



MARINE ORDERS

Part 51

Fishing Vessels

Issue 1

Order No 1 of 1989

Pursuant to the Navigation (Orders) Regulations, I hereby make this order issuing the attached Marine Orders, Part 51, to come into operation on 1 May 1989.

P B Eccles
Delegate of the Minister
19 April 1989

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1 Interpretation

1.1 Preliminary

This Part shall be read and construed subject to Marine Orders, Part 1 (General) except that a definition contained in or referred to in Part 1 shall be disregarded if it is inconsistent with a definition in 1.2 of this Part.

1.2 Definitions

In this Part, unless the contrary intention appears, the following definitions apply: **approved** means approved by the Assistant Secretary;

Assistant Secretary means the person occupying the office of Assistant Secretary, Ship Safety Branch, in the Department;

Director means the person occupying the position of Director (Liaison), Marine Qualifications Section, in the Department, or in respect of any particular purpose under this Part, a person authorised by the Director for that purpose;

length, in relation to a fishing vessel, means 96 per cent of the total length on a waterline at 85 per cent of the least depth measured from the keel line, or as the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater, the waterline on which this length is measured being, in vessels designed with rake of keel, parallel to the designed waterline;

IMO means the International Maritime Organization;

valid, in relation to a certificate of qualification, means a certificate that is current, is not cancelled or under suspension, and that bears the signature of the holder.

2 Application

This Part applies to and in relation to an Australian fishing vessel on an overseas voyage.

3 Exemptions

The Assistant Secretary, the Chief Naval Architect or the Chief Marine Surveyor, being satisfied that compliance by a ship with a provision of this Part would be impracticable, unnecessary or unreasonable having regard to the

ship, its equipment and its intended voyage, may exempt that ship from compliance with such provision to the extent specified and subject to such conditions as that officer thinks fit.

4 Equivalentents

Where a provision of this Part requires that a particular fitting, material, appliance or apparatus, or type thereof, be fitted or carried in a ship, or any particular provision to be made in a ship, or that a procedure or arrangement be complied with, the Assistant Secretary, the Chief Naval Architect or the Chief Marine Surveyor, as appropriate, may allow any other fitting, material, appliance or apparatus, or type thereof, to be fitted or carried, or any other provision, procedure or arrangement to be made if that officer is satisfied that such fitting, material, appliance or apparatus, or type thereof, or that any particular provision, procedure or arrangement is at least as effective as that required by this Part.

5 Stability and subdivision

For the purpose of compliance with 3.2 of Marine Orders, Part 13 (Ship Stability and Subdivision), the subdivision shall be such that the requirements of subsection D of section 5 of the Uniform Shipping Laws Code, to the extent that they relate to Class 3 ships, are complied with.

6 Qualifications of crew

6.1 Competence

Notwithstanding 4.1 of Marine Orders, Part 3 (Seagoing Qualifications), a person is qualified for the purposes of section 16 of the Navigation Act to form part of the crew of a fishing vessel if the person:

- (a) in the case of a person undertaking the duties of skipper or officer in charge of a navigational watch of a fishing vessel of 24 metres in length or over, holds a valid certificate or like document evidencing, to the satisfaction of the Director, knowledge and experience consistent with Annex 2, 3, 4 or 5 to IMO Resolution A 539(13), as appropriate, set out in Appendix 1 of this Part;
- (b) in the case of a person undertaking the duties of skipper or officer in charge of a navigational watch of a fishing vessel of less than 24 metres in length, holds a valid certificate or like document evidencing, to the satisfaction of the Director, knowledge and experience consistent

with the Annex to IMO Resolution A.576(14), set out in Appendix 2 of this Part;

(c) in the case of a person undertaking the duties of chief engineer or second engineer of a fishing vessel powered by main propulsion machinery of 750 kW propulsion power or more, holds a valid certificate or like document evidencing, to the satisfaction of the Director, knowledge and experience consistent with the Annex to IMO Resolution A.623(15), set out in Appendix 3 of this Part:

(d) in any other case, produces evidence of knowledge and experience to the satisfaction of the Director and appropriate to the duties to be undertaken.

Note: *The Navigation (Orders) Regulations provide an avenue of appeal to the Administrative Appeals Tribunal.*

6.2 Health

Notwithstanding 3.1 of Marine Orders, Part 9 (Health - Medical Fitness), a person is permitted to form part of the crew of a fishing vessel if the person is in possession of a certificate signed during the preceding 2 years by a duly qualified medical practitioner attesting that the person is medically fit for the proposed duties.

Appendix 1

CERTIFICATION OF DECK OFFICERS ON VESSELS 24 METRES AND OVER

This Appendix sets out, for the purpose of 6.1 (a) of this Part, Annexes 2, 3, 4 and 5 of IMO Resolution A.539 (13).

ANNEX 2

RECOMMENDATION ON MINIMUM REQUIREMENTS FOR CERTIFICATION OF SKIPPERS ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN UNLIMITED WATERS

- 1 Every skipper on a fishing vessel of 24 metres in length and over operating in unlimited waters should hold an appropriate certificate.
- 2 Every candidate for certification should:
 - .1 satisfy the Administration as to medical fitness, particularly regarding eyesight and hearing;
 - .2 meet the requirements for certification as an officer in charge of a navigational watch on fishing vessels of 24 metres in length and over and have approved seagoing service of not less than 12 months as an officer in charge of a navigational watch on fishing vessels of not less than 12 metres in length. However, an Administration may allow the substitution of a period of approved seagoing service as an officer in charge of a navigational watch on merchant ships;
 - .3 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this recommendation. A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for issue of the Convention certificate.

