by reg 3(c), GNR501, GG23345, 26 April 2002]

"propulsion power" means the total maximum continuous rated output power in kilowatts of all a ship's main propulsion machinery appearing on the ship's certificate of registry or other official document;

"radio operator" means a person having responsibility for the operation of the radio installations on a ship;

[Definition of "radio officer" substituted by reg 3(d), GNR501, GG23345, 26 April 2002]

"rating" means a seaman other than an officer;

"repealed regulations" means the regulations repealed by regulation 25;

"ro-ro passenger ship" means a passenger ship with ro-ro cargo spaces or special category spaces as defined in regulation II-2/3 of the Safety Convention;

"safe manning document" means a document that describes the minimum manning considered necessary to ensure that a ship is sufficiently and efficiently manned, and that is issued—

- (a) in the case of a ship that is registered or licensed in the Republic, by the Authority; and
- (b) in the case of any other ship, by or under the authority of the flag State;

[Definition of "safe manning document" substituted by reg 3(e), GNR501, GG23345, 26 April 2002]

"seagoing ship" means a ship other than one that navigates exclusively in inland waters or in a sea area contemplated in the definition of port operations;

"ship to which the Safety Convention applies" means any seagoing ship of 25 GT or more engaged on an international voyage, except—

- (a) warships, naval auxiliaries or other ships owned or operated by a state and engaged only on government non-commercial service;
- (b) ships of less than 500 GT, other than passenger ships;
- (c) ships not propelled by mechanical means;
- (d) wooden ships of primitive build;
- (e) ships used solely for sport or recreation; and
- (f) fishing vessels;

"ship to which the STCW Convention applies" means any seagoing ship of 25 GT or more, except—

- (a) warships, naval auxiliaries or other ships owned or operated by a state and engaged only on government non-commercial service;

- (b) fishing vessels;
- (c) ships used solely for sport or recreation; and
- (d) wooden ships of primitive build;

"tanker" means a ship—

- (a) constructed or adapted and used for the carriage in bulk of any liquid product listed in chapter 17 of the latest edition of the *International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk* published by the International Maritime Organization, as amended from time to time;
- (b) constructed or adapted and used for the carriage in bulk of any liquefied gas or other product listed in chapter 19 of the latest edition of the *International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk* published by the International Maritime Organization, as amended from time to time; or
- (c) constructed and used for the carriage in bulk of petroleum or petroleum products;

"the Act" means the Merchant Shipping Act, 1951 (Act No. 57 of 1951);

"the Code" means the *Code for South African Maritime Qualifications* published by the Authority, as amended from time to time;

"the Training and Certification Regulations" means the Merchant Shipping (Training and Certification) Regulations, 1999;

"unlimited voyage" means a voyage other than one contemplated in the definitions of near-coastal voyage and port operations;

"waters under South African jurisdiction" means waters comprising—

- (a) the internal and territorial waters of the Republic; and
- (b) the exclusive economic zone of the Republic.

[Definition of "waters under South African jurisdiction" added by reg 3(f), GNR501, GG23345, 26 April 2002]

(2) References in these regulations to the holder of a certificate or to holding a certificate are references to the lawful holder of the certificate or to lawfully holding the certificate, as the case may be.

Application

2. (1) Subject to subregulations (2) and (3), these regulations apply to every ship registered or licensed in the Republic, or required to be so registered or licensed.

(2) The provisions of regulation 24 apply, in addition, to every foreign ship to which the Safety Convention applies while such ship is in the Republic or the territorial waters thereof.

(3) These regulations do not apply to a ship of 100 GT or more that is classified in terms of the life-saving equipment regulations as a class XII yacht, provided there are employed on the ship an adequate number and description of persons to ensure that the ship is sufficiently and efficiently manned.

Employment of master on ships of 25 GT or more

3. The owner of every ship of 25 GT or more going to sea from any port or operating at a port in the Republic shall—

- (a) employ as master of the ship a person who holds a valid certificate of competency of a class or grade not lower than the highest class or grade of certificate held by any other deck officer required to be employed on the ship in terms of these regulations; and
- (b) ensure that the master, before assuming command of the ship, has the appropriate experience in the type of ship he or she is to command and is familiarized with his or her specific duties and with the ship's arrangements, installations, equipment, procedures and characteristics relevant to assuming command.

Employment of officers and other persons on ships of 25 GT or more

4. (1) The owner and master of every ship of 25 GT or more shall—

- (a) ensure that no officer takes charge of a navigational or engineering watch unless he or she holds a valid certificate of competency entitling him or her to do so;
- (b) ensure that no rating forms part of a navigational or engineering watch unless he or she holds a certificate of qualification entitling him or her to do so;
- (c) in addition to the officers and other persons required to be employed on the ship in terms of these regulations, employ as crew of the ship the number and description of persons necessary to ensure that the ship is sufficiently and efficiently manned;
- (d) ensure that every certificated officer and other person employed on the ship, before being allowed to assume his or her assigned duties, is familiarized with his or her specific duties and with all the ship's arrangements, installations, equipment, procedures and characteristics relevant to his or her routine and emergency duties;
- (e) ensure that every certificated officer has the appropriate experience applicable to the type of ship on which he or she is to be employed;
- (f) ensure that—
 - (i) every person, other than a certificated officer or a certificated rating qualified as an able seaman or oiler, who is employed on the ship and designated to have safety or pollution prevention duties has documentary proof confirming that he or she has successfully completed approved training relating to those duties; and
 - (ii) every such person, including a certificated rating qualified as an able seaman or oiler, has documentary proof confirming that he or she has—
 - (aa) served in a capacity designated to have safety or pollution prevention duties for a period of at least 12 months during the preceding five years; or
 - (bb) successfully completed approved training relating to those duties during the preceding five years;
- (g) ensure that every person employed on the ship and going to sea for the first time has successfully completed an approved safety induction course; and

(h) ensure that the crew of the ship are capable of effectively co-ordinating their activities in an emergency situation and in performing functions vital to safety or to the prevention or mitigation of pollution.

(2) (a) For the purposes of subregulation (1)(c) and regulations 2(3) and 5(1)(b), a ship shall be deemed to be sufficiently and efficiently manned if, in the opinion of the proper officer, it has a crew of suitably qualified persons to enable it to proceed to sea with due regard to the requirements of the life-saving equipment regulations, the collision regulations, the radio regulations and of any such another safety provisions as may apply to the ship.

(b) In determining the adequacy of the crew complement of any ship for the purposes of paragraph (a), the proper officer shall have regard to—

- (i) the complement carried by the ship on recent voyages;
- (ii) the complement normally carried by similar ships when employed on voyages similar to that proposed; and
- (iii) the complement adequate to ensure compliance with the minimum rest periods prescribed by regulation 7.

Employment of master and other persons on ships of less than 25 GT

5. (1) The owner of every ship of less than 25 GT, other than a ship referred to in subregulation (2), going to sea from any port or operating at a port in the Republic shall—

(a) employ as master of the ship a person who holds a valid Small Vessel Certificate of Competence issued under regulation 14 of the Merchant Shipping (Small Vessel Safety) Regulations, 2002; and

[Para (a) substituted by reg 33(2), GNR500, GG23345, 26April 2002]

(b) employ as crew of the ship the number and description of persons necessary to ensure that the ship is sufficiently and efficiently manned.

(2) The owner of every passenger ship of less than 25 GT going to sea from any port or operating at a port in the Republic shall—

(a) employ as master of the ship a person who holds a valid certificate referred to in subregulation (1)(a) that is endorsed so as to entitle the holder thereof to command a small passenger ship in accordance with the terms of the endorsement; and

(b) employ as crew of the ship at least one competent person for every 50 passengers, or part of such number, carried on the ship.

Watchkeeping standards

6. The owner and master of a ship shall ensure that the watchkeeping standards set out in annex 1 are complied with on the ship at all relevant times.

Rest periods for watchkeeping personnel

7. (1) The owner and master of a ship shall ensure that no officer or rating keeps or forms part of a navigational or engineering watch unless he or she has had a minimum of 10 hours rest in any 24 hour period, subject to the following rules:

- (a) Rest periods may be divided into no more than two periods, one of which shall be of at least six hours duration;
- (b) rest periods need not be maintained in cases of emergency or drill or in other overriding operational circumstances; and
- (c) the minimum period of 10 hours may be reduced to not less than six consecutive hours: Provided that such a reduction shall not extend beyond two days and not less than 70 hours of rest shall be provided in each seven-day period.

(2) Every officer and rating designated to keep or form part of a navigational or engineering watch shall ensure that he or she is adequately rested before keeping or forming part of any such watch.

(3) The master shall cause to be recorded in the ship's official logbook every occasion when the prescribed rest periods cannot be met. The entry shall include the watchkeeper's name, the date and time of the watch concerned and a brief explanation of the emergency, drill or operational circumstances affecting each rest period.

