

# TRACTATENBLAD

VAN HET

KONINKRIJK DER NEDERLANDEN

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JAARGANG 1996 Nr. 249

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A. TITEL

*Internationaal Verdrag betreffende de normen voor zeevarenden inzake  
opleiding, diplomering en wachtdienst, 1978, met Bijlage;  
Londen, 7 juli 1978*

B. TEKST

De Engelse en de Franse tekst van Verdrag en Bijlage zijn geplaatst  
in *Trb.* 1981, 144.

C. VERTALING

Zie 1981, 144 en *Trb.* 1985, 107.

D. PARLEMENT

Zie *Trb.* 1985, 107, *Trb.* 1991, 13 en *Trb.* 1995, 268.

E. BEKRACHTIGING

Zie *Trb.* 1981, 144, *Trb.* 1985, 107 en *Trb.* 1992, 109.

F. TOETREDING

Zie *Trb.* 1981, 144, *Trb.* 1985, 107, *Trb.* 1992, 109 en *Trb.* 1995, 13,  
132 en 268.

Behalve de aldaar genoemde hebben nog de volgende Staten een akte  
van toetreding nedergelegd bij de Secretaris-Generaal van de Internatio-  
nale Maritieme Organisatie:

Estland  
Mauritanië

29 augustus 1995  
17 november 1995

Madagaskar	7 maart 1996
Eritrea	22 april 1996
Equatoriaal-Guinee	24 april 1996
Bahrein	13 juni 1996
Iran	1 augustus 1996

#### G. INWERKINGTREDING

Zie *Trb.* 1985, 107.

#### H. TOEPASSELIJKVERKLARING

Zie *Trb.* 1985, 107 en *Trb.* 1992, 109.

De Regering van het Koninkrijk van Groot-Brittannië en Noord-Ierland heeft het Verdrag voorts van toepassing verklaard op:  
 Gibraltar 27 september 1995  
 (m.i.v. die datum)

#### J. GEGEVENS

Zie *Trb.* 1981, 144, *Trb.* 1985, 107, *Trb.* 1992, 109 en *Trb.* 1995, 13, 132 en 268.

#### *Verwijzingen*

Voor het op 22 december 1992 te Genève tot stand gekomen Statuut en Verdrag van de Internationale Unie voor Telecommunicatie zie ook *Trb.* 1996, 165.

Voor de Franse en de Engelse tekst van de op 14 oktober 1994 te Kyoto tot stand gekomen Akten van wijziging van het Statuut en het Verdrag van de Internationale Unie voor Telecommunicatie van 1992 zie *Trb.* 1995, 201; zie ook *Trb.* 1996, 166.

Voor het op 6 december 1979 te Genève tot stand gekomen Radio-reglement zie ook, laatstelijk, *Trb.* 1995, 218.

Voor het op 1 november 1974 te Londen tot stand gekomen Internationaal Verdrag voor de beveiliging van mensenlevens op zee zie ook, laatstelijk, *Trb.* 1996, 128.

Voor het op 20 oktober 1972 te Londen tot stand gekomen Verdrag inzake Internationale Voorschriften ter voorkoming van aanvaringen op zee zie ook *Trb.* 1994, 137.

#### *Wijziging van de Bijlage bij het Verdrag*

Tijdens haar van 26 juni tot 7 juli 1995 te Londen gehouden zitting heeft de Conferentie van Partijen bij het Internationaal Verdrag betreffende de normen van zeevarenden inzake opleiding, diplomering en wachtdienst, 1978, resolutie 1 inzake de aanvaarding van wijzigingen

van de Bijlage bij het Verdrag en resolutie 2 inzake de aanvaarding van een Code inzake opleiding, diplomering en wacht dienst voor zeevarenden (STCW-code) aangenomen.

De Engelse en de Franse tekst van resolutie 1 luiden als volgt:

**Attachment 1 to the Final Act of the Conference****Resolution 1****Adoption of Amendments to the Annex to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978**

The Conference,

Recalling article XII(1)(b) of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (hereinafter referred to as "the Convention"), concerning the procedure for amending the Convention by a Conference of Parties,

Having considered amendments to the annex to the Convention proposed and circulated to the Members of the Organization and to all Parties to the Convention, to replace the existing text of the annex to the Convention.

1. Adopts, in accordance with article XII(1)(b)(ii) of the Convention, amendments to the annex to the Convention, the text of which is set out in the Annex to the present resolution;

2. Determines, in accordance with article XII(1)(a)(vii) 2 of the Convention, that the amendments annexed hereto shall be deemed to have been accepted on 1 August 1996, unless, prior to that date, more than one third of Parties to the Convention or Parties, the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant shipping of ships of 100 gross register tons or more, have notified the Secretary-General that they object to the amendments;

3. Invites Parties to note that, in accordance with article XII(1)(a)(ix) of the Convention, the amendments annexed hereto shall enter into force on 1 February 1997 upon being deemed to have been accepted in accordance with paragraph 1 above.

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## Annex

**Amendments to the Annex to the International Convention on  
Standards of Training, Certification and Watchkeeping for  
Seafarers, 1978**

## CHAPTER 1

## GENERAL PROVISIONS

## Regulation I/I

*Definitions and clarifications*

1. For the purpose of the Convention, unless expressly provided otherwise.
  - .1 “Regulations” means regulations contained in the annex to the Convention;
  - .2 “Approved” means approved by the Party in accordance with these regulations;
  - .3 “Master” means the person having command of a ship;
  - .4 “Officer” means a member of the crew, other than the master, designated as such by national law or regulations or, in the absence of such designation, by collective agreement or custom;
  - .5 “Deck officer” means an officer qualified in accordance with the provisions of chapter II of the Convention;
  - .6 “Chief mate” means the officer next in rank to the master and upon whom the command of the ship will fall in the event of the incapacity of the master;
  - .7 “Engineer officer” means an officer qualified in accordance with the provisions of chapter III of the Convention;
  - .8 “Chief engineer officer” means the senior engineer officer responsible for the mechanical propulsion and the operation and maintenance of the mechanical and electrical installations of the ship;
  - .9 “Second engineer officer” means the engineer officer next in rank to the chief engineer officer and upon whom the responsibility for the mechanical propulsion and the operation and maintenance of the mechanical and electrical installations of the ship will fall in the event of the incapacity of the chief engineer officer;
  - .10 “Assistant engineer officer” means a person under training to become an engineer officer and designated as such by national law of regulations;
  - .11 “Radio operator” means a person holding an appropriate certificate issued or recognized by the Administration under the provisions of the Radio Regulations;
  - .12 “Rating” means a member of the ship’s crew other than the master or an officer;

- .13 "Near-coastal voyages" means voyages in the vicinity of a Party as defined by that Party;
- .14 "Propulsion power" means the total maximum continuous rated output power in kilowatts of all the ship's main propulsion machinery which appears on the ship's certificate of registry or other official document;
- .15 "Radio duties" include, as appropriate, watchkeeping and technical maintenance and repairs conducted in accordance with the Radio Regulations, the International Convention for the Safety of Life at Sea and, at the discretion of each Administration, the relevant recommendations of the Organization;
- .16 "Oil tanker" means a ship constructed and used for the carriage of petroleum and petroleum products in bulk;
- .17 "Chemical tanker" means a ship constructed or adapted and used for the carriage in bulk of any liquid product listed in chapter 17 of the International Bulk Chemical Code;
- .18 "Liquefied gas tanker" means a ship constructed or adapted and used for the carriage in bulk of any liquefied gas or other products listed in chapter 19 of the International Gas Carrier Code;
- .19 "Ro-ro passenger ship" means a passenger ship with ro-ro cargo spaces or special category spaces as defined in the International Convention for the Safety of Life at Sea, 1974, as amended;
- .20 "Month" means a calendar month or 30 days made up of periods of less than one month;
- .21 "STCW Code" means the Seafarers' Training Certification and Watchkeeping (STCW) Code as adopted by the 1995 Conference resolution 2, as is may be amended;
- .22 "Function" means a group of tasks, duties and responsibilities, as specified in the STCW code, necessary for ship operation, safety of life at sea or protection of the marine environment;
- .23 "Company" means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the shipowner and who, on assuming such responsibility, has agreed to take over all the duties and responsibilities imposed on the company by these regulations;
- .24 "Appropriate certificate" means a certificate issued and endorsed in accordance with the provisions of this annex and entitling the lawful holder thereof to serve in the capacity and perform the functions involved at the level of responsibility specified therein on a ship of the type, tonnage, power and means of propulsion concerned while engaged on the particular voyage concerned;
- .25 "Seagoing service" means service on board a ship relevant to the issue of a certificate or other qualification.

2. These regulations are supplemented by the mandatory provisions contained in part A of the STCW Code and:

- .1 any reference to a requirement in a regulation also constitutes a reference to the corresponding section of part A of the STCW Code;
  - .2 in applying these regulations, the related guidance and explanatory material contained in part B of the STCW Code should be taken into account to the greatest degree possible in order to achieve a more uniform implementation of the Convention provisions on a global basis;
  - .3 amendments to part A of the STCW Code shall be adopted, brought into force and take effect in accordance with the provisions of article XII of the Convention concerning the amendment procedure applicable to the annex; and
  - .4 part B of the STCW Code shall be amended by the Maritime Safety Committee in accordance with its rules of procedure.
3. The references made in article VI of the Convention to “the Administration” and “the issuing Administration” shall not be construed as preventing any Party from issuing and endorsing certificates under the provisions of these regulations.

#### Regulation I/2

##### *Certificates and endorsements*

1. Certificates shall be in the official language of the issuing country. If the language used is not English, the text shall include a translation into that language.
2. In respect of radio operators, Parties may:
  - .1 include the additional knowledge required by the relevant regulations in the examination for the issue of a certificate complying with the Radio Regulations; or
  - .2 issue a separate certificate indicating that the holder has the additional knowledge required by the relevant regulations.
3. The endorsement required by article VI of the Convention to attest the issue of a certificate shall only be issued if all the requirements of the Convention have been complied with.
4. At the discretion of a Party endorsements may be incorporated in the format of the certificates being issued as provided for in section A-1/2 of the STCW Code. If so incorporated the form used shall be that set forth in section A-1/2, paragraph 1. If issued otherwise, the form of endorsements used shall be that set forth in paragraph 2 of that section.
5. An Administration which recognizes a certificate under regulation 1/10 shall endorse such certificate to attest its recognition. The endorse-

ment shall only be issued if all requirements of the Convention have been complied with. The form of the endorsement used shall be that set forth in paragraph 3 of section A-1/2 of the STCW Code.

6. The endorsements referred to in paragraphs 3, 4 and 5:
  - .1 may be issued as separate documents;
  - .2 shall each be assigned a unique number, except that endorsements attesting the issue of a certificate may be assigned the same number as the certificate concerned, provided that number is unique; and
  - .3 shall expire as soon as the certificate endorsed expires or is withdrawn, suspended or cancelled by the Party which issued it and, in any case, not more than five years after their date of issue.

7. The capacity in which the holder of a certificate is authorized to serve shall be identified in the form of endorsement in terms identical to those used in the applicable safe manning requirements of the Administration.

8. Administrations may use a format different from the format given in section A-1/2 of the STCW Code, provided that, as a minimum, the required information is provided in Roman characters and Arabic figures, taking into account the variations permitted under section A-1/2.

9. Subject to the provisions of regulation I/10, paragraph 5, any certificate required by the Convention must be kept available in its original form on board the ship on which the holder is serving.

#### Regulations I/3

##### *Principles governing near-coastal voyages*

1. Any Party defining near-coastal voyages for the purpose of the Convention shall not impose training, experience or certification requirements on the seafarers serving on board the ships entitled to fly the flag of another Party and engaged on such voyages in a manner resulting in more stringent requirements for such seafarers than for seafarers serving on board ships entitled to fly its own flag. In no case shall any such Party impose requirements in respect of seafarers serving on board ships entitled to fly the flag of another Party in excess of those of the Convention in respect of ships not engaged on near-coastal voyages.

2. With respect to ships entitled to fly the flag of a Party regularly engaged on near-coastal voyages off the coast of another Party, the Party whose flag the ship is entitled to fly shall prescribe training, experience and certification requirements for seafarers serving on such ships at least equal to those of the Party off whose coast the ship is engaged, provided



that they do not exceed the requirements of the Convention in respect of ships not engaged on near-coastal voyages. Seafarers serving on a ship which extends its voyage beyond what is defined as a near-coastal voyage by a Party and enters waters not covered by that definition shall fulfil the appropriate competency requirements of the Convention.

3. A Party may afford a ship which is entitled to fly its flag the benefits of the near-coastal voyage provisions of the Convention when it is regularly engaged off the coast of a non-Party on near-coastal voyages as defined by the Party.

4. Parties defining near-coastal voyages, in accordance with the requirements of this regulation, shall communicate to the Secretary-General, in conformity with the requirements of regulation 1/7, the details of the provisions adopted.

5. Nothing in this regulation shall, in any way, limit the jurisdiction of any State, whether or not a Party to the Convention.

#### Regulation I/4

##### *Control procedures*

1. Control exercised by a duly authorized control officer under article X shall be limited to the following:

- .1 verification in accordance with article XI(1) that all seafarers serving on board who are required to be certificated in accordance with the Convention hold an appropriate certificate or a valid dispensation, or provide documentary proof that an application for an endorsement has been submitted to the Administration in accordance with regulation 1/10, paragraph 5;
- .2 verification that the numbers and certificates of the seafarers serving on board are in conformity with the applicable safe meaning requirements of the Administration; and
- .3 assessment, in accordance with section A-I/4 of the STCW Code, of the ability of the seafarers of the ship to maintain watchkeeping standards as required by the Convention if there are clear grounds for believing that such standards are not being maintained because of any of the following have occurred:
  - .3.1 the ship has been involved in a collision, grounding or standing, or
  - .3.2 there has been a discharge of substances from the ship when underway, at anchor or at berth which is illegal under any international convention, or
  - .3.3 the ship has been manoeuvred in an erratic or unsafe manner whereby routing measures adopted by the Organization or safe navigation practices and procedures have not been followed, or

- .3.4 the ship is otherwise being operated in such a manner as to pose a danger to persons, property or the environment.
2. Deficiencies which may be deemed to pose a danger to persons, property or the environment include the following:
  - .1 failure of seafarers to hold a certificate, to have an appropriate certificate, to have a valid dispensation or to provide documentary proof that an application for an endorsement has been submitted to the Administration in accordance with regulation I/10, paragraph 5;
  - .2 failure to comply with the applicable safe manning requirements of the Administration;
  - .3 failure of navigational or engineering watch arrangements to conform to the requirements specified for the ship by the Administration;
  - .4 absence in a watch of a person qualified to operate equipment essential to safe navigation, safety radiocommunications or the prevention of marine pollution; and
  - .5 inability to provide for the first watch at the commencement of a voyage and for subsequent relieving watches persons who are sufficiently rested and otherwise fit for duty.
3. Failure to correct any of the deficiencies referred to in paragraph 2, in so far as it has been determined by the Party carrying out the control that they pose a danger to persons, property or the environment, shall be the only grounds under article X on which a Party may detain a ship.

#### Regulation I/5

##### *National provisions*

1. Each Party shall establish processes and procedures for the impartial investigation of any reported incompetency, act or omission, that may pose a direct threat to safety of life or property at sea or to the marine environment, by the holders of certificates or endorsements issued by that Party in connection with their performance of duties related to their certificates and for the withdrawal, suspension and cancellation of such certificates for such cause and for the prevention of fraud.
2. Each Party shall prescribe penalties or disciplinary measures for cases in which the provisions of its national legislation giving effect to the Convention are not complied with in respect of ships entitled to fly its flag or of seafarers duly certificated by that Party.
3. In particular, such penalties or disciplinary measures shall be prescribed and enforced in cases in which:

- .1 a company or a master has engaged a person not holding a certificate as required by the Convention;
  - .2 a master has allowed any function or service in any capacity required by these regulations to be performed by a person holding an appropriate certificate, to be performed by a person not holding the required certificate, a valid dispensation or having the documentary proof required by regulation I/10, paragraph 5; or
  - .3 a person has obtained by fraud or forged documents an engagement to perform any function or serve in any capacity required by these regulations to be performed or filled by a person holding a certificate of dispensation.
4. A Party, within whose jurisdiction there is located any company which, or any person who, is believed on clear grounds to have been responsible for, or to have knowledge of, any apparent non-compliance with the Convention specified in paragraph 3, shall extend all cooperation possible to any Party which advises it of its intention to initiate proceedings under its jurisdiction.

#### Regulation I/6

##### *Training and assessment*

Each Party shall ensure that:

- .1 the training and assessment of seafarers, as required under the Convention, are administered, supervised and monitored in accordance with the provisions of section A-I/6 of the STCW Code; and
- .2 those responsible for the training and assessment of competence of seafarers, as required under the Convention, are appropriately qualified in accordance with the provisions of section A-I/6 of the STCW Code for the type and level of training or assessment involved.

#### Regulation I/7

##### *Communication of information*

1. In addition to the information required to be communicated by article IV, each Party shall provide to the Secretary-General within the time periods prescribed and in the format specified in section A-I/7 of the STCW Code, such other information as may be required by the Code on other steps taken by the Party to give the Convention full and complete effect.
2. When complete information as prescribed in article IV and section A-I/7 of the STCW Code has been received and such information con-

firms that full and complete effect is given to the provisions of the Convention, the Secretary-General shall submit a report to this effect to the Maritime Safety Committee.

3. Following subsequent confirmation by the Maritime Safety Committee, in accordance with procedures adopted by the Committee, that the information which has been provided demonstrates that full and complete effect is given to the provisions of the Convention:

- .1 the Maritime Safety Committee shall identify the Parties so concerned; and
- .2 other Parties shall be entitled, subject to the provisions of regulations I/4 and I/10, to accept, in principle, that certificates issued by or on behalf of the Parties identified in paragraph 3.1. are in compliance with the Convention.

#### Regulation I/8

##### *Quality standards*

1. Each Party shall ensure that:
  - .1 in accordance with the provisions of section A-I/8 of the STCW Code, all training, assessment of competence, certification, endorsement and revalidation activities carried out by nongovernmental agencies or entities under its authority are continuously monitored through a quality standards system to ensure achievement of defined objectives, including those concerning the qualifications and experience of instructors and assessors; and
  - .2 where governmental agencies or entities perform such activities, there shall be a quality standards system.
2. Each Party shall also ensure that an evaluation is periodically undertaken in accordance with the provisions of section A-I/8 of the STCW Code by qualified persons who are not themselves involved in the activities concerned.
3. Information relating to the evaluation required by paragraph 2 shall be communicated to the Secretary-General.

#### Regulation I/9

##### *Medical standards – Issue and registration of certificates*

1. Each Party shall establish standards of medical fitness for seafarers, particularly regarding eyesight and hearing.
2. Each Party shall ensure that certificates are issued only to candidates who comply with the requirements of this regulation.

3. Candidates for certification shall provide satisfactory proof:
  - .1 of their identity;
  - .2 that their age is not less than that prescribed in the regulation relevant to the certificate applied for;
  - .3 that they meet the standards of medical fitness, particularly regarding eyesight and hearing, established by the Party, and hold a valid document attesting to their medical fitness, issued by a duly qualified medical practitioner recognized by the Party;
  - .4 of having completed the seagoing service and any related compulsory training required by these regulations for the certificate applied for, and
  - .5 that they meet the standards of competence prescribed by these regulations for the capacities, functions and levels that are to be identified in the endorsement to the certificate.
4. Each Party undertakes to:
  - .1 maintain a register or registers of all certificates and endorsements for masters and officers and, as appropriate, ratings, which are issued, have expired or have been revalidated, suspended, cancelled or reported lost or destroyed and of dispensations issued; and
  - .2 make available information on the status of such certificates, endorsements and dispensations to other Parties and companies which request verification of the authenticity and validity of certificates produced to them by seafarers seeking recognition of their certificates under regulation I/10 or employment on board ship.

#### Regulation I/10

##### *Recognition of certificates*

1. Each Administration shall ensure that the provisions of this regulation are complied with, in order to recognize, by endorsement in accordance with regulation I/2, paragraph 5, a certificate issued by or under the authority of another Party to a master, officer or radio operator and that:
  - .1 the Administration has confirmed, through all necessary measures, which may include inspection of facilities and procedures, that the requirements concerning standards of competence, the issue and endorsement of certificates and record keeping are fully complied with; and
  - .2 an undertaking is agreed with the Party concerned that prompt notification will be given of any significant change in the arrangements for training and certification provided in compliance with the Convention.

2. Measures shall be established to ensure that seafarers who present, for recognition, certificates issued under the provisions of regulations II/2, III/2 or III/3, or issued under VII/I at the management level, as defined in the STCW Code, have an appropriate knowledge of the maritime legislation of the Administration relevant to the functions they are permitted to perform.

3. Information provided and measures agreed upon under this regulation shall be communicated to the Secretary-General in conformity with the requirements of regulation I/7.

4. Certificates issued by or under the authority of a non-Party shall not be recognized.

5. Notwithstanding the requirement of regulation I/2, paragraph 5, an Administration may, if circumstances require, allow a seafarer to serve in a capacity, other than radio officer or radio operator, except as provided by the Radio Regulations, for a period not exceeding three months on board a ship entitled to fly its flag, while holding an appropriate and valid certificate issued and endorsed as required by another Party for use on board that Party's ships but which has not yet been endorsed so as to render it appropriate for service on board ships entitled to fly the flag of the Administration. Documentary proof shall be readily available that application for an endorsement has been submitted to the Administration.

6. Certificates and endorsements issued by an Administration under the provisions of this regulation in recognition of, or attesting the recognition of, a certificate issued by another Party, shall not be used as the basis for further recognition by another Administration.

#### Regulation I/11

##### *Revalidation of certificates*

1. Every master, officer and radio operator holding a certificate issued or recognized under any chapter of the Convention other than chapter VI, who is serving at sea or intends to return to sea after a period ashore shall, in order to continue to qualify for seagoing service, be required at intervals not exceeding five years to:

- .1 meet the standards of medical fitness prescribed by regulation I/9;  
and
- .2 establish continued professional competence in accordance with section A-I/11 of the STCW Code.

2. Every master, officer and radio operator shall, for continuing sea-going service on board ships for which special training requirements have been internationally agreed upon, successfully complete approved relevant training.

3. Each Party shall compare the standards of competence which it required of candidates for certificates issued before 1 February 2002 with those specified for the appropriate certificate in part A of the STCW Code, and shall determine the need for requiring the holders of such certificates to undergo appropriate refresher and updating training or assessment.

4. The Party shall, in consultation with those concerned, formulate or promote the formulation of a structure of refresher and updating courses as provided for in section A-I/11 of the STCW Code.

5. For the purpose of updating the knowledge of masters, officers and radio operators, each Administration shall ensure that the texts of recent changes in national and international regulations concerning the safety of life at sea and the protection of the marine environment are made available to ships entitled to fly its flag.

#### Regulation I/12

##### *Use of simulators*

1. The performance standards and other provisions set forth in section A-I/12 and such other requirements as are prescribed in part A of the STCW Code for any certificate concerned shall be complied with in respect of:

- .1 all mandatory simulator-based training;
- .2 any assessment of competency required by part A of the STCW Code which is carried out by means of a simulator; and
- .3 any demonstration, by means of a simulator, of continued proficiency required by part A of the STCW Code.

2. Simulators installed or brought into use prior to 1 February 2002 may be exempted from full compliance with the performance standards referred to in paragraph 1, at the discretion of the Party concerned.

#### Regulation I/13

##### *Conduct of trials*

1. These regulations shall not prevent an Administration from authorizing ships entitled to fly its flag to participate in trials.

2. For the purposes of this regulation, the term “trial” means an experiment or series of experiments, conducted over a limited period, which may involve the use of automated or integrated systems in order to evaluate alternative methods, of performing specific duties of satisfying particular arrangements prescribed by the Convention, which would provide at least the same degree of safety and pollution prevention as provided by these regulations.

3. The Administration authorizing ships to participate in trials shall be satisfied that such trials are conducted in a manner that provides at least the same degree of safety and pollution prevention as provided by these regulations. Such trials shall be conducted in accordance with guidelines adopted by the Organization.

4. Details of such trials shall be reported to the Organization as early as practicable but not less than six months before the date on which the trials are scheduled to commence. The Organization shall circulate such particulars to all Parties.

5. The results of trials authorized under paragraph 1, and any recommendations the Administration may have regarding those results, shall be reported to the Organization, which shall circulate such results and recommendations to all Parties.

6. Any Party having any objection to particular trials authorized in accordance with this regulation should communicate such objection to the Organization as early as practicable. The Organization shall circulate details of the objection to all Parties.

7. An Administration which has authorized a trial shall respect objections received from other Parties relating to such trial by directing ships entitled to fly its flag not to engage in a trial while navigating in the waters of a coastal State which has communicated its objection to the Organization.

8. An Administration which concludes, on the basis of a trial, that a particular system will provide at least the same degree of safety and pollution prevention as provided by these regulations may authorize ships entitled to fly its flag to continue to operate with such a system indefinitely, subject to the following requirements:

- .1 the Administration shall, after results of the trial have been submitted in accordance with paragraph 5, provide details of any such authorization, including identification of the specific ships which may be subject to the authorization, to the Organization, which will circulate this information to all Parties;



- .2 any operations authorized under this paragraph shall be conducted in accordance with any guidelines developed by the Organization, to the same extent as they apply during a trial;
- .3 such operations shall respect any objections received from other Parties in accordance with paragraph 7, to the extent such objections have not been withdrawn, and;
- .4 an operation authorized under this paragraph shall only be permitted pending a determination by the Maritime Safety Committee as to whether an amendment to the Convention would be appropriate, and, if so, whether the operation should be suspended or permitted to continue before the amendment enters into force.

9. At the request of any Party, the Maritime Safety Committee shall establish a date for the consideration of the trial results and for the appropriate determinations.

#### Regulation I/14

##### *Responsibilities of companies*

1. Each Administration shall, in accordance with the provisions of section A-I/14, hold companies responsible for the assignment of seafarers for service in their ships in accordance with the provisions of the present Convention, and shall require every such company to ensure that:
  - .1 each seafarer assigned to any of its ships holds an appropriate certificate in accordance with the provisions of the convention and as established by the Administration;
  - .2 its ships are manned in compliance with the applicable safe manning requirements of the Administration;
  - .3 documentation and data relevant to all seafarers employed on its ships are maintained and readily accessible, and include, without being limited to, documentation and data on their experience, training, medical fitness and competency in assigned duties;
  - .4 seafarers on being assigned to any of its ships are familiarized with their specific duties and with all ship arrangements, installations, equipment, procedures and ship characteristics that are relevant to their routine or emergency duties; and
  - .5 the ship's complement can effectively co-ordinate their activities in an emergency situation and in performing functions vital to safety or to the prevention or mitigation of pollution.

## Regulation I/15

*Transitional provisions*

1. Until 1 February 2002, a Party may continue to issue, recognize and endorse certificates in accordance with the provisions of the Convention which applied immediately prior to 1 February 1997 in respect of those seafarers who commenced approved seagoing service, an approved education and training programme or an approved training course before 1 August 1998.

2. Until 1 February 2002, a Party may continue to renew and revalidate certificates and endorsements in accordance with the provisions of the Convention which applied immediately prior to 1 February 1997.

3. Where a Party, pursuant to regulation I/11, reissues or extends the validity of certificates originally issued by that Party under the provisions of the Convention which applied immediately prior to 1 February 1997, the Party may, at its discretion, replace tonnage limitations appearing on the original certificates as follows:

- .1 "200 gross registered tons" may be replaced by "500 gross tonnage", and
- .2 "1,600 gross registered tons" may be replaced by "3,000 gross tonnage".

## CHAPTER II

## MASTER AND DECK DEPARTMENT

## Regulation II/1

*Mandatory minimum requirements for certification of officers in charge of a navigational watch on ships of 500 gross tonnage or more*

1. Every officer in charge of a navigational watch serving on a seagoing ship of 500 gross tonnage or more shall hold an appropriate certificate.

2. Every candidate for certification shall:
- .1 be not less than 18 years of age;
  - .2 have approved seagoing service of not less than one year as part of an approved training programme which includes on-board training which meets the requirements of section A-II/1 of the STCW Code and is documented in an approved training record book, or otherwise have approved seagoing service of not less than three years;

- .3 have performed, during the required seagoing service, bridge watchkeeping duties under the supervision of the master or a qualified officer for a period of not less than six months;
- .4 meet the applicable requirements of the regulation in chapter IV, as appropriate for performing designated radio duties in accordance with the radio Regulations, and
- .5 have completed approved education and training and meet the standard of competence specified in section A-II/1 of the STCW Code.

#### Regulation II/2

##### *Mandatory minimum requirements for certification of masters and chief mates on ships of 500 gross tonnage or more*

###### *Master and chief mate on ships of 3,000 gross tonnage or more*

- 1. Every master and chief mate on a seagoing ship of 3,000 gross tonnage or more shall hold an appropriate certificate.
- 2. Every candidate for certification shall:
  - .1 meet the requirements for certification as an officer in charge of a navigational watch on ships of 500 gross tonnage or more and have approved seagoing service in that capacity:
    - .1.1 for certification as chief mate, not less than 12 months, and
    - .1.2 for certification as master, not less than 36 months; however, this period may be reduced to not less than 24 months if not less than 12 months of such seagoing service has been served as chief mate; and
  - .2 have completed approved education and training and meet the standard of competence specified in section A-II/2 of the STCW Code for masters and chief mates on ships of 3,000 gross tonnage or more.

###### *Master and chief mate on ships of between 500 and 3,000 gross tonnage*

- 3. Every master and chief mate on a seagoing ship of between 500 and 3,000 gross tonnage shall hold an appropriate certificate.
- 4. Every candidate for certification shall:
  - .1 for certification as chief mate, meet the requirements of an officer in charge of a navigational watch on ships of 500 gross tonnage or more,
  - .2 for certification as master, meet the requirements of an officer in charge of a navigational watch on ships of 500 gross tonnage or more and have approved seagoing service of not less than 36

- months in that capacity, however, this period may be reduced to not less than 24 months if not less than 12 months of such seagoing service has been served as chief mate, and
- .3 have completed approved training and meet the standard of competence specified in section A-II/2 of the STCW Code for masters and chief mates on ships of between 500 and 3,000 gross tonnage.

#### Regulation II/3

#### *Mandatory minimum requirements for certification of officers in charge of a navigational watch and of masters on ships of less than 500 gross tonnage*

##### *Ships not engaged on near-coastal voyages*

1. Every officer in charge of a navigational watch serving on a seagoing ship of less than 500 gross tonnage not engaged near-coastal voyages shall hold an appropriate certificate for ships of 500 gross tonnage or more.
2. Every master serving on a seagoing ship of less than 500 gross tonnage not engaged on near-coastal voyages shall hold an appropriate certificate for service as master on ships of between 500 and 3,000 gross tonnage

##### *Ships engaged on near-coastal voyages*

##### *Officer in charge of a navigational watch*

3. Every officer in charge of a navigational watch on a seagoing ship of less than 500 gross tonnage engaged on near-coastal voyages shall hold an appropriate certificate.
4. Every candidate for certification as officer in charge of a navigational watch on a seagoing ship of less than 500 gross tonnage engaged on near-coastal voyages shall:
  - .1 be not less than 18 years of age;
  - .2 have completed;
    - .2.1 special training, including an adequate period of appropriate seagoing service as required but the Administration, or
    - .2.2 approved seagoing service in the deck department of not less than three years;
  - .3 meet the applicable requirements of the regulations in chapter IV, as appropriate for performing designated radio duties in accordance with the Radio Regulations; and
  - .4 have completed approved education and training and meet the standard of competence specified in section A-II/3 of the STCW

Code for officers in charge of an navigational watch on ships of less than 500 gross tonnage engaged on near-coastal voyages.

*Master*

5. Every master serving on a seagoing ship of less than 500 gross tonnage engaged on near-coastal voyages shall hold an appropriate certificate.

6. Every candidate for certification as master on a seagoing ship of less than 500 gross tonnage engaged on near-coastal voyages shall:

- .1 be not less than 20 years of age;
- .2 have approved seagoing service of not less than 12 months as officer in charge of a navigational watch, and
- .3 have completed approved education and training and meet the standard of competence specified in section A-II/3 of the STCW Code for masters on ships of less than 500 gross tonnage engaged on near-coastal voyages

7. Exemptions

The Administration, if it considers that a ship's size and the conditions of its voyage are such as to render the application of the full requirements of this regulation and section A-II/3 of the STCW Code unreasonable or impracticable, may to that extent exempt the master and the officer in charge of a navigational watch on such a ship of class of ships from some of the requirements, bearing in mind the safety of all ships which may be operating in the same waters.

Regulation II/4

*Mandatory minimum requirements for certification of ratings forming part of a navigational watch*

1. Every rating forming part of a navigational watch on a seagoing ship of 500 gross tonnage or more, other than ratings under training and ratings whose duties while on watch are of an unskilled nature, shall be duly certificated to perform such duties.

2. Every candidate for certification shall:

- .1 be not less than 16 years of age;
- .2 have completed:
  - .2.1 approved seagoing service including not less than six months training and experience, or
  - .2.2 special training, either pre-sea or on board ship, including an approved period of seagoing service which shall not be less than two months; and

.3 meet the standard of competence specified in section A-II/4 of the STCW Code.

3. The seagoing service, training and experience required by subparagraphs 2.2.1 and 2.2.2 shall be associated with navigational watchkeeping functions and involve the performance of duties carried out under the direct supervision of the master, the officer in charge of the navigational watch or a qualified rating.

4. Seafarers may be considered by the Party to have met the requirements of this regulation if they have served in a relevant capacity in the deck department for a period of not less than one year within the last five years preceding the entry into force of the Convention for that Party.

### CHAPTER III

#### ENGINE DEPARTMENT

##### Regulation III/1

*Mandatory minimum requirements for certifications of officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room*

1. Every officer in charge of an engineering watch in a manned engine-room or designated duty engineer officer in a periodically unmanned engine-room on a seagoing ship powered by main propulsion machinery of 750 kW propulsion power or more shall hold an appropriate certificate.

2. Every candidate for certification shall:

- .1 be not less than 18 years of age;
- .2 have completed not less than six months seagoing service in the engine department in accordance with section A-III/1 of the STCW Code, and
- .3 have completed approved education and training of at least 20 months which includes on-board training documented in an approved training record book and meet the standards of competence specified in section A-III/1 of the STCW Code.

## Regulation III/2

*Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more*

1. Every chief engineer officer and second engineer officer on a seagoing ship powered by main propulsion machinery of 3,000 kW propulsion power or more shall hold an appropriate certificate.
2. Every candidate for certification shall:
  - .1 meet the requirements for certification as an officer in charge of an engineering watch and:
    - .1.1 for certification as second engineer officer, shall have not less than 12 months' approved seagoing service as assistant engineer officer or engineer officer, and
    - .1.2 for certification as chief engineer officer, shall have not less than 36 months' approved seagoing service of which not less than 12 months shall have been served as an engineer officer in a position of responsibility while qualified to serve as second engineer officer, and
  - .2 have completed approved education and training and meet the standard of competence specified in section A-III/2 of the STCW Code.

## Regulation III/3

*Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on ships powered by main propulsion machinery of between 750 kW and 3,000 kW propulsion power*

1. Every chief engineer officer and second engineer officer on a seagoing ship powered by main propulsion machinery of between 750 and 3,000 kW propulsion power shall hold an appropriate certificate.
2. Every candidate for certification shall:
  - .1 meet the requirements for certification as an officer in charge of an engineering watch and:
    - .1.1 for certification as second engineer officer, shall have not less than 12 months approved seagoing service as assistant engineer officer or engineer officer, and
    - .1.2 for certification as chief engineer officer, shall have not less than 24 months' approved seagoing service of which not less than 12 months shall be served while qualified to serve as second engineer officer, and

.2 have completed approved education and training and meet the standard of competence specified in section A-III/3 of the STCW Code.

3. Every engineer officer who is qualified to serve as second engineer officer on ships powered by main machinery of 3,000 kW propulsion power or more, may serve as chief engineer officer on ships powered by main propulsion machinery of less than 3,000 kW propulsion power, provided that not less than 12 months' approved seagoing service shall have been served as an engineer officer in a position of responsibility and the certificate is so endorsed.

#### Regulation III/4

*Mandatory minimum requirements for certification of ratings forming part of a watch in a manned engine-room or designated to perform duties in a periodically unmanned engine-room*

1. Every rating forming part of an engine-room watch or designated to perform duties in a periodically unmanned engine-room on a seagoing ship powered by main propulsion machinery of 750 kW propulsion power or more, other than ratings under training and ratings whose duties are of an unskilled nature, shall be duly certificated to perform such duties.

2. Every candidate for certification shall:

.1 be not less than 16 years of age;

.2 have completed:

.2.1 approved seagoing service including not less than six months training and experience, or

.2.2 special training, either pre-sea or on board ship, including an approved period of seagoing service which shall not be less than two months, and

.3 meet the standard of competence specified in section A-III/4 of the STCW Code.

3. The seagoing service, training and experience required by subparagraphs 2.2.1 and 2.2.2 shall be associated with engine-room watchkeeping functions and involve the performance of duties carried out under the direct supervision of a qualified engineer officer or a qualified rating.

4. Seafarers may be considered by the Party to have met the requirements of this regulation if they have served in a relevant capacity in the engine department for a period of not less than one year within the last five years preceding the entry into force of the convention for that Party.



## CHAPTER IV

## RADIOCOMMUNICATION AND RADIO PERSONNEL

Explanatory note:

Mandatory provisions relating to radio watchkeeping are set forth in the Radio Regulations and in the International Convention for the Safety of Life at Sea, 1974, as amended. Provisions for radio maintenance are set forth in the International Convention for the Safety of Life at Sea, 1974, as amended, and the guidelines adopted by the Organization.

## Regulation IV/1

*Application*

1. Except as provided in paragraph 3, the provisions of this chapter apply to radio personnel on ships operating in the global maritime distress and safety system (GMDSS) as prescribed by the International Convention for the Safety of Life at Sea, 1974, as amended.

2. Until 1 February 1999, radio personnel on ships complying with the provisions of the International Convention for the Safety of Life at Sea, 1974, in force immediately prior to 1 February 1992 shall comply with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, in force prior to 1 December 1992.

3. Radio personnel on ships not required to comply with the provisions of the GMDSS in chapter IV of the SOLAS Convention are not required to meet the provisions of this chapter. Radio personnel on these ships are, nevertheless, required to comply with the Radio Regulations. The Administration shall ensure that the appropriate certificates as prescribed by the Radio Regulations are issued to or recognized in respect of such radio personnel.

## Regulation IV/2

*Mandatory minimum requirements for certification of GMDSS radio personnel*

1. Every person in charge of or performing, radio duties on a ship required to participate in the GMDSS shall hold an appropriate certificate related to the GMDSS, issued or recognized by the Administration under the provisions of the Radio Regulations.

2. In addition, every candidate for certification under this regulation for service on a ship which is required by the International Convention for the Safety of Life at Sea, 1974, as amended, to have a radio installation shall:

- .1 be not less than 18 years of age; and
- .2 have completed approved education and training and meet the standard of competence specified in section A-IV/2 of the STCW Code.

## CHAPTER V

### SPECIAL TRAINING REQUIREMENTS FOR PERSONNEL ON CERTAIN TYPES OF SHIPS

#### Regulation V/1

##### *Mandatory minimum requirements for the training and qualification of masters, officers and ratings on tankers*

1. Officers and ratings assigned specific duties and responsibilities related to cargo or cargo equipment on tankers shall have completed an approved shore-based fire-fighting course in addition to the training required by regulation VI/1 and shall have completed:

- .1 at least three months of approved seagoing service on tankers in order to acquire adequate knowledge of safe operational practices; or
- .2 an approved tanker familiarization course covering at least the syllabus given for that course in section A-V/1 of the STCW Code. so however that, the Administration may accept a period of supervised seagoing service shorter than that prescribed by sub-paragraph 1, provided:
- .3 the period so accepted is not less than one month;
- .4 the tanker is of less than 3,000 gross tonnage;
- .5 the duration of each voyage on which the tanker is engaged during the period does not exceed 72 hours; and
- .6 the operational characteristics of the tanker and the number of voyages and loading and discharging operations completed during the period, allow the same level of knowledge and experience to be acquired.

2. Masters, chief engineer officers, chief mates, second engineer officers and any person with immediate responsibility for loading, discharging and care in transit of handling of cargo shall, in addition to meeting the requirements of sub-paragraphs 1.1 or 1.2, have:

- .1 experience appropriate to their duties on the type of tanker on which they serve, and

- .2 completed an approved specialized training programme which at least covers the subjects set out in section A-V/1 of the STCW Code that are appropriate to their duties on the oil tanker, chemical tanker or liquefied gas tanker on which they serve.
3. Within two years after the entry into force of the Convention for a Party, seafarers may be considered to have met the requirements of subparagraph 2.2 if they have served in a relevant capacity on board the type of tanker concerned for a period of not less than one year within the preceding five years.
4. Administrations shall ensure that an appropriate certificate is issued to masters and officers, who are qualified in accordance with paragraphs 1 or 2 as appropriate, or that an existing certificate is duly endorsed. Every rating who is so qualified shall be duly certificated.

#### Regulation V/2

##### *Mandatory minimum requirements for the training and qualifications of masters, officers, ratings and other personnel on ro-ro-passenger ships*

1. This regulation applies to masters, officers, ratings and other personnel serving on board ro-ro passenger ships engaged on international voyages. Administrations shall determine the applicability of these requirements to personnel serving on ro-ro-passenger ships engaged on domestic voyages.
2. Prior to being assigned shipboard duties on board ro-ro passenger ships, seafarers shall have completed the training required by paragraphs 4 to 8 below in accordance with their capacity, duties and responsibilities.
3. Seafarers who are required to be trained in accordance with paragraphs 4, 7 and 8 below shall, at intervals not exceeding five years, undertake appropriate refresher training.
4. Master, officers and other personnel designated on muster lists to assist passengers in emergency situations on board ro-ro passenger ships shall have completed training in crowd management as specified in section A-V/2, paragraph 1 of the STCW Code.
5. Masters, officers and other personnel assigned specific duties and responsibilities on board ro-ro passenger ships shall have completed the familiarization training specified in section A-V/2, paragraph 2 of the STCW Code.

6. Personnel providing direct service to passengers in passenger spaces on board ro-ro passenger ships shall have completed the safety training specified in section A-V/2, paragraph 3 of the STCW Code.

7. Masters, chief mates, chief engineer officers, second engineer officers and every person assigned immediate responsibility for embarking and disembarking passengers, loading, discharging or securing cargo, or closing hull openings on board ro-ro passenger ships shall have completed approved training in passenger safety, cargo safety and hull integrity as specified in section A-V/2, paragraph 4 of the STCW Code.

8. Masters, chief mates, chief engineer officers, second engineer officers and any person having responsibility for the safety of passengers in emergency situations on board ro-ro passenger ships shall, have completed approved training in crisis management and human behaviour as specified in section A-V/2, paragraph 5 of the STCW Code.

9. Administrations shall ensure that documentary evidence of the training which has been completed is issued to every person found qualified under the provisions of this regulation.

## CHAPTER VI

### EMERGENCY, OCCUPATIONAL SAFETY, MEDICAL CARE AND SURVIVAL FUNCTIONS

#### Regulation VI/1

##### *Mandatory minimum requirements for familiarization, basic safety training and instruction for all seafarers*

Seafarers shall receive familiarization and basic safety training or instruction in accordance with section A-VI/1 of the STCW Code and shall meet the appropriate standard of competence specified therein.

#### Regulation VI/2

##### *Mandatory minimum requirements for the issue of certificates of proficiency in survival craft, rescue boats and fast rescue boats*

1. Every candidate for a certificate of proficiency in survival craft and rescue boats other than fast rescue boats shall:
  - .1 be not less than 18 years of age;
  - .2 have approved seagoing service of not less than 12 months or have attended an approved training course and have approved seagoing service of not less than six months; and

- .3 meet the standard of competence for certificates of proficiency in survival craft and rescue boats set out in section A-VI/2, paragraphs 1 to 4 of the STCW Code.
2. Every candidate for a certificate of proficiency in fast rescue boats shall:
  - .1 be the holder of a certificate of proficiency in survival craft and rescue boats other than fast rescue boats;
  - .2 have attended an approved training course; and
  - .3 meet the standard of competence for certificates of proficiency in fast rescue boats set out in section A-VI/2, paragraphs 5 to 8 of the STCW Code.

#### Regulation VI/3

##### *Mandatory minimum requirements for training in advanced fire-fighting*

1. Seafarers designated to control fire-fighting operations shall have successfully completed advanced training in techniques for fighting fire with particular emphasis on organization, tactics and command in accordance with the provisions of section A-VI/3 of the STCW Code and shall meet the standard of competence specified therein.
2. Where training in advanced fire-fighting is not included in the qualifications for the certificate to be issued, a special certificate or documentary evidence, as appropriate, shall be issued indicating that the holder has attended a course of training in advanced fire-fighting.

#### Regulation VI/4

##### *Mandatory minimum requirements relating to medical first aid and medical care*

1. Seafarers designated to provide medical first aid on board ship shall meet the standard of competence in medical first aid specified in section A-VI/4, paragraphs 1 to 3 of the STCW Code.
2. Seafarers designated to take charge of medical care on board ship shall meet the standard of competence in medical care on board ships specified in section A-VI/4, paragraphs 4 to 6 of the STCW Code.
3. Where training in medical first aid or medical care is not included in the qualifications for the certificate to be issued, a special certificate or documentary evidence, as appropriate, shall be issued indicating that the holder has attended a course of training in medical first aid or in medical care.

## CHAPTER VII

## ALTERNATIVE CERTIFICATION

## Regulation VII/1

*Issue of alternative certificates*

1. Notwithstanding the requirements for certification laid down in chapters II and III of this Annex, Parties may elect to issue or authorize the issue of certificates other than those mentioned in the regulations of those chapters, provided that:

- .1 the associated functions and levels of responsibility to be stated on the certificates and in the endorsements are selected from and identical to those appearing in sections A-II/1, A-II/2, A-II/3, A-II/4, A-III/1, A-III/2, A-III/3, A-III/4 and A-IV/2 of the STCW Code;
- .2 the candidates have completed approved education and training and meet the requirements for standards of competence, prescribed in the relevant sections of the STCW Code and as set forth in section A-VII/1 of this Code, for the functions and levels that are to be stated on the certificates and in the endorsements;
- .3 the candidates have completed approved seagoing service appropriate to the performance of the functions and levels that are to be stated on the certificate. The minimum duration of seagoing service shall be equivalent to the duration of seagoing service prescribed in chapters II and III of this Annex. However, the minimum duration of seagoing service shall be not less than as prescribed in section A-VII/2 of the STCW Code;
- .4 the candidates for certification who are to perform the function of navigation at the operational level shall meet the applicable requirements of the regulations in chapter IV, as appropriate, for performing designated radio duties in accordance with the Radio Regulations; and
- .5 the certificates are issued in accordance with the requirements of regulation I/9 and the provisions set forth in chapter VII of the STCW Code.

2. No certificate shall be issued under this chapter unless the Party has communicated information to the Organization in accordance with article IV and regulation I/7.

## Regulation VII/2

*Certification of seafarers*

1. Every seafarer who performs any function or group of functions specified in tables A-II/1, A-II/2, A-II/3 or A-II/4 of chapter II or in

tables A-III/1, A-III/2 of chapter III or A-IV/2 of chapter IV of the STCW Code, shall hold an appropriate certificate.

#### Regulation VII/3

##### *Principles governing the issue of alternative certificates*

1. Any Party which elects to issue or authorize the issue of alternative certificates shall ensure that the following principles are observed:
  - .1 no alternative certification system shall be complemented unless it ensures a degree of safety at sea and has a preventive effect as regards pollution at least equivalent to that provided by the other chapters; and
  - .2 any arrangement for alternative certification issued under this chapter shall provide for the interchangeability of certificates with those issued under the other chapters.
2. The principle of interchangeability in paragraph 1 shall ensure that:
  - .1 seafarers certificated under the arrangements of chapters II and/or III and those certificated under chapter VII are able to serve on ships which have either traditional or other forms of shipboard organization; and
  - .2 seafarers are not trained for specific shipboard arrangements in such a way as would impair their ability to take their skills elsewhere.
3. In issuing any certificate under the provisions of this chapter the following principles shall be taken into account:
  - .1 the issue of alternative certificates shall not be used in itself:
    - .1 to reduce the number of crew on board,
    - .2 to lower the integrity of the profession or “de skil” seafarers, or
    - .3 to justify the assignment of the combined duties of the engine and deck watchkeeping officers to a single certificate holder during any particular watch; and
  - .2 the person in command shall be designated as the master; and the legal position and authority of the master and others shall not be adversely affected by the implementation of any arrangement for alternative certification.
4. The principles contained in paragraphs 1 and 2 of this regulation shall ensure that the competency of both deck and engineer officers is maintained.

## CHAPTER VIII

## WATCHKEEPING

## Regulation VIII/1

*Fitness for duty*

Each Administration shall, for the purpose of preventing fatigue:

- .1 establish and enforce rest periods for watchkeeping personnel; and
- .2 require that watch systems are so arranged that the efficiency of all watchkeeping personnel is not impaired by fatigue and that duties are so organized that the first watch at the commencement of a voyage and subsequent relieving watches are sufficiently rested and otherwise fit for duty.

## Regulation VIII/2

*Watchkeeping arrangements and principles to be observed*

1. Administrations shall direct the attention of companies, masters, chief engineer officers and all watchkeeping personnel to the requirements, principles and guidance set out in the STCW Code which shall be observed to ensure that a safe continuous watch or watches appropriate to the prevailing circumstances and conditions are maintained in all seagoing ships at all times.
2. Administration shall require the master of every ship to ensure that watchkeeping arrangements are adequate for maintaining a safe watch of watches, taking into account the prevailing circumstances and conditions and that, under the master's general direction:
  - .1 officers in charge of the navigational watch are responsible for navigating the ship safely during their periods of duty, when they shall be physically present on the navigating bridge or in a directly associated location such as the chartroom or bridge control room at all times;
  - .2 radio operators are responsible for maintaining a continuous radio watch on appropriate frequencies during their periods of duty;
  - .3 officers in charge of an engineering watch, as defined in the STCW Code and under the direction of the chief engineer, shall be immediately available and on call to attend the machinery spaces and, when required, shall be physically present in the machinery space during their periods of responsibility; and
  - .4 an appropriate and effective watch or watches are maintained for the purpose of safety at all times, while the ship is at anchor or moored and, if the ship is carrying hazardous cargo, the organization of such watch or watches takes full account of the nature,



quantity, packing and stowage of the hazardous cargo and of any special conditions prevailing on board, afloat or ashore.

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**Document 1 joint à l'acte final de la conférence****Résolution 1****Adoption d'amendements à l'Annexe de la Convention internationale de 1978 sur les normes de formation des gens de mer, de délivrance des brevets et de veille**

La conférence,

Rappelant l'article XIII) b) de la Convention internationale de 1978 sur les normes de formation des gens de mer, de délivrance des brevets et de veille (ci-après dénommée «la Convention»), concernant de la procédure d'amendement de la Convention par une conférence des Parties,

Ayant examiné les amendements à l'Annexe de la Convention qui ont été proposés et diffusés aux Membres de l'Organisation et à toutes les Parties à la Convention et sont destinés à remplacer le texte actuel de l'Annexe de la Convention,

1. Adopte, conformément à l'article XII 1) b) ii) de la Convention, les amendements à l'Annexe de la Convention dont le texte figure en annexe à la présente résolution;

2. Décide, conformément à l'article XII 1) a) vii) 2 de la Convention, que les amendements joints en annexe seront réputés avoir été acceptés le 1er août 1996 à moins que, avant cette date, plus d'un tiers des Parties à la Convention, ou des Parties dont les flottes marchandes représentent au total 50% au moins du tonnage brut de la flotte mondiale des navires de commerce d'une jauge brute égale ou supérieure à 100 tonneaux, n'aient notifié au Secrétaire général qu'elles élèvent une objection contre ces amendements;

3. Invite les Parties à noter que, conformément à l'article XII 1) a) ix) de la Convention, les amendements joints en annexe entreront en vigueur le 1er février 1997 lorsqu'ils seront réputés avoir été acceptés conformément au paragraphe 2 ci-dessus.

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## Annexe

**Amendements l'Annexe de la Convention internationale de 1978  
sur les normes de formation des gens de mer, de délivrance des  
brevets et de veille**

## CHAPITRE I

## DISPOSITIONS GENERALES

## Règle I/1

*Définitions et clarifications*

1. Aux fins de la présente Convention, sauf disposition expresse contraire:
  - .1 le terme «règles» désigne les règles figurant dans l'Annexe de la Convention;
  - .2 le terme «approuvé» signifie approuvé par la Partie conformément aux présentes règles;
  - .3 le terme «capitaine» désigne la personne ayant le commandement d'un navire;
  - .4 le terme «officier» désigne un membre de l'équipage, autre que le capitaine, désigné comme tel d'après les lois ou règlements nationaux ou, à défaut, d'après les conventions collectives ou la coutume;
  - .5 l'expression «officier de pont» désigne un officier qualifié conformément aux dispositions du chapitre II de la présente Convention;
  - .6 le terme «second» désigne l'officier dont le rang vient immédiatement après celui de capitaine et à qui incombe le commandement du navire en cas d'incapacité du capitaine;
  - .7 l'expression «officier mécanicien» désigne un officier qualifié conformément aux dispositions du chapitre III de la présente Convention;
  - .8 l'expression «chef mécanicien» désigne l'officier mécanicien principal, responsable de la propulsion mécanique ainsi que du fonctionnement et de l'entretien des installations mécaniques et électriques du navire;
  - .9 l'expression «second mécanicien» désigne l'officier mécanicien dont le rang vient immédiatement après celui de chef mécanicien et à qui incombe la responsabilité de la propulsion mécanique ainsi que du fonctionnement et de l'entretien des installations mécaniques et électriques du navire, en cas d'incapacité du chef mécanicien;
  - .10 l'expression «officier mécanicien adjoint» désigne une personne qui suit une formation pour devenir officier mécanicien et qui est désignée comme tel d'après les lois ou règlements nationaux;

- .11 l'expression «opérateur des radiocommunications» désigne une personne titulaire d'un certificat approprié délivré ou reconnu par une Administration conformément aux dispositions du Règlement des radiocommunications;
- .12 le terme «matelot» désigne un membre de l'équipage du navire autre que le capitaine ou un officier;
- .13 l'expression «voyages à proximité du littoral» désigne les voyages effectués au voisinage d'une Partie, tels qu'ils sont définis par cette Partie;
- .14 l'expression «puissance propulsive» désigne la puissance de sortie nominale, continue et totale de tout l'appareil propulsif du navire, exprimée en kilowatts, qui figure sur le certificat d'immatriculation du navire ou tout autre document officiel;
- .15 l'expression «tâches relatives aux radiocommunications» désigne notamment, selon le cas, la veille, l'entretien ou les réparations techniques, conformément au Règlement des radiocommunications, à la Convention internationale pour la sauvegarde de la vie humaine en mer et, à la discrétion de chaque Administration, aux recommandations pertinentes de l'Organisation;
- .16 le terme «pétrolier» désigne un navire construit et utilisé pour le transport de pétrole et de produits pétroliers en vrac;
- .17 l'expression «navire-citerne pour produits chimiques» désigne un navire de charge construit ou adapté et utilisé pour transporter en vrac des produits liquides énumérés au chapitre 17 du Recueil international de règles sur les transporteurs de produits chimiques;
- .18 l'expression «navire-citerne pour gaz liquéfiés» désigne un navire de charge construit ou adapté et utilisé pour transporter en vrac des gaz liquéfiés ou d'autres produits énumérés au chapitre 19 du Recueil international de règles sur les transporteurs de gaz;
- .19 l'expression «navire roulier à passagers» désigne un navire à passagers qui est doté d'espaces rouliers à cargaison ou de locaux de catégorie spéciale tels que définis dans la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée;
- .20 le terme «mois» désigne un mois civil ou 30 jours constitués de périodes de moins d'un mois;
- .21 l'expression «Code STCW» désigne le Code de formation des gens de mer, de délivrance des brevets et de veille (Code STCW), tel qu'il a été adopté par la résolution 2 de la Conférence de 1995 et tel qu'il pourrait être modifié;
- .22 le terme «fonction» désigne un groupe de tâches et de responsabilités, telles que spécifiées dans le Code STCW, nécessaires à l'exploitation du navire, à la sauvegarde de la vie humaine en mer ou à la protection du milieu marin;
- .23 le terme «compagnie» désigne le propriétaire du navire ou toute autre entité ou personne, telle que l'armateur gérant ou l'affrètement coque nue, à laquelle le propriétaire du navire a confié la respon-

- sabilité de l'exploitation du navire et qui, en assumant cette responsabilité, a convenu de s'acquitter de toutes les tâches et obligations imposées à la compagnie par les présentes règles;
- .24 l'expression «brevet approprié» désigne un brevet délivré et visé conformément aux dispositions de la présente Annexe, qui habilite son titulaire légitime à servir dans la capacité et exécuter les fonctions prévues au niveau de responsabilité spécifié sur ce brevet, à bord d'un navire ayant le type, la jauge, la puissance et le moyen de propulsion considérés pendant le voyage particulier en cause;
- .25 l'expression «service en mer» désigne un service effectué à bord d'un navire en rapport avec la délivrance d'un brevet, d'un certificat ou d'une autre qualification.
2. Les présentes règles sont complétées par les dispositions obligatoires figurant dans la partie A du Code STCW et:
- .1 toute mention d'une prescription d'une règle renvoie aussi à la section correspondante de la partie A du Code STCW;
- .2 lors de la mise en oeuvre des présentes règles, les recommandations et les notes explicatives connexes figurant dans la partie B du Code STCW devraient être prises en considération dans toute la mesure possible de manière à uniformiser l'application des dispositions de la Convention à l'échelle mondiale;
- .3 les amendements à la partie A du Code STCW doivent être adoptés, être mis en vigueur et prendre effet conformément aux dispositions de l'article XII de la Convention concernant la procédure d'amendement applicable à l'annexe; et
- .4 la partie B du Code STCW doit être modifiée par le Comité de la sécurité maritime conformément à son règlement intérieur.
3. L'article VI de la Convention qui mentionne «l'Administration» et «l'Administration qui les délivre» ne doit pas être interprété comme empêchant toute Partie de délivrer et de viser des brevets en vertu des dispositions des présentes règles.