Appendix to Annex 2

MINIMUM KNOWLEDGE REQUIRED FOR CERTIFICATION OF SKIPPERS ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN UNLIMITED WATERS

1 The syllabus given below is compiled for examination of candidates for certification as skippers on fishing vessels of 24 metres in length and over operating in unlimited waters. Bearing in mind that the skipper has ultimate responsibility for the safety of the vessel and its crew at all times including during fishing operations, examination should be designed to test the candidate's ability to assimilate all available information that affects the safety of the vessel and its crew in accordance with the syllabus.

2 Navigation and position determination

2.1 Voyage planning and navigation for all conditions:

- .1 by acceptable methods of determining ocean tracks;
- .2 within restricted waters;
- .3 where applicable, in ice;
- .4 in restricted visibility;
- .5 where applicable, in traffic separation schemes;
- .6 in areas affected by tides or currents.

2.2 Position determination:

- .1 by celestial observations;
- .2 by terrestrial observations, including the ability to use bearings from landmarks and aids to navigation such as lighthouses, beacons and buoys in conjunction with appropriate charts, notices to mariners and other publications to assess the accuracy of the resulting position fix;
- .3 using, to the satisfaction of the Administration, modern ship electronic navigational aids as provided in fishing vessels, with specific reference to knowledge of their operating principles, limitations, sources of error, detection of misrepresentation of information and methods of correction to obtain accurate position fixing.

3 Watchkeeping

3.1 Demonstrate thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, including those Annexes concerned with safe navigation.

3.2 Demonstrate knowledge of Recommended Basic Principles to be Observed in Keeping a Navigational Watch on Board Fishing Vessels.

4 Radar equipment

4.1 Demonstrate in conjunction with the use of radar simulator or, when not available, manoeuvring board, knowledge of the fundamentals of radar and ability in the operation and use of radar, and in the interpretation and analysis of information obtained from the equipment, including:

- .1 factors affecting performance and accuracy;
- .2 setting up and maintaining displays;
- .3 detection of misrepresentation of information, false echoes, sea return, etc.;
- .4 range and bearing;
- .5 identification of critical echoes;
- .6 course and speed of other ships;
- .7 time and distance of closest approach of crossing, meeting or overtaking ships;
- .8 detecting course and speed changes of other ships;
- .9 effect of changes in own vessel's course or speed or both;
- .10 application of the International Regulations for Preventing Collisions at Sea, 1972.

5 Magnetic and gyro-compasses

5.1 Ability, using terrestrial and celestial means, to determine and apply the errors of the magnetic and gyro-compasses.

6 Meteorology and oceanography

- 6.1 Knowledge of meteorological instruments and their application.
- 6.2 Ability to apply meteorological information available.
- 6.3 Knowledge of characteristics of various weather systems, including, at the discretion of the Administration, tropical revolving storms and avoidance of storm centres and the dangerous quadrants.
- 6.4 Knowledge of weather conditions liable to endanger the vessel including, at the discretion of the Administration, fog, icebergs, ice accretion.
- 6.5 Ability to use appropriate navigational publications on tides and currents.
- 6.6 Ability to calculate times and heights of high and low water and estimate the direction and rate of tidal streams.

7 Fishing vessel manoeuvring and handling

7.1 Manoeuvring and handling of a fishing vessel in all conditions including the following:

- .1 berthing, unberthing and anchor work under various conditions of wind and tide;
- .2 manoeuvring in shallow water;
- .3 management and handling of fishing vessels in heavy weather, including appropriate speed, particularly in following and quartering seas, assisting a ship or aircraft in distress, means of keeping an unmanageable vessel out of a sea trough, lessening drift and use of oil;
- .4 manoeuvring the vessel during fishing operations with special regard to factors which could adversely affect the vessel's safety during such operations;
- .5 precautions in manoeuvring for launching boats or liferafts in bad weather,
- .6 methods of taking on board survivors from lifeboats or liferafts;
- .7 where applicable, practical measures to be taken when navigating in ice or conditions of ice accretion on board the vessel;

.8 the use of, and manoeuvring in, traffic separation schemes;

.9 the importance of navigating at reduced speed to avoid damage caused by own vessel's bow or stern wave;

.10 transferring fish at sea to factory ships or other vessels.

8 Fishing vessel construction and stability

8.1 General knowledge of the principal structural members of a vessel and the proper names of the various parts.

8.2 Knowledge of the theories and factors affecting trim and stability and measures necessary to preserve safe trim and stability.

8.3 Demonstrate use of stability and trim tables and pre-calculated operating conditions.

8.4 Knowledge of effects of free surfaces and ice accretion, where applicable.

8.5 Knowledge of effects of water on deck

8.6 Knowledge of the significance of weathertight and watertight integrity.

9 Catch handling and stowage

9.1 The stowage and securing of catch on board vessels, including fishing gear.

9.2 Loading and discharging operations, with special regard to heeling moments from gear and catch.

10 Fishing vessel power plants

10.1 Operating principles of marine power plants in fishing vessels.

10.2 Vessel's auxiliary machinery.

10.3 General knowledge of marine engineering terms.

11 Fire prevention and fire-fighting appliances

11.1 Organization of fire drills.

11.2 Classes and chemistry of fire.

11.3 Fire-fighting systems.

11.4 Attendance at an approved fire-fighting course.

11.5 Knowledge of provisions concerning fire-fighting equipment.

12 Emergency procedures

12.1 Precautions when beaching a vessel.

12.2 Action to be taken prior to, and after, grounding.

12.3 Action to be taken when the gear becomes fast to the ground or other obstruction.

12.4 Floating a grounded vessel, with and without assistance.

12.5 Action to be taken following a collision.

12.6 Temporary plugging of leaks.

12.7 Measures for the protection and safety of crew in emergencies.

12.8 Limiting damage and salving the vessel following a fire or explosion.

12.9 Abandoning ship.

12.10 Emergency steering, rigging and use of jury steering and the means of rigging a jury rudder, where practicable.

12.11 Rescuing persons from a ship in distress or from a wreck.

12.12 Man-overboard procedures.

12.13 Towing and being towed.

13 Medical care

13.1 Knowledge of first aid

13.2 Knowledge of procedures for obtaining medical advice by radio.

13.3 A thorough knowledge of the use of the following publications:

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- .1 International Medical Guide for Ships or equivalent national publications;
 - .2 Medical section of the International Code of Signals.