Employment of qualified personnel on tankers and passenger ships

8. (1) The owner and master of every tanker shall ensure that—

- (a) every officer and rating assigned specific duties and responsibilities related to cargo or cargo equipment on the ship; and
- (b) the master, chief engineer officer, chief mate, second engineer officer and every other person with immediate responsibility for loading, discharging and care in transit or handling of cargo on the ship,

holds either—

- (i) the appropriate certificate or endorsement evidencing compliance with the provisions of regulation 51 of the Training and Certification Regulations relative to his or her capacity, duties and responsibilities on the ship; or
- (ii) the appropriate certificate or endorsement, issued by or on behalf of another party to the STCW Convention, evidencing compliance with the provisions of regulation V/1 of that Convention relative to his or her capacity, duties and responsibilities on the ship.

(2) The owner and master of every ro-ro passenger ship shall ensure that—

- (a) the master, officers and ratings serving on the ship hold either—
 - (i) the appropriate certificate or endorsement evidencing compliance with the provisions of regulation 52 of the Training and Certification Regulations relative to their capacity, duties and responsibilities on the ship; or

- (ii) the appropriate certificate or endorsement, issued by or on behalf of another party to the STCW Convention, evidencing compliance with the provisions of regulation V/2 of that Convention relative to their capacity, duties and responsibilities on the ship; and
- (b) the other personnel serving on the ship hold either—
- (i) documentary evidence of compliance with the provisions of regulation 52 of the Training and Certification Regulations relative to their capacity, duties and responsibilities on the ship; or
 - (ii) documentary evidence, issued by or on behalf of another party to the STCW Convention, of compliance with the provisions of regulation V/2 of that Convention relative to their capacity, duties and responsibilities on the ship.
- (3) The owner and master of every passenger ship, other than a ro-ro passenger ship, engaged on unlimited voyages shall ensure that—
- (a) the master, officers and ratings serving on the ship hold either—
- (i) the appropriate certificate or endorsement evidencing compliance with the provisions of regulation 52A of the Training and Certification Regulations relative to their capacity, duties and responsibilities on the ship; or
 - (ii) the appropriate certificate or endorsement, issued by or on behalf of another party to the STCW Convention, evidencing compliance with the provisions of regulation V/3 of that Convention relative to their capacity, duties and responsibilities on the ship; and
- (b) the other personnel serving on the ship hold either—
- (i) documentary evidence of compliance with the provisions of regulation 52A of the Training and Certification Regulations relative to their capacity, duties and responsibilities on the ship; or
 - (ii) documentary evidence, issued by or on behalf of another party to the STCW Convention, of compliance with the provisions of regulation V/3 of that Convention relative to their capacity, duties and responsibilities on the ship.

[Reg 8 substituted by reg 4, GNR501, GG23345, 26April 2002]

Employment of persons holding foreign certificates

9. (1) For the purposes of section 83(1) of the Act, the owner of a ship to which the STCW Convention applies shall not employ on the ship, as master or ship's officer, any person who holds a certificate issued by or on behalf of the government of another country, unless—

- (a) that person's certificate has been endorsed in accordance with regulation 10; or
- (b) in the absence of such an endorsement, the certificate was issued and is valid in accordance with the STCW Convention, the period of employment does not exceed three months and the owner makes application to the Authority within that period for an endorsement in accordance with regulation 10.

(2) (a) For the purposes of section 83(1) of the Act, the owner of a ship to which the STCW Convention does not apply shall not employ on the ship, as master or ship's officer, any person who holds a certificate of competency issued by or on behalf of the government of another country, unless the Authority has, under section 83(2) of the Act, authorized that person's employment on the ship.

(b) Application for an authorization under section 83(2) of the Act shall be made by the owner of the ship and shall be directed to the proper officer nearest to the ship's intended port of departure. The application shall—

- (i) be made before the person assumes duty on the ship; and
- (ii) be accompanied by the person's original certificate (together with a certified translation into the English language where the certificate is in a language other than English), a medical examination report complying with the requirements specified by marine notice and attesting to the person's medical fitness and, in the case of a deck officer, a valid eyesight test certificate.

(c) The proper officer may require the person to appear before an examiner, who shall satisfy himself or herself that the person is adequately qualified and that he or she has the ability to converse, issue and understand orders and written instructions in the English language.

(3) An authorization granted under section 83(2) of the Act shall be in writing and shall specify the period, not exceeding six months, for which it is to remain in force.

(4) The Authority may revoke an authorization granted under section 83(2) of the Act if—

- (a) the person in question shows, through any inability, that he or she is not adequately qualified or that he or she is not able to converse, issue and understand orders and written instructions in the English language;
- (b) the person's certificate expires or is cancelled or suspended by or on behalf of the government under whose authority the certificate was originally issued;
- (c) the person fails to comply with any condition on which the authorization was granted;
- (d) a court of marine enquiry or a disciplinary hearing recommends the revocation of the authorization; or
- (e) the person is convicted of an offence in terms of the Act or any other law administered by the Authority.

Recognition of foreign certificates

10. (1) The holder of a certificate as master or ship's officer issued by or on behalf of another party to the STCW Convention may apply to the Authority in accordance with subregulation (2) for the recognition of his or her certificate as equivalent to a certificate of competency issued under the Act.

(2) An application contemplated in subregulation (1) shall be accompanied by—

- (a) a letter of motivation requesting the specific equivalency;

- (b) a statement by the applicant, confirmed by or on behalf of another party to the STCW Convention, that his or her level of proficiency in the English language meets the relevant requirements of the STCW Convention;

[Para (b) substituted by reg 5(a), GNR501, GG23345, 26 April 2002]

- (c) a medical certificate, issued by an approved medical practitioner, declaring that the medical fitness of the applicant complies with the medical standards set out in the Code;
- (d) a certified copy of the applicant's original certificate;
- (e) two passport-size photographs of the applicant; and
- (f) if the applicant is applying for an equivalency as master, chief mate, chief engineer officer or second engineer officer, documentary proof that he or she has attained the level of knowledge of the Republic's maritime legislation required for the equivalent certificate desired. A certificate issued by an accredited institution stating that the applicant has satisfied the institution's examiner that he or she has attained the required level of knowledge shall be accepted as sufficient proof of such knowledge.

(3) The Authority may issue an endorsement recognizing an applicant's certificate, which endorsement shall have effect as an authorization under section 83(1) of the Act, if it is satisfied that—

- (a) the certificate is authentic and valid;
- (b) the level of competence and knowledge evidenced by the certificate is not inferior to that required for the equivalent certificate issued under the Act;
- (c) the applicant, if applying for an equivalency as master, chief mate, chief engineer officer or second engineer officer, has attained the level of knowledge of the Republic's maritime legislation required for the equivalent certificate issued under the Act; and
- (d) prompt notification will be given to the Authority of any significant change in the arrangements for training and certification provided in compliance with the STCW Convention.

(4) Every endorsement issued under subregulation (3) shall be a separate document and shall state, with reference to the Training and Certification Regulations and the STCW Convention, the capacity in which the holder is entitled to serve.

(5) The Authority may cancel an endorsement issued under subregulation (3) if—

- (a) the holder shows, through any inability, that he or she does not meet the level of competency or knowledge required for the equivalent certificate of competency, or that his or her level of proficiency in the English language does not meet the relevant requirements of the STCW Convention;

[Para (a) substituted by reg 5(b), GNR501, GG23345, 26 April 2002]

- (b) the holder's certificate expires or is cancelled or suspended by or on behalf of the government under whose authority the certificate was originally issued;
- (c) a court of marine enquiry or a disciplinary hearing recommends the cancellation of the endorsement; or
- (d) the holder is convicted of an offence in terms of the Act or any other law administered by the Authority.

(6) Where the Authority cancels an endorsement under subregulation (5), it shall inform the government under whose authority the certificate was originally issued of the cancellation.

Employment of certificated deck officers on ships of 25 GT or more other than fishing vessels

11. (1) The owner and master of every ship of 25 GT or more other than a fishing vessel or a ship referred to in subregulation (2) shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated deck officers specified in the table below:

Item	Type of voyage	Gross tonnage of ship	Title of certificate and number of certificated deck officers to be employed											
			Skipper (Port Operations)	Skipper (Coastal)	Skipper (Unlimited)	Master (Port Operations)	Mate (Coastal)	Master (Coastal)	Deck Officer	Chief Mate	Master			
1	Port operations	25 or more, but less than 200	1	—	—	—	—	—	—	—	—	—	—	—
2	Port operations	200 or more, but less than 500	—	—	—	1	—	—	—	—	—	—	—	—
3	Port operations	500 or more	1	—	—	1	—	—	—	—	—	—	—	—
4	Near-coastal	25 or more, but less than 100	—	2	—	—	—	—	—	—	—	—	—	—
5	Unlimited	25 or more, but less than 100	—	—	2	—	—	—	—	—	—	—	—	—
6	Near-coastal	100 or more, but less than 500	—	—	—	—	—	—	—	1	—	—	—	—
7	Unlimited	100 or more, but less than 500	—	—	—	—	—	—	—	—	—	2(A)	—	—
8	Unlimited	500 or more, but less than 3 000	—	—	—	—	—	—	—	—	—	2(B)	1(C)	—
9	Unlimited	3 000 or more	—	—	—	—	—	—	—	—	—	2	1	1

Notes:

- (A) Master's certificate to be endorsed: "Master of a ship of less than 500 GT on unlimited voyages".
- (B) Mate's certificate to be endorsed: "Chief Mate of a ship of less than 3 000 GT on unlimited voyages".
- (C) Certificate to be endorsed: "Master of a ship of less than 3 000 GT on unlimited voyages".