#### Règle I/2

##### *Brevets et visas*

1. Les brevets doivent être rédigés dans la langue ou les langues officielles du pays les délivre. Si la langue utilisée n'est pas l'anglais, le texte doit comprendre une traduction dans cette langue.
2. Les parties peuvent, en ce qui concerne les opérateurs des radiocommunications:
- .1 inclure, dans l'examen pour la délivrance d'un certificat conforme au Règlement des radiocommunications, les connaissances supplémentaires prescrites dans les règles pertinentes; ou

- .2 délivrer un certificat distinct, indiquant que le titulaire possède les connaissances supplémentaires prescrites dans les règles pertinentes.
3. Le visa prescrit à l'article VI de la Convention en vue d'attester la délivrance d'un brevet ne doit être délivré que s'il a été satisfait à toutes les prescriptions de la Convention.
4. A la discrétion d'une Partie, les visas peuvent être incorporés dans le modèle des brevets délivrés, ainsi qu'il est prévu dans la section A-I/2 du Code STCW. Si tel est le cas, le modèle utilisé doit être conforme celui figurant au paragraphe 1 de la section A-I/2. Sinon, le modèle des visas utilisé doit être conforme à celui figurant au paragraphe 2 de cette section.
5. Une Administration qui reconnaît un brevet en vertu de la règle I/10 doit le viser pour en attester la reconnaissance. Elle ne délivre de visa que s'il a été satisfait à toutes les prescriptions de la Convention. Le modèle de visa utilisé doit être conforme au paragraphe 3 de la section A-I/2 du Code STCW.
6. Les visas mentionnés aux paragraphes 3, 4 et 5:
  - .1 peuvent être délivrés en tant que documents distincts;
  - .2 doivent chacun avoir un numéro unique, sauf que les visas attestant la délivrance d'un brevet peuvent avoir le même numéro que le brevet en question, sous réserve que ce numéro soit unique; et
  - .3 doivent expirer dès que le brevet visé expire ou est retiré, suspendu ou annulé par la Partie qui l'a délivré et, en tout état de cause, cinq ans au plus après la date de leur délivrance.
7. La capacité dans laquelle le titulaire d'un brevet est autorisé à servir à bord doit être spécifiée sur le modèle de visa en des termes identiques à ceux qui sont utilisés dans les prescriptions applicables de l'Administration concernant les effectifs de sécurité.
8. Les Administration peuvent utiliser un modèle qui diffère de celui figurant dans la section A-I/2 du Code STCW; toutefois, le modèle utilisé doit fournir, au minimum, les renseignements prescrits qui doivent être inscrits en caractères romains et en chiffres arabes, compte tenu des variations permises en vertu de la section A-I/2.
9. Sous réserve des dispositions du paragraphe 5 de la règle I/10, l'original de tout brevet prescrit par la Convention doit se trouver à bord du navire sur lequel sert le titulaire.

## Règle I/3

*Principes régissant les voyages à proximité du littoral*

1. Toute Partie définissant les voyages à proximité du littoral aux fins de la Convention ne doit pas imposer, aux gens de mer servant à bord des navires autorisés à battre le pavillon d'une autre Partie et effectuant de tels voyages, des prescriptions en matière de formation, d'expérience ou de brevets plus rigoureuses que celles qu'elle impose aux gens de mer servant à bord des navires autorisés à battre son propre pavillon. En aucun cas, une telle Partie ne doit imposer aux gens de mer servant à bord de navires autorisés à battre le pavillon d'une autre Partie des prescriptions plus rigoureuses que les prescriptions de la Convention qui s'appliquent aux navires n'effectuant pas de voyages à proximité du littoral.

2. S'agissant des navires autorisés à battre le pavillon d'une Partie qui effectuent régulièrement des voyages à proximité du littoral d'une autre Partie, la Partie dont le navire est autorisé à battre le pavillon doit imposer, aux gens de mer servant à bord de ces navires, des prescriptions en matière de formation, d'expérience et de brevets au moins équivalentes à celles qui sont imposées par la Partie au large des côtes de laquelle le navire effectue les voyages, à condition qu'elles ne soient pas plus rigoureuses que les prescriptions de la Convention qui sont applicables aux navires n'effectuant pas de voyages à proximité du littoral. Les gens de mer servant à bord d'un navire dont le voyage va au-delà de ce qui est défini comme un voyage à proximité du littoral par une Partie, et qui entre dans des eaux qui ne sont pas visées par cette définition, doivent satisfaire aux prescriptions pertinentes de la présente Convention en matière de compétence.

3. Une Partie peut faire bénéficier un navire qui est autorisé à battre son pavillon des dispositions de la Convention relatives aux voyages à proximité du littoral lorsqu'il effectue régulièrement au large des côtes d'un Etat non Partie, des voyages à proximité du littoral tels qu'ils sont définis par la Partie.

4. Les Parties qui définissent les voyages à proximité du littoral conformément aux prescriptions de la présente règle doivent, conformément aux prescriptions de la règle I/7, communiquer au Secrétaire général des détails sur les dispositions adoptées.

5. Aucune des dispositions de la présente règle ne saurait limiter en quoi que ce soit la juridiction d'un Etat, qu'il soit ou non Partie à la Convention.

## Règle I/4

*Procédures de contrôle*

1. Le contrôle exercé en vertu de l'article X par un fonctionnaire dûment autorisé chargé du contrôle doit se limiter à:
  - .1 vérifier, conformément au paragraphe 1) de l'article X, que tous les gens de mer servant à bord qui sont tenus d'être titulaires d'un brevet conformément à la Convention possèdent un brevet approprié ou une dispense valide, ou fournissent un document prouvant qu'une demande de visa a été soumise à l'Administration conformément au paragraphe 5 de la règle I/10.
  - .2 vérifier que les effectifs et les brevets des gens de mer servant à bord sont conformes aux prescriptions applicables de l'Administration concernant les effectifs de sécurité; et
  - .3 évaluer, conformément à la section A-I/4 du Code STCW, l'aptitude des gens de mer du navire à respecter les normes de veille prescrites par la Convention, s'il existe de bonnes raisons de penser que ces normes ne sont pas respectées parce que l'un quelconque des faits suivants s'est produit:
    - .3.1 le navire a subi un abordage ou s'est échoué; ou
    - .3.2 le navire a effectué, alors qu'il faisait route, était au mouillage ou était à quai, un rejet de produits qui est illégal aux termes d'une quelconque convention internationale, ou
    - .3.3 le navire, en manoeuvrant de façon désordonnée ou peu sûre n'a pas respecté les mesures d'organisation du trafic adoptées par l'Organisation ou des pratiques et procédures de navigation sûres; ou
    - .3.4 le navire est, à d'autres égards, exploité de manière à présenter un danger pour les personnes, les biens ou l'environnement.
2. Les carences qui peuvent être considérées comme présentant un danger pour les personnes, les biens ou l'environnement sont, notamment, les suivantes:
  - .1 les gens de mer tenus d'être titulaires d'un brevet ne possèdent pas un brevet approprié ou une dispense valide ou ne fournissent pas un document prouvant qu'une demande de visa a été soumise à l'Administration conformément au paragraphe 5 de la règle I/10;
  - .2 les prescriptions applicables de l'Administration concernant les effectifs de sécurité ne sont pas respectées;
  - .3 les dispositions en matière de quart à la passerelle ou à la machine ne répondent pas aux prescriptions prévues pour le navire par l'Administration;
  - .4 l'équipe de quart ne comprend pas de personne qualifiée pour exploiter l'équipement indispensable à la sécurité de la navigation, aux radiocommunications de sécurité ou à la prévention de la pollution; et



.5 il n'est pas possible de trouver, pour assurer le premier quart au début d'un voyage et les quarts ultérieurs, des personnes suffisamment reposées et aptes au service à tous autres égards.

3. Une Partie qui effectue un contrôle n'est en droit de retenir un navire conformément à l'article X que lorsque aucune mesure n'a été prise pour remédier à l'une quelconque des carences visées au paragraphe 2 et pour autant que la Partie ait établi que cela présente un danger pour les personnes, les biens ou l'environnement.

#### Règle I/5

##### *Dispositions nationales*

1. Chaque Partie doit établir des processus et procédures pour effectuer une enquête impartiale lorsqu'a été signalé tout cas d'incompétence, d'acte ou d'omission susceptible de menacer directement la sauvegarde de la vie humaine ou la sécurité des biens en mer ou le milieu marin, lequel aurait été commis par les titulaires de brevets ou de visas délivrés par cette Partie dans l'exécution des tâches liées à ces brevets, et pour retirer, suspendre et annuler ces brevets pour une telle raison et pour prévenir les fraudes.

2. Chaque Partie doit prescrire les sanctions pénales ou disciplinaires à appliquer dans les cas où les dispositions de sa législation nationale donnant effet à la présente Convention ne sont pas observées s'agissant de navires autorisés à battre son pavillon ou de gens de mer dûment brevetés par cette Partie.

3. De telles sanctions pénales ou disciplinaires doivent en particulier être prévues et appliquées lorsque:

- .1 une compagnie ou un capitaine a engagé une personne non titulaire d'un brevet prescrit par la présente Convention;
- .2 un capitaine a autorisé qu'une personne non titulaire du brevet prescrit ou d'une dispense valide ou n'ayant pas le document exigé au paragraphe 5 de règle I/10 exerce une fonction ou serve dans une capacité que les présentes règles exigent de confier à une personne titulaire d'un brevet approprié; ou
- .3 une personne a obtenu par fraude ou fausses pièces un engagement pour exercer une fonction ou servir dans une capacité que les présentes règles exigent de confier à une personne titulaire d'un brevet ou d'une dispense.

4. Une Partie dans la juridiction de laquelle se trouve compagnie ou toute personne dont on a de bonnes raisons de penser qu'elle a été responsable ou a eu connaissance d'un non-respect apparent de la Conven-

tion spécifié au paragraphe 3 doit offrir toute la coopération possible à toute Partie qui l'avise de son intention d'intenter une procédure sous sa juridiction.

#### Règle I/6

##### *Formation et évaluation*

Chaque Partie doit s'assurer que:

- .1 la formation et l'évaluation des compétences des gens de mer, qui sont prescrites en vertu de la Convention, sont dirigées, supervisées et contrôlées conformément aux dispositions de la section A-I/6 du Code STCW; et
- .2 les responsables de la formation et de l'évaluation des compétences des gens de mer, qui sont prescrites en vertu de la Convention, ont les qualifications voulues, conformément aux dispositions de la section A-I/6 du Code STCW, pour le type et le niveau de formation ou d'évaluation en cause.

#### Règle I/7

##### *Communication de renseignements*

1. Outre les renseignements qu'elle doit communiquer en application de l'article IV, chaque Partie doit fournir au Secrétaire général, dans les délais prescrits et selon le modèle spécifié dans la section A-I/7 du Code STCW, les renseignements qui peuvent être exigés en vertu du Code au sujet des autres mesures qu'elle a prises pour donner pleinement et entièrement effet à la Convention.

2. Lorsque des renseignements complets, tels que prescrits à l'article IV et dans la section A-I/7 du Code STCW ont été reçus et confirment qu'il est donné pleinement et entièrement effet aux dispositions de la Convention, le Secrétaire général doit soumettre un rapport à cet effet au Comité de la sécurité maritime.

3. Une fois que le Comité de la sécurité maritime a confirmé, conformément aux procédures qu'il a adoptées, que les renseignements communiqués montrent qu'il est donné pleinement et entièrement effet aux dispositions de la Convention:

- .1 il recense les Parties en question; et
- .2 d'autres Parties sont habilitées, sous réserve des dispositions des règles I/4 et I/10, à accepter en principe que les brevets délivrés par les Parties visées au paragraphe 3.1 ou en leur nom sont conformes aux dispositions de la Convention.

## Règle I/8

*Normes de qualité*

1. Chaque Partie doit s'assurer que:
  - .1 conformément aux dispositions de la section A-I/8 du Code STCW, toutes les activités de formation, d'évaluation des compétences, de délivrance des brevets et des visas et de revalidation exercées par des entités ou organismes non gouvernementaux sous son autorité font l'objet d'un contrôle continu dans le cadre d'un système de normes de qualité afin de garantir la réalisation d'objectifs définis y compris ceux concernant les qualifications et l'expérience des instructeurs et des évaluateurs; et
  - .2 lorsque des entités ou organismes gouvernementaux s'acquittent de ces activités, il doit y avoir un système de normes de qualité.
2. Chaque Partie doit aussi s'assurer qu'une évaluation est périodiquement effectuée conformément aux dispositions de la section A-I/8 du Code STCW par des personnes qualifiées qui ne se livrent pas elles-mêmes aux activités en question.
3. Les renseignements relatifs à l'évaluation prescrite au paragraphe 2 doivent être communiqués au Secrétaire général.

## Règle I/9

*Normes d'aptitude physique - Délivrance et enregistrement des brevets*

1. Chaque Partie doit fixer les normes auxquelles doivent satisfaire les gens de mer en matière d'aptitude physique, notamment en ce qui concerne l'acuité visuelle et auditive.
2. Chaque Partie doit veiller à ce que des brevets ne soient délivrés qu'aux candidats qui satisfont aux prescriptions de la présente règle.
3. Les candidates aux brevets doivent prouver de manière satisfaisante:
  - .1 leur identité;
  - .2 qu'ils ont au moins l'âge prescrit dans la règle applicable pour l'obtention du brevet demandé;
  - .3 qu'ils satisfont aux normes prévues par la Partie en matière d'aptitude physique, notamment en ce qui concerne l'acuité visuelle et auditive, et qu'ils possèdent un document valide attestant leur aptitude physique, délivré par un médecin dûment qualifié agréé par la Partie;

- .4 qu'ils ont accompli le service en mer et toute formation obligatoire connexe prescrits par les présentes règles pour l'obtention du brevet demandé; et
  - .5 qu'ils satisfont aux normes de compétence prescrites par les présentes règles pour les capacités, les fonctions et les niveaux qui doivent être indiqués sur le visa du brevet.
4. Chaque Partie s'engage à:
- .1 tenir un ou des registres de tous les brevets et visas de capitaine et d'officier et, selon le cas, de matelot qui sont délivrés, sont arrivés à expiration ou ont été revalidés, suspendus, annulés ou déclarés perdus ou détruits, ainsi que des dispenses qui ont été accordées; et
  - .2 fournir des renseignements sur l'état desdits brevets, visas et dispenses aux autres Parties et les compagnies qui demandent à vérifier l'authenticité et la validité des brevets produits par des gens de mer afin de les faire reconnaître en vertu de la règle I/10 ou d'obtenir un emploi à bord d'un navire.

#### Règle I/10

##### *Reconnaissance des brevets*

1. Chaque Administration doit s'assurer que les dispositions de la présente règle sont observées avant de reconnaître, en le visant conformément au paragraphe 5 de la règle I/2, un brevet délivré par une autre Partie ou sous son autorité à un capitaine, un officier ou un opérateur des radiocommunications et que:
  - .1 l'Administration a confirmé, par le biais de toutes les mesures nécessaires qui peuvent comprendre une inspection des installations et procédures, que les prescriptions relatives aux normes de compétence, à la délivrance de brevets et de visas et à la tenue de registres sont pleinement observées; et
  - .2 la Partie intéressée s'est engagée à notifier promptement toutes modifications importantes apportées aux dispositions prévues pour la formation et la délivrance des brevets en application de la Convention.
2. Des mesures doivent être prévues pour s'assurer que les gens de mer qui présentent des brevets délivrés en vertu des dispositions de la règle II/2, III/2 ou III/3, ou en vertu de la règle VII/1 au niveau de direction, tel que défini dans le Code STCW, pour les faire reconnaître ont des connaissances appropriées de la législation maritime de l'Administration se rapportant aux fonctions qu'ils sont autorisés à exercer.

3. Les renseignements fournis et les mesures arrêtées en vertu de la présente règle doivent être communiqués au Secrétaire général conformément aux prescriptions de la règle I/7.

4. Les brevets délivrés par un Etat non Partie ou sous son autorité ne doivent pas être reconnus.

5. Nonobstant les dispositions du paragraphe 5 de la règle I/2, une Administration peut, si les circonstances l'exigent, autoriser des gens de mer à servir à bord d'un navire autorisé à battre son pavillon dans une capacité, autre que celle d'officier radioélectricien ou d'opérateur des radiocommunications, sous réserve des dispositions du Règlement des radiocommunications, pour une période ne dépassant pas trois mois, s'ils sont titulaires d'un brevet approprié et valide qu'une autre Partie a délivré et visé de la manière prescrite pour le service à bord de ses navires mais qui n'a pas encore été visé en vue de le rendre approprié pour le service à bord des navires autorisés à battre le pavillon de l'Administration. Un document prouvant qu'une demande de visa a été soumise à l'Administration doit pouvoir être fourni.

6. Les brevets et les visas délivrés par une Administration en vertu des dispositions de la présente règle pour reconnaître un brevet ou pour attester la reconnaissance d'un brevet délivré par une autre Partie ne doivent pas être utilisés pour solliciter à nouveau la reconnaissance de brevets auprès d'une autre Administration.

#### Règle I/11

##### *Revalidation des brevets et certificats*

1. Tout capitaine, tout officier et tout opérateur des radiocommunications qui est titulaire d'un brevet ou d'un certificat délivré ou reconnu en vertu de tout chapitre de la Convention autre que le chapitre VI, et qui sert en mer ou a l'intention de reprendre du service en mer après une période à terre doit, pour pouvoir continuer à être reconnu apte au service en mer, être tenu, à des intervalles ne dépassant pas cinq ans de:

- .1 satisfaire aux normes d'aptitude physique prescrites par la règle I/9; et
- .2 prouver le maintien de sa compétence professionnelle conformément à la section A-I/11 du Code STCW.

2. Tout capitaine, tout officier ou tout opérateur des radiocommunications doit, pour continuer de servir en mer à bord de navires pour lesquels une formation spéciale a été prescrite à l'échelle internationale, suivre avec succès la formation pertinente approuvée.

3. Chaque Partie doit comparer les normes de compétence qu'elle exigeait des candidats aux brevets délivrés avant le 1er février 2002 à celles qui sont spécifiées dans la partie A du Code STCW pour l'obtention du brevet approprié et déterminer s'il est nécessaire d'exiger que les titulaires de ces brevets reçoivent une formation appropriée pour la remise à niveau et l'actualisation de leurs connaissances ou que leurs compétences soient évaluées.

4. La Partie doit, en consultation avec les intéressés, assurer ou encourager la mise au point d'un ensemble de cours de remise à niveau et d'actualisation des connaissances, tels que prévus dans la section A-I/11 du Code STCW.

5. Aux fins de mettre à jour les connaissances des capitaines, des officiers et des opérateurs des radiocommunications, chaque Administration doit faire en sorte que le texte des modifications récemment apportées aux règles nationales et internationales relatives à la sauvegarde de la vie humaine en mer et à la protection du milieu marin soit mis à la disposition des navires autorisés à battre son pavillon.

#### Règle I/12

##### *Utilisation de simulateurs*

1. Les normes de fonctionnement et autres dispositions de la section A-I/12, ainsi que les autres prescriptions de la partie A du Code STCW concernant tout brevet pertinent, doivent être observées pour ce qui est:

- .1 de toute la formation obligatoire sur simulateur;
- .2 de toute évaluation de la compétence prescrite par la partie A du Code STCW qui se fait sur simulateur; et
- .3 de toute démonstration faite sur simulateur pour prouver le maintien des compétences prescrite par la partie A du Code STCW.

2. Les simulateurs installés ou mis en service avant le 1er février 2002 peuvent être dispensés de satisfaire pleinement aux normes de fonctionnement mentionnées au paragraphe 1, à la discrétion de la Partie intéressée.

#### Règle I/13

##### *Déroulement des essais*

1. Les présentes règles n'empêchent pas une Administration de permettre aux navires autorisés à battre son pavillon de participer à des essais.

2. Aux fins de la présente règle, le terme «essai» désigne une expérience ou une série d'expériences, exécutée sur une période limitée et pouvant impliquer l'utilisation de systèmes automatisés ou intégrés, qui vise à évaluer d'autres méthodes possibles pour exécuter des tâches particulières ou pour satisfaire à des arrangements particuliers prescrits par la présente Convention, lesquelles offriraient au moins le même degré de sécurité et de prévention de la pollution que ce qui est prévu par les présentes règles.

3. L'Administration autorisant des navires à participer à des essais doit veiller à ce qu'ils soient effectués d'une manière assurant au moins le même degré de sécurité et de prévention de la pollution que ce qui est prévu par les présentes règles. Ces essais doivent être effectués conformément aux directives adoptées par l'Organisation.

4. Les caractéristiques de ces essais doivent être communiquées à l'Organisation dès que possible mais pas moins de six mois avant la date à laquelle ces essais doivent commencer. L'Organisation diffuse ces caractéristiques à toutes les Parties.

5. Les résultats des essais autorisés en vertu du paragraphe 1 et les recommandations que peut formuler l'Administration au vu de ces résultats doivent être communiqués à l'Organisation qui diffuse ces résultats et recommandations à toutes les Parties.

6. Toute Partie qui a une objection contre des essais particuliers autorisés conformément à la présente règle devrait communiquer cette objection à l'Organisation dès que possible. L'Organisation communique les détails de cette objection à toutes les Parties.

7. Une Administration qui a autorisé un essai doit respecter les objections reçues d'autres Parties concernant cet essai, en demandant aux navires autorisés à battre son pavillon de ne pas procéder à l'essai alors qu'ils naviguent dans les eaux d'un Etat côtier qui a communiqué son objection à l'Organisation.

8. Une Administration qui conclut, à la suite d'un essai, qu'un système particulier offrira au moins le même degré de sécurité et de prévention de la pollution que ce qui est prévu dans les présentes règles peut autoriser les navires battant son pavillon à continuer d'utiliser un tel système indéfiniment, sous réserve que les conditions ci-après soient remplies:

- .1 après avoir soumis les résultats de l'essai conformément au paragraphe 5, l'Administration doit communiquer les détails de cette autorisation, en identifiant spécifiquement les navires pouvant bénéficier de l'autorisation, à l'Organisation qui diffuse ces renseignements à toutes les Parties;

- .2 tout système dont l'utilisation a été autorisée en vertu du présent paragraphe doit être exploité conformément aux directives élaborées par l'Organisation, de la même façon qu'au cours d'un essai;
- .3 l'exploitation d'un tel système doit respecter toutes les objections reçues d'autres Parties conformément au paragraphe 7, dans la mesure où ces objections n'ont pas été retirées; et
- .4 un système dont l'exploitation a été autorisée en vertu du présent paragraphe ne peut être utilisé que jusqu'à ce que le Comité de la sécurité maritime ait déterminé s'il y a lieu ou non de modifier la Convention et, dans l'affirmative, si l'exploitation du système devrait être suspendue ou continuer à être autorisée avant l'entrée en vigueur de l'amendement.

9. A la demande d'une Partie, le Comité de la sécurité maritime fixe la date à laquelle il examine les résultats de l'essai et prend les décisions appropriées.

#### Règle I/14

##### *Responsabilités des compagnies*

1. Chaque Administration doit, conformément aux dispositions de la section A-I/14, tenir les compagnies responsables de l'affectation de gens de mer à un service à bord de leurs navires conformément aux dispositions de la présente Convention et elle doit exiger que chaque compagnie s'assure que:
  - .1 tous les gens de mer affectés à l'un quelconque de ses navires sont titulaires d'un brevet approprié conformément aux dispositions de la Convention et tel que prévu par l'Administration;
  - .2 ses navires sont dotés d'effectifs satisfaisant aux prescriptions applicables de l'Administration concernant les effectifs de sécurité;
  - .3 les documents et renseignements concernant tous les gens de mer employés à bord de ses navires sont tenus à jour et aisément disponibles, et qu'ils comprennent, sans toutefois s'y limiter, des documents et renseignements sur l'expérience de ces gens de mer, leur formation, leur aptitude physique et leur compétence pour l'exercice des tâches qui leur ont été assignées;
  - .4 les gens de mer qu'elle affecte à l'un quelconque de ses navires sont familiarisés avec leurs tâches spécifiques et avec les dispositifs, les installations, le matériel, les procédures et les caractéristiques du navire se rapportant aux tâches qui leur incombent à titre régulier ou en cas d'urgence; et
  - .5 les effectifs du navire peuvent efficacement coordonner leurs activités en cas d'urgence et dans l'exercice des fonctions essentielles pour la sécurité ou pour la prévention ou l'atténuation de la pollution.



## Règle I/15

*Dispositions transitoires*

1. Jusqu'au 1er février 2002, une Partie peut continuer à délivrer, reconnaître et viser des brevets conformément aux dispositions de la présente Convention qui s'appliquaient immédiatement avant le 1er février 1997 dans le cas de gens de mer qui ont commencé un service en mer approuvé, un programme d'enseignement et de formation approuvé ou un cours de formation approuvé avant le 1er août 1998.

2. Jusqu'au 1er février 2002, une Partie peut continuer à renouveler et à revalider des brevets et des visas conformément aux dispositions de la présente Convention qui s'appliquaient immédiatement avant le 1er février 1997.

3. Lorsque, en application de la règle I/11, une Partie procède à la redélivrance ou proroge la validité de brevets qu'elle avait délivrés à l'origine en vertu des dispositions de la Convention qui s'appliquaient immédiatement avant le 1er février 1997, elle peut, à sa discrétion, remplacer les limites de jauge indiquées sur les certificats d'origine comme suit:

- .1 les mots «d'une jauge brute égale ou supérieure à 200 tonneaux» peuvent être remplacés par «d'une jauge brute égale ou supérieure à 500»; et
- .2 les mots «d'une jauge brute égale ou supérieure à 1600 tonneaux» peuvent être remplacés par «d'une jauge brute égale ou supérieure à 3000».

## CHAPITRE II

## CAPITAINE ET SERVICE «PONT»

## Règle II/1

*Prescriptions minimales obligatoires pour la délivrance du brevet d'officier chargé du quart à la passerelle à bord de navires d'une jauge brute égale ou supérieure à 500*

1. Tout officier chargé du quart à la passerelle servant à bord d'un navire de mer d'une jauge brute égale ou supérieure à 500 doit être titulaire d'un brevet approprié.

2. Tout candidat à un brevet doit:
  - .1 avoir 18 ans au moins;
  - .2 avoir accompli un service en mer approuvé d'une durée d'un an au moins dans le cadre d'un programme de formation approuvé com-

- portant une formation à bord qui satisfasse aux prescriptions de la section A-II/1 du Code STCW et soit consignée dans un registre de formation approuvé, ou sinon, avoir accompli un service en mer approuvé d'une durée de trois ans au moins;
- .3 avoir exécuté pendant une période de six mois au moins au cours du service en mer requis, des tâches liées au quart à la passerelle sous la supervision du capitaine ou d'un officier qualifié;
  - .4 satisfaire aux prescriptions applicables des règles du chapitre IV pour l'exécution des tâches assignées en matière de radiocommunications conformément au Règlement des radiocommunications; et
  - .5 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-II/1 du Code STCW.

#### Règle II/2

##### *Prescriptions minimales obligatoires pour la délivrance des brevets de capitaine et de second de navires d'une jauge brute égale ou supérieure à 500*

##### *Capitaine et second de navires d'une jauge brute égale ou supérieure à 3000*

1. Tout capitaine et tout second d'un navire de mer d'une jauge brute égale ou supérieure à 3000 doit être titulaire d'un brevet approprié.
2. Tout candidat à un brevet doit:
  - .1 satisfaire aux prescriptions relatives à la délivrance du brevet d'officier chargé du quart à la passerelle à bord des navires d'une jauge brute égale ou supérieure à 500 et avoir accompli en cette qualité, un service en mer approuvé d'une durée;
    - .1.1 de 12 mois au moins pour le brevet de second; et
    - .1.2 de 36 mois au moins pour le brevet de capitaine, toutefois cette durée peut être réduite à 24 mois au moins lorsque le candidat a effectué en tant que second un service en mer d'une durée de 12 mois au moins; et
  - .2 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-II/2 du Code STCW pour les capitaines et les seconds de navires d'une jauge brute égale ou supérieure à 3000.

##### *Capitaine et second de navires d'une jauge brute comprise entre 500 et 3000*

3. Tout capitaine et tout second d'un navire de mer d'une jauge brute comprise entre 500 et 3000 doit être titulaire d'un brevet approprié.

4. Tout candidat à un brevet doit:
  - .1 pour le brevet de second, satisfaire aux prescriptions applicables aux officiers chargés du quart à la passerelle à bord des navires d'une jauge brute égale ou supérieure à 500;
  - .2 pour le brevet de capitaine satisfaire aux prescriptions applicables aux officiers chargés du quart à la passerelle à bord des navires d'une jauge brute égale ou supérieure à 500 et avoir accompli en cette qualité, un service en mer approuvé d'une durée de 36 mois au moins; toutefois, cette durée peut être réduite à 24 mois au moins lorsque le candidat a effectué en tant que second un service en mer d'une durée de 12 mois au moins; et
  - .3 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-II/2 du Code STCW pour les capitaines et les seconds de navires d'une jauge brute comprise entre 500 et 3000.

#### Règle II/3

*Prescriptions minimales obligatoires pour la délivrance des brevets d'officier chargé du quart à la passerelle et de capitaine de navires d'une jauge brute inférieure à 500*

##### *Navires n'effectuant pas de voyages à proximité du littoral*

1. Tout officier chargé du quart à la passerelle qui sert à bord d'un navire de mer d'une jauge brute inférieure à 500 n'effectuant pas de voyages à proximité du littoral doit être titulaire d'un brevet approprié pour les navires d'une jauge brute égale ou supérieure à 500.

2. Tout capitaine qui sert à bord d'un navire de mer d'une jauge brute inférieure à 500 n'effectuant pas de voyages à proximité du littoral doit être titulaire d'un brevet approprié pour servir en tant que capitaine à bord des navires d'une jauge brute comprise entre 500 et 3000.

##### *Navires effectuant des voyages à proximité du littoral*

###### *Officier chargé du quart à la passerelle*

3. Tout officier chargé du quart à la passerelle à bord d'un navire de mer d'une jauge brute inférieure à 500 effectuant des voyages à proximité du littoral doit être titulaire d'un brevet approprié.

4. Tout candidat au brevet d'officier chargé du quart à la passerelle à bord d'un navire de mer d'une jauge brute inférieure à 500 effectuant des voyages à proximité du littoral doit:

- .1 avoir 18 ans ou moins;
- .2 avoir accompli:

- .2.1 une formation spéciale comportant un service en mer approprié d'une durée adéquate, tel que prescrit par l'Administration, ou
- .2.2 un service en mer approuvé d'une durée de trois ans au moins, en tant que membre du service «pont»; et
- .3 satisfaire aux prescriptions applicables des règles du chapitre IV pour l'exécution des tâches assignées en matière de radiocommunications conformément au Règlement des radiocommunications; et
- .4 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-II/3 du Code STCW pour les officiers chargés du quart à la passerelle à bord de navires d'une jauge brute inférieure à 500 effectuant des voyages à proximité du littoral.

#### *Capitaine*

5. Tout capitaine qui sert à bord d'un navire de mer d'une jauge brute inférieure à 500 effectuant des voyages à proximité du littoral doit être titulaire d'un brevet approprié.

6. Tout candidat au brevet de capitaine d'un navire de mer d'une jauge brute inférieure à 500 effectuant des voyages à proximité du littoral doit:

- .1 avoir 20 ans au moins;
- .2 avoir accompli un service en mer approuvé d'une durée de 12 mois au moins en tant qu'officier chargé du quart à la passerelle; et
- .3 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-II/3 du Code STCW pour les capitaines de navires d'une jauge brute inférieure à 500 effectuant des voyages à proximité du littoral.

#### 7. Exemptions

L'Administration, si elle juge que les dimensions d'un navire et les conditions du voyage sont telles que l'application de la totalité des prescriptions de la présente règle et de la section A-II/3 du Code STCW ne serait ni raisonnable ni possible dans la pratique, peut, dans la mesure appropriée, exempter le capitaine et l'officier chargé du quart à la passerelle à bord d'un tel navire ou d'une telle catégorie de navires, de certaines de ces prescriptions en tenant compte de la sécurité de tous les navires pouvant se trouver dans les mêmes eaux.

## Règle II/4

*Prescriptions minimales obligatoires pour la délivrance des brevets de matelot faisant partie d'une équipe de quart à la passerelle*

1. Tout matelot faisant partie d'une équipe de quart à la passerelle à bord d'un navire d'une jauge brute égale ou supérieure à 500, autre que les matelots en cours de formation et ceux qui s'acquittent lors du quart de fonctions non spécialisées, doit être dûment breveté pour accomplir ces fonctions.

2. Tout candidat à un brevet doit:

.1 avoir 16 ans au moins;

.2 avoir accompli:

.1 un service en mer approuvé comportant une formation et une expérience pendant six mois au moins; ou

.2 une formation spéciale, soit avant l'embarquement, soit à bord d'un navire, comportant un service en mer d'une durée approuvée de deux mois au moins; et

.3 satisfaisant à la norme de compétence spécifiée dans la section A-II/4 du Code STCW.

3. Le service en mer, la formation et l'expérience requis en vertu des alinéas 2.2.1 et 2.2.2 doivent se rapporter aux fonctions liées au quart à la passerelle et comprendre l'exécution de tâches sous la supervision directe du capitaine, de l'officier chargé du quart à la passerelle ou d'un matelot qualifié.

4. La Partie peut considérer que les gens de mer satisfont aux prescriptions de la présente régie s'ils ont servi, dans la capacité appropriée, dans le service «pont» pendant une période d'un an au moins au cours des cinq années qui ont précédé l'entrée en vigueur de la Convention à l'égard de cette Partie.

## CHAPITRE III

## SERVICE «MACHINE»

## Règle III/1

*Prescriptions minimales obligatoires pour la délivrance des brevets d'officier chargé du quart machine dans une chambre des machines gardée ou d'officier mécanicien de service dans une chambre des machines exploitée sans présence permanente de personnel*

1. Tout officier chargé du quart machine dans une chambre des machines gardée ou tout officier mécanicien de service dans une cham-

bre des machines exploitée sans présence permanente de personnel à bord d'un navire de mer dont l'appareil de propulsion principal a une puissance propulsive égale ou supérieure à 750 kW doit être titulaire d'un brevet approprié.

2. Tout candidat à un brevet doit:
  - .1 avoir 18 ans au moins;
  - .2 avoir servi en mer pendant au moins six mois dans le service «machine» conformément à la section A-III/1 du Code STCW; et
  - .3 avoir suivi pendant au moins 30 mois un enseignement et une formation approuvés comportant une formation à bord qui soit consignée dans un registre de formation approuvé et satisfaisant aux normes de compétence spécifiées dans la section A-III/1 du Code STCW.

#### Règle III/2

*Prescriptions minimales obligatoires pour la délivrance des brevets de chef mécanicien et de second mécanicien de navires dont l'appareil de propulsion principal a une puissance propulsive égale ou supérieure à 3 000 kW*

1. Tout chef mécanicien et tout second mécanicien d'un navire de mer dont l'appareil de propulsion principal a une puissance propulsive égale ou supérieure à 3 000 kW doit être titulaire d'un brevet approprié.
2. Tout candidat à un brevet doit:
  - .1 satisfaire aux prescriptions relatives à la délivrance du brevet d'officier chargé du quart machine et:
    - .1.1 pour le brevet de second mécanicien, avoir accompli un service en mer approuvé d'une durée de 12 mois au moins, en tant qu'officier mécanicien adjoint ou officier mécanicien;
    - .1.2 pour le brevet de chef mécanicien, avoir accompli un service en mer approuvé d'une durée de 36 mois au moins, dont 12 mois au moins en tant qu'officier mécanicien exerçant des responsabilités avec les qualifications requises pour servir en tant que second mécanicien; et
  - .2 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-III/2 du Code STCW.

## Règle III/3

*Prescriptions minimales obligatoires pour la délivrance des brevets de chef mécanicien et de second mécanicien de navires dont l'appareil de propulsion principal a une puissance propulsive comprise entre 750 kW et 3000 kW*

1. Tout chef mécanicien et tout second mécanicien d'un navire de mer dont l'appareil de propulsion principal a une puissance propulsive comprise entre 750 kW et 3 000 kW doit être titulaire d'un brevet approprié.
2. Tout candidat à un brevet doit:
  - .1 satisfaire aux prescriptions relatives à la délivrance du brevet d'officier chargé du quart machine et:
    - .1.1 pour le brevet de second mécanicien, avoir accompli un service en mer approuvé d'une durée de 12 mois au moins, en tant qu'officier mécanicien adjoint ou officier mécanicien;
    - .1.2 pour le brevet de chef mécanicien, avoir accompli un service en mer approuvé d'une durée de 24 mois au moins, dont 12 mois au moins avec les qualifications requises pour servir en tant que second mécanicien; et
  - .2 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-III/3 du Code STCW.
3. Tout officier mécanicien qualifié pour servir en tant que second mécanicien à bord de navires dont l'appareil de propulsion principal a une puissance propulsive égale ou supérieure à 3 000 kW peut servir en tant que chef mécanicien à bord de navires dont l'appareil de propulsion principal a une puissance propulsive inférieure à 3 000 kW, à condition qu'il puisse justifier d'au moins 12 mois de service en mer approuvé en qualité d'officier mécanicien exerçant des responsabilités et que son brevet soit visé en conséquence.

## Règle III/4

*Prescriptions minimales obligatoires pour la délivrance des brevets de matelot faisant partie d'une équipe de quart dans une chambre des machines gardée ou de matelot de service dans une chambre des machines exploitée sans présence permanente de personnel*

1. Tout matelot faisant partie d'une équipe de quart dans une chambre des machines ou tout matelot de service dans une chambre des machines exploitée sans présence permanente de personnel à bord d'un navire de mer dont l'appareil de propulsion principal a une puissance propulsive égale ou supérieure à 750 kW, autre que les matelots en cours

de formation et ceux qui s'acquittent de fonctions non spécialisées doit être dûment breveté pour accomplir ces fonctions.

2. Tout candidat à un brevet doit:

- .1 avoir 16 ans au moins;
- .2 avoir accompli:
  - .2.1 un service en mer approuvé comportant une formation et une expérience pendant six mois au moins; ou
  - .2.2 une formation spéciale, soit avant l'embarquement, soit à bord d'un navire, comportant un service en mer d'une durée approuvée de deux mois au moins; et
- .3 satisfaire à la norme de compétence spécifiée dans la section A-III/4 du Code STCW.

3. Le service en mer, la formation et l'expérience requis en vertu des alinéas 2.2.1 et 2.2.2 doivent se rapporter aux fonctions liées au quart dans la machine et comprendre l'exécution de tâches sous la supervision directe d'un officier mécanicien qualifié ou d'un matelot qualifié.

4. La Partie peut considérer que les gens de mer satisfont aux prescriptions de la présente règle s'ils ont servi, dans la capacité appropriée, dans le service «machine» pendant une période d'un an au moins au cours des cinq années qui ont précédé l'entrée en vigueur de la Convention à l'égard de cette Partie.

#### CHAPITRE IV

##### RADIOCOMMUNICATIONS ET PERSONNEL CHARGE DES RADIOCOMMUNICATIONS

###### Note explicative

Les dispositions obligatoires relatives à la veille radioélectrique sont énoncées dans le Règlement des radiocommunications et dans la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée. Les dispositions relatives à l'entretien du matériel radioélectrique sont énoncées dans la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée, et dans les directives adoptées par l'Organisation.

###### Règle IV/1

###### *Application*

1. Sous réserve des dispositions du paragraphe 3, les dispositions du présent chapitre s'appliquent au personnel chargé des radiocommunications à bord des navires exploités dans le cadre du système mondial de



détresse et de sécurité en mer (SMDSM) de la manière prescrite par la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée.

2. Jusqu'au 1er février 1999, le personnel chargé des radiocommunications à bord d'un navire satisfaisant aux dispositions de la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer en vigueur immédiatement avant le 1er février 1992, doit satisfaire aux dispositions de la Convention internationale de 1978 sur les normes de formation des gens de mer, de délivrance des brevets et de veille en vigueur avant le 1er décembre 1992.

3. Le personnel chargé des radiocommunications à bord des navires qui ne sont pas obligés de satisfaire aux dispositions du chapitre IV de la Convention SOLAS relatives au SMDSM n'est pas tenu de satisfaire aux dispositions du présent chapitre. Le personnel chargé des radiocommunications à bord de ces navires est néanmoins tenu de satisfaire au Règlement des radiocommunications. L'Administration doit s'assurer que les certificats appropriés exigés par le Règlement des radiocommunications sont délivrés à ce personnel ou reconnus en ce qui les concerne.

#### Règle IV/2

##### *Prescriptions minimales obligatoires pour la délivrance des certificats du personnel chargé des radiocommunications dans le cadre du SMDSM*

1. Toute personne chargée des radiocommunications ou effectuant des tâches relatives aux radiocommunications à bord d'un navire tenu de participer au SMDSM doit être titulaire d'un certificat approprié ayant trait au SMDSM, délivré ou reconnu par l'Administration conformément aux dispositions du Règlement des radiocommunications.

2. En outre, tout candidat à un certificat en vertu de la présente règle, appelé à servir à bord d'un navire qui est tenu d'être muni, en vertu de la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée, d'une installation radioélectrique doit:

- .1 avoir 18 ans au moins; et
- .2 avoir suivi un enseignement et une formation approuvés et satisfaire à la norme de compétence spécifiée dans la section A-IV/2 du Code STCW.

## CHAPITRE V

## FORMATION SPECIALE REQUISE POUR LE PERSONNEL DE CERTAINS TYPES DE NAVIRES

## Règle V/1

*Prescriptions minimales obligatoires concernant la formation et les qualifications des capitaines, des officiers et des matelots des navires-citernes*

1. Les officiers et les matelots chargés de tâches et de responsabilités spécifiques en ce qui concerne la cargaison ou le matériel connexe à bord des navires-citernes doivent avoir suivi à terre un cours approuvé de lutte contre l'incendie en sus de la formation prescrite à la règle VI/1 et:

- .1 avoir accompli un service en mer approuvé de trois mois au moins à bord d'un navire-citerne afin d'acquérir une connaissance adéquate des pratiques opérationnelles sûres; ou
- .2 avoir suivi un cours approuvé de familiarisation avec les navires-citernes portant au moins sur les domaines énumérés pour ce cours dans la section A-V/I du Code STCW;

toutefois, l'Administration peut accepter une période de service en mer supervisé, inférieure à ce qui est prescrit à l'alinéa 1, à condition que:

- .3 la durée de la période ainsi acceptée ne soit pas inférieure à un mois;
- .4 le navire-citerne ait une jauge brute inférieure à 3 000;
- .5 la durée de chaque voyage qu'effectue le navire-citerne pendant la période ne dépasse pas 72 heures; et
- .6 les caractéristiques d'exploitation du navire-citerne et le nombre de voyages et d'opérations de chargement et de déchargement effectués pendant la période, permettent d'acquérir le même niveau de connaissances et d'expérience.

2. Les capitaines, les chefs mécaniciens, les seconds et les seconds mécaniciens, ainsi que toutes les personnes qui sont directement responsables du chargement, du déchargement et des précautions à prendre pendant le transfert ou la manutention des cargaisons, doivent, en plus des prescriptions des alinéas 1.1 ou 1.2:

- .1 avoir acquis une expérience se rapportant aux tâches qu'ils doivent assumer sur le type de navire-citerne à bord duquel ils servent; et
- .2 avoir suivi un programme approuvé de formation spécialisée portant au moins sur les domaines énumérés dans la section A-V/I du Code STCW, qui se rapportent aux tâches qu'ils doivent assumer sur le pétrolier, navire-citerne pour produits chimiques ou navire-citerne pour gaz liquéfiés à bord duquel ils servent.

3. Pendant les deux années qui suivent l'entrée en vigueur de la Convention à l'égard d'une Partie, on peut considérer que les gens de mer satisfont aux prescriptions de l'alinéa 2.2 s'ils ont servi, dans la capacité appropriée, à bord du type de navire-citerne en question pendant une période d'un an au moins au cours des cinq années précédentes.

4. Les Administrations doivent veiller à ce qu'un certificat approprié soit délivré aux capitaines et aux officiers qui possèdent les qualifications prescrites au paragraphe 1 ou 2, selon le cas, ou à ce qu'un brevet ou certificat existant soit dûment visé. Tout matelot qui a les qualifications prescrites doit être titulaire d'un certificat pertinent.

#### Règle V/2

##### *Prescriptions minimales obligatoires concernant la formation et les qualifications des capitaines, des officiers, des matelots et des autres membres du personnel des navires rouliers à passagers*

1. La présente règle s'applique aux capitaines, officiers, matelots et autre personnel servant à bord des navires rouliers à passagers qui effectuent des voyages internationaux. Les Administrations décident si ces prescriptions doivent s'appliquer au personnel servant à bord des navires rouliers à passagers qui effectuent des voyages nationaux.

2. Avant d'être affectés des tâches à bord d'un navire roulier à passagers, les gens de mer doivent avoir reçu la formation prescrite aux paragraphes 4 à 8 ci-dessous qui correspond à leur capacité, leurs tâches et leurs responsabilités.

3. Les gens de mer qui sont tenus d'avoir reçu la formation prescrite aux paragraphes 4, 7 et 8 ci-dessous doivent, à des intervalles ne dépassant pas cinq ans, suivre une formation appropriée pour la remise à niveau de leurs connaissances.

4. Les capitaines, officiers et autres membres du personnel désignés, sur le rôle d'appel, pour aider les passagers dans des situations d'urgence à bord de navires rouliers, à passagers doivent avoir suivi, la formation à l'encadrement des passagers spécifiée au paragraphe 1 de la section A-V/2 du Code STCW.

5. Les capitaines, officiers et autres membres du personnel auxquels des tâches et des responsabilités spécifiques sont confiées à bord de navires rouliers à passagers doivent avoir suivi la formation de familiarisation spécifiée au paragraphe 2 de la section A-V/2 du Code STCW.

6. Le personnel assurant directement un service aux passagers dans des locaux réservés aux passagers à bord de navires rouliers à passagers doit avoir suivi la formation en matière de sécurité spécifiée au paragraphe 3 de la section A-V/2 du Code STCW.

7. Les capitaines, les seconds, les chefs mécaniciens, les seconds mécaniciens et toute personne désignée comme étant directement responsable de l'embarquement et du débarquement des passagers, du chargement, du déchargement ou du saisissage de la cargaison ou de la fermeture des ouvertures de coque à bord de navires rouliers à passagers doivent avoir suivi une formation approuvée en matière de sécurité des passagers et de la cargaison et d'intégrité de la coque, telle que spécifiée au paragraphe 4 de la section A-V/2 du Code STCW.

8. Les capitaines, les seconds, les chefs mécaniciens, les seconds mécaniciens et toute personne responsable de la sécurité des passagers dans des situations d'urgence à bord de navires rouliers à passagers doivent avoir suivi une formation approuvée en matière de gestion des situations de crise et de comportement humain, telle que spécifiée au paragraphe 5 de la section A-V/2 du Code STCW.

9. Les Administrations doivent veiller à ce qu'un document attestant la formation reçue soit délivré à toute personne qui possède les qualifications requises en vertu de la présente règle.

## CHAPITRE VI

### FONCTIONS RELATIVES AUX SITUATIONS D'URGENCE, A LA PREVENTION DES ACCIDENTS DU TRAVAIL, AUX SOINS MEDICAUX ET A LA SURVIE

#### Règle VI/1

##### *Prescriptions minimales obligatoires pour la familiarisation et la formation et l'enseignement de base en matière de sécurité pour tous les gens de mer*

Les gens de mer doivent être familiarisés et recevoir une formation ou un enseignement de base en matière de sécurité conformément à la section A-VI/1 du Code STCW et doivent satisfaire à la norme de compétence appropriée qui y est spécifiée.

## Règle VI/2

*Prescriptions minimales obligatoires pour la délivrance du certificat d'aptitude à l'exploitation des embarcations et radeaux de sauvetage, des canots de secours et des canots de secours rapides*

1. Tout candidat à un certificat d'aptitude à l'exploitation des embarcations et radeaux de sauvetage et des canots de secours autres que les canots de secours rapides doit:
  - .1 avoir 18 ans au moins;
  - .2 avoir accompli un service en mer approuvé d'une durée de 12 mois au moins ou avoir suivi un cours de formation approuvé et avoir accompli un service en mer approuvé d'une durée de six mois au moins; et
  - .3 satisfaire à la norme de compétence pour l'obtention d'un certificat d'aptitude à l'exploitation des embarcations et radeaux de sauvetage et des canots de secours spécifiée aux paragraphes 1 à 4 de la section A-VI/2 du Code STCW.
2. Tout candidat à un certificat d'aptitude à l'exploitation des canots de secours rapides doit:
  - .1 être titulaire d'un certificat d'aptitude à l'exploitation des embarcations et radeaux de sauvetage et des canots de secours autres que les canots de secours rapides;
  - .2 avoir suivi un cours de formation approuvé, et
  - .3 satisfaire à la norme de compétence pour l'obtention d'un certificat d'aptitude à l'exploitation des canots de secours rapides spécifiée aux paragraphes 5 à 8 de la section A-VI/2 du Code STCW.

## Règle VI/3

*Prescriptions minimales obligatoires pour la formation aux techniques avancées de lutte contre l'incendie*

1. Les gens de mer désignés pour diriger les opérations de lutte contre l'incendie doivent avoir suivi avec succès une formation avancée aux techniques de lutte contre l'incendie qui mette notamment l'accent sur l'organisation, la stratégie et le commandement, conformément aux dispositions de la section A-VI/3 du Code STCW et ils doivent satisfaire à la norme de compétence qui y est spécifiée.
2. Si la formation aux techniques avancées de lutte contre l'incendie n'est pas incluse dans les qualifications requises pour l'obtention du brevet pertinent, il doit être délivré, selon le cas, un certificat spécial ou une attestation spéciale indiquant que le titulaire a suivi un cours de formation aux techniques avancées de lutte contre l'incendie.

## Règle VI/4

*Prescriptions minimales obligatoires en matière de soins médicaux d'urgence et de soins médicaux*

1. Les gens de mer désignés pour dispenser des soins médicaux d'urgence à bord d'un navire doivent satisfaire à la norme de compétence spécifiée pour les soins médicaux d'urgence aux paragraphes 1 à 3 de la section A-VI/4 du Code STCW.
2. Les gens de mer désignés pour assumer la responsabilité des soins médicaux à bord d'un navire doivent satisfaire à la norme de compétence spécifiée pour les soins médicaux aux paragraphes 4 à 6 de la section A-VI/4 du Code STCW.
3. Si la formation en matière de soins médicaux d'urgence ou de soins médicaux n'est pas incluse dans les qualifications requises pour l'obtention du brevet pertinent, il doit être délivré, selon le cas, un certificat spécial ou une attestation spéciale indiquant que le titulaire a suivi un cours de formation en matière de soins médicaux d'urgence ou de soins médicaux.

## CHAPITRE VII

## AUTRES BREVETS

## Règle VII/1

*Délivrance d'autres brevets*

1. Nonobstant les prescriptions relatives à la délivrance des brevets qui sont énoncées aux chapitres II et III de la présente annexe, les Parties peuvent choisir de délivrer ou d'autoriser que soient délivrés des brevets autres que ceux mentionnés dans les règles de ces chapitres, pourvu que soient réunies les conditions suivantes:
  - .1 les fonctions et les niveaux de responsabilité correspondants qui sont mentionnés sur les brevets et les visas doivent être choisis parmi ceux qui sont indiqués dans les sections A-II/1, A-II/2, A-II/3, A-II/4, A-III/1, A-III/2, A-III/3, A-III/4 et A-IV/2 du Code STCW et doivent leur être identiques;
  - .2 les candidats doivent avoir suivi un enseignement et une formation approuvés et satisfaire aux normes de compétence prescrites dans les sections pertinentes du Code STCW et énoncées dans la section A-VII/1 de ce code pour les fonctions et niveaux mentionnés sur les brevets et les visas;
  - .3 les candidats doivent avoir accompli un service en mer approuvé, approprié pour l'exécution des fonctions et pour les niveaux men-

tionnés sur le brevet. La durée minimale du service en mer doit être équivalente à la durée du service en mer prescrite aux chapitres II et III de la présente annexe. Toutefois, la durée minimale du service en mer ne doit pas être inférieure à celle prescrite dans la section A-VII/2 du Code STCW;

- .4 les candidats à un brevet qui sont appelés à exercer la fonction de navigation au niveau opérationnel doivent satisfaire aux prescriptions applicables des règles du chapitre IV pour l'exécution des tâches assignées en matière de radiocommunications conformément au Règlement des radiocommunications; et
- .5 les brevets doivent être délivrés conformément aux prescriptions de la règle I/9 et aux dispositions du chapitre VII du Code STCW.

2. Il ne doit pas être délivré de brevets en vertu du présent chapitre sans que la Partie ait communiqué à l'Organisation les renseignements visés à l'article IV et à la règle I/7.

#### Règle VII/2

##### *Délivrance de brevets aux gens de mer*

1. Tous les gens de mer qui exercent une fonction ou un groupe de fonctions spécifiés dans les tableaux A-II/1, A-II/2, A-II/3 ou A-II/4 du chapitre II ou dans les tableaux A-III/1, A-III/2 ou A-III/4 du chapitre III ou A-IV/2 du chapitre IV du Code STCW doivent être titulaires d'un brevet approprié.

#### Règle VII/3

##### *Principes régissant la délivrance d'autres brevets*

1. Toute Partie qui choisit de délivrer ou d'autoriser la délivrance d'autres brevets doit veiller à ce que les principes suivant soient observés:

- .1 un système de délivrance d'autres brevets ne doit être mis en oeuvre que s'il assure un degré de sécurité en mer et a des effets, en ce qui concerne la prévention de la pollution, équivalant au moins à ceux qui sont assurés par les autres chapitres; et
- .2 les dispositions prises pour la délivrance d'autres brevets en vertu du présent chapitre doivent prévoir l'interchangeabilité de ces brevets et de ceux délivrés en vertu des autres chapitres.

2. Le principe de l'interchangeabilité des brevets visé au paragraphe 1 doit garantir que:

- .1 les gens de mer brevetés en vertu des chapitres II et/ou III et les gens de mer brevetés en vertu du chapitre VII peuvent servir à bord de navires dont l'organisation de bord est soit de type classique, soit d'un autre type, et
  - .2 les gens de mer ne sont pas formés pour une organisation de bord particulière d'une façon qui porte atteinte à l'exercice de leurs aptitudes ailleurs.
3. Pour la délivrance de tout brevet en vertu des dispositions du présent chapitre, les principes suivants doivent être pris en compte;
- .1 la délivrance d'autres brevets ne doit pas être utilisée en soi pour:
    - .1 réduire le nombre de membres de l'équipage à bord;
    - .2 abaisser l'intégrité de la profession ou dévaloriser les compétences professionnelles des gens de mer, ou
    - .3 justifier l'attribution des tâches combinées des officiers chargés du quart à la machine et à la passerelle à un seul et même titulaire de brevet pendant un quart déterminé quel qu'il soit; et
  - .2 la personne qui a le commandement du navire doit être désignée comme étant le capitaine; la mise en oeuvre d'un système de délivrance d'autres brevets ne doit pas porter atteinte à la position et à l'autorité légales du capitaine et des autres personnes.
4. Les principes énoncés aux paragraphes 1 et 2 de la présente règle ont pour objet de garantir le maintien de la compétence des officiers de pont et des officiers mécaniciens.

## CHAPITRE VIII

### VEILLE

#### Règle VIII/1

##### *Aptitude au service*

Chaque Administration doit, en vue d'empêcher la fatigue:

- .1 établir et faire appliquer des périodes de repos en ce qui concerne le personnel chargé du quart; et
- .2 exiger que les systèmes de quart soient organisés de telle sorte que l'efficacité de tous les membres du personnel de quart ne soit pas compromise par la fatigue et que les tâches soient conçues de telle manière que les membres du premier quart au début d'un voyage et ceux des quarts suivants qui assurent la relève soient suffisamment reposés et aptes au service à tous autres égards.



## Règle VIII/2

*Organisation de la veille et principes à observer*

1. Les Administrations doivent appeler l'attention des compagnies, des capitaines, des chefs mécaniciens et de tout le personnel de quart sur les prescriptions, les principes et les recommandations figurant dans le Code STCW qui doivent être observés pour assurer qu'un quart ou des quarts permanents, appropriés compte tenu des circonstances et conditions régnautes, sont continuellement tenus en toute sécurité à bord de tous les navires de mer.

2. Les Administrations doivent exiger que le capitaine de tout navire veille à ce que le quart ou les quarts soient organisés de manière à pouvoir être tenus en toute sécurité, compte tenu des circonstances et conditions régnautes et que sous son autorité générale:

- .1 les officiers chargés du quart à la passerelle soient responsables de la sécurité de la navigation du navire pendant leur période de service lors de laquelle ils doivent être physiquement présents en tout temps, sur la passerelle de navigation ou à un endroit qui y est directement relié, tel que la chambre des cartes ou le poste de commande de la passerelle;
  - .2 les opérateurs des radiocommunications soient responsables du maintien d'une veille radioélectrique permanente sur les fréquences appropriées pendant leur période de service;
  - .3 les officiers chargés du quart machine, tel que défini dans le Code STCW, sous l'autorité du chef mécanicien, soient immédiatement disponibles et prêts à se rendre dans les locaux de machines et, s'il le faut, soit physiquement présents dans ces locaux pendant les périodes où ils exercent cette responsabilité; et
  - .4 un service de garde ou des services de garde appropriés et efficaces soient assurés en tout temps à des fins de sécurité, pendant que le navire est au mouillage ou amarré et, si le navire transporte une cargaison dangereuse, il soit pleinement tenu compte, lors de l'organisation de ce service de garde ou de ces services de garde, de la nature, de la quantité, de l'emballage et de l'arrimage de la cargaison dangereuse, ainsi que de toutes conditions particulières régnautes à bord, à flot ou à terre.
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De vertaling van resolutie 1 luidt als volgt:

**Bijlage 1 bij de Slotakte van de Conferentie**

**Resolutie I**

**Aanneming van wijzigingen in de Bijlage bij het Internationaal Verdrag betreffende de normen voor zeevarenden inzake opleiding, diplomering en wachtdienst, 1978**

De Conferentie,

Onder verwijzing naar artikel XII(1)(b) van het Internationaal Verdrag betreffende de normen voor zeevarenden inzake opleiding, diplomering en wachtdienst, 1978, (hierna te noemen „het Verdrag”), aangaande de procedure voor het wijzigen van het Verdrag door een conferentie van Partijen,

Bestudeerd hebbende wijzigingen in de bijlage bij het Verdrag, die voorgesteld en rondgezonden zijn aan de Leden van de Organisatie en aan alle Partijen bij het Verdrag, en die de bestaande tekst van de bijlage bij het Verdrag moeten vervangen.

1. Neemt aan, in overeenstemming met artikel XII(I)(b)(ii) van het Verdrag, de wijzigingen in de bijlage bij het Verdrag, waarvan de tekst staat vermeld in de Bijlage bij deze resolutie;

2. Bepaalt, in overeenstemming met artikel XII(I)(a)(vii) 2 van het Verdrag, dat de bijgaande wijzigingen worden geacht te zijn aanvaard op 1 augustus 1996, tenzij vóór die datum meer dan een derde van de Partijen bij het Verdrag dan wel Partijen waarvan de gezamenlijke koopvaardijvloot ten minste vijftig procent vormen van de bruto tonnage van de wereldkoopvaardijvloot van schepen van 100 bruto-registerton of meer, de Secretaris-Generaal hebben meegedeeld dat zij bezwaar aantekenen tegen de wijzigingen.

3. Nodigt de Partijen uit er nota van te nemen dat in overeenstemming met artikel XII(I)(a)(ix) van het Verdrag, de bijgaande wijzigingen na hun aanvaarding in overeenstemming met punt 2 hierboven, in werking treden op 1 februari 1997.

