International Transport Workers' Federation
Maritime Safety Committee
Consolidated documents

November 2020

ITF Maritime Safety Committee (ITF MSC) is a technical arm of the ITF Seafarers' Section Committee (ITF SSC) undertaking all issues related to safety of seafarers. The ITF MSC in coordination with the ITF Accredited Representative to the IMO and the Maritime Safety Committee Steering Group (ITF MSC SG) operates under terms to reference. The terms of reference for ITF MSC and ITF MSC SG are separated but connected.

ITF work at the IMO is a project code on the Seafarers' Section budget, such as the funding of the ITF MSC.

The IMO Liaison Assistant coordinates with the elected ITF MSC members on participation in the IMO and other fora, *inter alia* providing a brief note before the meeting and storing them in the ITF MSC's electronic archive called 'Sharefile' and produce a final ITF report by consolidating each expert's individual report. The final reports are available on a dedicated section 'The IMO' in the public ITF homepage.

Acknowledging highly interconnected nature of the agenda we deal with – within the IMO bodies and other fora - the communications of the ITF MSC are undertaken actively and smoothly throughout the year via face to face interactions, emails, phone calls, online conferences calls and text messages.

The work of the ITF MSC is continuous throughout the year and more. The experts strive to excel to undertake many different safety related issues of their expertise via year-long IMO Correspondence Groups, IMO Experts Groups and other relevant fora.

The ITF MSC has 5 prioritised projects, as of October 2019:

- Human Element
- Manning
- Ships Automation
- STCW and STCW - F
- Environment and issues affecting seafarer safety

The ITF MSC upholds the profoundness of learning process of individuals. In order to facilitate the participation to the IMO and other fora of elected ITF MSC experts as well as enhance further prospective outcome for the individuals and the orgnisation, ITF / IMO training courses are to be established.

Terms of reference

ITF Seafarers' Section Maritime Safety Committee

Purpose

1. The Maritime Safety Committee (ITF MSC) is established to represent seafarers' interest within relevant maritime fora to promote ITF policies and secure the protection or enhancement of Seafarers rights and working environment within the IMO and other relevant fora.
2. The ITF MSC will formulate strategies and assist with the drafting and research on relevant technical issues to provide recommendations to the IMO Accredited Representative (IMO Rep) and Seafarers Section Committee (SSC).
3. In Co-ordination with the IMO Rep and the Maritime Safety Committee Steering Group (Steering Group), the ITF MSC agree to undertake the responsibility to provide the technical expertise on matters relevant to progress the key projects identified in the work plan, including the nomination of correspondence working group to research, draft and complete submission documents within set deadlines as required

Reporting and relationship with other bodies

4. The ITF MSC reports to the SSC.

5. Additionally, the ITF MSC coordinates with ITF Dockers, Fisheries and Inland Navigation Sections, Cruise Ship Task Force, Offshore Task Force Group and the European Transport Workers' Federation and other third parties as appropriate to provide support on areas of mutual interest.

Responsibilities

6. The ITF MSC's core responsibilities include:
    - Lobby the IMO governmental delegations INGOs and NGOs to co-sponsor position documents to gain advantages for seafarers;
    - Participate in IMO meetings, covering most of the working and drafting groups, on issues affecting the health and safety, training, security of seafarers, and those regarding further development of regulations;
    - Participate and contribute in IMO correspondence groups on agreed activities;
    -
    - Provide expertise to research , draft documents and complete tasks on agreed activities to assist the IMO Rep ;
    - Closely monitor IMO work to secure better alignment with the MLC 2006 and other relevant ILO instruments;
    - Assist with communication strategies for various target groups; and

- Cooperate and coordinate, where appropriate, with the national unions and administrations on surveys, reports and education on issues in relation to seafarers' health, safety, wellbeing and marine environment.

Composition

7. The ITF MSC shall appoint a Chair and Vice Chair, plus 18 ordinary members.

8. The composition of the ITF MSC shall be formulated to address the IMO Committees and Sub-Committees as detailed below, ensuring one representative and up to two experts per IMO Committee/Sub-Committee:
    - Maritime Safety Committee (MSC)
    - Maritime Environment Protection Committee (MEPC)
    - Legal Committee (LEG)
    - Facilitation Committee (FAL)
    - Sub-Committee on ship design and construction (SDC)
    - Sub-Committee on pollution prevention and response (PPR)
    - Sub-Committee on navigation communications and search and rescue (NCSR)
    - Sub-Committee on human element, training and watch-keeping (HTW)
    - Sub-Committee on carriage of cargoes and containers (CCC)
    - Sub-Committee on implementation of IMO instruments (III)
    - Sub-Committee on ships systems and equipment (SSE)

9. Additionally, the ITF MSC needs to have a balance of representation from beneficial ownership, labour supply, officers and ratings unions as well as a regional balance. Furthermore, there should be a consideration of gender equality and youth involvement.

10. The ITF MSC shall review the composition annually, in order to take into account their union responsibilities and availability to effectively support the work.