[Notes (B) and (C) in the table in subreg (1) amended by reg 6(a), GNR501, GG23345, 26April 2002]

- (2) The owner and master of every ship of 100 GT or more that—
- (a) conducts mining operations within waters under South African jurisdiction; and
- (b) so operates at anchor for two-thirds or more of the time spent at sea between port calls,
- shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated deck officers specified in the table below:

Item	Gross tonnage of ship	Title of certificate and number of certificated deck officers to be employed				
		Mate (Coastal)	Master (Coastal)	Deck Officer	Chief Mate	Master
1	100 or more, but less than 500	1	1	—	—	—
2	500 or more, but less than 3 000	—	—	1(A)	1(B)	—
3	3 000 or more	—	—	1	1	1

Notes:

(A) Certificate to be endorsed: "Chief mate of a ship of less than 3 000 GT on unlimited voyages".

(B) Certificate to be endorsed: "Master of a ship of less than 3 000 GT on unlimited voyages".

The certificates mentioned in the table may be limited to mining operations.

[Subreg (2) substituted by reg 6(b), GNR501, GG23345, 26 April 2002]

Employment of certificated fishermen on fishing vessels of 25 GT or more operating wholly within defined fishing zone

12. The owner and master of every fishing vessel of 25 GT or more that operates wholly within the defined fishing zone shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated fishermen specified in the table below:

Item	Gross tonnage or length of ship	Title of certificate and number of certificated fishermen to be employed			
		Fisherman Grade 4 (Watchkeeper)	Fisherman Grade 4 (Skipper)	Fisherman Grade 3	Fisherman Grade 2
1(A)	25 GT or more, but less than 24 metres	1	1	—	—
2	24 metres or more, but less than 30 metres	—	1(B)	1	—
3	30 metres or more	—	1(B)	1	1

Notes:

(A) Fishing vessels of 25 GT or more, but not exceeding 50 GT, going to sea from any port on voyages of not more than 16 hours duration may dispense with the Fisherman Grade 4 (Watchkeeper). For the purposes of this note "port" means a safe berth alongside which the ship is securely moored and not at anchor.

(B) Fisherman Grade 4 (Skipper) or Fisherman Grade 4 (Watchkeeper).

Employment of certificated fishermen on fishing vessels of 25 GT or more operating outside defined fishing zone

13. The owner and master of every fishing vessel of 25 GT or more that operates either wholly or partly outside the defined fishing zone shall comply with regulation 12: Provided that the certificate of the master, who may be one of the officers required by regulation 12, shall be endorsed for high seas command.

Employment of certificated engineer officers and certificated marine motormen on ships of 25 GT or more, other than fishing vessels

14. (1) The owner and master of every ship of 25 GT or more, other than a fishing vessel or a ship referred to in subregulation (2), shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated engineer officers and certificated marine motormen specified in the table below:

Item	Type of voyage	Registered propulsion power of ship (kW)	Title of certificate and number of certificated engineer officers and certificated marine motormen to be employed										
			Marine Motorman Grade 1	Marine Motorman Higher Grade	Second Engineer Officer (Port Operations)	Chief Engineer Officer (Port Operations)	Engineer Officer	Second Engineer Officer (< 3 000 kW)	Second Engineer Officer (\$ 3 000 kW)	Chief Engineer Officer (< 3 000 kW)	Chief Engineer Officer (\$ 3 000 kW)		
1	Port operations	less than 350	1	—	—	—	—	—	—	—	—	—	—
2	Port operations	350 or more, but less than 750	—	1	—	—	—	—	—	—	—	—	—
3	Port operations	750 or more, but less than 1 500	—	—	1	—	—	—	—	—	—	—	—
4	Port operations	1 500 or more	1	—	—	1	—	—	—	—	—	—	—
5	Near-coastal	less than 350	1	—	—	—	—	—	—	—	—	—	—
6	Near-coastal	350 or more, but less than 750	1	1	—	—	—	—	—	—	—	—	—
7	Near-coastal	750 or more, but less than 3 000	—	—	—	—	—	2	—	—	1(A)	—	—
8	Near-coastal	3 000 or more	—	—	—	—	—	1	—	—	1	—	1
9	Unlimited	less than 750	1	—	—	—	—	1	1(B)	—	—	—	—
10	Unlimited	750 or more, but less than 3 000	—	—	—	—	—	1	1	—	—	—	1(C)
11	Unlimited	3 000 or more	—	—	—	—	—	2	—	—	1	—	1

Notes:

(A) Certificate to be endorsed: "Chief engineer officer of a ship of less than 3 000 kW propulsion power".

(B) Certificate to be endorsed: "Chief engineer officer of a ship of less than 750 kW propulsion power".

(C) Or Second Engineer Officer (\$ 3 000 kW) endorsed "Chief engineer officer of a ship of less than 3 000 kW propulsion power".

- (2) The owner and master of every ship of 100 GT or more that—
- (a) conducts mining operations within waters under South African jurisdiction; and
- (b) so operates at anchor for two-thirds or more of the time spent at sea between port calls,
- shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated engineer officers and certificated marine motormen specified in the table below:

Item	Registered propulsion power of ship (kW)	Title of certificate and number of certificated engineer officers and certificated marine motormen to be employed				
		Marine Motorman Grade 1	Marine Motorman Higher Grade	Engineer Officer	Second Engineer Officer (\$ 3 000 kW)	Chief Engineer Officer (\$ 3 000 kW)
1	less than 750	1	1	—	—	—
2	750 or more, but less than 3 000	—	—	2	1(A)	—
3	3 000 or more	—	—	1	1	1

Note:

- (A) Certificate to be endorsed: "Chief engineer officer of a ship of less than 3 000 kW propulsion power".

[Reg 14 substituted by reg 7, GNR501, GG23345, 26 April 2002]

Employment of certificated engineer officers and/or certificated marine motormen on fishing vessels of 25 GT or more

15. The owner and master of every fishing vessel of 25 GT or more shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated engineer officers and/or certificated marine motormen specified in the table below:

Item	Registered propulsion power of ship (kW)	Title of certificate and number of certificated engineer officers and/or certificated marine motormen to be employed					
		Engineer Officer Class 3	Engineer Officer Class 4	Marine Motorman Higher Grade	Marine Motorman Grade 1	Marine Motorman Grade 2	Marine Motorman Grade 3
1	3 000 or more	1(A)	1	—	—	—	—
2	2 000 or more, but less than 3 000	—	1(B)	—	1	—	—
3	1 000 or more, but less than 2 000	—	—	1	1	—	—
4	350 or more, but less than 1 000	—	—	—	1	1	—
5	150 or more but less than 350	—	—	—	—	1	—
6	less than 150	—	—	—	—	—	1

Notes:

- (A) Chief engineer officer's certificate to bear Class 3 service endorsement.
- (B) Chief engineer officer's certificate to bear Class 4 service endorsement.

Employment of certificated radio operators

16. The owner and master of every ship shall ensure that there is employed on the ship the number of certificated radio operators specified in the table below: Provided that—

- (a) if the ship is of 300 GT or more, is engaged on a near-coastal voyage and is not equipped in accordance with GMDSS requirements of the radio regulations, there shall be employed on the ship at least two radio operators who are appropriately certificated for the type of radio installation on the ship;
- (b) if the ship is equipped in accordance with the GMDSS requirements of the radio regulations and at-sea maintenance of radio equipment is to be conducted to ensure availability, at least one radio operator on the ship shall hold a valid Radio Electronic Certificate (First Class), or a recognized equivalent certificate;
- (c) if the ship is fitted with radio equipment capable of operating within the GMDSS (whether or not so fitted in compliance with statutory requirements), there shall be employed on the ship at least one radio operator who is the holder of a valid GMDSS General Operators Certificate, or a recognized equivalent certificate;
- (d) when the radio equipment on the ship is being used for general communications, other than distress, urgency or safety communications, such general communications shall not be conducted by the deck officer on watch.

