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REVIEW OF THE PRINCIPLES FOR ESTABLISHING THE SAFE MANNING LEVELS OF SHIPS

Process for the determination of the safe manning levels on ships

Submitted by ITF and IFSMA

SUMMARY

Executive summary: At the 38th session of the STW Sub-Committee it was agreed that the process for the determination of safe manning should be made prescriptive. Although the subsequent correspondence group was tasked to address this matter it has been unable to identify any methodologies to make suitable recommendations. This document is intended to open a debate on a prescriptive process to determine manning, closely reflecting the management, verification and auditing process contained within the ISM Code.

Action to be taken: Paragraph 9

Related documents: MSC 81/25; MSC 83/28, resolutions A.890(21) and A.955(23); STW 38/17, STW 38/WP.5/Rev.1; ILO Conventions 147 & 180 and ISM Code

1 The Maritime Safety Committee, at its 81st session, instructed the Sub Committee on Standards of Training and Watchkeeping to review resolution A.890(21), as amended by A.955(23) on Principles of minimum safe manning. At the 38th session of the Sub Committee on Standards of Training and Watchkeeping, after considering the outcomes of a working group, it was agreed that the process for the determination of safe manning should be prescriptive. The Maritime Safety Committee was invited to concur with this decision and the 84th session will consider including a corresponding item 'mandatory requirements for determining safe manning' on its work programme.

2 Based on the report of the Working Group on the Review of the Principles of Safe Manning, a correspondence group was set up. The terms of reference not only addressed a review of the principles of safe manning resolution A.890(21), as amended, but also was tasked to identify possible processes and methodologies for determining manning levels. The correspondence group determined that: '*None of the methodologies that were submitted are fully definitive to the extent that they could be used as a universal calculator that provides specific outputs in relation to specific inputs,*' and '*manning determinations as they are currently practised involve a high level of subjectivity on the part of the company and the flag Administration.*'

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3 Clearly creating an international goal-based system that would add uniformity to the current manning determination process needs a different approach. The principles contained in resolution A.890(21), as amended, in general cover all the relevant areas to be considered and the failure is in the implementation.

4 It is also clear that there may be a number of assessment tools and ‘calculators’ used to determine manning levels and many variations of operations to be taken into consideration. Whilst flag States may have policies, minimum basic levels or check lists that they apply, it would appear that the calculation of crewing levels is currently carried out by the shipowner or manning agency. Unfortunately too often this leads to manning levels determined by competitive pressure and does not lead to a universally applied criteria.

5 Discussions to date indicate that the majority want a prescriptive process to determine the safe manning that is:

- .1 transparent;
- .2 verifiable;
- .3 subject to a regular audit;
- .4 internationally applicable criteria;
- .5 reviewed on the change of flag, or significant change in trade or operation;
- .6 subject to scrutiny by port State control;
- .7 compliant with acceptable hours of work and the requirements of hours of rest;
- .8 with sufficient numbers of crew with the appropriate training and competency to prevent incidences of fatigue;
- .9 clear provision for necessary onboard training;
- .10 facilitates a safety culture; and
- .11 enables the safe management of the vessel.

6 It could be said that manning and safe management of the vessel are inextricably linked and many of the requirements within the ISM Code would equally apply to a prescriptive process to determine and monitor manning levels. There are varying views about the effectiveness of the ISM Code but the majority of adverse comment is about the ongoing generation of paper work, not the ability to generate better management practices. The Maritime Safety Committee, in its review of the ISM Code, considered that it had been widely accepted by both management and seafarers with a general successful implementation. The draft process set out in the annex has used the tried and tested system, in the manning context, as a possible prescriptive process that would allow a universal application in attaining goal based operational safety standards.

7 This process, like the ISM Code, gives the company the primary responsibility for calculating manning showing all evaluating tools, calculation methods and comprehensive details of the policy to operate the vessel. It retains the concept of a designated person responsible at the company’s highest level and in direct communication with the ships management. It also opens up not only the hours of rest record but also the management of the manning to external scrutiny. The flag State would retain full responsibility for issuing documentation, verifying and auditing that the vessel is in compliance but with sufficient transparency for port State control to be able to monitor its operation.

