ASSEMBLY RESOLUTION A.1047(27)

PRINCIPLES OF MINIMUM SAFE MANNING

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO Article 28(a) of that Convention which requires the Maritime Safety Committee to consider, *inter alia*, the manning of seagoing ships from a safety standpoint,

NOTING that safe manning is a function of the number of qualified and experienced seafarers necessary for the safety and security 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 IMO instruments as well as those adopted by ILO, ITU and WHO relevant to maritime safety and protection of the marine environment,

MINDFUL of the provisions of SOLAS regulation V/14, as amended, with respect to the issue of an appropriate safe manning document or equivalent as evidence of minimum safe manning,

ALSO MINDFUL of the provisions of SOLAS chapter XI-2 and the International Ship and Port Facility Security (ISPS) Code relating to the security of ships and port facilities,

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, security and protection of the marine environment,

HAVING CONSIDERED the recommendation made by the Maritime Safety Committee at its eighty-eighth session,

1. ADOPTS the Principles of minimum safe manning, consisting of the Guidelines for the application of principles of safe manning, the Guidelines for determination of minimum safe manning, the Responsibilities in the application of principles of minimum safe manning, the Guidance on contents and model form of minimum safe manning document and the Framework for determining minimum safe manning, set out respectively in Annexes 1, 2, 3, 4 and 5 to the present resolution;

2. RECOMMENDS that Governments, in establishing the minimum safe manning for ships flying their countries' flag, observe the Principles set out in Annex 1 and the procedures as set out in Annex 5 and take into account the Guidelines set out in Annexes 2 and 3;

3. URGES Governments to ensure that minimum safe manning documents contain, as a minimum, the information set out in Annex 4;

4. URGES FURTHER Governments, when exercising port State control functions under international conventions in force with respect to foreign ships visiting their ports, to regard compliance with the minimum safe manning documents as evidence that such ships are safely manned;

5. REQUESTS the Maritime Safety Committee to keep this resolution under review;

6. REVOKES resolutions A.890(21) and A.955(23).

ANNEX 1

GUIDELINES FOR THE APPLICATION OF PRINCIPLES OF MINIMUM SAFE MANNING

1 Introduction

1.1 These Guidelines should be used in applying the principles of minimum safe manning set out in section 3 to ensure the safe operation of ships to which article III of the 1978 STCW Convention, as amended, applies, and the security of ships to which chapter XI-2 of the 1974 SOLAS Convention, as amended, applies, and for the protection of the marine environment.

1.2 The 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 Objectives

The objectives of these Guidelines are to ensure that a ship is sufficiently, effectively and efficiently manned to provide safety and security of the ship, safe navigation and operations at sea, safe operations in port, prevention of human injury or loss of life, the avoidance of damage to the marine environment and to property, and to ensure the welfare and health of seafarers through the avoidance of fatigue. These objectives can be achieved through the following:

.1 adoption of a goal-based approach;

.2 standard procedures for effective implementation; and

.3 effective enforcement.

3 Principles of minimum safe manning

3.1 The following principles should be observed in determining the minimum safe manning of a ship:

.1 the capability to:

.1 maintain safe navigational, port, engineering and radio watches in accordance with regulation VIII/2 of the 1978 STCW Convention, as amended, and also maintain general surveillance of the ship;

.2 moor and unmoor the ship safely;

.3 manage the safety functions of the ship when employed in a stationary or near-stationary mode at sea;

.4 perform operations, as appropriate, for the prevention of damage to the marine environment;

.5 maintain the safety arrangements and the cleanliness of all accessible spaces to minimize the risk of fire;

.6 provide for medical care on board ship;

.7 ensure safe carriage of cargo during transit;

.8 inspect and maintain, as appropriate, the structural integrity of the ship; and

.9 operate in accordance with the approved Ship's Security Plan; and

.2 the ability to:

.1 operate all watertight closing arrangements and maintain them in effective condition, and also deploy a competent damage control party;

.2 operate all onboard fire-fighting and emergency equipment and life-saving appliances, carry out such maintenance of this equipment as is required to be done at sea, and muster and disembark all persons on board; and

.3 operate the main propulsion and auxiliary machinery including pollution prevention equipment and maintain them in a safe condition to enable the ship to overcome the foreseeable perils of the voyage.