**Bijlage****Wijzigingen in de bijlage bij het Internationaal Verdrag  
betreffende de normen voor zeevarenden inzake opleiding,  
diplomering en wacht dienst, 1978**

## HOOFDSTUK I

## ALGEMENE BEPALINGEN

## Voorschrift I/1

*Begripsomschrijvingen*

1. Tenzij uitdrukkelijk anders is bepaald, wordt bij de toepassing van het Verdrag verstaan onder:
  - .1 „Voorschriften”: de voorschriften die in de Bijlage bij het Verdrag zijn opgenomen;
  - .2 „Goedgekeurd”: goedgekeurd door de Partij in overeenstemming met deze voorschriften;
  - .3 „Kapitein”: degene die het bevel voert over het schip;
  - .4 „Officier”: een lid van de bemanning niet zijnde de kapitein, die als zodanig is aangewezen op grond van nationale wetten of voorschriften, of, indien zulks niet is geschied, op grond van collectieve arbeidsovereenkomsten of gebruik;
  - .5 „Dekofficier”: een gediplomeerd scheepsofficier die bevoegd is in overeenstemming met de bepalingen van Hoofdstuk II van het Verdrag;
  - .6 „Eerste stuurman”: de officier die in rang volgt op de kapitein en op wie het bevel over het schip komt te rusten, indien de kapitein daartoe niet in staat is;
  - .7 „Scheepswerktuigkundige”: een gediplomeerd scheepsofficier die bevoegd is in overeenstemming met de bepalingen van hoofdstuk III van het Verdrag;
  - .8 „Hoofdwerktuigkundige”: de scheepswerktuigkundige die het hoogst in rang is en die verantwoordelijk is voor de werktuiglijke voortstuwing en de werking en het onderhoud van de werktuiglijke en elektrische installaties van het schip;
  - .9 „Tweede scheepswerktuigkundige”: de scheepswerktuigkundige die in rang volgt op de hoofdwerktuigkundige en op wie de verantwoordelijkheid voor de werktuiglijke voortstuwing en de werking en het onderhoud van de werktuiglijke en elektrische installaties van het schip komt te rusten indien de hoofdwerktuigkundige daartoe niet in staat is;
  - .10 „Leerling-scheepswerktuigkundige”: een persoon die een opleiding volgt tot scheepswerktuigkundige en als zodanig op grond van nationale wetten of voorschriften is aangewezen;

- .11 „Radio-operator”: een persoon die in het bezit is van een passend diploma, afgegeven of erkend door de Administratie in overeenstemming met de bepalingen van het Radioreglement;
- .12 „Scheepsgezel”: een lid van de bemanning van het schip, niet zijnde de kapitein of een officier;
- .13 „Reizen langs de kust”: reizen in de nabijheid van een Partij zoals door die Partij is omschreven;
- .14 „Voortstuwingsvermogen”: het maximum nominale totaalvermogen in kilowatts van alle voortstuwingsmachines van het schip, dat vermeld is in de zeebrief van het schip of in een ander officieel document;
- .15 „Radiowerkzaamheden”: naar gelang het geval, de luisterwacht alsmede het technisch onderhoud en technische reparatiewerkzaamheden overeenkomstig de bepalingen van het Radioreglement, het Internationaal Verdrag voor de beveiliging van mensenlevens op zee en, ter beoordeling van de onderscheiden Administraties, de desbetreffende aanbevelingen van de Organisatie;
- .16 „Olietanker”: een schip gebouwd en gebruikt voor het vervoer van aardolie en aardolieproducten in bulk;
- .17 „Chemicaliëntanker”: een schip gebouwd of verbouwd en gebruikt voor het vervoer in bulk van vloeibare produkten opgenomen in hoofdstuk 17 van de International Bulk Chemical Code (Internationale Code inzake vervoer van chemicaliën in bulk);
- .18 „Vloeibaar-gastanker”: een schip gebouwd of verbouwd en gebruikt voor het vervoer van vloeibare gassen of andere produkten opgenomen in hoofdstuk 19 van de International Gas Carrier Code (Internationale Code inzake het vervoer van vloeibaar gas);
- .19 „Ro-ro-passagiersschip”: een passagiersschip met ruimten voor ro-ro-vracht of ruimten van bijzondere aard zoals omschreven in het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, zoals gewijzigd;
- .20 „Maand”: een kalendermaand of een periode van dertig dagen, samengesteld uit perioden van minder dan één maand;
- .21 „STCW-Code”: het Reglement inzake opleiding, diplomering en wachtdienst van zeevarenden, zoals aangenomen bij resolutie 2 van de conferentie van 1995, en eventuele wijzigingen daarop;
- .22 „Functie”: een aantal taken, plichten en verantwoordelijkheden, zoals genoemd in de STCW-Code, die vereist zijn voor de bedrijfsvoering aan boord, de beveiliging van mensenlevens op zee of de bescherming van het mariene milieu;
- .23 „Maatschappij”: de eigenaar van het schip of elke andere organisatie of persoon, zoals de beheerder of degene die het schip leeg chartert (zonder bemanning), die de verantwoordelijkheid voor de bedrijfsvoering aan boord van de eigenaar van het schip heeft overgenomen en die deze verantwoordelijkheid aanvaardt en ermee

- instemt alle verplichtingen en verantwoordelijkheden op zich te nemen die door deze voorschriften aan de maatschappij worden opgelegd;
- .24 „Passend vaarbevoegdheidsbewijs”: een vaarbevoegdheidsbewijs afgegeven en voorzien van een officiële verklaring in overeenstemming met de bepalingen van deze bijlage, dat de rechtmatige houder ervan het recht geeft werkzaam te zijn in de daarin beschreven hoedanigheid en de daarbij behorende functies te vervullen op het daarin omschreven verantwoordelijkheidsniveau op een schip van het desbetreffende type, en met de desbetreffende tonnage, het desbetreffende vermogen en de desbetreffende hoofdvoortstuwingsinstallatie, tijdens de desbetreffende zeereis;
- .25 „Werkzaamheden op zee”: het dienst doen aan boord van een schip voorzover van belang voor de afgifte van een vaarbevoegdheidsbewijs of een ander bewijs van beroepsbekwaamheid.
2. Deze voorschriften zijn aangevuld met de dwingende bepalingen vervat in deel A van de STCW-Code en:
- .1 elke verwijzing naar een vereiste in een voorschrift houdt tevens een verwijzing naar het overeenkomstige artikel in deel A van de STCW-Code in;
  - .2 bij het toepassen van deze voorschriften moeten de ermee samenhangende richtlijnen en verklarende opmerkingen, vervat in deel B van de STCW-Code, zoveel mogelijk in aanmerking worden genomen teneinde wereldwijd tot een meer uniforme toepassing van de bepalingen van het Verdrag te komen;
  - .3 wijzigingen in deel A van de STCW-Code dienen te worden aangenomen, van kracht te worden en uitgevoerd te worden volgens de bepalingen van artikel XII van het Verdrag die betrekking hebben op de procedure betreffende wijzigingen die op de bijlage van toepassing is; en
  - .4 deel B van de STCW-Code dient te worden gewijzigd door de Maritieme Veiligheidscommissie overeenkomstig haar reglement van orde.
3. De verwijzingen in artikel VI van het Verdrag naar „de Administratie” en „de Administratie die het vaarbevoegdheidsbewijs afgeeft” mogen niet zo geïnterpreteerd worden dat zij een Partij beletten om vaarbevoegdheidsbewijzen af te geven of van officiële verklaringen te voorzien volgens de bepalingen van deze voorschriften.

## Voorschrift I/2

*Vaarbevoegdheidsbewijzen en officiële verklaringen*

1. Vaarbevoegdheidsbewijzen dienen gesteld te zijn in de officiële taal of talen van het land dat ze afgeeft. Indien die taal niet het Engels is, dient de tekst van een vertaling in het Engels vergezeld te gaan.

2. Met betrekking tot radio-operators mogen Partijen:

- .1 de aanvullende kennis, vereist volgens de desbetreffende voorschriften, opnemen in het onderzoek inzake de afgifte van een diploma in overeenstemming met het Radioreglement; of
- .2 een afzonderlijk diploma afgeven waarin is vermeld dat de houder de aanvullende kennis, vereist volgens de desbetreffende voorschriften, bezit.

3. De officiële verklaring die volgens artikel VI van het Verdrag vereist is om de afgifte van een vaarbevoegdheidsbewijs te bevestigen, mag slechts worden afgegeven, indien aan alle vereisten van het Verdrag is voldaan.

4. Ter beoordeling van een Partij mogen officiële verklaringen zijn opgenomen in het model voor het vaarbevoegdheidsbewijs dat wordt afgegeven zoals voorgeschreven in artikel A-I/2 van de STCW-Code. In dat geval moet het gebruikte model overeenkomen met het model dat is beschreven in artikel A-I/2, lid 1. Indien zij op andere wijze worden afgegeven, dienen de officiële verklaringen overeen te komen met het model dat in het tweede lid van dat artikel is beschreven.

5. Een Administratie die een vaarbevoegdheidsbewijs erkent krachtens voorschrift I/10 dient een officiële verklaring af te geven teneinde die erkenning te bevestigen. De officiële verklaring mag slechts worden afgegeven, indien aan alle vereisten van het Verdrag is voldaan. De gebruikte officiële verklaring dient overeen te komen met het model dat in het derde lid van artikel A-I/2 van de STCW-Code is beschreven.

6. De officiële verklaringen bedoeld in lid 3, lid 4 en lid 5:

- .1 mogen als afzonderlijke documenten worden afgegeven;
- .2 dienen alle van een eigen, uniek nummer te worden voorzien, doch aan de officiële verklaringen die de afgifte van een vaarbevoegdheidsbewijs bevestigen, kan hetzelfde nummer worden toegekend als aan het betrokken vaarbevoegdheidsbewijs, op voorwaarde dat dit nummer niet voor enig ander document is gebruikt; en
- .3 verliezen hun geldigheid zodra het desbetreffende vaarbevoegdheidsbewijs ongeldig wordt of wordt ingetrokken, tijdelijk

ingetrokken of ongeldig wordt verklaard door de Partij die dit heeft afgegeven en, in elk geval uiterlijk vijf jaar na de datum van afgifte.

7. De hoedanigheid waarin de houder van een vaarbevoegdheidsbewijs gerechtigd is te varen dient te worden vermeld in de officiële verklaring in bewoordingen, gelijk aan die welke gebezigd worden in de vereisten inzake het veilig bemannen die de Administratie hanteert.

8. De Administraties mogen een model gebruiken dat afwijkt van het model dat in artikel A-I/2 van de STCW-Code is weergegeven, op voorwaarde dat de vereiste gegevens ten minste in Romeinse letters en Arabische cijfers zijn vermeld, daarbij rekening houdend met de varianten die volgens artikel A-I/2 zijn toegestaan.

9. Behoudens de bepalingen van voorschrift I/10, vijfde lid, dient elk op grond van het Verdrag vereiste vaarbevoegdheidsbewijs in origineel beschikbaar te zijn aan boord van het schip waarop de houder vaart.

#### Voorschrift I/3

##### *Beginselen inzake reizen langs de kust*

1. De Partijen stellen bij de aanduiding van reizen langs de kust ter toepassing van het Verdrag aan de zeevarenden, dienst doende aan boord van de schepen die gerechtigd zijn tot het voeren van de vlag van een andere Partij, en dienst doende op zodanige reizen, geen eisen wat opleiding, opgedane ervaring of diplomering betreft, op een wijze die leidt tot strengere eisen voor die zeevarenden dan voor de zeevarenden, dienst doende aan boord van schepen die gerechtigd zijn haar eigen vlag te voeren. In geen geval stellen de bedoelde Partijen eisen met betrekking tot zeevarenden, dienst doende aan boord van schepen die gerechtigd zijn tot het voeren van de vlag van een andere Partij die strenger zijn dan die van het Verdrag met betrekking tot schepen die niet voor kustreizen worden gebruikt.

2. Met betrekking tot schepen die gerechtigd zijn de vlag te voeren van een Partij en die regelmatig worden gebruikt voor reizen langs de kust in de nabijheid van de kust van een andere Partij, stelt de Partij waarvan het schip gerechtigd is de vlag te voeren, voor op zodanige schepen dienst doende zeevarenden eisen vast inzake opleiding, opgedane ervaring en diplomering, die ten minste gelijk zijn aan die van de Partij in de nabijheid van wier kust het schip wordt gebruikt, mits deze de eisen van het Verdrag met betrekking tot schepen die niet voor reizen langs de kust worden gebruikt niet te boven gaan. Zeevarenden, dienst doende op een schip waarvan de reis zich verder uitstrekt dan datgene wat door een Partij als een reis langs de kust is aangeduid, en dat zich

begeeft in wateren die niet onder die beschrijving vallen, dienen aan de van toepassing zijnde eisen van vakbekwaamheid van het Verdrag te voldoen.

3. Een Partij kan aan een schip dat gerechtigd is haar vlag te voeren de voordelen van de bepalingen van het Verdrag inzake reizen langs de kust toekennen, wanneer het regelmatig in de nabijheid van de kust van een Staat die geen Partij is, wordt gebruikt voor reizen langs de kust als aangeduid door de Partij.

4. De Partijen die reizen langs de kust aanduiden, in overeenstemming met de bepalingen van dit voorschrift, dienen volgens de eisen van voorschrift I/7 de gegevens betreffende de aangenomen bepalingen aan de Secretaris-Generaal toe te zenden.

5. Geen enkele bepaling van dit voorschrift beperkt op enigerlei wijze de rechtsbevoegdheid van de Staten, ongeacht of zij al dan niet Partij zijn bij het Verdrag.

#### Voorschrift I/4

##### *Controleprocedures*

1. De controle, uitgeoefend door een bevoegde functionaris krachtens artikel X, is beperkt tot de volgende gevallen:

- .1 onderzoek overeenkomstig artikel X, eerste lid, of alle aan boord dienst doende zeevarenden, die volgens het Verdrag in het bezit dienen te zijn van een vaarbevoegdheidsbewijs, een geldig vaarbevoegdheidsbewijs of een geldige dispensatie bezitten, of een schriftelijk bewijs kunnen overleggen waaruit blijkt dat een aanvraag om een officiële verklaring bij de Administratie is ingediend in overeenstemming met voorschrift I/10, vijfde lid;
- .2 onderzoek dat het aantal en de vaarbevoegdheidsbewijzen van de aan boord dienst doende zeevarenden voldoen aan de vereisten inzake het veilig bemannen die de Administratie hanteert; en
- .3 vaststellen, in overeenstemming met artikel A-I/4 van de STCW-Code, van de geschiktheid van de zeevarenden van het schip om te voldoen aan de normen inzake wacht dienst, als vastgesteld in het Verdrag, indien het aannemelijk is dat niet aan die normen wordt voldaan, omdat zich een van de volgende feiten heeft voorgedaan:
  - .3.1 het schip is bij een aanvaring betrokken geweest, is aan de grond gelopen of is gestrand, of
  - .3.2 er heeft lozing van stoffen vanuit het schip plaatsgevonden terwijl het varende was, voor anker lag of aangemeerd was, welke lozing onrechtmatig is krachtens internationale verdragen, of



- .3.3 er is met het schip gemanoeuvreerd op een foutieve of onveilige wijze, waarbij de door de Organisatie aangenomen routingsmaatregelen of veilige navigatiemethoden en -procedures niet in acht zijn genomen, of
  - .3.4 de bedrijfsvoering aan boord geschiedt anderszins op zodanige wijze dat het schip een gevaar vormt voor personen, zaken of het milieu.
2. Onder tekortkomingen die geacht mogen worden een gevaar te vormen voor personen, zaken of het milieu vallen:
- .1 zeevarenden die een vaarbevoegdheidsbewijs dienen te hebben, zijn niet in het bezit van een passend vaarbevoegdheidsbewijs of een geldige dispensatie en kunnen geen schriftelijk bewijs overleggen dat een aanvraag om een officiële verklaring bij de Administratie is ingediend in overeenstemming met voorschrift I/10, vijfde lid;
  - .2 er is niet voldaan aan de vereisten inzake het veilig bemannen die de Administratie hanteert;
  - .3 de regelingen voor de wacht op de brug of de wacht in de machiniekamer voldoen niet aan de door de Administratie voor het schip vastgestelde eisen;
  - .4 afwezigheid tijdens een wacht van een persoon die bevoegd is de uitrusting te bedienen die noodzakelijk is voor een veilige navigatie, veilige radioverbindingen of het voorkomen van verontreiniging van het zeewater; en
  - .5 het niet in staat zijn aan het begin van de reis en bij de daaropvolgende aflossende wachten te zorgen voor personeel dat voldoende rust heeft genoten en anderszins in goede conditie is om dienst te doen.
3. Het niet herstellen van de tekortkomingen, bedoeld in het tweede lid, in zoverre de Partij die de controle uitvoert, heeft vastgesteld dat zij een gevaar vormen voor personen, zaken of het milieu, vormen de enige gronden krachtens artikel X waarop een Partij een schip kan aanhouden.

#### Voorschrift I/5

##### *Nationale bepalingen*

1. Elke Partij dient werkwijzen en procedures vast te stellen voor het onpartijdig onderzoek van elke gerapporteerde onbekwaamheid, die, en elk handelen of nalaten dat een directe bedreiging kan vormen voor de veiligheid van mensenlevens of zaken op zee of voor het mariene milieu, van de zijde van houders van vaarbevoegdheidsbewijzen of van officiële verklaringen afgegeven door die Partij met betrekking tot de vervulling van hun taken zoals in hun vaarbevoegdheidsbewijzen omschreven, en

voor het intrekken, tijdelijk intrekken en ongeldig verklaren van zulke vaarbevoegdheidsbewijzen op dergelijke gronden en ter voorkoming van fraude.

2. Elke Partij dient straffen of disciplinaire maatregelen voor te schrijven voor de gevallen waarin de bepalingen van haar nationale wetgeving ter uitvoering van het Verdrag niet nageleefd worden met betrekking tot schepen die gerechtigd zijn haar vlag te voeren of zeevarenden die door die Partij naar behoren zijn voorzien van een vaarbevoegdheidsbewijs.

3. In het bijzonder dienen zulke straffen en disciplinaire maatregelen opgelegd en ten uitvoer gebracht te worden in gevallen waarin:

- .1 een maatschappij of een kapitein een persoon heeft aangesteld die geen vaarbevoegdheidsbewijs bezit zoals volgens het Verdrag vereist is;
- .2 een kapitein heeft toegestaan dat een functie of dienst in een hoedanigheid die krachtens deze voorschriften verricht dient te worden door een persoon die in het bezit is van een passend vaarbevoegdheidsbewijs, wordt verricht door een persoon die niet in het bezit is van het vereiste vaarbevoegdheidsbewijs, een geldige dispensatie of een schriftelijk bewijs zoals vereist door voorschrift I/10, vijfde lid; of
- .3 een persoon middels fraude of vervalste documenten een aanstelling heeft gekregen om een functie te vervullen of dienst te doen in een hoedanigheid, waarvan de uitoefening of vervulling volgens deze voorschriften dient te geschieden door een persoon die in het bezit is van een vaarbevoegdheidsbewijs of een dispensatie.

4. Een Partij binnen wier rechtsgebied zich een maatschappij of een persoon bevindt van wie mag worden aangenomen dat zij of hij verantwoordelijk is voor of kennis draagt van een kennelijk geval van niet nakomen van het Verdrag, zoals bepaald in het derde lid, dient alle mogelijke medewerking te verlenen aan een Partij die haar op de hoogte stelt van haar voornemen uit hoofde van haar rechtsbevoegdheid gerechtelijke stappen te ondernemen.

#### Voorschrift I/6

##### *Opleiding en beoordeling*

Elke Partij dient ervoor te zorgen dat:

1. de opleiding en beoordeling van zeevarenden, zoals bepaald in het Verdrag, geschieden, onder toezicht worden gehouden en gecontroleerd in overeenstemming met de bepalingen van sectie A-I/6 van de STCW-Code; en
2. degenen die verantwoordelijk zijn voor de opleiding en beoordeling van de vakbekwaamheid van zeevarenden, zoals bepaald in het Ver-

drag, een bevoegdheid bezitten in overeenstemming met de bepalingen van sectie A-I/6 van de STCW-Code die past bij de aard en het niveau van de desbetreffende opleiding en beoordeling.

#### Voorschrift I/7

##### *Toezending van gegevens*

1. Behalve de informatie, waarvan de toezending dient te geschieden volgens de bepalingen van artikel IV, dienen alle Partijen binnen de daarvoor voorgeschreven termijn en op de wijze als beschreven in sectie A-I/7 van de STCW-Code, alle andere in de STCW-Code voorgeschreven gegevens betreffende stappen die de Partij heeft genomen om aan het Verdrag volledige uitvoering te geven, ter kennis van de Secretaris-Generaal te brengen.

2. Wanneer volledige gegevens zoals voorgeschreven in artikel IV en sectie A-I/7 van de STCW-Code ontvangen zijn en die gegevens bevestigen dat aan de bepalingen van het Verdrag volledige uitvoering is gegeven, dient de Secretaris-Generaal hierover verslag uit te brengen aan de Maritieme Veiligheidscommissie.

3. Na de hierop volgende bevestiging door de Maritieme Veiligheidscommissie, in overeenstemming met de door de Commissie aangenomen procedures, dat de toegezonden gegevens aantonen dat aan de bepalingen van het Verdrag volledige uitvoering is gegeven:

- .1 dient de Maritieme Veiligheidscommissie aan te geven welke Partijen het betreft; en
- .2 hebben andere Partijen in principe het recht, met inachtneming van de bepalingen van de voorschriften I/4 en I/10, te aanvaarden dat vaarbevoegdheidsbewijzen, afgegeven door of namens de ingevolge het derde lid, sub 1, aangegeven Partijen, aan de bepalingen van het Verdrag voldoen.

#### Voorschrift I/8

##### *Kwaliteitsnormen*

1. Elke Partij dient ervoor te zorgen dat:
  - .1 overeenkomstig de bepalingen van sectie A-I/8 van de STCW-Code, alle werkzaamheden betreffende opleiding, beoordeling van vakbekwaamheid, vaarbevoegdheidsverlening, officiële verklaring en verlenging van geldigheid die uitgevoerd worden door niet-gouvernementele instanties of door lichamen die onder hun gezag vallen voortdurend door een systeem van kwaliteitsbewaking worden getoetst teneinde te garanderen dat de vastgestelde doelstellin-

gen verwezenlijkt worden, met inbegrip van die welke betrekking hebben op de bevoegdheden en opgedane ervaring van instructeurs en beoordelaars; en

.2 indien overheidsinstanties of -lichamen deze werkzaamheden verrichten, er een systeem van kwaliteitsbewaking aanwezig is.

2. Elke Partij dient er tevens voor te zorgen dat in overeenstemming met de bepalingen van sectie A-I/8 van de STCW-Code periodiek een evaluatie plaatsvindt door bevoegde personen die zelf niet bij de werkzaamheden betrokken zijn.

3. Gegevens betreffende de evaluatie die op grond van het tweede lid vereist is, dienen aan de Secretaris-Generaal toegezonden te worden.

#### Voorschrift I/9

##### *Medische normen – Afgifte en registratie van vaarbevoegdheidsbewijzen*

1. Elke Partij dient normen vast te stellen om te verzekeren dat zeevarenden uit medisch oogpunt geschikt zijn, in het bijzonder wat betreft hun gezichts-en gehoororgaan.

2. Elke Partij dient ervoor te zorgen dat vaarbevoegdheidsbewijzen slechts worden afgegeven aan kandidaten die aan de eisen van dit voorschrift voldoen.

3. Kandidaten die een vaarbevoegdheidsbewijs wensen te verkrijgen, dienen een bewijs te overleggen:

- .1 van hun identiteit;
- .2 dat hun leeftijd niet lager is dan die welke is voorgeschreven in het voorschrift voor het aangevraagde vaarbevoegdheidsbewijs;
- .3 dat zij voldoen aan de normen voor medische geschiktheid, in het bijzonder wat betreft hun gezichts-en gehoororgaan, die door de Partij zijn vastgesteld en in het bezit zijn van een geldig document waaruit blijkt dat zij uit een medisch oogpunt geschikt zijn, afgegeven door een bevoegde arts die door de Partij erkend is;
- .4 dat zij de diensttijd buitengaats en een eventuele verplichte opleiding die door deze voorschriften voor het aangevraagde vaarbevoegdheidsbewijs vereist zijn, voltooid hebben; en
- .5 dat zij voldoen aan de normen van vakbekwaamheid die door deze voorschriften worden voorgeschreven voor de hoedanigheden, functies en niveaus die vermeld moeten zijn in de officiële verklaring bij het vaarbevoegdheidsbewijs.

4. Elke Partij verbindt zich ertoe:

- .1 een register of registers bij te houden van alle vaarbevoegdheidsbewijzen en officiële verklaringen van kapiteins en officieren en, waar van toepassing, scheepsgezellen, die zijn afgegeven, zijn verlopen of zijn vernieuwd, ingetrokken, tijdelijk ingetrokken of ongeldig verklaard of als vermist of in het ongerede geraakt zijn gemeld en tevens van dispensaties die verleend zijn; en
- .2 gegevens beschikbaar te stellen betreffende de status van dergelijke vaarbevoegdheidsbewijzen, officiële verklaringen en dispensaties aan andere Partijen en maatschappijen die om bevestiging van de echtheid en geldigheid verzoeken van vaarbevoegdheidsbewijzen die aan hen worden overgelegd door zeevarenden die erkenning van hun vaarbevoegdheidsbewijzen aanvragen op grond van voorschrift I/10 of werk zoeken aan boord van een schip.

#### Voorschrift I/10

##### *Erkenning van vaarbevoegdheidsbewijzen*

1. Elke Administratie moet ervoor zorgen dat de bepalingen van dit voorschrift in acht worden genomen, zodat een vaarbevoegdheidsbewijs, afgegeven door of op gezag van een andere Partij aan een kapitein, officier of radio-operator, erkend kan worden door de afgifte van een officiële verklaring in overeenstemming met voorschrift I/2, vijfde lid, en dat:
  - .1 de Administratie, door het nemen van alle noodzakelijke maatregelen, die mede controle van installaties en procedures kunnen inhouden, heeft vastgesteld dat volledig aan de eisen inzake normen van vakbekwaamheid, afgifte van vaarbevoegdheidsbewijzen en officiële verklaringen en het bijhouden van dossiers is voldaan; en
  - .2 met de betrokken Partij wordt afgesproken dat alle belangrijke wijzigingen in de regelingen inzake opleiding en vaarbevoegdheidsverlening die gehanteerd wordt bij het naleven van het Verdrag, onverwijld gemeld zullen worden.
2. Er moeten maatregelen getroffen worden om te verzekeren dat zeevarenden die vaarbevoegdheidsbewijzen voor erkenning aanbieden, welke afgegeven zijn krachtens de bepalingen van de voorschriften II/2, III/2 of III/3, of afgegeven ingevolge VII/1 op managementniveau, zoals omschreven in de STCW-Code, de vereiste kennis bezitten van de scheepvaartwetgeving van de Administratie met betrekking tot de functies die zij mogen vervullen.
3. De overgelegde gegevens en de maatregelen waarover overeenstemming is bereikt volgens dit voorschrift moeten overeenkomstig de voorwaarden van voorschrift I/7 aan de Secretaris-Generaal worden toegezonden.

4. Vaarbevoegdheidsbewijzen die door of onder het gezag van een staat die geen Partij is, zijn uitgegeven mogen niet erkend worden.

5. Onverminderd voorschrift I/2, vijfde lid, mag een Administratie, indien de omstandigheden dit vereisen, een zeevarende toestaan om dienst te doen in een hoedanigheid, niet zijnde die van radio-officier of radio-operator (tenzij het Radioreglement hierin voorziet) gedurende een periode van ten hoogste drie maanden aan boord van een schip dat gerechtigd is haar vlag te voeren, indien hij een vereist en geldig vaarbevoegdheidsbewijs, voorzien van een officiële verklaring, bezit dat door een andere Partij is afgegeven, zoals vereist voor gebruik aan boord van schepen van die andere Partij, maar dat nog niet van een officiële verklaring is voorzien dat dit tot een vereist vaarbevoegdheidsbewijs maakt voor het dienst doen aan boord van schepen die gerechtigd zijn de vlag van de Administratie te voeren. Er moet schriftelijk bewijs voorhanden zijn om aan te tonen dat de aanvraag om een officiële verklaring bij de Administratie is ingediend.

6. Vaarbevoegdheidsbewijzen en officiële verklaringen afgegeven door een Administratie op grond van de bepalingen van dit voorschrift ter erkenning van of ter bevestiging van de erkenning van een vaarbevoegdheidsbewijs afgegeven door een andere Partij, mogen niet gebruikt worden voor het verkrijgen van verdere erkenning door een andere Administratie.

#### Voorschrift I/11

##### *Verlenging van de geldigheid van vaarbevoegdheidsbewijzen*

1. Van elke kapitein, officier en radio-operator die in het bezit is van een vaarbevoegdheidsbewijs dat is afgegeven of erkend krachtens een hoofdstuk van het Verdrag, uitgezonderd hoofdstuk VI, en die buitengaats dienst doet of van plan is na een periode aan de wal naar zee terug te keren, moet verlangd worden dat hij, teneinde zijn bevoegdheid om buitengaats dienst te doen te behouden, met tussenpozen van ten hoogste vijf jaar:

- .1 aantoont dat hij uit medisch oogpunt geschikt is en aan de normen van voorschrift I/9 voldoet; en
- .2 aantoont dat hij bij voortdurende bevoegd en vakbekwaam is in overeenstemming met sectie A-I/11 van de STCW-Code.

2. Elke kapitein, officier en radio-operator moet om bij voortdurende buitengaats dienst te doen aan boord van schepen waarvoor internationaal bijzondere opleidingseisen overeengekomen zijn, een goedgekeurde desbetreffende opleiding met goed gevolg afsluiten.

3. Elke Partij moet de normen inzake bekwaamheid die aan kandidaten gesteld worden voor vaarbevoegdheidsbewijzen afgegeven voor 1 februari 2002, vergelijken met die welke in deel A van de STCW-Code voor de passende vaarbevoegdheidsbewijzen genoemd zijn, en moet vaststellen of het noodzakelijk is de houders van dergelijke vaarbevoegdheidsbewijzen een passende herhalings- en bijscholingscursus te laten volgen en een beoordeling te laten ondergaan.

4. De Partij moet, in overleg met betrokkenen, een structuur van herhalings- en bijscholingscursussen formuleren of die formulering bevorderen, zoals bepaald in sectie A-I/11 van de STCW-Code.

5. Elke Administratie dient ervoor te zorgen dat voor het up-to-date houden van de kennis van kapiteins, officieren en radio-operators de teksten van de laatste wijzigingen in de nationale en internationale voorschriften inzake de beveiliging van mensenlevens op zee en de bescherming van het mariene milieu, ter beschikking worden gesteld aan de schepen die gerechtigd zijn haar vlag te voeren.

#### Voorschrift I/12

##### *Het gebruik van simulatoren*

1. Aan de functienormen en andere bepalingen, die vermeld zijn in sectie A-I/12 en verdere eisen die in deel A van de STCW-Code worden voorgeschreven met betrekking tot een desbetreffend vaarbevoegdheidsbewijs, moet voldaan worden inzake:

- .1 elke verplichte opleiding waarbij een simulator wordt gebruikt;
- .2 elke beoordeling van vakbekwaamheid vereist krachtens deel A van de STCW-Code die met behulp van een simulator wordt gedaan; en
- .3 elke proeve van bekwaamheid bij voortdurende met behulp van een simulator zoals vereist in deel A van de STCW-Code.

2. Simulatoren die vóór 1 februari 2002 geïnstalleerd of in gebruik genomen worden, kunnen vrijgesteld worden van naleving van de functienormen, waarnaar in het eerste lid wordt verwezen, dit ter beoordeling van de betrokken Partij.

#### Voorschrift I/13

##### *Het houden van experimenten*

1. Deze voorschriften beletten een Administratie niet schepen, gerechtigd tot het voeren van haar vlag, te machtigen aan experimenten deel te nemen.

2. Voor de toepassing van dit voorschrift wordt onder „experiment” verstaan een experiment of een reeks experimenten, uitgevoerd gedurende een bepaalde termijn, die het gebruik van geautomatiseerde of geïntegreerde systemen kunnen omvatten, teneinde alternatieve methoden voor het uitvoeren van bepaalde taken of het voldoen aan bijzondere door het Verdrag voorgeschreven regelingen te evalueren, welke de veiligheid en het voorkomen van verontreiniging in ten minste dezelfde mate als voorgeschreven door deze voorschriften garanderen.

3. De Administratie die schepen machtigt om aan experimenten deel te nemen dient zich ervan te vergewissen dat dergelijke experimenten gemaakt worden op een wijze die de veiligheid en het voorkomen van verontreiniging in ten minste dezelfde mate als voorgeschreven in deze voorschriften garandeert. Dergelijke experimenten dienen te worden uitgevoerd in overeenstemming met de richtlijnen die door de Organisatie zijn aangenomen.

4. Gegevens betreffende dergelijke experimenten dienen zo spoedig mogelijk, maar uiterlijk zes maanden vóór de datum waarop het begin van de experimenten gepland is, aan de Organisatie te worden gemeld. De Organisatie zendt deze gegevens toe aan alle Partijen.

5. De resultaten van experimenten waarvoor krachtens het eerste lid machtiging is verleend en alle aanbevelingen die de Administratie met betrekking tot die resultaten nuttig acht, dienen te worden gemeld aan de Organisatie, die deze resultaten en aanbevelingen aan alle Partijen toezendt.

6. Elke Partij die bezwaar heeft tegen bepaalde experimenten waarvoor in overeenstemming met dit voorschrift machtiging is verleend, moet haar bezwaar zo spoedig mogelijk aan de Organisatie meedelen. De Organisatie zendt de bijzonderheden van het bezwaar toe aan alle Partijen.

7. Een Administratie die voor een experiment machtiging heeft verleend, dient de bezwaren met betrekking tot een dergelijk experiment die van andere Partijen zijn ontvangen, te respecteren door schepen, gerechtigd haar vlag te voeren, op te dragen niet aan een experiment deel te nemen wanneer zij varen in de kustwateren van een Staat die zijn bezwaar aan de Organisatie heeft toegezonden.

8. Een Administratie die op basis van een experiment besluit dat een bepaald systeem de veiligheid en het voorkomen van verontreiniging in ten minste dezelfde mate garandeert als voorgeschreven in deze voorschriften, kan schepen, gerechtigd haar vlag te voeren, machtigen een dergelijk systeem voor onbepaalde tijd te blijven gebruiken, onder de volgende voorwaarden:



- .1 nadat de resultaten van het experiment in overeenstemming met het vijfde lid zijn gemeld, dient de Administratie de bijzonderheden van bedoelde machtiging, met inbegrip van de identiteit van die schepen die in aanmerking komen voor de machtiging mede te delen aan de Organisatie, die deze informatie toezendt aan alle Partijen.
  - .2 alle handelingen waarvoor krachtens dit lid machtiging is verleend, dienen te worden uitgevoerd in overeenstemming met eventuele door de Organisatie ontwikkelde richtlijnen, in dezelfde mate waarin zij gedurende een experiment gelden;
  - .3 dergelijke handelingen dienen alle bezwaren die van andere Partijen zijn ontvangen te respecteren in overeenstemming met het zevende lid, voorzover die bezwaren niet zijn ingetrokken; en
  - .4 een handeling waarvoor krachtens dit lid machtiging is verleend, mag slechts toegestaan worden in afwachting van een besluit van de Maritieme Veiligheidscommissie waarbij wordt bepaald of een wijziging van het Verdrag terecht is, en, in dat geval, of tot opschorting van de handeling dan wel tot voortzetting ervan moet worden besloten, alvorens de wijziging van kracht wordt.
9. De Maritieme Veiligheidscommissie stelt op verzoek van een Partij een datum vast voor de bestudering van de resultaten van het experiment en voor de desbetreffende besluiten.

#### Voorschrift I/14

##### *Verantwoordelijkheden van maatschappijen*

1. Elke Administratie dient, in overeenstemming met de bepalingen van sectie A-I/14, maatschappijen verantwoordelijk te stellen voor de aanstelling van zeevarenden op hun schepen in overeenstemming met de bepalingen van dit Verdrag en dient van elk van deze maatschappijen te eisen dat zij er zorg voor dragen dat:
  - .1 elke aangestelde zeevarende op elk van haar schepen in het bezit is van een vereist vaarbevoegdheidsbewijs in overeenstemming met de bepalingen van het Verdrag en zoals vastgesteld door de Administratie;
  - .2 zij bij het bemannen van haar schepen voldoet aan de vereisten inzake het veilig bemannen die de Administratie hanteert;
  - .3 documentatie en gegevens met betrekking tot alle zeevarenden die op haar schepen tewerkgesteld zijn, bijgehouden worden en direct beschikbaar zijn, en documentatie en gegevens betreffende hun opgedane ervaring, opleiding, geschiktheid uit medisch oogpunt en vakbekwaamheid in de opgedragen taken bevatten, zonder overigens andere gegevens uit te sluiten;
  - .4 zeevarenden na hun aanstelling op een van haar schepen vertrouwd zijn met hun specifieke taken en met alle regelingen, installaties,

uitrusting, procedures en kenmerken van het schip die verband houden met hun taken onder normale omstandigheden of in nood-situaties; en

- .5 de voltallige bemanning van het schip in een noodsituatie en bij het vervullen van functies die van vitaal belang zijn voor de veiligheid of voor het voorkomen of verminderen van verontreiniging, haar werkzaamheden doeltreffend kan coördineren.

#### Voorschrift I/15

##### *Overgangsbepalingen*

1. Tot 1 februari 2002 mag een Partij voortgaan met de afgifte en erkenning van vaarbevoegdheidsbewijzen en de afgifte van officiële verklaringen in overeenstemming met de bepalingen van het Verdrag die onmiddellijk voorafgaande aan 1 februari 1997 van kracht waren met betrekking tot die zeevarenden die hun dienst buitengaats, een goedgekeurde studie en opleidingsprogramma of een goedgekeurde cursus vóór 1 augustus 1998 zijn begonnen.

2. Tot 1 februari 2002 mag een Partij voortgaan met het verlengen van de geldigheid van vaarbevoegdheidsbewijzen en officiële verklaringen in overeenstemming met de bepalingen van het Verdrag die onmiddellijk voorafgaande aan 1 februari 1997 van kracht waren.

3. Wanneer een Partij, overeenkomstig voorschrift I/11, nieuwe vaarbevoegdheidsbewijzen afgeeft of de geldigheid verlengt van vaarbevoegdheidsbewijzen die zijn afgegeven door die Partij krachtens de bepalingen van het Verdrag die onmiddellijk voorafgaande aan 1 februari 1997 van kracht waren, mag de Partij naar eigen goeddunken beperkingen met betrekking tot tonnage die op de oorspronkelijke vaarbevoegdheidsbewijzen vermeld waren, als volgt vervangen:

- .1 „200 brutoregisterton” mag vervangen worden door „500 brutotonnage”; en
- .2 „1.600 brutoregisterton” mag vervangen worden door „3.000 brutotonnage”.

## HOOFDSTUK II

## KAPITEIN EN DEKDIENTST

## Voorschrift II/1

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van officieren belast met de brugwacht op schepen met een brutotonnage van 500 of meer*

1. Iedere officier belast met de brugwacht op een zeeschip met een brutotonnage van 500 of meer dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.
2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 niet jonger zijn dan 18 jaar;
  - .2 een goedgekeurde diensttijd buitengaats hebben vervuld van ten minste één jaar die deel uitmaakt van een goedgekeurd opleidingsprogramma waarin is inbegrepen een opleiding aan boord die aan de eisen van sectie A-II/1 van de STCW-Code voldoet en is vastgelegd in een goedgekeurd stageboek, of anders een goedgekeurde diensttijd buitengaats van ten minste drie jaar hebben;
  - .3 gedurende de vereiste diensttijd buitengaats wachtdienst op de brug gelopen hebben onder toezicht van de kapitein of van een bevoegd officier gedurende een periode van ten minste zes maanden;
  - .4 voldoen aan de van toepassing zijnde eisen van de voorschriften van hoofdstuk IV, voor het in voorkomende gevallen verrichten van radiowerkzaamheden in overeenstemming met het Radioreglement; en
  - .5 een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-II/1 van de STCW-Code.

## Voorschrift II/2

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van kapiteins en eerste stuurlieden op schepen met een brutotonnage van 500 of meer*

*Kapitein en eerste stuurman op schepen met een brutotonnage van 3.000 of meer*

1. Iedere kapitein en eerste stuurman op een zeeschip met een brutotonnage van 3.000 of meer dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.

2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 voldoen aan de eisen inzake vaarbevoegdheidsverlening als officier, belast met de brugwacht, op schepen met een brutotonnage van 500 of meer en in die hoedanigheid goedgekeurde diensttijd buitengaats hebben vervuld:
    - .1.1 wat een vaarbevoegdheid als eerste stuurman betreft, van ten minste 12 maanden, en
    - .1.2 wat een vaarbevoegdheid als kapitein betreft, van ten minste 36 maanden; deze periode kan evenwel worden bekort tot ten minste 24 maanden, indien ten minste 12 maanden van die tijd dienst is gedaan als eerste stuurman; en
  - .2 een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-II/2 van de STCW-Code voor kapiteins en eerste stuurlieden op schepen met een brutotonnage van 3.000 of meer.

*Kapitein en eerste stuurman op schepen tussen 500 en 3.000 brutotonnage*

3. Iedere kapitein en iedere eerste stuurman op een zeeschip tussen 500 en 3.000 brutotonnage dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.

4. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 wat vaarbevoegdheidsverlening als eerste stuurman betreft, voldoen aan de eisen voor een officier, belast met de brugwacht, op schepen van 500 brutotonnage of meer;
  - .2 wat vaarbevoegdheidsverlening als kapitein betreft, voldoen aan de eisen voor een officier, belast met de brugwacht, op schepen van 500 brutotonnage of meer en in die hoedanigheid ten minste 36 maanden goedgekeurde diensttijd buitengaats hebben vervuld; deze periode kan evenwel worden bekort tot ten minste 24 maanden, indien ten minste 12 maanden van die tijd dienst is gedaan als eerste stuurman; en
  - .3 een goedgekeurde opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-II/2 van de STCW-Code voor kapiteins en eerste stuurlieden van schepen tussen 500 en 3.000 brutotonnage.

## Voorschrift II/3

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van officieren, belast met de brugwacht, en van kapiteins van schepen van minder dan 500 brutotonnage*

*Schepen die niet worden gebruikt voor reizen langs de kust*

1. Iedere officier belast met de brugwacht, dienst doende op een zeeschip van minder dan 500 brutotonnage, dat niet wordt gebruikt voor reizen langs de kust, dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs voor schepen van 500 brutotonnage of meer.

2. Iedere kapitein, dienst doende op een zeeschip van minder dan 500 brutoregisterton dat niet wordt gebruikt voor reizen langs de kust, dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs voor dienst als kapitein van schepen van tussen 500 en 3.000 brutoregisterton.

*Schepen die worden gebruikt voor reizen langs de kust*

*Officier belast met de brugwacht*

3. Iedere officier belast met de brugwacht op een zeeschip van minder dan 500 brutotonnage, dat wordt gebruikt voor reizen langs de kust, dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.

4. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen als officier belast met de brugwacht op een zeeschip van minder dan 500 brutotonnage dat gebruikt wordt op reizen langs de kust, moet:

- .1 niet jonger zijn dan 18 jaar;
- .2 het volgende hebben voltooid:
  - .2.1 een bijzondere opleiding, daaronder begrepen een ruime periode van passende dienst buitengaats als vereist door de Administratie, of
  - .2.2 een goedgekeurde diensttijd aan dek buitengaats van ten minste drie jaar;
- .3 voldoen aan de geldende eisen van de voorschriften in hoofdstuk IV, om in voorkomende gevallen radiowerkzaamheden te verrichten in overeenstemming met het Radioreglement; en
- .4 een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectieartikel A-II/3 van de STCW-Code voor officieren belast met de brugwacht op schepen van minder dan 500 brutotonnage die gebruikt worden op reizen langs de kust.

*Kapitein*

5. Iedere kapitein die dienst doet op een zeeschip van minder dan 500 brutotonnage dat gebruikt wordt voor reizen langs de kust, dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.

6. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen als kapitein van een zeeschip van minder dan 500 brutotonnage dat gebruikt wordt voor reizen langs de kust, moet:

- .1 niet jonger zijn dan 20 jaar;
- .2 goedgekeurde diensttijd buitengaats hebben vervuld van ten minste 12 maanden als officier belast met de brugwacht; en
- .3 een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-II/3 van de STCW-Code voor kapiteins van schepen van minder dan 500 brutotonnage die gebruikt worden voor reizen langs de kust.

## 7. Vrijstellingen

Indien de Administratie van oordeel is dat, gezien de grootte van het schip en de omstandigheden van de reis, volledige toepassing van dit voorschrift en sectie A-II/3 van de STCW-Code onredelijk of onmogelijk is, kan zij de kapitein en de officier, belast met de brugwacht, op een zodanig schip of een zodanige categorie schepen een dienovereenkomstige vrijstelling verlenen ten aanzien van enkele van de eisen, rekening houdend met de veiligheid van alle schepen die zich in dezelfde wateren kunnen bevinden.

## Voorschrift II/4

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening voor scheepsgezellen die deel uitmaken van de brugwacht*

1. Iedere scheepsgezel die deel uitmaakt van de brugwacht op een zeeschip van 500 brutotonnage of meer, uitgezonderd scheepsgezellen in opleiding en scheepsgezellen wier taken op de brug van ongeschoolde aard zijn, dient in het bezit te zijn van een vaarbevoegdheidsbewijs dat hun het recht geeft die taken te verrichten.

2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
- .1 niet jonger zijn dan 16 jaar;
  - .2 het volgende hebben voltooid:
    - .2.1 goedgekeurde diensttijd buitengaats, waaronder ten minste zes maanden opleiding en ervaring, of
    - .2.2 een bijzondere opleiding, hetzij vóór, hetzij tijdens het verblijf aan boord, met inbegrip van een goedgekeurde periode van ten minste twee maanden, waarin dienst buitengaats is gedaan; en

.3 voldoen aan de eisen van bekwaamheid, omschreven in sectie A-II/4 van de STCW-Code.

3. De diensttijd buitengaats, opleiding en ervaring, vereist volgens de leden 2.2.1 en 2.2.2 dienen verband te houden met het verrichten van functies op het gebied van de brugwacht en deze dienen taken te omvatten die worden verricht onder rechtstreeks toezicht van de kapitein, de officier, belast met de brugwacht, of een bevoegde scheepsgezel.

4. Zeevarenden kunnen door de Partij worden geacht aan de eisen van dit voorschrift te voldoen, indien zij in een desbetreffende hoedanigheid dekdienst hebben gedaan gedurende een periode van ten minste een jaar in de laatste vijf jaar voorafgaande aan de inwerkingtreding van het Verdrag voor die Partij.

### HOOFDSTUK III

#### MACHINEKAMERDIENST

##### Voorschrift III/1

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van officieren, belast met de machinekamerwacht in een bemande machinekamer of de aangewezen scheepswerktuigkundigen, belast met de wacht, in een tijdelijk onbemane machinekamer*

1. Iedere scheepswerktuigkundige, belast met de wacht in een bemande machinekamer, of de aangewezen scheepswerktuigkundige, belast met de wacht, in een tijdelijk onbemane machinekamer, op een zeeschip met een voortstuwingsvermogen van 750 kW of meer dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.

2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 niet jonger zijn dan 18 jaar;
  - .2 ten minste zes maanden dienst buitengaats gedaan hebben in de machinekamer in overeenstemming met sectie A-III/1 van de STCW-Code; en
  - .3 een goedgekeurde studie en opleiding van ten minste 30 maanden hebben voltooid, met inbegrip van een opleiding aan boord die vastgelegd is in een goedgekeurd stageboek en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-III/1 van de STCW-Code.

## Voorschrift III/2

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van hoofdwerktuigkundigen en tweede scheepswerktuigkundigen van schepen met een voortstuwingsvermogen van 3.000 kW of meer*

1. Iedere hoofdwerktuigkundige en tweede scheepswerktuigkundige van een zeeschip met een voortstuwingsvermogen van 3.000 kW of meer dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.
2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 voldoen aan de eisen inzake vaarbevoegdheidsverlening als scheepswerktuigkundigen belast met de wacht in de machinekamer en:
    - .1.1 wat vaarbevoegdheidsverlening als tweede scheepswerktuigkundige betreft, goedgekeurde diensttijd buitengaats hebben vervuld van ten minste 12 maanden als leerling-scheepswerktuigkundige of scheepswerktuigkundige, en
    - .1.2 wat vaarbevoegdheidsverlening als hoofdwerktuigkundige betreft, goedgekeurde diensttijd buitengaats hebben vervuld van ten minste 36 maanden, waarvan ten minste 12 maanden dienst is gedaan als scheepswerktuigkundige in een verantwoordelijke functie en in het bezit van de vaarbevoegdheid als tweede scheepswerktuigkundige; en
  - .2 een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-III/2 van de STCW-Code.

## Voorschrift III/3

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van hoofdwerktuigkundigen en tweede scheepswerktuigkundigen van schepen met een voortstuwingsvermogen van tussen 750 kW en 3.000 kW*

1. Iedere hoofdwerktuigkundige en tweede scheepswerktuigkundige van een zeeschip met een voortstuwingsvermogen van tussen 750 en 3.000 kW dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.
2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 voldoen aan de eisen inzake vaarbevoegdheidsverlening als scheepswerktuigkundige belast met de wacht in de machinekamer en:
    - .1.1 wat vaarbevoegdheidsverlening als tweede scheepswerktuigkundige betreft, goedgekeurde diensttijd buitengaats hebben ver-



- vuld van ten minste 12 maanden als leerlingscheeps-  
werktuigkundige of scheepswerktuigkundige, en
- .1.2 wat vaarbevoegdheidsverlening als hoofdwerktuigkundige be-  
treft, goedgekeurde diensttijd buitengaats hebben vervuld van  
ten minste 24 maanden, waarvan ten minste 12 maanden dienst  
is gedaan als scheepswerktuigkundige met het vaar-  
bevoegdheidsbewijs voor tweede scheepswerktuigkundige; en
  - .2 een goedgekeurde studie en opleiding hebben voltooid en voldoen  
aan de eisen van bekwaamheid, omschreven in sectie A-III/3 van  
de STCW-Code.

3. Iedere scheepswerktuigkundige die bevoegd is dienst te doen als  
tweede scheepswerktuigkundige van schepen met een voortstuwings-  
vermogen van 3.000 kW of meer kan dienst doen als hoofdwerktuig-  
kundige van schepen met een voortstuwingsvermogen van minder dan  
3.000 kW, mits ten minste 12 maanden goedgekeurde diensttijd buiten-  
gaats is vervuld als scheepswerktuigkundige in een verantwoordelijke  
functie en dit officieel is aangetekend op het vaarbevoegdheidsbewijs.

#### Voorschrift III/4

*Verplichte minimumeisen inzake vaarbevoegdheidsverlening van  
scheepsgezellen die deel uitmaken van de machinekamerwacht in een  
bemande machinekamer of aangewezen zijn om dienst te doen in een  
tijdelijk onbemande machinekamer*

1. Iedere scheepsgezel die deel uitmaakt van de machinekamerwacht  
of is aangewezen om dienst te doen in een tijdelijk onbemande machi-  
nekamer op een zeeschip met een voortstuwingsvermogen van 750 kW  
of meer, uitgezonderd scheepsgezellen die in opleiding zijn en scheeps-  
gezellen wier taken van ongeschoolde aard zijn, dient in het bezit te zijn  
van een vaarbevoegdheidsbewijs dat hun het recht geeft die taken te ver-  
richten.
2. Ieder die een vaarbevoegdheidsbewijs wenst te verkrijgen, moet:
  - .1 niet jonger zijn dan 16 jaar;
  - .2 het volgende hebben voltooid:
    - .2.1 goedgekeurde diensttijd buitengaats, waaronder begrepen ten  
minste zes maanden opleiding en ervaring, of
    - .2.2 een bijzondere opleiding, hetzij vóór, hetzij tijdens het verblijf  
aan boord, met inbegrip van een goedgekeurde periode van ten  
minste twee maanden, waarin dienst buitengaats is gedaan; en
  - .3 voldoen aan de eisen van bekwaamheid, omschreven in sectie  
A-III/4 van de STCW-Code.
3. De diensttijd buitengaats, opleiding en ervaring, vereist volgens de  
leden 2.2.1 en 2.2.2 dienen verband te houden met het verrichten van

functies op het gebied van de machinekamerwacht en deze dienen taken te omvatten die worden verricht onder rechtstreeks toezicht van een bevoegde scheepswerktuigkundige of een bevoegde scheepsgezel.

4. Zeevarenden kunnen door de Partij worden geacht aan de eisen van dit voorschrift te voldoen, indien zij in een desbetreffende hoedanigheid machinekamerdienst hebben gedaan gedurende een periode van ten minste een jaar in de laatste vijf jaar voorafgaande aan de inwerkingtreding van het Verdrag voor die Partij.

#### HOOFDSTUK IV

#### RADIOCOMMUNICATIE EN PERSONEEL BELAST MET HET RADIOVERKEER

Verklarende noot:

Dwingende bepalingen inzake de radioluisterwacht zijn opgenomen in het Radioreglement en in het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, zoals gewijzigd. Bepalingen inzake het onderhoud van radioapparatuur zijn opgenomen in het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, zoals gewijzigd, en in de door de Organisatie aangenomen richtlijnen.

#### Voorschrift IV/1

##### *Toepassing*

1. Uitgezonderd de bepalingen van het derde lid, zijn de bepalingen van dit hoofdstuk van toepassing op personeel belast met het radioverkeer aan boord van schepen die deelnemen in het GMDSS, als voorgeschreven door het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, zoals gewijzigd.

2. Tot 1 februari 1999 dient het personeel belast met het radioverkeer op schepen die voldoen aan de bepalingen van het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, die onmiddellijk vóór 1 februari 1992 van kracht waren, te voldoen aan de bepalingen van het Internationaal Verdrag betreffende de normen voor zeevarenden inzake opleiding, diplomering en wachtdienst van 1978 die vóór 1 december 1992 van kracht waren.

3. Personeel belast met het radioverkeer op schepen, van wie niet verlangd wordt dat zij voldoen aan de bepalingen van het GMDSS in hoofdstuk IV van het SOLAS-Verdrag, behoeven niet aan de bepalingen van dit hoofdstuk te voldoen. Van personeel belast met het radioverkeer op deze schepen wordt niettemin verlangd dat zij voldoen aan de bepalingen van het Radioreglement. De Administratie dient ervoor te zorgen

dat, met betrekking tot zodanig personeel belast met het radioverkeer, passende vaarbevoegdheidsbewijzen, zoals voorgeschreven in het Radioreglement, worden afgegeven of erkend.

#### Voorschrift IV/2

##### *Verplichte minimumeisen inzake vaarbevoegdheidsverlening van personeel belast met het radioverkeer in het GMDSS*

1. Iedere persoon die belast is met radiotaken of deze vervult op een schip dat verplicht is aan het GMDSS deel te nemen, dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs dat betrekking heeft op het GMDSS en dat is afgegeven of erkend door de Administratie krachtens de bepalingen van het Radioreglement.

2. Bovendien moet ieder die krachtens dit voorschrift een vaarbevoegdheidsbewijs wenst te verkrijgen voor het dienst doen op een schip dat volgens het Internationaal Verdrag voor de beveiliging van mensenlevens op zee, 1974, zoals gewijzigd, met een radio-installatie dient te zijn uitgerust:

- .1 niet jonger zijn dan 18 jaar; en
- .2 een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, omschreven in sectie A-IV/2 van de STCW-Code.

## HOOFDSTUK V

### BIJZONDERE EISEN INZAKE OPLEIDING VAN PERSONEEL OP BEPAALDE SCHEEPSTYPEN

#### Voorschrift V/1

##### *Verplichte minimumeisen inzake de opleiding en geschiktheid van kapiteins, officieren en scheepsgezellen van tankers*

1. Officieren en scheepsgezellen, aan wie bijzondere taken worden opgedragen en bijzondere verantwoordelijkheden in verband met die taken worden opgelegd met betrekking tot de lading en de daarbij behorende uitrusting op olietankers, moeten aan de wal een goedgekeurde cursus brandbestrijding hebben gevolgd naast de in voorschrift VI/1 vereiste opleiding en moeten:

- .1 ten minste drie maanden goedgekeurde diensttijd buitengaats op tankers hebben vervuld teneinde voldoende kennis betreffende veilige operationele handelwijzen op te doen; of

- .2 een goedgekeurde cursus hebben gevolgd om zich vertrouwd te maken met de dienst aan boord van tankers, waarin ten minste het programma voor die cursus vervat in sectie A-V/1 van de STCW-Code wordt behandeld.

met dien verstande echter, dat de Administratie akkoord kan gaan met een diensttijd buitengaats onder toezicht gedurende een periode die korter is dan voorgeschreven in lid 1.1, mits:

- .3 de periode waarmee akkoord wordt gegaan niet korter is dan één maand;
- .4 de tanker niet groter is dan 3.000 brutotonnage;
- .5 de duur van elke reis van de tanker niet langer is dan 72 uur; en
- .6 de operationele kenmerken van de tanker en het aantal reizen en los- en laadhandelingen die gedurende deze periode worden voltooid, het mogelijk maken hetzelfde niveau van kennis en ervaring te verkrijgen.

2. Kapiteins, hoofdwerktuigkundigen, eerste stuurlieden, tweede scheepswerktuigkundigen en allen die rechtstreeks verantwoordelijk zijn voor het laden, lossen en de te nemen voorzorgsmaatregelen tijdens de reis of de behandeling van de lading moeten, naast het in de leden 1.1 en 1.2 bepaalde:

- .1 ter zake dienende ervaring bezitten op het gebied van hun taken op het type tanker waarop zij varen; en
- .2 een goedgekeurd gespecialiseerd opleidingsprogramma hebben gevolgd dat ten minste de onderwerpen behandelt die omschreven zijn in sectie A-V/1 van de STCW-Code en die passen bij hun taken op de olietanker, chemicaliëntanker of vloeibaargastanker waarop zij varen.

3. Zeevarenden kunnen binnen twee jaar na de inwerkingtreding van het Verdrag voor een Partij worden geacht aan de in lid 2.2 vervatte eisen te hebben voldaan, indien zij in een periode van ten minste één jaar binnen de voorafgaande vijf jaar in een desbetreffende functie dienst hebben gedaan aan boord van het betreffende type tanker.

4. Administraties dienen er zorg voor te dragen dat een passend vaarbevoegdheidsbewijs wordt afgegeven aan kapiteins en officieren die bevoegd zijn in overeenstemming met de leden 1 of 2, zoals van toepassing, of dat een bestaand vaarbevoegdheidsbewijs vergezeld gaat van een officiële verklaring. Iedere scheepsgezel die aldus bevoegd is, dient in het bezit te zijn van een vaarbevoegdheidsbewijs.

## Voorschrift V/2

*Verplichte minimumeisen inzake de opleiding en geschiktheid van kapiteins, officieren, scheepsgezellen en ander personeel op ro-ro-passagiersschepen*

1. Dit voorschrift heeft betrekking op kapiteins, officieren, scheepsgezellen en ander personeel dat dienst doet aan boord van ro-ro-passagiersschepen op internationale reizen. De Administraties stellen de toepasselijkheid van deze eisen op personeel dat dienst doet op ro-ro-passagiersschepen op binnenlandse reizen vast.
2. Alvorens hun taken aan boord van ro-ro-passagiersschepen worden opgedragen, dienen zeevarenden de opleiding, zoals vereist in de onderstaande leden 4 t/m 8, te hebben voltooid in overeenstemming met hun hoedanigheid, taken en verantwoordelijkheden.
3. Zeevarenden, van wie verlangd wordt dat zij een opleiding volgen in overeenstemming met de onderstaande leden 4, 7 en 8 dienen passende herhalingscursussen te volgen met tussenpozen van niet meer dan vijf jaar.
4. Kapiteins, officieren en ander personeel dat op de monsterrol staat en is aangewezen om passagiers bij te staan in noodsituaties aan boord van ro-ro-passagiersschepen, dienen een opleiding te hebben voltooid in het beheersen van mensenmassa's, zoals omschreven in sectie A-V/2, eerste lid, van de STCW-Code.
5. Kapiteins, officieren en ander personeel dat belast is met bijzondere taken en verantwoordelijkheden aan boord van ro-ro-passagiersschepen dienen de opleiding om hiermee vertrouwd te geraken, zoals omschreven in sectie A-V/2, tweede lid, van de STCW-Code, te hebben voltooid.
6. Personeel dat in de passagiersruimten aan boord van ro-ro-passagiersschepen direct bij de dienstverlening aan passagiers betrokken is, dient de veiligheidsopleiding, omschreven in sectie A-V/2, derde lid, van de STCW-Code te hebben voltooid.
7. Kapiteins, eerste stuurlieden, hoofdwerktuigkundigen, tweede scheepswerktuigkundigen en iedereen die belast is met de directe verantwoordelijkheid voor het aan en van boord gaan van passagiers, voor het laden, lossen of veilig stuwen van de lading, of het sluiten van openingen in de romp aan boord van ro-ro-passagiersschepen, dienen een goedgekeurde opleiding betreffende de veiligheid van passagiers en lading en de goede conditie van de romp te hebben voltooid, zoals omschreven in sectie A-V/2, vierde lid, van de STCW-Code.