Meetings

11. The ITF secretariat shall call meetings of the ITF MSC only when necessary, although it is understood that there should be at least one meeting a year. If necessary the ITF secretariat will, in consultation with the chair, establish *ad hoc* working groups to pursue urgent aspects or to consider specific technical issues.

12. The operational language of the meeting is English.

13. Costs relevant to the ITF MSC members shall be covered by the ITF. Other participants shall be for the account of the affiliates concerned.

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May 2020

Terms of reference ITF
Seafarers' Section
Maritime Safety Committee Steering Group

Purpose

1. The Maritime Safety Committee Steering Group's (Steering Group) decision-making powers are delegated by the ITF Maritime Safety Committee (MSC).

2. The Steering Group is established to handle interim guidance and decision, with the ITF Accredited Representative to the IMO (IMO Rep) to formulate strategies and provide recommendations to the ITF MSC to be approved by the Seafarers Section on all issues relating to maritime safety, health and security including manning, training and related environmental protection issues.

Reporting and relationship with other bodies

3. The Steering Group reports to the ITF MSC and Seafarers' Section Committee (SSC).

Responsibilities

4. The Steering Group's core responsibilities, in addition to those of the ITF MSC include:
    a. To oversee the actual implementation of the work at the IMO;
    b. Make proposals to the ITF MSC for IMO submissions;
    c. To provide advice for work with national administrations on issues that are of the seafarers' interests; and
    d. To lead on projects identified and prioritised by the ITF MSC.

Composition

5. The composition of the Steering Group shall be determined by the ITF MSC and should comprise of the Chair and Vice Chair, plus four further ITF MSC members who must be from different affiliates, representing officers and ratings in balance.

Meetings

6. The ITF secretariat shall call meetings of the Steering Group only when necessary, although it is understood that there should be two meetings a year, and where possible one should be held in conjunction with the SSC and the other one in conjunction with the ITF MSC.

7. The operational language of the meeting is English.

8. Costs relevant to the participation of steering group members shall be covered by the ITF.

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STATEMENT ON HUMAN ELEMENT

Background

The Human Element in the maritime industry covers the entire spectrum of human activities performed by ships crew, shore-based personnel, regulatory bodies, recognised organisations, shipyards, legislators, and other relevant parties, all of whom need to co-operate to address human element issues effectively. The role of the ITF working through its ITF Maritime Safety Committee (ITF MSC) and the ITF delegation at the IMO is to represent and advocate for the international maritime workers in the development of the regulatory framework that affects all levels of human activities within the maritime industry.

General statements and Assumptions

1. Automation and advanced technology have had long-standing impacts. The business concept of unmanned ships was initially introduced to reduce crew onboard by shore-side control. The IMO has been carrying out a scoping exercise to seek ways to regulate at international regulatory level. The ITF has been successfully endeavouring in advocating for the safety of maritime workers under the umbrella of human element. Our views and positions need to be updated to be in the forefront of any future changes.

Assumptions: It is anticipated that communication and data exchange technology, and automated systems will change the way ships are managed and operated. Unmanned/remote-control ships will not be a significant factor in international shipping in the foreseeable future. However, there will be a need for seafarers to adapt to new skills and competences when working with such technology.

2. Participating in the high level international regulatory in advocating maritime workers as a part of human element is critical for resolving current problems and securing the future. Therefore, the ITF has been actively speaking for the international maritime workers at any possible fora.

Assumptions: Growing aggressive introduction of advanced technology in international shipping and the uncertainty about the future derived from such movement has become a common concern for stakeholders from the industry. Maritime human element should be considered ‘how to prepare for the future’.

3. The present STCW Convention and Code that regulate the training and certification of seafarers were last amended in Manila in 2010. It is on schedule for review and amendment in 2020. This will present the ITF with the opportunity to address various issues raised to date, such as the increased minimum hours of rest in the STCW Code as well as new additional training requirements for seafarers due to the implementation of ships with advanced technology, including fishing vessel personnel requirements under STCW-F.

Assumptions: The future training and certification for seafarers will change in the future to adapt to new technology.

4. The ITF strongly advocates that the safety of personnel onboard or ashore should not be compromised when developing measures to protect marine environment.

Assumptions: Along with the protection of marine environment, safety related issues with new type of fuels used onboard will become more important.

5. Pursuing human element is not only about participating in developing new regulations but also supporting/fighting for effective implementation of the existing ones. The ITF has been participating in discussions on port state control to secure appropriate manning to be checked and the working/living conditions onboard to be provided.

Assumption: The importance of Port State Control needs to be effectively recognised within the IMO structure to ensure safety of seafarers and proper implementation of IMO instruments.

Planned Actions

1. Support the ITF Secretariat to ensure human element is fully considered in international shipping throughout research by a joint IMO/ILO/ITF/WMU project that will analyse capabilities of automation applied in the industry and the prediction on penetration level. Following the completion of the research, consider specific actions for the future work.

2. Continue participating and cooperating with governments and industry group activities *i.e.* Human Element Industry Group (HEIG).

3. Make sure the intentions of Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs) are properly understood, in particular the importance of "proper lookout" and "good seamanship" via the Navigation, Communication and Search and Rescue Subcommittee (NCSR).