8 To enable this process to operate effectively it may require some further consideration of amendments to resolution A.890(21), as amended.

Action requested of the Sub-Committee

9 The Sub-Committee is invited to note the procedure set out in the annex and, if appropriate, consider it as a basis for further discussion of a prescriptive process to determine and monitor manning levels.

ANNEX

INTERNATIONAL SAFE MANNING CODE FOR THE SAFE OPERATION OF SHIPS, PREVENTION OF POLLUTION AND THE PROTECTION OF THE SAFETY, HEALTH AND GENERAL WELFARE OF SHIP'S CREWS (Safe Manning (SM) Code)

PREAMBLE

- 1 The purpose of this Code is to provide a mandatory process for the safe manning of ships.
- 2 The Code provides a consistent methodology for determining the safe manning levels for ships that is transparent and verifiable, and takes into account the Principles of Safe Manning contained in Assembly resolution A.890(21) as amended by resolution A.955(23) and other relevant international regulations and guidelines.
- 3 The Code recognizes that no two shipping companies or shipowners are the same, and that ships operate under a wide range of different conditions and addresses the operating conditions of each individual ship.
- 4 In order to provide an effective manning level, it is necessary to have an accurate plan for the management of crew resources in terms of time available to perform the tasks required to operate the ship under both normal and emergency conditions, a comprehensive task analysis to determine workload levels and workload patterns, and effective evaluation tools to reveal potential problems to ensure appropriate manning levels necessary to prevent incidents of fatigue that could affect the safety of ships and crews, threaten the marine environment, and impact on the health and general welfare of crews.
- 5 The Code provides a consistent methodology for determining the safe manning levels for ships that is transparent and verifiable, and based on general principles and goals to give effective implementation to international standards and guidelines.

PART A – IMPLEMENTATION

1 GENERAL

1.1 Definitions

The following definitions apply to parts A and B of this Code.

1.1.1 “Safe Manning (SM) Code” means the International Manning Code for the safe operation of ships, prevention of pollution and the protection of the safety, health and general welfare of ship’s crews, that determines the methodology and considerations required to ensure a vessel operates with a sufficient complement of crew members to ensure its safety, the protection of the marine environment and the general welfare of its crew.

1.1.2 “Company” means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the ship owner and who, on assuming such responsibility, has agreed to take over all duties and responsibility imposed by the Code.

1.1.3 “Administration” means the Government of the State whose flag the ship is entitled to fly.

1.1.4 “Safe Manning Document of Compliance” means a document issued by the administration to a Company which complies with the requirements of this Code.

1.1.5 “Minimum Safe Manning Document” (SMD) means a document issued by the Administration to a ship which signifies that the Company and its shipboard management operate in accordance with an approved plan for the management of the tasks required to operate the ship. The SMC shall specify the minimum safe manning levels and complement required to operate the ship as approved by the Administration.

1.1.6 “Non-conformity” means an observed situation where objective evidence indicates the non-fulfilment of a specified requirement contained within the Manning Management Manual.

1.1.7 “Major non-conformity” means an identifiable deviation that poses a serious threat to the safety of personnel or the ship or a serious risk to the crew that requires immediate corrective action and includes the lack of effective and systematic implementation of a requirement of this Code.

1.1.8 “Manning Management Plan” is a plan prepared by the shipowner, in consultation with a human factors professional approved by the Administration, and submitted to the Administration for approval and carried on board in the form of a “Manning Management Manual” available to crew members, labour representatives of crew members and port State control officials for review. It is incorporated by reference into the SMD and adherence to the plan is a condition of the SMC remaining valid.

1.1.9 “Workload Evaluation” is prepared by a human factors professional approved by the Administration after a comprehensive task analysis of the proposed “Manning Management Plan” to determine the effect of the plan on workload and work patterns. The Workload Evaluation shall contain a detailed assessment and evaluation of the anticipated workload of each crew member based on human factors tools used to predict fatigue. The Workload Evaluation shall be included in the Manning Management Manual.