14 Maritime law

14.1 A knowledge of international maritime law as embodied in the international agreements and conventions as they affect the specific obligations and responsibilities of the skipper, particularly those concerning safety and the protection of the marine environment. Particular regard should be paid to the following subjects:

- .1 certificates and other documents required to be carried on board fishing vessels by international conventions. how they may be obtained and the period of their legal validity;
- .2 responsibilities under the relevant requirements of the Torremolinos International Convention for the Safety of Fishing Vessels, 1977;
- .3 responsibilities under the relevant requirements of Chapter V of the International Convention for the Safety of Life at Sea, 1974;
- .4 responsibilities under international conventions for the prevention of pollution from ships;
- .5 maritime declarations of health; the requirements of international health regulations;
- .6 responsibilities under the Convention on the International Regulations for preventing Collisions at Sea. 1972;
- .7 responsibilities under other international instruments affecting the safety of the ship and crew.

14.2 The extent of knowledge of national maritime legislation is left to the discretion of the Administration but should include national arrangements for implementing applicable international agreements and conventions.

15 English language

15.1 Adequate knowledge of the English language enabling the skipper to use charts and other nautical publications, to understand meteorological

information and measures concerning the vessel's safety and operation and to express himself clearly in his communications with other ships or coast stations. Ability to understand and use the IMO Standard Marine Navigational Vocabulary.

16 Communications

16.1 Ability to transmit and receive messages by Morse light and to use the International Code of Signals; where the Administration has examined candidates in these subjects at lower levels of certification, they may have the option of not re-examining in these subjects.

16.2 Knowledge of procedures used in radiotelephone communication and ability to use radiotelephone equipment, in particular with respect to distress, urgency, safety and navigational messages.

16.3 Knowledge of the adverse effect of misuse of the radiotelephone equipment.

16.4 Where appropriate, a knowledge of the procedures for emergency distress signal by radiotelegraphy as prescribed in the Radio Regulations.

17 Life-saving

17.1 A thorough knowledge of the regulations on life-saving appliances and on emergency procedures, musters and drills (the Torremolinos International Convention for the Safety of Fishing Vessels, 1977), organization of abandon ship drills, lifeboats, liferafts and other life-saving equipment.

18 Search and rescue

18.1 A thorough knowledge of the IMO Merchant Ship Search and Rescue Manual (MERSAR).

19 The FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels

19.1 Knowledge of Part A.

20 Methods for demonstration of proficiency

20.1 Navigation.

20.1.1 Demonstrate the use of sextant, pelorus, azimuth mirror, ability to plot position, course, bearings.

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20.2 Convention on the International Regulations for Preventing Collisions at Sea, 1972

20.2.1 Use of small models displaying proper signals or lights, or navigation light simulator.

20.2.2 Manoeuvring board or radar simulator.

20.3 Radar.

20.3.1 Radar simulator or manoeuvring board.

20.4 Fire-fighting.

20.4.1 Attendance at an approved fire-fighting course.

20.5 Communications.

20.5.1 Visual and vocal practical test.

20.6 Life-saving

20.6.1 Handling of life-saving appliances, including the donning of lifejackets.

ANNEX 3

**RECOMMENDATION ON MINIMUM REQUIREMENTS FOR
CERTIFICATION OF OFFICERS IN CHARGE OF A NAVIGATIONAL
WATCH ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER
OPERATING IN UNLIMITED WATERS**

1 Every officer in charge of a navigational watch on a fishing vessel of 24 metres in length and over operating in unlimited waters should hold an appropriate certificate.

2 Every candidate for certification should:

.1 be not less than 18 years of age;

.2 satisfy the Administration as to medical fitness, particularly regarding eyesight and hearing;

.3 have approved seagoing service in the deck department on fishing vessels of not less than 24 months: however, the Administration may allow the substitution of:

.3.1 a short period of special training which is at least equivalent in value to the period of the required seagoing service it replaces;

.3.2 a period of approved seagoing service on merchant ships;

.4 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation. A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for issue of the Convention certificate.

Appendix to Annex 3

MINIMUM KNOWLEDGE REQUIRED FOR CERTIFICATION OF OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN UNLIMITED WATERS

1 The syllabus given below is compiled for examination of candidates for certification as officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in unlimited waters.

2 Celestial navigation

Ability to use a celestial body to determine compass errors.

3 Terrestrial and coastal navigation

3.1 Ability to determine the vessel position by the use of:

.1 landmarks;

.2 aids to navigation, including lighthouses, beacons and buoys;

.3 dead reckoning, taking into account winds, tides, currents and speed by propeller revolutions per minute and by log.

3.2 Thorough knowledge of and ability to use navigational charts and publications such as sailing directions, tide tables, notices to mariners and radio navigational warnings.