4. Conduct a comprehensive review of the STCW Convention and Code to participate in the 2020 potential revision of the STCW Convention and Code at the IMO Human Element, Training and Watchkeeping Subcommittee (HTW) with the understanding of the revision of the STCW-F is directly influenced by the revision of STCW and is underway.

5. Endorse the work at the IMO Maritime Safety Committee (MSC) and Marine Environment and Protection Committee (MEPC) regarding the safety of ship operation, in particular Energy Efficiency Design Index (EEDI) and new fuel types and provide information as deemed appropriate.

6. Support the ITF Secretariat on the work at the IMO Ship Systems and Equipment Subcommittee (SSE) regarding Onboard lifting Appliances and Anchor handling Winches (OLAW) to ensure the regulatory framework stresses on the importance of human element.

7. Participate in the work of the IMO Implementation of International Instruments Subcommittee (III) to promote effective uniform implementation and enforcement by flag States and Port State Control of IMO minimum rest hours and manning level guidelines, as well as the ILO MLC.

8. Create the best way to address the effective implementation of IMO instruments for securing lashing in order to ensure only qualitied and competent personnel should carry out the work.

9. Support the ITF Maritime department in the process of revising the ITF manning policy.

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ITF MANNING POLICY

Part A. Manning policy

Objectives

The objectives of this policy are to ensure that any ship, to which an ITF approved or national agreement applies, 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.

Definition of Company: The Owner of the ship or any other organization or person such as the Manager, or the Bareboat Charterer, who has assumed the responsibility for operation of the ship from the Shipowner and who on assuming such responsibility has agreed to take over all the duties and responsibility imposed by the ISM Code.

General Principles

The Company should ensure that the ship is manned with qualified, certificated and medically fit seafarers in accordance with National and International requirements; and appropriately manned in order to encompass all aspects of operational safe manning.[1]

1. In preparing a proposal for the manning level of a ship, The Company must:

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

2. prepare and justify manning level proposals based on; tasks, duties, competence, safe operation, security for the crew and protection of the marine environment, competence to deal with unforeseen events or emergency situations, including evacuation of passengers where applicable; and

3. ensure that the manning level is adequate at all times and in all respects, possesses the appropriate competence to get the ship back to normal operating condition or safe to port, meet work peak situations, conditions and requirements, and is in accordance with the regulations, principles, recommendations and guidelines from the Organization.

[1] References to the ISM Code Section 6 and IMO Assembly Resolution. 1047(27)

2. In conjunction with these factors, and to ensure that personnel do not work more hours than is safe, the Company must:

1. Identify all the functions to be undertaken onboard during a representative voyage or operational period, including determination of the number of personnel required to undertake the relevant tasks and duties under both peak and routine workload conditions;

2. Identify those functions that constitute normal operations and determine the minimum numbers of personnel required to undertake the concurrent tasks and duties safely;

3. Identify the competences, skills and experience required to perform those functions;

4. Establish working arrangements to ensure that the Master and crew are capable of undertaking concurrent and continuing operations at the appropriate level of responsibility, as specified, with respect to their skills and training; and

5. Ensure that the working arrangements allow sufficient rest periods to avoid fatigue, drawing up work schedules accordingly.

3. In applying these principles, proper account must be taken of the IMO Resolution A. 1047 (27) *Principles of minimum Safe Manning*, the ILO Maritime Labour Convention (MLC) and other relevant instruments of the ILO, ITU and WHO with respect to:

1. watchkeeping;
2. hours of work and hours of rest;
3. safety management;
4. certification of seafarers;
5. training of seafarers;
6. occupational health and hygiene; and
7. crew accommodation.

Establishing Manning Requirements

1. For their safe operation according to the nature of their work, all ships must be sufficiently manned.
2. The 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, and high voltages;

    3. level of ship digitalisation, automation and complexity;

    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. applicable maximum hours of work limits and minimum hours of rest requirements;

11. measures to avoid fatigue;

12. observance of industrial safety and health requirements and procedures;

13. seafarers' welfare provisions;

14. ship's security provisions;

15. catering needs;

16. sanitary regulations;

17. watchkeeping arrangements;

18. medical care aboard ship; and

19. duties in connection with cargo handling in port and at sea[2].

Determination of manning

The determination of manning of a ship should be based on performance of the functions at the appropriate level(s) of responsibility, as specified in International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW) and the International Safety Management Code (ISM Code), which include the following:

1. **watchkeeping**:

- manage and plan to conduct safe navigation;
- manage and maintain a safe navigational watchkeeping;
- manage and manoeuvre and handle the ship in all conditions; and
- manage and moor and unmoor the ship safely.

2. **cargo operation**

- plan;
- monitor and ensure safe cargo operations;
- stowage;
- securing; and
- care during the voyage.

