



**THE SHIPPING (MANNING AND WATCHKEEPING)  
REGULATIONS 1986**

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PAUL REEVES, Governor-General

ORDER IN COUNCIL

At Wellington this 9th day of June 1986

Present:

HIS EXCELLENCY THE GOVERNOR-GENERAL IN COUNCIL

PURSUANT to sections 17, 19, and 504 of the Shipping and Seamen Act 1952, His Excellency the Governor-General, acting on the recommendation of the Minister of Transport made after consideration by the Minister of a report on the proposed regulations by the Marine Council and after consultation by the Minister with organisations which appeared to the Minister to be representative of owners and seafarers, and by and with the advice and consent of the Executive Council, hereby makes the following regulations.

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## REGULATIONS

**1. Title and commencement**—(1) These regulations may be cited as the Shipping (Manning and Watchkeeping) Regulations 1986.

(2) Subject to subclause (3) of this regulation, these regulations shall come into force on the 1st day of August 1986.

(3) Regulation 6, regulations 10 to 17, and regulation 21 of these regulations, and the Fourth and Fifth Schedules to these regulations, shall come into force on the 1st day of November 1986.

**2. Interpretation**—In these regulations, unless the context otherwise requires,—

“The Act” means the Shipping and Seamen Act 1952:

“Approved” means approved by the Secretary for the relevant purpose:

“Certificate” means a certificate of competency or a certificate of service issued in accordance with the provisions of the Act; and includes a certificate that is recognised in New Zealand by the Shipping (Recognition of Certificates of Competency) Order 1975\*:

“Chemical tanker” means a ship constructed or adapted, and used, for carrying a cargo of liquid chemicals in bulk:

“Chief engineer” means the senior engineer officer responsible for the mechanical propulsion of a ship:

“Convention” means the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, done at London on the 7th day of July 1978; and includes any amendment or protocol to that Convention:

“Convention ship” means a sea-going ship other than—

- (a) A ship of the armed forces of any country; or
- (b) A fishing boat; or
- (c) A pleasure yacht:

“Current certificate of medical fitness” means a certificate of medical fitness—

(a) Issued in accordance with the Shipping (Medical Examination of Seafarers) Regulations 1986\*; and

(b) Issued not more than 1 year earlier than the date on which that certificate is produced for the purpose of obtaining a certificate or sea-going licence under these regulations:

“First mate” means the deck officer next in rank to the master of a ship:

“Hazardous cargo” means cargo comprising goods which—

(a) By reason of their nature, quantity, or mode of stowage, are liable, either singly or collectively, to endanger the lives or health of persons on or near any ship, or to imperil any ship; or

(b) Belong to any of the classes specified in section 305A of the Act; or

(c) Are declared by rules made under section 307 of the Act, or by the Minister by notice in the *Gazette*, to be dangerous goods for the purposes of the Act:

“Liquefied gas tanker” means a ship constructed or adapted, and used, for carrying a cargo of any liquefied gas in bulk:

“Oil tanker” means a ship constructed or adapted, and used, for carrying a cargo of oil in bulk:

“Power”, in relation to a ship, means the power in kilowatts of the main propulsion machinery specified on the certificate of registry, or other equivalent document, for that ship:

“Prescribed form” means a form approved by the Minister under section 502 of the Act:

“Rating” means a member of a ship’s crew other than a master or an officer:

“Sea-going licence” means a sea-going licence issued under regulation 8 of these regulations, and includes any renewal of a sea-going licence:

“Tanker” means any chemical tanker, liquefied gas tanker, or oil tanker.

**3. Application**—These regulations shall apply to—

(a) New Zealand convention ships; and

(b) Convention ships of other countries that are engaged in the home-trade.

## PART I

### OFFICERS

#### *Minimum Manning Requirements*

**4. Minimum manning requirements**—(1) Every ship to which these regulations apply shall carry, as a minimum complement,—

(a) A master and such deck officers, holding such certificates, as are specified as appropriate to that category of ship in the scale set out in the First Schedule to these regulations; and

(b) Such engineer officers, holding such certificates, as are specified as appropriate to that category of ship in the scale set out in the Second Schedule to these regulations; and

(c) Such radio officers or radio operators, holding such qualifications, as are specified in the Shipping Radio Rules 1967\* as appropriate to that category of ship.

(2) No person shall be in charge of a navigational watch unless that person holds an appropriate certificate in accordance with subclause (1) of this regulation.

(3) No person shall be in charge of an engineering watch on a ship of 750 kW power or more unless that person holds an appropriate certificate in accordance with subclause (1) of this regulation.

**5. Alternative certificates**—Where a master or officer is required by regulation 4 of these regulations to hold a named certificate, that master or officer may instead hold—

(a) A certificate that is specified in the second column of the Third Schedule to these regulations as an alternative to the named certificate; or

(b) A certificate of the corresponding kind and grade recognised in New Zealand by the Shipping (Recognition of Certificates of Competency) Order 1975†.

#### *Sea-Going Licences*

**6. Masters and certain officers to hold sea-going licences**—(1) Subject to subclause (2) of this regulation, no master, deck officer serving in other than a supernumerary capacity, or engineer officer serving in the highest capacity appropriate to that officer's certificate, shall serve in any ship to which these regulations apply unless that master or officer holds a valid sea-going licence appropriate to the capacity in which that master or officer is to serve.

(2) No person who, immediately before the 1st day of November 1986, was the holder of a certificate entitling that person to act as master, deck officer, or engineer officer on a ship to which these regulations apply shall be required to hold a sea-going licence before—

(a) The 1st day of November 1989, in the case of a person born on or before the 1st day of November 1939; or

(b) The 1st day of November 1990, in the case of a person born after the 1st day of November 1939 but on or before the 1st day of November 1950; or

(c) The 1st day of November 1991, in the case of a person born after the 1st day of November 1950.

**7. Application for issue or renewal of sea-going licence**—An application for the issue or renewal of a sea-going licence shall be in the prescribed form addressed to the Secretary, and shall be accompanied by the prescribed fee (if any) and by the following documents:

(a) Any certificate, and any current or expired sea-going licence, held by the applicant;

(b) A current certificate of medical fitness:

\*S.R. 1967/259  
†S.R. 1975/60

- (c) In the case of an applicant seeking to serve as a master or deck officer, proof of—
- (i) Not less than 12 months' sea service as master or deck officer performed within the 5 years immediately preceding the date of the application; or
  - (ii) Performance, within the 5 years immediately preceding the date of the application, of functions relating to the duties appropriate to the grade of certificate held by the applicant which the Secretary considers to be at least equivalent to the sea service specified in subparagraph (i) of this paragraph; or
  - (iii) Successful completion of an approved course; or
  - (iv) Performance of not less than 3 months' sea service as a deck officer in a supernumerary capacity immediately prior to taking up service in the rank appropriate to the applicant's certificate:
- (d) In the case of an applicant seeking to serve as an engineer officer, proof of—
- (i) Not less than 12 months' sea service as an engineer officer, performed within the 5 years immediately preceding the date of the application; or
  - (ii) Performance, within the 5 years immediately preceding the date of the application, of functions relating to the duties appropriate to the grade of certificate held by the applicant which the Secretary considers to be at least equivalent to the sea service specified in subparagraph (i) of this paragraph; or
  - (iii) Successful completion of an approved course; or
  - (iv) Performance of not less than 3 months' sea service as an engineer officer in a supernumerary capacity, or in a rank lower than the highest rank appropriate to the applicant's certificate, immediately prior to taking up service in the rank appropriate to the applicant's certificate.