4 Radar navigation

4.1 Knowledge of the fundamentals of radar and ability in the operation and use of radar and ability to interpret and analyse information obtained by use of radar including the following:

- .1 factors affecting performance and accuracy;
- .2 setting up and maintaining displays;
- .3 detection of misrepresentation of information, false echoes, sea return, etc.;
- .4 range and bearing;
- .5 identification of critical echoes;
- .6 course and speed of other ships;
- .7 time and distance of closest approach of crossing, meeting or overtaking ships;
- .8 detecting course and speed changes of other ships;
- .9 effect of changes in own vessel's course or speed or both;
- .10 application of the International Regulations for Preventing Collisions at Sea, 1972.

5 Watchkeeping

5.1 Demonstrate thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, including those Annexes concerned with safe navigation.

5.2 Demonstrate knowledge of the content of the Recommended Basic Principles to be Observed in Keeping a Navigational Watch on Board Fishing Vessels.

6 Electronic systems of position fixing and navigation

6.1 Ability to determine the ship's position by the use of electronic navigational aids to the satisfaction of the Administration.

7 Radio direction-finders and echo-sounders

7.1 Ability to operate the equipment and apply the information correctly.

8 Meteorology

8.1 Knowledge of shipborne meteorological instruments and their application.

8.2 Knowledge of the characteristics of the various weather systems.

9 Magnetic and gyro-compasses

9.1 Care and use of compasses and associated equipment.

10 Radiotelephony and visual signalling

.1 Ability to transmit and receive messages by Morse light.

.2 Ability to use the International Code of Signals.

.3 Knowledge of procedures used in radiotelephone communications and ability to use radiotelephone equipment, in particular with respect to distress, urgency, safety and navigational messages.

.4 Knowledge of the adverse effect of misuse of radiotelephone equipment.

11 Fire prevention and fire-fighting appliances

.1 Knowledge of classes and chemistry of fire.

.2 Knowledge of fire-fighting systems and procedures.

.3 Attendance at an approved fire-fighting course.

12 Life-saving

Ability to direct abandon ship drills and knowledge of the operations of life-saving appliances and their equipment, including portable radio apparatus. Survival at sea techniques including attendance at an approved survival at sea course.

13 Emergency procedures and safe working practices for fishermen

Knowledge of the items listed in the appropriate sections of the FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels, part A, and in chapter VIII of the Annex to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977.

14 Fishing vessels manoeuvring and handling

Basic knowledge of manoeuvring and handling a fishing vessel, including the following:

.1 berthing, unberthing, anchoring and manoeuvring alongside other vessels at sea;

.2 manoeuvring during fishing operations with special regard to factors which could adversely affect the vessel's safety during such operations;

.3 effects of wind and tide/current on ship handling;

.4 manoeuvring in shallow water;

.5 management of fishing vessels in heavy weather;

.6 rescuing persons and assisting a ship or aircraft in distress;

.7 towing and being towed;

.8 man overboard procedure;

.9 where applicable, practical measures to be taken when navigating in ice or in conditions of ice accretion on board the vessel.

15 Fishing vessels construction

General knowledge of the principal structural members of a vessel.

16 Vessel stability

Knowledge of factors affecting stability and the use of stability information.

17 Catch handling and stowage

Knowledge of safe handling and stowage of catch and the effect of these factors on the safety of these factors on the safety of the vessel.

18 English language

Adequate knowledge of the English language enabling the officer to use charts and other nautical publications, to understand meteorological information and messages concerning ship's safety and operation. Ability to understand and use the IMO Standard Marine Navigational Vocabulary.

19 Medical aid

Knowledge of first aid procedures. Practical application of medical guides and advice by radio.

20 Search and rescue

Adequate knowledge of search and rescue procedures based on the IMO Merchant Ship Search and Rescue Manual (MERSAR).

21 Prevention of pollution of the marine environment

Knowledge of the precautions to be observed to prevent pollution of the marine environment.

ANNEX 4

RECOMMENDATION ON MINIMUM REQUIREMENTS FOR CERTIFICATION OF SKIPPERS ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN LIMITED WATERS

1 Every skipper on a fishing vessel of 24 metres in length and over operating in limited waters should, unless he holds a certificate issued in compliance with Annex 2, hold an appropriate certificate issued in compliance with at least the provisions of this Annex.

2 Every candidate for certification should:

.1 satisfy the Administration as to medical fitness, particularly regarding eyesight and hearing;

.2 meet the requirements for certification as an officer in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters and have approved seagoing service as an officer

in charge of a navigational watch on fishing vessels of not less than 12 metres in length. However, an Administration may allow the substitution of a period of approved seagoing service as an officer in charge of a navigational watch on merchant ships;

.3 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation.

The Administration, bearing in mind the effect on the safety of all ships and structures which may be operating in the same limited waters, should consider the limited waters it has defined in accordance with Annex 1 to this resolution and determine any additional material that should be included in the examination or examinations.

A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for the issue of the Convention certificate.

Appendix to Annex 4

MINIMUM KNOWLEDGE REQUIRED FOR CERTIFICATION OF SKIPPERS ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN LIMITED WATERS

1 The syllabus given below is compiled for examination of candidates for certification as skippers on fishing vessels of 24 metres in length and over operating in limited waters. Bearing in mind that the skipper has ultimate responsibility for the safety of the vessel and its crew at all times including during fishing operations, examination should be designed to test the candidate's ability to assimilate all available information that affects the safety of the vessel and its crew in accordance with the syllabus.

2 Navigation and position determination

2.1 Voyage planning and navigation for all conditions:

- .1 by acceptable methods of determining tracks;
- .2 within restricted waters;

- .3 where applicable, in ice;
- .4 in restricted visibility;
- .5 where applicable, in traffic separation schemes;
- .6 in areas affected by tides or currents.