8. Kapiteins, eerste stuurlieden, hoofdwerktuigkundigen, tweede scheepswerktuigkundigen en iedereen die belast is met de verantwoordelijkheid voor de veiligheid van passagiers in noodsituaties aan boord van ro-ro-passagiersschepen dienen een goedgekeurde opleiding in crisis-beheersing en menselijk gedrag te hebben voltooid, zoals omschreven in sectie A-V/2, vijfde lid, van de STCW-Code.

9. De Administraties dienen ervoor te zorgen dat schriftelijke bewijzen van de voltooide opleiding worden afgegeven aan iedereen die bevoegd bevonden wordt volgens de bepalingen van dit voorschrift.

## HOOFDSTUK VI

### NOODSITUATIES, VEILIGHEID OP HET WERK, MEDISCHE VERZORGING EN OVERLEVINGSMAATREGELEN

#### Voorschrift VI/1

*Verplichte minimumeisen betreffende de eisen voor zeevarenden inzake bekendheid met de materie, basisveiligheidsstraining en onderricht in beveiliging*

Zeevarenden dienen een basisopleiding of onderricht te ontvangen inzake het verkrijgen van bekendheid met de materie en beveiliging in overeenstemming met sectie A-VI/1 van de STCW-Code en moeten voldoen aan de desbetreffende eisen van bekwaamheid die daarin zijn omschreven.

#### Voorschrift VI/2

*Verplichte minimumeisen betreffende de afgifte van bevoegdheden inzake het gebruik van reddingmiddelen en hulpverleningsboten en snelle hulpverleningsboten*

1. Ieder die een certificaat van bekwaamheid inzake het gebruik van reddingmiddelen en hulpverleningsboten, uitgezonderd snelle hulpverleningsboten, wenst te verkrijgen, moet:

- .1 niet jonger zijn dan 18 jaar;
- .2 goedgekeurde dienst buitengaats van ten minste 12 maanden hebben vervuld of een goedgekeurde opleidingscursus hebben gevolgd en goedgekeurde dienst buitengaats van ten minste zes maanden hebben vervuld; en
- .3 voldoen aan de eisen van bekwaamheid voor bevoegdheden inzake het gebruik van reddingmiddelen en hulpverleningsboten, omschreven in sectie A-VI/2, eerste tot en met vierde lid, van de STCW-Code.

2. Ieder die een certificaat van bekwaamheid in het gebruik van snelle hulpverleningsboten wenst te verkrijgen, moet:
  - .1 in het bezit zijn van een certificaat van bekwaamheid in het gebruik van reddingmiddelen en hulpverleningsboten, uitgezonderd snelle hulpverleningsboten;
  - .2 een goedgekeurde opleidingscursus hebben gevolgd; en
  - .3 voldoen aan de eisen van bekwaamheid voor een certificaat van bekwaamheid in het gebruik van snelle hulpverleningsboten, omschreven in sectie A-VI/2, vijfde tot en met achtste lid, van de STCW-Code.

#### Voorschrift VI/3

##### *Verplichte minimumeisen inzake de voortgezette opleiding in brandbestrijding*

1. Zeevarenden die aangewezen zijn om leiding te geven aan werkzaamheden bij brandbestrijding dienen met goed gevolg een voortgezette opleiding te hebben gevolgd in brandbestrijdingsmethoden met bijzondere nadruk op organisatie, tactieken en commando's in overeenstemming met de bepalingen van sectie A-VI/3 van de STCW-Code en moeten voldoen aan de eisen van bekwaamheid die daarin zijn omschreven.

2. In gevallen waarin een voortgezette opleiding in brandbestrijding niet is inbegrepen in de bevoegdheden voor het af te geven vaarbevoegdheidsbewijs, dient een bijzonder diploma of een schriftelijk bewijs, indien van toepassing, afgegeven te worden, waarin vermeld wordt dat de houder een voortgezette opleidingscursus in brandbestrijding heeft gevolgd.

#### Voorschrift VI/4

##### *Verplichte minimumeisen betreffende eerste hulp en medische verzorging*

1. Zeevarenden, aangewezen om eerste hulp te verlenen aan boord van een schip, dienen te voldoen aan de eisen van bekwaamheid inzake het verlenen van eerste hulp, omschreven in sectie A-VI/4, eerste tot en met derde lid, van de STCW-Code.

2. Zeevarenden, aangewezen om leiding te geven aan de medische verzorging aan boord van een schip, dienen te voldoen aan de eisen van bekwaamheid inzake medische verzorging aan boord van schepen, omschreven in sectie A-VI/4, vierde tot en met zesde lid, van de STCW-Code.

3. In gevallen waarin een opleiding in eerste hulp of medische verzorging aan boord van schepen niet is inbegrepen in de bevoegdheden voor het af te geven vaarbevoegdheidsbewijs, dient een bijzonder diploma of een schriftelijk bewijs, indien van toepassing, afgegeven te worden, waarin vermeld wordt dat de houder een opleidingscursus in eerste hulp of medische verzorging heeft gevolgd.

## HOOFDSTUK VII

### ALTERNATIEVE VAARBEVOEGDHEIDSVLERENING

#### Voorschrift VII/1

##### *Afgifte van alternatieve vaarbevoegdheidsbewijzen*

1. Niettegenstaande de eisen inzake vaarbevoegdheidsverlening, vervat in de hoofdstukken II en III van deze bijlage, kunnen Partijen ervoor kiezen andere vaarbevoegdheidsbewijzen af te geven of te doen afgeven dan die welke in de voorschriften van die hoofdstukken zijn vermeld, op voorwaarde dat:

- .1 de bedoelde functies en verantwoordelijkheidsniveaus die op de vaarbevoegdheidsbewijzen en de officiële verklaringen moeten worden vermeld, geselecteerd worden uit en gelijk zijn aan die welke vermeld staan in de secties A-II/1, A-II/2, A-II/3, A-II/4, A-III/1, A-III/2, A-III/3, A-III/4 en A-IV/2 van de STCW-Code;
- .2 de kandidaten een goedgekeurde studie en opleiding hebben voltooid en voldoen aan de eisen van bekwaamheid, voorgeschreven in de desbetreffende artikelen van de STCW-Code en zoals zij zijn vermeld in sectie A-VII/1 van deze Code, inzake de functies en niveaus die op de vaarbevoegdheidsbewijzen en de officiële verklaringen vermeld moeten worden;
- .3 de kandidaten goedgekeurde diensttijd buitengaats hebben vervuld, passend bij de uitvoering van de functies en niveaus die op het diploma moeten worden vermeld. De minimale duur van de diensttijd buitengaats dient gelijkwaardig te zijn aan de duur van diensttijd buitengaats, voorgeschreven in de hoofdstukken II en III van deze bijlage. De minimale duur van de diensttijd buitengaats mag echter niet korter zijn dan die welke is voorgeschreven in sectie A-VII/2 van de STCW-Code;
- .4 kandidaten die een vaarbevoegdheidsbewijs wensen te verkrijgen en die op operationeel niveau een navigatiefunctie zullen verrichten, dienen te voldoen aan de geldende eisen van de voorschriften in hoofdstuk IV, indien van toepassing, met betrekking tot het uitvoeren van aangewezen radiotaken in overeenstemming met het Radioreglement; en



- .5 de vaarbevoegdheidsbewijzen worden afgegeven in overeenstemming met de eisen van voorschrift I/9 en de bepalingen, omschreven in hoofdstuk VII van de STCW-Code.
2. Vaarbevoegdheidsbewijzen mogen niet krachtens dit hoofdstuk worden afgegeven, indien de Partij de Organisatie niet dienaangaande heeft ingelicht in overeenstemming met artikel IV en voorschrift I/7.

#### Voorschrift VII/2

##### *Vaarbevoegdheidsverlening van zeevarenden*

1. Iedere zeevarende die een functie of een aantal functies verricht, omschreven in de tabellen A-II/1, A-II/2, A-II/3 of A-II/4 van hoofdstuk II of in de tabellen A-III/1, A-III/2, A-III/4 van hoofdstuk III of A-IV/2 van hoofdstuk IV van de STCW-Code, dient in het bezit te zijn van een passend vaarbevoegdheidsbewijs.

#### Voorschrift VII/3

##### *Beginselen inzake de afgifte van alternatieve vaarbevoegdheidsbewijzen*

1. Iedere Partij die verkiest alternatieve vaarbevoegdheidsbewijzen af te geven of te doen afgeven, dient ervoor te zorgen dat de volgende beginselen in acht genomen worden:
- .1 Geen alternatief systeem van vaarbevoegdheidsverlening mag ten uitvoer gebracht worden, indien het niet een mate van veiligheid op zee garandeert en een preventieve werking heeft met betrekking tot verontreiniging, die ten minste gelijk zijn aan die welke in de andere hoofdstukken zijn geregeld; en
  - .2 alle regelingen inzake de afgifte van alternatieve vaarbevoegdheidsbewijzen, afgegeven overeenkomstig dit hoofdstuk, dienen te voorzien in de mogelijkheid deze in te wisselen tegen vaarbevoegdheidsbewijzen afgegeven overeenkomstig de andere hoofdstukken.
2. Het beginsel van inwisselbaarheid, vermeld in het eerste lid, moet garanderen dat:
- .1 zeevarenden die bevoegd zijn volgens de regelingen van de hoofdstukken II en/of III en zij die bevoegd zijn volgens hoofdstuk VII, dienst kunnen doen op schepen die hetzij de gebruikelijke hetzij een andere vorm van organisatie aan boord hebben; en
  - .2 zeevarenden niet worden opgeleid voor bepaalde regelingen aan boord op een wijze die hun mogelijkheden om hun vaardigheden elders aan te wenden zou verslechteren.

3. Bij het afgeven van een vaarbevoegdheidsbewijs overeenkomstig de bepalingen van dit hoofdstuk dienen de volgende beginselen in acht genomen te worden:

- .1 de afgifte van alternatieve vaarbevoegdheidsbewijzen mag op zich niet worden gebruikt:
  - .1 om het aantal bemanningsleden aan boord te verminderen,
  - .2 om het aanzien van het beroep te schaden of afbreuk te doen aan de vakkundigheid van zeevarenden, of
  - .3 om te rechtvaardigen dat gedurende een bepaalde wachtdienst de gecombineerde taken van officieren in de machinekamerwacht en in de brugwacht aan de houder van slechts één enkel vaarbevoegdheidsbewijs worden opgedragen; en
- .2 degene die het bevel voert, moet aangewezen worden als de kapitein; en de rechtspositie en het gezag van de kapitein en anderen mag niet ongunstig worden beïnvloed door het in praktijk brengen van een regeling voor alternatieve vaarbevoegdheidsverlening.

4. De beginselen, vervat in het eerste en tweede lid van dit voorschrift dienen te garanderen dat de bekwaamheid van zowel dekofficieren als scheepswerktuigkundigen gehandhaafd blijft.

## HOOFDSTUK VIII

### WACHTDIENST

#### Voorschrift VIII/1

##### *Fysieke conditie*

Iedere Administratie moet, teneinde vermoeidheid te voorkomen:

1. rustperiodes voor personeel dat wachtdienst doet instellen en toezien op de naleving daarvan; en
2. eisen dat de wachten zo geregeld zijn dat de doelmatigheid van het gehele wacht doende personeel niet wordt geschaad door vermoeidheid en dat de taken zo ingedeeld zijn dat de eerste wacht bij de aanvang van een reis en de daaropvolgende aflossende wachten voldoende rust genoten hebben en anderszins geschikt zijn voor hun dienst.

#### Voorschrift VIII/2

##### *Regelingen voor de wachtdienst en in acht te nemen beginselen*

1. De Administraties dienen de aandacht van maatschappijen, kapiteins, hoofdwerktuigkundigen en al het wacht doende personeel te vestigen op de eisen, beginselen en richtlijnen vervat in de STCW-Code. Deze dienen in acht genomen te worden teneinde te garanderen dat te

allen tijde op alle zeeschepen veilig en onafgebroken wacht dienst of wacht diensten wordt/worden gelopen, passend bij de heersende omstandigheden.

2. De Administraties dienen van de kapitein van elk schip te eisen dat hij ervoor zorgt dat de regelingen voor de wacht dienst toereikend zijn om veilig en onafgebroken wacht dienst of wacht diensten te lopen, rekening houdend met de heersende omstandigheden en dat, onder de algemene leiding van de kapitein:

- .1 officieren belast met de brugwacht verantwoordelijk zijn voor de veilige navigatie van het schip gedurende hun wachten, waarbij zij persoonlijk op de brug aanwezig dienen te zijn of op een bijbehorende belendende ruimte zoals de kaartkamer of de navigatiebrug;
- .2 radio-operatoren verantwoordelijk zijn voor het onderhouden van een ononderbroken radioluisterwacht op de juiste golflengtes gedurende hun wacht dienst;
- .3 officieren belast met de machinekamerwacht, zoals omschreven in de STCW-Code en onder leiding van de hoofdwerktuigkundige, onmiddellijk beschikbaar en bereikbaar dienen te zijn om zich naar de machineruimten te begeven en, indien vereist, persoonlijk in de machinekamer aanwezig te zijn gedurende de perioden dat zij dienst hebben; en
- .4 een passende en doeltreffende wacht dienst of wacht diensten wordt/worden gelopen met het oog op de veiligheid op elk moment, terwijl het schip voor anker ligt of is afgemeerd en, indien het schip gevaarlijke lading vervoert, bij de organisatie van die wacht dienst of wacht diensten volledig rekening wordt gehouden met de aard, hoeveelheid, verpakking en stuwing van die gevaarlijke lading en van eventuele bijzondere omstandigheden aan boord, op het water of aan de wal.

De wijzigingen behoeven ingevolge artikel 7, onderdeel f, van de Rijkswet goedkeuring en bekendmaking verdragen niet de goedkeuring van de Staten-Generaal.

De wijzigingen worden geacht te zijn aanvaard op 1 augustus 1996, tenzij voor die datum bij de Internationale Maritieme Organisatie bezwaren zijn ingediend door meer dan eenderde van de Partijen bij het Verdrag of Partijen waarvan de gezamenlijke koopvaardijvloeten tenminste vijftig procent vormen van de bruto-tonnage van de wereldkoopvaardijvloot van schepen van 100 brutoregisterton of meer.

In overeenstemming met artikel XII, eerste lid, letter a (ix) van het Verdrag zullen bij aanvaarding de wijzigingen in werking treden op 1 februari 1997.

Wat het Koninkrijk der Nederlanden betreft, zullen de wijzigingen voor het gehele Koninkrijk gelden.

*STCW-code*

De Engelse tekst van resolutie 2 luidt als volgt:

**Attachment 2 to the Final Act of the Conference**

**Resolution 2**

**Adoption of the Seafarers' Training, Certification and  
Watchkeeping Code**

The Conference

Having adopted resolution 1 on Adoption of the 1995 amendments to the Annex to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978,

Recognizing the importance of establishing detailed mandatory standards of competence and other mandatory provisions necessary to ensure that all seafarers shall be properly educated and trained, adequately experienced, skilled and competent to perform their duties in a manner which provides for the safety of life and property at sea and the protection of the marine environment,

Also recognizing the need to allow for the timely amendment of such mandatory standards and provisions in order to effectively respond to changes in technology, operations, practices and procedures used on board ships,

Recalling that a large percentage of maritime casualties and pollution incidents are caused by human error,

Appreciating that one effective means of reducing the risks associated with human error in the operation of seagoing ships is to ensure that the highest practicable standards of training, certification and competence are maintained in respect of the seafarers who are employed on such ships,

Desiring to achieve and maintain the highest practicable standards for the safety of life and property at sea and in port and for the protection of the environment,

Having considered the Seafarers' Training, Certification and Watchkeeping (STCW) Code, comprised of part A – Mandatory standards regarding provisions of the Annex to the 1978 STCW Convention, as amended, and part B – Recommended guidance regarding provisions of

the 1978 STCW Convention, as amended, proposed and circulated to all Members of the Organization and all Parties to the Convention,

Noting that regulation I/1, paragraph 2, of the amended Annex to the 1978 STCW Convention provides that part A of the STCW Code supplements the regulations annexed to the Convention and that any reference to a requirement in a regulation also constitutes a reference to the corresponding section of part A of the STCW Code,

1. Adopts:
  - .1 the Seafarers' Training, Certification and Watchkeeping (STCW) Code, part A – Mandatory standards regarding provisions of the Annex to the 1978 STCW Convention, as amended, set out in Annex I to the present resolution;
  - .2 the Seafarers' Training Certification and Watchkeeping (STCW) Code, part B – Recommended guidance regarding provisions of the 1978 STCW Convention, as amended, and its Annex, set out in Annex 2 to the present resolution;
2. Resolves:
  - .1 that the provisions of part A of the STCW Code shall enter into force for each Party to the 1978 STCW Convention, as amended, on the same date and in the same manner as the amendments to that Convention adopted by the Conference;
  - .2 to recommend that the guidance contained in part B of the STCW Code should be taken into account by all Parties to the 1978 STCW Convention, as amended, as from the date of entry into force of the amendments to that Convention adopted by the Conference;
3. Invites the International Maritime Organization:
  - .1 to keep the provisions of parts A and B of the STCW Code under review and consult, as may be appropriate, with the International Labour Organization, the International Telecommunication Union and the World Health Organization and to bring the need for any future amendment thereto to the attention of the Maritime Safety Committee for consideration and adoptions as may be appropriate;
  - .2 to communicate this resolution and any future amendment thereto that may be adopted, to the attention of all Parties to the STCW Convention.

## Annex I

## Seafarers' Training, Certification and Watchkeeping (STCW) Code

## Part A

## Mandatory standards regarding provisions of the Annex to the STCW Convention

## Introduction

1. This part of the STCW Code contains mandatory provisions to which specific reference is made in the Annex to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended, hereinafter referred to as the STCW Convention. These provisions give in detail the minimum standards required to be maintained by Parties in order to give full and complete effect to the Convention.

2. Also contained in this part are standards of competence required to be demonstrated by candidates for the issue and revalidation of certificates of competency under the provisions of the STCW Convention. To clarify the linkage between the alternative certification provisions of chapter VII and the certification provisions of chapters II, III and IV, the abilities specified in the standards of competence are grouped as appropriate under the following seven functions:

- .1 Navigation
  - .2 Cargo handling and stowage
  - .3 Controlling the operation of the ship and care for persons on board
  - .4 Marine engineering
  - .5 Electrical, electronic and control engineering
  - .6 Maintenance and repair
  - .7 Radiocommunications
- at the following levels of responsibility:
- .1 Management level
  - .2 Operational level
  - .3 Support level

Functions and levels of responsibility are identified by subtitle in the tables of standards of competence given in chapters II, III and IV of this part. The scope of the function at the level of responsibility stated in a subtitle is defined by the abilities listed under it in column 1 of the table. The meaning of "function" and "level of responsibility" is defined in general terms in section A-I/1 below.

3. The numbering of the sections of this part corresponds with the numbering of the regulations contained in the Annex to the STCW Convention. The text of the sections may be divided into numbered parts and paragraphs, but such numbering is unique to that text alone.

## CHAPTER I

## STANDARDS REGARDING GENERAL PROVISIONS

## Section A-I/1

## Definitions and clarifications

1. The definitions and clarifications contained in article II and regulation I/1 apply equally to the terms used in parts A and B of this Code. In addition, the following supplementary definitions apply only to this Code:

- .1 “Standard of competence” means the level of proficiency to be achieved for the proper performance of functions on board ship in accordance with the internationally agreed criteria as set forth herein and incorporating prescribed standards or levels of knowledge, understanding and demonstrated skill;
- .2 “Management level” means the level of responsibility associated with:
  - .2.1 serving as master, chief mate, chief engineer officer or second engineer officer on board a seagoing ship, and
  - .2.2 ensuring that all functions within the designated area of responsibility are properly performed;
- .3 “Operational level” means the level of responsibility associated with:
  - .3.1 serving as officer in charge of a navigational or engineering watch or as designated duty engineer for periodically unmanned machinery spaces or as radio operator on board a seagoing ship, and
  - .3.2 maintaining direct control over the performance of all functions within the designated area of responsibility with proper procedures and under the direction of an individual serving in the management level for that area of responsibility;
- .4 “Support level” means the level of responsibility associated with performing assigned tasks, duties or responsibilities on board a seagoing ship under the direction of an individual serving in the operational or management level;
- .5 “Evaluation criteria” are the entries appearing in column 4 of the “Specifications of Minimum Standards of Competence” tables in part A and provide the means for an assessor to judge whether or not a candidate can perform the related tasks, duties and responsibilities; and
- .6 “Independent evaluation” means an evaluation by suitably qualified persons, independent of, or external to, the unit or activity being evaluated, to verify that the administrative and operational procedures at all levels are managed, organized, undertaken and

monitored internally in order to ensure their fitness for purpose and achievement of stated objectives.

#### Section A-I/2

##### Certificates and endorsements

1. Where, as provided in regulation I/2, paragraph 4, the endorsement required by article VI of the Convention is incorporated in the wording of the certificate itself, the certificate shall be issued in the format shown hereunder, provided that the words “or until the date of expiry of any extension of the validity of this certificate as may be shown overleaf” appearing on the front of the form and the provisions for recording extension of the validity appearing on the back of the form shall be omitted where the certificate is required to be replaced upon its expiry: Guidance or completion of the form is contained in section B-I/2 of this Code.



(Official Seal)

(Country)

Certificate issued under the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995

The Government of .....certifies that ..... has been found duly qualified in accordance with the provisions of regulation ..... of the above Convention, as amended, and has been found competent to perform the following functions, at the levels specified, subject to any limitations indicated until ..... or until the date of expiry of any extension of the validity of this certificate as may be shown overleaf:

FUNCTION	LEVEL	LIMITATION APPLYING (IF ANY)

The lawful holder of this certificate may serve in the following capacities specified in the applicable safe manning requirements of the Administration:

CAPACITY	LIMITATIONS APPLYING (IF ANY)

Certificate No. .... issued on .....

(Official Seal)

.....  
Signature of duly authorized official

.....  
Name of duly authorized official

The original of this certificate must be kept available in accordance with regulation I/2, paragraph 9 of the Convention while serving on a ship.

Date of birth of the holder of the certificate .....

Signature of the holder of the certificate .....

Photograph of the holder of the certificate



The validity of this certificate is hereby extended until .....	
(Official seal)	..... Signature of duly authorized official
Date of revalidation .....	..... Name of duly authorized official
The validity of this certificate is hereby extended until .....	
(Official seal)	..... Signature of duly authorized official
Date of revalidation .....	..... Name of duly authorized official

2. Except as provided in paragraph 1, the form used to attest the issue of a certificate shall be as shown hereunder, provided that the words "or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf" appearing on the front of the form and the provisions for recording extension of the validity appearing on the back of the form shall be omitted where the endorsement is required to be replaced upon its expiry. Guidance on completion of the form is contained in section B-1/2 of this Code.

(Official Seal)

(Country)

Endorsement attesting the issue of a certificate under the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995

The Government of ..... certifies that Certificate No. .... has been issued to ..... who has been found duly qualified in accordance with the provisions of regulation ..... of the above Convention, as amended, and has been found competent to perform the following functions, at the levels specified, subject to any limitations indicated until ..... or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf:

FUNTION	LEVEL	LIMITATIONS APPLYING (IF ANY)

The lawful holder of this endorsement may serve in the following capacities specified in the applicable safe manning requirements of the Administration:

CAPACITY	LIMITATIONS APPLYING (IF ANY)

Endorsement No. .... issued on .....

(Official Seal)

.....  
Signature of duly authorized official

.....  
Name of duly authorized official

The original of this endorsement must be kept available in accordance with regulation I/2, paragraph 9 of the Convention while serving on a ship.

Date of birth of the holder of the certificate .....

Signature of the holder of the certificate .....

Photograph of the holder of the certificate



The validity of this endorsement is hereby extended until .....	
(Official seal)	..... Signature of duly authorized official
Date of revalidation .....	..... Name of duly authorized official
The validity of this endorsement is hereby extended until .	
(Official seal)	..... Signature of duly authorized official
Date of revalidation .....	..... Name of duly authorized official

3. The form used to attest the recognition of a certificate shall be as shown hereunder, except that the words "or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf" appearing on the front of the form and the provisions for recording extension of the validity appearing on the back of the form shall be omitted where the endorsement is required to be replaced upon its expiry. Guidance on completion of the form is contained in section B-1/2 of this Code.

(Official Seal)

(Country)

Endorsement attesting the recognition of a certificate under the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995

The Government of ..... certifies that Certificate No. .... issued to ..... by or on behalf of the Government of ..... is duly recognized in accordance with the provisions of regulation I/10 of the above Convention, as amended, and the lawful holder is authorized to perform the following functions, at the levels specified, subject to any limitations indicated until ..... or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf:

FUNCTION	LEVEL	LIMITATIONS APPLYING (IF ANY)

The lawful holder of this endorsement may serve in the following capacity or capacities specified in the applicable safe manning requirements of the Administration:

CAPACITY	LIMITATIONS APPLYING (IF ANY)

Endorsement No. .... issued on .....

(Official Seal)

.....  
Signature of duly authorized official

.....  
Name of duly authorized official

The original of this certificate must be kept available in accordance with regulation I/2, paragraph 9 of the Convention while serving on a ship.

Date of birth of the holder of the certificate .....

Signature of the holder of the certificate .....

Photograph of the holder of the certificate



The validity of this endorsement is hereby extended until .....	
(Official seal)	Signature of duly authorized official
Date of revalidation .....	Name of duly authorized official
The validity of this endorsement is hereby extended until .....	
(Official seal)	Signature of duly authorized official
Date of revalidation .....	Name of duly authorized official

4. In using formats which may be different from those set forth in this section, pursuant to regulation 1/2, paragraph 8, Parties shall ensure that in all cases:

- .1 all information relating to the identity and personal description of the holder, including name, date of birth, photograph and signature, along with the date on which the document was issued, shall be displayed on the same side of the documents; and
- .2 all information relating to the capacity or capacities in which the holder is entitled to serve, in accordance with the applicable safe manning requirements of the Administration, as well as any limitations, shall be prominently displayed and easily identified.

## Section A-I/3

## Principles governing near-coastal voyages

(No provisions)

## Section A-I/4

## Control procedures

1. The assessment procedure provided for in regulation I/4, paragraph 1.3, resulting from any of the occurrences mentioned therein shall take the form of a verification that members of the crew who are required to be competent do in fact possess the necessary skills related to the occurrence.

2. It shall be borne in mind when making this assessment that on-board procedures are relevant to the International Safety Management (ISM) Code and that the provisions of this Convention are confined to the competence to safely execute those procedures.

3. Control procedures under this Convention shall be confined to the standards of competence of the individual seafarers on board and their skills related to watchkeeping as defined in part A of this Code. Onboard assessments of competency shall commence with verification of the certificates of the seafarers.

4. Notwithstanding verification of the certificate, the assessment under regulation I/4, paragraph 1.3 can require the seafarer to demonstrate the related competency at the place of duty. Such demonstration may include verification that operational requirements in respect of watchkeeping standards have been met and that there is a proper response to emergency situations within the seafarer's level of competence.

5. In the assessment, only the methods for demonstrating competence together with the criteria for its evaluation and the scope of the standards given in part A of this Code shall be used.

## Section A-I/5

## National provisions

The provisions of regulation I/5 shall not be interpreted as preventing the allocation of tasks for training under supervision or in cases of *force majeure*.

## Section A-I/6

## Training and assessment

1. Each Party shall ensure that all training and assessment of seafarers for certification under the Convention is:
  - .1 structured in accordance with written programmes, including such methods and media of delivery, procedures, and course material as are necessary to achieve the prescribed standard of competence; and
  - .2 conducted, monitored, evaluated and supported by persons qualified in accordance with paragraphs 4, 5 and 6.
2. Persons conducting in-service training or assessment on board ship shall only do so when such training or assessment will not adversely affect the normal operation of the ship and they can dedicate their time and attention to training or assessment.

## Qualifications of instructors, supervisors and assessors

3. Each Party shall ensure that instructors, supervisors and assessors are appropriately qualified for the particular types and levels of training or assessment of competence of seafarers either on board or ashore, as required under the Convention, in accordance with the provisions of this section.

## In-service training

4. Any person conducting in-service training of a seafarer, either on board or ashore, which is intended to be used in qualifying for certification under the Convention, shall:
  - .1 have an appreciation of the training programme and an understanding of the specific training objectives for the particular type of training being conducted;
  - .2 be qualified on the task for which training is being conducted; and
  - .3 if conducting training using a simulator:
    - .3.1 have received appropriate guidance in instructional techniques involving the use of simulators, and
    - .3.2 have gained practical operational experience on the particular type of simulator being used.
5. Any person responsible for the supervision of in-service training of a seafarer intended to be used in qualifying for certification under the Convention shall have a full understanding of the training programme and the specific objectives for each type of training being conducted.



#### Assessment of competence

6. Any person conducting in-service assessment of competence of a seafarer, either on board or ashore, which is intended to be used in qualifying for certification under the Convention, shall:

- .1 have an appropriate level of knowledge and understanding of the competence to be assessed;
- .2 be qualified in the task for which the assessment is being made;
- .3 have received appropriate guidance in assessment methods and practice;
- .4 have gained practical assessment experience, and
- .5 if conducting assessment involving the use of simulators, have gained practical assessment experience on the particular type of simulator under the supervision and to the satisfaction of an experienced assessor.

#### Training and assessment within an institution

7. Each Party which recognizes a course of training, a training institution, or a qualification granted by a training institution, as part of its requirements for the issue of a certificate required under the Convention, shall ensure that all qualifications and experience of instructors and assessors are covered in the application of the quality standard provisions of section A-I/8. Such qualification, experience and application of quality standards shall incorporate appropriate training in instructional techniques, and training and assessment methods and practice, and comply with all applicable requirements of paragraphs 4 to 6.

#### Section A-I/7

#### Communication of information

1. The information required by regulation I/7, paragraph 1 shall be communicated to the Secretary-General in the formats prescribed in paragraph 2 hereunder.

2. By 1 August 1998, or within one calendar year of entry into force of regulation I/7, whichever it later for the party concerned, each party shall report on the steps it has taken to give the Convention full and complete effect, which report shall include the following:

- .1 the name, postal address and telephone and facsimile numbers and organization chart of the ministry, department or governmental agency responsible for administering the Convention;
- .2 a concise explanation of the legal and administrative measures provided and taken to ensure compliance, particularly with regulations I/6 and I/9;

- .3 a clear statement of the education, training, examination, competency assessment and certification policies adopted;
  - .4 a concise summary of the courses, training programmes, examinations and assessments provided for each certificate issued pursuant to the Convention;
  - .5 a concise outline of the procedures followed to authorize, accredit or approve training and examinations, medical fitness and competency assessments, required by the Convention, the conditions attaching thereto, and a list of the authorizations, accreditations and approvals granted;
  - .6 a concise summary of the procedures followed in granting any dispensation under article VIII of the Convention, and
  - .7 the results of the comparison carried out pursuant to regulation I/11 and a concise outline of the refresher and upgrading training mandated.
3. Each Party shall, within six months of:
- .1 retaining or adopting any equivalent education or training arrangements pursuant to article IX, provide a full description of such arrangements;
  - .2 recognizing certificates issued by another Party, provide a report summarizing the measures taken to ensure compliance with regulation I/10, and
  - .3 authorizing the employment of seafarers holding alternative certificates issued under regulation VII/1 on ships entitled to fly its flag, provide the Secretary-General with a specimen copy of the type of safe manning documents issued to such ships.
4. Each party shall report the results of each evaluation carried out pursuant to regulation I/8, paragraph 2 within six months of its completion, which report shall describe the terms of reference of the evaluators, their qualifications and experience, the date and scope of the evaluation, the deficiencies found and the corrective measures recommended and carried out.
5. The Secretary-General shall maintain a list of competent persons approved by the Maritime Safety Committee, including competent persons made available or recommended by the Parties, who may be called upon to assist in the preparation of the report required by regulation I/7, paragraph 2. These persons shall ordinarily be available during relevant sessions of the Maritime Safety Committee or its subsidiary bodies, but need not conduct their work solely during such sessions.
6. In relation to regulation I/7, paragraph 2, the competent persons shall be knowledgeable of the requirements of the Convention and at least one of them shall have knowledge of the system of training and certification of the Party concerned.

7. Any meeting of the competent persons shall:
  - .1 be held at the discretion of the Secretary-General;
  - .2 be comprised of an odd number of members, ordinarily not to exceed 5 persons;
  - .3 appoint its own chairman; and
  - .4 provide the Secretary-General with the agreed opinion of its members, or if no agreement is reached, with both the majority and minority views.
  
8. The competent persons shall, on a confidential basis, express their views in writing on:
  - .1 a comparison of the facts reported in the information communicated to the Secretary-General by the Party, with all relevant requirements of the Convention;
  - .2 the report of any relevant evaluation submitted under regulation I/8, paragraph 3; and
  - .3 any additional information provided by the Party.
  
9. In preparing the report to the Maritime Safety Committee required by regulation I/7, paragraph 2, the Secretary-General shall:
  - .1 solicit and take into account the views expressed by competent persons selected from the list established pursuant to paragraph 5;
  - .2 seek clarification when necessary from the Party of any matter related to the information provided under regulation I/7, paragraph 1; and
  - .3 identify any area in which the Party may have requested assistance to implement the Convention.
  
10. The Party concerned shall be informed of the arrangements for the meetings of competent persons, and its representatives shall be entitled to be present to clarify any matter related to the information provided pursuant to regulation I/7, paragraph 1.
  
11. If the Secretary-General is not in a position to submit the report called for by paragraph 2 of regulation I/7, the Party concerned may request the Maritime Safety Committee to take the action contemplated by paragraph 3 of regulation I/7, taking into account the information submitted pursuant to this section and the views expressed in accordance with paragraphs 7 and 8.

## Section A-I/8

## Quality standards

## National objectives and quality standards

1. Each Party shall ensure that the education and training objectives and related standards of competence to be achieved are clearly defined and identify the levels of knowledge, understanding and skills appropriate to the examinations and assessments required under the Convention. The objectives and related quality standards may be specified separately for different courses and training programmes and shall cover the administration of the certification system.

2. The field of application of the quality standards shall cover the administration of the certification system, all training courses and programmes, examinations and assessments carried out by or under the authority of a Party and the qualifications and experience required of instructors and assessors, having regard to the policies, systems, controls and internal quality assurance reviews established to ensure achievement of the defined objectives.

3. Each Party shall ensure that an independent evaluation of the knowledge, understanding, skills and competence acquisition and assessment activities, and of the administration of the certification system, are conducted at intervals of not more than five years in order to verify that:

- .1 all internal management control and monitoring measures and follow-up actions comply with planned arrangements and documented procedures and are effective in ensuring achievement of the defined objectives;
- .2 the results of each independent evaluation are documented and brought to the attention of those responsible for the area evaluated; and
- .3 timely action is taken to correct deficiencies.

4. The report of the independent evaluation required by paragraph 3 of regulation I/8 shall include the terms of reference for the evaluation and the qualifications and experience of the evaluators.

## Section A-I/9

## Medical standards – Issue and registration of certificates

(No provisions)

## Section A-I/10

## Recognition of certificates

1. The provisions of regulation I/10, paragraph 4 regarding the non-recognition of certificates issued by a non-Party shall not be construed as preventing a Party, when issuing its own certificate, from accepting seagoing service, education and training acquired under the authority of a non-Party, provided the Party complies with regulation I/9 in issuing each such certificate, and ensures that the requirements of the Convention relating to seagoing service, education, training and competence are complied with.

2. Where an Administration which has recognized a certificate withdraws its endorsement of recognition for disciplinary reasons, the Administration shall inform the Party that issued the certificate of the circumstances.

## Section A-I/11

## Revalidation of certificates

## Professional competence

1. Continued professional competence as required under regulation I/11, shall be established by:

- .1 approved seagoing service performing functions appropriate to the certificate held for a period of at least one year in total during the preceding five years; or
- .2 having performed functions considered to be equivalent to the seagoing service required in paragraph 1.1; or
- .3 one of the following:
  - .3.1 passing an approved test, or
  - .3.2 successfully completing an approved course of courses, or
  - .3.3 having completed approved seagoing service performing functions appropriate to the certificate held for a period of not less than three months in a supernumerary capacity, or in a lower officer rank than that for which the certificate held is valid immediately prior to taking up the rank for which it is valid.

2. The refresher and updating courses required by regulation I/11 shall be approved and include changes in relevant national and international regulations concerning the safety of life at sea and the protection of the marine environment and take account of any updating of the standard of competence concerned.

## Section A-I/12

Standards governing the use of simulators

PART 1 – PERFORMANCE STANDARDS

General performance standards for simulators used in training

1. Each Party shall ensure that any simulator used for mandatory simulator-based training shall:
  - .1 be suitable for the selected objectives and training tasks;
  - .2 be capable of simulating the operating capabilities of shipboard equipment concerned, to a level of physical realism appropriate to training objectives, and include the capabilities, limitations and possible errors of such equipment;
  - .3 have sufficient behavioural realism to allow a trainee to acquire the skills appropriate to the training objectives;
  - .4 provide a controlled operating environment, capable of producing a variety of conditions, which may include emergency, hazardous or unusual situations relevant to the training objectives;
  - .5 provide an interface through which a trainee can interact with the equipment, the simulated environment and, as appropriate, the instructor; and
  - .6 permit an instructor to control, monitor and record exercises for the effective debriefing of trainees.

General performance standards for simulators used in assessment of competence

2. Each Party shall ensure that any simulator used for the assessment of competence required under the Convention or for any demonstration of continued proficiency so required, shall:
  - .1 be capable of satisfying the specified assessment objectives;
  - .2 be capable of simulating the operational capabilities of the shipboard equipment concerned to a level of physical realism appropriate to the assessment objectives, and include the capabilities, limitations and possible errors of such equipment;
  - .3 have sufficient behavioural realism to allow a candidate to exhibit the skills appropriate to the assessment objectives;
  - .4 provide an interface through which a candidate can interact with the equipment and simulated environment;
  - .5 provide a controlled operating environment, capable of producing a variety of conditions, which may include emergency, hazardous or unusual situations relevant to assessment objectives; and
  - .6 permit an assessor to control, monitor and record exercises for the effective assessment of the performance of candidates.

#### Additional performance standards

3. In addition to meeting the basic requirements set out in paragraphs 1 and 2, simulation equipment to which this section applies shall meet the performance standards given hereunder in accordance with their specific type.

#### Radar simulation

4. Radar simulation equipment shall be capable of simulating the operational capabilities of navigational radar equipment which meets all applicable performance standards adopted by the Organization and incorporate facilities to:

- .1 operate in the stabilized relative motion mode and sea and ground stabilized true motion modes;
- .2 model weather, tidal streams, current, shadow sectors, spurious echoes and other propagation effects, and generate coastlines, navigational buoys and search and rescue transponders; and
- .3 create a real-time operating environment incorporating at least two own ship stations with ability to change own ship's course and speed, and include parameters for at least 20 target ships and appropriate communication facilities.

#### Automatic Radar Plotting Aid (ARPA) simulation

5. ARPA simulation equipment shall be capable of simulating the operational capabilities of ARPAs which meet all applicable performance standards adopted by the Organization, and shall incorporate the facilities for:

- .1 manual and automatic target acquisition;
- .2 past track information;
- .3 use of exclusion areas;
- .4 vector/graphic time-scale and data display; and
- .5 trial manoeuvres.

### PART 2 – OTHER PROVISIONS

#### Simulator training objectives

6. Each Party shall ensure that the aims and objectives of simulator-based training are defined within an overall training programme and that specific training objectives and tasks are selected so as to relate as closely as possible to shipboard tasks and practices.

#### Training procedures

7. In conducting mandatory simulator-based training, instructors shall ensure that:
  - .1 trainees are adequately briefed beforehand on the exercise objectives and tasks and are given sufficient planning time before the exercise starts;
  - .2 trainees have adequate familiarization time on the simulator and with its equipment before any training or assessment commences;
  - .3 guidance given and exercise stimuli are appropriate to the selected exercise objectives and tasks and to the level of trainee experience;
  - .4 exercises are effectively monitored, supported as appropriate by audio and visual observation of trainee activity and pre and post exercise evaluation reports;
  - .5 trainees are effectively debriefed to ensure that training objectives have been met and that operational skills demonstrated are of an acceptable standard;
  - .6 the use of peer assessment during debriefing is encouraged; and
  - .7 simulator exercises are designed and tested so as to ensure their suitability for the specified training objectives.

#### Assessment procedures

8. Where simulators are used to assess the ability of candidates to demonstrate levels of competency, assessors shall ensure that:
  - .1 performance criteria are identified clearly and explicitly and are valid and available to the candidates;
  - .2 assessment criteria are established clearly and are explicit to ensure reliability and uniformity of assessment and to optimise objective measurement and evaluation, so that subjective judgements are kept to the minimum;
  - .3 candidates are briefed clearly on the tasks and/or skills to be assessed and on the tasks and performance criteria by which their competency will be determined;
  - .4 assessment of performance takes into account normal operating procedures and any behavioural interaction with other candidates on the simulator or simulator staff;
  - .5 scoring or grading methods to assess performance are used with caution until they have been validated; and
  - .6 the prime criterion is that a candidate demonstrates the ability to carry out a task safely and effectively to the satisfaction of the assessor.



#### Qualifications of instructors and assessors

9. Each Party shall ensure that instructors and assessors are appropriately qualified and experienced for the particular types and levels of training and corresponding assessment of competence as specified in regulation I/6 and section A-I/6.

#### Section A-I/13

##### Conduct of trials

(No provisions)

#### Section A-I/14

##### Responsibilities of companies

1. Companies, masters and crew members each have responsibility for ensuring that the obligations set out in this section are given full and complete effect and that such other measures as may be necessary are taken to ensure that each crew member can make a knowledgeable and informed contribution to the safe operation of the ship.

2. The company shall provide written instructions to the master of each ship to which the Convention applies, setting forth the policies and the procedures to be followed to ensure that all seafarers who are newly employed on board the ship are given a reasonable opportunity to become familiar with the shipboard equipment, operating procedures and other arrangements needed for the proper performance of their duties, before being assigned to those duties. Such policies and procedures shall include:

- .1 allocation of a reasonable period of time during which each newly employed seafarer will have an opportunity to become acquainted with:
  - .1.1 the specific equipment the seafarer will be using or operating, and
  - .1.2 ship specific watchkeeping, safety, environmental protection and emergency procedures and arrangements the seafarer needs to know to perform the assigned duties properly; and
- .2 designation of a knowledgeable crew member who will be responsible for ensuring that an opportunity is provided to each newly employed seafarer to receive essential information in a language the seafarer understands.

## Section A-I/15

## Transitional provisions

(No provisions)

## CHAPTER II

STANDARDS REGARDING THE MASTER AND DECK  
DEPARTMENT

## Section A-II/1

Mandatory minimum requirements for certifications of officers in charge of a navigational watch on ships of 500 gross tonnage or more

## Standard of competence

1. Every candidate for certification shall:
  - .1 be required to demonstrate the competence to undertake at operational level, the tasks, duties and responsibilities listed in column 1 of table A-II/1;
  - .2 at least hold an appropriate certificate for performing VHF radio-communications in accordance with the requirements of the Radio Regulations, and
  - .3 if designated to have primary responsibility for radiocommunications during distress incidents, hold an appropriate certificate issued or recognized under the provisions of the Radio Regulations.
2. The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/1.
3. The level of knowledge of the subjects listed in column 2 of table A-II/1 shall be sufficient for officers of the watch to carry out their watchkeeping duties.
4. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall be based on section A-VIII/1, part 3-1 – Basic principles to be observed in keeping a navigational watch and shall also take into account the relevant requirements of this part and the guidance given in part B of this Code.
5. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/1.

#### On-board training

6. Every candidate for certification as officer in charge of a navigational watch of ships of 500 gross tonnage or more whose seagoing service, in accordance with paragraph 2.2. of regulation II/1, forms part of a training programme approved as meeting the requirements of this section shall follow an approved programme of on-board training which:

- .1 ensures that during the required period of seagoing service the candidate receives systematic practical training and experience in the tasks, duties and responsibilities of an officer in charge of a navigational watch, taking into account the guidance given in section B-II/1 of this Code;
- .2 is closely supervised and monitored by qualified officers aboard the ships in which the approved seagoing service is performed; and
- .3 is adequately documented in a training record book or similar document.

#### Near-coastal voyages

7. The following subjects may be omitted from those listed in column 2 of table A-II/1 for issue of restricted certificates for service on near-coastal voyages, bearing in mind the safety of all ships which may be operating in the same waters:

- .1 celestial navigation; and
- .2 those electronic systems of position fixing and navigation that do not cover the waters for which the certificate is to be valid.

Table A-II/I  
 Specification of minimum standard of competence for officers in charge of a navigational watch on ships of 500 gross tonnage or more

Column 1 COMPETENCE	Column 2 KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	Column 3 METHODS FOR DEMONSTRATING COMPETENCE	Column 4 CRITERIA FOR EVALUATING COMPETENCE
Plan and conduct a passage and determine position	<p><i>Celestial Navigation</i>                      Ability to use celestial bodies to determine the ship's position</p> <p><i>Terrestrial and Coastal Navigation</i>                      Ability to determine the ship's position by use of:</p> <ul style="list-style-type: none"> <li>.1 landmarks</li> <li>.2 aids to navigation, including lighthouses, beacons and buoys</li> <li>.3 dead reckoning, taking into account winds, tides, currents and estimated speed</li> </ul> <p>Thorough knowledge of and ability to use navigational charts and publications, such as sailing directions, tide tables, notices to mariners, radio navigational warnings and ships routing information</p> <p>NOTE: ECDIS systems are considered to be included under the term "charts"</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul> <p>using: chart catalogues, charts, navigational publications, radio navigational warnings, sextant, azimuth mirror, electronic navigation equipment, echo sounding equipment, compass</p>	<p>The information obtained from navigational charts and publications is relevant, interpreted correctly and properly applied. All potential navigational hazards are accurately identified</p> <p>The primary method of fixing the ship's position is the most appropriate to the prevailing circumstances and conditions</p> <p>The position is determined within the limits of acceptable instrument/system errors</p> <p>The reliability of the information obtained from the primary method of position fixing is checked at appropriate intervals</p> <p>Calculations and measurements of navigational information are accurate</p> <p>The charts selected are the largest scale suitable for the area of navigation and charts and publications are corrected in accordance with the latest information available</p>

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Plan and conduct a passage and determine position (continued)</p>	<p><i>Electronic systems of position fixing and navigation</i> Ability to determine the ship's position by use of electronic navigational aids <i>Echo sounders</i> Ability to operate the equipment and apply the information correctly <i>Compass – magnetic and gyro</i> Knowledge of the principles of magnetic and gyro compasses Ability to determine errors of the magnetic and gyro compasses, using celestial and terrestrial means, and to allow for such errors <i>Steering control systems</i> Knowledge of steering control systems, operational procedures and change-over from manual to automatic control and vice-versa. Adjustment of controls for optimum performance <i>Meteorology</i> Ability to use and interpret information obtained from shipborne meteorological instruments Knowledge of the characteristics of the various weather systems, reporting procedures and recording systems Ability to apply the meteorological information available</p>		<p>Performance checks and tests to navigation systems comply with manufacturer's recommendations and good navigational practice</p> <p>Errors in magnetic and gyro compasses are determined and correctly applied to courses and bearings.</p> <p>The selection of the mode of steering is the most suitable for the prevailing weather, sea and traffic conditions and intended manoeuvres</p> <p>Measurements and observations of weather conditions are accurate and appropriate to the passage Meteorological information is correctly interpreted and applied</p>

Table A-11/1  
Page 2 of 11 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Maintain a safe navigational watch</p>	<p><i>Watchkeeping</i></p> <p>Thorough knowledge of the content, application and intent of the International Regulations for Preventing Collisions at Sea                      Thorough knowledge of the basic principles to be observed in keeping a navigational watch                      The ship's complement and the bridge team work procedures                      The use of routing in accordance with the General Provisions on Ship's Routing</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>	<p>The conduct, hand over and relief of the watch conforms with accepted principles and procedures</p> <p>A proper lookout is maintained at all times and in such a way as to conform to accepted principles and procedures</p> <p>Lights, shapes and sound signals conform with the requirements contained in the International Regulations for Preventing Collisions at Sea and are correctly recognized</p> <p>The frequency and extent of monitoring of traffic, the ship and the environment conform with accepted principles and procedures</p> <p>A proper record is maintained of the movements and activities relating to the navigation of the ship</p> <p>Responsibility for the safety of navigation is clearly defined at all times, including periods when the master is on the bridge and while under pilotage</p>
<p>Use of radar and ARPA to maintain safety of navigation</p> <p><b>Note:</b> Training and assessment in the use of ARPA is not intended to replace the use of ARPA on ships not fitted with ARPA. This limitation shall be reflected in the endorsement issued to the seafarer concerned.</p>	<p><i>Radar Navigation</i></p> <p>Knowledge of the fundamentals of radar and automatic radar plotting aids (ARPA)</p> <p>Ability to operate and to interpret and analyse information obtained from radar, including the following:</p>	<p>Assessment of evidence obtained from approved radar simulator and ARPA simulator training plus in-service experience</p>	<p>Information obtained from radar and ARPA is correctly interpreted and analysed taking into account the limitations of the equipment and prevailing circumstances and conditions</p>

Table A-II/1  
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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Use of radar and ARPA to maintain safety of navigation (continued)</p> <p><b>Note:</b> Training and assessment in the use of ARPA is not required for those who serve exclusively on ships not fitted with ARPA. This limitation shall be reflected in the endorsement issued to the seafarer concerned.</p>	<p>Performance including:</p> <ol style="list-style-type: none"> <li>.1 factors affecting performance and accuracy</li> <li>.2 setting up and maintaining displays</li> <li>.3 detection of misrepresentation of information, false echoes, sea return, etc., racons and SARTs</li> </ol> <p>Use including:</p> <ol style="list-style-type: none"> <li>.1 range and bearing, course and speed of other ships, time and distance of closest approach or crossing, meeting overtaking ships</li> <li>.2 identification of critical echoes; detecting course and speed changes of other ships; effect of changes in own ship's course or speed or both</li> </ol>		<p>Action taken to avoid a close encounter or collision with other vessels is in accordance with the International Regulations for Preventing Collisions at Sea</p> <p>Decisions to amend course and/or speed are both timely and in accordance with accepted navigation practice</p> <p>Adjustments made to the ship's course and speed maintain safety of navigation</p> <p>Communication is clear, concise and acknowledged at all times in a seamanlike manner</p> <p>Manoeuvring signals are made at the appropriate time and are in accordance with the International Regulations for Preventing Collisions at Sea</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Use of radar and ARPA to maintain safety of navigation (continued)</p> <p><b>Note:</b> Training and assessment in the use of ARPA is not required for those who serve exclusively on the bridge of a ship with ARPA. The limitation shall be reflected in the endorsement issued to the seafarer concerned.</p>	<p>3 application of the International Regulations for Preventing Collisions at Sea</p> <p>4 plotting techniques and relative and true motion concepts</p> <p>5 parallel indexing</p> <p>Principal types of ARPA, their display characteristics, performance standards and the dangers of over reliance on ARPA</p> <p>Ability to operate and to interpret and analyse information obtained from ARPA, including:</p> <ol style="list-style-type: none"> <li>1 system performance and accuracy, tracking capabilities and limitations, and processing delays</li> <li>2 use of operational warnings and system tests</li> <li>3 methods of target acquisition and their limitations</li> <li>4 true and relative vectors, graphic representation of target information and danger areas</li> <li>5 deriving and analysing information, critical echoes, exclusion areas and trial manoeuvres</li> </ol>		

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Respond to emergencies	<p><i>Emergency procedures</i></p> <p>Precautions for the protection and safety of passengers in emergency situations</p> <p>Initial action to be taken following a collision or a grounding; initial damage assessment and control</p> <p>Appreciation of the procedures to be followed for rescuing persons from the sea, assisting a ship in distress, responding to emergencies which arise in port</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience</p> <p>.2 approved training ship experience</p> <p>.3 approved simulator training, where appropriate</p> <p>.4 practical training</p>	<p>The type and scale of the emergency is promptly identified.</p> <p>Initial actions and, if appropriate, manoeuvring of the ship are in accordance with contingency plans and are appropriate to the urgency of the situation and nature of the emergency</p>
Respond to a distress signal at sea	<p><i>Search and rescue</i></p> <p>Knowledge of the contents of the IMO Merchant Ship Search and Rescue Manual (MERSAR)</p>	<p>Examination and assessment of evidence obtained from practical instruction or approved simulator training, where appropriate</p>	<p>The distress or emergency signal is immediately recognized</p> <p>Contingency plans and instructions in standing orders are implemented and complied with</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Use the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases and use English in written and oral form</p>	<p><i>English language</i>  Adequate knowledge of the English language to enable the officer to use charts and other nautical publications, to understand meteorological information and messages concerning ship's safety and operation, to communicate with other ships and coastal stations and to perform duties concerning safety of life at sea, including the ability to use and understand the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases</p>	<p>Examination and assessment of evidence obtained from practical instruction</p>	<p>English language navigational publications and messages relevant to the safety of the ship are correctly interpreted or drafted  Communications are clear and understood</p>
<p>Transmit and receive information by visual signalling</p>	<p><i>Visual signalling</i>  Ability to transmit and receive signals by Morse light  Ability to use the International Code of Signals</p>	<p>Assessment of evidence obtained from practical instruction</p>	<p>Communications within the operator's area of responsibility are consistently successful</p>

Table A-II/I  
Page 7 of 11 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Manoeuvre the ship	<p><i>Ship manoeuvring and handling</i></p> <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>the effects of deadweight, draught, trim, speed and under-keel clearance on turning circles and stopping distances</li> <li>the effects of wind and current on ship handling</li> <li>manoeuvres and procedures for the rescue of person overboard</li> <li>squat, shallow water and similar effects</li> <li>proper procedures for anchoring and mooring</li> </ol>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>approved in-service experience</li> <li>approved training ship experience</li> <li>approved simulator training, where appropriate</li> <li>approved training on a manned scale ship model where appropriate</li> </ol>	<p>Safe operating limits of ship propulsion, steering and power systems are not exceeded in normal manoeuvres</p> <p>Adjustments made to the ship's course and speed maintain safety of navigation</p>
Function: Cargo handling and stowage at the operational level			
Monitor the loading, stowage, securing and unloading of cargoes and their care during the voyage	<p><i>Cargo handling and stowage</i></p> <p>Cargo handling, stowage and securing</p> <p>Knowledge of the effect of cargo including heavy lifts on the seaworthiness and stability of the ship</p> <p>Knowledge of safe handling, stowage and securing of cargoes including dangerous, hazardous and harmful cargoes and their effect on the safety of life and of the ship</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>approved in-service experience</li> <li>approved training ship experience</li> <li>approved simulator training, where appropriate</li> </ol>	<p>Cargo operations are carried out in accordance with the cargo plan or other documents and established safety rules/regulations, equipment operating instructions and shipboard stowage limitations</p> <p>The handling of dangerous, hazardous and harmful cargoes complies with international regulations and recognized standards and codes of safe practice</p>

Table A-11/1  
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Function: Controlling the operation of the ship and care for persons on board at the operational level

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Ensure compliance with pollution prevention requirements	<p><i>Prevention of pollution of the marine environment and anti-pollution procedures</i></p> <p>Knowledge of the precautions to be taken to prevent pollution of the marine environment</p> <p>Anti-pollution procedures and all associated equipment</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience</p> <p>.2 approved training ship experience</p>	<p>Procedures for monitoring shipboard operations and ensuring compliance with MARPOL requirements are fully observed</p>
Maintain seaworthiness of the ship	<p><i>Ship stability</i></p> <p>Working knowledge and application of stability, trim and stress tables, diagrams and stress calculating equipment</p> <p>Understanding of fundamental actions to be taken in the event of partial loss of intact buoyancy</p> <p>Understanding of the fundamentals of watertight integrity</p> <p><i>Ship construction</i></p> <p>General knowledge of the principal structural members of a ship and the proper names for the various parts</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience</p> <p>.2 approved training ship experience</p> <p>.3 approved simulator training, where appropriate</p> <p>.4 approved laboratory equipment training</p>	<p>The stability conditions comply with the IMO intact stability criteria under all conditions of loading</p> <p>Actions to ensure and maintain the watertight integrity of the ship are in accordance with accepted practice</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Prevent, control and fight fires on board	<p><i>Fire prevention and fire-fighting appliances</i></p> <p>Knowledge of fire prevention</p> <p>Ability to organize fire drills</p> <p>Knowledge of classes and chemistry of fire</p> <p>Knowledge of fire-fighting systems</p> <p>Knowledge of action to be taken in the event of fire, including fires involving oil systems</p>	<p>Assessment of evidence obtained from approved fire-fighting training and experience as set out in section A-VI/3</p>	<p>The type and scale of the problem is promptly identified and initial actions conform with the emergency procedures and contingency plans for the ship</p> <p>Evacuation, emergency shut-down and isolation procedures conform with the nature of the emergency and are implemented promptly</p> <p>The order of priority, and the levels and timescales of making reports and informing personnel on board, are relevant to the nature of the emergency and reflect the urgency of the problem</p>
Operate life-saving appliances	<p><i>Life-saving</i></p> <p>Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment including radio life-saving appliances, satellite EPIRBs, SARTs, immersion suits and thermal protective aids.</p> <p>Knowledge of survival at sea techniques</p>	<p>Assessment of evidence obtained from approved fire-fighting training and experience as set out in section A-VI/2, paragraphs 1 to 4</p>	<p>Actions in responding to abandon ship and survival situations conform with the nature of the emergency and conditions and comply with accepted safety practices and standards</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Apply medical first aid on board ship	<i>Medical aid</i> Practical application of medical guides and advice by radio, including the ability to take effective action bases on such knowledge in the case of accidents of illnesses that are likely to occur on board ship	Assessment of evidence obtained from approved training as set out in section A-V/4, paragraphs 1 to 3	The identification of probable cause, nature and extent of injuries or conditions is prompt and treatment minimizes immediate treat to life
Monitor compliance with legislative requirements	Basic working knowledge of the relevant IMO Conventions concerning safety of life at sea and protection of the marine environment	Assessment of evidence obtained from examination or approved training	Legislative requirements relating to safety of life at sea and protection of the marine environment are correctly identified

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### Section A-II/2

Mandatory minimum requirements for certification of masters and chief mates on ships of 500 gross tonnage or more

#### Standard of competence

1. Every candidate for certification as master or chief mate of ships of 500 gross tonnage or more shall be required to demonstrate the competence to undertake at the management level, the tasks, duties and responsibilities listed in column 1 of table A-II/2.

2. The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/2. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-II/1 for officers in charge of a navigational watch.

3. Bearing in mind that the master has ultimate responsibility for the safety of the ship, its passengers, crew and cargo, and for the protection of the marine environment against pollution by the ship and that a chief mate shall be in a position to assume that responsibility at any time, assessment in these subjects shall be designed to test their ability to assimilate all available information that affects the safety of the ship, its passengers, crew or cargo, or the protection of the marine environments.