[2]Cross references to the dockers' clauses of ITF TCC and IBF agreements

3. **operation of the ship and care for persons on board**:

- manage and maintain the safety and security of all persons on board and keep life-saving, fire-fighting and other safety systems in operational condition;
- manage and operate and maintain all watertight closing arrangements;
- manage and perform operations, as appropriate, to muster and disembark all persons on board;
- manage and perform operations, as appropriate, to ensure protection of the marine environment;
- manage and provide for medical care on board the ship; and
- manage and undertake administrative tasks required for the safe operation and the security of the ship.

4. engineering:

- manage and operate and monitor the ship's main propulsion and auxiliary machinery and evaluate the performance of such machinery;
- manage and maintain a safe engineering watch;
- manage and perform fuel and ballast operations; and
- manage and maintain safety of the ship's systems, equipment and services.

5. electrical, electronic and control engineering:

- manage and operate the ship's electrical and electronic equipment, high voltages; and
- manage and maintain the safety of the ship's communication, electrical and electronic systems.

6. radiocommunications:

- transmit and receive information using the radio equipment of the ship;
- maintain a safe radio watch[3]; and
- provide radio services in emergencies.

7. maintenance and repair:

carry out maintenance and repair work to the ship’s systems and equipment, as appropriate to the method of maintenance and repair used.

Additional factors

In addition to the factors and functions in paragraphs above, the determination of the manning must also take into account:

1. 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;

[3] the ITU Radio Regulations and the International Convention for the Safety of Life at Sea (SOLAS)

2. the number of qualified 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

3. the management of the safety, security and protection of the crew and marine environment when not underway.

4. the observance of ***a three-watch system*** to ensure that*:*

1. the Master is not asked to stand regular watches by adopting a three-watch system.

2. the composition of a navigational watch comprises one (or more) qualified Officers supported by appropriately qualified Ratings.

3. the actual number of Officers and Ratings on watch at a particular time will depend on the prevailing circumstances and conditions.

4. the certified deck watch/lookout ratings shall be part of the crew to be able to maintain three-watch system. The ITF does not consider it safe for the officer in charge of the navigational watch to act as sole look-out during periods of darkness or restricted visibility.

5. the Chief Engineer officer is not asked to stand regular watches by adopting a three-watch system.

5. ***Health and Safety***

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

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

Hours of work and hours of rest

1. The limits on hours of work and hours of rest shall be as follows:

1. maximum hours of work shall not exceed:

- 14 hours in any 24-hour period; and
- 72 hours in any 7-day period;

2. minimum hours of rest shall not be less than:

- 10 hours in any 24-hour period; and
- 77 hours in any 7-day period.

Hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length, and the interval between consecutive periods of rest shall not exceed 14 hours.

2. Records must be kept of hours of work and hours of rest so that they can be checked to ensure compliance with the regulations.

3. When a seafarer is on call, such as when a machinery space is unattended, the seafarer shall have 6 consecutive hours of rest if the normal hours of rest is disturbed by call-outs to work.

4. Sufficient time should be allowed for all meals as well as short breaks.

5. Measures shall be taken to ensure protection of young seafarers.

6. Cadets shall not work more than 8 hours per day.

7. Manning levels also have to take into account the requirement for seafarers working in catering and food services.

8. Ships' Cooks have to be appropriately trained and qualified for the job. However, on ships with less than ten crew or in exceptional cases for a period no longer than one month, the cook does not have to be fully qualified, but all those responsible for handling food, must be trained in matters relating to hygiene, food and its storage on board.

Part B. The ITF Manning Policy - Model Ship

Positions	Number	Level	Certificates Competences Proficiencies
Master	1	Management	STCW II/2
Chief mate	1	Management	STCW II/1
Watchkeeping officers deck	2	Operational	STCW II/1
Chief Engineer officer	1	Management	STCW III/2
2nd Engineer officer	1	Management	STCW III/2
Watchkeeping officers Engine	2	Operational	STCW III/1
Electro-Technical Officer (ETO)	1	Operational	STCW III/6
Electro Technical Rating (ETR)	1	Support	STCW III/7
Bosun	1	Support	STCW II/5
AB Deck	3	Support	STCW II/5
Donkeyman	1	Support	STCW III/5
AB Engine	3	Support	STCW III/5
Chief Cook	1	NA	MLC
Cook	1	NA	MLC
Catering department personnel	2	NA	MLC
OS	1	Support	STCW II/4
Cadets	*		
Total	23		

*The Company is encouraged to take into account in their manning plans the need for cadets.

Annex to Part B

General

1. The principles applying to the keeping of a safe watch are given in section A-VIII/2 of the STCW Code and must be followed in order to comply with the regulations.

2. The regulations require the Master of any ship to be responsible for the overall safety of the ship. He must also ensure that the watchkeeping arrangements are adequate for maintaining safe navigational watches at all times, including the provision of a lookout as required under the International Regulations for the Prevention of Collisions at Sea 1972, as amended (COLREG). Masters, shipowner or ship operators are reminded that the ITF does not consider it safe for the officer in charge of the navigational watch to act as sole look-out during periods of darkness or restricted visibility.

3. The Chief Engineer officer of any ship is required to ensure that arrangements are adequate at all times for maintaining a safe engineering watch.