**8. Issue and renewal of sea-going licences**—(1) The Secretary shall, without need for application, when issuing any certificate of competency which entitles its holder to act as master or as officer in charge of a watch on a ship to which these regulations apply, concurrently issue to the holder of that certificate a sea-going licence.

(2) In any other case the Secretary shall, on being satisfied that an applicant for the issue or renewal of a sea-going licence has complied with the appropriate requirements of regulation 7 of these regulations, issue to that applicant a sea-going licence or renew that applicant's sea-going licence, as the case may require.

(3) A sea-going licence issued under this regulation shall be in the prescribed form.

**9. Period of validity of sea-going licence**—Every sea-going licence and every renewal of a sea-going licence shall be valid for a period of 5 years from the date of issue or renewal of the licence, and shall then expire.

#### *Watchkeeping Duties*

**10. Duty of owner**—The owner of any ship to which these regulations apply shall ensure that the ship carries sufficient qualified officers and

ratings to enable the master and chief engineer to perform their duties in accordance with regulations 11 and 13 of these regulations.

**11. Duty of master**—The master of any ship to which these regulations apply shall—

- (a) Ensure that the watchkeeping arrangements for the ship are at all times adequate for maintaining safe navigational, engineering, and radio watches; and
- (b) When deciding the composition of the watch on the bridge, take account of the basic principles set out in Part I of the Fourth Schedule to these regulations; and
- (c) Give such directions as may be necessary to ensure that each deck officer is aware of that officer's responsibilities.

**12. Duty of officer in charge of navigational watch**—An officer in charge of a navigational watch on any ship to which these regulations apply shall—

- (a) Carry out his or her duties in accordance with the directions of the master of the ship; and
- (b) In the performance of those duties—
  - (i) Have regard to the basic principles and operational guidelines set out in Part II of the Fourth Schedule to these regulations; and
  - (ii) Where the ship is safely moored or safe at anchor in normal circumstances in port, have regard to the basic principles and operational guidelines set out in Part III of the Fourth Schedule to these regulations.

**13. Duty of chief engineer**—The chief engineer of any ship to which these regulations apply shall—

- (a) In consultation with the master of the ship, ensure that the engineering watchkeeping arrangements for the ship are at all times adequate for maintaining a safe watch; and
- (b) When deciding the composition of the watch, take into account the basic principles set out in Part I of the Fifth Schedule to these regulations.

**14. Duty of officer in charge of engineering watch**—An officer in charge of an engineering watch on a ship to which these regulations apply shall—

- (a) Carry out his or her duties in accordance with the directions of the chief engineer of the ship; and
- (b) In the performance of those duties—
  - (i) Have regard to the basic principles and operational guidelines set out in Part II of the Fifth Schedule to these regulations; and
  - (ii) Where the ship is safely moored or safe at anchor in normal circumstances in port, have regard to the basic principles and operational guidelines set out in Part III of the Fifth Schedule to these regulations.

**15. Watchkeeping arrangements in port**—The master of any ship to which these regulations apply which is safely moored or safe at anchor in normal circumstances in port shall—

- (a) Arrange for an appropriate and effective watch to be maintained for the purposes of safety; and
- (b) In organising the watches, take account of the basic principles and operational guidelines for deck officers in charge of a watch in port set out in Part III of the Fourth Schedule to these regulations, and the basic principles and operational guidelines for engineer officers in charge of an engineering watch in port set out in Part III of the Fifth Schedule to these regulations; and
- (c) In the case of a ship carrying hazardous cargo in bulk, ensure that a safe deck watch and safe engineering watch are maintained by the ready availability on board of a duly qualified officer or officers, and ratings where appropriate; and
- (d) In the case of a ship carrying hazardous cargo other than in bulk, in organising the watchkeeping arrangements take account of the nature, quantity, packaging, and stowage of the hazardous cargo and of any special conditions on board and ashore.

## PART II

### WATCH RATINGS

#### *Qualifications for Watch Ratings*

**16. Qualifications for deck watch ratings**—(1) Any rating who is required by the master to form part of a navigational watch on a ship of not less than 200 gross tonnage to which these regulations apply shall hold a deck watch rating certificate.

(2) The holder of a certificate as A.B. shall be deemed to be the holder of a deck watch rating certificate.

**17. Qualifications for engineroom watch ratings**—(1) Any engineroom rating who is required by the chief engineer to form part of an engineroom watch of a ship of not less than 750 kW power to which these regulations apply shall hold an engineroom watch rating certificate.

(2) An engineroom rating who is required by the chief engineer to keep a boiler watch shall, in addition to holding an engineroom watch rating certificate, satisfy the chief engineer that the rating has adequate knowledge of the safe operation of boilers and the ability to maintain correct water levels and steam pressures.

#### *Watch Rating Certificates*

**18. Applications for and issue of watch rating certificates**—(1) An application for a watch rating certificate shall—

- (a) Be made to a Superintendent on the prescribed form; and
- (b) Be accompanied by—
  - (i) The prescribed fee (if any); and
  - (ii) Where appropriate, a current certificate of medical fitness; and
  - (iii) Proof of sea service in accordance with regulation 25 of these regulations; and

(iv) Where appropriate, proof in accordance with regulation 26 of these regulations of any qualification relating to training, experience, or knowledge.

(2) A Superintendent shall, on payment of the prescribed fee (if any) and on being satisfied that the applicant for a watch rating certificate has complied with the requirements of regulation 19 or regulation 20 of these regulations, issue to the applicant a deck watch rating certificate or an engineroom watch rating certificate, as the case may require.

**19. Deck watch rating certificate**—(1) Subject to subclause (2) of this regulation, an applicant for a deck watch rating certificate shall—

- (a) Be not less than 16 years of age; and
- (b) Hold a current certificate of medical fitness; and
- (c) Have completed not less than 6 months' sea service performing duties associated with navigational watchkeeping under the supervision of a master, officer in charge of a navigational watch, or certificated deck watch rating; and
- (d) Produce proof of all of the following:
  - (i) Training or experience in basic principles of firefighting, first aid, personal survival techniques, health hazards, and personal safety;
  - (ii) The ability to understand orders and be understood in matters relevant to the applicant's duties;
  - (iii) The ability to steer and comply with helm orders, together with sufficient knowledge of magnetic and gyro compasses for the purpose of those duties;
  - (iv) The ability to keep a proper lookout by sight and hearing and report the approximate bearing of a sound signal, light, or other object in degrees or points;
  - (v) Familiarity with the changeover from automatic pilot to hand steering and vice versa;
  - (vi) Knowledge of the use of appropriate internal communication and alarm systems;
  - (vii) Knowledge of pyrotechnic distress signals;
  - (viii) Knowledge of emergency duties;
  - (ix) Knowledge of appropriate shipboard terms and definitions.

(2) An applicant shall be entitled to a deck watch rating certificate who—

- (a) Applies for such a certificate on or before the 1st day of November 1988; and
- (b) Has completed, within the period of 5 years immediately preceding the 1st day of November 1986, not less than 12 months' sea service in a deck rating capacity associated with navigational watchkeeping duties.