3.2 The following onboard functions, when applicable, should also be taken into account:

.1 ongoing training requirements for all personnel, including the operation and use of fire-fighting and emergency equipment, life-saving appliances and watertight closing arrangements;

.2 specialized training requirements for particular types of ships and in instances where crew members are engaged in shipboard tasks that cross departmental boundaries;

.3 provision of proper food and drinking water;

.4 need to undertake emergency duties and responsibilities; and

.5 need to provide training opportunities for entrant seafarers to allow them to gain the training and experience needed.

ANNEX 2

GUIDELINES FOR DETERMINATION OF MINIMUM SAFE MANNING

1.1 The minimum safe manning of a ship should be established taking into account all relevant factors, including the following:

.1 size and type of ship;

.2 number, size and type of main propulsion units and auxiliaries;

.3 level of ship automation;

.4 construction and equipment of the ship;

.5 method of maintenance used;

.6 cargo to be carried;

.7 frequency of port calls, length and nature of voyages to be undertaken;

.8 trading area(s), waters and operations in which the ship is involved;

.9 extent to which training activities are conducted on board;

.10 degree of shoreside support provided to the ship by the company;

.11 applicable work hour limits and/or rest requirements; and

.12 the provisions of the approved Ship's Security Plan.

1.2 The determination of the minimum safe manning of a ship should be based on performance of the functions at the appropriate level(s) of responsibility, as specified in the STCW Code, which include the following:

.1 navigation, comprising the tasks, duties and responsibilities required to:

.1 plan and conduct safe navigation;

.2 maintain a safe navigational watch in accordance with the requirements of the STCW Code;

.3 manoeuvre and handle the ship in all conditions; and

.4 moor and unmoor the ship safely;

.2 cargo handling and stowage, comprising the tasks, duties and responsibilities required to plan, monitor and ensure safe loading, stowage, securing, care during the voyage and unloading of cargo to be carried on the ship;

.3 operation of the ship and care for persons on board, comprising the tasks, duties and responsibilities required to:

.1 maintain the safety and security of all persons on board and keep life-saving, fire-fighting and other safety systems in operational condition;

.2 operate and maintain all watertight closing arrangements;

.3 perform operations, as appropriate, to muster and disembark all persons on board;

.4 perform operations, as appropriate, to ensure protection of the marine environment;

.5 provide for medical care on board the ship; and

.6 undertake administrative tasks required for the safe operation and the security of the ship;

.4 marine engineering, comprising the tasks, duties and responsibilities required to:

.1 operate and monitor the ship's main propulsion and auxiliary machinery and evaluate the performance of such machinery;

.2 maintain a safe engineering watch in accordance with the requirements of the STCW Code;

.3 manage and perform fuel and ballast operations; and

.4 maintain safety of the ship's engine equipment, systems and services;

.5 electrical, electronic and control engineering, comprising the tasks, duties and responsibilities required to:

.1 operate the ship's electrical and electronic equipment; and

.2 maintain the safety of the ship's electrical and electronic systems;

.6 radiocommunications, comprising the tasks, duties and responsibilities required to:

.1 transmit and receive information using the radio equipment of the ship;

.2 maintain a safe radio watch in accordance with the requirements of the ITU Radio Regulations and the 1974 SOLAS Convention, as amended; and

.3 provide radio services in emergencies; and

.7 maintenance and repair, comprising the tasks, duties and responsibilities required to carry out maintenance and repair work to the ship and its machinery, equipment and systems, as appropriate to the method of maintenance and repair used.

1.3 In addition to the factors and functions in paragraphs 1.1 and 1.2, the determination of the minimum safe manning should also take into account:

.1 the management of the safety, security and protection of the environment functions of a ship at sea when not under way;

.2 except in ships of limited size, the provision of qualified deck officers to ensure that it is not necessary for the master to keep regular watches by adopting a three-watch system;

.3 except in ships of limited propulsion power or operating under provisions for unattended machinery spaces, the provision of qualified engineer officers to ensure that it is not necessary for the chief engineer to keep regular watches by adopting a three-watch system;

.4 the maintenance of applicable occupational health and hygiene standards on board; and

.5 the provision of proper food and drinking water for all persons on board, as required.

1.4 In determining the minimum safe manning of a ship, consideration should also be given to:

.1 the number of qualified and other personnel required to meet peak workload situations and conditions, with due regard to the number of hours of shipboard duties and rest periods assigned to seafarers; and

.2 the capability of the master and the ship's complement to coordinate the activities necessary for the safe operation and for the security of the ship and for the protection of the marine environment.