2.2 Position determination

.1 by terrestrial observations, including the ability to use bearings from landmarks and aids to navigation such as lighthouses, beacons and buoys in conjunction with appropriate charts, notices to mariners and other publications and assessment of the accuracy of the resulting position fix;

.2 using, to the satisfaction of the Administration, modern ship electronic navigational aids as provided in the fishing vessels concerned.

3 Watchkeeping

3.1 Demonstrate thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, including those Annexes concerned with safe navigation.

3.2 Demonstrate knowledge of Recommended Basic Principles to be Observed in Keeping a Navigational Watch on Board Fishing Vessels.

4 Radar equipment

4.1 The Administration should decide whether or not to incorporate the radar syllabus below in the general requirements for certification of skippers. If the Administration decides not to include the syllabus in the general requirements, it should ensure that the syllabus is taken into account for the purposes of certification of skippers serving on vessels fitted with radar equipment and plying within limited waters.

4.2 Knowledge of the fundamentals of radar and ability in the operation and use of radar, and in the interpretation and analysis of information obtained from the equipment, including:

- .1 factors affecting performance and accuracy;
- .2 setting up and maintaining displays;

- .3 detection of misrepresentation of information, false echoes, sea return, etc.;
- .4 range and bearing;
- .5 identification of critical echoes;
- .6 course and speed of other ships;
- .7 time and distance of closest approach of crossing, meeting or overtaking ships;
- .8 detecting course and speed changes of other ships;
- .9 effect of changes in own vessel's course or speed or both;
- .10 application of the International Regulations for Preventing Collisions at Sea, 1972.

5 Compasses

- 5.1 Ability to determine and apply compass errors.

6 Meteorology and oceanography

- 6.1 Knowledge of meteorological instruments and their application.
- 6.2 Ability to apply meteorological information available.
- 6.3 Knowledge of characteristics of various weather systems affecting the limited waters concerned, at the discretion of the Administration.
- 6.4 Knowledge of weather conditions affecting the limited waters concerned liable to endanger the vessel, at the discretion of the Administration.
- 6.5 Where applicable, ability to use appropriate navigational publications on tides and currents.

7 Fishing vessel manoeuvring and handling

- 7.1 Manoeuvring and handling of a fishing vessel in all conditions including the following:
 - .1 berthing, unberthing and anchor work under various conditions of wind and tide;

- .2 manoeuvring in shallow water;
- .3 management and handling of fishing vessels in heavy weather, including appropriate speed, particularly in following and quartering seas, assisting a ship or aircraft in distress, means of keeping an unmanageable vessel out of a sea trough, lessening drift and use of oil;
- .4 manoeuvring the vessel during fishing operations with special regard to factors which could adversely affect the vessel's safety during such operations;
- .5 precautions in manoeuvring for launching boats or liferafts in bad weather;
- .6 methods of taking on board survivors from lifeboats or liferafts;
- .7 where applicable, practical measures to be taken when navigating in ice or conditions of ice accretion on board the vessel:
- .8 where applicable, the use of, and manoeuvring in, traffic separation schemes;
- .9 the importance of navigating at reduced speed to avoid damage caused by own vessel's bow or stern wave:
- .10 transferring fish at sea to factory ships or other vessels.

8 Fishing vessel construction and stability

- 8.1 General knowledge of the principal structural members of a vessel and the proper names of the various parts.
- 8.2 Knowledge of the theories and factors affecting trim and stability and measures necessary to preserve safe trim and stability.
- 8.3 Demonstrate use of stability information as supplied to fishing vessels.
- 8.4 Where applicable, knowledge of effects of free surfaces and ice accretion.
- 8.5 Knowledge of effects of water on deck.
- 8.6 Knowledge of the significance of weathertight and watertight integrity.

9 Catch handling and stowage

9.1 The stowage and securing of catch on board vessels, including fishing gear.

9.2 Loading and discharging operations, with special regard to heeling moments from gear and catch.

10 Fishing vessel power plants

10.1 Operating principles of marine power plants in fishing vessels.

10.2 Vessel's auxiliary machinery.

10.3 General knowledge of marine engineering terms.

11 Fire prevention and fire-fighting appliances

11.1 Organization of fire drills.

11.2 Classes and chemistry of fire.

11.3 Fire-fighting systems.

11.4 Attendance at an approved fire-fighting course.

11.5 Knowledge of provisions concerning fire-fighting equipment.

12 Emergency procedures

12.1 Precautions when beaching a vessel.

12.2 Action to be taken prior to, and after, a grounding.

12.3 Action to be taken when the gear becomes fast to the ground or other obstruction.

12.4 Floating a grounded vessel, with and without assistance.

12.5 Action to be taken following a collision.

12.6 Temporary plugging of leaks.

12.7 Measures for the protection and safety of crew in emergencies.

12.8 Limiting damage and salvaging the vessel following a fire or explosion.

12.9 Abandoning ship.

12.10 Emergency steering, rigging and use of jury steering and the means of rigging a jury rudder, where practicable.

12.11 Rescuing persons from a ship in distress or from a wreck.

12.12 Man-overboard procedures.

12.13 Towing and being towed.

13 Medical care

13.1 Knowledge of first aid.

13.2 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 the vessel.

14 Maritime law

14.1 Taking into account the limited waters as defined by the Administration, a knowledge of international maritime law as embodied in the international agreements and conventions as they affect the specific obligations and responsibilities of the skipper in the waters concerned, particularly those related to safety and the protection of the marine environment.