4. The level of knowledge of the subjects listed in column 2 of table A-II/2 shall be sufficient to enable the candidate to serve in the capacity of master or chief mate.

5. The level of theoretical knowledge, understanding and proficiency required under the different sections in column 2 of table A-II/2 may be varied according to whether the certificate is to be valid for ships of 3,000 gross tonnage or more or for ships of between 500 gross tonnage and 3,000 gross tonnage.

6. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take into account the relevant requirements of this part and the guidance given in part B of this Code.

7. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/2.

## Near-coastal voyages

8. An Administration may issue a certificate restricted to service on ships engaged exclusively on near-coastal voyages and, for the issue of such a certificate, may exclude such subjects as are not applicable to the waters or ships concerned, bearing in mind the effect on the safety of all ships which may be operating in the same waters.



**Table A-II/2**  
**Specification of minimum standard of competence for masters and chief mates on ships of 500 gross tonnage or more**

Function: Navigation at the management level	COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Plan a voyage and conduct navigation	<p>Voyage planning and navigation for all conditions by acceptable methods of plotting ocean tracks taking into account, e.g.:</p> <ul style="list-style-type: none"> <li>.1 restricted waters</li> <li>.2 meteorological conditions</li> <li>.3 ice</li> <li>.4 restricted visibility</li> <li>.5. traffic separation schemes</li> <li>.6 areas of extensive tidal effects</li> </ul> <p>Routing in accordance with the General Principles Ships' Routing</p> <p>Reporting in accordance with the Guidelines and Criteria for Ship Reporting Systems</p>	<p>Examination and assessment of evidence obtained from one or more of the following</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training, where appropriate</li> <li>.3 approved laboratory equipment training using: chart catalogues, charts, nautical publications and ship particulars.</li> </ul>	<p>The equipment, charts and nautical publications required for the voyage are enumerated and appropriate to the safe conduct of the voyage.</p> <p>The reasons for the planned route are supported by facts and statistical data obtained from relevant sources and publications.</p> <p>Positions, courses, distances and time calculations are correct within accepted accuracy standards for navigational equipment</p> <p>All potential navigational hazards are accurately identified.</p>	

Table A-II/2  
 Page 1 of 17 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Determine position and the accuracy of resultant position fix by any means</p>	<p><i>Position determination in all conditions:</i></p> <ol style="list-style-type: none"> <li>.1 by celestial observations</li> <li>.2 by terrestrial observations, including the ability to use appropriate charts, notices to mariners and other publications to assess the accuracy of the resulting position fix</li> <li>.3 using modern electronic navigational aids, with specific knowledge of their operating characteristics, and the ability to detect and correct for misrepresentation of information and methods of correction to obtain accurate position fixing</li> </ol>	<p>Examination and assessment of evidence obtained from one or more of the following</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training, where appropriate</li> <li>.3 approved laboratory equipment training using                             <ol style="list-style-type: none"> <li>.1 charts, nautical almanacs, plotting sheets, chronometer, sextant and a calculator</li> <li>.2 charts, navigational publications and instruments (azimuth mirror, sextant, log, sounding equipment, compass) and manufacturers' manuals</li> <li>.3 radar, Decca, Loran, satellite navigation systems and appropriate navigational charts and publications</li> </ol> </li> </ol>	<p>The primary method chosen for fixing the ship's position is the most appropriate to the prevailing circumstances and conditions</p> <p>The fix obtained by celestial observations is within accepted accuracy levels</p> <p>The fix obtained by terrestrial observations is within accepted accuracy levels</p> <p>The accuracy of the resulting fix is properly assessed</p> <p>The fix obtained by the use of electronic navigational aids is within the accuracy standards of the systems in use. The possible errors affecting the accuracy of the resulting position are stated and methods of minimizing the effects of system errors on the resulting position are properly applied</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Determine and allow for compass errors	<p>Ability to determine and allow for errors of the magnetic and gyro-compasses</p> <p>Knowledge of the principles of magnetic and gyro-compasses</p> <p>Un understanding of systems under the control of the master gyro and a knowledge of the operation and care of the main types of gyro-compass</p>	<p>Examination and assessment of evidence obtained from one or more of the following</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training, where appropriate</li> <li>.3 approved laboratory equipment training using:</li> </ul> <p>celestial observations, terrestrial bearings and comparison between magnetic and gyro-compasses</p>	<p>The method and frequency of checks for errors of magnetic and gyro-compasses ensures accuracy of information</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Co-ordinate search and rescue operations	A thorough knowledge of and ability to apply the procedures contained in the IMO Merchant Ship Search and Rescue Manual (MERSAR)	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training, where appropriate</li> <li>.3 approved laboratory equipment training using:               <ul style="list-style-type: none"> <li>relevant publications, charts, meteorological data, particulars of ships involved, radiocommunication equipment and other available facilities and one or more of the following:</li> </ul> </li> </ol> <ol style="list-style-type: none"> <li>.1 approved SAR training course</li> <li>.2 approved simulator training, where appropriate</li> <li>.3 approved laboratory equipment training</li> </ol>	<p>The plan for co-ordinating search and rescue operations is in accordance with international guidelines and standards</p> <p>Radiocommunications are established and correct communication procedures are followed at all stages of the search and rescue operations</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Establish watchkeeping arrangements and procedures</p>	<p>Thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea                      Thorough knowledge of the content, application and intent of the Basic Principles to be Observed in Keeping a Navigational Watch.                      Effective bridge teamwork procedures</p>	<p>Examination and assessment of evidence obtained from one or more of the following                      .1 approved in-service experience                      .2 approved simulator training, where appropriate</p>	<p>Watchkeeping arrangements and procedures are established and maintained in compliance with international regulations and guidelines so as to ensure the safety of navigation, protection of the marine environment and safety of the ship and persons on board.</p>

Table A-II/2  
 Page 5 of 17 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Maintain safe navigation through the use of radar and ARPA and make appropriate command decision-making</p> <p><b>Nota:</b> Training and assessment in the use of ARPA is not required for those who serve exclusively on ships not fitted with ARPA. This provision shall be regarded in the endorsement issued to the seafarer concerned.</p>	<p>An appreciation of system errors and thorough understanding of the operational aspects of radar and navigational systems, including radar and ARPA.</p> <p>Blind piloting techniques</p> <p>Evaluation of navigational information derived from all sources, including radar and ARPA, in order to make and implement command decisions for collision avoidance and for directing the safe navigation of the ship</p> <p>The inter-relationship and optimum use of all navigational data available for conducting navigation.</p>	<p>Assessment of evidence obtained from approved radar simulator and ARPA simulator training</p>	<p>Information obtained from radar and ARPA is correctly interpreted and analysed taking into account the limitations of the equipment and prevailing circumstances and conditions.</p> <p>Action taken to avoid a close encounter or collision with another vessel is in accordance with the International Regulations for Preventing Collisions at Sea</p>

Table A-II/2  
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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Forecast weather and oceanographic conditions	<p>Ability to understand and interpret a synoptic chart and to forecast area weather, taking into account local weather conditions and information received by weather fax</p> <p>Knowledge of the characteristics of various weather systems, including tropical revolving storms and avoidance of storm centres and the dangerous quadrants</p> <p>Knowledge of ocean current systems</p> <p>Ability to calculate tidal conditions</p> <p>Use all appropriate navigational publications on tides and currents</p>	<p>Examination and assessment of evidence obtained from one or more of the following</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved laboratory equipment training</li> </ol>	<p>The likely weather conditions predicted for a determined period are based on all available information</p> <p>Actions taken to maintain safety of navigation minimize any risk to safety of the ship</p> <p>Reasons for intended action are backed by statistical data and observations of the actual weather conditions</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Respond to navigational emergencies	<p>Precautions when beaching a ship</p> <p>Action to be taken if grounding is imminent, and after grounding</p> <p>Refloating a grounded ship with and without assistance</p> <p>Action to be taken if collision is imminent and following a collision or impairment of the watertight integrity of the hull by any cause</p> <p>Assessment of damage control</p> <p>Emergency steering</p> <p>Emergency towing arrangements and towing procedures</p>	Examination and assessment of evidence obtained from practical instruction, in-service experience and practical drills in emergency procedures	<p>The type and scale of any problem is promptly identified and decisions and actions minimize the effects of any malfunction of the ship's systems</p> <p>Communications are effective and comply with established procedures</p> <p>Decisions and actions maximize safety of persons on board</p>



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Manoeuvre and handle a ship in all conditions</p>	<p>Manoeuvres and handling a ship in all conditions, including:</p> <ul style="list-style-type: none"> <li>.1 manoeuvres when approaching pilot stations and embarking or disembarking pilots with due regard to weather, tide, headreach and stopping distances</li> <li>.2 handling ship in rivers, estuaries and restricted waters, having regard to the effects of current, wind and restricted water on helm response</li> <li>.3 application of constant rate of turn techniques</li> <li>.4 manoeuvring in shallow water, including the operation in reduced clearance caused by squat, rolling and pitching</li> <li>.5 interaction between passing ships and between own ship and nearby banks (canal effect)</li> <li>.6 berthing and unberthing under various conditions of wind, tide and current with and without tugs</li> <li>.7 ship and tug interaction</li> <li>.8 use of propulsion and manoeuvring systems</li> </ul>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training, where appropriate</li> <li>.3 approved manned scale ship model, where appropriate</li> </ul>	<p>All decisions concerning berthing and anchoring are based on a proper assessment of the ship's manoeuvring and engine characteristics and the forces to be expected while berthed alongside or lying at anchor</p> <p>While underway, a full assessment is made of possible effects of shallow and restricted waters, ice, banks, tidal conditions, passing ships and on ship's bow and stern clearance, and the ship is manoeuvred under various conditions of loading and weather</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Manoeuvring and handle a ship in all conditions (continued)</p>	<p>.9 choice of anchorage, anchoring with one or two anchors in limited anchorages and factors involved in determining the length of anchor cable to be used</p> <p>.10 dragging anchor, clearing fouled anchors</p> <p>.11 dry-docking, both with and without damage</p> <p>.12 management and handling of ships in heavy weather, including assisting a ship or being rescued; means of keeping an unmanageable ship out of trough of the sea, lessening drift and use of oil</p> <p>.13 precautions in manoeuvring to launch rescue boats or survival craft in bad weather</p> <p>.14 methods of taking on board survivors from rescue boats and survival craft</p> <p>.15 ability to determine the manoeuvring and propulsion characteristics of common types of ships with special reference to stopping distances and turning circles at various draughts and speeds</p>		

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Manoeuvre and handle a ship in all conditions (continued)	<p>.16 importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave</p> <p>.17 practical measures to be taken when navigating in or near ice or in conditions of ice accumulation on board</p> <p>.18 use of, and manoeuvring in and near, traffic separation schemes and in vessel traffic services (VTS) areas</p>		
Operate remote controls of propulsion plant and engineering systems and services	<p>Operating principles of marine power plants</p> <p>Ships' auxiliary machinery</p> <p>General knowledge of marine engineering terms</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience</p> <p>.2 approved simulator training where appropriate</p>	<p>Plant, auxiliary machinery and equipment is operated in accordance with technical specifications and within safe operating limits at all times</p>

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## Function: Cargo handling and stowage at the management level

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Plan and ensure safe loading, stowage, securing, care during the voyage and unloading of cargoes</p>	<p>Knowledge of and ability to apply relevant international regulations, codes and standards concerning the safe handling, stowage, securing and transport of cargoes</p> <p>Knowledge of the effect on trim and stability of cargoes and cargo operations</p> <p>Use of stability and trim diagrams and stress calculating equipment, including automatic data-based (ADB) equipment and knowledge of loading cargoes and ballasting in order to keep hull stress within acceptable limits</p> <p>Stowage and securing of cargoes on board ships, including cargo handling gear and securing and lashing equipment</p> <p>Loading and unloading operations, with special regard to the transport of cargoes identified in the Code of Safe Practice for Cargo Stowage and Securing</p> <p>General knowledge of tankers and tanker operations</p>	<p>Examinations and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training, where appropriate using: stability, trim and stress tables, diagrams and stress calculating equipment.</li> </ol>	<p>The frequency and extent of cargo condition monitoring is appropriate to its nature and prevailing conditions.</p> <p>Unacceptable or unforeseen variations in the condition or stowage of cargo during the voyage are identified and remedial action is immediately taken and designed to safeguard the safety of the ship and those on board.</p> <p>Cargo operations are planned and executed in accordance with established procedures and legislative requirements</p> <p>Stowage and securing of cargoes ensures that stability and stress conditions remain within safe limits at all times during the voyage</p>

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Carriage of dangerous cargoes	<p>International regulations, standards, codes and recommendations on the carriage of dangerous cargoes, including the International Maritime Dangerous Goods (IMDG) Code and the Code of Safe Practice for Solid Bulk Cargoes (BC Code)</p> <p>Carriage of dangerous, hazardous and harmful cargoes, including the loading and unloading and care during the voyage</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved simulator training where appropriate</li> <li>.3 approved specialist training</li> </ul>	<p>Planned distribution of cargo, is based on reliable information and is in accordance with established guidelines and legislative requirements</p> <p>Information on dangers, hazards and special requirements is recorded in a format suitable for easy reference in the event of an incident</p>

Table A-1/2  
Page 13 of 17 pages

Function: Controlling the operation of the ship and care for persons on board at the management level

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Control trim, stability and stress	<p>Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability</p> <p>Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and counter measures to be taken</p> <p>Knowledge of IMO recommendations concerning ship stability</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> </ol>	<p>Stability and stress conditions are maintained within safe limits at all times</p>
Monitor and control compliance with legislative requirements and procedures to ensure safety of life at sea and the protection of the marine environment	<p>Knowledge of international maritime law embodied in international agreements and conventions</p> <p>Regard shall be paid especially to the following subjects:</p> <ol style="list-style-type: none"> <li>.1 certificates and other documents required to be carried on board ships by international conventions, how they may be obtained and their period of validity</li> </ol>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> </ol>	<p>Procedures for monitoring operations and maintenance comply with legislative requirements</p> <p>Potential non-compliance is promptly and fully identified</p> <p>Planned renewal and extension of certificates ensures continued validity of surveyed items and equipment</p>

Table A-11/2  
Page 14 of 17 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and the protection of the marine environment (continued)</p>	<p>.2 responsibilities under the relevant requirements of the International Convention on Load Lines                      .3 responsibilities under the relevant requirements of the International Convention for the Safety of Life at Sea                      .4 responsibilities under the International Convention for the Prevention of Pollution from Ships                      .5 maritime declarations of health and the requirements of the International Health Regulations                      .6 responsibilities under international instruments affecting the safety of the ship, passengers, crew and cargo                      .7 methods and aids to prevent pollution of the marine environment by ships                      .8 national legislation for implementing international agreements and conventions</p>		

Table A-II/2  
Page 15 of 17 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Maintain safety and security of the ship's crew and passengers in the event of an emergency condition of life-saving, fire-fighting and other safety systems	A thorough knowledge of life-saving appliance regulations (International Convention for the Safety of Life at Sea) Organization of fire and abandon ship drills Maintenance of operational condition of life-saving, fire-fighting and other safety systems Actions to be taken to protect and safeguard all persons on board in emergencies Actions to limit damage and save the ship following a fire, explosion, collision or grounding	Examination and assessment of evidence obtained from practical instruction and approved in-service training and experience	Procedures for monitoring fire detection and safety systems ensure that all alarms are detected promptly and acted upon in accordance with established emergency procedures
Develop emergency and damage control plans and handle emergency situations	Preparation of contingency plans for response to emergencies Ship construction, including damage control Methods and aids for fire prevention, detection and extinction Functions and use of life-saving appliances	Examination and assessment of evidence obtained from approved in-service training and experience	Emergency procedures are in accordance with the established plans for emergency situations
Organize and manage the crew	A knowledge of personnel management, organization and training on board ship A knowledge of related international maritime conventions and recommendations, and national legislation	Examination and assessment of evidence obtained from approved in-service training and experience	The crew are allocated duties and informed of expected standards of work and behaviour in a manner appropriate to the individuals concerned Training objectives and activities are based on an assessment of current competence and capabilities and operational requirements

Table A-11/2  
Page 16 of 17 pages



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Organize and manage the provision of medical care on board	<p>A thorough knowledge of the use and contents of the following publications:</p> <ul style="list-style-type: none"> <li>.1 International Medical Guide for Ships or equivalent national publications</li> <li>.2 Medical section of the International Code of Signals</li> <li>.3 Medical First Aid Guide for Use in Accidents Involving Dangerous Goods</li> </ul>	Examination and assessment of evidence obtained from approved training	Action taken and procedures followed correctly apply and make full use of advice available.

Table A-11/2  
Page 17 of 17 pages

## Section A-II/3

Mandatory minimum requirements for certification of officers in charge of a navigational watch and of masters on ships of less than 500 gross tonnage, engaged on near-coastal voyages

Officer in charge of a navigational watch

## Standard of competence

1. Every candidate for certification shall:
  - .1 be required to demonstrate the competence to undertake at operational level, the tasks, duties and responsibilities listed in column 1 of table A-II/3;
  - .2 at least hold an appropriate certificate for performing VHF radio-communications in accordance with the requirements of the Radio Regulations; and
  - .3 if designated to have primary responsibility for radiocommunications during distress incidents, hold an appropriate certificate issued or recognized under the provisions of the Radio Regulations.
2. The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-II/3.
3. The level of knowledge of the subjects listed in column 2 of table A-II/3 shall be sufficient to enable the candidate to serve in the capacity of officer in charge of a navigational watch.
4. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall be based on section A-VII/1, part 3-1 – Basic principles to be observed in keeping a navigational watch, and shall also take into account the relevant requirements of this part and the guidance given in part B of this Code.
5. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-II/3.

## Special training

6. Every candidate for certification as officer in charge of a navigational watch on ships of less than 500 gross tonnage, engaged on near-coastal voyages, who, in accordance with paragraph 4.2.1. of regulation II/3, is required to have completed special training, shall follow an approved programme of on-board training which:

- .1 ensures that during the required period of seagoing service the candidate receives systematic practical training and experience in the tasks, duties and responsibilities of an officer in charge of a navigational watch, taking into account the guidance given in section B-II/1 of this Code;
- .2 is closely supervised and monitored by qualified officers on board the ships in which the approved seagoing service is performed; and
- .3 is adequately documented in a training record book or similar document.

#### Master

7. Every candidate for certification as master on ships of less than 500 gross tonnage, engaged on near coastal voyages, shall meet the requirements for an officer in charge of a navigational watch set out below and, in addition, shall be required to provide evidence of knowledge and ability to carry out all the duties of such a master.

**Table A-II/3**  
**Specification of minimum standard of competence for officers in charge of a navigational watch and for masters on ships of less than 500 gross tonnage engaged on near-coastal voyages**  
**Function: Navigation at the operational level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Plan and conduct a coastal passage and determine position	<p><i>Navigation</i></p> <p>Ability to determine the ship's position by the use of:</p> <ul style="list-style-type: none"> <li>.1 landmarks</li> <li>.2 aids to navigation, including lighthouses, beacons and buoys</li> <li>.3 dead reckoning, taking into account winds, tides, currents and estimated speed</li> </ul>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training using: chart catalogues, charts, navigational publications, radio navigational warnings, sextant, azimuth mirror, electronic navigation equipment, echo sounding equipment, compass</li> </ul>	<p>Information obtained from navigational charts and publications is relevant, interpreted correctly and properly applied</p> <p>The primary method of fixing the ship's position is the most appropriate to the prevailing circumstances and conditions</p> <p>The position is determined within the limits of acceptable instrument/system errors</p> <p>The reliability of the information obtained from the primary method of position fixing is checked at appropriate intervals</p> <p>Calculations and measurements of navigational information are accurate</p>

Table A-II/3  
 Page 1 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Plan and conduct a coastal passage and determine position (continued)</p>	<p>Thorough knowledge of and ability to use navigational charts and publications, such as sailing directions, tide tables, notices to mariners, radio navigational warnings and ships' routing information</p> <p>Reporting in accordance with the Guidelines and Criteria for Ship Reporting Systems</p> <p><b>Note:</b> This item only required for certification as master</p> <p><i>Navigational aids and equipment</i></p> <p>Ability to operate safely and determine the ship's position by use of all navigational aids and equipment commonly fitted on board the ships concerned</p> <p><i>Compasses</i></p> <p>Knowledge of the errors and corrections of magnetic compasses</p> <p>Ability to determine errors of the compass using terrestrial means, and to allow for such errors</p>	<p>Assessment of evidence obtained from approved radar navigation and ARPA simulator training</p>	<p>Charts and publications selected are the largest scale on board suitable for the area of navigation and charts are corrected in accordance with the latest information available</p> <p>Performance checks and tests of navigation systems comply with manufacturer's recommendations, good navigational practice and IMO resolutions on performance standards for navigational equipment</p> <p>Interpretation and analyses of information obtained from radar is in accordance with accepted navigational practice and takes account of the limits and accuracy levels of radar.</p> <p>Errors in magnetic compasses are determined and applied correctly to courses and bearings.</p>

Table A-II/3  
Page 2 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Plan and conduct a coastal passage and determine position (continued)	<p><i>Automatic pilot</i></p> <p>Knowledge of automatic pilot systems and procedures change-over from manual to automatic control and vice-versa; adjustment of controls for optimum performance</p> <p><i>Meteorology</i></p> <p>Ability to use and interpret information obtained from shipborne meteorological instruments</p> <p>Knowledge of the characteristics of the various weather systems, reporting procedures and recording systems.</p> <p>Ability to apply the meteorological information available</p>		<p>Selection of the mode of steering is the most suitable for prevailing weather, sea and traffic conditions and intended manoeuvres</p> <p>Measurements and observations of weather conditions are accurate and appropriate to the passage</p> <p>Meteorological information is evaluated and applied to maintain the safe passage of the vessel</p>

Table A-II/3  
Page 3 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Maintain a safe navigational watch</p>	<p><i>Watchkeeping</i>                      Thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea                      Knowledge of content of the Basic Principles to be Observed in Keeping a Navigational Watch                      Use of routing in accordance with the General Provisions on Ship's Routing</p>	<p>Examination and assessment of evidence obtained from one or more of the following:                      .1 approved in-service experience                      .2 approved training ship experience                      .3 approved simulator training, where appropriate                      .4 approved laboratory equipment training</p>	<p>The conduct, handover and relief of the watch conforms with accepted principles and procedures                      A proper lookout is maintained at all times and in conformity with accepted principles and procedures                      Lights, shapes and sound signals conform with the requirements contained in the International Regulations for Preventing Collisions at Sea and are correctly recognized                      The frequency and extent of monitoring of traffic, the ship and the environment conforms with accepted principles and procedures</p>

Table A-II/3  
 Page 4 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Maintain a safe navigational watch (continued)			<p>Action to avoid close encounters and collision with other vessels is in accordance with the International Regulation for Preventing Collisions at Sea.</p> <p>Decisions to adjust course and/or speed are both timely and in accordance with accepted navigation procedures</p> <p>A proper record is maintained of movements and activities relating to the navigation of the ship</p> <p>Responsibility for safe navigation is clearly defined at all times, including periods when the Master is on the bridge and when under pilotage</p>
Respond to emergencies	<p><i>Emergency procedures</i> including:</p> <ol style="list-style-type: none"> <li>.1 precautions for the protection and safety of passengers in emergency situations</li> <li>.2 initial assessment of damage and damage control</li> <li>.3 action to be taken following a collision</li> <li>.4 action to be taken following a grounding</li> </ol>	<p>Examination and assessment of evidence obtained from one or more of the following</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 practical instruction</li> </ol>	<p>The type and scale of the emergency is promptly identified</p> <p>Initial actions and, if appropriate, manoeuvring, are in accordance with contingency plans and are appropriate to the urgency of the situation and the nature of the emergency</p>

Table A-II/3  
Page 5 of 10 pages



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Respond to emergencies (continued)	<p>In addition, the following material should be included for certification as master:</p> <ol style="list-style-type: none"> <li>.1 emergency steering</li> <li>.2 arrangements for towing and for being taken in tow</li> <li>.3 rescuing persons from the sea</li> <li>.4 assisting a vessel in distress</li> <li>.5 appreciation of the action to be taken when emergencies arise in port</li> </ol>		
Respond to a distress signal at sea	<p><i>Search and rescue</i>  Knowledge of the contents of the IMO Merchant Ship Search and Rescue Manual (MERSAR)</p>	<p>Examination and assessment of evidence obtained from practical instruction or approved simulator training, where appropriate</p>	<p>The distress or emergency signal is immediately recognized  Contingency plans and instructions in standing orders are implemented and complied with</p>

Table A-II/3  
Page 6 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Manoeuvre the ship and operate small ship power plants	<i>Ship manoeuvring and handling</i> Knowledge of factors affecting safe manoeuvring and handling The operation of small ship power plants and auxiliaries Proper procedures for anchoring and mooring	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate	Safe operating limits of ship propulsion, steering and power systems are not exceeded in normal manoeuvres Adjustments made to the ship's course and speed maintain safety of navigation Plant, auxiliary machinery and equipment is operated in accordance with technical specifications and within safe operating limits at all times

**Function: Cargo handling and stowage at the operational level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Monitor the loading, stowage, securing and unloading of cargoes and their care during the voyage	<i>Cargo handling, stowage and securing</i> Knowledge of safe handling, stowage and securing of cargoes including dangerous, hazardous and harmful cargoes and their effect on the safety of life and of the ship Use of the International Maritime Dangerous Goods (IMDG) Code	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate	Cargo operations are carried out in accordance with the cargo plan or other documents and established safety rules/regulations, equipment operating instructions and shipboard stowage limitations The handling of dangerous, hazardous and harmful cargoes complies with international regulations and recognized standards and codes of safe practice

**Function: Controlling the operation of the ship and care for persons on board at the operational level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Ensure compliance with pollution prevention requirements	<p><i>Prevention of pollution of the marine environment and anti-pollution procedures</i></p> <p>Knowledge of the precautions to be taken to prevent pollution of the marine environment and anti-pollution procedures</p> <p>Anti-pollution procedures and all associated equipment</p>	<p>Examination and assessment of evidence obtained from one or more of the following</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> </ol>	<p>Procedures for monitoring shipboard operations and ensuring compliance with MARPOL, requirements are fully observed</p>
Maintain seaworthiness of the ship	<p><i>Ship stability</i></p> <p>Working knowledge and application of stability, trim and stress tables, and diagrams and stress calculating equipment</p> <p>Understanding of fundamental actions to be taken in the event of partial loss of intact buoyancy</p> <p>Understanding of the fundamentals of watertight integrity</p> <p><i>Ship construction</i></p> <p>General knowledge of the principal structural members of a ship and the proper names for the various parts</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ol>	<p>Stability conditions comply with the IMO intact stability criteria under all conditions of loading</p> <p>Actions to ensure and maintain the watertight integrity of the ship are in accordance with accepted practice</p>

Table A-II/3  
Page 8 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Prevent, control and fight fires on board	<p><i>Fire prevention and fire-fighting appliances</i></p> <p>Knowledge of fire prevention</p> <p>Ability to organize fire drills</p> <p>Knowledge of classes and chemistry of fire</p> <p>Knowledge of fire-fighting systems</p> <p>Understanding of action to be taken in the event of fire, including fires involving oil systems</p>	<p>Assessment evidence obtained from approved fire-fighting training and experience as set out in section A-VI/3</p>	<p>The type and scale of the problem is promptly identified and initial actions conform with the emergency procedures and contingency plans for the ship</p> <p>Evacuation, emergency shut down and isolation procedures are appropriate to the nature of the emergency and are implemented promptly.</p> <p>The order of priority, and the levels and time scales of making reports and informing personnel on board, are relevant to the nature of the emergency and reflect the urgency of the problem</p>
Operate life-saving appliances	<p><i>Life-saving</i></p> <p>Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment including life-saving appliances, survival equipment, EPIRBs, SARTs, and other personal survival equipment and aids. Knowledge of survival at sea techniques</p>	<p>Assessment of evidence obtained from approved training and experience as set out in action A-VI/2, paragraphs 1 to 4</p>	<p>Actions in responding to abandon ship, and survival situations are appropriate to the prevailing circumstances and conditions and comply with accepted safety practices and standards</p>

Table A-II/3  
Page 9 of 10 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Apply medical first aid on board ship	<p><i>Medical aid</i></p> <p>Practical application of medical guides and advice by radio, including the ability to take effective action based on such knowledge in the case of accidents or illnesses that are likely to occur on board ship</p>	<p>Assessment of evidence obtained from approved training as set out in section A-VI/4, paragraphs 1 to 3</p>	<p>The identification of probable cause, nature and extent of injuries or conditions is prompt and treatment minimizes immediate threat to life</p>
Monitor compliance with legislative requirements	<p>Basic working knowledge of the relevant IMO conventions concerning safety of life at sea and protection of the marine environment</p>	<p>Assessment of evidence obtained from examination or approved training</p>	<p>Legislative requirements relating to safety of life at sea and protection of the marine environment are correctly identified</p>

Table A-II/3  
Page 10 of 10 pages

## Section A-II/4

Mandatory minimum requirements for ratings forming part of a navigational watch

## Standard of competence

1. Every rating forming part of a navigational watch on a seagoing ship of 500 gross tonnage or more shall be required to demonstrate the competence to perform the navigation function at the support level, as specified in column 1 of table A-II/4.

2. The minimum knowledge, understanding and proficiency required of ratings forming part of a navigational watch on a seagoing ship of 500 gross tonnage or more is listed in column 2 of table A-II/4.

3. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence specified in columns 3 and 4 of table A-II/4. The reference to “practical test” in column 3 may include approved shore-based training in which the students undergo practical testing.

4. Where there are no tables of competence for the support level in respect to certain functions, it remains the responsibility of the Administration to determine the appropriate training, assessment and certification requirements to be applied to personnel designated to perform those functions at the support level.

**Table A-II/4**  
**Specification of minimum standard of competence for ratings forming part of a navigational watch**  
**Function: Navigation at the support level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Steer the ship and comply with helm orders also in the English language	Use of magnetic and gyro compasses Helm orders Change-over from automatic pilot to hand steering and vice-versa	Assessment of evidence obtained from: .1 practical test, or .2 approved in-service experience or approved training ship experience	A steady course is steered within acceptable limits having regard to the area of navigation and prevailing sea state. Alterations of course are smooth and controlled Communication are clear and concise at all times and orders are acknowledged in a seamanlike manner
Keep a proper look-out by sight and hearing	Responsibilities of a look-out, including reporting the approximate bearing of a sound signal, light or other object in degrees or points	Assessment of evidence obtained from: .1 practical test, or .2 approved in-service experience or approved training ship experience	Sound signals, lights and other objects are promptly detected and their appropriate bearing in degrees or points is reported to the officer of the watch

Table A-II/4  
 Page 1 of 2 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Contribute to monitoring and controlling a safe watch	<p>Shipboard terms and definitions</p> <p>Use of appropriate internal communication and alarm systems</p> <p>Ability to understand orders and to communicate with the officer of the watch in matters relevant to watchkeeping duties</p> <p>Procedures for the relief, maintenance and hand-over of a watch</p> <p>Information required to maintain a safe watch</p> <p>Basic environmental protection procedures</p>	Assessment of evidence obtained from approved in-service experience or approved training ship experience	<p>Communications are clear and concise and advice/clarification is sought from the officer on watch where watch information or instructions are not clearly understood</p> <p>Maintenance, hand-over and relief of the watch is in conformity with accepted practices and procedures</p>
Operate emergency equipment and apply emergency procedures	<p>Knowledge of emergency duties and alarm signals</p> <p>Knowledge of pyrotechnic distress signals; satellite EPIRBs and SARTs</p> <p>Avoidance of false distress alerts and action to be taken in event of accidental activation</p>	Assessment of evidence obtained from demonstration and approved in-service experience or approved training ship experience	<p>Initial action on becoming aware of an emergency or abnormal situation is in conformity with established practices and procedures</p> <p>Communications are clear and concise at all times and orders are acknowledged in a seamanlike manner</p> <p>The integrity of emergency and distress alerting systems is maintained at all times</p>

Table A-II/4  
Page 2 of 2 pages



## CHAPTER III

## STANDARDS REGARDING THE ENGINE DEPARTMENT

## Section A-III/1

Mandatory minimum requirements for certification of officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room

## Training

1. The education and training required by paragraph 2.3 of regulation III/1 shall include training in mechanical and electrical workshop skills relevant to the duties of an engineer officer.

## On-board training

2. Every candidate for certification as officer in charge of an engineering watch in a manned engine-room or as designated duty engineer in a periodically unmanned engine-room of ships powered by main propulsion machinery of 750 kW or more shall follow an approved programme of on-board training which:

- .1 ensures that during the required period of seagoing service the candidate receives systematic practical training and experience in the tasks, duties and responsibilities of an officer in charge of an engine-room watch, taking into account the guidance given in section B-III/1 of this Code;
- .2 is closely supervised and monitored by a qualified and certificated engineer officer aboard the ships in which the approved seagoing service is performed, and
- .3 is adequately documented in a training record book.

## Standard of Competence

3. Every candidate for certification as officer in charge of an engineering watch in a manned engine-room or as designated duty engineer in a periodically unmanned engine-room on a seagoing ship powered by main propulsion machinery of 750 kW propulsion power or more shall be required to demonstrate ability to undertake at the operational level, the tasks, duties and responsibilities listed in column 1 of table A-III/1.

4. The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-III/1.

5. The level of knowledge of the material listed in column 2 of table A-III/1 shall be sufficient for engineer officers to carry out their watch-keeping duties.

6. Training and experience to achieve the necessary theoretical knowledge, understanding and proficiency shall be based on section A-VIII/1, part 3-2 – Principles to be observed in keeping an engineering watch, and shall take into account the relevant requirements of this part and the guidance given in part B of this Code.

7. Candidates for certification for service in ships in which steam boilers do not form part of their machinery may omit the relevant requirements of table A-III/1. A certificate awarded on such a basis shall not be valid for service on ships in which steam boilers form part of a ship's machinery until the engineer officer meets the standard of competence in the items omitted from table A-III/1. Any such limitation shall be stated on the certificate and in the endorsement.

8. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-III/1.

#### Near-coastal voyages

9. The requirements of paragraphs 2.2 and 2.3 of regulation III/1 may be varied for engineer officers of ships powered by main propulsion machinery of less than 3,000 kW propulsion power engaged on near-coastal voyages, bearing in mind the effect on the safety of all ships which may be operating in the same waters. Any such limitation shall be stated on the certificate and in the endorsement.

**Table A-III/1**  
**Specification of minimum standard of competence for officers in charge of an engineering watch in a manned engine-room or designated duty engineers in a periodically unmanned engine-room**

Function: Marine engineering at the operational level		Function: Marine engineering at the operational level	
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Use appropriate tools for fabrication and repair operations typically performed on ships	<p>Characteristics and limitations of materials used in construction and repair of ships and equipment</p> <p>Characteristics and limitations of processes used for fabrication and repair</p> <p>Properties and parameters considered in the fabrication and repair of systems and components</p> <p>Application of safe working practices in the workshop environment</p>	<p>Assessment of evidence obtained from one or more of the following:</p> <p>.1 approved workshop skills training</p> <p>.2 approved practical experience and tests</p>	<p>Identification of important parameters for fabrication of typical ship related components is appropriate</p> <p>Selection of material is appropriate</p> <p>Fabrication is to designated tolerances</p> <p>Use of equipment and machine tools is appropriate and safe</p>
Use hand tools and measuring equipment for dismantling, inspecting, repairing and re-assembly of shipboard plant and equipment	<p>Design characteristics and selection of materials in construction of equipment</p> <p>Interpretation of machinery drawings and hand-books</p> <p>Operational characteristics of equipment and systems</p>	<p>Assessment of evidence obtained from one or more of the following:</p> <p>.1 approved workshop skill training</p> <p>.2 approved practical experience and tests</p>	<p>Safety procedures followed are appropriate</p> <p>Selection of tools and spare gear is appropriate</p> <p>Dismantling, inspecting, repairing and reassembling equipment is in accordance with manuals and good practice</p> <p>Re-commissioning and performance testing is in accordance with manuals and good practice</p>

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 Page 1 of 9 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Use hand tools, electrical and electronic measuring and test equipment to identify faults, diagnose and repair maintenance and repair operations</p>	<p>Safety requirements for working on shipboard electrical systems                      Construction and operational characteristics of shipboard AC and DC electrical systems and equipment                      Construction and operation of electrical test and measuring equipment</p>	<p>Assessment of evidence obtained from one or more of the following:                      .1 approved workshop skills training                      .2 approved practical experience and tests</p>	<p>Implementation of safety procedures is satisfactory                      Selection and use of test equipment is appropriate and interpretation of results is accurate                      Selection of procedures for the conduct of repair and maintenance is in accordance with manuals and good practice                      Commissioning and performance testing of equipment and systems brought back into service after repair is in accordance with manuals and good practice</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Maintain a safe engineering watch	<p>Thorough knowledge of basic principles to be observed in keeping an engineering watch including:</p> <ul style="list-style-type: none"> <li>.1 duties associated with taking over and accepting a watch</li> <li>.2 routine duties undertaken during a watch</li> <li>.3 maintenance of the machinery space log book and the significance of the readings taken</li> <li>.4 duties associated with handing over a watch</li> </ul>	<p>Assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>	<p>The conduct, handover and relief of the watch conforms with accepted principles and procedures</p> <p>The frequency and extent of monitoring of engineering equipment and systems conforms to manufacturers' recommendations and accepted principles and procedures including basic principles to be observed in keeping an engineering watch</p> <p>A proper record is maintained of the movements and activities relating to the ship's engineering systems</p>

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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Maintain a safe engineering watch (continued)	<p>Safety and emergency procedures, changeover of remote/automatic to local control of all systems</p> <p>Safety precautions to be observed during a watch and immediate actions to be taken in the event of fire or accident, with particular reference to oil systems</p>		
Use English in written and oral form	Adequate knowledge of the English language to enable the officer to use engineering publications and to perform engineering duties	Examination and assessment of evidence obtained from practical instruction	English language publications relevant to engineering duties are correctly interpreted Communications are clear and understood

Table A-III/1  
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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Operate main and auxiliary machinery and associated control systems	<p>Main and auxiliary machinery:</p> <ol style="list-style-type: none"> <li>.1 preparation of main machinery and preparation of auxiliary machinery for operation</li> <li>.2 operation of steam boilers, including combustion systems</li> <li>.3 methods of checking water level in steam boilers and action necessary if water level is abnormal</li> <li>.4 location of common faults in machinery and plant in engine and boiler rooms and action necessary to prevent damage</li> </ol>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ol>	<p>Operations are planned and carried out in accordance with established rules and procedures to ensure safety of operations and avoid pollution of the marine environment</p> <p>Deviations from the norm are promptly identified</p> <p>The output of plant and engineering systems consistently meets requirements including bridge orders relating to changes in speed and direction</p> <p>The causes of machinery malfunctions are promptly identified and actions are designed to ensure the overall safety of the ship and the plant having regard to the prevailing circumstances and conditions</p>
Operate pumping systems and associated control systems	<p>Pumping systems:</p> <ol style="list-style-type: none"> <li>.1 routine pumping operations</li> <li>.2 operation of bilge, ballast and cargo pumping systems</li> </ol>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ol style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ol>	<p>Operations are planned and carried out in accordance with established rules and procedures to ensure safety of operations and avoid pollution of the marine environment</p>

Table A-III/1  
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Function: Maintenance and repair at the operational level		
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE
Maintain marine engineering systems including control systems	<p><i>Marine systems</i></p> <p>Appropriate basic mechanical knowledge and skills</p> <p><i>Safety and emergency procedures:</i></p> <p>Safe isolation of electrical and all plant and equipment required before personnel are permitted to work on such plant or equipment</p> <p>Undertake maintenance and repair to plant and equipment</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>
		CRITERIA FOR EVALUATING COMPETENCE
		Isolation dismantling and re-assembly of plant and equipment is in accordance with accepted practices and procedures. Action taken leads to the restoration of plant by the method most suitable and appropriate to the prevailing circumstances and conditions

Function: Electrical, electronic and control engineering at the operational level		
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE
Operate alternators, generators and control systems	<p><i>Generating plant:</i></p> <p>Appropriate basic electrical knowledge and skills</p> <p>Preparing, starting, coupling and changing over alternators or generators</p> <p>Location of common faults and action to prevent damage</p> <p><i>Control systems:</i></p> <p>Location of common faults and action to prevent damage</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>
		CRITERIA FOR EVALUATING COMPETENCE
		Operation are planned and carried out in accordance with established rules and procedures to ensure safety of operations

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**Function: Controlling the operation of the ship and care for persons on board at the operational level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Ensure compliance with pollution prevention requirements	<p><i>Prevention of pollution of the marine environment</i></p> <p>Knowledge of the precautions to be taken to prevent pollution of the marine environment</p> <p>Anti-pollution procedures and all associated equipment</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> </ul>	<p>Procedures for monitoring shipboard operations and ensuring compliance with MARPOL requirements are fully observed</p>
Maintain seaworthiness of the ship	<p><i>Ship stability</i></p> <p>Working knowledge and application of stability, trim and stress tables, diagrams and stress calculating equipment</p> <p>Understanding of the fundamentals of watertight integrity</p> <p>Understanding of fundamental actions to be taken in the event of partial loss of intact buoyancy</p> <p><i>Ship construction</i></p> <p>General knowledge of the principal structural members of a ship and the proper names for the various parts</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>	<p>The stability conditions comply with the IMO intact stability criteria under all conditions of loading</p> <p>Actions to ensure and maintain the watertight integrity of the ship are in accordance with accepted practice</p>

Table A-III/1  
Page 7 of 9 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Prevent, control and fight fires on board	<p><i>Fire prevention and fire-fighting appliances</i></p> <p>Knowledge of fire prevention</p> <p>Ability to organize fire drills</p> <p>Knowledge of classes and chemistry of fire</p> <p>Knowledge of fire-fighting systems</p> <p>Action to be taken in the event of fire, including fires involving oil systems</p>	<p>Assessment of evidence obtained from approved fire-fighting training and experience as set out in section A-VI/3</p>	<p>The type and scale of the problem is promptly identified and initial actions conform with the emergency procedure and contingency plans for the ship</p> <p>Evacuation, emergency shutdown and isolation procedures are appropriate to the nature of the emergency and are implemented promptly</p> <p>The order of priority, and the levels and time scales of making reports and informing personnel on board, are relevant to the nature of the emergency and reflect the urgency of the problem</p>
Operate life-saving appliances	<p><i>Life-saving</i></p> <p>Ability to organize abandon ship drills and knowledge of the operation of survival craft and rescue boats, their launching appliances and arrangements, and their equipment, including survival life-saving appliances, seating EPIRBs, SARTs immersion suits and thermal protective aids.</p> <p>Knowledge of survival at sea techniques</p>	<p>Assessment of evidence obtained from approved training and experience as set out in section A-VI/2, paragraphs 1 to 4</p>	<p>Actions in responding to abandon ship and survival situations are appropriate to the prevailing circumstances and conditions and comply with accepted safety practices and standards</p>

Table A-III/1  
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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Apply medical first aid on board ship	<p><i>Medical aid</i></p> <p>Practical application of medical guides and advice by radio, including the ability to take effective action based on such knowledge in the case of accidents or illnesses that are likely to occur on board ship</p>	<p>Assessment of evidence obtained from approved training as set out in section A-VI/4, paragraphs 1 to 3</p>	<p>Identification of probable cause, nature and extent of injuries or conditions is prompt and treatment minimizes immediate treat to life</p>
Monitor compliance with legislative requirements	<p>Basic working knowledge of the relevant IMO conventions concerning safety of life at sea and protection of the marine environment</p>	<p>Assessment of evidence obtained from examination or approved training</p>	<p>Legislative requirements relating to safety of life at sea and protection of the marine environment are correctly identified</p>

Table A-III/1  
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## Section A-III/2

Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more.

## Standard of Competence

1. Every candidate for certification as chief engineer officer and second engineer officer of seagoing ships powered by main propulsion machinery of 3,000 kW power or more shall be required to demonstrate ability to undertake at the management level, the tasks, duties and responsibilities listed in column 1 of table A-III/2.
2. The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-III/2. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-III/1 for officers in charge of an engineering watch.
3. Bearing in mind that a second engineer officer shall be in a position to assume the responsibilities of the chief engineer officer at any time, assessment in these subjects shall be designed to test the candidate's ability to assimilate all available information that affects the safe operation of the ship's machinery and the protection of the marine environment.
4. The level of knowledge of the subjects listed in column 2 of table A-III/2 shall be sufficient to enable the candidate to serve in the capacity of chief engineer officer or second engineer officer.
5. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take into account the relevant requirements of this part and the guidance given in part B of this Code.
6. The Administration may omit knowledge requirements for types of propulsion machinery other than those machinery installations for which the certificate to be awarded shall be valid. A certificate awarded on such a basis shall not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these knowledge requirements. Any such limitation shall be stated on the certificate and in the endorsement.
7. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in ac-

cordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-III/2.

#### Near-coastal voyages

8. The level of knowledge, understanding and proficiency required under the different sections listed in column 2 of table A-III/2 may be varied for officers of ships with limited propulsion power engaged on near-coastal voyages, as considered necessary, bearing in mind the effect of the safety of all ships which may be operating in the same waters. Any such limitation shall be stated on the certificate and in the endorsement.

**Table A-III/2**  
**Specification of minimum standard of competence for chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 kW propulsion power or more**  
**Function: Marine engineering at the management level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Plan and schedule operations Start up and shut down main propulsion and auxiliary machinery including associated systems	<i>Theoretical knowledge</i> Thermodynamics and heat transmission Mechanics and hydromechanics Operating principles of ship power installations (diesel, steam and gas turbine) and refrigeration Physical and chemical properties of fuels and lubricants Technology of materials Naval architecture and ship construction, including damage control	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience; .2 approved training ship experience; .3 approved simulator training, where appropriate	The planning and preparation of operations is suited to the design parameters of the power installation and to the requirements of the voyage
		Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience; .2 approved training ship experience; .3 approved simulator training, where appropriate.	The methods of preparing the start-up and of making available fuel, lubricants, cooling water and air are the most appropriate Checks of pressures, temperatures and revolutions during the start-up and warm-up period are in accordance with technical specifications and agreed work plans Surveillance of main propulsion plant and auxiliary systems is sufficient to maintain safe operating conditions The methods of preparing the shut-down and of supervising the cooling-down of the engine are the most appropriate.

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Operate, monitor and evaluate engine performance and capacity	<p><i>Practical knowledge</i></p> <p>Operation and maintenance of</p> <ul style="list-style-type: none"> <li>.1 marine diesel engines</li> <li>.2 marine steam propulsion plant</li> <li>.3 marine gas turbines</li> </ul> <p>Operation and maintenance of auxiliary machinery, including pumping and piping systems, auxiliary boiler plant and steering gear systems</p> <p>Operation, testing and maintenance of control systems</p> <p>Operation and maintenance of cargo-handling equipment and deck machinery</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> </ul>	<p>The methods of measuring the load capacity of the engines are in accordance with technical specifications</p> <p>Performance is checked against bridge orders</p> <p>Performance levels are in accordance with technical specifications</p>
Maintain safety of engine equipment, systems and services		<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> </ul>	<p>Arrangements for ensuring the safe and efficient operation and condition of the machinery installation are suitable for all modes of operation</p>

Table A-III/2  
Page 2 of 8 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Manage fuel and ballast operations	Operation and maintenance of machinery including pumps and piping systems	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate	Fuel and ballast operations meet operational requirements and are carried out so as to prevent pollution of the marine environment
Use internal communication systems	Operation of all internal communication systems on board	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate .4 approved laboratory equipment training	Transmission and reception of messages are consistently successful  Communication records are complete, accurate and comply with statutory requirements

Table A-III/2  
Page 3 of 8 pages



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Operate electrical and electronic control equipment	<p><i>Theoretical knowledge</i> Marine electrotechnology, electronics and electrical equipment</p> <p>Fundamentals of automation, instrumentation and control systems</p> <p><i>Practical knowledge</i> Operation, testing and maintenance of electrical and electronic control equipment including fault diagnostics</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>	<p>Operation of equipment and system is in accordance with operating manuals</p> <p>Performance levels are in accordance with technical specifications</p>
Test, detect faults and maintain and restore electrical and electronic control equipment to operating condition		<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> <li>.4 approved laboratory equipment training</li> </ul>	<p>Maintenance activities are correctly planned in accordance with technical, legislative, safety and procedural specifications</p> <p>The effect of malfunctions on associated plant and systems is accurately identified, ship's technical drawings are correctly interpreted, measuring and calibrating instruments are correctly used and actions taken are justified</p>

Table A-III/2  
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## Function: Maintenance and repair at the management level

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Organize safe maintenance and repair procedures	<i>Theoretical knowledge</i> Marine engineering practice <i>Practical knowledge</i> Organizing and carrying out safe maintenance and repair procedures	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved workshop training	Maintenance activities are correctly planned and carried out in accordance with technical, legislative, safety and procedural specifications  Appropriate plans, specifications, materials and equipment are available for maintenance and repair  Action taken leads to the restoration of plant by the most suitable method
Detect and identify the cause of machinery malfunctions and correct faults	<i>Practical knowledge</i> Detection of machinery malfunction, location of faults and action to prevent damage	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience .3 approved simulator training, where appropriate	The methods of comparing actual operating conditions are in accordance with recommended practices and procedures  Actions and decisions are in accordance with recommended operating specifications and limitations
Ensure safe working practices	<i>Practical knowledge</i> Safe working practices	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience .2 approved training ship experience	Working practices are in accordance with legislative requirements, codes of practice, permits to work and environmental concerns

Table A-III/2  
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**Function: Controlling the operation of the ship and care for persons on board at the management level**

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Control trim, stability and stress	<p>Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability</p> <p>Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and counter measures to be taken</p> <p>Knowledge of IMO recommendations concerning ship stability</p>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> </ul>	<p>Stability and stress conditions are maintained within safety limits at all times</p>
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and protection of the marine environment	<p>Knowledge of relevant international maritime law embodied in international agreements and conventions</p> <p>Regard shall be paid especially to the following subjects:</p> <ul style="list-style-type: none"> <li>.1 certificates and other documents required to be carried on board ships by international conventions; how they may be obtained and the period of their legal validity</li> </ul>	<p>Examination and assessment of evidence obtained from one or more of the following:</p> <ul style="list-style-type: none"> <li>.1 approved in-service experience</li> <li>.2 approved training ship experience</li> <li>.3 approved simulator training, where appropriate</li> </ul>	<p>Procedures for monitoring operations and maintenance comply with legislative requirements</p> <p>Potential non-compliance is promptly and fully identified</p> <p>Requirements for renewal and extension of certificates ensure continued validity of survey items and equipment</p>

Table A-III/2  
Page 6 of 8 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and the protection of the marine environment (continued)</p>	<p>.2 responsibilities under the relevant requirements of the International Convention on Load Lines</p> <p>.3 responsibilities under the relevant requirements of the International Convention for the Safety of Life at Sea</p> <p>.4 responsibilities under the International Convention for the Prevention of Pollution from Ships</p> <p>.5 maritime declarations of health and the requirements of the International Health Regulations</p> <p>.6 responsibilities under international instruments affecting the safety of the ships, passengers, crew or cargo</p> <p>.7 methods and aids to prevent pollution of the environment by ships</p> <p>.8 knowledge of national legislation for implementing international agreements and conventions</p>		

Table A-III/2  
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COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Maintain safety and security of the vessel, crew and passengers and the operational condition of life-saving, fire-fighting and other safety systems	<p>A thorough knowledge of life-saving appliances regulations (International Convention for the Safety of Life at Sea)</p> <p>Organization of fire and abandon ship drills</p> <p>Maintenance of operational condition of life-saving, fire-fighting and other safety systems</p> <p>Actions to be taken to protect and safeguard all persons on board in emergencies</p> <p>Actions to limit damage and save the ship following fire, explosion, collision or grounding</p>	Examination and assessment of evidence obtained from practical instruction and approved in-service training and experience	Procedures for monitoring fire detection and safety systems ensure that all alarms are detected promptly and acted upon in accordance with established emergency procedures
Develop emergency and damage control plans and handle emergency situations	<p>Ship construction, including damage control</p> <p>Methods and aids for fire prevention, detection and extinction</p> <p>Functions and use of life-saving appliances</p>	Examination and assessment of evidence obtained from approved in-service training and experience	Emergency procedures are in accordance with the established plans for emergency situations
Organize and manage the crew	<p>A knowledge of personnel management, organization and training on board ships</p> <p>A knowledge of international maritime conventions and recommendations, and related national legislation</p>	Examination and assessment of evidence obtained from approved in-service training and experience	<p>The crew are allocated duties and informed of expected standards of work and behaviour in a manner appropriate to the individuals concerned</p> <p>Training objectives and activities are based on an assessment of current competence and capabilities and operational requirements</p>

Table A-II/2  
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## Section A-III/3

Mandatory minimum requirements for certification of chief engineer officers and second engineer officers on ships powered by main propulsion machinery of between 750 kW and 3,000 kW propulsion power.

## Standard of competence

1. Every candidate for certification as chief engineer officer and second engineer officer of seagoing ships powered by main propulsion machinery of between 750 kW and 3,000 kW power shall be required to demonstrate ability to undertake at management level, the tasks, duties and responsibilities listed in column 1 of table A-III/2.

2. The minimum knowledge, understanding and proficiency required for certification is listed in column 2 of table A-III/2. This incorporates, expands and extends in depth the subjects listed in column 2 of table A-III/1 for officers in charge of an engineering watch in a manned engine room or designated duty engineers in a periodically unmanned engine room.

3. Bearing in mind that a second engineer officer shall be in a position to assume the responsibilities of the chief engineer officer at any time, assessment in these subjects shall be designed to test the candidate's ability to assimilate all available information that affects the safe operation of the ship's machinery and the protection of the marine environment.

4. The level of knowledge of the subjects listed in column 2 of table A-III/2 may be lowered but shall be sufficient to enable the candidate to serve in the capacity of chief engineer officer or second engineer officer at the range of propulsion power specified in this section.

5. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take into account the relevant requirements of this part and the guidance given in part B of this Code.

6. The Administration may omit knowledge requirements for types of propulsion machinery other than those machinery installations for which the certificate to be awarded shall be valid. A certificate awarded on such a basis shall not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these items. Any such limitation shall be stated on the certificate and in the endorsement.

7. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-III/2.

#### Near-coastal voyages

8. The level of knowledge, understanding and proficiency required under the different sections listed in column 2 of table A-III/2 and the requirements of paragraphs 2.1.1 and 2.1.2 of regulation III/3 may be varied for officers of ships engaged on near-coastal voyages, as considered necessary, bearing in mind the effect on the safety of all ships which may be operating in the same waters. Any such limitation shall be stated on the certificate and in the endorsement.

#### Section A-III/4

Mandatory minimum requirements for certification of ratings forming part of a watch in a manned engine-room or designated to perform duties in a periodically unmanned engine-room

#### Standard of competence

1. Every rating forming part of an engine-room watch on a seagoing ship shall be required to demonstrate the competence to perform the marine engineering function at the support level, as specified in column 1 of table A-III/4.

2. The minimum knowledge, understanding and proficiency required of ratings forming part of an engine-room watch is listed in column 2 of table A-III/4.

3. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence in accordance with the methods for demonstrating competence and the criteria for evaluating competence specified in columns 3 and 4 of table A-III/4. The reference to "practical test" in column 3 may include approved shore-based training in which the students undergo practical testing.

4. Where there are no tables of competence for the support level in respect to certain functions, it remains the responsibility of the Administration to determine the appropriate training, assessment and certification requirements to be applied to personnel designated to perform those functions at the support level.

Table A-III/4  
 Specification of minimum standard of competence for ratings forming part of an engineering watch

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Carry out a watch routine appropriate to the duties of a rating forming part of an engine-room watch</p> <p>Understand orders and be understood in matters relevant to watchkeeping duties</p>	<p>Terms used in machinery spaces and names of machinery and equipment</p> <p>Engine-room watchkeeping procedures</p> <p>Safe working practices as related to engine-room operations</p> <p>Basic environmental protection procedures</p> <p>Use of appropriate internal communication system</p> <p>Engine-room alarm systems and ability to distinguish between the various alarms, with special reference to fire-extinguishing gas alarms</p> <p>Safe operation of boilers</p>	<p>Assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience; or</p> <p>.2 approved training ship experience</p> <p>.3 practical test</p>	<p>Communications are clear and concise and advice or clarification is sought from the officer of the watch where watch information or instructions are not clearly understood</p> <p>Maintenance, hand-over and relief of the watch is in conformity with accepted principles and procedures</p>
<p>For keeping a boiler watch:</p> <p>Maintain the correct water levels and steam pressures</p>	<p>Safe operation of boilers</p>	<p>Assessment of evidence obtained from one or more of the following:</p> <p>.1 approved in-service experience; or</p> <p>.2 approved training ship experience</p> <p>.3 practical test</p>	<p>Assessment of boiler condition is accurate and based on observations available from local and remote indicators and physical inspections</p> <p>The sequence and timing of adjustments maintains safety and optimum efficiency</p>

Table A-III/4  
 Page 1 of 2 pages



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Operate emergency equipment and apply emergency procedures	Knowledge of emergency duties Escape routes from machinery spaces Familiarity with the location and use of fire-fighting equipment in the machinery spaces	Assessment of evidence obtained from demonstration and approved in-service experience or approved training ship experience	Initial action on becoming aware of an emergency or abnormal situation conforms with established procedures Communications are clear and concise at all times and orders are acknowledged in a seamanlike manner

Table A-III/4  
Page 2 of 2 pages

## CHAPTER IV

## STANDARDS REGARDING RADIO PERSONNEL

## Section A-IV/1

## Application

(No provisions)

## Section A-IV/2

Mandatory minimum requirements for certifications of GMDSS radio personnel

## Standard of competence

1. The minimum knowledge, understanding and proficiency required for certification of GMDSS radio personnel shall be sufficient for radio personnel to carry out their radio duties. The knowledge required for obtaining each type of certificate defined in the Radio Regulations shall be in accordance with those regulations. In addition, every candidate for certification shall be required to demonstrate ability to undertake the tasks, duties and responsibilities listed in column 1 of table A-IV/2.

2. The knowledge, understanding and proficiency for endorsement under the Convention, of certificates issued under the provisions of the Radio Regulations are listed in column 2 of table A-IV/2.

3. The level of knowledge of the subjects listed in column 2 of table A-IV/2 shall be sufficient for the candidate to carry out his duties.

4. Every candidate shall provide evidence of having achieved the required standard of competence through:

- .1 demonstration of competence to perform the tasks and duties and to assume responsibilities listed in column 1 of table A-IV/2, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of that table, and
- .2 examination or continuous assessment as part of an approved course of training based on the material set out in column 2 of table A-IV/2.