4. In addition, the level of manning must also take into consideration:

1. the management of safety functions of a ship underway, not underway or operating in near stationary mode;

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;

3. except in ships of limited propulsion power or operating under provisions for unattended machinery spaces, the provision of qualified engineering officers to ensure that it is not necessary for the Chief Engineer officer to keep regular watches;

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

5. the provision of proper food and drinking water for all persons onboard.

Guidance on Appropriate Manning Levels

The manning levels referred in this document are those required for all reasonably foreseeable circumstances and working conditions to permit the safe operation of the ship under any operational conditions.

Records of seafarers' daily hours of rest or hours of work must be maintained.

Given the diverse working patterns and operational cycle of some vessels, the Company must take into account the working pattern, rotation and/or work schedules of crews, the particular operational requirements of a ship or group of ships and any call-out requirements of a port, harbour or other organisation.

1. Offshore Vessels -These present special problems because of the diverse nature of their operations and the conditions under which they are required to operate. The Company is reminded of the restrictions placed on working hours in Part A of this Policy and must set manning levels accordingly.

2. Tankers -In addition to navigation and engineering officers, except on tankers of limited size, the Company must take into account cargo operations and include an additional officer.

International Convention for the Safety of Life at Sea, as amended (SOLAS) Regulation 14

3. Passenger and Ro-Ro Ships -The need to handle large numbers of passengers unfamiliar with the marine environment must be taken into account in determining manning levels. The Company must give attention to the requirements for minimum numbers of trained crew to take charge of life saving appliances.

References

International Convention for the Safety of Life at Sea, as amended (SOLAS) Regulation 14

International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 (STCW 1978), as amended

IMO Assembly Resolution A.1047 (27) *Principles of Minimum Safe Manning*

IMO Assembly Resolution A.703 (17) *Training of Radio Personnel in the Global Maritime Distress and Safety System (GMDSS)*

International Safety Management (ISM) Code

The International Regulations for Preventing Collisions at Sea 1972 (CORLEG 1972), as amended

Maritime Labour Convention (MLC 2006), as amended, Regulation 2.7

Dockers' clause in the ITF TCC and IBF agreements

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ITF MSC STATEMENT ON SHIP AUTOMATION

Background

Autonomous ships or smart ships, regardless of definition, will have significant impacts on safety, security and the marine environment. These ships raise much confusion and challenging issues such as employment opportunities, education and training schemes and ship-shore interface - interactions with ports, pilotage, responses to incidents and accidents. Noting that advanced technology manufacturers have altered their narrative from a focus on safety to environmental soundness and energy effectiveness of ships. They present that highly-automated ships are capable of improving a level of safety and security in comparison to conventional ships.

The maritime industry has already experienced a variety of development and changes. Lessons have been learnt throughout years of experience in adapting to such transitions. Taking into consideration the age of the current world fleet, growing populations, prediction on growth in international trades and connectivity amongst different transportation modes in supply chains, it is more and more imperative to underscore that humans should be in the centre of technological advancement.

The ITF has been describing any future progression to autonomous ships or smart ships, which are connected to an unmanned shipboard environment, as an evolutionary process. Effectively, down-to-earth management solutions should be sought through effective collective bargaining and political involvement at the national and international level in order to ensure safety and avoid serious disruptions to the industry including its impact on maritime professionals.

General statements and Assumptions

1. Automation and technological advancement, continues to evolve based on economic feasibility in particular scale trades, acceptance of risk inherent in complex systems, development of a regulatory regime and national administrations' policies on maritime safety, security and environmental protection. The movement has often led the rest of trades to follow suit. However, no matter how the manufacturers present their case for such advancements, the quality and reliability must be assessed to seamlessly put humans in the centre of the evolution.

Assumptions: The business model suggests that in the future many decisions and actions may be performed autonomously with human supervision on board ships. High-impact decisions will be implemented in a way to give crew the opportunity to intercede and override the algorithm. The shore-based monitoring, assistance and communications capability will result in greater shore-based management participation in decision making and the operation of a ship. It will be essential to establish global standards, projecting that the centre of the development focuses on humans, and not instead, on the role of humans for technology.

2. The ITF has successfully conveyed that the end-users, referring to maritime professionals, are always anticipated to adapt to changes, in this context, maritime professionals. They are in the field and will have to confront any drawbacks that may turn out to be fatal for their safety and security including that of the environment through pollution threats.

With any change, – new regulations, introduction of new technologies, environmental changes and geopolitical circumstances – maritime professionals have to be properly educated, trained and updated. What makes things worse, , in terms of the end-user, is that seafarers have been targets to be easily blamed and potentially criminalised.

It is time to contemplate if the number of education and training courses is a proper way out in comparison to providing effective learning curricula. The evaluation to improve existing

MET has already commenced globally, regionally and nationally. Besides, the STCW 1978, as amended has been open for revision as of 2020. There are many voices advocating to evaluate and review the Convention and the Codes. As for the ITF, it is one of the utmost important fora to express our views.