1.1.10 “Work” shall mean carrying out any duty required in the operation of the ship including, but not limited to, watchkeeping, maintenance and repairs, inspections, administration, communications or any dealings with the ship’s operation with Administrations or shore personnel.

1.1.11 “Rest” shall mean periods off duty solely designated to recuperation from periods of work and totally uninterrupted by the duties of operating the ship.

1.1.12 “Convention” means the International Convention for the Safety of Life at Sea, 1974, as amended.

1.2 Objectives

1.2.1 The objectives of the Code are to ensure that a ship is effectively and efficiently manned to provide safety and security of the ship, safe navigation at sea, 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 in ships' crew.

1.2.2 Manning level objectives of the Company should, *inter alia*:

- .1 provide sufficient crew to ensure there are safe practices onboard at all times and a safe working environment;
- .2 establish good training and appropriate competency standards for all crew;
- .3 review manning levels continuously to ensure there are sufficient crew to fulfil the duties required in the documents used to describe and implement the manning management plan; and
- .4 ensure a record of hours of work is accurately kept and maintained within the relevant conventions.

1.2.3 Manning Management Manual should ensure:

- .1 compliance with mandatory rules and regulations; and
- .2 that in the operation of the ship, that applicable Codes, guidelines and standards recommended by the Organization, Administrations, classification societies or recognized organizations and maritime industry organizations are taken into account.

1.3 Application

The requirements of this Code shall be applied to all ships.

1.4 Functional requirements for a safe manning code

Every Company should develop, implement and maintain safe manning levels that can fulfil the following functions:

- .1 ensure the safe navigation of the ship at all times;
- .2 respond efficiently to all emergency situations;
- .3 carry out routine maintenance sufficient to guarantee an efficient and safe operation;
- .4 give full effect to the ongoing familiarization and training needs of the crew;
- .5 fulfil the policies of the company with respect to the ship's operation;
- .6 complete the administrative and regulatory compliance duties associated with today's vessels without encroaching on crew rest periods; and
- .7 perform all duties to ensure the welfare of the crew and healthy environment for them to work and live in.

2 SAFE MANNING AND ENVIRONMENTAL PROTECTION POLICY

2.1 The Company should establish policies that describe how the objectives in 1.2 and the functions in 1.4 can be achieved.

2.2 The Company should ensure that the policy is implemented and maintained at all levels of the organization, both ship-based and shore-based.

3 COMPANY RESPONSIBILITY AND AUTHORITY

3.1 If the entity who is responsible for the operation of the ship is other than the owner, the owner must report the full name and details of such entity to the Administration.

3.2 The Company should define and document the responsibility, authority and interrelation of all personnel who manage the crew.

3.3 The Company is responsible for ensuring that adequate resources and shore-based support are provided to enable the designated person to implement the company's manning and operational policy.

4 DESIGNATED PERSON(S)

To ensure the safe operation of each ship and to provide a link between the Company and those on board, every Company, as appropriate, should designate a person or persons ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the management of human resources of each ship and ensuring that adequate resources and shore-based support are applied, as required.

5 MASTER'S RESPONSIBILITY AND AUTHORITY

5.1 The Company should clearly define and document the master's responsibility with regard to:

- .1 implementing the company's operational and manning policy including ensuring rest and leave provisions are complied with;
- .2 recording and reporting non-conformities to the designated person ashore responsible for the management of human resources;
- .3 verifying that the records of hours of work and rest are accurately maintained; and
- .4 discontinuing non-safety related operations in port or at sea if work/rest hour limits are being exceeded.

5.2 The Company should ensure the authority of the master, to make decisions in respect to the safe operation of the vessel and the correction of manning and workload non-conformities, is respected.

6 RESOURCES AND PERSONNEL

6.1 The Company should ensure that the master is:

- .1 properly qualified for command;
- .2 fully conversant with the company's manning and operational policies;
- .3 given full authority to take any necessary action to implement those manning and operational policies; and
- .4 given the necessary support so that the master's duties can be safely performed.