ANNEX 3

RESPONSIBILITIES IN THE APPLICATION OF PRINCIPLES OF MINIMUM SAFE MANNING

1 Responsibilities of companies

1.1 The Administration may require the company responsible for the operation of the ship to prepare and submit its proposal for the minimum safe manning of a ship in accordance with a form specified by the Administration.

1.2 In preparing a proposal for the minimum safe manning of a ship, the company should apply the principles, recommendations and guidelines contained in this resolution and should be required to:

.1 make an assessment of the tasks, duties and responsibilities of the ship's complement required for its safe operation, for its security, for protection of the marine environment, and for dealing with emergency situations;

.2 ensure that fitness for duty provisions and record of hours are implemented;

.3 make an assessment of numbers and grades/capacities in the ship's complement required for its safe operation, for its security, for protection of the marine environment, and for dealing with emergency situations;

.4 prepare and submit to the Administration a proposal for the minimum safe manning based upon the assessment of the numbers and grades/capacities in the ship's complement required for its safe operation, for its security and for protection of the marine environment, justifying the proposal by explaining how the proposed ship's complement will deal with emergency situations, including the evacuation of passengers, where necessary;

.5 ensure that the minimum safe manning is adequate at all times and in all respects, including meeting peak workload situations, conditions and requirements, and is in accordance with the principles, recommendations and guidelines contained in this resolution; and

.6 prepare and submit to the Administration a new proposal for the minimum safe manning of a ship in the case of changes in trading area(s), construction, machinery, equipment, operation and maintenance or management of the ship, which may affect the safe manning.

2 Approval by the Administration

2.1 A proposal for the minimum safe manning of a ship submitted by a company to the Administration should be evaluated by the Administration to ensure that:

.1 the proposed ship's complement contains the number and grades/capacities of personnel to fulfil the tasks, duties and responsibilities required for the safe operation of the ship, for its security, for protection of the marine environment and for dealing with emergency situations; and

.2 the master, officers and other members of the ship's complement are not required to work more hours than is safe in relation to the performance of their duties and the safety of the ship and that the requirements for work and rest hours, in accordance with applicable national regulations, can be complied with.

2.2 In applying such principles, Administrations should take proper account of existing IMO, ILO, ITU and WHO instruments in force which deal with:

.1 watchkeeping;
.2 hours of work or rest;
.3 safety management;
.4 certification of seafarers;
.5 training of seafarers;
.6 occupational safety, health and hygiene;
.7 crew accommodation and food;
.8 security; and
.9 radiocommunications.

2.3 The Administration should require a company to amend a proposal for the minimum safe manning of a ship if, after evaluation of the original proposal submitted by the company, the Administration is unable to approve the proposed composition of the ship's complement.

2.4 The Administration should only approve a proposal for the minimum safe manning of a ship and issue accordingly a minimum safe manning document if it is fully satisfied that the proposed ship's complement is established in accordance with the principles, recommendations and guidelines contained in this resolution, and is adequate in all respects for the safe operation and the security of the ship and for the protection of the marine environment.

2.5 The Administration may withdraw the minimum safe manning document of a ship if the company fails to submit a new proposal for the ship's minimum safe manning when changes in trading area(s), construction, machinery, equipment or operation and maintenance of the ship have taken place which affect the minimum safe manning.

2.6 The Administration should review and may withdraw, as appropriate, the minimum safe manning document of a ship which persistently fails to be in compliance with rest hours requirements.

2.7 The Administration should consider the circumstances very carefully before allowing a minimum safe manning document to contain provisions for less than three qualified officers in charge of a navigational watch, while taking into account all the principles for establishing safe manning.

ANNEX 4

GUIDANCE ON CONTENTS AND MODEL FORM OF MINIMUM SAFE MANNING DOCUMENT

1 The following information should be included in the minimum safe manning document issued by the Administration specifying the minimum safe manning:

.1 a clear statement of the ship's name, port of registry, distinctive number or letters, IMO number, gross tonnage, main propulsion power, type and trading area, whether or not the machinery space is unattended and company as defined in the ISM Code;

.2 a table showing the number and grades/capacities of the personnel required to be carried, together with any special conditions or other remarks;

.3 a formal statement by the Administration that, in accordance with the principles and guidelines set out in Annexes 1 and 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 number and grades/capacities 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; and

.5 the date of issue and any expiry date of the document together with a signature for and the seal of the Administration.