**20. Engineroom watch rating certificate**—(1) Subject to subclause (2) of this regulation, an applicant for an engineroom watch rating certificate shall—

- (a) Be not less than 16 years of age; and
- (b) Hold a current certificate of medical fitness; and
- (c) Either—



- (i) Have completed an approved engineroom rating training scheme; or
  - (ii) Hold a certificate of competency as engineer of local ship, or any certificate specified in Part II of the Third Schedule to these regulations as an alternative to such a certificate; or
  - (iii) Produce proof of not less than 6 months' sea service performing duties associated with engineroom watchkeeping under the supervision of an engineer officer or a certificated engineroom watch rating; and
- (d) Produce proof of all of the following:
- (i) Training or experience in basic principles of firefighting, first aid, personal survival techniques, health hazards, and personal safety;
  - (ii) The ability to understand orders and be understood in matters relevant to the applicant's duties;
  - (iii) An adequate knowledge of engineroom watchkeeping procedures and the ability to carry out a watch routine appropriate to the applicant's duties;
  - (iv) An adequate knowledge of safe working practices as related to engineroom operations;
  - (v) An adequate knowledge of terms used in machinery spaces and names of machinery and equipment relative to the applicant's duties;
  - (vi) An adequate knowledge of basic environmental protection procedures.
- (2) An applicant shall be entitled to an engineroom watch rating certificate who—
- (a) Applies for such a certificate on or before the 1st day of November 1988; and
  - (b) Has completed, within the period of 5 years immediately preceding the 1st day of November 1986, not less than 12 months' sea service in an engineroom rating capacity associated with engineroom watchkeeping duties.

### PART III

#### ADDITIONAL REQUIREMENTS FOR SERVICE ON TANKERS

**21. Additional requirements for service on tankers—**(1) Where a ship to which these regulations apply is a tanker, the certificate or sea-going licence required to be held by—

- (a) The master, chief engineer, first mate, and second engineer; and
- (b) Any other person who has immediate supervisory responsibility for the loading, discharging, and care in transit, or handling, of cargo,—

shall bear a tanker endorsement (class 1) appropriate to the type of tanker in which the duties are to be served.

(2) Any person who is required to perform duties specifically related to cargo operations and cargo equipment on a tanker to which these regulations apply shall, unless that person's certificate or sea-going licence already bears an appropriate tanker endorsement (class 1), hold—

- (a) A certificate or sea-going licence endorsed with a tanker endorsement (class 2); or

(b) Where that person is not required by these regulations to hold a certificate or sea-going licence, a tanker certificate (class 2),— appropriate to the type of tanker in which the duties are to be served.

**22. Applications for tanker endorsements or certificates**—An application for a tanker endorsement or tanker certificate shall—

- (a) Be made in the prescribed form; and
- (b) Specify the certificate or class of endorsement applied for, and the type of cargo for which the endorsement or certificate is required; and
- (c) Be addressed to—
  - (i) The Secretary, in the case of an applicant who is a master or officer; and
  - (ii) A Superintendent, in the case of an applicant who is a rating; and
- (d) Be accompanied by—
  - (i) The prescribed fee (if any); and
  - (ii) Proof of sea service in accordance with regulation 26 of these regulations; and
  - (iii) Copies of certificates or other satisfactory evidence of any qualification required by regulation 23 or regulation 24 of these regulations, as the case may require.

**23. Tanker endorsement (class 1)**—(1) Subject to subclause (2) of this regulation, a tanker endorsement (class 1) shall be granted to an applicant who—

- (a) Has completed—
    - (i) An approved firefighting course; and
    - (ii) An approved tanker safety course ashore relating to the carriage of the relevant cargo; and
  - (b) Has completed—
    - (i) Not less than 6 months' sea service in tankers of the type for which the endorsement is sought; or
    - (ii) Not less than 28 days' intensive shipboard training in duties relating to the handling of the relevant cargo; or
    - (iii) A combination of service and training approved as equivalent to the service and training specified in subparagraphs (i) and (ii) of this paragraph.
- (2) An applicant for a tanker endorsement (class 1) shall be exempt from the requirements of paragraphs (a) and (b) of subclause (1) of this regulation who—
- (a) Applies for the endorsement on or before the 1st day of November 1988; and
  - (b) Has, within the period of 5 years immediately preceding the 1st day of November 1986, served for not less than 12 months as master, chief engineer, first mate, or second engineer, or in any other position with immediate supervisory responsibility for the loading, discharging, and care in transit, or handling, of cargo, in a tanker carrying the type of cargo for which the endorsement is sought.

**24. Tanker endorsement or certificate (class 2)**—A tanker endorsement (class 2) or, in the case of an applicant who does not hold a certificate or sea-going licence, a tanker certificate (class 2), shall be granted to an applicant—

(a) Who has completed—

(i) An approved firefighting course; and

(ii) An approved tanker familiarisation course relating to the carriage of the relevant cargo; or

(b) Who—

(i) Applies for the endorsement or certificate on or before the 1st day of November 1988; and

(ii) Has, within the period of 5 years immediately preceding the 1st day of November 1986, completed not less than 12 months' sea service on tankers in a capacity relevant to the certificate or duties of the applicant or involving the performance of duties specifically related to cargo operations and cargo equipment.

#### PART IV

##### EVIDENCE OF SEA SERVICE AND OTHER QUALIFICATIONS

**25. Calculation of sea service**—(1) Sea service shall be reckoned from the date of engagement to the date of discharge from a ship.

(2) Certificates of discharge from ships that have more than one crew or have additional crew members signed on for relief purposes shall be accompanied by proof of the actual period spent on board, and sea service shall be assessed on that proof.

**26. Proof of sea service**—(1) Subject to subclause (2) of this regulation, any of the following shall be accepted as proof of sea service:

(a) Certificates of discharge:

(b) A statement from the master or owner of a ship on which the service has been performed:

(c) In the case of an applicant for a certificate as engineroom watch rating, a statement from the chief engineer of the ship on which the service has been performed.

(2) Where there is any doubt of the authenticity or accuracy of any certificate of discharge or statement from any master, owner, or chief engineer, the Secretary may require such further verification or evidence of sea service as may be reasonable in the circumstances.

**27. Proof of qualifications of ratings**—(1) Proof of any qualification relating to training, experience, or knowledge required by regulations 19, 20, 23, and 24 of these regulations shall be in the form of a statement,—

(a) In the case of a deck rating, from the master; or

(b) In the case of an engineroom rating, from the chief engineer,—  
of the ship on which the training, experience, or knowledge was gained.

(2) Notwithstanding subclause (1) of this regulation, the Secretary may, in any case where the obtaining of a statement from a master or chief engineer is not reasonably practicable, accept any satisfactory alternative form of proof of the training, experience, or knowledge claimed.