**Table A-IV/2**  
**Specification of minimum standard of competence for GMDSS radio operators**

Column 1 COMPETENCE	Column 2 KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	Column 3 METHODS FOR DEMONSTRATING COMPETENCE	Column 4 CRITERIA FOR EVALUATING COMPETENCE
Transmit and receive information using GMDSS systems and equipment and perform the functional requirements of GMDSS	<p><i>In addition to the requirements of the Radio Regulations, a knowledge of:</i></p> <ol style="list-style-type: none"> <li>.1 search and rescue radiocommunications, including procedures in the IMO Merchant Ship Search and Rescue Manual (MERSAR)</li> <li>.2 the means to prevent the transmission of false distress alerts and the procedures to mitigate the effects of such alerts</li> <li>.3 ship reporting systems</li> <li>.4 radio medical services</li> <li>.5 use of the International Code of Signals and the Standard Marine Navigational Vocabulary as replaced by the Standard Marine Communication Phrases</li> <li>.6 the English language both written and spoken and a minimum of information relevant to safety of life at sea</li> </ol> <p>Note: This requirement may be reduced in the case of the Restricted Radio Operator Certificate</p>	Examination and assessment of evidence obtained from practical demonstration of operational procedures using: <ol style="list-style-type: none"> <li>.1 approved equipment</li> <li>.2 GMDSS communication simulator, where appropriate</li> <li>.3 radiocommunication laboratory equipment</li> </ol>	Transmission and reception of communications complies with international regulations and procedures and are carried out efficiently and effectively.  English language message relevant to the safety of the ship and persons on board and protection of the marine environment are correctly handled.
Provide radio service in emergencies	<p><i>The provision of radio services in emergencies such as:</i></p> <ol style="list-style-type: none"> <li>1. abandon ship</li> <li>2. fire on board ship</li> <li>3. partial or full breakdown of radio installations</li> </ol> <p>Preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical and non-ionising radiation hazards</p>	Examination and assessment of evidence obtained from practical demonstration of operational procedures using: <ol style="list-style-type: none"> <li>.1 approved equipment</li> <li>.2 GMDSS communication simulator, where appropriate</li> <li>.3 radiocommunication laboratory equipment</li> </ol>	Response is carried out efficiently and effectively

Table A-IV/2  
 Page 1 of 1 page

## CHAPTER V

## STANDARDS REGARDING SPECIAL TRAINING REQUIREMENTS FOR PERSONNEL ON CERTAIN TYPES OF SHIPS

## Section A-V/1

Mandatory minimum requirements for the training and qualifications of masters, officers and ratings on tankers

## Tanker familiarization course

1. The tanker familiarization course referred to in paragraph 1.2 of regulation V/1 shall cover at least the syllabus given in paragraphs 2 to 7 below.

## Characteristics of cargoes

2. An outline treatment including practical demonstration of the physical properties of oil, chemicals and gases carried in bulk; vapour pressure/temperature relationship; influence of pressure on boiling temperature; explanation of saturated vapour pressure, diffusion, partial pressure, flammability limits, flashpoint and auto-ignition temperature; practical significance of flashpoint and lower flammable limit; simple explanation of types of electrostatic charge generation; chemical symbols and structures; elements of the chemistry of acids and bases and chemical reactions of well-known groupings sufficient to enable proper utilization of codes.

## Toxicity

3. Simple explanation of principles and basic concepts; toxicity limits, both acute and chronic effects of toxicity, systemic poisons and irritants.

## Hazards

4. An explanation of hazards including:
- .1 explosion and flammability hazards, flammability limits and sources of ignition and explosion;
  - .2 health hazards including the dangers of skin contact, inhalation and ingestion; oxygen deficiency with particular reference to inert gas systems; harmful properties of cargo carried; accidents to personnel and associated first aid do's and don'ts;
  - .3 hazards to the environment, covering: the effect on human and marine life from the release of oil, chemicals or gases; effect of

- specific gravity and solubility; danger from vapour cloud drift; effect of vapour pressure and atmospheric conditions;
- .4 reactivity hazards; self-reaction; polymerization; effects of temperature, impurities as catalysts; reaction with air, water and other chemicals; and
  - .5 corrosion hazards, covering: the dangers to personnel; attacks on constructional materials; effects of concentration and evolution of hydrogen.

#### Hazard control

5. Interting, water padding, drying agents and monitoring techniques; anti-static measures; ventilation; segregation; cargo inhibition and the importance of compatibility of materials.

#### Safety equipment and protection of personnel

6. The function and calibration of measuring instruments and similar equipment; specialized fire-extinguishing appliances; reathing apparatus and tanker evacuating equipment; safe use of protective clothing and equipment; use of resuscitators and other rescue and escape equipment.

#### Pollution prevention

7. Procedures to be followed to prevent air and water pollution and measures to be taken in the event of spillage, including the need to:
- .1 immediately report all relevant information to the appropriate officials when a spill is detected or when a malfunction has occurred which poses a risk of a spill;
  - .2 promptly notify shore-based response personnel; and
  - .3 properly implement shipboard spill containment procedures.

#### OIL TANKER TRAINING PROGRAMME

8. The specialized training programme referred to in paragraph 2.2 of regulation V/1 appropriate to duties on oil tankers shall provide theoretical and practical knowledge of the subjects specified in paragraphs 9 to 14 below.

#### Regulations and codes of practice

9. Familiarization with the appropriate provisions of relevant international conventions; relevant international and national codes; the IMO Manual on Oil Pollution; relevant tanker safety guides and relevant port regulations as commonly applied.

#### Design and equipment of oil tankers

10. Familiarization with piping, pumping, tank and deck arrangements; types of cargo pumps and their application to various types of cargo; tank cleaning, gas-freeing and inerting systems; cargo tank venting and accommodation ventilation; gauging systems and alarms; cargo heating systems; and the safety aspects of electrical systems.

#### Cargo characteristics

11. Knowledge of the chemical and physical properties of different oil cargoes.

#### Ship operations

12. Cargo calculations; loading and discharging plans; loading and discharge procedures including ship-to-ship transfers; checklists; use of monitoring equipment; importance of proper supervision of personnel; gas-freeing operations and tank cleaning operations; where appropriate, crude oil washing procedures and the operation and maintenance of inert gas systems; control of entry into pump-rooms and enclosed spaces; use of gas detecting and safety equipment; load-on-top and proper ballasting and de-ballasting procedures; air and water pollution prevention.

#### Repair and maintenance

13. Precautions to be taken before and during repair and maintenance work, including that affecting pumping, piping, electrical and control systems; safety factors necessary in the performance of hot work; control of hot work and proper hot work procedures.

#### Emergency operations

14. The importance of developing ship emergency plans; cargo operations emergency shutdown; action in the event of failure of services essential to cargo; fire-fighting on oil tankers; action following collision, stranding or spillage; medical first aid procedures and the use of resuscitation equipment; use of breathing apparatus for safe entry into rescue from enclosed spaces.

#### CHEMICAL TANKER TRAINING PROGRAMME

15. The specialized training programme referred to in paragraph 2.2 of regulation V/1 appropriate of duties on chemical tankers shall provide theoretical and practical knowledge of the subjects specified in paragraphs 16 to 21 below.

#### Regulations and codes of practice

16. Familiarization with relevant international conventions, and relevant IMO and national codes and with relevant tanker safety guides and relevant port regulations as commonly applied.

#### Design and equipment of chemical tankers

17. A brief description of specialized piping, pumping and tank arrangements, overflow control; types of cargo pumps and their application to various types of cargo; tank cleaning and gas-freeing systems; cargo tank venting; vapour return systems; accommodation ventilation, airlocks; gauging systems and alarms; tank temperature control systems and alarms; the safety factors of electrical systems.

#### Cargo characteristics

18. Sufficient knowledge of liquid chemical cargo characteristics to allow proper use of relevant cargo safety guides.

#### Ship operations

19. Cargo calculations; loading and discharging plans; loading and discharge procedures; vapour return systems; checklists; use of monitoring equipment; gas-freeing operations and tank cleaning operations including proper use of absorption and wetting agents and detergents; use and maintenance of inert atmospheres; control of entry into pump-rooms and enclosed spaces; use of detecting and safety equipment; disposal of waste and washings.

#### Repair and maintenance

20. Precautions to be taken before the repair and maintenance of pumping, piping, electrical and control systems.

#### Emergency operations

21. The importance of developing ship emergency plans; cargo operations emergency shutdown; action in the event of failure of services essential to cargo; fire-fighting on chemical tankers; action following collision, stranding or spillage; medical first aid procedures and the use of resuscitation and decontamination equipment; use of breathing apparatus and escape equipment; safe entry into the rescue from enclosed spaces.

## LIQUEFIED GAS TANKER TRAINING PROGRAMME

22. The specialized training programme referred to in paragraph 2.2 of regulation V/1 appropriate to the duties on liquefied gas tankers shall provide theoretical and practical knowledge of the subjects specified in paragraphs 23 to 34 below.

## Regulations and codes of practice

23. Familiarization with relevant international conventions and relevant IMO, national and industry codes.

24. Familiarization with the ship design and equipment of liquefied gas tankers; types of liquefied gas tankers; cargo containment systems (construction, surveys); cargo-handling equipment (pumps, piping systems); cargo conditioning systems (warm-up, cool-down); tank atmosphere control systems (inert gas, nitrogen); instrumentation of cargo containment and handling systems; fire-fighting system and safety and rescue equipment.

## Fire-fighting

25. Advanced practical fire-fighting techniques and tactics applicable to gas tankers, including the use of water-spray systems.

## Chemistry and physics

26. An introduction to basic chemistry and physics as it relates to the safe carriage of liquefied gases in bulk in ships covering:

- .1 the properties and characteristics of liquefied gases and their vapours, including the definition of gas; simple gas laws; the gas equation; density of gases; diffusion and mixing of gases; compression of gases; liquefaction of gases; refrigeration of gases; critical temperature; the practical significance of flashpoint; upper and lower explosive limits; auto-ignition temperature; compatibility of gases; reactivity; polymerization and inhibitors.
- .2 the properties of single liquids including densities of liquids and vapours; variation with temperature; vapour pressure and temperature, enthalpy; vaporization and boiling liquids; and
- .3 the nature and properties of solutions including the solubility of gases in liquids; miscibility between liquids and effects of temperature change; densities of solutions and dependence on temperature and concentration; effects of dissolved substances on melting and boiling points; hydrates, their formation and dispersion, hygroscopicity; drying of air and other gases; dew point and low temperature effects.



#### Health hazards

27. Familiarization with health hazards relevant to the carriage of liquefied gas covering:

- .1 toxicity including the modes by which liquefied gases and their vapours may be toxic; the toxic properties of inhibitors and of products of combustion of both materials of construction and of liquefied gases carried, acute and chronic effects of toxicity, systemic poisons and irritants; and the Threshold Limiting Value (TLV);
- .2 hazards of skin contact, inhalation and ingestion, and
- .3 medical first aid and administering of antidotes.

#### Cargo containment

28. Principles of containment systems; rules; surveys; tank construction, materials, coatings, insulation and compatibility.

#### Pollution

29. Hazards to human life and to the marine environment; the effect of specific gravity and solubility; danger from vapour cloud drift and the jettisoning of cryogenic liquids.

#### Cargo handling systems

30. A description of the main types of pumps and pumping arrangements and vapour return systems, piping systems and valves; an explanation of pressure, vacuum, suction, flow, head; filters and strainers; expansion devices; flame screens; commonly used inert gases; storage, generation and distribution systems; temperature and pressure monitoring systems; cargo vent systems; liquid re-circulation and re-liquifraction systems; cargo gauging, instrumentation systems and alarms; gas detection and monitoring systems; CO<sub>2</sub> monitoring systems; cargo boil-off systems and auxiliary systems.

#### Ship operating procedures

31. Loading and discharging preparations and procedures; check lists; cargo condition maintenance on passage and in harbour; segregation of cargoes and procedures for cargo transfer; changing cargoes, tank cleaning procedures; cargo sampling; ballasting and de-ballasting; warm up and gas-freeing procedures; and procedures for cool-down of a gas-free system from ambient temperature and the safety precautions involved.

#### Safety practices and equipment

32. The function, calibration and use of portable measuring instruments; fire-fighting equipment and procedures; breathing apparatus; resuscitators; escape sets; rescue equipment; protective clothing and equipment; entry into enclosed spaces; precautions to be observed before and during repair and maintenance of cargo and control systems; supervision of personnel during potentially hazardous operations; types and principles of certified safe equipment and sources of ignition.

#### Emergency procedures

33. The importance of developing ship emergency plans; emergency shutdown of cargo operations; emergency cargo valve closing systems; action to be taken in the event of failure of systems or services essential to cargo; and action to be taken following collision or stranding, spillage and envelopment of the ship in toxic or flammable vapour.

#### General principles of cargo operations

34. Inerting cargo tank and void spaces; tank cool down and loading; operations during loaded and ballasted voyages; discharging and tank stripping and emergency procedures, including pre-planned action in the event of leaks, fire, collision, stranding, emergency cargo discharge and personnel casualty.

#### Section A-V/2

Mandatory minimum requirements for the training and qualifications of masters, officers, ratings and other personnel on ro-ro passenger ships

#### Crowd management training

1. The crowd management training required by regulation V/2, paragraph 4 for personnel designated on muster lists to assist passengers in emergency situations shall include, but not necessarily be limited to:

- .1 awareness of life-saving appliance and control plan including:
  - .1.1 knowledge of muster lists and emergency instructions,
  - .1.2 knowledge of the emergency exits, and
  - .1.3 restrictions on the use of elevators;
- .2 the ability to assist passengers en route to muster and embarkation stations including:
  - .2.1 the ability to give clear reassuring orders,
  - .2.2 the control of passengers in corridors, staircases and passage ways,
  - .2.3 maintaining escape routes clear of obstructions,

- .2.4 methods available for evacuation of disabled persons and persons needing special assistance, and
- .2.5 search of accommodation spaces;
- .3 mustering procedures including:
  - .3.1 the importance of keeping order,
  - .3.2 the ability to use procedures for reducing and avoiding panic,
  - .3.3 the ability to use, where appropriate, passenger lists for evacuation counts, and
  - .3.4 the ability to ensure that the passengers are suitably clothed and have donned their lifejackets correctly.

#### Familiarization training

2. The familiarization training required by regulation V/2, paragraph 5 shall at least ensure attainment of the abilities that are appropriate to the capacity to be filled and the duties and responsibilities to be taken up, as follows:

##### Design and operational limitations

- .1 Ability to properly understand and observe any operational limitations imposed on the ship, and to understand and apply performance restrictions, including speed limitations in adverse weather, which are intended to maintain the safety of life, ship and cargo.  
Procedures for opening, closing and securing hull openings
- .2 Ability to apply properly the procedures established for the ship regarding the opening, closing and securing of bow, stern, and side doors and ramps and to correctly operate the related systems.  
Legislation, codes and agreements affecting ro-ro passenger ships.
- .3 Ability to understand and apply international and national requirements for ro-ro passenger ships relevant to the ship concerned and the duties to be performed.  
Stability and stress requirements and limitations
- .4 Ability to take proper account of stress limitations for sensitive parts of the ship such as bow doors and other closing devices that maintain watertight integrity and of special stability considerations which may affect the safety of ro-ro passenger ships.  
Procedures for the maintenance of special equipment on ro-ro passenger ships
- .5 Ability to apply properly the shipboard procedures for maintenance of equipment peculiar to ro-ro passenger ships such as, bow, stern and side doors and ramps, scuppers and associated systems.  
Loading and cargo securing manuals and calculators
- .6 Ability to make proper use of the loading and securing manuals in respect of all types of vehicles and rail cars where applicable, and to calculate and apply stress limitations for vehicle decks.  
Dangerous cargo areas
- .7 Ability to ensure proper observance of special precautions and limitations applying to designated dangerous cargo areas.

## Emergency procedures

- .8 Ability to ensure proper application of any special procedures to:
  - .8.1 prevent or reduce the ingress of water on vehicle decks,
  - .8.2 remove water from vehicle decks, and
  - .8.3 minimise effects of water on vehicle decks.

## Safety training for personnel providing direct service to passengers in passenger spaces

3. The additional safety training required by regulation V/2, paragraph 6, shall at least ensure attainment of the abilities as follows:

## Communication

- .1 Ability to communicate with passengers during an emergency, taking into account:
  - .1.1 the language of languages appropriate to the principal nationalities of passengers carried on the particular route,
  - .1.2 the likelihood that an ability to use an elementary English vocabulary for basic instructions can provide a means of communicating with a passenger in need of assistance whether or not the passenger and crew member share a common language,
  - .1.3 the possible need to communicate during an emergency by some other means such as by demonstration, or hand signals, or calling attention to the location of instructions, muster stations, life-saving devices or evacuation routes, when oral communication is impractical,
  - .1.4 the extent to which complete safety instructions have been provided to passengers in their native language or languages, and
  - .1.5 the languages in which emergency announcements may be broadcast during an emergency or drill to convey critical guidance to passengers and to facilitate crew members in assisting passengers.

## Life-saving appliances

- .2 Ability to demonstrate to passengers the use of personal lifesaving appliances.

## Passenger safety, cargo safety and hull integrity training

4. The passenger safety, cargo safety and hull integrity training required by regulation V/2, paragraph 7, for masters, chief mates, chief engineer officers, second engineer officers and persons assigned immediate responsibility for embarking and disembarking passengers, loading, discharging or securing cargo or for closing hull openings, shall at least ensure attainment of the abilities that are appropriate to their duties and responsibilities as follows:

## Loading and embarkation procedures

- .1 Ability to apply properly the procedures established for the ship regarding:
  - .1.1 loading and discharging vehicles, rail cars and other cargo transport units, including related communications,
  - .1.2 lowering and hoisting ramps,
  - .1.3 setting up and stowing retractable vehicle decks, and
  - .1.4 embarking and disembarking passengers with special attention to disabled persons and persons needing assistance.
- Carriage of dangerous goods
- .2 Ability to apply any special safeguards, procedures and requirements regarding the carriage of dangerous goods on board ro-ro passenger ships.
- Securing cargoes
- .3 Ability to:
  - .3.1 apply correctly the provisions of the Code of Safe Practice for Cargo Stowage and Securing to the vehicles, rail cars and other cargo transport units carried; and
  - .3.2 use properly the cargo securing equipment and materials provided, taking into account their limitations.
- Stability, trim and stress calculations
- .4 Ability to:
  - .4.1 make proper use of the stability and stress information provided,
  - .4.2 calculate stability and trim for different conditions of loading using the stability calculators or computer programmes provided,
  - .4.3 calculate load factors for decks, and
  - .4.4 calculate the impact of ballast and fuel transfers on stability, trim and stress.
- Opening, closing and securing hull openings
- .5 Ability to:
  - .5.1 apply properly the procedures established for the ship regarding the opening, closing and securing of bow, stern and side doors and ramps and to correctly operate the associated systems, and
  - .5.2 conduct surveys on proper sealing.
- Ro-ro deck atmosphere
- .6 Ability to:
  - .6.1 use equipment, where carried, to monitor atmosphere in ro-ro cargo spaces, and
  - .6.2 apply properly the procedures established for the ship for ventilation of ro-ro cargo spaces during loading and discharging of vehicles, while on voyage and in emergencies.

#### Crisis management and human behaviour training

- 5. The crisis management and human behaviour training required by regulation V/2, paragraph 8, for masters, chief mates, chief engineer

officers, second engineer officers and any person having responsibility for the safety of passengers in emergency situations shall be to the satisfaction of the Administration based on standards developed by the Organization.

## CHAPTER VI

### STANDARDS REGARDING EMERGENCY, OCCUPATIONAL SAFETY, MEDICAL CARE AND SURVIVAL FUNCTIONS

#### Section A-VI/1

Mandatory minimum requirements for familiarization and basic safety training and instruction for all seafarers

#### Familiarization training

1. Before being assigned to shipboard duties, all persons employed or engaged on a seagoing ship other than passengers, shall receive approved familiarization training in personal survival techniques or receive sufficient information and instruction, taking account of the guidance given in part B, to be able to:

- .1 communicate with other persons on board on elementary safety matters and understand safety information symbols, signs and alarm signals;
- .2 know what to do if:
  - .2.1 a person falls overboard,
  - .2.2 fire or smoke is detected, or
  - .2.3 the fire or abandon ship alarm is sounded;
- .3 identify muster and embarkation stations and emergency escape routes;
- .4 locate and don life-jackets;
- .5 raise the alarm and have basic knowledge of the use of portable fire extinguishers;
- .6 take immediate action upon encountering an accident or other medical emergency before seeking further medical assistance on board; and
- .7 close and open the fire weathertight and watertight doors fitted in the particular ship other than those for hull openings.

#### Basic training

2. Seafarers employed or engaged in any capacity on board ship on the business of that ship as part of the ship's complement with designated safety or pollution prevention duties in the operation of the ship shall, before being assigned to any shipboard duties:

- .1 receive appropriate approved basic training of instruction in:

- .1.1 personal survival techniques as set out in table A-VI/1-1,
  - .1.2 fire prevention and fire-fighting as set out in table A-VI/1-2,
  - .1.3 elementary first-aid as set out in table A-VI/1-3, and
  - .1.4 personal safety and social responsibilities as set out in table A-VI/1-4.
- .2 be required to provide evidence of having achieved the required standard of competence to undertake the tasks, duties and responsibilities listed in column 1 of tables A-VI/1-1, A-VI/1-2, A-VI/1-3 and A-VI/1-4 within the previous five years through:
- .2.1 demonstration of competence, in accordance with the methods and the criteria for evaluating competence tabulated in column 3 and 4 of those tables; and
  - .2.2 examination or continuous assessment as part of an approved training programme in the subjects listed in column 2 of those tables.
3. The Administration may, in respect of ships other than passenger ships of more than 500 gross tonnage engaged on international voyages and tankers, if it considers that a ship's size and the length or character of its voyage are such as to render the application of the full requirements of this section unreasonable or impracticable, exempt to that extent the seafarers on such a ship or class of ships from some of the requirements, bearing in mind the safety of people on board, the ship and property and the protection of the marine environment.

Table A-VI/1-1  
Specification of minimum standard of competence in personal survival techniques

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Survive at sea in the event of ship abandonment	<p>Types of emergency situations which may occur, such as collision, fire, foundering</p> <p>Types of life-saving appliances normally carried on ships</p> <p>Equipment in survival craft</p> <p>Location of personal life-saving appliances</p> <p>Principles concerning survival including:</p> <ol style="list-style-type: none"> <li>.1 value of training and drills</li> <li>.2 personal protective clothing and equipment</li> <li>.3 need to be ready for any emergency</li> <li>.4 actions to be taken when called to survival craft stations</li> <li>.5 actions to be taken when required to abandon ship</li> <li>.6 actions to be taken when in the water</li> <li>.7 actions to be taken when aboard a survival craft</li> <li>.8 main dangers to survivors</li> </ol>	<p>Assessment of evidence obtained from approved survival courses or approved in-service experience and examination including practical demonstration of competence to:</p> <ol style="list-style-type: none"> <li>.1 don a life-jacket</li> <li>.2 don and use an immersion suit</li> <li>.3 safely jump from a height into the water</li> <li>.4 right an inverted liferaft while wearing a life-jacket</li> <li>.5 swim while wearing a life-jacket</li> <li>.6 keep afloat without a life-jacket</li> <li>.7 board a survival craft from ship and water while wearing a life-jacket</li> </ol>	<p>Action taken on identifying muster signals is appropriate to indicated emergency and complies with established procedures</p> <p>The timing and sequence of individual actions are appropriate to the prevailing circumstance and conditions and minimize potential dangers and threats to survival</p> <p>Method of boarding survival craft is appropriate and avoids dangers to other survivors</p> <p>Initial actions after leaving the ship and procedures and actions in water minimize threats to survival</p>

Table A-VI/1-1  
Page 1 of 2 pages



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Survive at sea in the event of ship abandonment (continued)		.8 take initial actions on boarding survival craft to enhance chance of survival .9 stream a drogue or sea anchor .10 operate survival craft equipment .11 operate location devices, including radio equipment	

Table A-XV/1/1  
Page 2 of 2 Pages

**Table A-VI/1-2**  
**Specification of minimum standard of competence in fire prevention and fire-fighting**

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Minimize the risk of fire and ensure crew readiness to respond to emergency situations involving fire</p>	<p>Shipboard fire-fighting organization                      Location of fire-fighting appliances and emergency escape routes                      The elements of fire and explosion (the fire triangle)                      Types and sources of ignition                      Flammable materials, fire hazards and spread of fire                      The need for constant vigilance                      Actions to be taken on board ship                      Fire and smoke detection and automatic alarm systems                      Classification of fire and applicable extinguishing agents</p>	<p>Assessment of evidence obtained from approved instruction or attendance at an approved course</p>	<p>Initial actions on becoming aware of an emergency conform with accepted practices and procedures                      Action taken on identifying muster signals is appropriate to the indicated emergency and complies with established procedures</p>

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Fight and extinguish fires	<p>Fire-fighting equipment and its location on-board</p> <p>Instruction in:</p> <ol style="list-style-type: none"> <li>.1 fixed installations</li> <li>.2 firefighter's outfits</li> <li>.3 personal equipment</li> <li>.4 fire-fighting appliances and equipment</li> <li>.5 fire-fighting methods</li> <li>.6 fire-fighting agents</li> <li>.7 fire-fighting procedures</li> <li>.8 use of breathing apparatus for fighting fires and effecting rescues</li> </ol>	<p>Assessment of evidence obtained from approved instruction or during attendance at an approved course including practical demonstration in spaces which provide truly realistic training conditions (e.g. simulated shipboard conditions) and, whenever possible and practical, in darkness, of the ability to:</p> <ol style="list-style-type: none"> <li>.1 use various types of portable fire extinguishers</li> <li>.2 use self-contained breathing apparatus</li> <li>.3 extinguish smaller fires, e.g. electrical fires, oil fires, propane fires</li> <li>.4 extinguish extensive fires with water using jet and spray nozzles</li> <li>.5 extinguish fires with foam, powder or any other suitable chemical agent</li> <li>.6 enter and pass through with lifeline but without breathing apparatus a compartment into which high expansion foam has been injected</li> </ol>	<p>Clothing and equipment are appropriate to the nature of the fire-fighting operations</p> <p>The timing and sequence of individual actions are appropriate to the prevailing circumstances and conditions</p> <p>Extinguishment of fire is achieved using appropriate procedures, techniques and fire-fighting agents</p> <p>Breathing apparatus procedures and techniques comply with accepted practices and procedures</p>

Table A-VI/1-2  
Page 2 of 3 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Fight and extinguish fires (continued)		.7 fight fire in smoke-filled enclosed spaces wearing self-contained breathing apparatus .8 extinguish fire with water fog or any other suitable fire-fighting agent in an accommodation room or simulated engine-room with fire and heavy smoke .9 extinguish oil fire with fog applicator and spray nozzles, dry chemical powder or foam applicators .10 effect a rescue in a smoke-filled space wearing breathing apparatus	

Table A-VI/102  
Page 3 of 3 Pages

Table A-VI/1-3  
Specification of minimum standard of competence in elementary first aid

Column 1 COMPETENCE	Column 2 KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	Column 3 METHODS FOR DEMONSTRATING COMPETENCE	Column 4 CRITERIA FOR EVALUATING COMPETENCE
Take immediate action upon encountering an accident or other medical emergency	<p>Assessment of needs of casualties and threats to own safety</p> <p>Appreciation of body structure and functions</p> <p>Understanding of immediate measures to be taken in cases of emergency, including the ability to:</p> <ol style="list-style-type: none"> <li>.1 position casualty</li> <li>.2 apply resuscitation techniques</li> <li>.3 control bleeding</li> <li>.4 apply appropriate measures of basic shock management</li> <li>.5 apply appropriate measures in event of burns and scalds, including accidents caused by electric current</li> <li>.6 rescue and transport a casualty</li> <li>.7 improvise bandages and use materials in emergency kit</li> </ol>	<p>Assessment of evidence obtained from approved instruction or during attendance at an approved course</p>	<p>The manner and timing of raising the alarm is appropriate to the circumstances of the accident or medical emergency</p> <p>The identification of probable cause, nature and extent of injuries is prompt and complete and the priority and sequence of actions is proportional to any potential treat to life</p> <p>Risk of further harm to self and casualty is minimized at all times</p>

Table A-VI/1-4  
 Specification of minimum standard of competence in personal safety and social responsibilities

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Comply with emergency procedures	Types of emergency which may occur, such as collision, fire, foundering Knowledge of shipboard contingency plans for response to emergencies Emergency signals and specific duties allocated to crew members in the muster list; muster stations; correct use of personal safety equipment Action to take on discovering potential emergency, including fire, collision, foundering and ingress of water into the ship Action to take on hearing emergency alarm signals Value of training and drills Knowledge of escape routes and internal communication and alarm systems	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Initial action on becoming aware of an emergency conforms to established emergency response procedures Information given on raising alarm is prompt, accurate, complete and clear
Take precautions to prevent pollution of the marine environment	Effects of operational or accidental pollution of the marine environment Basic environmental protection procedures	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Organizational procedures designed to safeguard the marine environment are observed at all times

Table A-VI/1-4  
 Page 1 of 2 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Observe safe working practices	<p>Importance of adhering to safe working practices at all times</p> <p>Safety and protective devices available to protect against potential hazards aboard ship</p> <p>Precautions to be taken prior to entering enclosed spaces</p> <p>Familiarization with international measures concerning accident prevention and occupational health</p>	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Safe working practices are observed and appropriate safety and protective equipment is correctly used at all times
Understand orders and be understood in relation to shipboard duties	Ability to understand orders and to communicate with orders in relation to shipboard duties	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Communications are clear and effective at all times
Contribute to effective human relationship on board ship	<p>Importance of maintaining good human and working relationships aboard ship</p> <p>Social responsibilities; employment conditions; individual rights and obligations; dangers of drugs and alcohol abuse</p>	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Expected standards of work and behaviour are observed at all times

Table A-VI/1-4  
Page 2 of 2 pages

## Section A-VI/2

Mandatory minimum requirements for the issue of certificates of proficiency in survival craft, rescue boats and fast rescue boats

Proficiency in survival craft and rescue boats other than fast rescue boats

## Standard of Competence

1. Every candidate for a certificate of proficiency in survival craft and rescue boats other than fast rescue boats shall be required to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/2-1.

2. The level of knowledge of the subjects listed in column 2 of table A-VI/2-1 shall be sufficient to enable the candidate to launch and take charge of a survival craft or rescue boat in emergency situations.

3. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take account of the guidance given in part B of this Code.

4. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence within the previous five years through.

.1 demonstration of competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/2-1, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of that table, and

.2 examination or continuous assessment as part of an approved training programme covering the material set out in column 2 of table A-VI/2-1.

Proficiency in fast rescue boats

## Standard of competence

5. Every candidate for a certificate of proficiency in fast rescue boats shall be required to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/2-2.

6. The level of knowledge of the subjects listed in column 2 of table A-VI/2-2 shall be sufficient to enable the candidate to launch and take charge of a fast rescue boat in emergency situations.



7. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take account of the guidance given in part B of this Code.

8. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence within the previous five years through:

- .1 demonstration of competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/2-2, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of that table, and
- .2 examination or continuous assessment as part of an approved training programme covering the material set out in column 2 of table A-VI/2-2.

Table A-VI/2-1  
 Specification of the minimum standard of competence in survival craft and rescue boats other than fast rescue boats

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Take charge of a survival craft or rescue boat during and after launch	Construction and outfit of survival craft and rescue boats and individual items of their equipment  Particular characteristics and facilities of survival craft and rescue boats  Various types of device used for launching survival craft and rescue boats  Methods of launching survival craft into a rough sea  Methods of recovering survival craft  Action to be taken after leaving the ship  Methods of launching and recovering rescue boats in a rough sea	Assessment of evidence obtained from practical demonstration of ability to:  .1 right an inverted liferaft while wearing a life-jacket .2 interpret the markings on survival craft as to the number of persons they are intended to carry .3 give correct commands for launching and boarding survival craft, clearing the ship and handling and disembarking persons from survival craft .4 prepare and safely launch survival craft and clear the ship's side quickly .5 safely recover survival craft and rescue boats  Using: inflatable liferaft and open or enclosed lifeboat with inboard engine	Preparation, boarding and launching of survival craft are within equipment limitations and enable survival craft to clear the ship safely  Initial actions on leaving the ship minimize threat to survival  Recovery of survival craft and rescue boats is within equipment limitations
Operate a survival craft engine	Methods of starting and operating a survival craft engine and its accessories together with the use of the fire extinguisher provided	Assessment of evidence obtained from practical demonstration of ability to start and operate an inboard engine fitted in an open or enclosed lifeboat	Propulsion is available and maintained as required for manoeuvring

Table A-VI/2-1  
 Page 1 of 3 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Manage survivors and survival craft after abandoning ship	<p>Handling survival craft in rough weather</p> <p>Use of painter, sea anchor and all other equipment</p> <p>Apportionment of food and water in survival craft</p> <p>Action taken to maximize detectability and location of survival craft</p> <p>Method of helicopter rescue</p> <p>Effects of hypothermia and its prevention; use of protective covers and garments including immersion suits and thermal protective aids</p> <p>Use of rescue boats and motor lifeboats for marshalling liferafts and rescue of survivors and persons in the sea</p> <p>Beaching survival craft</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <p>.1 row and steer a boat and steer by compass</p> <p>.2 use individual items of equipment of survival craft</p> <p>.3. rig devices to aid location</p>	Survival management is appropriate to prevailing circumstances and conditions
Use locating devices, including communication and signalling apparatus and pyrotechnics	<p>Radio life-saving appliances carried in survival craft, including satellite EPIRBs and SARTs</p> <p>Pyrotechnic distress signals</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <p>.1 use portable radio equipment for survival craft</p> <p>.2 use signalling equipment, including pyrotechnics</p>	Use and choice of communication and signalling apparatus is appropriate to prevailing circumstances and conditions

Table A-VI/2-1  
Page 2 of 3 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Apply first aid to survivors	Use of the first aid kit and resuscitation techniques Management of injured persons, including control of bleeding and shock	Assessment of evidence obtained from practical demonstration of ability to deal with injured persons both during and after abandonment using first aid kit and resuscitation techniques	Identification of the probable cause, nature and extent of injuries or condition is prompt and accurate Priority and sequence of treatment minimizes any threat to life

Table A-VI/2-1  
Page 3 of 3 pages

Table A-VI/2-2  
Specification of the minimum standard of competence in fast rescue boats

Column 1 COMPETENCE	Column 2 KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	Column 3 METHODS FOR DEMONSTRATING COMPETENCE	Column 4 CRITERIA FOR EVALUATING COMPETENCE
Take charge of a fast rescue boat during and after launch	<p>Construction and outfit of fast rescue boats and individual items of their equipment</p> <p>Particular characteristics and facilities of fast rescue boats</p> <p>Safety precautions during launch and recovery of a fast rescue boat</p> <p>Procedures for righting a capsized fast rescue boat</p> <p>How to handle a fast rescue boat in prevailing and adverse weather and sea conditions</p> <p>Navigational and safety equipment available in a fast rescue boat</p> <p>Search patterns and environmental factors affecting their execution</p> <p>Assessment of the readiness of fast rescue boats and related equipment for immediate use</p>	<p>Assessment of evidence obtained from practical demonstration of ability to:</p> <ol style="list-style-type: none"> <li>.1 control safe launching and recovery of a fast rescue boat</li> <li>.2 right a capsized fast rescue boat</li> <li>.3 handle a fast rescue boat in prevailing weather and sea conditions</li> <li>.4 swim in special equipment</li> <li>.5 use communication and signalling equipment between the fast rescue boat and a helicopter and a ship</li> <li>.6 use the emergency equipment carried</li> </ol>	<p>Preparation, boarding, launching and operation of fast rescue boats is within equipment limitations</p>

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Operate a fast rescue boat engine	<p>Knowledge of the maintenance, emergency repairs, normal inflation and deflation of buoyancy compartments of inflated fast rescue boats</p> <p>Methods of starting and operating a fast rescue boat engine and its accessories</p>	<p>.7 recover a casualty from the water and transfer a casualty to a rescue helicopter or to a ship or to a place of safety</p> <p>.8 carry out search patterns taking account of environmental factors</p> <p>Assessment of evidence obtained from practical demonstration of ability to start and operate a fast rescue boat engine</p>	<p>Engine is started and operated as required for manoeuvring</p>

Table A-VI/2-2  
Page 2 of 2 pages

## Section A-VI/3

## Mandatory minimum training in advanced fire-fighting

## Standard of competence

1. Seafarers designated to control fire-fighting operations shall have successfully completed advanced training in techniques for fighting fire, with particular emphasis on organization, tactics and command, and shall be required to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/3.

2. The level of knowledge and understanding of the subjects listed in column 2 of table A-VI/3 shall be sufficient for the effective control of fire-fighting operations on board ship.

3. Training and experience to achieve the necessary level of theoretical knowledge, understanding and proficiency shall take account of the guidance given in part B of this Code.

4. Every candidate for certification shall be required to provide evidence of having achieved the required standard of competence within the previous five years, in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-VI/3.

Table A-VI/3  
Specification of minimum standard of competence in advanced fire-fighting

Column 1 COMPETENCE	Column 2 KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	Column 3 METHODS FOR DEMONSTRATING COMPETENCE	Column 4 CRITERIA FOR EVALUATING COMPETENCE
Control fire-fighting operation in aboard ships	<p>Fire-fighting procedures at sea and in port with particular emphasis on organization, tactics and command</p> <p>Use of water for fire-extinguishing, the effect on ship stability, precautions and corrective procedures</p> <p>Communication and co-ordination during fire-fighting operations</p> <p>Ventilation control, including smoke extractor</p> <p>Control of fuel and electrical systems</p> <p>Fire-fighting process hazards (dry distillation, chemical reactions, boiler uptake fires, etc.)</p> <p>Fire-fighting involving dangerous goods</p> <p>Fire precautions and hazards associated with the storage and handling of materials (paints, etc.)</p> <p>Management and control of injured persons</p> <p>Procedures for co-ordination with shore-based fire fighters</p>	<p>Practical exercises and instruction conducted under approved and truly realistic training conditions (e.g.: simulated shipboard conditions) and, whenever possible and practicable, in darkness</p>	<p>Actions taken to control fires are based on a full and accurate assessment of the incident using all available sources of information</p> <p>The order of priority, timing and sequence of actions are appropriate to the overall requirements of the incident and to minimize damage and potential damage to the ship, injuries to personnel and impairment of the operational effectiveness of the ship</p> <p>Transmission of information is prompt, accurate, complete and clear</p> <p>Personal safety during fire control activities is safeguarded at all times</p>

Table A-VI/3  
Page 1 of 2 pages



COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Organize and train fire parties	Preparation of contingency plans Composition and allocation of personnel to fire parties Strategies and tactics for control of fires in various parts of the ship	Practical exercises and instruction conduct under approved and truly realistic training conditions, e.g. simulated shipboard conditions	Composition and organization of fire control parties ensure the prompt and effective implementation of emergency plans and procedures
Inspect and service fire detection and extinguishing systems and equipment	Fire detection systems: fixed fire-extinguishing systems; portable and mobile fire-extinguishing equipment including appliances, pumps and rescue, salvage, life support, personal protective and communication equipment Requirements for statutory and classification surveys	Practical exercises using approved equipment and systems in a realistic training environment	Operational effectiveness of all fire detection and extinguishing systems and equipment is maintained at all times in accordance with performance specifications and legislative requirements
Investigate and compile reports on incidents involving fire	Assessment of cause of incidents involving fire	Practical exercises in a realistic training environment	Causes of fire are identified and the effectiveness of counter measures are evaluated

Table A-VI/3  
Page 2 of 2 pages

## Section A-VI/4

Mandatory minimum requirements related to medical first aid and medical care

Standard of competence for seafarers designated to provide medical first aid on board ship

1. Every seafarer who is designated to provide medical first aid on board ship shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/4-1.

2. The level of knowledge of the subjects listed in column 2 of table A-VI/4-1 shall be sufficient to enable the designated seafarer to take immediate effective action in the case of accidents or illness likely to occur on board ship.

3. Every candidate for certification under the provisions of regulation VI/4, paragraph 1 shall be required to provide evidence that the required standard of competence has been achieved in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 table A-VI/4-1.

Standard of competence for seafarers designated to take charge of medical care on board ship

4. Every seafarer who is designated to take charge of medical care on board ship shall be required to demonstrate the competence to undertake the tasks, duties and responsibilities listed in column 1 of table A-VI/4-2.

5. The level of knowledge of the subjects listed in column 2 of table A-VI/4-2 shall be sufficient to enable the designated seafarer to take immediate effective action in the case of accidents or illness likely to occur on board ship.

6. Every candidate for certification under the provisions of regulation VI/4, paragraph 2 shall be required to provide evidence that the required standard of competence has been achieved in accordance with the methods for demonstrating competence and the criteria for evaluating competence tabulated in columns 3 and 4 of table A-VI/4-2.

**Table A-VI/4-1**  
**Specification of minimum standard of proficiency in medical first aid**

Column 1 COMPETENCE	Column 2 KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	Column 3 METHODS FOR DEMONSTRATING COMPETENCE	Column 4 CRITERIA FOR EVALUATING COMPETENCE
Apply immediate first aid in the event of accident or illness on board	First aid kit Body structure and function Toxicological hazards on board, including use of the Medical First Aid Guide for use in Accidents Involving Dangerous Goods (MIFAG) or its national equivalent Examination of casualty or patient Spinal injuries Burns, scalds and effects of cold fractures, dislocations and muscular injuries Medical care of rescued persons Radio-medical advice Pharmacology Sterilisation Cardiac arrest, drowning and asphyxia	Assessment of evidence obtained from practical instruction	The identification of probable cause, nature and extent of injuries is prompt, complete and conforms to current first aid practice  Risk of harm to self and others is minimized at all times  Treatment of injuries and the patients condition is appropriate and conforms to recognized first aid practice and international guidelines

Table A-VI/4-2  
 Specification of minimum standard of proficiency for persons in charge of medical care on board ship

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Provide medical care to the sick and injured while they remain on board	Care of casualty involving: .1 head and spinal injuries .2 injuries of ear, nose, throat and eyes .3 external and internal bleeding .4 burns, scalds and frostbite .5 fractures, dislocations and muscular injuries .6 wounds, wound healing and infection .7 pain relief .8 techniques of sewing and clamping .9 management of acute abdominal conditions .10 minor surgical treatment .11 dressing and bandaging Aspects of nursing: .1 general principles .2 nursing care	Assessment of evidence obtained from practical instruction and demonstration Where practicable, approved practical experience at a hospital or similar establishment	Identification of symptoms is based on the concepts of clinical examination and medical history Protection against infection and spread of diseases is complete and effective Personal attitude is calm, confident and reassuring Treatment of injury or condition is appropriate and conforms to accepted medical practice and relevant national and international medical guides The dosage and application of drugs and medication complies with manufacturers' recommendations and accepted medical practice The significance of changes in patients' condition is promptly recognized

Table A-VI/4-2  
 Page 1 of 3 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
<p>Provide medical care to the sick and injured while they remain on board (continued)</p>	<p>Diseases, including:                      .1 medical conditions and emergencies                      .2 sexually transmitted diseases                      .3 tropical and infectious diseases                      Alcohol and drug abuse                      Dental care                      Gynaecology, pregnancy and childbirth                      Medical care of rescued persons                      Death at sea                      Hygiene                      Disease prevention including:                      .1 disinfection, disinfestation, de-ratting                      .2 vaccinations                      Keeping records and copies of applicable regulations:                      .1 keeping medical records                      .2 international and national maritime medical regulations</p>		

Table A-V/4-2  
Page 2 of 3 pages

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Participate in co-ordinated schemes for medical assistance to ships	External assistance, including: .1 radio-medical advice .2 transportation of the ill and injured including helicopter evacuation .3 medical care of sick seafarers involving co-operation with port health authorities or outpatient wards in port		Clinical examination procedures are complete and comply with instructions received  The method and preparation for evacuation is in accordance with recognized procedures and is designed to maximize the welfare of the patient.  Procedures for seeking radio-medical advice conform to established practice and recommendations

Table A-V/1/4-2  
Page 3 of 3 pages

## CHAPTER VII

## STANDARDS REGARDING ALTERNATIVE CERTIFICATION

## Section A-VII/1

## Issue of alternative certificates

1. Every candidate for certification at the operational level under the provisions of chapter VII of the Annex to the Convention shall be required to complete relevant education and training and meet the standard of competence for all the functions prescribed in either table A-II/1 or table A-III/1. Functions specified in tables A-II/1 or A-III/1 respectively may be added provided the candidate completes, as appropriate, additional relevant education and training and meets the standards of competence prescribed in those tables for the functions concerned.

2. Every candidate for certifications at the management level as the person having command of a ship of 500 gross tonnage or more, or the person upon whom the command of such a ship will fall in the event of the incapacity of the person in command, shall be required in addition to compliance with the standard of competence specified in table A-II/1 to complete relevant education and training and meet the standards of competence for all of the functions prescribed in table A-II/2. Functions specified in the tables of chapter III of this part may be added provided the candidate completes, as appropriate, additional relevant education and training and meets the standards of competence prescribed in those tables for the functions concerned.

3. Every candidate for certification at the management level as the person responsible for the mechanical propulsion of a ship powered by main propulsion machinery of 750 kW or more, or the person upon whom such responsibility will fall in the event of the incapacity of the person responsible for the mechanical propulsion of the ship, shall be required, in addition to compliance with the standard of competence specified in table A-III/1, to complete relevant education and training and meet the standards of competence for all of the functions prescribed in table A-III/2, as appropriate. Functions specified in the tables of chapter II of this part may be added provided the candidate completes, as appropriate, additional relevant education and training and meets the standards of competence prescribed in those tables for the functions concerned.

4. Every candidate for certification at the support level in navigation or marine engineering shall comply with the standard of competence prescribed in table A-II/4 or A-III/4 of this part, as appropriate.

## Section A-VII/2

## Certification of seafarers

1. In accordance with the requirements of regulation VII/1, paragraph 1.3, every candidate for certification under the provisions of chapter VII at operational level in functions specified in tables A-II/1 or A-III/1 shall:

- .1 have approved seagoing service of not less than one year, which service shall include a period of at least six months performing engine-room duties under the supervision of a qualified engineer officer and, where the function of navigation is required, a period of at least six months performing bridge watchkeeping duties under the supervision of a qualified bridge watchkeeping officer; and
- .2 have completed, during this service, on-board training programmes approved as meeting the relevant requirements of sections A-II/1 and A-III/1 and documented in an approved training record book.

2. Every candidate for certification under the provisions of chapter VII at the management level in a combination of functions specified in tables A-II/2 and A-III/2, shall have approved seagoing service related to the functions to be shown in the endorsement to the certificate as follows:

- .1 for persons other than those having command or responsibility for the mechanical propulsion of a ship – 12 months performing duties at the operational level related to regulation III/2 or III/3 as appropriate and, where the function of navigation at the management level is required, at least 12 months performing bridge watchkeeping duties all the operational level;
- .2 for those having or the responsibility for the mechanical propulsion of a ship – not less than 48 months including the provisions in paragraph 2.1 of this section performing, as a certificated officer, duties related to the functions to be shown in the endorsement to the certificate, of which 24 months shall be served performing functions set out in table A-II/1 and 24 months shall be served performing functions set out in tables A-III/1 and A-III/2.

## Section A-VII/3

## Principles governing the issue of alternative certificates

(No provisions)



## CHAPTER VIII

## STANDARDS REGARDING WATCHKEEPING

## Section A-VIII/1

## Fitness for duty

1. All persons who are assigned duty as officer in charge or a watch or as a rating forming part of a watch shall be provided a minimum of 10 hours of rest in any 24-hour period.
2. The hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length.
3. The requirements for rest periods laid down in paragraphs 1 and 2 need not be maintained in the case of an emergency or drill or in other overriding operational conditions.
4. Notwithstanding the provisions of paragraphs 1 and 2, the minimum period of ten hours may be reduced to not less than 6 consecutive hours provided that any such reduction shall not extend beyond two days and not less than 70 hours of rest are provided each seven day period.
5. Administrations shall require that watch schedules be posted where they are easily accessible.

## Section A-VIII/2

## Watchkeeping arrangements and principles to be observed

## PART 1 – CERTIFICATION

1. The officer in charge of the navigational or deck watch shall be duly qualified in accordance with the provisions of chapter II, or chapter VII appropriate to the duties related to navigational or deck watchkeeping.
2. The officer in charge of the engineering watch shall be duly qualified in accordance with the provisions of chapter III, or chapter VII appropriate to the duties related to engineering watchkeeping.

## PART 2 – VOYAGE PLANNING

## General requirements

3. 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.

4. 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.

## Planning prior to each voyage

5. Prior to each voyage the master of every 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 which are of a permanent or predictable nature, and which are relevant to the safe navigation of the ship.

## Verification and display of planned route

6. 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 prior to using it during the voyage.

## Deviation from planned route

7. 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 prior to deviating from the route originally planned.

## PART 3 – WATCHKEEPING AT SEA

## Principles applying to watchkeeping generally

8. Parties shall direct the attention of companies, masters, chief engineer officers and watchkeeping personnel to the following principles which shall be observed to ensure that safe watches are maintained at all times.

9. The master of every ship is bound to 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.

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

## Protection of marine environment

11. 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 3-1 – PRINCIPLES TO BE OBSERVED IN KEEPING A NAVIGATIONAL WATCH

12. The officer in charge of the navigational watch is the masters' representative and is primarily responsible at all times for the safe navigation of the ship and for complying with the International Regulations for Preventing Collisions at Sea, 1972.

## Look-out

13. A proper look-out shall be maintained at all times in compliance with rule 5 of the International Regulations for Preventing Collisions at Sea, 1972 and shall serve the purpose of:

- .1 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;
- .2 fully appraising the situation and the risk of collision, stranding and other dangers to navigation, and
- .3 detecting ships or aircraft in distress, shipwrecked persons, wrecks, debris and other hazards to safe navigation.

14. The look-out must 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.

15. The duties of the look-out and helmsperson are separate and the helmsperson 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:

- .1 the situation has been carefully assessed and it has been established without doubt that it is safe to do so;
- .2 full account has been taken of all relevant factors including, but not limited to:
  - state of weather,
  - visibility,
  - traffic density,
  - proximity of dangers to navigation, and
  - the attention necessary when navigating in or near traffic separation schemes; and
- .3 assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

16. 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 section of the Code, as well as the following factors:

- .1 visibility, state of weather and sea;
- .2 traffic density, and other activities occurring in the area in which the vessel is navigating;
- .3 the attention necessary when navigating in or near traffic separation schemes or other routing measures;
- .4 the additional workload caused by the nature of the ship's functions, immediate operating requirements and anticipated manoeuvres;
- .5 the fitness for duty of any crew members on call who are assigned as members of the watch;
- .6 knowledge of and confidence in the professional competence of the ship's officers and crew;
- .7 the experience of each officer of the navigational watch, and the familiarity of that officer with the ship's equipment, procedures, and manoeuvring capability;

- .8 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;
- .9 the operational status of bridge instrumentation and controls, including alarm systems;
- .10 rudder and propeller control and ship manoeuvring characteristics;
- .11 the size of the ship and the field of vision available from the conning position;
- .12 the configuration of the bridge, to the extent such configuration might inhibit a member of the watch from detecting by sight or hearing any external development; and
- .13 any other relevant standard, procedure or guidance relating to watchkeeping arrangements and fitness for duty which has been adopted by the Organization.

#### Watch arrangements

17. When deciding the composition of the watch on the bridge, which may include appropriately qualified ratings, the following factors, *inter alia*, shall be taken into account:

- .1 at no time shall the bridge be left unattended;
- .2 weather conditions, visibility and whether there is daylight or darkness;
- .3 proximity of navigational hazards which may make it necessary for the officer in charge of the watch to carry out additional navigational duties;
- .4 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;
- .5 whether the ship is fitted with automatic steering;
- .6 whether there are radio duties to be performed;
- .7 unmanned machinery space (UMS) controls, alarms and indicators provided on the bridge, procedures for their use and limitations; and
- .8 any unusual demands on the navigational watch that may arise as a result of special operational circumstances.

#### Taking over the watch

18. 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.

19. 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.

20. Prior to 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.

21. Relieving officers shall personally satisfy themselves regarding the:

- .1 standing orders and other special instructions of the master relating to navigation of the ship;
- .2 position, course, speed and draught of the ship;
- .3 prevailing and predicted tides, currents, weather, visibility and the effect of these factors upon course and speed;
- .4 procedures for the use of main engines to manoeuvre when the main engines are on bridge control; and
- .5 navigational situation, including but not limited to:
  - .5.1 the operational condition of all navigational and safety equipment being used or likely to be used during the watch,
  - .5.2 the errors of gyro and magnetic compasses,
  - .5.3 the presence and movement of ships in sight or known to be in the vicinity,
  - .5.4 the conditions and hazards likely to be encountered during the watch, and
  - .5.5 the possible effects of heel, trim, water density and squat on under keel clearance.

22. 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.

Performing the navigational watch

23. The officer in charge of the navigational watch shall:

- .1 keep the watch on the bridge;
- .2 in no circumstances leave the bridge until properly relieved;
- .3 continue to be responsible for the safe navigation of the ship, despite the presence of the master on the bridge, until informed specifically that the master has assumed that responsibility and this is mutually understood; and
- .4 notify the master when in any doubt as to what action to take in the interest of safety.

24. 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.

25. 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.

26. 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.

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

28. When using radar, the officer in charge of the navigational watch shall bear in mind the necessity to comply at all times with the provisions on the use of radar contained in the International Regulations for Preventing Collisions at Sea, in force.

29. 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.

30. 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 characteristics.

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

32. 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 chart room the officer in charge of the navigational watch may visit the chart room, 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.

33. 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 prior to port arrival and departure.

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

- .1 the person steering the ship or the automatic pilot is steering the correct course;
- .2 the standard compass error is determined at least once 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;
- .3 the automatic pilot is tested manually at least once a watch;
- .4 the navigation and signal lights and other navigational equipment are functioning properly;
- .5 the radio equipment is functioning properly in accordance with paragraph 86 of this section: and
- .6 the UMS controls, alarms and indicators are functioning properly.

35. The officer in charge of the navigational watch shall bear in mind the necessity to comply at all times with the requirements in force of the International Convention for the Safety of Life at Sea, (SOLAS) 1974. The officer of the navigational watch shall take into account:

- .1 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
- .2 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.

36. 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.

37. 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 regards to its limitations.

38. 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.

39. 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.



40. The officer in charge of the navigational watch shall notify the master immediately;
- .1 if restricted visibility is encountered or expected;
  - .2 if the traffic conditions or the movements of other ships are causing concern;
  - .3 if difficulty is experienced in maintaining course;
  - .4 on failure to sight land, a navigation mark or to obtain soundings by the expected time;
  - .5 if, unexpectedly, land or a navigation mark is sighted or a change in soundings occurs;
  - .6 on breakdown of the engines, propulsion machinery remote control, steering gear of any essential navigational equipment, alarm or indicator;
  - .7 if the radio equipment malfunctions;
  - .8 in heavy weather, if in any doubt about the possibility of weather damage;
  - .9 if the ship meets any hazard to navigation, such as ice or a derelict; and
  - .10 in any other emergency or if in any doubt

41. 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.

42. The officer in charge of the navigational watch shall give watch-keeping personnel all appropriate instructions and information which will ensure the keeping of a safe watch, including a proper look-out.

Watchkeeping under different conditions and in different areas

Clear weather

43. 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 International Regulations for Preventing Collisions at Sea, 1972 and subsequently check that such action is having the desired effect.

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

#### Restricted visibility

45. When restricted visibility is encountered or expected, the first responsibility of the officer in charge of the navigational watch is to comply with the relevant rules of the International Regulations for Preventing Collisions at Sea, 1972 with particular regard to the sounding of fog signals, proceeding at a safe speed and having the engines ready for immediate manoeuvre. In addition, the officer in charge of the navigational watch shall:

- .1 inform the master;
- .2 post a proper look-out;
- .3 exhibit navigation lights; and
- .4 operate and use the radar.

#### In hours of darkness

46. The master and the officer in charge of the navigational watch when arranging look-out duty shall have due regard to the bridge equipment and navigational aids available for use, their limitations; procedures and safeguards implemented.

#### Coastal and congested waters

47. The largest scale chart on board, suitable for the area and connected 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.

48. The officer in charge of the navigational watch shall positively identify all relevant navigation marks.

#### Navigation with pilot on board

49. 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.

50. 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.

#### Ship at anchor

51. If the master considers it necessary, a continuous navigational watch shall be maintained at anchor. While at anchor, the officer in charge of the navigational watch shall:

- .1 determine and plot the ship's position on the appropriate chart as soon as practicable;
- .2 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;
- .3 ensure that proper look-out is maintained;
- .4 ensure that inspection rounds of the ship are made periodically;
- .5 observe meteorological and tidal conditions and the state of the sea;
- .6 notify the master and undertake all necessary measures if the ship drags anchor;
- .7 ensure that the state of readiness of the main engines and other machinery is in accordance with the master's instructions;
- .8 if visibility deteriorates, notify the master;
- .9 ensure that the ship exhibits the appropriate lights and shapes and that appropriate sound signals are made in accordance with all applicable regulations; and
- .10 take measures to protect the environment from pollution by the ship and comply with applicable pollution regulations.

#### PART 3-2 - PRINCIPLES TO BE OBSERVED IN KEEPING AN ENGINEERING WATCH

52. The term "engineering watch" as used in parts 3-2, 4-2 and 4-4 of this section 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.

53. 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.

#### Watch arrangements

54. 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.

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

- .1 the type of ship and the type and condition of the machinery;
- .2 the adequate supervision, at all times, of machinery affecting the safe operation of the ship;
- .3 any special modes of operation dictated by conditions such as weather, ice, contaminated water, shallow water, emergency conditions, damage containment or pollution abatement;
- .4 the qualifications and experience of the engineering watch;
- .5 the safety of life, ship, cargo and port, and protection of the environment;
- .6 the observance of international, national and local regulations; and
- .7 maintaining the normal operations of the ship.

#### Taking over the watch

56. 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.

57. 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.

58. Prior to taking over the engineering watch, relieving officers shall satisfy themselves regarding at least the following:

- .1 the standing orders and special instructions of the chief engineer officer relating to the operation of the ship's systems and machinery;
- .2 the nature of all work being performed on machinery and systems, the personnel involved and potential hazards;
- .3 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;
- .4 the condition and level of fuel in the reserve tanks, settling tank, day tank and other fuel storage facilities;
- .5 any special requirements relating to sanitary system disposals;
- .6 condition and mode of operation of the various main and auxiliary systems, including the electrical power distribution system;
- .7 where applicable, the condition of monitoring and control console equipment, and which equipment is being operated manually;
- .8 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;
- .9 any potentially adverse conditions resulting from bad weather, ice, contaminated or shallow water;
- .10 any special modes of operation dictated by equipment failure or adverse ship conditions;
- .11 the reports of engine-room ratings relating to their assigned duties;
- .12 the availability of fire-fighting appliances; and
- .13 the state of completion of engine-room log.

#### Performing the engineering watch

59. 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.

60. 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.

61. 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:

- .1 the use of appropriate internal communication systems;
- .2 the escape routes from machinery spaces;
- .3 the engine-room alarm systems and be able to distinguish between the various alarms with special reference to the fire extinguishing media alarm; and
- .4 the number location and types of fire-fighting equipment and damage control gear in the machinery spaces, together with their use and the various safety precautions to be observed.

62. 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.

63. 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.

64. 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.

65. All bridge orders shall be promptly executed. Changes in direction or speed of the main propulsion units shall be recorded, except where an Administration has determined that the size or characteristics of a particular ship make such recording impracticable. 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.

66. 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.

67. 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, by-passing 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.

68. 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.

69. 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.

70. 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 the ship.

71. 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 of throttles.

72. 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.

73. 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.

74. 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:

- .1 isolating and bypassing machinery to be worked on;
- .2 adjusting the remaining plant to function adequately and safely during the maintenance period;
- .3 recording, in the engine-room log 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
- .4 testing and putting into service, when necessary, the repaired machinery or equipment.

75. 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.

76. 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 of 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 action is possible to avoid a potential marine casualty.

77. The officer in charge of the engineering watch shall notify the chief engineer officer without delay;

- .1 when engine damage or a malfunction occurs which may be such as to endanger the safe operation of the ship;
- .2 when any malfunction occurs which, it is believed, may cause damage or breakdown of propulsion machinery, auxiliary machinery or monitoring and governing systems; and
- .3 in any emergency or if in any doubt as to what decision or measures to take.

78. 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.

79. 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.

Engineering watchkeeping under different conditions and in different areas

Restricted visibility

80. 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.

Coastal and congested waters

81. 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.