14.2 The extent of knowledge of national maritime legislation is left to the discretion of the Administration but should include national arrangements for implementing applicable international agreements and conventions.

15 Communications

15.1 Knowledge of radiotelephony and visual signalling to the extent required by the Administration.

15.2 Knowledge of the adverse effect of misuse of the radiotelephone equipment.

16 Life-saving

16.1 Knowledge of life-saving appliances provided on fishing vessels. Organization of abandon ship drills and the use of the equipment.

17 Search and rescue

17.1 Knowledge of search and rescue procedures.

18 The FAO/LO/IMO Code of Safety for Fishermen and Fishing Vessels, Part A

18.1 Knowledge of such sections as may be required by the Administration.

19 Methods for demonstration of proficiency

19.1 The Administration should prescribe appropriate methods for demonstration of proficiency in relevant requirements of this appendix.

ANNEX 5

RECOMMENDATION ON MINIMUM REQUIREMENTS FOR CERTIFICATION OF OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN LIMITED WATERS

1 Every officer in charge of a navigational watch on a fishing vessel of 24 metres in length and over operating in limited waters should, unless he holds a certificate issued in compliance with Annex 3, hold an appropriate certificate issued in compliance with at least the provisions of this Annex.

2 Every candidate for certification should:

.1 be not less than 18 years of age;

.2 satisfy the Administration as to medical fitness, particularly regarding eyesight and hearing;

.3 have approved seagoing service in the deck department on fishing vessels of not less than 24 months; however, the Administration may allow the substitution of:

.3.1 a short period of special training which is at least equivalent in value to the period of the required seagoing service it replaces;

.3.2 a period of approved seagoing service on merchant ships;

.4 have passed an appropriate examination or examinations to the satisfaction of the Administration. Such examination or examinations should include the material set out in the appendix to this Recommendation. A candidate for examination who holds a valid certificate of competency issued in accordance with the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978

need not be re-examined in those subjects listed in the appendix which were passed at a higher or equivalent level for the issue of the Convention certificate.

Appendix to Annex 5

MINIMUM KNOWLEDGE REQUIRED FOR CERTIFICATION OF OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH ON FISHING VESSELS OF 24 METRES IN LENGTH AND OVER OPERATING IN LIMITED WATERS

1 The syllabus given below is compiled for examination of candidates for certification as officers in charge of a navigational watch on fishing vessels of 24 metres in length and over operating in limited waters.

2 Terrestrial and coastal navigation

2.1 Ability to determine the vessel's position by the use of:

- .1** landmarks;
- .2** aids to navigation, including lighthouses, beacons and buoys;
- .3** dead reckoning, taking into account winds, tides, currents and speed by propeller revolutions per minute and by log.

2.2 Thorough knowledge of and ability to use navigational charts and publications such as sailing directions, tide tables, notices to mariners and radio navigational warnings.

3 Radar navigation

3.1 The Administration should decide whether or not to incorporate the radar syllabus below in the general requirements for certification of officers in charge of a navigational watch. If the Administration decides not to include the syllabus in the general requirements, it should ensure that the syllabus is taken into account for purposes of certification of officers in charge of a navigational watch serving on vessels fitted with radar equipment and plying within limited waters.

3.2 Knowledge of the fundamentals of radar and ability in the operation and use of radar and ability to interpret and analyse information obtained by use of radar, including the following:

- .1** factors affecting performance and accuracy;

-
- .2 setting up and maintaining displays;
 - .3 detection of misrepresentation of information, false echoes, sea returns, etc.;
 - .4 range and bearing;
 - .5 identification of critical echoes;
 - .6 course and speed of other ships;
 - .7 time and distance of closest approach of crossing, meeting or overtaking ships;
 - .8 detecting course and speed changes of other ships;
 - .9 effect of changes in own vessel's course or speed or both;
 - .10 application of the International Regulations for Preventing Collisions at Sea, 1972.

4 Watchkeeping

4.1 Demonstrate thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea, 1972, including those Annexes concerned with safe navigation.

4.2 Demonstrate knowledge of the content of Recommended Basic Principles to be Observed in Keeping a Navigational Watch on Board Fishing Vessels.

5 Electronic systems of position fixing and navigation

5.1 Ability to determine the ship's position by the use of electronic navigational aids, where applicable, to the satisfaction of the Administration.

6 Meteorology

6.1 Knowledge of shipborne meteorological instruments and their application.

6.2 Knowledge of the characteristics of the various weather systems affecting the limited waters concerned.

7 Compasses

7.1 Ability to determine and apply compass errors.

8 Communications

8.1 Knowledge of radiotelephony and visual signalling to the extent required by the Administration.

8.2 Knowledge of the adverse effect of misuse of radiotelephone equipment.

9 Fire-fighting

9.1 Knowledge of fire prevention and use of fire-fighting appliances.

9.2 Attendance at an approved fire-fighting course.

10 Life-saving

10.1 Knowledge of life-saving appliances provided on fishing vessels. Organization of abandon ship drills and the use of the equipment.

10.2 Attendance at an approved survival at sea course.

11 Emergency procedures and safe working practices for fishermen

11.1 Knowledge of the items listed in the appropriate sections of the FAO/ILO/IMO Code of Safety for Fishermen and Fishing Vessels, part A, and in chapter VIII of the Annex to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977.