SCHEDULES

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FIRST SCHEDULE

MASTERS AND DECK OFFICERS MINIMUM MANNING SCALE

Class of ship	Officers and grades of certificates required for following positions:			
	Master	First Mate	Second Mate	Additional officers in charge of watch, if carried
Foreign-going ship	Master of foreign-going ship	First mate of foreign-going ship	Second mate of foreign-going ship	Watchkeeper of foreign-going ship
Home-trade ship of not less than 5000 gross tonnage	Master of foreign-going ship	First mate of foreign-going ship	Watchkeeper of foreign-going ship	Watchkeeper of foreign-going ship
Home-trade ship of less than 5000 but not less than 200 gross tonnage	Master of home-trade ship	Watchkeeper of foreign-going ship	Watchkeeper of foreign-going ship, if ship is continuously at sea for any period exceeding 24 hours	Watchkeeper of foreign-going ship
Home-trade ship of less than 200 gross tonnage	(a) Master of home-trade ship, if intended distance of voyage offshore is not less than 100 miles; or (b) NZ coastal master with home-trade endorsement, if such distance is less than 100 miles	NZ coastal master with home-trade endorsement	Nil	NZ coastal master with home-trade endorsement

Reg. 4 (1) (a)

## SECOND SCHEDULE

## ENGINEER OFFICERS MINIMUM MANNING SCALE

Class of Ship	Officers and grades of marine engineer certificates required for following positions <sup>o</sup> :		
	Chief engineer	Second engineer	Additional engineer officers†
1. <i>Foreign-going passenger ships:</i>			
(a) 3000 kW or more .. .. .	Class 1	Class 2	2 Watchkeepers
(b) Less than 3000 kW but not less than 750 kW	Class 1	Class 2	1 Watchkeeper
(c) Less than 750 kW .. .. .	Class 2 with chief engineer endorsement	Watchkeeper	Nil
2. <i>Foreign-going non-passenger ships:</i>			
(a) 750 kW or more .. .. .	Class 1	Class 2	Nil
(b) Less than 750 kW .. .. .	Class 2	Nil	Nil
3. <i>Home-trade passenger ships:</i>			
(a) 3000 kW or more .. .. .	Class 1	Class 2	2 Watchkeepers
(b) Less than 3000 kW but not less than 750 kW	Class 1	Class 2	1 Watchkeeper
(c) Less than 750 kW but not less than 250 kW ..	Class 2	Watchkeeper	Nil
(d) Less than 250 kW .. .. .	Watchkeeper	Nil	Nil
4. <i>Home-trade non-passenger ships:</i>			
(a) 3000 kW or more .. .. .	Class 1	Class 2	Nil
(b) Less than 3000 kW but not less than 750 kW	Class 2 with chief engineer endorsement	Watchkeeper	Nil

SECOND SCHEDULE—*continued*

Class of Ship	Officers and grades of marine engineer certificates required for following positions*:		
	Chief engineer	Second engineer	Additional engineer officers†
(c) Less than 750 kW but not less than 250 kW ..	Watchkeeper	Nil	Nil
(d) Less than 250 kW .. .. .	Engineer of local ship	Nil	Nil

## NOTES

\*The certificates must be of a type (steam or motor) appropriate to the ship's propulsion system.

†Any engineer officer taking charge of a watch, being an officer additional to those required by this Schedule, shall, except in the case of a ship of less than 750 kW, be required to hold a certificate as marine engineer watchkeeper.

## THIRD SCHEDULE

Reg. 5

## ALTERNATIVE CERTIFICATES

*Part I—Deck Officers*

Certificate Required by These Regulations	Alternative Certificate
First mate of foreign-going ship	Master of foreign-going ship
Second mate of foreign-going ship	(a) Master of foreign-going ship (b) First mate of foreign-going ship
Master of home-trade ship . .	Master of foreign-going ship
Watchkeeper of foreign-going ship	(a) Master of foreign-going ship (b) First mate of foreign-going ship (c) Second mate of foreign-going ship (d) Master of home-trade ship (e) Mate of home-trade ship
New Zealand coastal master with home-trade endorsement	(a) Master of foreign-going ship (b) First mate of foreign-going ship (c) Second mate of foreign-going ship (d) Master of home-trade ship (e) Mate of home-trade ship (f) Watchkeeper of foreign-going ship

*Part II—Engineer Officers*

Certificate Required by These Regulations	Alternative Certificate*
Marine engineer class 1 . .	First class steam or motor engineer
Marine engineer class 2 with chief engineer endorsement . .	(a) Marine engineer class 1 (b) First-class steam or motor engineer (c) First-class coastal motor engineer†
Marine engineer class 2 . .	(a) Marine engineer class 1 (b) First-class steam or motor engineer (c) Marine engineer class 2 with chief engineer endorsement (d) Second-class steam or motor engineer (e) First-class coastal motor engineer†
Marine engineer watchkeeper . .	(a) Marine engineer class 2 (b) Any certificate specified in this Schedule as an alternative to a certificate as marine engineer class 2

## THIRD SCHEDULE—continued

Certificate Required by These Regulations	Alternative Certificate*
Engineer of local ship	(c) Engineer of local motor ship with endorsement to show that holder has been in charge of the engines of a motor ship for a total period of 2 years or more† (a) Marine engineer watchkeeper (b) Any certificate specified in this Schedule as an alternative to a certificate as marine engineer watchkeeper (c) Marine engineer class 3 (d) First-class diesel trawler engineer (e) Second-class coastal motor engineer (f) Third-class steam engineer (g) Engineer of local motor ship (h) River engineer

## NOTES

\*Alternative certificate must be of the corresponding type (steam or motor).

†Not acceptable as an alternative in respect of the following positions:

- (a) Second engineer on a foreign-going ship of not less than 750 kW;
- (b) Second engineer on a home-trade passenger ship of not less than 750 kW;
- (c) Chief engineer on a foreign-going ship of less than 750 kW.

‡Acceptable as an alternative in respect only of position of chief engineer on a home-trade non-passenger ship of less than 750 kW.

Regs 11, 12, and 15

## FOURTH SCHEDULE

## NAVIGATIONAL WATCH

*Part 1—Basic Principles to be Observed in Keeping a Navigational Watch*

**1. Interpretation**—In this Schedule, the term “bridge” means the position from which the navigation of a ship is controlled.

**2. Watch arrangements**—(1) The composition of the watch shall at all times be adequate and appropriate to the prevailing circumstances and conditions and shall take into account the need for maintaining a proper lookout.

(2) The composition of the watch on the bridge may include appropriate deck ratings and 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 navigation duties:



FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

- (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) Any unusual demands on the navigational watch that may arise as a result of special operational circumstances.

**3. Fitness for duty**—The watch system shall be such that the efficiency of watchkeeping officers and watchkeeping ratings is not impaired by fatigue. Duties shall be so organised that the first watch at the commencement of a voyage and the subsequent relieving watches are sufficiently rested and otherwise fit for duty.

**4. Navigation**—(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) During the watch the course steered, position, and speed shall be checked at sufficiently frequent intervals, using any available navigational aids necessary, to ensure that the ship follows the planned course.

(3) The officer of the 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.

(4) The officer in charge of a navigational watch shall not be assigned or undertake any duties which would interfere with the safe navigation of the ship.

**5. Navigational equipment**—(1) The officer of the watch shall make the most effective use of all navigational equipment at that officer's disposal.

(2) When using radar, the officer of the 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 Order 1976\*.

(3) In cases of need the officer of the watch shall not hesitate to use the helm, engines, and sound signalling apparatus.

**6. Navigational duties and responsibilities**—(1) The officer in charge of the watch shall—

- (a) Keep the watch on the bridge and in no circumstances leave until properly relieved;
- (b) Continue to be responsible for the safe navigation of the ship, despite the presence of the master on the bridge, until the master informs that officer specifically that the master has assumed that responsibility and this is mutually understood;
- (c) Notify the master when in any doubt as to what action to take in the interests of safety;
- (d) Not hand over the watch to the relieving officer if the officer has reason to believe the latter is not capable of carrying out his or

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

her duties effectively, in which case the officer shall notify the master accordingly.

(2) On taking over the watch the relieving officer shall satisfy himself or herself as to the ship's estimated or true position and confirm its intended track, course, and speed and shall note any dangers to navigation expected to be encountered during the watch.