6.2 The Company should ensure that each ship is manned with at least the number of seafarers required by the SMC who are appropriately qualified, certificated and medically fit in accordance with national and international requirements.

6.3 The Company should establish procedures to ensure personnel are given proper familiarization with their duties.

6.4 The Company should ensure that all crew are familiar with their emergency duties.

6.5 The Company should establish and maintain procedures for identifying any training requirements and ensure that such training is provided for all personnel concerned.

6.6 The Company should establish procedures by which the ship's personnel receive information on the Manning Management Manual in a working language or languages understood by them.

6.7 The Company should ensure that the ship's personnel are able to communicate effectively in the execution of their duties.

6.8 The Company shall ensure that all labour-saving devices and technology required to operate the vessel in compliance with the Manning Management Manual and Minimum Safe Manning Document are fully functional.

7 DEVELOPMENT OF MANNING MANAGEMENT PLAN

7.1 The Company should develop and provide a Manning Management Plan as defined in 1.1.8 for shipboard operations in accordance with relevant IMO and ILO requirements and the provisions of Assembly resolution A.890(21), as amended.

7.2 The plan shall contain detailed instructions and guidance on how the ship is to be operated in the specific trade in which it is engaged. The plan shall detail what tasks are to be performed by the ship's crew and what tasks are to be performed by shore support or by non-crew member contract labour.

7.3 The plan shall be in sufficient detail that the anticipated workload and work pattern of each crew member can be estimated.

7.4 A human factors professional approved by the Administration shall prepare an anticipated Workload Evaluation after a comprehensive task analysis of the proposed plan to determine the effect of the plan on crew member workload and work patterns.

7.5 The anticipated Workload Evaluation shall contain a detailed assessment and evaluation of the anticipated workload of each crew member based on human factors tools used to predict fatigue.

7.4 The Manning Management Plan and the Workload Evaluation shall be incorporated into a Manning Management Manual to be carried aboard ship and made available to crew members, labour representatives of crew members, and port State control officers.

7.5 The Company shall review the Manning Management Plan and manning levels continuously to ensure there are sufficient crew to fulfil the duties required in the documents used to describe and implement the manning management plan.

8 EMERGENCY PREPAREDNESS

8.1 The Company should identify and describe its plans to respond to potential emergency shipboard situations with the crew numbers and complement available under the Safe Manning Certificate.

8.2 The Company should establish procedures and programmes for drills and exercises to prepare for emergency actions.

8.3 The Company should ensure it can respond and give support at any time to hazards, accidents and emergency situations involving its ships.

9 REPORTS AND ANALYSIS OF NON-CONFIRMITIES, ACCIDENTS AND HAZARDOUS SITUATIONS

9.1 The Company should establish a procedure for ensuring that non-conformities with the Manning Management Plan due to operational considerations, illness, accidents or absence of a seafarer and the lack of suitably trained or competent crew are reported to the Company, investigated and analysed with the objective of improving the Companies manning policies and plans.

9.2 The Company should establish procedures for the immediate implementation of corrective action where the non-conformities are of a systemic or continuing nature.

9.3 A record of all non-conformities and major non-conformities shall be maintained onboard and available for audit by the Administration and port State control officials.

10 MAINTENANCE OF THE SHIP AND EQUIPMENT

10.1 The Company should establish that at all times there is sufficient manning of appropriate crew to maintain the vessel in conformity with the provisions of the relevant rules and regulations and the Company's ISM procedures.

10.2 The Company should ensure that all additional resources or shore-side support that has been taken into consideration in the Manning Management Plan is made available for the maintenance of the vessel.

11 DOCUMENTATION

11.1 The Company should establish and maintain a record of hours of work and rest for crew and actively audit these records against other documentation including the ship's log-books and overtime records.

11.2 Copies of the Minimum Safe Manning Document, Manning Management Manual, Ships Articles and Seafarers Employment Agreements shall be freely available for inspection by crew members, labour representatives of crew members and port State control officials.

12 COMPANY VERIFICATION, REVIEW AND EVALUATION

12.1 The Company should carry out internal annual audits to verify that shipboard operating practices comply with the provisions of the Manning Management Manual.

