

RESOLUTION A.481(XII)

*Adopted on 19 November 1981
Agenda item 10(b)*

PRINCIPLES OF SAFE MANNING

THE ASSEMBLY,

RECALLING Article 16(i) of the Convention on the Inter-Governmental Maritime Consultative Organization,

RECALLING FURTHER Article 29(a) of that Convention which requires the Maritime Safety Committee to consider, *inter alia*, the manning of sea-going ships from a safety standpoint,

NOTING that safe manning is a function of the number of qualified or experienced seafarers necessary for the safety of the ship, crew, passengers, cargo and property and for the protection of the marine environment,

RECOGNIZING the importance of the requirements of the pertinent instruments adopted by ILO, IMCO, ITU and WHO for maritime safety and protection of the marine environment and, in particular, the ILO Merchant Shipping (Minimum Standards) Convention, 1976 (No.147) and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978,

BEING AWARE that the ability of seafarers to maintain observance of these requirements is dependent upon their continued efficiency through conditions relating to training, hours of work and rest, occupational safety, health and hygiene and the proper provision of food,

BELIEVING that international acceptance of broad principles as a framework for administrations to determine the safe manning of ships would materially enhance maritime safety,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its forty-fourth session,

1. URGES Member Governments to take the necessary steps to ensure that every sea-going ship to which the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, applies carries on board at all times a document issued by the Administration specifying the minimum safe manning required for such ship and containing the information given in Annex 1 to this resolution;
2. URGES FURTHER that Member Governments, when exercising port State control functions under international conventions in force with respect to a foreign ship visiting their ports, should regard compliance with such a document as evidence that the ship is safely manned;
3. RECOMMENDS that, in establishing the minimum safe manning for each such ship, Administrations observe the following broad principles and take into account the guidelines set out in Annex 2 to the present resolution which provide the capability to:
 - (a) Maintain a safe navigational watch in accordance with Regulation II/1 of the 1978 STCW Convention and also maintain general surveillance of the ship;
 - (b) Moor and unmoor the ship effectively and safely;

- (c) Operate all watertight closing arrangements and maintain them in effective condition and also deploy a competent damage control party;
 - (d) Operate all on-board fire equipment and life-saving appliances, carry out such maintenance of this equipment as is required to be done at sea, and muster and disembark passengers, non-essential personnel and other crew members;
 - (e) Manage the safety functions of the ship when employed in a stationary or near-stationary mode at sea;
 - (f) Maintain a safe engineering watch at sea in accordance with Regulation III/1 of the 1978 STCW Convention and also maintain general surveillance of spaces containing main propulsion or auxiliary machinery;
 - (g) Operate and maintain in a safe condition the main propulsion and auxiliary machinery to enable the ship to overcome the foreseeable perils of the voyage;
 - (h) Maintain the safety arrangements and the cleanliness of all accessible spaces to minimize the risk of fire;
 - (i) Provide for medical care on board ship;
4. RECOMMENDS ALSO that, in applying such principles, Administrations take proper account of the existing ILO, IMCO, ITU and WHO instruments in force which deal with:
- (a) Training of seafarers;
 - (b) Certification of seafarers;
 - (c) Watchkeeping;
 - (d) Hours of work and rest;
 - (e) Occupational health and hygiene;
 - (f) Crew accommodation;
5. RECOMMENDS FURTHER that the following on-board functions, when applicable, should be taken into account;
- (a) On-going training requirements for all personnel including the operation and use of fire-fighting, emergency and life-saving equipment and watertight closing arrangements;
 - (b) Specialized training requirements for particular types of ships, e.g. oil, chemical and liquefied gas tankers;
 - (c) Encouragement of the carriage of entrant seafarers to allow them to gain the training and experience required by the 1978 STCW Convention;
 - (d) Proper provision of food;
 - (e) Need to undertake emergency duties and responsibilities;
6. INVITES the Maritime Safety Committee to keep this resolution under review.

ANNEX 1**CONTENTS OF MINIMUM SAFE MANNING DOCUMENT**

The following information should be stated in the document, in whatever form, which is issued by the Administration specifying minimum safe manning. If the language used is not English the information given should include a translation into English:

- .1 a clear statement of the ship's name, its port of registry and its distinctive number or letters;
- .2 a table showing the numbers and grades of the personnel required to be carried, together with any special conditions or other remarks;
- .3 a formal statement by the Administration that, having regard to the principles and guidelines set out in this resolution and in Annex 2, the ship named in the document is considered to be safely manned if, whenever it proceeds to sea, it carries not less than the numbers and grades of personnel shown in the document, subject to any special conditions stated therein;
- .4 a statement as to any limitations on the validity of the document by reference to particulars of the individual ship and the nature of service upon which it is engaged;
- .5 the date of issue and any expiry date of the document together with a signature for and the seal of the Administration.