Item	Type of voyage	Gross tonnage or length of ship	Title of certificate and number of certificated radio operators to be employed		
			Restricted Radiotelephone Operators Certificate (VHF only)	Restricted Radiotelephone Operators certificate	GMDSS General Operators Certificate
1	Port operations	25 GT or more	—	1	—
2	Near-coastal	25 GT or more, but less than 300 GT	—	2	—
3	Near-coastal	300 GT or more	—	—	2
4	Fishing within 40 nautical miles offshore	25 GT or more	1	—	—
5	Fishing within 200 nautical miles offshore	25 GT or more	—	2	—
6	Fishing beyond 200 nautical miles offshore	25 GT or more, but less than 45 metres	—	2	—
7	Fishing beyond 200 nautical miles offshore	45 metres or more	—	—	2
8	Unlimited	100 GT or more, but less than 300 GT	—	2	—
9	Unlimited	300 GT or more	—	—	2

[Reg 16 substituted by reg 8, GNR501, GG23345, 26 April 2002]

Employment of certificated ratings on ships of 25 GT or more other than fishing vessels

17. The owner and master of every ship of 25 GT or more other than a fishing vessel shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated ratings specified in the table below: Provided that—

- (a) where a combination of ratings qualified as ordinary seamen and as able seamen are employed in the deck department, at least half shall be qualified as able seamen;
- (b) where a combination of ratings qualified as wipers and as oilers are employed in the engine-room department, at least one shall be qualified as an oiler;
- (c) on passenger ships the required number of ratings qualified as proficient in survival craft and as proficient in fast rescue boats shall be in addition to the ratings qualified as able seamen and as oilers;
- (d) on ships having only liferafts as survival craft there may be employed, in lieu of the ratings qualified as proficient in survival craft, ratings qualified as proficient in liferafts only;
- (e) owners and masters (bearing in mind that the table below specifies minimum requirements only) shall have regard to the requirements of regulation 4(1)(b) and (c) when determining the appropriate manning;
- (f) in respect of a ship engaged solely in port operations, and in lieu of meeting the requirements specified in the table below, application may be made to the proper officer at the ship's port of operation for the number of certificated ratings to be determined, *mutatis mutandis*, in accordance with regulation 4(2);
- (g) on ships engaged solely in port operations, there may be employed, instead of the ratings qualified as able seamen or oilers, ratings qualified as general purpose ratings (port operations).

[Para (g) added by reg 9, GNR501, GG23345, 26 April 2002]

Description of ship	Type of voyage	Title of certificate and number of certificated ratings to be employed			
		Ordinary seaman or Able seaman	Wiper or Oiler	Proficient in survival craft	Efficient cook
Passenger	Unlimited or near-coastal	Sufficient to man each 4 hour watch in a 12 hour period with a rating, plus one (i.e. 4)	Sufficient to man each 4 hour watch in a 12 hour period with a rating (i.e. 3)	One for every 50 passengers, or part of such number, on board	1
	Port operations	Sufficient to man each 6 hour watch in a 12 hour period with a rating, plus one (i.e. 3)	Sufficient to man each 6 hour watch in a 12 hour period with a rating (i.e. 2)		—

Description of ship	Type of voyage	Title of certificate and number of certificated ratings to be employed			
		Ordinary seaman or Able seaman	Wiper or Oiler	Proficient in survival craft	Efficient cook
Other	Unlimited	Sufficient to man each 4 hour watch in a 12 hour period with a rating, plus one (i.e. 4)	Sufficient to man each 4 hour watch in a 12 hour period with a rating (i.e. 3)	—	1
	Near-coastal	Sufficient to man each 6 hour watch in a 12 hour period with a rating, plus one (i.e. 3)	Sufficient to man each 6 hour watch in a 12 hour period with a rating (i.e. 2)	—	
	Port operations	1 Able seaman (Port Operations) and 1 ordinary seaman (Port Operations) OR 2 Able seamen (Port Operations)	1 Oiler (Port Operations)	—	—

Employment of certificated ratings on fishing vessels of 100 GT or more

18. The owner and master of every fishing vessel of 100 GT or more shall ensure that there is employed on the ship, in their appropriate capacities, the number of certificated ratings specified in the table below:

Number of persons on ship	Title of certificate and number of certificated ratings to be employed		
	Able seaman	Proficient in survival craft	Efficient cook
15 to 30	1	1	—
More than 30	1	2	1

Notes:

Ratings required to hold a certificate of qualification as proficient in survival craft shall be in addition to those required to hold the certificate of qualification as able seaman.

The certificates of qualification as able seaman and as proficient in survival craft and fast rescue boats may be the local certificate or the certificate issued in accordance with the STCW Convention.

Employment of qualified medical practitioners on ships of 25 GT or more

19. (1) The owner and master of every ship of 25 GT or more shall ensure that at least one qualified medical practitioner is employed on the ship when the ship carries 100 or more persons on an unlimited voyage.

(2) The owner and master of every ship of 25 GT or more to which the STCW Convention applies shall ensure that—

- (a) every crew member designated to take charge of medical care on the ship in the absence of a qualified medical practitioner holds—
 - (i) a valid Ship Captain's Medical Training Certificate issued in accordance with the Code; or

- (ii) a valid certificate in medical care issued in accordance with regulation VI/4, paragraph 2 of the STCW Convention by or on behalf of another party to that Convention; and
- (b) every crew member designated to provide medical first aid on the ship holds—
 - (i) a valid First Aid at Sea Certificate issued in accordance with the Code; or
 - (ii) a valid certificate in medical first aid issued in accordance with regulation VI/4, paragraph 1 of the STCW Convention by or on behalf of another party to that Convention.
- (3) Every person who is designated the duties referred to subregulation (2)(a) or (b) shall undertake approved refresher training at intervals not exceeding five years.

Employment of qualified fire-fighting personnel on ships of 25 GT or more

- 20.** (1) The owner and master of every ship of 25 GT or more shall ensure that every crew member designated to take charge of a fire-fighting party on the ship holds—
- (a) in the case of a ship of 100 GT or more, a valid Fire-Fighting Certificate issued in accordance with the Code, or an approved equivalent qualification;
 - (b) in the case of a tanker of 100 GT or more, a valid Tanker Fire-Fighting Certificate issued in accordance with the Code, or an approved equivalent qualification; and
 - (c) in the case of a ship of less than 100 GT, a valid Fire-Fighting (Small Vessels) Certificate issued in accordance with the Code, or an approved equivalent qualification.
- (2) The owner and master of every ship of 25 GT or more to which the STCW Convention applies shall ensure that every crew member designated to control fire-fighting operations on the ship holds—
- (a) a valid Advanced Fire-Fighting Certificate issued in accordance with the Code; or
 - (b) a valid certificate in advanced fire-fighting issued in accordance with regulation VI/3, paragraph 1 of the STCW Convention by or on behalf of another party to that Convention.
- (3) Every person who is designated the duties referred to in subregulation (1) or (2) shall undertake approved refresher training at intervals not exceeding five years.

Employment of qualified personnel on ships equipped with fast rescue boat

- 21.** The owner and master of every ship that is equipped with one or more fast rescue boats shall ensure that there are employed on the ship at least two persons per boat who hold—
- (a) a valid certificate of qualification as proficient in fast rescue boats issued in accordance with regulation 49 of the Training and Certification Regulations; or
 - (b) a valid certificate of proficiency in fast rescue boats issued in accordance with regulation VI/2, paragraph 2 of the STCW Convention by or on behalf of another party to that Convention.

Exemption in respect of certain ships

22. (1) Subject to subregulations (2) and (3), the Authority may in special circumstances, if in its opinion no danger would result to persons, property or the environment, grant an exemption permitting a seaman to serve in a particular ship for the shortest possible time, but in any event not exceeding six months, in any capacity other than that of radio officer, or master of a passenger ship, for which he or she is not certificated.

(2) No exemption shall be granted under subregulation (1) unless the seaman is certificated to serve in the next lower capacity: Provided that where the next lower capacity is not required by these regulations to be filled by a certificated person, exemption may be granted only if the seaman's qualifications and experience, in the opinion of the Authority, clearly meet the requirements for the certificated capacity to be filled: Provided further that such seaman, if uncertificated, shall be required to satisfy an examiner that he or she possesses the minimum knowledge and experience required to serve in the certificated capacity concerned.

(3) No master or chief engineer officer of a ship to which the STCW Convention applies shall be granted an exemption under subregulation (1) except in the case of *force majeure*, and then only for the shortest possible time.

Equivalence of certificates and endorsements

23. (1) (a) The certificates or endorsements specified in the second and third columns of an item in the table below are, subject to paragraph (b), to be taken to be equivalent to the certificate or endorsement, as the case may be, specified in the fourth column of that item.