2 It is recommended that the minimum safe manning document be drawn up in the form corresponding to the model given in the appendix to this Annex. If the language used is not English, the information given should include a translation into English.

Appendix

MODEL FORM OF MINIMUM SAFE MANNING DOCUMENT

MINIMUM SAFE MANNING DOCUMENT

(Official seal) (State)

Issued under the provisions of regulation V/14.2.2 of the

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, as amended

under the authority of the Government of

(Name of the State)

by

(Administration)

Particulars of ship[*]

Name of ship .....
Distinctive number or letters .....
IMO number .....
Port of registry .....
Gross tonnage:
National .....
International Tonnage Convention, 1969 .....
Main propulsion power (kW) .....
Type of ship .....

Periodically unattended machinery space yes/no

Operating Company .....

.....

[*] Alternatively the particulars of the ship may be placed horizontally.

Trading area[**]

The ship named in this document is considered to be safely manned if, when it proceeds to sea, it carries not less than the number and grades/capacities of personnel specified in the table(s) below.

Grade/capacity	Certificate (STCW regulation)	Number of persons

Special requirements or conditions, if any:

Issued at ..... on the ..... day of .....
(month and year)

Date of expiry (if any) .....

(Seal of the Administration)

.....
(Signature for and on behalf of the Administration)

[**] Where a trading area other than unlimited is shown, a clear description or map of the trading area should be included in the document.

ANNEX 5

FRAMEWORK FOR DETERMINING MINIMUM SAFE MANNING

PREAMBLE

This framework has been developed to assist Administrations and companies in determining minimum safe manning.

STEPS FOR DETERMINING MINIMUM SAFE MANNING

1 Submission from the company

1.1 Submission of a proposal from the company for minimum safe manning defining the nature of the operation of the ship.

1.2 Submission needs to take into account the requirements of Annexes 2 and 3 in the context of the management of the safety, security and protection of the marine environment functions of a ship.

1.3 The process outlined below should enable companies to achieve greater depth and insight into the interdependencies and interactions of operational elements that influence the amounts of crew member workload and, ultimately, the proposed minimum safe manning level.

Operational functions

1.4 Beginning this process requires the breakdown of the operational elements into functions. Annex 2 provides guidance on the relevant functions that need to be considered, however, this list is not exclusive. Each function can then be broken down into a task list that includes the attributes listed below.

.1 **Duration**: What is the time required to execute each task? Time in this case is measurement of total man hours versus the actual duration taken for task completion, since some tasks can be done in a shorter time by using multiple individuals.

.2 **Frequency**: How often is the task performed? This can be categorized using some form of standard interval (i.e. hourly, daily, weekly, etc.).

.3 **Competence**: What are the skills, training and qualifications needed to consistently perform the task properly?

.4 **Importance**: What is the risk or consequence associated with improper performance?

Operational factors

1.5 Once a function is broken down into specific tasks and their attributes, it is then necessary to determine the specific personnel qualifications, operational policy and procedures, and infrastructure/technology necessary to perform each task. It is important to recognize that these elements may increase or decrease manning levels depending on

availability and appropriate procedures and of specific capability enabling technology/automation.

Task capability

1.6 The information generated in defining the operational factors and functions should be used to determine how many tasks that can be executed by an individual under the possible range of operational conditions. Critical considerations, while conducting this step, are human element limitations and relevant standards and regulations. These include sleep and circadian requirements, physical and mental workload associated with each task, and exposure limits to shipboard environmental conditions such as noise, temperature and toxins.

Workload assessments

1.7 Once steps relating to operational functions, operational factors and task capability have been conducted, the information is then used to determine whether workload will not exceed the minimum hours of rest and/or work as provided in relevant national and international regulations. Considerations, while performing this step, include work period lengths, work schedule designs and whether a single crew member can execute the tasks set in a specific work period or work period(s) per work day.

2 Evaluation by the Administration

2.1 The Administration should evaluate/approve the submission of the company against relevant national and international regulatory requirements and guidelines.

2.2 Having evaluated and approved the proposal the Administration should issue a minimum safe manning document including special requirements and conditions.

3 Maintenance of minimum safe manning document

A company should advise the Administration of any changes that would affect the minimum safe manning document, and in such circumstances prepare and submit a new proposal taking into account Annex 3.

4 Compliance monitoring

The Administration should periodically review the minimum safe manning arrangements.

***