#### Ship at anchor

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

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

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

#### PART 3-3 – PRINCIPLES TO BE OBSERVED IN KEEPING A RADIO WATCH

##### General provisions

84. Administration shall direct the attention of companies, masters and radio watchkeeping personnel to comply with the following provisions to ensure that an adequate safety radio watch is maintained while a ship is at sea. In complying with this Code, account shall be taken of the Radio Regulations.

##### Watch arrangements

85. In deciding the arrangements for the radio watch, the master of every seagoing ship shall:

- .1 ensure that the radio watch is maintained in accordance with the relevant provisions of the Radio Regulations and the SOLAS Convention;
- .2 ensure that the primary duties for radio watchkeeping are not adversely affected by attending to radio traffic not relevant to the safe movement of the ship and safety of navigation; and
- .3 take into account the radio equipment fitted on board and its operational status.

##### Performing the radio watch

86. The radio operator performing radio watchkeeping duties shall:

- .1 ensure that watch is maintained on the frequencies specified in the Radio Regulations and the SOLAS Convention; and
- .2 while on duty regularly check the operation of the radio equipment and its sources of energy and report to the master any observed failure of this equipment.

87. The requirements of the Radio Regulations and the SOLAS Convention on keeping a radiotelegraph or radio log, as appropriate, shall be complied with.

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

- .1 a summary of distress, urgency and safety radiocommunications;
- .2 important incidents relating to the radio service;
- .3 where appropriate, the position of the ship at least once per day; and
- .4 a summary of the condition of the radio equipment including its sources of energy.

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

- .1 for inspection by the master; and
- .2 for inspection by any authorized official of the Administration and by any duly authorized officer exercising control under article X of the Convention.

#### PART 4 – WATCHKEEPING IN PORT

Principles applying to all watchkeeping

General

90. On any ship safely moored or safely at anchor under normal circumstances in port, the master shall arrange for an appropriate and effective watch to be maintained for the purpose of safety. Special requirements may be necessary for special types of ships' propulsion systems or ancillary equipment and for ships carrying hazardous, dangerous, toxic or highly flammable materials or other special types of cargo.

Watch arrangements

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

- .1 ensure the safety of life, of the ship, the port and the environment, and the safe operation of all machinery related to cargo operation;
- .2 observe international, national and local rules; and
- .3 maintain order and the normal routine of the ship.

92. 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.

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

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

95. 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:

- .1 on all ships of 3,000 kW propulsion power and over there shall always be an officer in charge of the engineering watch;
- .2 on ships of less than 3,000 kW propulsion power there may be, at the master's discretion and in consultation with the chief engineer officer, no officer in charge of the engineering watch, and
- .3 officers, while in charge of an engineering watch, shall not be assigned or undertake any task or duty which would interfere with their supervisory duty in respect of the ship's machinery system.

#### Taking over the watch

96. 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.

97. 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 4-1 – TAKING OVER THE DECK WATCH

98. Prior to 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:

- .1 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;
- .2 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;
- .3 the level of water in bilges and ballast tanks;
- .4 the signals or lights being exhibited or sounded;
- .5 the number of crew members required to be on board and the presence of any other persons on board;
- .6 the state of fire-fighting appliances;
- .7 any special port regulations;
- .8 the master's standing and special orders;
- .9 the lines of communication available between the ship and shore personnel, including port authorities, in the event of an emergency arising or assistance being required;
- .10 any other circumstances of importance to the safety of the ship, its crew, cargo or protection of the environment from pollution; and
- .11 the procedures for notifying the appropriate authority of any environmental pollution resulting from ship activities.

99. Relieving officers, before assuming charge of the deck watch, shall verify that:

- .1 the securing of moorings and anchor chain are adequate;
- .2 the appropriate signals or lights are properly exhibited or sounded;
- .3 safety measures and fire protection regulations are being maintained;
- .4 their awareness 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;
- .5 no external conditions or circumstances imperil the ship and that it does not imperil others.

## PART 4-2 - TAKING OVER THE ENGINEERING WATCH

100. Prior to taking over the engineering watch, the relieving officer shall be informed by the officer in charge of the engineering watch as to:

- .1 the standing orders of the day, any special orders relating to the ship operations, maintenance functions, repairs to the ship's machinery or control equipment;
- .2 the nature of all work being performed on machinery and systems on board ship, personnel involved and potential hazards;
- .3 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;
- .4 any special requirements relating to sanitary system disposals;
- .5 the condition and state of readiness of portable fire-extinguishing equipment and fixed fire-extinguishing installations and fire detection systems;
- .6 authorized repair personnel on board engaged in engineering activities, their work locations and repair functions and other authorized persons on board and the required crew;
- .7 any port regulations pertaining to ship effluents, fire-fighting requirements and ship readiness, particularly during bad weather conditions;
- .8 the lines of communication available between the ship and shore personnel, including port authorities, in the event of an emergency arising or assistance being required;
- .9 any other circumstance of importance to the safety of the ship, its crew, cargo or the protection of the environment from pollution; and
- .10 the procedures for notifying the appropriate authority of environmental pollution resulting from engineering activities.

101. 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:

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

#### PART 4-3 - PERFORMING THE DECK WATCH

102. The officer in charge of the deck watch shall:
- .1 make rounds to inspect the ship at appropriate intervals;
  - .2 pay particular attention to:
    - .2.1 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,

- .2.2 the draught, under-keel clearance and the general state of the ship, to avoid dangerous listing or trim during cargo handling or ballasting,
- .2.3 the weather and sea state;
- .2.4 the observance of all regulation concerning safety and fire protection,
- .2.5 the water level in bilges and tanks,
- .2.6 all persons on board and their location, especially those in remote or enclosed spaces, and
- .2.7 the exhibition and sounding, where appropriate, of lights and signals;
- .3 in bad weather, or on receiving a storm warning, take the necessary measures to protect the ship, persons on board and cargo;
- .4 take every precaution to prevent of the environment by the ship;
- .5 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;
- .6 be aware of the ship's stability condition so that, in the event of the 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;
- .7 offer assistance to ships or persons in distress;
- .8 take necessary precautions to prevent accidents or damage when propellers are to be turned; and
- .9 enter in the appropriate log-book all important events affecting the ship.

#### PART 4-4 - PERFORMING THE ENGINEERING WATCH

103. Officers in charge of the engineering watch shall pay particular attention to:

- .1 the observance of all orders, special operating procedures and regulations concerning hazardous conditions and their prevention in all areas in their charge;
- .2 the instrumentation and control systems, monitoring of all power supplies, components and systems in operation;
- .3 the techniques, methods and procedures necessary to prevent violation of the pollution regulations of the local authorities; and
- .4 the state of the bilges.

104. Officers in charge of the engineering watch shall:

- .1 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;

- .2 be aware of the deck officer's needs relating to the equipment required in the loading or unloading of the cargo and the additional requirements of the ballast and other ship stability control systems;
- .3 make frequent rounds of inspection to determine possible equipment malfunction or failure, and take immediate remedial action to ensure the safety of the ship, of cargo operations, of the port and the environment;
- .4 ensure that the necessary precautions are taken, within their area of responsibility, to prevent accidents or damage to the various electrical, electronic, hydraulic, pneumatic and mechanical systems of the ship;
- .5 ensure that all important events affecting the operation, adjustment or repair of the ship's machinery are satisfactorily recorded.

PART 4-5 – WATCH IN PORT ON SHIPS CARRYING HAZARDOUS CARGO

General

105. The master of every 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.

106. 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**

**Seafarers' training, certification and watchkeeping (STCW) code**

PART B

RECOMMENDED GUIDANCE REGARDING PROVISIONS OF  
THE STCW CONVENTION AND ITS ANNEX

Introduction

1. This part of the STCW Code contains recommended guidance intended to assist Parties to the STCW Convention and those involved

in implementing, applying or enforcing its measures, to give the Convention full and complete effect in a uniform manner.

2. The measures suggested are not mandatory and the examples given are only intended to illustrate how certain Convention requirements may be complied with. However, the recommendations in general represent an approach to the matters concerned which has been harmonized through discussion within IMO involving, where appropriate, consultation with the International Labour Organization, the International Telecommunication and the World Health Organization.

3. Observance of the recommendations contained in this part will assist the Organization in achieving its goal of maintaining the highest practicable standards of competence in respect of crews of all nationalities and ships of all flags.

4. Guidance is provided in this part in respect of certain articles of the Convention, in addition to guidance on certain regulations in its Annex. The numbering of the sections of this part therefore corresponds with that of the articles and the regulations of the Convention. As in part A, the text of each section may be divided into numbered parts and paragraphs, but such numbering is unique to that text alone.

#### GUIDANCE REGARDING PROVISIONS OF THE ARTICLES

##### Section B-I

Guidance regarding general obligations under the Convention

(No provisions)

##### Section B-II

Guidance regarding definitions and clarifications

1. The definitions contained in article II of the Convention, and the definitions and clarifications contained in regulation I/1 of its Annex, apply equally to the terms used in parts A and B of this Code. Supplementary definitions which apply only to the provisions of this Code are contained in section A-I/1.

2. The definition of "certificate" appearing in article II (c) provides for three possibilities:

- .1 the Administration may issue the certificate;
- .2 the Administration may have the certificate issued under its authority; or



- .3 the Administration may recognize a certificate issued by another Party as provided for in regulation I/10.

#### Section B-III

##### Guidance regarding the application of the Convention

1. While the definition of “fishing vessel” contained in article II, paragraph (h) excludes vessels used for catching fish, whales, seals, walrus or other living resources of the sea from application of the Convention, vessels not engaged in the catching activity cannot enjoy such exclusion.

2. The Convention excludes all wooden ships of primitive build, including junks.

#### Section B-IV

##### Guidance regarding the communication of information

In paragraph (1)(b) of article IV, the words “where appropriate” are intended to include:

- .1 the recognition of a certificate issued by another Party; or
- .2 the issue of the Administration’s own certificate, where applicable, on the basis of recognition of a certificate issued by another Party.

#### Section B-V

##### Guidance regarding other treaties and interpretation

The word “arrangements” in paragraph (1) of article V is intended to include provisions previously established between States for the reciprocal recognition of certificates.

#### Section B-VI

##### Guidance regarding certificates

See the guidance given in sections B-II and B-I/2.

A policy statement and an outline of the procedures to be followed should be published for the information of companies operating ships under the flag of the Administration.

## Section B-VII

## Guidance regarding transitional provisions

Certificates issued for service in one capacity which are currently recognized by a Party as an adequate qualification for service in another capacity, e.g. chief mate certificates recognized for service as master, should continue to be accepted as valid for such service under article VII. This acceptance also applies to such certificates issued under the provisions of paragraph 2 of article VII.

## Section B-VIII

## Guidance regarding dispensations

A policy statement and an outline of the procedures to be followed should be published for the information of companies operating ships under the flag of the Administration. Guidance should be provided to those officials authorized by the Administration to issue dispensations. Information on action taken should be summarized in the initial report communicated to the Secretary-General in accordance with the requirements of section A-1/7.

## Section B-IX

## Guidance regarding equivalents

1. Naval certificates may continue to be accepted and certificates of service may continue to be issued to naval officers as equivalents under article IX, provided that the requirements of the Convention are met.

## Section B-X

## Guidance regarding control

(No provisions - see section B-I/4)

## Section B-XI

## Guidance regarding the promotion of technical co-operation

1. Governments should provide, or arrange to provide, in collaboration with IMO, assistance to States which have difficulty in meeting the requirements of the Convention and which request such assistance.

2. The importance of adequate training for masters and other personnel serving on board oil, chemical and liquefied gas tankers and ro-ro

passenger ships is stressed, and it is recognized that in some cases there may be limited facilities for obtaining the required experience and providing specialized training programmes, particularly in developing countries.

#### Examination database

3. Parties with maritime training academies or examination centres serving several countries and wishing to establish a database of examination questions and answers are encouraged to do so, on the basis of bilateral co-operation with a country or countries which already have such a database.

#### Availability of maritime training simulators

4. The IMO Secretariat maintains a list of maritime training simulators, as a source of information for Parties and others, on the availability of different types of simulators for training seafarers, in particular where such training facilities may not be available to them nationally.

5. Parties are urged to provide information on their national maritime training simulators to the IMO Secretariat and to update the information whenever any change or addition is made to their maritime training simulator facilities.

#### Information on technical co-operation

6. Information on technical advisory services, access to international training institutions affiliated with IMO, and information on fellowships and other technical co-operation which may be provided by or through IMO may be obtained by contacting the Secretary-General at 4 Albert Embankment, London SE1 7SR, United Kingdom.

(No guidance provided regarding articles XII to XVII.)

**Guidance regarding provisions of the Annex to the STCW  
convention**

CHAPTER I

GUIDANCE REGARDING GENERAL PROVISIONS

Section B-I/1

Guidance regarding definitions and clarifications

1. The definitions contained in article II of the Convention, and the definitions and interpretations contained in regulation I/1 of its Annex, apply equally to the terms used in parts A and B of this Code. Supplementary definitions which apply only to the provisions of this Code are contained in section A-I/1.

2. Officers with capacities covered under the provisions of chapter VII may be designated as polyvalent officer, dual purpose officer or other designations as approved by the Administration, in accordance with the terminology used in the applicable safe manning requirements.

3. Ratings qualified to serve in capacities covered under the provisions of chapter VII may be designated as polyvalent ratings or other designations as approved by the Administration, in accordance with the terminology used in the applicable safe manning requirements.

Section B-I/2

Guidance regarding certificates and endorsements

1. Where an endorsement is integrated in the format of a certificate as provided by section A-I/2, paragraph 1, the relevant information should be inserted in the certificate in the manner explained hereunder, except for the omission of the space numbered .2. Otherwise in preparing endorsements attesting the issue of a certificate, the spaces numbered .1 to .17 in the form which follows the text hereunder, should be completed as follows:

- .1 Enter the name of the issuing State.
- .2 Enter the number assigned to the certificate by the Administration.
- .3 Enter the full name of the seafarer to whom the certificate is issued. The name should be the same as that appearing in the seafarer's passport, seafarer's identity certificate and other official documents issued by the Administration.
- .4 The number or numbers of the STCW Convention regulation or regulations under which the seafarer has been found qualified should be entered here, for example:

- .4.1 II/1, if the seafarer has been found qualified to fill the capacity of officer in charge of a navigational watch,
- .4.2 III/1, if the seafarer has been found qualified to act as the officer in charge of an engineering watch in a manned engine-room, or as designated duty engineer officer in a periodically unmanned engine-room,
- .4.3 IV/2, if the seafarer has been found qualified to fill the capacity of radio operator,
- .4.4 VII/1, if the certificate is a functional certificate and the seafarer has been found qualified to perform functions specified in part A of the Code, for example, the function of marine engineering at the management level, and
- .4.5 III/1 and V/1, if found qualified to act as the officer in charge of an engineering watch in a manned engine-room, or as designated duty engineer officer in a periodically unmanned engine-room in tankers. (See limitations in paragraphs 8 and 10 below)
- .5 Enter the date of expiry of the endorsement. This date should not be later than the date of expiry, if any, of the certificate in respect of which the endorsement is issued, nor later than five years after the date of issue of the endorsement.
- .6 In this column should be entered each of the functions specified in part A of the Code, which the seafarer is qualified to perform. Functions and their associated levels of responsibility are specified in the tables of competence set out in chapters II, III and IV of part A of the Code, and are also listed for convenient reference in the introduction to part A. When reference is made under .4 above to regulations in chapters II, III or IV it is not necessary to list specific functions.
- .7 In this column should be entered the levels of responsibility at which the seafarer is qualified to perform each of the functions entered in column .6. These levels are specified in the tables of competence set out in chapters II, III and IV of part A of the Code, and are also listed for convenient reference in the introduction to part A.
- .8 A general limitation, such as the requirement to wear corrective lenses when performing duties, should be entered prominently at the top of the limitations column. Limitations applying to the functions listed in column .6 should be entered on the appropriate line against the function concerned, for example:
  - .8.1 "Not valid for service in tankers" – if not qualified under chapter V,
  - .8.2 "Not valid for service in tankers other than oil tankers" if qualified under chapter V for service only in oil tankers,
  - .8.3 "Not valid for service in ships in which steam boilers form part of the ship's machinery" – if the related knowledge has been omitted in accordance with STCW Code provisions, and

- .8.4 “Valid only on near coastal voyages” if the related knowledge has been omitted in accordance with STCW Code provisions.  
Note: Tonnage and power limitations need not be shown here if they are already indicated in the title of the certificate and in the capacity entered in column .9.
- .9 The capacity or capacities entered in column .9 should be those specified in the title to the STCW regulation or regulations concerned in the case of certificates issued under chapters II or III, or should be as specified in the applicable safe manning requirements of the Administration, as appropriate.
- .10 A general limitation such as the requirement to wear corrective lenses when performing duties should be entered prominently at the top of this limitations column also. The limitations entered in column .10 should be the same as those shown in column .8 for the functions performed in each capacity entered.
- .11 The number entered in space. 11 should be that of the certificate, so that both certificate and endorsement have the same unique number for reference and for location in the register of certificates and/or endorsements, etc.
- .12 The date of original of the endorsement should be entered here; it may be the same as, or differ from, the date of issue of the certificate in accordance with the circumstances.
- .13 The name of the official authorized to issue the endorsement should be shown here in block letters below the official’s signature.
- .14 The date of birth shown should be the date confirmed from Administration records or as otherwise verified.
- .15 The endorsement should be signed by the seafarer in the presence of an official, or may be incorporated from the seafarer’s application form duly completed and verified.
- .16 The photograph should be a standard black and white or colour passport type head and shoulders photograph, supplied in duplicate by the seafarer so that one may be kept in or associated with the register of certificates.
- .17 If the blocks for revalidation are shown as part of the endorsement form (see section A-1/2, paragraph 1), the Administration may revalidate the endorsement by completing the block after the seafarer has demonstrated continuing proficiency as required by regulation I/11.

(Official Seal)

(COUNTRY)

ENDORSEMENT ATTESTING THE ISSUE OF A CERTIFICATE UNDER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS, 1978, AS AMENDED IN 1995

The Government of ..... **.1** ..... certifies that Certificate No. .... **.2** ..... has been issued to .... **.3** ..... who has been found duly qualified in accordance with the provisions of regulation .... **.4** ..... of the above Convention, as amended, and has been found competent to perform the following functions, at the levels specified, subject to any limitations indicated until .... **.5** ..... or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf:

<b>.6</b> FUNCTION	<b>.7</b> LEVEL	<b>.8</b> LIMITATIONS APPLYING (IF ANY)

The lawful holder of this certificate may serve in the following capacities specified in the applicable safe manning requirements of the Administration.

<b>.9</b> CAPACITY	<b>.10</b> LIMITATIONS APPLYING (IF ANY)

Endorsement No. .... **.11** ..... issued on ..... **.12**.....,

(Official Seal)

..... **.13**.....  
Signature of duly authorized official

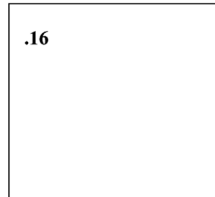
.....  
Name of duly authorized official

The original of this endorsement must be kept available in accordance with regulation I/2, paragraph 9 of the Convention while serving on a ship.

Date of birth of the holder of the certificate ..... **.14** .....

Signature of the holder of the certificate ..... **.15** .....

Photograph of the holder of the certificate



The validity of this certificate is hereby extended until .....

(Official seal) .....  
Signature of duly authorized official

Date of revalidation ..... **.17** .....

.....  
Name of duly authorized official

The validity of this endorsement is hereby extended until .....

(Official seal) .....  
Signature of duly authorized official

.....  
Name of duly authorized official

Date of revalidation ..... **.17** .....



2. An endorsement attesting the recognition of a certificate may be attached to and form part of the certificate endorsed, or may be issued as a separate document (see STCW regulation I/2, paragraph 6). All entries made in the form are required to be in Roman characters and Arabic figures (see STCW regulation I/2, paragraph 8). The spaces numbered .1 to .17 in the form which follows the text hereunder are intended to be completed as indicated in paragraph 1 above, except in respect of the following spaces:

- .2 where the number assigned by the Party which issued the certificate being recognized should be entered;
- .3 where the name entered should be the same as that appearing in the certificate being recognized;
- .4 where the name of the Party which issued the certificate being recognized should be entered;
- .9 where the capacity or capacities entered in column .9 should be selected, as appropriate, from those specified in the safe applicable manning requirements of the Administration which is recognizing the certificate;
- .11 where the number entered in space .11 should be unique to the endorsement both for reference and for location in the register of endorsements; and
- .12 where the date of original issue of the endorsement should be entered.

3. When replacing a certificate or endorsement which has been lost or destroyed, Parties should issue the replacement under a new number, to avoid confusion with the document to be replaced.

(Official Seal)

(COUNTRY)

ENDORSEMENT ATTESTING THE RECOGNITION OF A CERTIFICATE UNDER THE PROVISIONS OF THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS, 1978, AS AMENDED IN 1995

The Government of .....1..... certifies that Certificate No. ....2..... issued to ....3..... by or on behalf of the Government of .....4..... is duly recognized in accordance with the provisions of regulation I/10 of the above Convention, as amended, and the lawful holder is authorized to perform the following functions, at the levels specified, subject to any limitations indicated until .....5..... or until the date of expiry of any extension of the validity of this endorsement as may be shown overleaf:

.6 FUNCTION	.7 LEVEL	.8 LIMITATIONS APPLYING (IF ANY)

The lawful holder of this endorsement may serve in the following capacity or capacities specified in the applicable safe manning requirements of the Administration:

.9 CAPACITY	.10 LIMITATIONS APPLYING (IF ANY)

Endorsement No. ....11..... issued on .....12.....

(Official Seal)

.....13.....  
Signature of duly authorized official

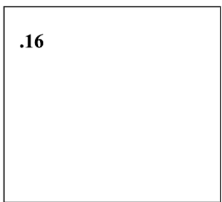
.....  
Name of duly authorized official

The original of this endorsement must be kept available in accordance with regulation I/2, paragraph 9 of the Convention while serving on a ship.

Date of birth of the holder of the certificate ..... **.14** .....

Signature of the holder of the certificate ..... **.15** .....

Photograph of the holder of the certificate



The validity of this endorsement is hereby extended until .....	
(Official seal)	..... Signature of duly authorized official
Date of revalidation ..... <b>.17</b> .....	..... Name of duly authorized official
The validity of this endorsement is hereby extended until .....	
(Official seal)	..... Signature of duly authorized official
Date of revalidation ..... <b>.17</b> .....	..... Name of duly authorized official

## Section B-I/3

## Guidance regarding near-coastal voyages

1. When a Party defines near-coastal voyages, *inter alia*, for the purposes of applying variations to the subjects listed in column 2 of the standard of competence tables contained in chapters II and III of part A of the Code, for the issue of certificates valid for service in ships entitled to fly the flag of that Party and engaged on such voyages, account should be taken of the following factors, bearing in mind the effect on the safety of all ships and on the marine environment.

- .1 the type of ship and the trade in which it is engaged;
- .2 the gross tonnage of the ship and the power in kW of the main propulsion machinery;
- .3 the nature and length of the voyages;
- .4 the maximum distance from a port of refuge;
- .5 the adequacy of the coverage and accuracy of navigational position-fixing devices;
- .6 the weather conditions normally prevailing in the near-coastal voyage area;
- .7 the provision of shipboard and coastal communication facilities for search and rescue.

2. A Party which includes voyages off another Party's coast within the limits of its near-coastal voyage definition, may enter into a bilateral agreement with the Party concerned.

3. It is not intended that ships engaged on near-coastal voyages should extend their voyages world-wide, under the excuse that they are navigating constantly within the limits of designated near-coastal voyages of neighbouring Parties.

## Section B-I/4

## Guidance regarding control procedures

## Introduction

1. The purpose of the control procedures of regulation I/4 is to enable officers duly authorized by port States to ensure that the seafarers on board have sufficient competence to ensure safe and pollution-free operation of the ship.

2. This provision is no different in principle from the need to make checks on ships' structures and equipment. Indeed, it builds on these inspections to make an appraisal of the total system of on-board safety and pollution prevention.

#### Assessment

3. By restricting assessment as indicated in section A-I/4, the subjectivity which is an unavoidable element in all control procedures, is reduced to a minimum, no more than would be evident in other types of control inspection.

4. The clear grounds given in regulation I/4, paragraph 1.3 will usually be sufficient to direct the inspector's attention to specific areas of competency, which could then be followed up by seeking evidence of training in the skills in question. If this evidence is inadequate or unconvincing, the authorized officer may ask to observe a demonstration of the relevant skill.

5. It will be a matter for the professional judgement of the inspector when on board, either following an incident as outlined in regulation I/4 or for the purposes of a routine inspection, whether the ship is operated in a manner likely to pose a danger to persons, property or the environment.

#### Section B-I/5

##### Guidance regarding national provisions

(No provisions)

#### Section B-I/6

##### Guidance regarding training and assessment

##### Qualifications of instructors and assessors

1. Each Party should ensure that instructors and assessors are appropriately qualified and experienced for the particular types and levels of training or assessment of competence of seafarers, as required under the Convention, in accordance with the guidelines in this section.

##### In-service training and assessment

2. Any person on board or ashore conducting in-service training of a seafarer intended to be used in qualifying for certification under the Convention should have received appropriate guidance in instructional techniques.

3. Any person responsible for the supervision of in-service training of a seafarer intended to be used in qualifying for certification under the

Convention should have appropriate knowledge of instructional techniques and of training methods and practice.

4. Any person, on board or ashore, conducting an in-service assessment of the competence of a seafarer intended to be used in qualifying for certification under the Convention, should have:

- .1 received appropriate guidance in assessment methods and practice; and
- .2 gained practical assessment experience under the supervision and to the satisfaction of an experienced assessor.

5. Any person responsible for the supervision of the in-service assessment of competence of a seafarer intended to be used in qualifying for certification under the Convention, should have a full understanding of the assessment system, assessment methods and practice.

#### Section B-I/7

##### Guidance regarding communication of information

##### Reports of difficulties encountered

Parties are requested to include in the reports required by regulation I/7 an indication of any relevant guidance contained in part B of this Code, the observance of which has been found to be impracticable.

#### Section B-I/8

##### Guidance regarding quality standards

1. In applying quality standards under the provisions of regulation I/8 and section A-I/8 to the administration of its certification system, each Party should take account of existing national or international models, and incorporate the following key elements:

- .1 an expressed policy regarding quality and the means by which such policy is to be implemented;
- .2 a quality system incorporating the organizational structure, responsibilities, procedures, processes and resources necessary for quality management;
- .3 the operational techniques and activities to ensure quality control;
- .4 systematic monitoring arrangements including internal quality assurance evaluations, to ensure that all defined objectives are being achieved; and
- .5 arrangements for periodic external quality evaluations as described in the following paragraphs.

2. In establishing such quality standards for the administration of their national certification system, Administration should seek to ensure that the arrangements adopted:

1. are sufficiently flexible to enable the certification system to take account of the varying needs of the industry, and that they facilitate and encourage the application of new technology;
2. cover all the administrative matters that give effect to the various provisions of the Convention, in particular regulations I/2 to I/5 and other provisions which enable the Administration to grant certificates of service and dispensations and to withdraw, cancel and suspend certificates;
3. encompass the Administration's responsibilities for approving training and assessment at all levels, from undergraduate-type courses and updating courses for certificates of competency to short courses of vocational training; and
4. incorporate arrangements for the internal quality assurance reviews under paragraph 1.4 involving a comprehensive selfstudy of the administrative procedures, at all levels, in order to measure achievement of defined objectives and to provide the basis for the independent external evaluation required under section A-I/8, paragraph 3.

Quality standards model for assessment of knowledge, understanding, skills and competence

3. The quality standards model for assessment of knowledge, understanding, skills and competence should incorporate the recommendations of this section within the general framework of either:

- .1 a national scheme for education and training accreditation or quality standards; or
- .2 an alternative quality standards model acceptable to the Organization.

4. The above quality standards model should incorporate:

- .1 a quality policy, including a commitment by the training institution or unit to the achievement of its stated aims and objectives, and to the consequential recognition by the relevant accrediting or quality standards authority;
- .2 those quality management functions that determine and implement the quality policy, relating to aspects of the work which impinge on the quality of what is provided, including provisions for determining progression within a course or programme;
- .3 quality system coverage, where appropriate, of the academic and administrative organizational structure, responsibilities, procedures, processes and the resources of staff and equipment;
- .4 the quality control functions to be applied at all levels to the teaching, training, examination and assessment activities, and to their

organization and implementation, in order to ensure their fitness for their purpose and the achievement of their defined objectives;

- .5 the internal quality assurance processes and reviews which monitor the extent to which the institution, or training unit, is achieving the objectives of the programmes it delivers, and is effectively monitoring the quality control procedures which it employs; and
- .6 the arrangements made for periodic external quality evaluations required under regulation 1/8, paragraph 2 and described in the following paragraphs, for which the outcome of the quality assurance reviews forms the basis and starting point.

5. In establishing quality standards for education, training and assessment programmes, the organizations responsible for implementing these programmes should take account of the following:

- .1 Where provisions exist for established national accreditation, or education quality standards, such provisions should be utilized for courses incorporating the knowledge and understanding requirements of the Convention. The quality standards should be applied to both management and operational levels of the activity, and should take account of how it is managed, organized, undertaken and evaluated, in order to ensure that the identified goals are achieved.
- .2 Where acquisition of a particular skill or accomplishment of a designated task is the primary objective, the quality standards should take account of whether real or simulated equipment is utilized for this purpose, and of the appropriateness of the qualifications and experience of the assessors, in order to ensure achievement of the set standards.
- .3 The internal quality assurance evaluations should involve a comprehensive self-study of the programme, at all levels, to monitor achievement of defined objectives through the application of quality standards. These quality assurance reviews should address the planning, design, presentation and evaluation of programmes as well as the teaching, learning and communication activities. The outcome provides the basis for the independent evaluation required under section A-1/8, paragraph 3.

#### The independent evaluation

6. Each independent evaluation should include a systematic and independent examination of all quality activities, but should not evaluate the validity of the defined objectives. The evaluation team should:

- .1 carry out the evaluation in accordance with documented procedures;
- .2 ensure that the results of each evaluation are documented and brought to the attention of those responsible for the area evaluated; and



.3 check that timely action is taken to correct any deficiencies.

7. The purpose of the evaluation is to provide an independent assessment of the effectiveness of the quality standard arrangements at all levels. In the case of an education or training establishment a recognized academic accreditation or quality standards body or Government agency should be used. The evaluation team should be provided with sufficient advance information to give an overview of the tasks in hand. In the case of a major training institution or programme, the following items are indicative of the information to be provided:

- .1 the mission statement of the institution;
- .2 details of academic and training strategies in use;
- .3 an organization chart and information on the composition of committees and advisory bodies;
- .4 staff and student information;
- .5 a description of training facilities and equipment; and
- .6 an outline of the policies and procedures on:
  - .6.1 student admission,
  - .6.2 the development of new courses and review of existing courses,
  - .6.3 the examination system, including appeals and resits,
  - .6.4 staff, recruitment, training, development, appraisal and promotion,
  - .6.5 feedback from students and from industry, and
  - .6.6 staff involvement in research and development.

#### The report

8. Before submitting a final report, the evaluation team should forward an interim report to the management seeking their comments on their findings. Upon receiving their comments, the evaluators should submit their final report, which should:

- .1 include brief background information about the institution or training programme;
- .2 be full, fair and accurate;
- .3 highlight the strengths and weaknesses of the institution;
- .4 describe the evaluation procedure followed;
- .5 cover the various elements identified in paragraph 4;
- .6 indicate the extent of compliance or non-compliance with the requirements of the Convention and the effectiveness of the quality standards in ensuring achievement of defined aims and objectives; and
- .7 spell out clearly the areas found deficient, offer suggestions for improvement and provide any other comments the evaluators consider relevant.

## Section B-1/9

Guidance regarding medical standards – Issue and registration of certificates

## Medical examination and certification

1. The standards developed pursuant to regulation 1/9, paragraph 1, should take into account the views of recognized medical practitioners experienced in medicine as applied in the maritime environment.

2. The medical standards may differentiate between those persons seeking to start a career at sea and those seafarers already serving at sea. In the former case, for example, it might be appropriate to designate higher standards in certain areas, while in the latter case some reduction may be made for age.

3. The standards should, so far as possible, define objective criteria with regard to fitness for sea service, taking into account access to medical facilities and medical expertise on board ship. They should, in particular, specify the conditions under which seafarers suffering from potentially life-threatening medical conditions controlled by medication may be allowed to continue to serve at sea.

4. The medical standards should also identify particular medical conditions, such as colour blindness, which might disqualify seafarers from holding particular positions on board ship.

5. Medical examinations and certification of seafarers under the standards should be conducted by one or more medical practitioners recognized by the Party. A list of medical practitioners so recognized should be made available to other Parties and to companies on request.

6. In the absence of mandatory international eyesight standards for seafarers, Parties should regard the minimum in-service eyesight standards set out in paragraphs 7 to 11 and table B-1/9 hereunder as the minimum for the safe operation of ships, and report on maritime casualties where poor eyesight has contributed to such incidents.

7. Each Administration has the discretionary authority to grant a variance or waiver of any of the standards set out in table B-1/9 hereunder, based on an assessment of a medical evaluation and any other relevant information concerning an individual's adjustment to the condition and proven ability to satisfactorily perform assigned shipboard functions. However, if the aided distant visual acuity of either eye is less than the standard, the aided distant visual acuity in the better eye should be at

least 0.2 higher than the standard indicated in the table. The unaided distant visual acuity in the better eye should be at least 0.1.

8. Persons requiring the use of spectacles or contact lenses to perform duties should have a spare pair conveniently available on board the ship. Any need to wear visual aids to meet the required standards should be recorded on each certificate and endorsement issued.

9. Eyes of seafarers should be free of disease. Any permanent or progressing debilitating pathology without recovery should be cause for a determination of unfitness.

10. All tests need to determine the visual fitness of a seafarer must be reliable and performed by a competent person recognized by the Administration.

1. Notwithstanding these provisions, the Administration may require higher standards than those given in table B-1/9 below.

#### Issue and registration of certificates

#### Approval of seagoing service

12. In approving seagoing service required by the Convention, Parties should ensure that the service concerned is relevant to the qualification being applied for, bearing in mind that, apart from the initial familiarization with service in seagoing ships, the purpose of such service is to allow the seafarer to be instructed in and to practise, under appropriate supervision, those safe and proper seagoing practices, procedures and routines which are relevant to the qualification applied for.

#### Approval of training courses

13. In approving training courses and programmes, Parties should take into account that the various IMO Model Courses identified by footnotes in Part A of this Code can assist in the preparation of such courses and programmes and ensure that the detailed learning objectives recommended therein are suitably covered.

#### Electronic access to registers

14. Where the register or registers of certificates, endorsements and other documents issued by or on behalf of a Party are maintained by electronic means, provision should be made to allow controlled electronic access to such register or registers to allow Administrations and companies to confirm:

- .1 the name of the seafarer to whom a certificate, endorsement or other qualification was issued, its relevant number, date of issue, and date of expiry;
- .2 the capacity in which the holder may serve and any limitations attaching thereto; and
- .3 the functions the holder may perform, the levels authorized and any limitations attaching thereto.

MINIMUM IN-SERVICE EYESIGHT STANDARD  
Table B-1/9

STCW Con- servation Regulation	Category of seafarer	Distance one eye	Vision* other eye	Near/immediate vision Both eyes together Aided or unaided	Colour vision	Visual fields	Night blindness	Diplopia (double vision)
I/1 III/1 III/2 III/3 III/4	All engineer officers and ratings forming part of an engineroom watch  Aided: Unaided:	0.4 0.1	0.4 0.1	Vision required to read instruments in close proximity, to operate equipment and to identify systems/components as necessary		Sufficient visual fields	Vision required to perform all necessary functions in darkness without compromise	No significant condition evident
I/1 IV/2	Radio officers and electrical/electronic officers:  Aided: Unaided:	0.4 0.1	0.4 0.4	Vision required to read instruments in close proximity, to operate equipment, and to identify systems/components as necessary		Sufficient visual fields	Vision required to perform all necessary functions in darkness without compromise	No significant condition evident

\* Note: Values given in Snellen decimal notation

\*\* Note: A value of at least 0.7 in one eye is recommended to reduce the risk of undetected underlying eye disease

## Section B-I/10

Guidance regarding the recognition of certificates

(No provisions)

## Section B-I/11

Guidance regarding the revalidation of certificates

The courses required by regulation I/11 should include relevant changes in marine technology and recommendations concerning the safety of life at sea and the protection of the marine environment.

## Section B-I/12

Guidance regarding the use of simulators

1. When simulators are being used for training or assessment of competency, the following guidelines should be taken into consideration in conducting any such training or assessment.

Training and assessment in radar observation and plotting

2. Training and assessment in radar observation and plotting should:  
.1 incorporate the use of radar simulation equipment; and  
.2 conform to standards not inferior to those given in paragraphs 3 to 17 below.

3. Demonstrations of and practice in radar observation should be undertaken where appropriate on live marine radar equipment, including the use of simulators. Plotting exercises should preferably be undertaken in real time, in order to increase trainees' awareness of the hazards of the improper use of radar data and improve their plotting techniques to a standard of radar plotting commensurate with that necessary for the safe execution of collision avoidance manoeuvring under actual seagoing conditions.

Theory factors affecting performance and accuracy

4. An elementary understanding should be attained of the principles of radar, together with a full practical knowledge of:  
.1 range and bearing measurement, characteristics of the radar set which determine the quality of the radar display, radar antennae, polar diagrams, the effects of power radiated in directions outside the main beam, a non-technical description of the radar system including variations in the features encountered in different types

- of radar set, performance monitors and equipment factors which affect maximum and minimum detection ranges and accuracy of information;
- .2 the current marine radar performance specification adopted by the Organization;
- .3 the effects of the siting of the radar antenna, shadow sectors and arcs of reduced sensitivity, false echoes, effects of antenna height on detection ranges and of siting radar units and storing spares near magnetic compasses, including magnetic safe distance; and
- .4 radiation hazards and safety precautions to be taken in the vicinity of antenna and open wave guides.

Detection of misrepresentation of information, including false echoes and sea returns

5. A knowledge of the limitations to target detection is essential, to enable the observer to estimate the dangers of failure to detect targets. The following factors should be emphasized:

- .1 performance standard of the equipment;
- .2 brilliance, gain and video processor control settings;
- .3 radar horizon;
- .4 size, shape, aspect and composition of targets;
- .5 effects of the motion of the ship in a seaway;
- .6 propagation conditions;
- .7 meteorological conditions; sea clutter and rain clutter;
- .8 anti-clutter control settings;
- .9 shadow sectors; and
- .10 radar-to-radar interference.

6. A knowledge should be attained of factors which might lead to faulty interpretation, including false echoes, effects of nearby pylons and large structures, effects of power lines crossing rivers and estuaries, echoes from distant targets occurring on second or later traces.

7. A knowledge should be attained of aids to interpretation, including corner reflectors and radar beacons; detection and recognition of land targets; the effects of topographical features; effects of pulse length and beam width; radar conspicuous and inconspicuous targets; factors which affect the echo strength from targets.

#### PRACTICE

Setting up and maintaining displays

- 8. A knowledge should be attained of:

1. the various types of radar display mode; unstabilized ship's-head-up relative motion; ship's-head-up-course-up and north-up stabilized motion and true motion;
2. the effects or errors on the accuracy of information displayed; effects of transmitting compass errors on stabilized and true motion displays; effects of transmitting log errors on a true motion display; and the effects of inaccurate manual speed settings on a true motion display;
3. methods of detecting inaccurate speed settings on true motion controls; the effects of receiver noise limiting ability to display weak echo returns, and the effects of saturation by receiver noise, etc; the adjustment of operational controls; criteria which indicate optimum points of adjustment; the importance of proper adjustment sequence, and the effects of maladjusted controls; the detection of maladjustments and corrections of:
  - 3.1 controls affecting detection ranges, and
  - 3.2 controls affecting accuracy;
4. the dangers of using radar equipment with maladjusted controls; and
5. the need for frequent regular checking of performance, and the relationship of the performance indicator to the range performance of the radar set.

#### Range and bearing

9. A knowledge should be attained of:
  1. the methods of measuring ranges; fixed range markers and variable range markers;
  2. the accuracy of each method and the relative accuracy of the different methods;
  3. how range data are displayed; ranges at stated intervals, digital counter and graduated scale;
  4. the methods of measuring bearings; rotatable cursor on transparent disc covering the display, electronic bearing cursor and other methods;
  5. bearing accuracy and inaccuracies caused by: parallax, heading marker displacement, centre maladjustment;
  6. how bearing data are displayed; graduated scale and digital counter; and
  7. the need for regular checking of the accuracy of ranges and bearings, methods of checking for inaccuracies and correcting or allowing for inaccuracies.

#### Plotting techniques and relative motion concepts

10. Practice should be provided in manual plotting techniques, including the use of reflection plotters, with the objective of establishing a



thorough understanding of the interrelated motion between own ship and other ships, including the effects of manoeuvring to avoid collision. At the preliminary stages of this training, simple plotting exercises should be designed to establish a sound appreciation of plotting geometry and relative motion concepts. The degree of complexity of exercises should increase throughout the training course until the trainee has mastered all aspects of the subject. Competence can best be enhanced by exposing the trainee to real-time exercises performed on a simulator or using other effective means.

#### Identification of critical echoes

11. A thorough understanding should be attained of:
  - .1 position fixing by radar from land targets and sea marks;
  - .2 the accuracy of position fixing by ranges and by bearings;
  - .3 the importance of cross-checking the accuracy of radar against other navigational aids; and
  - .4 the value of recording ranges and bearings at frequent, regular intervals when using radar as an aid to collision avoidance.

#### Course and speed of other ships

12. A thorough understanding should be attained of:
  - .1 the different methods by which course and speed of other ships can be obtained from recorded ranges and bearings including:
    - .1.1 the unstabilized relative plot,
    - .1.2 the stabilized relative plot, and
    - .1.3 the true plot; and
  - .2 the relationship between visual and radar observations, including detail and the accuracy of estimates of course and speed of other ships, and the detection of changes in movements of other ships.

#### Time and distance of closest approach of crossing, meeting or overtaking ships

13. A thorough understanding should be attained of:
  - .1 the use of recorded data to obtain:
    - .1.1 measurement of closest approach distance and bearing, and
    - .1.2 time to closest approach, and
  - .2 the importance of frequent, regular observations.

#### Detecting course and speed changes of other ships

14. A thorough understanding should be attained of:
  - .1 the effects of changes of course and/or speed by other ships on their tracks across the display;

- .2 the delay between change of course or speed and detection of that change; and
- .3 the hazards of small changes as compared with substantial changes of course or speed in relation to rate and accuracy of detection.

Effects of changes in own ship's course or speed or both

15. A thorough understanding of the effects on a relative motion display of own ship's movements, and the effects of other ship's movements and the advantages of compass stabilization of a relative display.

16. In respect of true motion displays, a thorough understanding should be attained of:

- 1. the effects of inaccuracies of:
  - .1.1 speed and course settings, and
  - .1.2 of compass stabilization data driving a stabilized relative motion display;
- 2. the effects of changes in course or speed or both by own ship on tracks of other ships on the display; and
- 3. the relationship of speed to frequency of observations.

Application of the International Regulations for Preventing Collisions at Sea

17. A thorough understanding should be attained of the relationship of the International Regulations for Preventing Collisions at Sea to the use of radar, including:

- .1 action to avoid collision, danger of assumptions made on inadequate information and the hazards of small alterations of course or speed;
- .2 the advantages of safe speed when using radar to avoid collision;
- .3 the relationship of speed to closest approach distance and time and to the manoeuvring characteristics of various types of ships;
- .4 the importance of radar observation reports and radar reporting procedures being well defined;
- .5 the use of radar in clear weather, to obtain an appreciation of its capabilities and limitations, compare radar and visual observations and obtain an assessment of the relative accuracy of information;
- .6 the need for early use of radar in clear weather at night and when there are indications that visibility may deteriorate;
- .7 comparison of features displayed by radar with charted features; and
- .8 comparison of the effects of differences between range scales.

Training and assessment in the operational use of automatic radar plotting aids (ARPA)

18. Training and assessment in the operational use of automatic radar plotting aids (ARPA) should:

- .1 require prior completion of the training in radar observation and plotting or combine that training with the training given in paragraphs 19 to 36 below;
- .2 incorporate the use of ARPA simulation equipment; and
- .3 conform to standards not inferior to those given in paragraphs 19 to 36 below.

19. Where ARPA training is provided as part of the general training under the 1978 STCW Convention, masters, chief mates and officers in charge of a navigational watch should understand the factors involved in decision-making based on the information supplied by ARPA in association with other navigational data inputs, having a similar appreciation of the operational aspects and of system errors of modern electronic navigational systems. This training should be progressive in nature, commensurate with the responsibilities of the individual and the certificates issued by Parties under the 1978 STCW Convention.

Theory and Demonstration

Possible risks of over-reliance on ARPA

20. Appreciation that ARPA is only a navigational aid and:

- .1 that its limitations, including those of its sensors, make overreliance on ARPA dangerous, in particular for keeping a lookout; and
- .2 the need to observe at all times the Principles to be observed in keeping a navigational watch and the Guidance on keeping a navigational watch.

Principal types of ARPA systems and their display characteristics

21. Knowledge of the principal types of ARPA systems in use, their various display characteristics and an understanding of when to use ground or sea stabilized modes and north-up, course-up or head-up presentations.

IMO performance standards for ARPA

22. An appreciation of the IMO performance standards for ARPA, in particular the standards relating to accuracy.

Factors affecting system performance and accuracy

23. Knowledge of ARPA sensor input performance parameters – radar, compass and speed inputs and the effects of sensor malfunction on the accuracy of ARPA data.

24. Knowledge of:

- .1 the effects of the limitations of radar range and bearing discrimination and accuracy and the limitations of compass and speed input accuracies on the accuracy of ARPA data; and
- .2 factors which influence vector accuracy.

Tracking capabilities and limitations

25. Knowledge of:

- .1 the criteria for the selection of targets by automatic acquisition;
- .2 the factors leading to the correct choice of targets for manual acquisition;
- .3 the effects on tracking of “lost” targets and target fading;
- .4 the circumstances causing “target swap” and its effects on displayed data.

Processing delays

26. Knowledge of the delays inherent in the display of processed ARPA information, particularly on acquisition and re-acquisition or when a tracked target manoeuvres.

Operational warnings, their benefits and limitations

27. Appreciation of the uses, benefits and limitations of ARPA operational warnings and their correct setting, where applicable, to avoid spurious interference.

System operational tests

28. Knowledge of:

- .1 methods of testing for malfunctions of ARPA systems including functional self-testing; and
- .2 precautions to be taken after a malfunction occurs.

Manual and automatic acquisition of targets and their respective limitations

29. Knowledge of the limits imposed on both types of acquisition in multi-target scenarios, and the effects on acquisition of target fading and target swap.

True and relative vectors and typical graphic representation of target information and danger areas

30. Thorough knowledge of true and relative vectors; derivation of targets' true courses and speeds including:
- .1 threat assessment, derivation of predicted closest point of approach and predicted time to closest point of approach from forward extrapolation of vectors, the use of graphic representation of danger areas;
  - .2 the effects of alterations of course and/or speed of own ship and/or targets on predicted closest point of approach and predicted time to closest point of approach and danger areas;
  - .3 the effects of incorrect vectors and danger areas; and
  - .4 the benefit of switching between true and relative vectors.

Information on past position of targets being tracked

31. Knowledge of the derivation of past positions of targets being tracked, recognition of historic data as a means of indicating recent manoeuvring of targets and as a method of checking the validity of the ARPA's tracking.

Practice

Setting up and maintaining displays

32. Ability to demonstrate:
- .1 the correct starting procedure to obtain the optimum display of ARPA information;
  - .2 the selection of display presentation; stabilized relative motion displays and true motion displays;
  - .3 the correct adjustment of all variable radar display controls for optimum display of data;
  - .4 the selection, as appropriate, of required speed input to ARPA;
  - .5 the selection of ARPA plotting controls, manual/automatic acquisition, vector/graphic display of data;
  - .6 the selection of the time scale of vectors/graphics;
  - .7 the use of exclusion areas when automatic acquisition is employed by ARPA; and
  - .8 performance checks of radar, compass, speed input sensors and ARPA.

System operational tests

33. Ability to perform system checks and determine data accuracy of ARPA, including the trial manoeuvre facility, by checking against basic radar plot.

#### Obtaining information from the ARPA display

34. Demonstrate the ability to obtain information in both relative and true motion modes of display, including:
- .1 the identification of critical echoes;
  - .2 the speed and direction of target's relative movement;
  - .3 the time to, and predicted range at, target's closest point of approach;
  - .4 the courses and speeds of targets;
  - .5 detecting course and speed changes of targets and the limitations of such information;
  - .6 the effect of changes in own ship's course or speed or both; and
  - .7 the operation of the trial manoeuvre facility.

#### Application of the International Regulations for Preventing Collisions at Sea

35. Analysis of potential collision situations from displayed information, determination and execution of action to avoid close-quarters situations in accordance with the International Regulations for Preventing Collisions at Sea in force.

#### Recommended performance standards for non-mandatory types of simulation

36. Performance standards for non-mandatory simulation equipment used for training and/or assessment of competence or demonstration of skills are set out hereunder. Such forms of simulations include, but are not limited to, the following types:
- .1 navigation and watchkeeping;
  - .2 shiphandling and manoeuvring;
  - .3 cargo handling and stowage;
  - .4 radiocommunications; and
  - .5 main and auxiliary machinery operation

#### Navigation and watchkeeping simulation

37. Navigation and watchkeeping simulation equipment should, in addition to meeting all applicable performance standards set out in section A-I/12, be capable of simulating navigational equipment and bridge operational controls which meet all applicable performance standards adopted by the Organization, incorporate facilities to generate soundings and:
- .1 create a real-time operating environment, including navigation control and communications instruments and equipment appropriate to the navigation and watchkeeping tasks to be carried out and the manoeuvring skills to be assessed;

- .2 provide a realistic visual scenario by day or by night, including variable visibility, or by night only as seen from the bridge, with a minimum horizontal field of view available to the trainee in viewing sectors appropriate to the navigation and watchkeeping tasks and objectives; and
- .3 realistically simulate "own ship" dynamics in open water conditions including the effects of weather, tidal stream, currents and interaction with other ships.

#### Ship handling and manoeuvring simulation

38. In addition to meeting the performance standards set out in paragraph 37, ship handling simulation equipment should:

- .1 provide a realistic visual scenario as seen from the bridge by day and by night with variable visibility throughout a minimum horizontal field of view available to the trainee in viewing sectors appropriate to the shiphandling and manoeuvring training tasks and objectives; and
- .2 realistically simulate "own ship" dynamics in restricted waterways, including shallow water and bank effects.

39. Manned scale models are used to provide shiphandling and manoeuvring simulation, in addition to the performance standards set out in paragraphs 37.3 and 38.2, such equipment should:

- .1 incorporate scaling factors which present accurately the dimensions, areas, volume and displacement, speed, time and rate of turn of a real ship; and
- .2 incorporate controls for the rudder and engines to the correct time scale.

#### Cargo handling and stowage simulation

40. Cargo handling simulation equipment should be capable of simulating cargo handling and control equipment which meets all applicable performance standards adopted by the Organization, and incorporate facilities to:

- .1 create an effective operational environment, including a cargo-control station with such instrumentation as may be appropriate to the particular type of cargo system modelled;
- .2 model loading and unloading functions and stability and stress data appropriate to the cargo handling tasks to be carried out and the skills to be assessed; and
- .3 simulate loading, unloading, ballasting and deballasting operations and appropriate associated calculations for stability, trim, list, longitudinal strength, torsional stress and damage stability.

#### GMDSS communication simulation

41. GMDSS communication simulation equipment should be capable of simulating GMDSS communication equipment which meets all applicable performance standards adopted by the Organization, and incorporate facilities to:

- .1 simulate the operation of VHF, VHF-DSC, NAVTEX, EPIRB and watch receiver equipment as required for the Restricted Operators Certificate (ROC);
- .2 simulate the operation of INMARSAT-A, B and C ship earth stations, MF/HF NBDP, MF/HF-DSC, VHF, VHF-DSC, NAVTEX, EPIRB and watch receiver equipment as required for the General Operator's Certificate (GOC);
- .3 provide voice communication with background noise;
- .4 provide a printed text communication facility; and
- .5 create a real-time operating environment, consisting of an integrated system, incorporating at least one instructor/assessor station and at least two GMDSS ship or shore stations.

#### Main and auxiliary machinery operation simulation

42. Engine-room simulation equipment should be capable of simulating a main and auxiliary machinery system and incorporate facilities to:

- .1 create a real-time environment for seagoing and harbour operations with communication devices and simulation of appropriate main and auxiliary propulsion machinery equipment and control panels;
- .2 simulate relevant sub-systems that should include but not be restricted to boiler, steering gear, electrical power general and distribution systems including emergency power supplies and fuel, cooling water, refrigeration, bilge and ballast systems;
- .3 monitor and evaluate engine performance and remote sensing systems;
- .4 simulate machinery malfunctions;
- .5 allow for the variable external conditions to be changed so as to influence the simulated operations; weather, ship's draught, sea water and air temperatures;
- .6 allow for instructor controlled external conditions to be changed: deck steam, accommodation steam, deck air, ice conditions, deck cranes, heavy power, bow thrust, ship load;
- .7 allow for instructor controlled simulator dynamics to be changed: emergency run, process responses, ship responses; and
- .8 provide a facility to isolate certain processes, such as speed, electrical system, diesel oil system, lubricating oil system, heavy oil system, seawater system, steam system, exhaust boiler and turbo generator for performing specific training tasks.



## Section B-I/13

Guidance regarding the conduct of trials

(No provisions)

## Section B-I/14

Guidance regarding responsibilities of companies and recommended responsibilities of masters and crew members

## Companies

1. Companies should provide ship specific introductory programmes aimed at assisting newly employed seafarers to familiarize themselves with all procedures and equipment relating to their areas of responsibility.

## Master

2. The master should take all steps necessary to implement any company instructions issued in accordance with section A-I/14. Such steps should include:

- .1 identifying all seafarers who are newly employed on board the ship before they are assigned to any duties;
- .2 providing the opportunity for all newly arrived seafarers to:
  - .2.1 visit the spaces in which their primary duties will be performed,
  - .2.2 get acquainted with the location, controls and display features of equipment they will be operating or using,
  - .2.3 activate the equipment when possible and perform functions using the controls on the equipment, and
  - .2.4 observe and ask questions of someone who is already familiar with the equipment, procedures and other arrangements, and who can communicate information in a language which the seafarer understands; and
- .3 providing for a suitable period of supervision when there is any doubt that a newly employed seafarer is familiar with the ship-board equipment, operating procedures and other arrangements needed for the proper performance of his or her duties.

## Crew members

3. Seafarers who are newly assigned to a ship should take full advantage of every opportunity provided to become familiar with the ship-board equipment, operating procedures and other arrangements needed for the proper performance of their duties. Immediately upon arriving on board for the first time, each seafarer has the responsibility to become

acquainted with the ship's working environment, particularly with respect to new or unfamiliar equipment, procedures or arrangements.

4. Seafarers who do not promptly attain the level of familiarity required for performing their duties have the obligation to bring this fact to the attention of their supervisor or to the attention of the crew member designated in accordance with section A-I/14, paragraph 2.2, and to identify any equipment, procedure or arrangement which remains unfamiliar.

Section B-I/15

Guidance regarding transitional provisions

(No provisions)

## CHAPTER II

### GUIDANCE REGARDING THE MASTER AND THE DECK DEPARTMENT

Section B-II/1

Guidance regarding the certification of officers in charge of a navigational watch on ships of 500 gross tonnage or more

Training

1. Every candidate for certification as officer in charge of a navigational watch should have completed a planned and structured programme of training designed to assist a prospective officer to achieve the standard of competence in accordance with table A-II/1.

2. The structure of the programme of training should be set out in a training plan which clearly expresses for all parties involved the objectives of each stage of training on board and ashore. It is important that the prospective officer, tutors, ships' staff and company personnel are clear about the competences which are to be achieved at the end of the programme and how they are to be achieved through a combination of education, training and practical experience on board and ashore.

3. The mandatory periods of seagoing service are of prime importance in learning the job of being a ships' officer and in achieving the overall standard of competence required. Properly planned and structured, the periods of seagoing service will enable prospective officers to acquire and practise skills and will offer opportunities for competences achieved to be demonstrated and assessed.

4. Where the seagoing service forms part of an approved training programme, the following principles should be observed:

.1 The programme of on-board training should be an integral part of the overall training plan.

.2 The programme of on-board training should be managed and co-ordinated by the company which manages the ship on which the seagoing service is to be performed.

.3 The prospective officer should be provided with a training record book to enable a comprehensive record of practical training and experience at sea to be maintained. The training record book should be laid out in such a way that it can provide detailed information about the tasks and duties which should be undertaken and the progress towards their completion. Duly completed, the record book will provide unique evidence that a structured programme of on-board training has been completed which can be taken into account in the process of evaluating competence for the issue of a certificate.

.4 At all times, the prospective officer should be aware of two identifiable individuals who are immediately responsible for the management of the programme of on-board training. The first of these is a qualified seagoing officer, referred to as the shipboard training officer who, under the authority of the master, should organise and supervise the programme of training for the duration of each voyage. The second should be a person nominated by the company, referred to as the company training officer, who should have an overall responsibility for the training programme and for co-ordination with colleges and training institutions.

.5 The company should ensure that appropriate periods are set aside for completion of the programme of on-board training within the normal operational requirement of the ship.

#### ROLES AND RESPONSIBILITIES

5. The following section summarises the roles and responsibilities of those individuals involved in organizing and conducting on-board training:

.1 The company training officer should be responsible for:

.1.1 overall administration of the programme of training,

.1.2 monitoring the progress of the prospective officer throughout, and

.1.3 issuing guidance as required and ensuring that all concerned with the training programme play their parts.

.2 The shipboard training officer should be responsible for:

.2.1 organizing the programme of practical training at sea,

.2.2 ensuring in a supervisory capacity that the training record book is properly maintained and that all other requirements are fulfilled, and

.2.3 making sure, so far as is practicable, that the time the prospective officer spends on board is as useful as possible in terms of

training and experience, and is consistent with the objectives of the training programme, the progress of training and the operational constraints of the ship.

- .3 The master's responsibilities should be to:
  - .3.1 provide the link between the shipboard training officer and the company training officer ashore,
  - .3.2 fulfil the role of continuity if the shipboard training officer is relieved during the voyage, and
  - .3.3 ensure that all concerned are effectively carrying out the on-board training programme.
- .4 The prospective officers' responsibilities should be to:
  - .4.1 follow diligently the programme of training as laid down,
  - .4.2 make the most of the opportunities presented, be they in or outside working hours, and
  - .4.3 keep the training record book up to date and ensure that it is available at all times for scrutiny.

#### INDUCTION

6. At the beginning of the programme and at the start of each voyage on a different ship, prospective officers should be given full information and guidance as to what is expected to them and how the training programme is to be organized. Induction presents the opportunity to brief prospective officers about important aspects of the tasks they will be undertaking, with particular regard to safe working practices and protection of the marine environment.

#### SHIPBOARD PROGRAMME OF TRAINING

7. The training record book should contain, amongst other things, a number of training tasks or duties which should be undertaken as part of the approved programme of on-board training. Such tasks and duties should relate to the least the following areas:

- .1 steering systems;
- .2 general seamanship;
- .3 mooring, anchoring and port operations;
- .4 life-saving and fire-fighting appliances;
- .5 systems and equipment;
- .6 cargo work;
- .7 bridge work and watchkeeping; and
- .8 engine-room familiarization.

8. It is extremely important that the prospective officer is given adequate opportunity for supervised bridge watchkeeping experience, particularly in the later stages of the on-board training programme.