(b) If the certificate or endorsement specified in the fourth column of an item in the table is subject to additional qualification requirements in terms of the Training and Certification Regulations, documentary evidence of compliance with those requirements, or so much thereof as the Authority may direct, is to be produced within the time and in the manner that the Authority directs.

Item	Title of certificate issued before commencement of repealed regulations	Equivalent certificate or endorsement under repealed regulations	Equivalent certificate or endorsement under Training and Certification Regulations
1	Master of a foreign-going ship	Deck Officer Class 1	Master
2	—	Deck Officer Class 2 endorsed Master (Limited Trade)	Chief Mate endorsed: — <i>Master of a ship of less than 3000 GT on unlimited voyages</i>
3	Chief Navigating Officer of a foreign-going ship	Deck Officer Class 2 endorsed Master (Short Sea Trade)	Chief Mate endorsed: — <i>Master of a ship of less than 500 GT on near-coastal voyages</i>
4	—	Deck Officer Class 2	Chief Mate
5	—	Deck Officer Class 3 endorsed Master (Limited Trade)	Deck Officer endorsed: — <i>Master of a ship of less than 500 GT on unlimited voyages</i> — <i>Chief Mate of a ship of less than 3 000 GT on unlimited voyages</i>

Item	Title of certificate issued before commencement of repealed regulations	Equivalent certificate or endorsement under repealed regulations	Equivalent certificate or endorsement under Training and Certification Regulations
6	—	Deck Officer Class 3 endorsed Master (Short Sea Trade)	Deck Officer endorsed: —Master of a ship of less than 500 GT on near-coastal voyages —Chief Mate of a ship of less than 3 000 GT on unlimited voyages
7	Second Navigating Officer of a foreign-going ship	Deck Officer Class 3	Deck Officer
8	—	Deck Officer Class 4 endorsed Master (Limited Trade)	Deck Officer endorsed: —Master of a ship of less than 500 GT on unlimited voyages
9	Master of a coasting ship of 100 GT or more	Deck Officer Class 4 endorsed Master (Short Sea Trade)	Deck Officer endorsed: —Master of a ship of less than 500 GT on near-coastal voyages
10	—	Deck Officer Class 4 endorsed Master (Port Operation)	Deck Officer endorsed: —Master of a ship of any tonnage operating within a port operations area
11	—	Deck Officer Class 4 endorsed Port Operation Service	Master (Port Operations)
12	—	Deck Officer Class 4	Deck officer
13	—	Deck Officer Class 5 endorsed Master (Short Sea Trade)	Mate (Coastal) endorsed: —Master of a ship of less than 500 GT on near-coastal voyages
14	—	Deck Officer Class 5 endorsed Master (Port Operation)	Mate (Coastal) endorsed: —Master of a ship of any tonnage operating within a port operations area
15	—	Deck Officer Class 5 endorsed Port Operation Service	Master (Port Operations)
16	Navigating Officer of a coasting ship of 100 GT or more	Deck Officer Class 5	Mate (Coastal)
17	—	Deck Officer Class 6 (Unlimited Trade)	Skipper (Unlimited)
18	—	Deck Officer Class 6 (Short Sea Trade)	Skipper (Coastal)
19	—	Deck Officer Class 6 (Restricted Trade)	Skipper (Port Operations)
20	—	Dangerous Cargo Endorsement (Petroleum), (Chemical) or (Gas)	Tanker Cargo Endorsement (Petroleum), (Chemical) or (Gas), as appropriate
21	Skipper of a fishing, sealing or shore-based whaling boat of 100 GT or more	Fisherman Grade 2	Fisherman Grade 2
22	Mate of a fishing, sealing or shore-based whaling boat of 100 GT or more	Fisherman Grade 3	Fisherman Grade 3
23	Boatswain of a fishing, sealing or shore-based whaling boat of 100 GT or more	Fisherman Grade 4 (Skipper)	Fisherman Grade 4 (Skipper)

Item	Title of certificate issued before commencement of repealed regulations	Equivalent certificate or endorsement under repealed regulations	Equivalent certificate or endorsement under Training and Certification Regulations
24	Skipper of a coasting ship or a fishing, sealing or shore-based whaling boat of less than 100 GT	Fisherman Grade 4 (Skipper)	Fisherman Grade 4 (Skipper)
25	Mate of a coasting ship or a fishing, sealing or shore-based whaling boat of less than 100 GT	Fisherman Grade 4 (Watchkeeper)	Fisherman Grade 4 (Watchkeeper)
26	—	Fisherman Grade 4	Fisherman Grade 4 (Skipper)
27	Chief Engineer-Officer of a foreign-going ship	Marine Engineer-Officer Class 1	Chief Engineer Officer (\$3 000 kW)
28	Second Engineer-Officer of a foreign-going ship	Marine Engineer-Officer Class 2	Second Engineer Officer (\$3 000 kW) endorsed: — <i>Chief Engineer Officer of a ship of less than 3 000 kW propulsion power</i>
29	—	Marine Engineer-Officer Class 3 with Service Endorsement	Second Engineer Officer (< 3 000 kW) endorsed: — <i>Chief Engineer Officer of a ship of less than 750 kW propulsion power</i> — <i>Chief Engineer Officer of a ship of any kilowatt propulsion power operating within a port operations area</i>
30	Chief Engineer-Officer of a coasting ship	Marine Engineer-Officer Class 3	(a) Second Engineer Officer (< 3 000 kW) endorsed: — <i>Chief Engineer Officer of a ship of any kilowatt propulsion power operating within a port operations area</i> (b) Chief Engineer Officer (Port Operations)
31	Second Engineer-Officer of a coasting ship	Marine Engineer-Officer Class 4	(a) Engineer Officer endorsed: — <i>Chief Engineer Officer of a ship of less than 1 500 kW propulsion power operating within a port operations area</i> (b) Second Engineer Officer (Port Operations)
32	—	Marine Motorman Higher Grade	Marine Motorman Higher Grade
33	Marine Engineman	Marine Motorman Grade 1	Marine Motorman Grade 1
34	Assistant Marine Engineman, any brake horsepower	Marine Motorman Grade 2	Marine Motorman Grade 2
35	Assistant Marine Engineman, under 150 brake horsepower	Marine Motorman Grade 3	Marine Motorman Grade 3
36	Able Seaman	Efficient Deck Rating	Able Seaman
37	Lifeboatman	Proficiency in Survival Craft	Proficiency in Survival Craft
38	—	Efficient Engine-room Rating	Oiler
39	—	Efficient Cook	Efficient Cook
40	—	Proficiency in Survival Craft (Local)	Proficiency in Liferrafts

Item	Title of certificate issued before commencement of repealed regulations	Equivalent certificate or endorsement under repealed regulations	Equivalent certificate or endorsement under Training and Certification Regulations
41	—	Efficient General Purpose Rating	Efficient General Purpose Rating (Port Operations)

[Subreg (1) substituted by reg 10(a), GNR501, GG23345, 26 April 2002]

(2) ...

[Subreg (2) deleted by reg 10(b), GNR501, GG23345, 26 April 2002]

(3) ...

[Subreg (3) deleted by reg 10(b), GNR501, GG23345, 26 April 2002]

(4) Where the holder of a certificate of competency issued under the Act before the commencement of these regulations has served in a certificated capacity for at least 12 months in the preceding five years but is prohibited from continued employment in that capacity owing to the tonnage, propulsion power or area of operation of the ship exceeding the applicable tonnage, propulsion power or area of operation limitation, the Authority may endorse the certificate, or the equivalent certificate in terms of this regulation, as the case may be, so as to entitle the holder to continued employment in the capacity concerned on a ship having an appropriately greater tonnage, propulsion power or area of operation.

[Subreg (4) substituted by reg 10(c), GNR501, GG 23345, 26 April 2002]

Safe manning document

24. (1) The owner of every ship of 25 GT or more shall ensure that—

- (a) a safe manning document is in force in respect of the ship and the manning of the ship;
- (b) the safe manning document is kept on board the ship at all times; and
- (c) the manning of the ship is maintained at all times to at least the levels specified in the safe manning document.

(2) The master of every ship to which subregulation (1) applies shall ensure that the ship does not proceed to sea unless there is on board a valid safe manning document issued in respect of the ship, and the manning of the ship complies with that document.

(3) Every owner who contravenes subregulation (1) is guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding 12 months.

(4) Every master who contravenes subregulation (2) is guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding 12 months.

Repeal of regulations

25. The Manning of Ships Regulations, 1985, published by Government Notice No. R. 2652 of 29 November 1985, as amended by Government Notices Nos. R. 41 of 10 January 1989, R. 2129 of 7 September 1990, R. 2088 of 30 August 1991 and R. 2316 of 1 December 1993, are repealed.

Title and commencement

26. (1) These regulations are called the Merchant Shipping (Safe Manning) Regulations, 1999, and, subject to subregulation (2), come into operation on 31 December 1999.