The ITF MSC has undertaken the review of the Convention and Codes in preparation of this event. The ITF must establish our positions on the revision/amendments of the Convention, based on our submission to HTW 6 proposing to:

- recognise that experience is an integral part of competency along with knowledge and skills;
- acknowledge the responsibilities of shipowners and managers in the training of seafarers;
- identify the skill set required for the seafarer of the future;
- integrate the training of shore-side ship controllers into an overall maritime career path;
- ensure that, for highly automated ships, there are clear standards of automation established for training purposes;
- recognise the needs of the human element when interacting with automation; and
- ensure that new amendments are introduced with an adequate transitional timeframe and in a clear, comprehensive and understandable manner.

Assumptions: The needs for developing robust MET systems are obvious. There will be more submissions at HTW 7 and MSC 103, as a new output, onwards regarding the revision/amendments to the STCW 1978, as amended. While some submitters will be addressing all issues that have manifested during the implementation of the Manila amendments. Others will underscore the advancement of technologies and propose to amend/revise the provisions accordingly.

3. The IMO MSC has started a *regulatory scoping exercise (RSE) for the use of maritime autonomous surface ships (MASS)* to assess the applicability of MASS by four degrees of autonomy defined by the Committee. The results of the second step of the exercise, the IMO envisaged to decide whether to develop a stand-alone Code or amend every relevant regulations. The IMO FAL and LEG have also commenced their RSE in following the same framework of the IMO MSC.

   The ITF participated in the process addressing various aspects regarding the human element. The essence of our deliberations is to enshrine human centred principle to the regulatory framework. The requirements and provisions regarding roles of maritime professionals in the advanced technological working and living environment must provide for how the new technologies would be implemented in assisting operations by humans.

Assumptions: Ship automation will introduce more cutting-edge technologies for navigation and engine operation such as auto pilotage, auto voyage planning, new propulsion plans, generators and machinery for new fuels, communications systems from ship to shore, etc. All leading countries, active players and others will benefit from unified standards from the IMO, considering shipping's highly global nature.

Regulatory framework which focuses on 'human-centred' goal based approaches, including the safety and security of crew onbaord and ashore, will be the appropriate basis. Additionally, regulation implementation plans should be constructed through human-centred approach by the IMO, which would foster the process.

4. Once the advancement of technologies was thought to be one of key contributors to the 21st century civilisation, the scope of the proliferation of technology has called attention to the world and its sustainability to the extent of safety, security, environmental protection and social impact. Thriving sustainability does not come from technologies only.

   Leading or replacing human labour is not sustainable in the end. Systems and machines cannot simply replace the men and women who have shaped the sector, nor is it acceptable for a small group of people controlling the data and systems to monopolise on all the political and economic power and benefits that may arise. For instance, one must consider the social and economic impact for countries with a large percentage of seafarers in the population, if they are simply replaced by algorithms.

   Trade unions should help to democratise the decision-making process on the way advanced technologies are used and proceed to steer it towards benefiting the safety, security, efficiency, and environmental performance of the shipping industry in order to benefit the working lives and conditions of maritime professionals, and the sustainability of maritime clusters worldwide.

Assumptions: For the shipping industry in the near and distant future, advanced technologies will require investing in the human element to ensure continued employment and improved job opportunities for maritime professionals, in other words, maritime sustainability.

Planned Actions

The ITF Maritime Safety Committee, in advocating the safety and security of global maritime professionals, should support the followings for the ITF Secretariat to:

1. Continue the information gathering regarding the cost effectiveness of automated infrastructure;

2. Create a vision message for the ITF affiliates to ensure they are informed about the coming opportunities and necessary preparations derived from automation to their membership, highlighting the likely international and national development of the proposed autonomous and unmanned/remotely controlled ships;

3. After a review of the tasks and skill evaluations, proposals will be submitted to the IMO during the STCW 1978, as amended review;

4. Maintain the media strategy with a consistent message to be used to promote the ITF position on automation;

5. Create an alternative realistic narrative to the manufacturers message false narrative regarding the benefits of autonomous ships;

6. As of the IMO MSC 100, the ITF has been recognised and invited to many international and national fora to provide our views on ship automation and digitalisation. It should be more encouraged and supported to participate in such events to raise our voices; and

7. Consider available international or national standards that could be potential basis of IMO regulatory structure, such as International Organization of Standardization (ISO), International Electrotechnical Commission (IEC) and American Society for Testing and Materials (ASTM International) standards and find possible cooperation with these organisations.

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ITF MSCSG STATEMENT ON THE INTERNATIONAL CONVENTION ON STANDARDS OF TRAINING, CERTIFICATION AND WATCHKEEPING FOR SEAFARERS (STCW)

AGREED – MARCH 28, 2018

Background

STCW- 1978 sets qualification minimum standards relating to training, certification and watch keeping for masters, officers and watch personnel on seagoing merchant ships. STCW was adopted in 1978 by conference at the International Maritime Organization (IMO) in London, and entered into force in 1984. The Convention was significantly amended in 1995.

The IMO Convention on Standards of Training Certification and Watch keeping of Seafarers adopted a new set of amendments in Manila in 2010 called "The Manila Amendments". These amendments were necessary to keep training standards in line with new technological and operational requirements that require new shipboard competencies. The Manila Amendments were effective as of 1 January 2012, with a transition period until 1 January 2017 when all seafarers must be certified and trained according to the new standards. However, some of the current regulations are still without proper recognition and unified interpreted.