9. The performance of the prospective officers in each of the tasks and duties itemized in the training record book should be initialled by a qualified officer when, in the opinion of the officer concerned, a prospective officer has achieved a satisfactory standard of proficiency. It is important to appreciate that a prospective officer may need to demonstrate ability on several occasions before a qualified officer is confident that a satisfactory standard has been achieved.

#### MONITORING AND REVIEWING

10. Guidance and reviewing are essential to ensure that prospective officers are fully aware of the progress they are making and to enable them to join in decisions about their future programme. To be effective, reviews should be linked to information gained through the training record book and other sources as appropriate. The training record book should be scrutinized and endorsed formally by the master and the shipboard training officer at the beginning, during and at the end of each voyage. The training record book should also be examined and endorsed by the company training officer between voyages.

#### ASSESSMENT OF ABILITIES AND SKILLS IN NAVIGATIONAL WATCHKEEPING

11. A candidate for certification who is required to have received special training and assessment of abilities and skills in navigational watchkeeping duties should be required to provide evidence, through demonstration either on a simulator or on board ship as part of an approved programme of shipboard training, that the skills and ability to perform as officer in charge of a navigational watch in at least the following areas have been acquired, namely to:

- .1 prepare for and conduct a passage, including:
  - .1.1 interpreting and applying information obtained from charts,
  - .1.2 fixing position in coastal waters,
  - .1.3 applying basic information obtained from tide tables and other navigational publications,
  - .1.4 checking and operating bridge equipment,
  - .1.5 checking magnetic and gyro-compasses,
  - .1.6 assessing available meteorological information,
  - .1.7 using celestial bodies to fix position,
  - .1.8 determining the compass error by celestial and terrestrial means, and
  - .1.9 performing calculations for sailings of up to 24 hours;
- .2 operate and apply information obtained from electronic navigation systems;
- .3 operate radar and ARPA and apply radar information for navigation and collision avoidance;

- .4 operate propulsion and steering systems to control heading and speed;
  - .5 implement navigational watch routines and procedures;
  - .6 implement the manoeuvres required for rescue of persons overboard;
  - .7 initiate action to be taken in the event of an imminent emergency situation (e.g. fire, collision, stranding) and action in the immediate aftermath of an emergency;
  - .8 initiate action to be taken in event of malfunction or failure of major items of equipment or plant (e.g. steering gear, power, navigation systems);
  - .9 conduct radiocommunications and visual and sound signalling in normal and emergency situations; and
  - .10 monitor and operate safety and alarm systems including internal communications.
12. Assessment of abilities and skills in navigational watchkeeping should:
- .1 be made against the criteria for evaluating competence for the function of navigation set out in table A-II/1;
  - .2 ensure that the candidate performs navigational watchkeeping duties in accordance with the Principles to be observed in keeping a safe navigational watch (section A-VIII/2, part 3-1) and the Guidance on keeping a navigational watch (section B-VIII/2, part 3-1).

#### EVALUATION OF COMPETENCE

13. The standard of competence to be achieved for certification as officer in charge of a navigational watch is set out in table A-II/1. The standard specifies the knowledge and skill required and the application of that knowledge and skill to the standard of performance required on board ship.

14. Scope of knowledge is implicit in the concept of competence. Assessment of competence should, therefore, encompass more than the immediate technical requirements of the job, the skills and tasks to be performed, and should reflect the broader aspects needed to meet the full expectations of competent performance as a ships' officer. This includes relevant knowledge, theory, principles and cognitive skills which, to varying degrees, underpin all levels of competence. It also encompasses proficiency in what to do, how and when to do it, and why it should be done. Properly applied, this will help to ensure that a candidate can:

- .1 work competently in different ships and across a range of circumstances;
- .2 anticipate, prepare for and deal with contingencies; and
- .3 adapt to new and changing requirements.

15. The criteria for evaluating competence (column 4 of table A-II/1) identify, primarily in outcome terms, the essential aspects of competent performance. They are expressed so that assessment of a candidate's performance can be made against them and should be adequately documented in the training record book.

16. Evaluation of competence is the process of:

- .1 collecting sufficient valid and reliable evidence about the candidate's knowledge, understanding and proficiency to accomplish the tasks, duties and responsibilities listed in column 1 of table A-II/1; and
- .2 judging that evidence against the criteria specified in the standard.

17. The arrangements for evaluating competence should be designed to take account of different methods of assessment which can provide different types of evidence about candidates' competence, e.g.:

- .1 direct observation of work activities (including seagoing service);
- .2 skills/proficiency/competency tests;
- .3 projects and assignments;
- .4 evidence from previous experience; and
- .5 written, oral and computer-based questioning techniques.

18. One or more of the first four methods listed should almost invariably be used to provide evidence of ability, in addition to appropriate questioning techniques to provide evidence of supporting knowledge and understanding.

#### Section B-II/2

Guidance regarding the certification of masters and chief officers on ships of 500 gross tonnage or more

(See section B-II/1 for guidance).

#### Section B-II/3

Guidance regarding the certification of officers in charge of a navigational watch of masters on ships of less than 500 gross tonnage

(See section B-II/1 for guidance).

## Section B-II/4

Guidance regarding ratings forming part of a navigational watch

In addition to the requirements stated in table A-II/4 of this Code, Parties are encouraged for safety reasons to include the following subjects in the training of ratings forming part of a navigational watch:

- .1 a basic knowledge of the International Regulations for Preventing Collisions at Sea;
- .2 rigging a pilot ladder;
- .3 an understanding of wheel orders given by pilots in English;
- .4 training for proficiency in survival craft and rescue boats;
- .5 support duties when berthing and unberthing and during towing operations;
- .6 a basic knowledge of anchoring;
- .7 a basic knowledge of dangerous cargoes;
- .8 a basic knowledge of stowage procedures and arrangements for bringing stores on board; and
- .9 a basic knowledge of deck maintenance and tools used on deck.

## CHAPTER III

## GUIDANCE REGARDING THE ENGINE DEPARTMENT

## Section B-III/1

Guidance regarding the certification of officers in charge of an engineering watch in a manned engine-room or as designated duty engineers in a periodically unmanned engine-room

1. In table A-III/1, column 1, top block, the tools referred to should include hand tools, common measuring equipment, centre lathes, drilling machines, welding equipment and milling machines as appropriate.

2. Training in workshops skills ashore can be carried out in a training institution or approved workshop.

3. On-board training should be adequately documented in the training record book by qualified assessors.

## Section B-III/2

Guidance regarding the certification of chief engineer officers and second engineer officers of ships powered by main propulsion machinery of 3,000 kW propulsion power or more

(No provisions)



## Section B-III/3

Guidance regarding the certification of chief engineer officers and second engineer officers of ships powered by main propulsion machinery between 750 kW and 3,000 kW propulsion power

(No provisions)

## Section B-III/4

Guidance regarding the training and certification of ratings forming part of a watch in a manned engine-room or designated to perform duties in a periodically unmanned engine-room

In addition to the requirements stated in section A-III/4 of this Code, Parties are encouraged for safety reasons to include the following items in the training of ratings forming part of an engineering watch:

- .1 a basic knowledge of routine pumping operations, such as bilge, ballast and cargo pumping systems;
- .2 a basic knowledge of electrical installations and the associated dangers;
- .3 a basic knowledge of maintenance and repair of machinery and tools used in the engine-room; and
- .4 a basic knowledge of stowage and arrangements for bringing stores on board.

## CHAPTER IV

GUIDANCE REGARDING RADIOCOMMUNICATION AND  
RADIO PERSONNEL

## Section B-IV/1

Guidance regarding the application of chapter IV

(No provisions)

## Section B-IV/2

Guidance regarding training and certification of GMDSS radio personnel

TRAINING RELATED TO THE FIRST-CLASS RADIO-ELECTRONIC CERTIFICATE

## General

1. The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

2. The training should be relevant to the provisions of the STCW Convention, the provisions of the Radio Regulations annexed to the International Telecommunication Convention (Radio Regulations) and the provisions of the International Convention for the Safety of Life at Sea (SOLAS) Convention, currently in force, with particular attention given to provisions for the Global Maritime Distress and Safety System (GMDSS). In developing training requirements, account should be taken of at least the knowledge and training given in paragraphs 3 to 14 hereunder.

## Theory

3. Knowledge of the general principles and basic factors necessary for safe and efficient use of all sub-systems and equipment required in the GMDSS, sufficient to support the practical training provisions given in paragraph 13.

4. Knowledge of the use, operation and service areas of GMDSS sub-systems, including satellite system characteristics, navigational and meteorological warning systems and selection of appropriate communication circuits.

5. Knowledge of the principles of electricity and the theory of radio and electronics sufficient to meet the provisions given in paragraphs 6 to 10 below.

6. Theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraphy and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radiobeacons (EPIRBs), marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge

of the principles of other equipment generally used for radionavigation, with particular reference to maintaining the equipment in service.

7. Knowledge of factors that affect system reliability, availability, maintenance procedures and proper use of test equipment.

8. Knowledge of microprocessors and fault diagnosis in systems using microprocessors.

9. Knowledge of control systems in the GMDSS radio equipment including testing and analysis.

10. Knowledge of the use of computer software for the GMDSS radio equipment and methods for correcting faults caused by loss of software control of the equipment.

#### Regulations and documentation

11. Knowledge of:
  - .1 the SOLAS Convention and the Radio Regulations with particular emphasis on:
    - .1.1 distress, urgency and safety radiocommunications,
    - .1.2 avoiding harmful interference, particularly with distress and safety traffic, and
    - .1.3 prevention of unauthorized transmissions;
  - .2 other documents relating to operational and communication procedures for distress, safety and public correspondence services, including charges, navigational warnings, and weather broadcasts in the Maritime Mobile Service and the Maritime Mobile Satellite Service; and
  - .3 use of the International Code of Signals and the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases.

#### Watchkeeping and procedures

12. Knowledge of and training in:
  - .1 communication procedures and discipline to prevent harmful interference in GMDSS sub-systems;
  - .2 procedures for using propagation prediction information to establish optimum frequencies for communications;
  - .3 radiocommunication watchkeeping relevant to all GMDSS sub-systems, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures and radio records;
  - .4 use of the international phonetic alphabet;

- .5 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency;
- .6 ship reporting systems and procedures;
- .7 radiocommunication procedures of the IMO Merchant Ship Search and Rescue Manual (MERSAR);
- .8 radio medical systems and procedures; and
- .9 causes of false distress alerts and means to avoid them.

#### Practical

13. Practical training, supported by appropriate laboratory work, should be given in:

- .1 correct and efficient operation of all GMDSS sub-systems and equipment under normal propagation conditions and under typical interference conditions;
- .2 safe operation of all the GMDSS communication equipment and ancillary devices, including safety precautions;
- .3 adequate and accurate keyboard skills for the satisfactory exchange of communications;
- .4 operational techniques for:
  - .4.1 receiver and transmitter adjustment for the appropriate mode of operation, including digital selective calling and direct-printing telegraphy,
  - .4.2 antenna adjustment and re-alignment, as appropriate,
  - .4.3 use of radio life-saving appliances, and
  - .4.4 use of emergency position-indicating radio beacons (EPIRBs);
- .5 antenna rigging, repair and maintenance, as appropriate;
- .6 reading and understanding pictorial, logic and circuit diagrams;
- .7 use and care of those tools and test instruments necessary to carry out at-sea electronic maintenance;
- .8 manual soldering and desoldering techniques, including those involving semiconductor devices and modern circuits and the ability to distinguish whether the circuit is suitable to the manually soldered or desoldered;
- .9 tracing and repair of faults to component level where practicable, and to board/module level in other cases;
- .10 recognition and correction of conditions contributing to the fault occurring;
- .11 maintenance procedures, both preventive and corrective for all GMDSS communication equipment and radionavigation equipment; and
- .12 methods of alleviating electric and electromagnetic interference such as bonding, shielding and bypassing.

#### Miscellaneous

14. Knowledge of and/or training in:

- .1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;
- .2 world geography, especially the principal shipping routes, services of rescue co-ordination centres (RCCs) and related communication routes;
- .3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;
- .4 fire prevention and fire-fighting, with particular reference to the radio installation;
- .5 preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards;
- .6 first aid, including heart-respiration revival techniques; and
- .7 co-ordinated universal time (UTC), global time zones and the international date line.

#### TRAINING RELATED TO THE SECOND-CLASS RADIO-ELECTRONIC CERTIFICATE

##### General

15. The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

16. The training should be relevant to the provisions of the STCW Convention, and the SOLAS Convention currently in force, with particular attention given to provisions for the Global Maritime Distress and Safety System (GMDSS). In developing training requirements, account should be taken of at least the knowledge and training given in paragraphs 17 to 28 hereunder.

##### Theory

17. Knowledge of the general principles and basic factors necessary for safe and efficient use of all sub-systems and equipment required in the GMDSS, sufficient to support the practical training provisions given in paragraphs 27 below.

18. Knowledge of the use, operation and service areas of GMDSS sub-systems, including satellite system characteristics, navigational and meteorological warning systems and selection of appropriate communication circuits.

19. Knowledge of the principles of electricity and the theory of radio and electronics sufficient to meet the provisions given in paragraph 20 to 24 below.

20. General theoretical knowledge of GMDSS radiocommunication equipment, including narrow-band direct-printing telegraph and radiotelephone transmitters and receivers, digital selective calling equipment, ship earth stations, emergency position-indicating radiobeacons (EPIRBs), marine antenna systems, radio equipment for survival craft together with all auxiliary items, including power supplies, as well as general knowledge of other equipment generally used for radionavigation, with particular reference to maintaining the equipment in service.

21. General knowledge of factors that affect system reliability, availability, maintenance procedures and proper use of test equipment.

22. General knowledge of microprocessors and fault diagnosis in systems using microprocessors.

23. General knowledge of control systems in the GMDSS radio equipment including testing and analysis.

24. Knowledge of the use of computer software for the GMDSS radio equipment and methods for correcting faults caused by loss of software control of the equipment.

#### Regulations and documentation

25. Knowledge of:

- .1 the SOLAS Convention and the Radio Regulations with particular emphasis on:
  - .1.1 distress, urgency and safety radiocommunication,
  - .1.2 avoiding harmful interference, particularly with distress and safety traffic, and
  - .1.3 the prevention of unauthorized transmissions;
- .2 other documents relating to operational and communication procedures for distress, safety and public correspondence service, including charges, navigational warnings, and weather broadcasts in the Maritime Mobile Service and the Maritime Mobile Satellite Service; and
- .3 the use of the International Code of Signals and the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases.

#### Watchkeeping and procedures

26. Training should be given in:

- .1 communication procedures and discipline to prevent harmful interference in GMDSS subsystems;
- .2 procedures for using propagation prediction information to establish optimum frequencies for communication;
- .3 radiocommunication watchkeeping relevant to all GMDSS subsystems, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures and radio records;
- .4 use of the international phonetic alphabet;
- .5 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency;
- .6 ship reporting systems and procedures;
- .7 radiocommunication procedures of the IMO Merchant Ship Search and Rescue Manual (MERSAR);
- .8 radio medical systems and procedures; and
- .9 causes of false distress alerts and means to avoid them.

#### Practical

27. Practical training, supported by appropriate laboratory work, should be given in:

- .1 correct and efficient operation of all GMDSS sub-systems and equipment under normal propagation conditions and under typical interference conditions;
- .2 safe operation of all the GMDSS communication equipment and ancillary devices, including safety precautions;
- .3 adequate and accurate keyboard skills for the satisfactory exchange of communications;
- .4 operational techniques for:
  - .4.1 receiver and transmitter adjustment for the appropriate mode of operation, including digital selective calling and direct-printing telegraphy,
  - .4.2 antenna adjustment and re-alignment, as appropriate,
  - .4.3 use of radio life-saving appliances, and
  - .4.4 use of emergency position-indicating radio beacons (EPIRBs);
- .5 antenna rigging, repair and maintenance, as appropriate;
- .6 reading and understanding pictorial, logic and module interconnection diagrams;
- .7 use and care of those tools and test instruments necessary to carry out at-sea electronic maintenance at the level of unit or module replacement;
- .8 basic manual soldering and desoldering techniques and their limitations;
- .9 tracing and repair of faults to board/module level;
- .10 recognition and correction of conditions contributing to the fault occurring;

- .11 basic maintenance procedure, both preventive and corrective, for all the GMDSS communication equipment and radionavigation equipment, and
- .12 methods of alleviating electrical and electromagnetic interference such as bonding, shielding and bypassing.

#### Miscellaneous

28. Knowledge of, and/or training in:
- .1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;
  - .2 world geography, especially the principal shipping routes, services of rescue co-ordination centres (RCCs) and related communication routes;
  - .3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;
  - .4 fire prevention and fire-fighting, with particular reference to the radio installation;
  - .5 preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards;
  - .6 first aid, including heart-respiration revival techniques; and
  - .7 co-ordinated universal time (UTC), global time zones and international date line.

#### TRAINING RELATED TO THE GENERAL OPERATOR'S CERTIFICATE

##### General

29. The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

30. The training should be relevant to the provisions of the STCW Convention, the Radio Regulations and the SOLAS Convention currently in force, with particular attention given to provisions for the Global Maritime Distress and Safety System (GMDSS). In developing training requirements, account should be taken of at least the knowledge and training given in paragraphs 31 to 36 hereunder.



### Theory

31. Knowledge of the general principles and basic factors necessary for safe and efficient use of all sub-systems and equipment required in the GMDSS sufficient to support the practical training provisions given in paragraph 35 below.

32. Knowledge of the use, operation and service areas of GMDSS sub-systems, including satellite system characteristics, navigational and meteorological warning systems and selection of appropriate communication circuits.

### Regulations and documentation

33. Knowledge of:
- .1 the SOLAS Convention and the Radio Regulations with particular emphasis on:
    - .1.1 distress, urgency and safety radiocommunications,
    - .1.2 avoiding harmful interference, particularly with distress and safety traffic, and
    - .1.3 prevention of unauthorized transmissions;
  - .2 other documents relating to operational and communication procedures for distress, safety and public correspondence service, including charges, navigational warnings, and weather broadcasts in the Maritime Mobile Service and the Maritime Mobile Satellite Service; and
  - .3 use of the International Code of Signals and the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases.

### Watchkeeping and procedures

34. Training should be given in:
- .1 communication procedures and discipline to prevent harmful interference in GMDSS sub-systems;
  - .2 procedures for using propagation prediction information to establish optimum frequencies for communications;
  - .3 radiocommunication watchkeeping relevant to all GMDSS sub-systems, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures and radio records;
  - .4 use of the international phonetic alphabet;
  - .5 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency;
  - .6 ship reporting systems and procedures;
  - .7 radiocommunication procedures of the IMO Merchant Ship Search and Rescue Manual (MERSAR);

- .8 radio medical systems and procedures; and
- .9 causes of false distress alerts and means to avoid them.

#### Practical

35. Practical training should be given in:
- .1 correct and efficient operation of all GMDSS sub-systems and equipment under normal propagation conditions and under typical interference conditions;
  - .2 safe operation of all the GMDSS communications equipment and ancillary devices, including safety precautions;
  - .3 accurate and adequate keyboard skills for the satisfactory exchange of communications; and
  - .4 operational techniques for:
    - 4.1 receiver and transmitter adjustment for the appropriate mode of operation, including digital selective calling and direct-printing telegraphy,
    - 4.2 antenna adjustment and re-alignment as appropriate,
    - 4.3 use of radio life-saving appliances, and
    - 4.4 use of emergency position-indicating radio beacons (EPIRBs).

#### Miscellaneous

36. Knowledge of, and/or training in:
- .1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;
  - .2 world geography, especially the principal shipping routes, services of rescue co-ordination centres (RCCs) and related communication routes;
  - .3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;
  - .4 fire prevention and fire-fighting, with particular reference to the radio installation;
  - .5 preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards;
  - .6 first aid, including heart-respiration revival techniques; and
  - .7 co-ordinated universal time (UTC), global time zones and international date line.

## TRAINING RELATED TO THE RESTRICTED OPERATOR'S CERTIFICATE

### General

37. The requirements of medical fitness, especially as to hearing, eyesight and speech, should be met by the candidate before training is commenced.

38. The training should be relevant to the provisions of the STCW Convention, the Radio Regulations and the SOLAS Convention currently in force, with particular attention given to provisions for the Global Maritime Distress and Safety System (GMDSS). In developing training guidance, account should be taken of at least the knowledge and training given in paragraphs 39 to 44 hereunder.

### Theory

39. Knowledge of the general principles and basic factors, including VHF range limitation and antenna height effect necessary for safe and efficient use of all sub-systems and equipment required in GMDSS in sea area A1, sufficient to support the training given in paragraph 43 below.

40. Knowledge of the use, operation and service areas of GMDSS sea area A1 sub-systems, e.g. navigational and meteorological warning systems and the appropriate communication circuits.

### Regulations and documentation

41. Knowledge of:
- .1 those parts of the SOLAS Convention and the Radio Regulations relevant to sea area A1, with particular emphasis on:
    - .1.1 distress, urgency and safety radiocommunications,
    - .1.2 avoiding harmful interference, particularly with distress and safety traffic, and
    - .1.3 prevention of unauthorized transmissions;
  - .2 other documents relating to operational and communication procedures for distress, safety and public correspondence service, including charges, navigational warnings and weather broadcasts in the Maritime Mobile Service in sea area A1; and
  3. use of the International Code of Signals and the Standard Marine Navigational Vocabulary as replaced by the IMO Standard Marine Communication Phrases.

## Watchkeeping and procedures

42. Training should be given in:
- .1 communication procedures and discipline to prevent harmful interference in GMDSS sub-systems used in sea area A1;
  - .2 VHF communication procedures for:
    - .2.1 radiocommunication, watchkeeping, exchange of radiocommunication traffic, particularly concerning distress, urgency and safety procedures and radio records,
    - .2.2 monitoring a distress frequency while simultaneously monitoring or working on at least one other frequency, and
    - .2.3 the digital selective calling system;
  - .3 use of the international phonetic alphabet;
  - .4 ship reporting systems and procedures;
  - .5 VHF radiocommunication procedures of the IMO Merchant Ship Search and Rescue Manual (MERSAR);
  - .6 radio medical systems and procedures; and
  - .7 causes of false distress alerts and means to avoid them.

## Practical

43. Practical training should be given in:
- .1 correct and efficient operation of the GMDSS sub-systems and equipment prescribed for ships operating in sea area A1 under normal propagation conditions and under typical interference conditions;
  - .2 safe operation of relevant GMDSS communication equipment and ancillary devices, including safety precautions; and
  - .3 operational techniques for use of:
    - .3.1 VHF, including channel, squelch, and mode adjustment, as appropriate,
    - .3.2 radio life-saving appliances,
    - .3.3 emergency position-indicating radio beacons (EPIRBs), and
    - .3.4 NAVTEX receivers.

## Miscellaneous

44. Knowledge of, and/or training in:
- .1 the English language, both written and spoken, for the satisfactory exchange of communications relevant to the safety of life at sea;
  - .2 service of rescue co-ordination centres (RCCs) and related communication routes;
  - .3 survival at sea, the operation of lifeboats, rescue boats, liferafts, buoyant apparatus and their equipment, with special reference to radio life-saving appliances;
  - .4 fire prevention and fire-fighting, with particular reference to the radio installation;

- .5 preventive measures for the safety of ship and personnel in connection with hazards related to radio equipment, including electrical, radiation, chemical and mechanical hazards; and
- .6 first aid, including heart-respiration revival techniques.

#### TRAINING RELATED TO MAINTENANCE OF GMDSS INSTALLATIONS ON BOARD SHIPS

##### General

45. Reference is made to the maintenance requirements of SOLAS Convention regulation IV/15, and to IMO resolution A.702(17) on Radio maintenance guidelines for the GMDSS related to sea areas A3 and A4, which includes in its Annex the following provision:

“4.2 The person designated to perform functions for at-sea electronic maintenance should either hold an appropriate certificate as specified by the Radio Regulations, as required, or have equivalent at-sea electronic maintenance qualifications, as may be approved by the Administration, taking into account the recommendations of the Organization on the training of such personnel”.

46. The following guidance on equivalent electronic maintenance qualifications is provided for use by Administrations as appropriate.

47. Training as recommended below, does not qualify any person to be an operator of GMDSS radio equipment who does not hold an appropriate Radio Operator’s Certificate.

##### Maintenance training equivalent to the First-Class Radioelectronic Certificate

48. In determining training equivalent to the elements on the listed First-Class Radioelectronic Certificate:

- .1 the theory content should cover at least the subjects given in paragraphs 3 to 10;
- .2 the practical content should cover at least the subjects given in paragraph 13; and
- .3 the miscellaneous knowledge included should cover at least the subjects given in paragraph 14.

##### Maintenance training equivalent to the Second-Class Radioelectronic Certificate

49. In determining training equivalent to the maintenance elements of the Second-Class Radioelectronic Certificate:

- .1 the theory content should cover at least the subjects given in paragraphs 17 to 24;

- .2 the practical content should cover at least the subjects given in paragraph 27; and
- .3 the miscellaneous knowledge included should cover at least the subjects given in paragraph 28.

## CHAPTER V

### GUIDANCE REGARDING SPECIAL TRAINING REQUIREMENTS FOR PERSONNEL ON CERTAIN TYPES OF SHIPS

#### Section B-V/1

Guidance regarding the training and qualifications of tanker personnel

#### Oil tanker training

1. The training required by paragraph 2.2 of regulation V/1 in respect of oil tankers should be divided into two parts, a general part concerning principles involved and a part on the application of those principles to ship operation. Any of this training may be given on board or ashore. It should be supplemented by practical instruction on board and, where appropriate, in a suitable shore-based installation. All training and instruction should be given by properly qualified and suitably experienced personnel.

2. As much use as possible should be made of shipboard operation and equipment manuals, films and suitable visual aids, and the opportunity should be taken to introduce discussion of the part to be played by the safety organization on board ship and the role of safety officers and safety committees.

#### Chemical tanker training

3. The training required by paragraph 2.2 of regulation V/1 in respect of chemical tankers should be divided into two parts, a general part concerning principles involved and a part on the application on board of those principles to ship operations. Any of this training may be given on board or ashore. It should be supplemented by practical instruction on board and, where appropriate, in a suitable shore-based installation. All training and instruction should be given by properly qualified and suitably experienced personnel.

4. As much use as possible should be made of shipboard operation and equipment manuals, films and suitable visual aids, and the opportunity should be taken to introduce discussion of the part to be played by the safety organization on board ship and the role of safety officers and safety committees.

#### Liquefied gas tanker training

5. The training required by paragraph 2.2 of regulation V/1 in respect of liquefied gas tankers should be divided into the following two parts:

- .1 supervised instruction, conducted in a shore-based facility or on board a specially equipped ship having training facilities and special instructors for this purpose, dealing with the principles involved and the application of these principles to ship operation, so however that Administrations may, in special situations, permit junior officers or ratings to be trained on board liquefied gas tankers on which they are serving, provided that such service is for a limited period, as established by the Administration, and that such crew members do not have duties or responsibilities in connection with cargo or cargo equipment and provided further that they are later trained in accordance with this guidance for any subsequent service; and
- .2 supplementary shipboard training and experience, wherein the principles learned are applied to a particular type of ship and cargo-containment system.

All training and instruction should be given by properly qualified and suitably experienced personnel.

6. As much use as possible should be made of shipboard operation and equipment manuals, films and suitable visual aids, and the opportunity should be taken to introduce discussion of the part to be played by the safety organization on board ship and the role of safety officers and safety committees.

#### ON-BOARD TRAINING FOR ALL TANKER PERSONNEL

7. All tanker personnel should undergo training on board and, where appropriate, ashore, which should be given by qualified personnel experienced in the handling and characteristics of oil, chemical or liquefied gas cargoes as appropriate and the safety procedures involved. The training should at least cover the matters set out in paragraphs 9 to 15 below.

#### Regulations

8. Knowledge of the ship's rules and regulations governing the safety of personnel on board a tanker in port and at sea.

#### Health hazards and precautions to be taken

9. Dangers of skin contact; inhalation and accidental swallowing of cargo; oxygen deficiency, with particular reference to inert-gas systems; the harmful properties of cargoes carried, personnel accidents and associated first aid; lists of dos and don'ts.

#### Fire prevention and fire-fighting

10. Control of smoking and cooking restrictions; sources of ignition; fire and explosion prevention; methods of fire-fighting; of portable extinguishers and fixed installations.

#### Pollution Prevention

11. Procedures to be followed to prevent air and water pollution and measures which will be taken in the event of spillage.

#### Safety equipment and its use

12. The proper use of protective clothing and equipment, resuscitators, escape and rescue equipment.

#### Emergency procedures

13. Familiarization with the emergency plan procedures.

#### Cargo equipment and operations

14. A general description of cargo-handling equipment; safe loading and discharge procedures and precautions and safe entry into enclosed spaces.

#### ON-BOARD TRAINING FOR LIQUEFIED GAS TANKER PERSONNEL

15. Personnel who are required to be trained under regulation V/1 should be provided supplementary shipboard training and experience based on the ship's operation manual. Such training and experience should cover the following systems as applicable:

- .1 the cargo handling including piping systems; pumps; valves; expansion devices and vapour systems; service requirements and operating characteristics of the cargo handling systems and liquid re-circulation;
- .2 instrumentation systems including cargo level indicators; gasdetection systems; hull and cargo temperature monitoring systems; the various methods of transmitting a signal from a sensor to the monitoring station and automatic shutdown systems;
- .3 boil-off disposal including use as fuel; compressors; heat exchanger; gas piping and ventilation in machinery and manned spaces; principles of dual-fuel boilers, gas turbines, diesel engines; emergency venting and re-liquefaction;



- .4 auxiliary systems including ventilation and inerting; quickclosing, remote control, pneumatic, excess flow, safety relief, and pressure/vacuum valves; steam systems for voids, ballast tanks and condenser; and
- .5 general principles operating the cargo-handling plant including inerting cargo tanks and void spaces; tank cool-down and loading; operations during loaded and ballasted voyages; discharging and tank stripping; emergency procedures, and preplanned action in the event of leaks, fires, collision, stranding, emergency cargo discharge and personnel casualty.

#### PROOF OF QUALIFICATION

16. The master of every oil, chemical and liquefied gas tanker should ensure that the officer primarily responsible for the cargo possesses an appropriate certificate, issued or endorsed or validated as required by regulation V/1, paragraph 4 and has had adequate recent practical experience on board an appropriate type of tanker to permit that officer to safely perform the duties assigned.

#### Section B-V/2

Guidance regarding mandatory minimum requirements for the training and qualification of masters, officers, ratings and other personnel on ro-ro passenger ships

(No provisions)

#### Section B-V/3

Guidance regarding additional training for masters and chief mates of large ships and ships with unusual manoeuvring characteristics

1. It is important that masters and chief mates should have had relevant experience and training before assuming the duties of master or chief mate of large ships or ships having unusual manoeuvring and handling characteristics significantly different from those in which they have recently served. Such characteristics will generally be found in ships which are of considerable deadweight or length or of special design or of high speed.

2. Prior to their appointment to such a ship, masters and chief mates should:

- .1 be informed of the ship's handling characteristics by the company, particularly in relation to the knowledge, understanding and proficiency listed under ship manoeuvring and handling in column 2 of

table A-II/2 – Specification of the minimum standard of competence for masters and chief mates of ships of 500 gross tonnage or more; and

.2 be made thoroughly familiar with the use of all navigational and manoeuvring aids fitted in the ship concerned, including their capabilities and limitations.

3. Before initially assuming command of one of the ships referred to above, the prospective master should have sufficient and appropriate general experience as master or chief mate, and either:

.1 have sufficient and appropriate experience manoeuvring the same ship under supervision or in manoeuvring a ship having similar manoeuvring characteristics; or

.2 have attended an approved ship-handling simulator course on an installation capable of simulating the manoeuvring characteristics of such a ship.

4. The additional training and qualifications of masters and chief mates of dynamically supported and high speed craft should be in accordance with the relevant guidelines of the IMO Code of Safety for Dynamically Supported Craft and the IMO Code of Safety for High Speed Craft (HSC) Code, as appropriate.

#### Section B-V/4

Guidance regarding training of officers and ratings responsible for cargo handling on ships carrying dangerous and hazardous substances in solid form in bulk.

1. Training should be divided into two parts, a general part on the principles involved and a part on the application of such principles to ship operation. All training and instruction should be given by properly qualified and suitably experienced personnel and cover at least the subjects given in paragraphs 2 to 15 hereunder.

#### PRINCIPLES

##### Characteristics and properties

2. The important physical characteristics and chemical properties of dangerous and hazardous substances, sufficient to give a basic understanding of the intrinsic hazards and risks involved.

##### Classification of materials possessing chemical hazards

3. IMO dangerous goods classes 4-9 and materials hazardous only in bulk (MHB) and the hazards associated with each class.

#### Health hazards

4. Dangers from skin contact, inhalation, ingestion and radiation.

#### Conventions, regulations and recommendations

5. General familiarization with the relevant requirements of chapters II-2 and VII of the 1974 SOLAS Convention as amended.

6. General use of and familiarization with the Code of Safe Practice for Solid Bulk Cargoes (BC Code) with particular reference to:

- .1 safety of personnel including safety equipment, measuring instruments, their use and practical application and interpretation of results;
- .2 hazards from cargoes which have a tendency to shift; and
- .3 materials possessing chemical hazards.

#### SHIPBOARD APPLICATION

Class 4.1 – Flammable solids

Class 4.2 – substances liable to spontaneous combustion

Class 4.3 – substances which, in contact with water, emit flammable gases

7. Carriage, stowage and control of temperature to prevent decomposition and possible explosion; stowage categories; general stowage precautions, including those applicable to self-reactive and related substances; segregation requirements to prevent heating and ignition; the emission of poisonous or flammable gases and the formation of explosive mixtures.

Class 5.1 – Oxidizing substances

8. Carriage, stowage and control of temperature to prevent decomposition and possible explosion; stowage categories; general stowage precautions and segregation requirements to ensure separation from combustible material, from acids and heat sources to prevent fire, explosion and the formation of toxic gases.

Class 6.1 – Toxic substances

9. Contamination of foodstuffs, working areas and living accommodation and ventilation.

#### Class 7 – Radioactives

10. Transport index; types of ores and concentrates; stowage and segregation from persons, undeveloped photographic film and plates and foodstuffs; stowage categories; general stowage requirements; special stowage requirements; segregation requirements and separation distances; segregation from other dangerous goods.

#### Class 8 – Corrosives

11. Dangers from wetted substances.

#### Class 9 – Miscellaneous dangerous substances and articles

12. Examples and associated hazards; the hazards of materials hazardous only in bulk (MHB); general and specific stowage precautions; working and transport precautions; segregation requirements.

#### Safety precautions and emergency procedures

13. Electrical safety in cargo spaces; precautions to be taken for entry into enclosed spaces that may contain oxygen depleted, poisonous or flammable atmospheres; the possible effects of fire in shipments of substances of each class; use of the Emergency Procedures for Ships Carrying Dangerous Goods; emergency plans and procedures to be followed in case of incidents involving dangerous and hazardous substances and the use of individual entries in the Code of Safe Practice for Solid Bulk Cargoes in this respect.

#### Medical first aid

14. The IMO Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG) and its use and application in association with other guides and medical advice by radio.

#### Section B-V/5

Guidance regarding training of officers and ratings responsible for cargo handling on ships carrying dangerous and hazardous substances in packaged form

1. Training should be divided into two parts, a general part on the principles involved and a part on the application of such principles to ship operation. All training and instruction should be given by properly qualified and suitably experienced personnel and cover at least the subjects given in paragraphs 2 to 19 hereunder.

## PRINCIPLES

### Characteristics and properties

2. The important physical characteristics and chemical properties of dangerous and hazardous substances, sufficient to give a basic understanding of the intrinsic hazards and risks involved.

### Classification of dangerous and hazardous substances and materials possessing chemical hazards

3. IMO dangerous goods classes 1–9 and the hazards associated with each class; materials hazardous only in bulk (MHB).

### Health hazards

4. Dangers from skin contact, inhalation, ingestion and radiation.

### Conventions, regulations and recommendations

5. General familiarization with the relevant requirements of chapters II-2 and VII of the 1974 SOLAS Convention and of Annex III of MARPOL73/78 including its implementation through the IMDG Code.

### Use of and familiarization with the International Maritime Dangerous Goods (IMDG) Code

6. General knowledge of the requirements of the IMDG Code concerning declaration, documentation, packing, labelling and placarding; freight container and vehicle packing; portable tanks, tank containers and road tank vehicles, and other transport units used for dangerous substances.

7. Knowledge of identification, marking, labelling, for stowage, securing, separation and segregation in different ship types mentioned in the IMDG Code.

8. Safety of personnel including safety equipment, measuring instruments, their use and practical application and the interpretation of results.

## SHIPBOARD APPLICATION

### Class 1 – Explosives

9. The 6 hazard divisions and 13 compatibility groups; packagings and magazines used for carriage of explosives; structural serviceability of freight containers and vehicles; stowage provisions, including specific

arrangements for on-deck and under deck stowage; segregation from dangerous goods of other classes within class 1 and from non-dangerous goods; transport and stowage on passenger ships; suitability of cargo spaces; security precautions; precautions to be taken during loading and unloading.

Class 2 – Gases (Compressed, liquefied, refrigerated liquefied or gases in solution) flammable, non-compressed, non-poisonous and poisonous

10. Types of pressure vessels and portable tanks including relief and closing devices used; stowage categories; general stowage precautions including those for flammable and poisonous gases and gases which are marine pollutants.

Class 3 – Flammable liquids

11. Packagings, tank containers, portable tanks and road tank vehicles, stowage categories, including the specific requirements for plastics receptacles; general stowage precautions including those for marine pollutants; segregation requirements; precautions to be taken when carrying flammable liquids at elevated temperatures.

Class 4.1 – Flammable solids

Class 4.2 – substances liable to spontaneous combustion

Class 4.3 – substances which, in contact with water, emit flammable gases

12. Types of packagings; carriage and stowage under controlled temperatures to prevent decomposition and possible explosion; stowage categories; general stowage precautions, including those applicable to self-reactive and related substances, desensitized explosives and marine pollutants; segregation requirements to prevent heating and ignition, the emission of poisonous or flammable gases and the formation of explosive mixtures.

Class 5.1 – Oxidizing substances

Class 5.2 – Organic peroxides

13. Types of packagings; carriage and stowage under controlled temperatures to prevent decomposition and possible explosion; stowage categories; general stowage precautions, including those applicable to marine pollutants; segregation requirements to ensure separation from combustible material, from acids and heat sources to prevent fire, explosion and the formation of toxic gases; precautions to minimize friction and impact which can initiate decomposition.

Class 6.1 – Toxic substances

Class 6.2 – Infectious substances

14. Types of packagings; stowage categories; general stowage precautions including those applicable to toxic, flammable liquids and marine pollutants; segregation requirements, especially considering that the characteristic common to these substances is their ability to cause death or serious injury to human health; decontamination measures in the event of spillage.

Class 7 – Radioactives

15. Types of packagings; transport index in relation to stowage and segregation; stowage and segregation from persons, undeveloped photographic film and plates and foodstuffs; stowage categories; general stowage requirements; segregation requirements and separation distances; segregation from other dangerous goods.

Class 8 – Corrosives

16. Types of packagings; stowage categories; general stowage precautions, including those applicable to corrosive, flammable liquids and marine pollutants; segregation requirements, especially considering that the characteristic common to these substances is their ability to cause severe damage to living tissue.

Class 9 – Miscellaneous dangerous substances and articles

17. Examples of hazards including marine pollution.

Safety precautions and emergency procedures

18. Electrical safety in cargo spaces; precautions to be taken for entry into enclosed spaces that may contain oxygen depleted, poisonous or flammable atmospheres; the possible effects of spillage or fire in shipments of substances or each class; consideration of events on deck or below deck; use of the IMO Emergency Procedures for Ships Carrying Dangerous Goods; emergency plans and procedures to be followed in case of incidents involving dangerous substances.

Medical first aid

19. The IMO Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG) and its use and application in association with other guides and medical advice by radio.

## CHAPTER VI

GUIDANCE REGARDING EMERGENCY, OCCUPATIONAL  
SAFETY, MEDICAL CARE AND SURVIVAL FUNCTIONS

## Section B-VI/1

Guidance regarding familiarization and basic safety training and instruction for all seafarers

## Fire prevention and fire-fighting

1. The basic training in fire prevention and fire-fighting required by section A-VI/1 should include at least the theoretical and practical elements itemized in paragraphs 2 to 4 hereunder.

## Theoretical training

2. The theoretical training should cover:
  - .1 the three elements of fire and explosion (the fire triangle), fuel; source of ignition; oxygen;
  - .2 ignition sources: chemical; biological; physical;
  - .3 flammable materials: flammability; ignition point; burning temperature; burning speed; thermal value; lower flammable limit (LFL); upper flammable limit (UFL); flammable range; inerting; static electricity; flashpoint; auto-ignition;
  - .4 fire hazard and spread of fire by radiation, convection, and conduction;
  - .5 reactivity;
  - .6 classification of fires and applicable extinguishing agents;
  - .7 main causes of fire on board ships: oil leakage in engine-room; cigarettes; overheating (bearings); galley appliances (stoves, flues, fryers, hotplates, etc.); spontaneous ignition (cargo, wastes, etc.); hot work (welding, cutting, etc.); electrical apparatus (short circuit, non-professional repairs); reaction, selfheating and auto-ignition; arson; static electricity;
  - .8 fire prevention;
  - .9 fire and smoke detection systems; automatic fire alarms;
  - .10 fire-fighting equipment including:
    - .10.1 fixed installations on board and their locations; fire mains, hydrants; international shore connection; smothering installations, carbon dioxide (CO<sub>2</sub>), foam; halogenated hydrocarbons; pressure water spray system in special category spaces, etc.; automatic sprinkler system; emergency fire pump; emergency generator; chemical powder applicants; general outline of required and available mobile apparatus; high pressure fog system; high expansion foam; new developments and equipment;



- .10.2 firefighter's outfit, personal equipment; breathing apparatus; resuscitation apparatus; smoke helmet or mask; fireproof life-line and harness; and their location on board; and
- .10.3 general equipment including fire hoses, nozzles, connections, fire axes; portable fire extinguishers; fire blankets;
- .11 construction and arrangements including escape routes; means for gas freeing tanks; Class A, B and C divisions; inert gas systems;
- .12 ship fire-fighting organization, including general alarm; fire control plans, muster stations and duties of individuals; communications, including ship-shore when in port; personnel safety procedures; periodic shipboard drills; patrol systems.
- .13 practical knowledge of resuscitation methods;
- .14 fire-fighting methods including sounding the alarm; locating and isolating; jettisoning; inhibiting; cooling; smothering; extinguishing; reflash watch; smoke extraction; and
- .15 fire-fighting agents including water, solid jet, spray, fog, flooding; foam, high, medium and low expansion; carbon dioxide (CO<sub>2</sub>); halon; aqueous film forming foam (AFFF); dry chemical powder; new developments and equipment.

#### Practical training

3. The practical training given below should take place in spaces which provide truly realistic training conditions, (e.g. simulated ship-board conditions), and whenever possible and practical should also be carried out in darkness as well as by daylight and should allow the trainees to acquire the ability to:

- .1 use various types of portable fire extinguishers;
- .2 use self-contained breathing apparatus;
- .3 extinguish smaller fires, e.g. electrical fires, oil fires and propane fires;
- .4 extinguish extensive fires with water (jet and spray nozzles);
- .5 extinguish fires with either foam, powder or any other suitable chemical agent;
- .6 enter and pass through, with life-line but without breathing apparatus, a compartment into which high expansion foam has been injected;
- .7 fight fire in smoke-filled enclosed spaces wearing self-contained breathing apparatus;
- .8 extinguish fire with water fog, or any other suitable firefighting agent in an accommodation room or simulated engineroom with fire and heavy smoke;
- .9 extinguish an oil fire with fog applicator and spray nozzles; dry chemical powder or foam applicators;
- .10 effect a rescue in a smoke-filled space wearing breathing apparatus.

#### General

4. Trainees should also be made aware of the necessity of maintaining a state of readiness on board.

#### Elementary first aid

5. The training in elementary first aid required by regulation VI/1 as part of the basic training should be given at an early stage in vocational training, preferably during pre-sea training, to enable seafarers to take immediate action upon encountering an accident or other medical emergency until the arrival of a person with first aid skills or the person in charge of medical care on board.

#### Personal safety and social responsibilities

6. Administrations should bear in mind the significance of communication and language skills in maintaining safety of life and property at sea and in preventing marine pollution. Given the international character of the maritime industry, the reliance on voice communications from ship-to-ship and ship-to-shore, the increasing use of multi-national crews, and the concern that crew members should be able to communicate with passengers in an emergency, adoption of a common language for maritime communications would promote safe practice by reducing the risk of human error in communicating essential information.

7. Although not universal, by common practice English is rapidly becoming the standard language of communication for maritime safety purposes, partly as a result of the use of the Standard Marine Navigational Vocabulary, as replaced by the IMO Standard Marine Communication Phrases.

8. Administrations should consider the benefits of ensuring that seafarers have an ability to use at least an elementary English vocabulary, with an emphasis on nautical terms and situations.

#### Section B-VI/2

##### Guidance regarding certification for proficiency in survival craft, rescue boats and fast rescue boats

1. Before training is commenced the requirement of medical fitness, particularly regarding eyesight and hearing, should be met by the candidate.

2. The training should be relevant to the provisions of the International Convention for the Safety of Life at Sea (SOLAS), as amended.

## Section B-VI/3

Guidance regarding training in advanced fire-fighting

(No provisions)

## Section B-VI/4

Guidance regarding requirements in medical first aid and medical care

(No provisions)

## CHAPTER VII

## GUIDANCE REGARDING ALTERNATIVE CERTIFICATION

## Section B-VII/1

Guidance regarding the issue of alternative certificates

(No provisions)

## Section B-VII/2

Guidance regarding certification of seafarers

(No provisions)

## Section B-VII/3

Guidance regarding principles governing the issue of alternative certificates

(No provisions)

## CHAPTER VIII

## GUIDANCE REGARDING WATCHKEEPING

## Section B-VIII/1

Guidance regarding fitness for duty

Prevention of fatigue

1. In observing the rest period requirements, "overriding operational conditions" should be construed to mean only essential shipboard work

which cannot be delayed for safety or environmental reasons or which could not reasonably have been anticipated at the commencement of the voyage.

2. Although there is no universally accepted technical definition of fatigue, everyone involved in ship operations should be alert to the factors which can contribute to fatigue, including, but not limited to those identified by the Organization, and take them into account when making decisions on ship operations.

3. In applying regulation VIII/1, the following should be taken into account:

- .1 provisions made to prevent fatigue should ensure that excessive or unreasonable overall working hours are not undertaken. In particular, the minimum rest periods specified in Section A-VIII/1 should not be interpreted as implying that all other hours may be devoted to watchkeeping or other duties;
- .2 that the frequency and length of leave periods, and the granting of compensatory leave, are material factors in preventing fatigue from building up over a period of time;
- .3 the provisions may be varied for ships on short-sea voyages, provided special safety arrangements are put in place; and

4. Administrations should consider the introduction of a requirement that records of hours of work or rest of seafarers should be maintained and that such records are inspected by the Administration at appropriate intervals to ensure compliance with regulations concerning working hours or rest periods.

5. Based on information received as a result of investigating maritime casualties, Administrations should keep their provisions on prevention of fatigue under review.

#### Section B-VIII/2

Guidance regarding watchkeeping arrangements and principles to be observed

1. The following operational guidance should be taken into account by companies, masters and watchkeeping officers.

## PART 1 – GUIDANCE ON CERTIFICATION

(No provisions)

## PART 2 – GUIDANCE ON VOYAGE PLANNING

(No provisions)

## PART 3 – GUIDANCE ON WATCHKEEPING AT SEA

(No provisions)

## PART 3-1 – GUIDANCE ON KEEPING A NAVIGATIONAL WATCH

## Introduction

2. Particular guidance may be necessary for special types of ships as well as for ships carrying hazardous, dangerous, toxic or highly flammable cargoes. The master should provide this operational guidance as appropriate.

3. It is essential that officers in charge of the navigational watch appreciate that the efficient performance of their duties is necessary in the interests of the safety of life and property at sea and of preventing pollution of the marine environment.

## Bridge resource management

4. Companies should issue guidance on proper bridge procedures, and promote the use of checklists appropriate to each ship taking into account national and international guidance.

5. Companies should also issue guidance to masters and officers in charge of the navigational watch on each ship concerning the need for continuously reassessing how bridge-watch resources are being allocated and used, based on bridge resource management principles such as the following:

- .1 a sufficient number of qualified individuals should be on watch to ensure all duties can be performed effectively;
- .2 all members of the navigational watch should be appropriately qualified and fit to perform their duties efficiently and effectively or the officer in charge of the navigational watch should take into account any limitation in qualifications or fitness of the individuals available when making navigational and operational decisions;
- .3 duties should be clearly and unambiguously assigned to specific individuals, who should confirm that they understand their responsibilities;

- .4 tasks should be performed according to a clear order of priority;
- .5 no member of the navigational watch should be assigned more duties or more difficult tasks than can be performed effectively;
- .6 individuals should be assigned at all times to locations at which they can most efficiently and effectively perform their duties, and individuals should be reassigned to other locations as circumstances may require;
- .7 members of the navigational watch should not be assigned to different duties, tasks or locations until the officer in charge of the navigational watch is certain that the adjustment can be accomplished efficiently and effectively;
- .8 instruments and equipment considered necessary for effective performance of duties should be readily available to appropriate members of the navigational watch;
- .9 communications among members of the navigational watch should be clear, immediate, reliable, and relevant to the business at hand;
- .10 non-essential activity and distractions should be avoided, suppressed or removed;
- .11 all bridge equipment should be operating properly and if not, the officer in charge of the navigational watch should take into account any malfunction which may exist in making operational decisions;
- .12 all essential information should be collected, processed and interpreted, and made conveniently available to those who require it for the performance of their duties;
- .13 non-essential materials should not be placed on the bridge or any work surface; and
- .14 members of the navigational watch should at all times be prepared to respond efficiently and effectively to changes in circumstances.

#### PART 3-2 – GUIDANCE ON KEEPING AN ENGINEERING WATCH

6. Particular guidance may be necessary for special types of propulsion systems or ancillary equipment and for ships carrying hazardous, dangerous, toxic or highly flammable materials or other special types of cargo. The chief engineer officer should provide this operational guidance as appropriate.

7. It is essential that officers in charge of the engineering watch appreciate that the efficient performance of engineering watchkeeping duties is necessary in the interest of the safety of life and property at sea and of preventing pollution of the marine environment.

8. The relieving officer, before assuming charge of the engineering watch, should:

- .1 be familiar with the location and use of the equipment provided for the safety of life in a hazardous or toxic environment;

- .2 ascertain that materials for the administration of emergency medical first aid are readily available, particularly those required for the treatment of burns and scalds; and
- .3 when in port, safely anchored or moored, be aware of:
  - .3.1 cargo activities, the status of maintenance and repair functions and all other operations affecting the watch, and
  - 3.2 the auxiliary machinery in use for passenger or crew accommodation services, cargo operations, operational water supplies and exhaust systems.

### PART 3-3 – GUIDANCE ON KEEPING A RADIO WATCH

#### General

9. Among other things, the Radio Regulations require that each ship radio station is licensed, is under the ultimate authority of the master or other person responsible for the ship and is only operated under the control of adequately qualified personnel. The Radio Regulations also require that a distress alert shall only be sent on the authority of the master or other person responsible for the ship.

10. The master should bear in mind that all personnel assigned responsibility for sending a distress alert must be instructed with regard to, be knowledgeable of, and be able to operate properly, all radio equipment on the ship as required by regulation 1/14, paragraph 1.4. This should be recorded in the deck or radio log-book.

#### Watchkeeping

11. In addition to the requirements concerning radiowatchkeeping, the master of every seagoing ship should ensure that:

- .1 the ship's radio station is adequately manned for the purpose of exchanging general communications – in particular public correspondence, taking into account the constraints imposed by the duties of those authorized to operate it; and
- .2 the radio equipment provided on board and, where fitted, the reserve sources of energy, are maintained in an efficient working condition.

12. Necessary instruction and information on use of radio equipment and procedures for distress and safety purposes should be given periodically to all relevant crew members by the person designated in the muster list to have primary responsibility for radiocommunications during distress incidents. This should be recorded in the radio log.

13. The master of every ship not subject to the SOLAS Convention should require that radio watchkeeping is adequately maintained as determined by the Administration, taking into account the Radio Regulations.

#### Operational

14. Prior to sailing, the radio operator designated as having primary responsibility for radiocommunications during distress incidents should ensure that:

- .1 all distress and safety radio equipment and the reserve source of energy are in an efficient working condition, and that this is recorded in the radio log;
- .2 all documents required by international agreement, notices to ship radio stations and additional documents required by the Administration are available and are corrected in accordance with the latest supplements, and that any discrepancy is reported to the master;
- .3 the radio clock is correctly set against standard time signals;
- .4 antennae are correctly positioned, undamaged and properly connected; and
- .5 to the extent practicable, routine weather and navigational warning messages for the area in which the ship will be navigating are updated together with those for other areas requested by the master, and that such messages are passed to the master.

15. On sailing and opening the station, the radio operator on watch should:

- .1 listen on the appropriate distress frequencies for any possible existing distress situation; and
- .2 send a traffic report (name, position and destination, etc.) to the local coast station and any other appropriate coast station from which general communications may be expected.

16. While the station is open, the radio operator on watch should:

- .1 check the radio clock against standard time signals at least once a day;
- .2 send a traffic report when entering and on leaving the service area of a coast station from which general communications might be expected; and
- .3 transmit reports to ship reporting systems in accordance with the instructions of the master.

17. While at sea, the radio operator designated as having primary responsibility for radiocommunications during distress incidents should ensure the proper functioning of:



- .1 the Digital Selective Calling (DSC) distress and safety radio equipment by means of a test call at least once each week; and
- .2 the distress and safety radio equipment by means of a test at least once each day but without radiating any signal.

The results of these tests should be recorded in the radio log.

18. The radio operator designated to handle general communications should ensure that an effective watch is maintained on those frequencies on which communications are likely to be exchanged, having regard to the position of the ship in relation to those coast stations and to coast earth stations from which traffic may be expected. When exchanging traffic, radio operators should follow the relevant ITU recommendations.

19. When closing the station on arrival at a port, the radio operator on watch should advise the local coast station and other coast stations with which contact has been maintained of the ship's arrival and of the closing of the station.

20. When closing the radio station the radio operator designated as having primary responsibility for radiocommunications during distress incidents should:

- .1 ensure that transmitting antennae are earthed; and
- .2 check that the reserve sources of energy are sufficiently charged.

Distress alerts and procedures

21. The distress alert or distress call has absolute priority over all other transmissions. All stations which receive such signals are required by the Radio Regulations to immediately cease all transmissions capable of interfering with distress communications.

22. In the case of a distress affecting own ship, the radio operator designated as having primary responsibility for radiocommunications during distress incidents should immediately assume responsibility for following the procedures of the Radio Regulations and relevant ITU-R Recommendations.

23. On receiving a distress alert:

- .1 the radio operator on watch should alert the master and, if appropriate, the radio operator designated as having primary responsibility for radiocommunications during distress incidents; and
- .2 the radio operator designated as having primary responsibility for radiocommunications during distress incidents should evaluate the situation and immediately assume responsibility for following the procedures of the Radio Regulations and relevant ITU-R Recommendations.

#### Urgency messages

24. In cases of urgency affecting own ship, the radio operator designated as having responsibility for radiocommunications during distress incidents should immediately assume responsibility for following the procedures of the Radio Regulations and relevant ITU-R Recommendations.

25. In cases of communications relating to medical advice, the radio operator designated as having primary responsibility for radiocommunications during distress incidents should follow the procedures of the Radio Regulations and adhere to the conditions as published in the relevant international documentation (see paragraph 14.2) or as specified by the satellite service provider.

26. In cases of communications relating to medical transports, as defined in the Annex 1 to the Protocol additional to the Geneva Conventions of 12 August 1949 relating to the protection of victims of international armed conflicts (Protocol 1), the radio operator designated as having primary responsibility for radiocommunication during distress incidents should follow the procedures of the Radio Regulations.

27. On receiving an urgency message, the radio operator on watch should alert the master and, if appropriate, the radio operator designated as having primary responsibility for radiocommunications during distress incidents.

#### Safety messages

28. When a safety message is to be transmitted, the master and the radio operator on watch should follow the procedures of the Radio Regulations.

29. On receiving a safety message, the radio operator on watch should note its content and act in accordance with the master's instructions.

30. Bridge-to-bridge communications should be exchanged on VHF channel 13. Bridge-to-bridge communications are described as "Inter-ship Navigation Safety Communications" in the Radio Regulations.

#### Radio records

31. Additional entries in the radio log should be made in accordance with paragraphs 10, 12, 14, 17 and 33.

32. Unauthorized transmissions and incidents of harmful interference should, if possible, be identified, recorded in the radio log and brought to the attention of the Administration in compliance with the Radio Regulations, together with an appropriate extract from the radio log.

#### Battery maintenance

33. Batteries providing a source of energy for any part of the radio installation including those associated with uninterrupted power supplies are the responsibility of the radio operator designated as having primary responsibility for radiocommunications during distress incidents and should be:

- .1 tested on-load and off-load daily and, where necessary, brought up to the fully charged condition;
- .2 tested once per week by means of a hydrometer where practicable, or where a hydrometer cannot be used, by a suitable load test; and
- .3 checked once per month for the security of each battery and its connections and the condition of the batteries and their compartment or compartments.

The results of these tests should be recorded in the radio log.

#### PART 4 – GUIDANCE ON WATCHKEEPING IN PORT

(No provisions)

#### PART 5 – GUIDANCE ON PREVENTION OF DRUG AND ALCOHOL ABUSE

34. Drug and alcohol abuse directly affect the fitness and ability of a seafarer to perform watchkeeping duties. Seafarers found to be under the influence of drugs or alcohol should not be permitted to perform watchkeeping duties until they are no longer impaired in their ability to perform those duties.

35. Administrations should consider developing national legislation:
- .1 prescribing a maximum of 0.08% blood alcohol level (BAC) during watchkeeping duty as a minimum safety standard on their ships; and
  - .2 prohibiting the consumption of alcohol within 4 hours prior to serving as a member of a watch.

#### Drug and alcohol abuse screening programme guidelines

36. The Administration should ensure that adequate measures are taken to prevent alcohol and drugs from impairing the ability of watchkeeping personnel, and should establish screening programmes as necessary which:

- .1 identify drug and alcohol abuse;
  - .2 respect the dignity, privacy, confidentiality and fundamental legal rights of the individuals concerned; and
  - .3 take into account relevant international guidelines.
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De bepalingen van Deel A van de STCW-code zullen ingevolge punt 2, onderdeel 2, van resolutie 2 in werking treden op dezelfde wijze en op dezelfde datum als de in resolutie 1 vervatte wijzigingen van het Verdrag.

Uitgegeven de *achttiende* september 1996.

*De Minister van Buitenlandse Zaken,*

H. A. F. M. O. VAN MIERLO

## INHOUD

	BLZ.
A. TITEL	1
B. TEKST	1
C. VERTALING	1
D. PARLEMENT	1
E. BEKRACHTIGING	1
F. TOETREDING	1
G. INWERKINGTREDING	2
H. TOEPASSELIJKVERKLARING	2
J. GEGEVENS	2
<i>Verwijzingen</i>	2
<i>Wijziging van de Bijlage bij het Verdrag</i>	2
De Engelse en de Franse tekst van resolutie 1	4
De vertaling van resolutie 1	66
<i>STCW-code</i>	100
De Engelse tekst van resolutie 2	100