(2) Regulations 4(1)(b),(f) and (g), 6, 7 and 10 shall take effect in respect of fishing vessels on a date fixed by the Minister by notice in the *Gazette*.

ANNEX 1

(Regulation 6)

WATCHKEEPING PRINCIPLES AND ARRANGEMENTS

Planning the voyage

1. The intended voyage shall be planned in advance, taking into consideration all pertinent information, and any course laid down shall be checked before the voyage commences.

2. The chief engineer officer shall, in consultation with the master, determine in advance the needs of the intended voyage, taking into consideration the requirements for fuel, water, lubricants, chemicals, expendable and other spare parts, tools, supplies and any other requirements.

3. Before each voyage the master of a ship 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 regarding those navigational limitations and hazards that are of a permanent or predictable nature and that are relevant to the safe navigation of the ship.

4. When the route planning is verified taking into consideration all pertinent information, the planned route shall be clearly displayed on appropriate charts and shall be continuously available to the officer in charge of the watch, who shall verify each course to be followed before using it during the voyage.

5. If a decision is made during a voyage to change the next port of call of the planned route, or if it is necessary for the ship to deviate substantially from the planned route for other reasons, then an amended route shall be planned before deviating substantially from the route originally planned.

Watchkeeping at sea

6. Owners, masters, chief engineer officers and watchkeeping personnel shall observe the following principles to ensure that safe watches are maintained at all times.

7. The master of a ship shall ensure that watchkeeping arrangements are adequate for maintaining a safe navigational watch. Under the master's general direction, the officers of the navigational watch are responsible for navigating the ship safely during their periods of duty, when they will be particularly concerned with avoiding collision and stranding.

8. The chief engineer officer of a ship shall, in consultation with the master, ensure that watchkeeping arrangements are adequate to maintain a safe engineering watch.

9. The master, officers and ratings shall be aware of the serious effects of operational or accidental pollution of the marine environment and shall take all possible precautions to prevent such pollution, particularly within the framework of relevant international and port regulations.

PART 1

PRINCIPLES TO BE OBSERVED IN KEEPING NAVIGATIONAL WATCH

10. The officer in charge of the navigational watch is the master's representative and is primarily responsible at all times for the safe navigation of the ship and for complying with the collision regulations.

11. A proper look-out shall be maintained at all times in compliance with rule 5 of the annex to the collision regulations, and shall serve the purpose of—

- (a) maintaining a continuous state of vigilance by sight and hearing as well as by all other available means, with regard to any significant change in the operating environment;
- (b) fully appraising the situation and the risk of collision, stranding and other dangers to navigation; and
- (c) detecting ships or aircraft in distress, shipwrecked persons, wrecks, debris and other hazards to safe navigation.

12. The look-out shall be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken or assigned which could interfere with that task.

13. The duties of the look-out and helmsman are separate and the helmsman shall not be considered to be the look-out while steering, except in small ships where an unobstructed all-round view is provided at the steering position and there is no impairment of night vision or other impediment to the keeping of a proper look-out. The officer in charge of the navigational watch may be the sole look-out in daylight provided that on each such occasion—

- (a) the situation has been carefully assessed and it has been established without doubt that it is safe to do so;
- (b) full account has been taken of all relevant factors, including, but not limited to—
 - (i) state of weather;
 - (ii) visibility;
 - (iii) traffic density;
 - (iv) proximity of dangers to navigation; and
 - (v) the attention necessary when navigating in or near traffic separation schemes; and
- (c) assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

14. In determining that the composition of the navigational watch is adequate to ensure that a proper look-out can continuously be maintained, the master shall take into account all relevant factors, including those described in this annex, as well as the following factors:

- (a) The hours of darkness, requiring in addition to the watchkeeping officer, a look-out;
- (b) visibility, state of weather and sea;

- (c) traffic density, and other activities occurring in the area in which the ship is navigating;
- (d) the attention necessary when navigating in or near traffic separation schemes and other routing measures;
- (e) the additional workload caused by the nature of the ship's functions, immediate operating requirements and anticipated manoeuvres;
- (f) the fitness for duty of any crew members on call who are assigned as members of the watch;
- (g) knowledge of and confidence in the professional competence of the ship's officers and crew;
- (h) the experience of each officer of the navigational watch, and the familiarity of that officer with the ship's equipment, procedures, and manoeuvring capability;
- (i) activities taking place on board the ship at any particular time, including radiocommunication activities, and the availability of assistance to be summoned immediately to the bridge when necessary;
- (j) the operational status of bridge instrumentation and controls, including alarm systems;
- (k) rudder and propeller control and ship manoeuvring characteristics;
- (l) the size of the ship and the field of vision available from the conning position;
- (m) the configuration of the bridge, to the extent that such configuration might inhibit a member of the watch from detecting by sight or hearing any external development; and
- (n) any other relevant standard, procedure or guidance relating to watchkeeping arrangements and fitness for duty which has been promulgated by regulation.

15. 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:

- (a) At no time shall the bridge be left unattended;
- (b) weather conditions, visibility and whether there is daylight or darkness;
- (c) proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties;
- (d) use and operational condition of navigational aids such as radar or electronic position-indicating devices and any other equipment affecting the safe navigation of the ship;
- (e) whether the ship is fitted with automatic steering;
- (f) whether there are radio duties to be performed;
- (g) unmanned machinery space (UMS) controls, alarms and indicators provided on the bridge, procedures for their use and limitations; and
- (h) any unusual demands on the navigational watch that may arise as a result of special operational circumstances.

16. The officer in 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.

17. The relieving officer shall ensure that the members of the relieving watch are fully capable of performing their duties, particularly as regards their adjustment to night vision. Relieving officers shall not take over the watch until their vision is fully adjusted to the light conditions.

18. Before taking over the watch, relieving officers shall satisfy themselves as to the ship's estimated or true 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.

19. Relieving officers shall personally satisfy themselves regarding—

- (a) standing orders and other special instructions of the master relating to navigation of the ship;
- (b) position, course, speed and draught of the ship;
- (c) prevailing and predicted tides, currents, weather, visibility and the effect of these factors upon course and speed;
- (d) procedures for the use of main engines to manoeuvre when the main engines are on bridge control; and
- (e) navigational situation, including but not limited to—
 - (i) the operational condition of all navigational and safety equipment being used or likely to be used during the watch;
 - (ii) the errors of gyro- and magnetic compasses;
 - (iii) presence and movement of ships in sight or known to be in the vicinity,
 - (iv) the conditions and hazards likely to be encountered during the watch, and
 - (v) the possible effects of heel, trim, water density and squat on under-keel clearance.

20. If at any time the officer in charge of the navigational watch is to be relieved when a manoeuvre or other action to avoid any hazard is taking place, the relief of that officer shall be deferred until such action has been completed.

21. The officer in charge of the navigational watch shall—

- (a) keep the watch on the bridge;
- (b) in no circumstances leave the bridge until properly relieved;
- (c) 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 that responsibility and this is mutually understood; and
- (d) notify the master when in any doubt as to what action to take in the interest of safety.

22. 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.

23. The officer in charge of the navigational watch shall have full knowledge of the location and operation of all safety and navigational equipment on board the ship and shall be aware and take account of the operating limitations of such equipment.

24. 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.

25. Officers of the navigational watch shall make the most effective use of all navigational equipment at their disposal.

26. 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 collision regulations.

27. In cases of need, the officer in charge of the navigational watch shall not hesitate to use the helm, engines and sound signalling apparatus. However, timely notice of intended variations of engine speed shall be given where possible or effective use made of UMS engine controls provided on the bridge in accordance with the applicable procedures.

28. Officers of the navigational watch shall know the handling characteristics of their ship, including its stopping distances, and should appreciate that other ships may have different handling characteristics.

29. A proper record shall be kept during the watch of the movements and activities relating to the navigation of the ship.

30. It is of special importance that at all times the officer in charge of the navigational watch ensures that a proper look-out is maintained. 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 look-out is maintained.

31. Operational tests of shipboard navigational equipment shall be carried out at sea as frequently as practicable and as circumstances permit, in particular before hazardous conditions affecting navigation are expected. Whenever appropriate, these tests shall be recorded. Such tests shall also be carried out before port arrival and departure.

32. The officer in charge of the navigational watch shall make regular checks to ensure that—

- (a) the person steering the ship, or the automatic pilot, is steering the correct course;
- (b) the standard compass error is determined at least once a watch and, when possible, after any major alteration of course; the standard and gyro-compasses are frequently compared and repeaters are synchronized with their master compass;
- (c) the automatic pilot is tested manually at least once a watch;
- (d) the navigation and signal lights and other navigational equipment are functioning properly;
- (e) the radio equipment available in the bridge is functioning properly in accordance with paragraph 82 of this annex; and
- (f) the UMS controls, alarms and indicators are functioning properly.