General statements

1. The IMO Convention on STCW, including later amendments, is the minimum standard of qualification to operate all types of ship.

2. Necessary changes to tasks and skills because of new technological and operational systems (such as autonomous or remote controlled ships) independent of the minimum requirements of STCW and in accordance with the rules of the ISM Code shall be required as an extension of the necessary minimum competence to be able to navigate, operate and maintain ship safety.

3. The IMO Convention on STCW, including later amendments, shall contain all relevant definitions to prevent flag states from interpreting the rules differently and creating problems for seafarers / ships operators and port state control.

4. The ITF will continue to support to the ITF Maritime Safety Committee and Steering Group so it can identify threats and formulate strategic and operational actions as threatening issues emerge. This will allow it to continue populating all committee and subcommittee meetings with a sufficient number of informed personnel to counter anti-seafarer agenda items.

Planned Actions

A. As an urgent measure make sure to get a definition of high voltage and who needed this knowledge into the Guidance for Parties, Administrations, port State control authorities, recognized organizations and other relevant parties on the requirements of the STCW Convention, 1978, as amended, which will be revised at the HTW meeting in 2018;

High Voltage and who needed this knowledge

Table A- III / 2 Standard of competence

4. The level of knowledge of the subjects listed in column 2 of table A-III/2 shall be sufficient to enable the candidate to serve in the capacity of chief engineer officer or second engineer officer.*

* The relevant IMO Model Course(s) may be of assistance in the preparation of courses.

High Voltage in the STCW is where 1000V AC/DC or above voltage is generated, distributed or transformed.

Ref. table A-III/1,1 d. (High-voltage installations), A-III/2 Electrical, electronic and control engineering at the management level and A-III/6 (High - voltage technology)

B. Proposal submitted to the IMO during the STCW review in 2020 to change the text in the main definition as suggested in red;

Mandatory standards regarding provisions of the annex to the STCW Convention

CHAPTER I - Standards regarding general provisions - Section A-I/1

Definitions and clarifications

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

*.1 Standard of competence means the level of proficiency to be achieved for the proper performance of functions on board / **operate** ship in accordance with the internationally agreed criteria as set forth herein and incorporating prescribed standards or levels of knowledge, understanding and demonstrated skill;*

*.2 **Management level** means the level of responsibility associated with:*

*.2.1 **designated and assigned duties of persons** serving as master **or** chief mate **or** chief engineer officer or second engineer officer ~~on board a seagoing ship~~, and*

.2.2 ensuring that all functions within the designated area of responsibility are properly performed;

*.3 **Operational level** means the level of responsibility associated with:*

*.3.1 **designated and assigned duties of persons** serving as officer in charge of a navigational or engineering watch or as designated duty engineer for periodically unmanned machinery spaces or as radio operator **or electro-technical officer** ~~on board a seagoing ship~~, and*

.3.2 maintaining direct control over the performance of all functions within the designated area of responsibility in accordance with proper procedures and under the direction of an individual serving in the management level for that area of responsibility;

*.4 **Support level** means the level of responsibility associated with performing assigned tasks, duties or responsibilities on board a seagoing ship under the direction of an individual serving in the operational or management level;*

C. Proposal submitted to the IMO during the STCW review in 2020 to change *on board* to *on board / **operate** ship in 1.1,* and take away *on board a seagoing ship* in 1.2.1, 1.31, but keep it for the support level.

D. To protect our members' job opportunities in connection with the introduction of autonomous or remote ships. Require the STCW revision to change all the text needed so that the convention becomes applicable to on board and remote control services by defining the word operating and accepting this equivalent to on board service.

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POLICY STATEMENT ON ENVIRONMENT AND ISSUES AFFECTING SEAFARERS SAFETY

Background

The focal issues regarding this agenda are:

- Reduction of GHG emissions from ships;
- IMO 2020 0.5% Sulphur limit (reducing Sulphur contents in fuel oil);
- Energy Efficiency Design Index (EEDI) reduction rate (how to make the use of energy the most efficient in a ship, examples are speed optimisation and use of better-quality fuels);
- Implementation of BWM Convention; and
- Marine plastic littering.

The ITF has been allying with many governments and industry partners and endeavouring to urge our members to understand the importance of maritime professionals' roles in relation to marine environment issues. The impact on safety of maritime workers should be taken into account as one of the utmost important elements in the decision-making.

Aforementioned issues have drawn global attention and legislative, political, socio-economic and technical resolutions have been under discussion. As for the ITF, active participation in a working group to enhance safety of ships relating to the use of fuel oil since 2018, and Intersessional Working Group on Reduction of GHG Emissions from Ships are major venues venues where the ITF is advocating for global maritime professionals' safety including other relevant fora.