ANNEX 2**GUIDELINES FOR THE APPLICATION OF PRINCIPLES OF SAFE MANNING****1 INTRODUCTION**

1.1 These Guidelines should be used in applying the basic principles of safe manning to ensure the safe operation of ships covered by Article III of the 1978 STCW Convention. This application may differ depending upon such factors as:

- .1 voyage description including trade or trades in which the ship is involved, length and nature of voyage, and waters;
- .2 number, size (kW) and type of main propulsion units and auxiliaries;
- .3 size of ship;
- .4 construction and technical equipment of ship.

1.2 These Guidelines are applicable only to masters and to officers and ratings in the deck and engine departments.*

* The mandatory requirements for the carriage of radio officers and radio telephone operators are contained in the SOLAS Conventions and the ITU Radio Regulations.

1.3 In applying these Guidelines an Administration should bear in mind that there should be a sufficient number of qualified personnel to meet peak work-load situations and conditions with due regard to the number of hours of shipboard duties and rest periods that may be assigned to a seafarer.

1.4 An Administration may retain or adopt arrangements which differ from the provisions herein recommended and which are especially adapted to technical developments and to special types of ships and trades. However, at all times the Administration should satisfy itself that the detailed manning arrangements ensure a degree of safety at least equivalent to that established by these guidelines.

2 BRIDGE WATCHKEEPING

Principle: The capability to maintain a safe navigational watch in accordance with Regulation II/1 of the 1978 STCW Convention and also to maintain general surveillance of the ship.

2.1 In addition to navigational and collision avoidance duties, the officer in charge of the navigational watch who is in effective control of the ship should exercise general surveillance over the ship and should take all possible precautions to avoid pollution of the marine environment. This surveillance will include, for example, the investigation of evidence of fire and unusual noises, security of cargo, general safety of crew members when working in exposed locations, the general watertight integrity of the ship and action in the event of man overboard.

2.2 The bridge watch should consist of at least one officer qualified to take charge of a navigational watch and at least one qualified or experienced seaman provided that:

- .1 the watch complies with the requirements of Regulation II/1 of the 1978 STCW Convention, particularly paragraphs 4 and 9;
- .2 when an automatic pilot is used, the helmsman may be released for other duties subject to the provisions of Regulation 19, Chapter V of the 1974 SOLAS Convention;
- .3 except in ships of limited size the provision of qualified deck officers should be such that it is not necessary for the master to keep regular watches;
- .4 except in ships of limited size a three watch system should be adopted.

2.3 Where the bridge watch consists of one officer and one seaman, there should be the capability to provide further assistance at any time if the officer of the watch requires additional help. Such assistance should be readily available and fit for duty.

3 MOORING AND UNMOORING

Principle: The capability to moor and unmoor the ship effectively and safely.

3.1 The number of persons required for mooring a ship varies from very few, in respect of a ship fitted with sophisticated mooring equipment, to a large number in ships where it is necessary to manhandle ropes and wires.

3.2 At each end of the ship there should be sufficient persons to enable them to accept and effectively secure a tug and to send away, tension and secure lines and backsprings. Any necessary operations should be capable of being performed at bow and stern simultaneously. All other moorings required are solely a function of time and not of additional manpower.

3.3 Where a ship is regularly trading to a port or ports where the mooring operation is known to be particularly exacting in terms of manpower, suitable provision of extra personnel should be made.

3.4 Details of any operations in which a ship is required to adopt a sophisticated mooring pattern involving the use of anchors should be clearly established. It will then be possible to identify simultaneous operations and enable adequate manpower to be provided for the peak workload.

3.5 If a ship is required to moor to another when both are underway, as in the case of some lightening operations, the workload involved should be analysed and manpower provided for the peak workload condition.

3.6 In cases where a number of variations of mooring procedures are required to be performed, or where any unusual or onerous operations may be contemplated, each should be evaluated in terms of the manpower necessary for its safe accomplishment.

4 WATERTIGHT INTEGRITY

Principle: The capability to operate all watertight closing arrangements and maintain them in effective condition and also to deploy a competent damage control party.

4.1 Assessment should commence with an examination of the ship's plans to identify the areas where the watertight integrity of the ship is effected by means of closing appliances.

4.2 The demands of each closing appliance or system of closing appliances should be evaluated in terms of the physical workload required for its operation during an emergency or with the onset of heavy weather.

4.3 A damage control party composed of assigned personnel with appropriate skills should be available to respond to emergencies involving damage or loss of watertight integrity.