12 Fishing vessels manoeuvring and handling

12.1 Basic knowledge of manoeuvring and handling a fishing vessel, including the following:

.1 berthing, unberthing, anchoring and manoeuvring alongside other vessels at sea;

.2 manoeuvring during fishing operations with special regard to factors which could adversely affect the vessel's safety during such operations;

.3 effects of wind and tide/current on ship handling;

.4 manoeuvring in shallow water;

-
- .5 management of fishing vessels in heavy weather;
 - .6 rescuing persons and assisting a ship or aircraft in distress;
 - .7 towing and being towed;
 - .8 man overboard procedure;
 - .9 where applicable, practical measures to be taken when navigating in ice or in conditions of ice accretion on board the vessel.

13 Vessel stability

13.1 Knowledge of factors affecting stability and the use of stability information.

14 Catch handling

14.1 Knowledge of safe handling and stowage of catch and the effect of these factors on the safety of the vessel.

15 Fishing vessels construction

15.1 General knowledge of the principal structural members of a vessel.

16 Medical aid

16.1 Knowledge of first aid procedures. Practical application of medical guides and advice by radio.

17 Search and rescue

17.1 Knowledge of search and rescue procedures.

18 Prevention of pollution of the marine environment

18.1 Knowledge of the precautions to be observed to prevent pollution of the marine environment.

ADDENDUM TO APPENDIX 1

Note: A certificate shown in column 1 of the following Table, being a certificate issued in accordance with the Uniform Shipping Laws Code, is a certificate evidencing, to the satisfaction of the Director, knowledge and experience consistent with such Annex to Resolution A.539(13) as is shown in column 2, subject to any limitations shown in column 3.

<i>column 1</i>	<i>column 2</i>	<i>column 3</i>
Certificate	Annex	Limitation
Master Class 3 (Fishing), Skipper Grade 1	Annex 2	Master of vessels less than 80 metres in length
Master Class3 (Fishing), Skipper Grade 1	Annexes 3, 4 & 5	Nil
Master Class 4 (Fishing), Skipper Grade 2	Annex 4	Master of vessels less than 80 metres in length, O/S (100 miles) Master of vessels less than 35 metres in length, ACMW
Master Class 4 (Fishing), Skipper Grade 2	Annex 5	Mate on vessels less than 80 metres in length, ACMW
Master Class 5 (Fishing), Skipper Grade 3	Annex 5	Mate on vessels less than 80 metres in length, O/S (100 miles)

In the above table:

ACMW means Australian Coastal and Middle Waters operational area; and

O/S means Off-shore operational area.

APPENDIX 2**CERTIFICATION OF DECK OFFICERS ON VESSELS LESS THAN 24 METRES**

This Appendix sets out, for the purpose of provision 6.1 (b), the Annex to IMO Resolution A.576(14).

ANNEX**RECOMMENDATION ON STANDARDS FOR SKIPPERS AND OFFICERS IN CHARGE OF A NAVIGATIONAL WATCH ON FISHING VESSELS OF LESS THAN 24 METRES IN LENGTH OPERATING IN UNLIMITED AND LIMITED WATERS**

1 So far as it is reasonable and practicable to do so, having regard to the size of vessels concerned, the Administration should make provisions for skippers and officers in charge of a navigational watch on fishing vessels of less than 24 m in length to have adequate knowledge, as appropriate, for the safe operation of such vessels, bearing in mind the safety of all ships which may be operating in the same waters and the need for a safe navigational watch to be kept on the fishing vessels concerned.

2 Unless the Administration is satisfied that the size of the fishing vessel and the conditions of its voyage would render it unreasonable or impracticable, every skipper and officer in charge of a navigational watch serving on a fishing vessel of less than 24 m in length operating in unlimited waters should hold a certificate recognized by the Administration.

3 In considering the requirements for skippers and officers in charge of a navigational watch on fishing vessels of less than 24 m in length, the Administration should *inter alia* take into account the need for sufficient knowledge of:

- .1 navigation;
- .2 International Regulations for Preventing Collisions at Sea;
- .3 compass;
- .4 communications;
- .5 fire prevention and fire-fighting appliances;

- .6 life saving;
- .7 emergency procedures;
- .8 vessel manoeuvring;
- .9 vessel stability;
- .10 meteorology;
- .11 small vessel power plants;
- .12 first aid;
- .13 search and rescue; and
- .14 prevention of pollution of the marine environment.

4 In addition, the Administration should take into account the need for skippers and officers in charge of a navigational watch on such vessels to have the ability to operate safely all navigational aids and equipment normally fitted aboard the vessels concerned.

ADDENDUM TO APPENDIX 2

Note: A certificate shown in column 1 of the following Table, being a certificate issued in accordance with the Uniform Shipping Laws Code, is a certificate evidencing, to the satisfaction of the Director, knowledge and experience consistent with the Annex to Resolution A.576(14), subject to any limitations shown in column 2.

<i>column 1</i> Certificate	<i>column 2</i> Limitation
Master Class 3 (Fishing), Skipper Grade 1	Nil
Master Class 4 (Fishing), Skipper Grade 2	ACMW
Master Class 5 (Fishing), Skipper Grade 3	Master, O/S (100 miles), Mate, ACMW

In the above table:

ACMW means Australian Coastal and Middle Waters operational area; and
O/S means Off-shore operational area.

APPENDIX 3**CERTIFICATION OF ENGINEER OFFICERS**

This Appendix sets out, for the purpose of provision 6.1 (c), the Annex to IMO Resolution A.623(15).