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

**7. Lookout**—(1) In addition to maintaining a proper lookout for the purpose of fully appraising the situation and the risk of collision, stranding and other dangers to navigation, the duties of the lookout shall include the detection of ships or aircraft in distress, shipwrecked persons, wrecks, and debris.

(2) In maintaining a lookout the following shall be observed:

(a) The lookout must be able to give full attention to the keeping of a proper lookout and no other duties shall be undertaken or assigned which could interfere with that task:

(b) The duties of the lookout and helmsman are separate and the helmsman shall not be considered to be the lookout 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 lookout. The officer in charge of the watch may be the sole lookout in daylight provided that on each such occasion—

(i) The situation has been carefully assessed and it has been established without doubt that it is safe to do so; and

(ii) Full account has been taken of all relevant factors including, but not limited to, the state of the weather, visibility, traffic density, the proximity of any danger to navigation, and the degree of attention necessary when navigating in or near traffic separation schemes; and

(iii) Assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

**8. Navigation with pilot embarked**—The presence of a pilot on board shall not relieve the master or officer in charge of the 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 officer of the watch shall co-operate closely with the pilot and maintain an accurate check of the ship's position and movement.

**9. Protection of marine environment**—The master and officer in charge of the watch 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.

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued**Part II—Operational Guidelines for Officers in Charge of a Navigational Watch*

**1. General**—(1) The officer of the watch is the master's representative, with primary responsibility at all times for the safe navigation of the ship.

(2) It is of special importance that at all times the officer of the watch ensures that an efficient lookout is maintained. In a ship with a separate chart room the officer of the watch may visit the chart room, when essential, for a short period for the necessary performance of navigational duties, but should previously satisfy himself or herself that it is safe to do so and ensure that an efficient lookout is maintained.

(3) The officer of the watch should not hesitate to use the engines in case of need. However, timely notice of intended variations of engine speed should be given where possible. The officer should also know the handling characteristics of the ship, including its stopping distance, and should appreciate that other ships may have different handling characteristics.

(4) The officer of the watch should not hesitate to use the sound signalling apparatus for preventing collisions at sea.

**2. Taking over navigational watch**—(1) The relieving officer of the watch should ensure that members of the watch are fully capable of performing their duties, particularly as regards their adjustment to night vision.

(2) The relieving officer should not take over the watch until that officer's vision is fully adjusted to the light conditions and the officer is personally satisfied 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) Navigational situation, including but not limited to the following:
  - (i) The operational condition of all navigational and safety equipment being used or likely to be used during the watch:
  - (ii) Errors of gyro and magnetic compasses:
  - (iii) The presence and movement of ships in sight or known to be in the vicinity:
  - (iv) Conditions and hazards likely to be encountered during the watch:
  - (v) Possible effects of heel, trim, water density, and squat on underkeel clearance.

(3) If at the time the officer of the watch is to be relieved a manoeuvre or other action to avoid any hazard is taking place, the relief of the officer should be deferred until such action has been completed.

**3. Periodic checks of navigational equipment**—(1) Operational tests of shipboard navigational equipment should be carried out at sea as frequently as practicable and as circumstances permit, in particular when hazardous conditions affecting navigation are expected; where appropriate these tests should be recorded.

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

- (2) The officer of the watch should make regular checks to ensure that—
- (a) The helmsman 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 synchronised 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.

**4. Automatic pilot**—The officer of the watch should bear in mind the necessity to comply at all times with legal safety requirements. The officer should take into account the need to station the helmsman 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. With a ship under automatic steering it is highly dangerous to allow a situation to develop to the point where the officer of the watch is without assistance and has to break the continuity of the lookout in order to take emergency action. The changeover from automatic to manual steering and vice versa should be made by, or under the supervision of, a responsible officer.

**5. Electronic navigational aids**—(1) The officer of the watch should be thoroughly familiar with the use of electronic navigational aids carried, including their capabilities and limitations.

(2) The echo-sounder is a valuable navigational aid and should be used whenever appropriate.

**6. Radar**—(1) The officer of the watch should use the radar when appropriate and whenever restricted visibility is encountered or expected, and at all times in congested waters having due regard to its limitations.

(2) Whenever radar is in use, the officer of the watch should select an appropriate range scale, observe the display carefully, and plot effectively.

(3) The officer of the watch should ensure that range scales employed are changed at sufficiently frequent intervals so that echoes are detected as early as possible.

(4) It should be borne in mind that small or poor echoes may escape detection.

(5) The officer of the watch should ensure that plotting or systematic analysis is commenced in ample time.

(6) In clear weather, whenever possible, the officer of the watch should carry out radar practice.

**7. Navigation in coastal waters**—(1) The largest scale chart on board, suitable for the area and corrected with the latest available information, should be used. Fixes should be taken at frequent intervals; whenever circumstances allow, fixing should be carried out by more than one method.

(2) The officer of the watch should positively identify all relevant navigation marks.

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

**8. Clear weather**—The officer of the watch should take frequent and accurate compass bearings of approaching ships as a means of early detection of risk of collision; 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 should also take early positive action in compliance with the Collision Regulations Order 1976\* and subsequently check that such action is having the desired effect.

**9. Restricted visibility**—(1) When restricted visibility is encountered or expected, the first responsibility of the officer of the watch is to comply with the Collision Regulations Order 1976\*, with particular regard to the sounding of fog signals, proceeding at a safe speed, and having the engines ready for immediate manoeuvres. In addition, the officer should—

(a) Inform the master:

(b) Post a proper lookout and helmsman and, in congested waters, revert to hand steering immediately:

(c) Exhibit navigation lights:

(d) Operate and use the radar.

(2) It is important that the officer of the watch should know the handling characteristics of the ship, including its stopping distance, and should appreciate that other ships may have different handling characteristics.

**10. Calling the master**—(1) The officer of the watch should notify the master immediately in the following circumstances:

(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 navigation mark, or to obtain soundings by the expected time:

(e) If, unexpectedly, land or a navigation mark is sighted or change in soundings occurs:

(f) On the breakdown of the engines, steering gear, or any essential navigational equipment:

(g) In heavy weather if in any doubt about the possibility of weather damage:

(h) If the ship meets any hazard to navigation, such as ice or derelicts:

(i) In any other emergency or situation in which the officer is in any doubt.

(2) Despite the requirement to notify the master immediately in the foregoing circumstances, the officer of the watch should in addition not hesitate to take immediate action for the safety of the ship, where circumstances so require.

**11. Navigation with pilot embarked**—If the officer of the watch is in any doubt as to the pilot's actions or intentions, the officer should seek

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

clarification from the pilot; if doubt still exists, the officer should notify the master immediately and take whatever action is necessary before the master arrives.

**12. Watchkeeping personnel**—The officer of the watch should give watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe watch including an appropriate lookout.

**13. Ship at anchor**—If the master considers it necessary, a continuous navigational watch should be maintained at anchor. In all circumstances, while at anchor, the officer of the watch should—

- (a) Determine and plot the ship's position on the appropriate chart as soon as practicable; when circumstances permit, check at sufficiently frequent intervals whether the ship is remaining securely at anchor by taking bearings of fixed navigation marks or readily identifiable shore objects:
- (b) Ensure that an efficient lookout is maintained:
- (c) Ensure that inspection rounds of the ship are made periodically:
- (d) Observe meteorological and tidal conditions and the state of the sea:
- (e) Notify the master and undertake all necessary measures if the ship drags anchor:
- (f) Ensure that the state of readiness of the main engines and other machinery is in accordance with the master's instructions:
- (g) If visibility deteriorates, notify the master:
- (h) Ensure that the ship exhibits the appropriate lights and shapes and that appropriate sound signals are made at all times, as required:
- (i) Take measures to protect the environment from pollution by the ship and comply with applicable pollution regulations.