5 SAFETY EQUIPMENT, MUSTERING AND DISEMBARKATION

Principle: The capability to operate all on-board fire equipment and life-saving appliances, to carry out such maintenance of this equipment as is required to be done at sea, and to muster and disembark passengers, non-essential personnel and other crew members.

5.1 The application of this principle varies in accordance with the diversity and range of equipment involved. The manpower requirement can be decided only by considering the workload involved in a particular ship.

5.2 Each ship should have an emergency organization which will include the allocation of personnel for fire parties, boat preparation parties and man overboard emergencies. A list of duties should be posted on board and the crew exercised in emergency drills in accordance with the requirements of the 1974 SOLAS convention.

5.3 In the case of ships carrying a large number of passengers in proportion to crew, the manpower required is usually dictated by emergency situations where passengers need to be mustered and disembarked in an orderly manner. This is dependent upon the internal arrangement of the ship, the equipment fitted, and the maximum number of persons involved. The most demanding phase in regard to manpower requirements is normally either the initial emergency phase or the abandon ship phase. Both phases should be carefully considered.

5.4 The master and all crew members have a duty to assist in any emergency affecting the ship or in rendering assistance to persons on other ships in distress.

6 STATIONARY OR NEAR-STATIONARY SHIPS

Principle: The capability to manage the safety functions of the ship when employed in a stationary or near-stationary mode at sea.

6.1 At present such ships are mainly concerned with offshore exploration and development activities where by the nature of their operations they may carry a large number of specialized personnel with limited knowledge of the maritime environment. It is important that such ships carry a nucleus of adequately trained marine crew to instruct the specialized personnel in the use of safety equipment and evacuation procedures and to assist in the event of an emergency.

6.2 Support services for specialized personnel and their particular requirements should be so arranged as to avoid making demands upon the marine crew, which are unrelated to safety.

6.3 All personnel carried on board should be organized and practised in the actions to be taken in typical emergency situations. Some of these emergency situations will involve their specialist activities.

7 ENGINEERING WATCHKEEPING

Principle: The capability to maintain a safe engineering watch at sea in accordance with Regulation III/1 of the 1978 STCW Convention and also to maintain general surveillance of spaces containing main propulsion and auxiliary machinery.

7.1 The designated duty engineer officer is in effective charge of the engineering watch and should exercise general surveillance over the main propulsion machinery, essential ship's equipment and systems necessary for the safe operation of the ship's main plant and auxiliary machinery, and avoidance of pollution of the marine environment.

7.2 The engineering watch should consist of not less than one duly qualified engineer officer and may include appropriate engine-room ratings; it should conform with the requirements of Regulation III/1 of the 1978 STCW Convention. In designating the number of personnel assigned to engineering watches, account should be taken of the following:

- .1 the number, size (kW) and type of the main propulsion and auxiliary units over which surveillance is to be maintained and the number of machinery spaces containing these units;
- .2 the adequacy of internal communication;
- .3 except in ships of limited propulsion power the provision of qualified engineer officers should be such that it is not necessary for the chief engineer to keep regular watches;
- .4 except in ships of limited propulsion power a three watch system should be adopted.

Watch arrangements on ships permitted to operate with a reduced manning level based upon automated or periodically unattended operation should be consistent with the approval permitting such operation.

7.3 The designated duty engineer officer or other engine room personnel should not be required to keep a watch in an engine room alone or enter the main machinery spaces alone, unless their safety can be confirmed to the navigating bridge at frequent intervals, either by means of a monitoring system or other equivalent method acceptable to the Administration.

8 OPERATION AND MAINTENANCE OF MACHINERY

Principle: The capability to operate the main propulsion and auxiliary machinery and maintain it in a safe condition to enable the ship to overcome the foreseeable perils of the voyage.

8.1 There should be a sufficient number of qualified personnel to:

- .1 operate the main propulsion machinery, essential ship's equipment and systems necessary for the safe operation of the ship's main plant and auxiliary machinery and to carry out routine maintenance of such machinery, equipment and systems;
- .2 meet the possible need to continue the safe operation of the ship for a limited period on a manually operated basis, in the event of an automation or instrumentation failure.

9 SAFETY ARRANGEMENTS IN MACHINERY SPACES

Principle: The capability to maintain the safety arrangements and the cleanliness of machinery spaces to minimize the risk of fire.

9.1 There should be a sufficient number of designated personnel available to ensure adequate cleanliness of machinery spaces.

9.2 Manning systems may exist whereby crew members, who are not permanently assigned to the engine room complement, are given training in certain engine room duties and work in the engine room for specified limited periods.

9.3 Such maintenance as is required to be done at sea should be carried out on engine room fire-fighting, fire detection and fire prevention equipment.