ANNEX**RECOMMENDATION ON MINIMUM REQUIREMENTS FOR
CERTIFICATION OF CHIEF ENGINEER OFFICERS AND SECOND
ENGINEER OFFICERS OF FISHING VESSELS POWERED BY MAIN
PROPULSION MACHINERY OF 750 kW PROPULSION POWER OR MORE**

- 1 Every chief engineer officer and second engineer officer serving on a seagoing fishing vessel powered by main propulsion machinery of 750 kW propulsion power or more should hold an appropriate certificate.
- 2 Every candidate for certification should:
 - .1 be not less than 18 years of age;
 - .2 satisfy the Administration as to medical fitness, including eyesight and hearing;
 - .3 for certification as second engineer officer, have not less than 12 months approved seagoing service in the engine-room on fishing vessels; however, this period may be reduced to not less than 6 months if the Administration requires special training which it considers to be equivalent to the approved seagoing service it replaces;
 - .4 for certification as chief engineer officer, have not less than 24 months approved seagoing service on fishing vessels of which not less than 12 months should be served while qualified to serve as second engineer officer;
 - .5 have attended an approved practical fire-fighting course; and
 - .6 have passed an appropriate examination to the satisfaction of the Administration. Such examination should include the material set out in the appendix to this Recommendation, except that the Administration may vary the requirements for examination and seagoing service for officers of fishing vessels engaged in voyages in limited waters bearing in mind the power of

the propulsion machinery and the effect on the safety of all fishing vessels which may be operating in the same waters.

3 The approved seagoing service prescribed in 2.3 and 2.4 may be replaced by approved seagoing service in the engine-room on merchant ships.

4 Training to achieve the necessary theoretical knowledge and practical experience should take into account relevant international regulations and recommendations.

5 The level of knowledge required under the different paragraphs of the appendix may be varied according to whether the certificate is being issued at chief engineer officer or second engineer officer level.

Appendix to the Annex

MINIMUM KNOWLEDGE REQUIRED FOR CERTIFICATION OF CHIEF ENGINEER OFFICERS AND SECOND ENGINEER OFFICERS OF FISHING VESSELS POWERED BY MAIN PROPULSION MACHINERY OF 750 kW PROPULSION POWER OR MORE

1 The syllabus given below is compiled for examination of candidates for certification as chief engineer officer or second engineer officer of fishing vessels powered by main propulsion machinery of 750 kW propulsion power or more. Bearing in mind that a second engineer officer should be in a position to assume the responsibilities of the chief engineer officer at any time, examination in these subjects should be designed to test the candidate's ability to assimilate all available information that affects the safe operation of the fishing vessel's machinery.

2 With respect to paragraphs 3.4 and 4.1 below, the Administration may omit knowledge requirements for types of propulsion machinery other than machinery installations for which the certificate to be awarded is to be valid. A certificate awarded on such a basis should not be valid for any category of machinery installation which has been omitted until the engineer officer proves to be competent in these items to the satisfaction of the Administration. Any such limitation should be stated in the certificate.

3 Every candidate should possess sufficient elementary theoretical knowledge to understand the basic principles involved in the following subjects:

FISHING VESSELS

- .1 combustion processes;
- .2 heat transmission;
- .3 mechanics and hydromechanics;
- .4 as appropriate:
 - .4.1 marine diesel engines;
 - .4.2 marine steam propulsion plant;
 - .4.3 marine gas turbines;
- .5 steering gear systems;
- .6 properties of fuels and lubricants;
- .7 properties of materials;
- .8 fire-extinguishing agents;
- .9 marine electrical equipment;
- .10 automation, instrumentation and control systems;
- .11 fishing vessel construction, including stability and damage control;
- .12 auxiliary systems; and
- .13 refrigeration systems.

4 Every candidate should possess adequate practical knowledge in at least the following subjects:

- .1 operation and maintenance of, as appropriate:
 - .1.1 marine diesel engines;
 - .1.2 marine steam propulsion plant;
 - .1.3 marine gas turbines;
- .2 operation and maintenance of auxiliary machinery systems, including steering gear systems;

- .3 operation, testing and maintenance of electrical and control equipment;
- .4 maintenance of catch handling equipment and deck machinery;
- .5 detection of machinery malfunction, location of faults and action to prevent damage;
- .6 organization of safe maintenance and repair procedures;
- .7 methods of, and aids for, fire prevention, detection and extinction;
- .8 regulations to be observed regarding operational or accidental pollution of the marine environment and methods and aids to prevent such pollution;
- .9 first aid related to injuries which might be expected in machinery spaces and use of first aid equipment;
- .10 functions and use of life-saving appliances;
- .11 methods of damage control with specific reference to action to be taken in the event of flooding of seawater into the engine-room; and
- .12 safe working practices.

5 Every candidate should possess a knowledge of international maritime law as embodied in international agreements and conventions as they affect the specific obligations and responsibilities of the engine department, particularly those concerning safety and the protection of the marine environment. The extent of knowledge of national maritime legislation is left to the discretion of the Administration but should include national arrangements for implementing international agreements and conventions.

6 Every candidate should possess a knowledge of personnel management, organization and training aboard fishing vessels.

Addendum to appendix 3

Note: A certificate shown in column 1 of the following Table, being a certificate issued in accordance with the Uniform Shipping Laws Code, is a certificate evidencing, to the satisfaction of the Director, knowledge and experience consistent with the Annex to Resolution A.623(15), subject to any limitations shown in column 2.

<i>column 1</i>	<i>column 2</i>
Certificate	Limitation
Engineer Class 1	Nil
Engineer Class 2	Nil
Engineer Class 3	Vessels less than 300()kW
Engineer Watchkeeper	Second Engineer on vessels less than 3000kW
Marine Engine Driver Grade 1	Second Engineer on vessels less than 3000kW, ACMW

In the above table:

kW means kW propulsion power;

ACMW means Australian Coastal and Middle Water operational area; and

O/S means Off-shore operational area.