*Part III—Principles and Operational Guidelines for Deck Officers in Charge of a Watch in Port*

**1. Watch arrangements**—(1) Arrangements for keeping a watch when the ship is in port should—

- (a) Ensure the safety of life, ship, cargo, and port:
- (b) Maintain order and the normal routine of the ship.

(2) The ship's master should decide the composition and duration of the watch depending on the conditions of mooring, type of ship, and character of duties.

(3) A qualified deck officer should be in charge of the watch, except in ships under 500 gross tonnage not carrying dangerous cargo, in which case the master may appoint whoever has appropriate qualifications to keep the watch in port.

(4) The necessary equipment should be so arranged as to provide for efficient watchkeeping.

**2. Taking over the watch**—(1) The officer of the watch should not hand over the watch to the relieving officer if he or she has any reason to believe

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

that the latter is obviously not capable of carrying out his or her duties effectively, in which case the officer should notify the master accordingly.

(2) The relieving officer should be informed of the following by the officer being relieved:

- (a) The depth of water at the berth, ship's draught, the level and time of high and low waters, fastening of the moorings, arrangement of anchors and the slip of the chain, and other features of mooring important for the safety of the ship; state of main engines and availability for emergency use:
- (b) All work to be performed on board the ship; the nature, amount, and disposition of cargo loaded or remaining, or any residue on board after unloading the ship:
- (c) The level of water in bilges and ballast tanks:
- (d) The signals or lights being 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 that are available between the ship and the dock staff or port authorities in the event of an emergency arising or assistance being required:
- (j) Other circumstances of importance to the safety of the ship and protection of the environment from pollution.
- (3) The relieving officer should be satisfied that—
  - (a) Fastenings of moorings or anchor chain are adequate:
  - (b) The appropriate signals or lights are properly hoisted and exhibited:
  - (c) Safety measures and fire protection regulations are being maintained:
  - (d) He or she is aware of the nature of any hazardous or dangerous cargo being loaded or discharged and the appropriate action in the event of any spillage or fire:
  - (e) No external conditions or circumstances imperil the ship and the ship does not imperil others.

(4) If, at the moment of handing over the watch, an important operation is being performed it should be concluded by the officer being relieved, except when ordered otherwise by the master.

**3. Keeping a watch**—The officer of the watch should—

- (a) Make rounds to inspect the ship at appropriate intervals:
- (b) Pay particular attention to—
  - (i) The condition and fastening of the gangway, anchor chain, or moorings, especially at the turn of the tide or in berths with a large rise and fall and, if necessary, take measures to ensure that they are in normal working condition:
  - (ii) The draught, underkeel clearance, and the state of the ship to avoid dangerous listing or trim during cargo handling or ballasting:

FOURTH SCHEDULE—*continued*NAVIGATIONAL WATCH—*continued*

- (iii) The state of the weather and sea:
- (iv) Observance of all regulations concerning safety precautions and fire protection:
  - (v) Water level in bilges and tanks:
  - (vi) All persons on board and their location, especially those in remote or enclosed spaces:
  - (vii) The exhibition of any signals or lights:
- (c) In bad weather, or on receiving a storm warning, take the necessary measures to protect the ship, personnel, 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 and, if necessary, request assistance from the shore authorities or neighbouring ships:
- (f) Be aware of the state of stability so that, in the event of fire, the shore firefighting 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:
- (i) Enter in the appropriate logbook all important events affecting the ship.

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Regs. 13, 14, and 15

## FIFTH SCHEDULE

## ENGINEERING WATCH

*Part I—Basic Principles to be Observed in Keeping an Engineering Watch*

**1. Interpretation**—In this Schedule, the term “watch” means a group of personnel comprising the watch, or a period of responsibility for an engineer officer during which the officer’s physical presence in the machinery space may or may not be required.

**2. General**—(1) The following criteria shall be taken into account when deciding the composition of the watch:

- (a) The type of ship:
- (b) The type and condition of the machinery:
- (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 watch:
- (e) The safety of life, ship, cargo, and port, and protection of the environment:
- (f) The maintaining of the normal operation of the ship.



FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

(2) Under the direction of the chief engineer, the engineer officer in charge of the watch shall be responsible for the inspection, operation, and testing, as required, of all machinery and equipment under that officer's responsibility. The engineer officer in charge of a watch is the chief engineer's representative, with primary responsibility, at all times, for the safe and efficient operation and up-keep of machinery affecting the safety of the ship.

(3) The chief engineer 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. Operation**—(1) The engineer officer in charge of the watch shall ensure that the established watchkeeping arrangements are maintained. Under that officer's general direction engineroom ratings, if forming part of the engineering watch, shall be required to assist in the safe and efficient operation of the propulsion machinery and the auxiliary equipment.

(2) At the commencement of the engineering watch, the current operational parameters and condition of all machinery shall be verified. 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.

(3) The engineer officer in charge of the watch shall ensure that the main propulsion plant and auxiliary system are kept under constant surveillance, inspections are made of the machinery and steering gear spaces at suitable intervals, and appropriate action is taken to remedy any malfunction discovered.

(4) When the machinery spaces are in the manned condition, the engineer officer in charge of the watch shall at all times be readily capable of operating the propulsion equipment in response to needs for changes in direction or speed. When the machinery spaces are in the periodic unmanned condition, the designated duty engineer officer in charge of the watch shall be immediately available and on call to attend the machinery spaces.

(5) All bridge orders shall be promptly executed. Subject to any exemption granted under the Act, changes in direction or speed of the main propulsion unit shall be recorded. The engineer officer in charge of the watch shall ensure that the main propulsion unit controls, when in the manual mode of operation, are continuously attended under standby or manoeuvring conditions.

(6) The engineer officer in charge of the watch shall not be assigned or undertake any duties which would interfere with that officer's supervisory duty in respect of the main propulsion system and its auxiliary equipment, and shall ensure that the main propulsion system and auxiliary equipment are kept under constant surveillance until that officer is properly relieved.

(7) Due attention shall be paid to the maintenance and support of all machinery, including mechanical, electrical, 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.

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

(8) The chief engineer shall ensure that the engineer in charge of the watch is informed of all preventive maintenance, damage control, or repair operations to be performed during the watch. The engineer officer in charge of the watch shall be responsible for the isolation, by-passing, and adjustment of all machinery under that officer's responsibility that is to be worked on, and shall record all work carried out.

(9) Before going off duty, the engineer officer in charge of the watch shall ensure that all events related to the main and auxiliary machinery are suitably recorded.

(10) To avoid any danger to the safety of the ship and its crew, the engineer officer in charge of the watch shall notify the bridge or fire control centre immediately in the event of fire, impending actions in machinery spaces that may cause reduction in ship's speed, imminent steering failure, stoppage of the ship's propulsion system, any alteration in the generation of electric power, or any 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 are possible to avoid a potential marine casualty.

(11) When the engineroom is put in a standby condition, the engineer officer in charge of the 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.