33. 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 Safety Convention. The officer in charge of the navigational watch shall take into account—

- (a) 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; and
- (b) that with a ship under automatic steering it is highly dangerous to allow a situation to develop to the point where the officer in charge of the navigational watch is without assistance and has to break the continuity of the look-out in order to take emergency action.

34. 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 and shall bear in mind that the echo sounder is a valuable navigational aid.

35. The officer in charge of the navigational watch shall use the radar whenever restricted visibility is encountered or expected, and at all times in congested waters, having due regard to its limitations.

36. The officer in charge of the navigational watch shall ensure that 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.

37. 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.

38. The officer in charge of the navigational watch shall notify the master immediately—

- (a) if restricted visibility is encountered or expected;
- (b) if the traffic conditions or the movements of other ships are causing concern;
- (c) if difficulty is experienced in maintaining course;
- (d) on failure to sight land, a navigational mark or to obtain soundings by the expected time;
- (e) if, unexpectedly, a land or a navigation mark is sighted or a change in sounding occurs;
- (f) on breakdown of the engines, propulsion machinery remote control, steering gear or any essential navigational equipment, alarm or indicator;
- (g) if the radio equipment in the bridge malfunctions;
- (h) in heavy weather, if in any doubt about the possibility of weather damage;
- (i) if the ship meets any hazard to navigation, such as ice or a derelict; and
- (j) in any other emergency or if in any doubt.

39. Despite the requirement to notify the master immediately in the foregoing circumstances, the officer in charge of the navigational watch shall in addition not hesitate to take immediate action for the safety of the ship, where circumstances so require.

40. 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, including a proper look-out.

41. In clear weather 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 and bear in mind that such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large ship or a tow or when approaching a ship at close range. The officer in charge of the navigational watch shall also take early and positive action in compliance with the applicable collision regulations and subsequently check that such action is having the desired effect.

42. In clear weather, whenever possible, the officer in charge of the navigational watch shall carry out radar practice.

43. 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 collision regulations 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—

- (a) inform the master;
- (b) post a proper look-out;
- (c) exhibit navigation lights; and
- (d) operate and use the radar.

44. During the 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 and procedures and safeguards implemented.

45. In coastal and congested waters the largest scale chart on board, suitable for the area and corrected with the latest available information, shall be used. Fixes shall be taken at frequent intervals, and shall be carried out by more than one method whenever circumstances allow. The officer in charge of the navigational watch shall positively identify all relevant navigational marks.

46. Despite the duties and obligations of pilots, their presence on board does not relieve the master or 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.

47. 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 doubt still exists, shall notify the master immediately and take whatever action is necessary before the master arrives.

48. While at anchor, the officer in charge of the navigational watch shall—

- (a) determine and plot the ship's position on the appropriate chart as soon as practicable;
- (b) when circumstances permit, check at sufficiently frequent intervals whether the ship is remaining securely at anchor by taking bearings of fixed navigational marks or readily identifiable shore objects;
- (c) ensure that proper look-out is maintained;
- (d) ensure that inspection rounds of the ship are made periodically;

- (e) observe meteorological and tidal conditions and the state of the sea;
- (f) notify the master and undertake all necessary measures if the ship drags anchor;
- (g) ensure that the state of readiness of the main engines and other machinery is in accordance with the master's instructions;
- (h) if visibility deteriorates, notify the master;
- (i) ensure that the ship exhibits the appropriate lights and shapes and that appropriate sound signals are made in accordance with all applicable regulations;
- (j) take measures to protect the environment from pollution by the ship and comply with applicable pollution regulations; and
- (k) maintain a listening watch on VHF channel 16 and/or the port operations working channel.

PART 2

PRINCIPLES TO BE OBSERVED IN KEEPING ENGINEERING WATCH

49. The term *engineering watch* as used in parts 2, 6 and 8 of this annex means either a person or a group of personnel comprising the watch or a period of responsibility for an officer during which the physical presence in machinery spaces of that officer may or may not be required.

50. The officer in charge of the engineering watch is the chief engineer officer's representative and is primarily responsible, at all times, for the safe and efficient operation and upkeep of machinery affecting the safety of the ship and is responsible for the inspection, operation and testing, as required, of all machinery and equipment under the responsibility of the engineering watch.

51. The composition of the engineering watch shall, at all times, be adequate to ensure the safe operation of all machinery affecting the operation of the ship, in either automated or manual mode, and be appropriate to the prevailing circumstances and conditions.

52. When deciding the composition of the engineering watch, which may include appropriately qualified ratings, the following criteria, *inter alia*, shall be taken into account:

- (a) The type of ship and the type and condition of the machinery;
- (b) the adequate supervision, at all times, of machinery affecting the safe operation of the ship;
- (c) any special modes of operation dictated by conditions such as weather, ice, contaminated water, shallow water, emergency conditions, damage containment or pollution abatement;
- (d) the qualifications and experience of the engineering watch;
- (e) the safety of life, ship, cargo and port, and protection of the environment;
- (f) the observance of international, national and local regulations; and
- (g) maintaining the normal operations of the ship.

53. 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.

54. 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.

55. Before taking over the engineering watch, relieving officers shall satisfy themselves regarding at least the following:

- (a) The standing orders and special instructions of the chief engineer officer relating to the operation of the ship's systems and machinery;
- (b) the nature of all work being performed on machinery and systems, the personnel involved and potential hazards;
- (c) the level and, where applicable, the condition of water or residues in bilges, ballast tanks, slop tanks, reserve tanks, fresh water tanks, sewage tanks and any special requirements for use or disposal of the contents thereof;
- (d) the condition and level of fuel in the reserve tanks, settling tanks, day tanks and other fuel storage facilities;
- (e) any special requirements relating to sanitary system disposals;
- (f) condition and mode of operation of the various main and auxiliary systems, including the electrical power distribution system;
- (g) where applicable, the condition of monitoring and control console equipment, and which equipment is being operated manually;
- (h) where applicable, 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;
- (i) any potentially adverse conditions resulting from bad weather, ice, or contaminated or shallow water;
- (j) any special modes of operation dictated by equipment failure or adverse ship conditions;
- (k) the reports of engine-room ratings relating to their assigned duties;
- (l) the availability of fire-fighting appliances; and
- (m) the state of completion of engine-room log.

56. 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.

57. 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.

58. All members of the engineering watch shall be familiar with their assigned watchkeeping duties. In addition, every member shall, with respect to the ship they are serving in, have knowledge of—

- (a) the use of appropriate internal communication systems;
- (b) the escape routes from machinery spaces;
- (c) the engine-room alarm systems and be able to distinguish between the various alarms, with special reference to the fire-extinguishing media alarm; and
- (d) the number, location and types of fire-fighting equipment and damage-control gear in the machinery spaces, and their use and the various safe precautions to be observed.

59. Any machinery not functioning properly, expected to malfunction or requiring special service shall be noted along with any action already taken. Plans shall be made for any further action if required.

60. 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.

61. 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.

62. All bridge orders shall be promptly executed. Except in ships of less than 500 GT, changes in direction or speed of the main propulsion units shall be recorded. The officer in charge of the engineering watch shall ensure that the main propulsion unit controls, when in the manual mode of operation, are continuously attended under stand-by or manoeuvring conditions.

63. 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.

64. 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.

65. 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.

66. 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.

67. 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.

68. 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. The engineering watch shall not leave the machinery spaces unsupervised in a manner that would prevent the manual operation of the engine-room plant or throttles.

69. The officer in charge of the engineering watch shall take the action necessary to contain the effects of damage resulting from equipment breakdown, fire, flooding, rupture, collision, stranding, or other cause.

70. 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.

71. The officer in charge of the engineering watch shall co-operate 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—

- (a) isolating and bypassing machinery to be worked on;
- (b) adjusting the remaining plant to function adequately and safely during the maintenance period;
- (c) recording, in the engine-room log or other suitable document, 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; and
- (d) testing and putting into service, when necessary, the repaired machinery or equipment.

72. 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.

73. 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. This notification, where possible, shall be accomplished before changes are made, in order to afford the bridge the maximum available time to take whatever actions possible to avoid a potential marine casualty.

74. The officer in charge of the engineering watch shall notify the chief engineer officer without delay—

- (a) when engine damage or a malfunction occurs which may be such as to endanger the safe operation of the ship;

- (b) when any malfunction occurs which, it is believed, may cause damage or breakdown of propulsion machinery, auxiliary machinery or monitoring and governing systems; and
- (c) in any emergency or if in any doubt as to what decision or measures to take.

75. Despite the requirement to notify the chief engineer officer in the foregoing circumstances, 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.

76. 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. Routine machinery upkeep, performed as incidental tasks as a part of keeping a safe watch, shall be set up as an integral part of the watch routine. 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. These repairs shall be recorded.