12.2 The Company should periodically evaluate the effectiveness of the Manning Management Plan in meeting the objectives of 1.2 and 1.4 of the Code

12.3 The audits and possible corrective actions should be carried out in accordance with clear company policies with documented procedures.

12.4 Personnel carrying out audits should be independent

12.5 The results of the audits and reviews should be brought to the attention of all personnel having responsibility in the area involved, and reported to the flag State administration.

PART B – CERTIFICATION AND VERIFICATION

13 CERTIFICATION AND PERIODICAL VERIFICATION

13.1 The ship should be operated by a Company which has been issued with a Document of Compliance under the provisions of the ISM Code.

13.2 The Manning Management Plan shall be a part of the documentation required for the issue of the Document of Compliance under the provisions of the ISM Code.

13.3 The Manning Management Plan is only valid for the ship explicitly indicated in the document.

13.4 The Safe Manning Document of Compliance should be issued by the Administration, by an organization recognized by the Administration or, at the request of the Administration, by another Contracting Government to the Convention to any Company complying with the requirements of this Code for a period specified by the Administration, which should not exceed five years. Such a document should be accepted as evidence that the Company is capable of complying with the requirements of this Code.

13.5 The validity of a Safe Manning Document of Compliance should be subject to annual verification by the Administration or by an organization recognized by the Administration or, at the request of the Administration, by another Contracting Government within three months before or after the anniversary date.

13.6 The Safe Manning Document of Compliance should be withdrawn by the Administration or, at its request, by the Contracting Government which issued the Document when the annual verification required in paragraph 13.5 is not requested or if there is evidence of major non-conformities with this Code.

13.7 All associated Minimum Safe Manning Documents should also be withdrawn if the Manning Document of Compliance is withdrawn.

13.8 A copy of the Safe Manning Document of Compliance should be placed on board in order that the master of the ship, if so requested, may produce it for verification by the Administration or by an organization recognized by the Administration or for the purposes of the control referred to in regulation IX/6.2 of the Convention. The copy of the Document is not required to be authenticated or certified.

13.9 The Minimum Safe Manning Document should be issued to a ship for a period, which should not exceed five years, by the Administration or an organization recognized by the Administration or, at the request of the Administration, by another Contracting Government. The Safe Manning Certificate should be issued after verifying that the Company and its shipboard management operate in accordance with the approved Manning Management Plan and within the hours of work limitation contained in International Maritime Conventions.

13.10 The validity of the Minimum Safe Manning Document should be subject to at least one intermediate verification by the Administration or an organization recognized by the Administration or, at the request of the Administration, by another Contracting Government. If only one intermediate verification is to be carried out and the period of validity of the Safe Manning Certificate is five years, it should take place between the second and third anniversary dates.

14 VERIFICATION

14.1 All verifications required by the provisions of this Code should be carried out in accordance with procedures acceptable to the Administration, taking into account the guidelines developed by the Organization.

15 FORMS OF CERTIFICATES

15.1 The Safe Manning Document of Compliance and the Minimum Safe Manning Document should be drawn up in a form corresponding to the models given in the appendix to this Code. If the language used is neither English nor French, the text should include a translation into one of these languages.

15.2 In addition to the requirements of paragraph 13.3, the ship types indicated on the Safe Manning Document of Compliance and the Interim Safe Manning Document of Compliance may be endorsed to reflect any limitations in the operations of the ships described in the manning management plan.

Appendix 1

Form for Safe Manning Document of Compliance. *Issued when the Safe Manning Certificate and the Manning Management Manual is being fully complied with.*
(To be developed)

Appendix 2

Form for Minimum Safe Manning Document *Will specify the minimum number and complement of crew members required to operate the ship.*
(To be developed)

Appendix 3

Manning Management Manual *contains all the details on what basis the Minimum Safe Manning Document has been issued and is integral to the safe manning document. Failure to comply with these undertakings will mean loss of the safe manning certificate.*

Appendix 4

Revised resolution A.890(21) as amended by A.955(23) *This will be the revised resolution and will remain as guidance only.*