**4. Watch requirements**—(1) Every member of the watch shall be familiar with that member's assigned watchkeeping duties. In addition, every member shall have, with respect to that ship,—

- (a) Knowledge of the use of appropriate internal communication systems:
- (b) Knowledge of escape routes from machinery spaces:
- (c) Knowledge of engineroom alarm systems and the ability to distinguish between the various alarms with special reference to the fire-extinguishing gas alarm:
- (d) Knowledge of the position and use of the firefighting equipment in the machinery spaces.

(2) The composition of an underway 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. To achieve this, the following, *inter alia*, shall be taken into account:

- (a) The adequate supervision, at all times, of machinery affecting the safe operation of the ship:
- (b) The condition and reliability of any remotely operated propulsion and steering equipment and their controls, control location and the procedures involved in placing them in a manual mode of operation in the event of breakdown or emergency:
- (c) The location and operation of fixed fire detection, fire extinction or fire containment devices and apparatus:

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

- (d) The use and operational condition of auxiliary, standby, and emergency equipment affecting the safe navigation, mooring, or docking operations of the ship:
  - (e) Any steps and procedures necessary to maintain the condition of machinery installations in order to ensure their efficient operation during all modes of ship operation:
  - (f) Any other demands on the watch which may arise as a result of special operating circumstances.
- (3) At an unsheltered anchorage the chief engineer shall consult with the master whether or not to maintain an underway watch.

**5. Fitness for duty**—The watch system shall be such that the efficiency of the watch is not impaired by fatigue. Duties shall be so organised by the chief engineer that the first watch at the commencement of a voyage and the subsequent relieving watches are sufficiently rested and otherwise fit for duty.

**6. Protection of marine environment**—All engineer officers and engineroom 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.

*Part II—Operational Guidelines for Engineer Officers in Charge of an  
Engineering Watch*

**1. General**—(1) The engineer officer in charge of the watch is the chief engineer's representative, with primary responsibility, at all times, for the safe and efficient operation and upkeep of machinery affecting the safe operation of the ship. That officer should ensure that at all times bridge orders relating to changes in speed or direction of operation are immediately implemented.

(2) The engineer officer in charge of the watch should ensure that the established watchkeeping arrangements are maintained. Under that officer's general direction, engineroom ratings, if forming part of the watch, should assist in the safe and efficient operation of the propulsion machinery and auxiliary equipment.

(3) The engineer officer in charge of the watch should keep the main propulsion plant and auxiliary systems under constant supervision until properly relieved. The officer should also ensure that adequate tours 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.

(4) The engineer officer in charge of the watch should direct any other member of the watch to inform the officer of potentially hazardous conditions which may adversely affect the machinery and jeopardise the safety of life or the ship.

(5) The engineer officer in charge of the watch should ensure that the machinery space watch is supervised and arrange for substitute personnel in the event of the incapacity of any watch personnel. The watch should

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

not leave the machinery spaces unsupervised in a manner which would prevent the manual operation of the engineroom plant or throttles.

(6) The engineer officer in charge of the watch should take the action necessary to contain the effects of damage resulting from equipment breakdown, fire, flooding, rupture, collision, stranding, or other cause.

(7) The engineer officer in charge of the watch should ensure that all members of the watch are familiar with the number, location, and types of firefighting equipment and damage control gear, their use, and the various safety precautions to be observed.

(8) The engineer officer in charge of the watch should be aware of potential hazards in the machinery spaces which could cause injury, and be able to administer first aid.

(9) The engineer officer in charge of the watch should continue to be responsible for machinery space operations despite the presence of the chief engineer in the machinery spaces, until the chief engineer informs the officer specifically that the chief engineer has assumed that responsibility and this is mutually understood.

**2. Taking over the watch**—(1) The engineer officer in charge of the watch should not hand over the watch to the relieving engineer officer if he or she has reason to believe that the latter is obviously not capable of carrying out his or her duties effectively, in which case the officer should notify the chief engineer accordingly. The relieving engineer officer of the watch should be satisfied that the members of the watch are apparently fully capable of performing their duties effectively.

(2) The relieving engineer officer should not take over the watch until that officer has examined the engineroom log and checked that it is in accordance with his or her own observations.

(3) Prior to taking over the watch the relieving engineer officer should be aware of the following:

- (a) Standing orders and special instructions of the chief engineer relating to the operation of the ship's systems and machinery:
- (b) The nature of all work being performed on machinery and systems, 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, and sewage tanks, and special requirements for use or disposal of the contents thereof:
- (d) The condition and level of fuel in the reserve tanks, settling tank, day tank, and other fuel storage facilities:
- (e) Any special requirements relating to sanitary system disposals:
- (f) The condition and mode of operation of the various main and auxiliary systems:
- (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

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

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) Reports of engineroom ratings relating to their assigned duties:
- (l) The availability of firefighting appliances.

**3. Periodic checks of machinery**—It is the responsibility of the engineer officer in charge of the watch to periodically inspect the machinery in that officer's charge. Such inspection should verify that—

- (a) Main and auxiliary machinery, control systems, indicating panels, and communication systems are functioning satisfactorily:
- (b) The steering system, and all associated gear, is functioning satisfactorily:
- (c) The water level is properly maintained in the boiler and heat exchanger equipment:
- (d) The engine or boiler exhausts indicate good combustion characteristics and soot has been blown where applicable:
- (e) The condition of the bilges with respect to water level and contamination is satisfactory:
- (f) Piping, including control and machinery systems piping, is free from leaks, functioning properly, and being adequately maintained, with special attention to be given to pressurised oil piping.

**4. Engineroom log**—Before going off duty, the engineer officer in charge of the watch should ensure that all events related to the main and auxiliary machinery which have occurred during the watch are suitably recorded.

**5. Preventive and repair maintenance**—(1) The engineer officer in charge of the watch should co-operate with any engineer officer in charge of maintenance work during all preventive maintenance, damage control, or repairs. This would include but not necessarily be limited to the following:

- (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 engineroom log or other suitable document, the equipment worked on and the personnel involved, and the safety steps taken and by whom, for the benefit of relieving engineer officers and for record purposes:
- (d) Testing and putting into service, where necessary, the repaired machinery or equipment.

(2) The engineer officer in charge of the watch should ensure that any engineroom ratings who perform maintenance duties are available to assist in the manual operation of machinery in the event of automatic equipment failure.

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

**6. Bridge notification**—The engineer officer in charge of the watch should bear in mind that changes in speed, resulting from machinery malfunction or loss of steering, may imperil the safety of the ship and life at sea. The bridge should be immediately notified, in the event of fire, of impending actions in machinery spaces that may cause reduction in 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, should be accomplished before changes are made, in order to afford the bridge the maximum available time to take whatever actions are possible to avoid a potential marine casualty.

**7. Navigation in congested waters**—The engineer officer in charge of the watch should ensure that all machinery involved with the manoeuvring of the ship can immediately be placed in manual modes of operation when notified that the ship is in congested waters. The engineer officer should also ensure that an adequate reserve of power is available for steering and other manoeuvring requirements. Emergency steering and other auxiliary equipment should be ready for immediate operation.

**8. Navigation during restricted visibility**—The engineer officer in charge of the watch should ensure a permanent air or steam pressure for fog sound signals. The officer should be ready to respond to any bridge orders and should ensure, in addition, that auxiliary machinery used for manoeuvring is readily available.

**9. Calling the chief engineer**—(1) The engineer officer in charge of the watch should notify the chief engineer, without delay, in the following circumstances:

- (a) When engine damage or malfunctions occur which in the officer's opinion are such as to endanger the safe operation of the ship:
- (b) When malfunctions occur which in the officer's opinion may cause damage or breakdown of propulsion machinery, auxiliary machinery, or monitoring and governing systems:
- (c) In emergencies or in situations when the officer is in doubt as to what decision or measures to take.