77. In restricted visibility the officer in charge of the engineering watch shall ensure that permanent air or steam pressure is available for sound signals and that at all times bridge orders relating to changes in speed or direction of operation are immediately implemented and, in addition, that auxiliary machinery used for manoeuvring is readily available.

78. In coastal and congested waters 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.

79. At an unsheltered anchorage the chief engineer officer shall consult with the master whether or not to maintain the same engineering watch as when under way.

80. When a ship is at anchor in an open roadstead or in any other virtually "at-sea" condition, the engineer officer in charge of the engineering watch shall ensure that—

- (a) an efficient engineering watch is kept;
- (b) periodic inspection is made of all operating and stand-by machinery;
- (c) main and auxiliary machinery is maintained in a state of readiness in accordance with orders from the bridge;
- (d) measures are taken to protect the environment from pollution by the ship, and that applicable pollution-prevention regulations are complied with; and
- (e) all damage-control and fire-fighting systems are in readiness.

PART 3

PRINCIPLES TO BE OBSERVED IN KEEPING RADIO WATCH

81. In deciding the arrangements for the radio watch, the master of every seagoing ship shall—

- (a) ensure that the radio watch is maintained in accordance with the relevant provisions of the radio regulations and the Safety Convention.
- (b) 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; and
- (c) take into account the radio equipment fitted on board and its operational status.

82. The radio operator performing radio watchkeeping duties shall—

- (a) ensure that watch is maintained on the frequencies specified in the radio regulations and, where applicable, the Safety Convention;
- (b) 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; and
- (c) maintain and keep the appropriate radio log.

83. The maintenance of radio records, in compliance with the requirements of the radio regulations and where applicable, the Safety Convention, is the responsibility of the radio operator designated as having primary responsibility for radiocommunications during distress incidents. The following shall be recorded, together with the times at which they occur:

- (a) A summary of distress, urgency and safety radiocommunications;
- (b) important incidents relating to the radio service;
- (c) where appropriate, the position of the ship at least once per day; and
- (d) a summary of the condition of the radio equipment, including its sources of energy.

84. The radio records shall be kept at the distress communications operating position, and shall be made available—

- (a) for inspection by the master; and
- (b) for inspection by any authorized official during a port state inspection and during a radio equipment survey.

PART 4

WATCHKEEPING IN PORT

85. 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 type of ships'

propulsion systems or ancillary equipment and for ships carrying hazardous, dangerous, toxic or highly flammable materials or other special types of cargo.

86. Arrangements for keeping a deck watch when the ship is in port shall at all times be adequate to—

- (a) ensure the safety of life, of the ship, the port and the environment, and the safe operation of all machinery related to cargo operations;
- (b) observe international, national and local rules; and
- (c) maintain order and the normal routine of the ship.

87. 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.

88. If the master considers it necessary, a qualified officer shall be in charge of the deck watch.

89. The necessary equipment shall be so arranged as to provide for efficient watchkeeping.

90. 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, which may include appropriate engine-room ratings, the following points are among those to be taken into account:

- (a) On all ships of 3 000 kW propulsion power or more there shall always be an officer in charge of the engineering watch;
- (b) on ships of less than 3 000 kW propulsion power there may be, at the master's discretion and in consultation with the chief engineer officer, no officer in charge of the engineering watch; and
- (c) 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.

91. 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 accordingly. 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.

92. 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.

PART 5
TAKING OVER DECK WATCH

93. Before taking over the deck watch, the relieving officer shall be informed of the following by the officer in charge of the deck watch as to—

- (a) the depth of the water at the berth, 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;
- (b) all work to be performed on board the ship; the nature, amount and disposition of cargo loaded or remaining, and any residue on board after unloading the ship;
- (c) the level of water in bilges and ballast tanks;
- (d) the signals or lights being sounded or exhibited;
- (e) the number of crew members required to be on board and the presence of any other persons on board;
- (f) the state of fire-fighting appliances;
- (g) any special port regulations;
- (h) the master's standing and special orders;
- (i) 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;
- (j) any other circumstances of importance to the safety of the ship, its crew, cargo or protection of the environment from pollution; and
- (k) the procedures for notifying the appropriate authority of any environmental pollution resulting from ship activities.

94. Relieving officers, before assuming charge of the deck watch, shall ensure that—

- (a) the securing of moorings and anchor chain is adequate;
- (b) the appropriate signals or lights are properly sounded or exhibited;
- (c) safety measures and fire protection regulations are being maintained;
- (d) they are aware of the nature of any hazardous or dangerous cargo being loaded or discharged and the appropriate action to be taken in the event of any spillage or fire; and
- (e) no external conditions or circumstances imperil the ship and that it does not imperil others.
- (f) they are aware of any ballasting/de-ballasting operations in progress and the current status of anti-heeling pumps and systems (where installed).

PART 6
TAKING OVER ENGINEERING WATCH

95. Before taking over the engineering watch, the relieving officer shall be informed by the officer in charge of the engineering watch as to—

- (a) 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;
- (b) the nature of all work being performed on machinery and systems on board ship, personnel involved and potential hazards;
- (c) the level and condition, where applicable, of water or residue in bilges, ballast tanks, slop tanks, sewage tanks, reserve tanks and special requirements for the use or disposal of the contents thereof;
- (d) any special requirements relating to sanitary system disposals;
- (e) the condition and state of readiness of portable fire-extinguishing equipment and fixed fire-extinguishing installations and fire-detection systems;
- (f) authorized repair personnel on board engaged in engineering activities, their work locations and repair functions and other authorized persons on board and the required crew;
- (g) any port regulations pertaining to ship effluents, fire-fighting requirements and ship readiness, particularly during potential bad weather conditions;
- (h) 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;
- (i) any other circumstances of importance to the safety of the ship, its crew, cargo or the protection of the environment from pollution; and
- (j) the procedures for notifying the appropriate authority of environmental pollution resulting from engineering activities.

96. 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, and shall—

- (a) be familiar with existing and potential sources of power, heat and lighting and their distribution;
- (b) know the availability and condition of ship's fuel, lubricants and all water supplies; and
- (c) be ready to prepare the ship and its machinery, as far as is possible, for stand-by or emergency conditions as required.

PART 7
PERFORMING DECK WATCH

- 97.** The officer in charge of the deck watch shall—
- (a) make rounds to inspect the ship at appropriate intervals;
 - (b) pay particular attention to—
 - (i) the condition and securing of the gangway, anchor chain and moorings, especially at the turn of the tide and in berths with a large rise and fall, if necessary, taking measures to ensure that they are in normal working condition;
 - (ii) the draught, under-keel clearance and the general state of the ship, to avoid dangerous listing or trim during cargo handling or ballasting;
 - (iii) the weather and sea state;
 - (iv) the observance of all regulations concerning safety and fire protection;
 - (v) the water level in bilges and tanks;
 - (vi) all persons on board and their location, especially those in remote or enclosed spaces; and
 - (vii) the exhibition and sounding, where appropriate, of lights and signals;
 - (c) in bad weather, or on receiving a storm warning, take the necessary measures to protect the ship, persons on board and cargo;
 - (d) take every precaution to prevent pollution of the environment by the ship;
 - (e) 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;
 - (f) 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;
 - (g) offer assistance to ships or persons in distress;
 - (h) take necessary precautions to prevent accidents or damage when propellers are to be turned; and
 - (i) enter in the appropriate log-book all important events affecting the ship.

PART 8
PERFORMING ENGINEERING WATCH

- 98.** Officers in charge of the engineering watch shall pay particular attention to—

- (a) the observance of all orders, special procedures and regulations concerning hazardous conditions and their prevention in all areas in their charge;
- (b) the instrumentation and control systems, monitoring of all power supplies, components and systems in operation;
- (c) the techniques, methods and procedures necessary to prevent violation of the pollution regulations of the local authorities; and
- (d) the state of the bilges.

99. Officers in charge of the engineering watch shall—

- (a) in emergencies, raise the alarm when in their opinion the situation so demands, and take all possible measures to prevent damage to the ship, persons on board and cargo;
- (b) 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;
- (c) 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;
- (d) 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; and
- (e) ensure that all important events affecting the operation, adjustment or repair of the ship's machinery are satisfactorily recorded.

PART 9

WATCH IN PORT ON SHIPS CARRYING HAZARDOUS CARGO

100. The master of a ship carrying cargo that is hazardous, whether explosive, flammable, toxic, health-threatening or environment-polluting, shall ensure that safe watchkeeping arrangements are maintained. On ships carrying hazardous cargo in bulk, this will 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.

101. On ships carrying hazardous cargo other than in bulk, the master shall take full account of the nature, quantity, packing and stowage of the hazardous cargo and of any special conditions on board, afloat and ashore.

ANNEX 2
(Regulation 24)

[Annex 2 repealed by reg 11, GNR501, GG23345, 26 April 2002]