(2) Despite the requirement to notify the chief engineer in the foregoing circumstances, the engineer officer in charge of the watch should in addition not hesitate to take immediate action for the safety of the ship, its machinery, and crew, where circumstances require.

**10. Watchkeeping personnel**—The engineer officer in charge of the watch should give the watchkeeping personnel all appropriate instructions and information which will ensure the keeping of a safe watch. Routine machinery upkeep, performed as incidental tasks as a part of keeping a safe watch, should be set up as a regimen of the watch routine. Detailed repair maintenance involving repairs to electrical, mechanical, hydraulic, pneumatic, or applicable electronic equipment throughout the ship should be performed with the cognisance of the engineer officer in charge of the watch and chief engineer. These repairs should be recorded.

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

**11. Engineering watch at an unsheltered anchorage**—When a ship is at anchor in an open roadstead or any other virtually “at sea” condition, the engineer officer in charge of the watch should ensure that—

- (a) An efficient 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:
- (e) All damage control and firefighting systems are in readiness.

*Part III—Principles and Operational Guidelines for Engineer Officers in Charge of an Engineering Watch in Port*

**1. Watch arrangements**—(1) The following criteria shall be taken into account when deciding the composition of the watch:

- (a) The type of ship:
- (b) The type and condition of the machinery:
- (c) Any special modes of operation dictated by weather, ice, contaminated or shallow water, emergency conditions, damage containment, or pollution abatement:
- (d) The qualifications and experience of any ratings forming part of the watch:
- (e) The safety of life, ship, cargo, port, and the environment:
- (f) The maintaining of order in the normal routine of the ship.

(2) Under the direction of the chief engineer, the engineer officer in charge of the watch is responsible for inspection and testing, as required, of all machines and equipment under that officer’s responsibility.

(3) The composition of the watch should, at all times, be adequate to ensure the safe operation of all machinery related to cargo operation, the safety of the ship, the port, and its environment and, subject to these considerations,—

- (a) On all ships of 3000 kW propulsion power and over there should always be an engineer officer in charge of the watch:
- (b) On all ships of 1500–3000 kW propulsion power there may be, at the master’s discretion and in consultation with the chief engineer, no engineer officer in charge of the watch, provided there is a deck officer in charge of the ship, and provided that the ship does not carry hazardous cargo in bulk:
- (c) On ships of less than 1500 kW propulsion power there need not be an engineer officer in charge of the watch, provided that the ship does not carry hazardous cargo in bulk.

(4) The engineer officer, while in charge of a watch, should not be assigned or undertake any task or duty which would interfere with that officer’s supervisory duty in respect of the ship’s machinery system.

**2. Taking over the watch**—(1) The engineer officer in charge of the watch should not hand over the watch to the relieving engineer officer if he or she has any reason to believe that the latter is obviously not capable of

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

carrying out his or her duties effectively, in which case the officer should notify the chief engineer accordingly. The relieving engineer officer of the watch should be satisfied that the members of the watch are apparently fully capable of performing their duties effectively.

(2) Prior to taking over the watch, the relieving engineer officer should be informed by the engineer officer in charge of the watch as to—

- (a) Standing orders of the day, and any special orders relating to the ship operations, maintenance functions, or 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, and reserve tanks, and special requirements for 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) Any authorised repair personnel on board engaged in engineering activities, their work location and repair functions, and other authorised persons and required crew:
  - (g) Any port regulations pertaining to ship effluents, firefighting requirements, and ship readiness, particularly during potential conditions of bad weather:
  - (h) Any lines of communication available between the ship and shoreside 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, and the protection of the environment from pollution:
  - (j) Procedures for notifying the appropriate authority of environmental pollution resulting from engineering activities.
- (3) The relieving engineer officer before assuming charge of the watch should—
- (a) Be satisfied that he or she is fully aware of all standing and special orders relating to operations, maintenance functions, and repairs to the ship's machinery and control equipment:
  - (b) Be familiar with existing and potential sources of power, heat, and lighting and their distribution:
  - (c) Know the availability and condition of ship's fuel, lubricants, and all water supplies:
  - (d) Be familiar with the ship's ballast system, and its controls:
  - (e) Verify the presence of appropriate engineroom ratings and be satisfied that they are physically capable of performing duties effectively:
  - (f) Be aware of cargo activities, status of maintenance and repair functions, and all other operations affecting the watch:



FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

- (g) Be aware of auxiliary machinery in use for passenger or crew accommodation services, cargo operations, operational water supplies, and exhaust systems:
- (h) Be aware of the port requirements for pollution prevention and proper operation of on-board equipment to meet those requirements:
- (i) Be aware of all regulations concerning safety precautions and fire protection and of the means of communication with the shore fire service:
- (j) Be familiar with all shipboard detection and alarm systems and the appropriate response to the activation of those systems:
- (k) Familiarise himself or herself as to the availability and operation of all fire detection alarm and extinguishing systems, methods of fire containment, types of portable extinguishing equipment on board, and their most effective use:
- (l) Be familiar with the location and use of the equipment provided for the safety of life in the presence of a hazardous or toxic environment:
- (m) Ascertain that materials for administration of emergency first aid are readily available, particularly those required for the treatment of burns and scalds:
- (n) Be aware of all means of communication on board and communications between ship and appropriate shore authorities:
- (o) Be ready to prepare the ship and its machinery, as far as is possible, for stand-by or emergency conditions as required.

**3. Keeping watch**—(1) The engineer officer in charge of the watch should pay particular attention to—

- (a) Observance of all orders, special operating procedures, and regulations concerning hazardous conditions and their prevention in all areas in that officer's charge:
  - (b) Instrumentation and control systems, and monitoring of all power supplies, components, and systems in operation:
  - (c) Techniques, methods, and procedures necessary to prevent violation of the pollution regulations of the local authorities:
  - (d) The state of the bilges.
- (2) The engineer officer in charge of the watch should—
- (a) In emergencies, sound the alarm when in that officer's opinion the situation so demands, and take all possible measures to prevent damage to the ship, its cargo, and persons on board:
  - (b) Be aware of the cargo 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 tours of inspection to determine possible equipment malfunction or failure and take immediate remedial action to ensure the safety of the ship, cargo operations, the port and its environment:

FIFTH SCHEDULE—*continued*ENGINEERING WATCH—*continued*

- (d) Ensure that the necessary precautions are taken, within that officer's responsibility, to prevent accidents or damage to the various electrical, hydraulic, pneumatic, and mechanical systems of the ship:
- (e) Ensure that all important events affecting the operation, adjustment, or repair of the ship's machinery are satisfactorily recorded.

P. G. MILLEN,  
Clerk of the Executive Council.

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EXPLANATORY NOTE

*This note is not part of the regulations, but is intended to indicate their general effect.*

These regulations relate to standards of training, certification, and watchkeeping for masters, officers, and watch ratings serving on sea-going ships and ships engaged in the home-trade, other than restricted-limit ships and fishing boats.

They deal with minimum manning requirements for officers, the issue and renewal of sea-going licences, matters to be taken into account by masters and officers in relation to their watchkeeping duties, the certification of ratings forming part of a watch, and the certification of persons supervising or performing duties relating to the handling of cargo on tankers.

The regulations bring New Zealand law into line with the relevant requirements of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978.

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