From a technical perspective, it is essential for maritime professionals to know how dangerous it could be reducing installed power in adverse weather conditions as well as how to safely deal with incidents of power loss when changing fuels, lubrication issues, filter problems, leaks and fires onboard. These issues have been put on the table and, yet not all maritime professionals have been made aware of nor do they know that they have to abide by the rules.

Shipping is the biggest part of supply chain. Therefore, maritime professionals should have responsible ownership and comprehensive knowledge in their minds in recognising how essential our action is and how our members could preserve safety at sea and on land.

General statements and Assumptions

6. The IMO set the goal of 40% reduction of carbon intensity by 2030 compared to 2008 in the shipping sector, called "IMO 2030 Target". One of the challenges is to take into account the existence of various types and characteristics of ships, including the various types and characteristics of cargoes, as well as how to handle them.

   The ITF believes that when introducing operational and technical GHG emissions reduction measures that ships' crew must comply with, safety aspects of ships must be engraved. Otherwise, accidents and incidents will result in all of these efforts being done in vein by resulting in more pollution and a greater threat to lives at sea**.**

Assumptions: Enacting unified and standardised technical measures, without considering for a variety nature of shipping, may jeopardise efficient emissions reduction endeavours. For instance, different types of charter types should have practical enforcement mechanisms that make both shipowners and charters be part of the system.

7. IMO 2020 Sulphur limit bans ships using fuels with more than 0.50% Sulphur content. Without effective implementation, there could be a number of confusions rise. Seafarers could find

themselves with a criminal conviction if they fail to correctly manage the new regulation on the use of low-Sulphur fuel. Concrete measures for master and crew to undertake in various possible circumstances, including clear descriptions on responsibilities of shoreside and onboard operations will be needed.

Assumptions: When a ship is under PSC inspection, it is the Master and crew to be responsible for non-compliances. Moreover, measures covering bunkering procedures and action to take in accidents and incidents will be developed.

8. The industry has presented a variety of marine fuel types to achieve zero emission or marine environmental protection. It is critical that the dangers and particularities of each type needs to be clarified and informed, including methods for firefighting for each type. As a result, practical education, training and upskilling should be developed for seafarers to handle such fuels with competency.

Assumptions: New types of fuels that have not been thoroughly evaluated, could pose a danger for seafarers and consequently, threaten the safety of ships and marine environment.

4. Several technical aspects significantly impact on the safety of crew. Speed optimisation and energy efficiency management plans covering operational and ship structural measures must have close connection to physical aspects of engine room and a ship as whole, such as chemicals, temperature, pressure, flash point, fuel additives and power management. To reiterate the importance for crew, the environment that we are talking about is shipboard one where they live and work.

Assumptions: Existing requirements do not consider the differences between testing environment of fuels and ship environment. Thus, technical considerations on such physical and structural aspects of a ship should be taken into place in developing international regulations.

5. With raising concerns on marine environment pollution by plastic littering, the first step to develop measures to regulate preventing entering plastics into the sea from ships has commenced. Short-, mid- and long-term measures including research projects are underway concerning the following topics:

- The availability and adequacy of port reception facilities;
- Marking of fishing gear mandatory, reporting of loss of fishing gear;
- Facilitating the delivery of retrieved fishing gear to shore facilities;
- Regulating lost containers and dangerous goods going into the sea;
- Training of personnel; and
- Ensuring seafarers' awareness of the impact of marine plastic litter.

Assumptions: The IMO is the major discussion ground through which the ITF is involved on this topic. Any unnecessary and additional burden on seafarers due to the amendments to MARPOL and the reporting system should be thoroughly contemplated. Otherwise, it will not be implemented effectively.

Planned Actions

10. Participate in Marine Environment and Protection Committee (MEPC) correspondence group on EEDI, the Intersessional Working Group on Reduction of GHG emissions from ships (ISWG-GHG), working group on marine plastic and Maritime Safety Committee (MSC) Correspondence group on fuel oil safety in order to advocate pragmatic solutions in drafting regulations.

11. Participate in Sub-Committee on Ship Systems and Equipment (SSE), Sub-Committee on Carriage of Cargoes and Containers (CCC), Maritime Safety Committee (MSC) that deal with SOLAS II-2 firefighting and address the importance of measures for both traditional and new fuels types.

12. Participate in Legal Committee (LEG) and Facilitation Committee (FAL) and Sub-Committee on Implementation of IMO Instruments (III) in particular the Working Group on Port State Control (PSCWG) to address, prevent seafarers' criminalisation and actively participate in developing robust ship-shore communication measures covering all stakeholders.

13. Continue updating attested ballast water management equipment on sampling and training related issues.

14. Participate in Marine Environment and Protection Committee (MEPC) and Sub-Committee on Pollution Prevention and Responses (PPR) and its correspondence group on marine plastic litter, focusing on marking of lost containers, educating fishing vessels personnel and availability of port reception facilities.

15. Encourage to research about the IMO and industry best practices to educate seafarers about marine environmental issues, including nature and danger of fuel types. Disseminate adequate information to the affiliates and the public via communications means.

16. Encourage participation in national and international fora regarding marine environmental issues and make connection with seafarers' safety in relevant discussions and new international regulations entering into force by presenting the ITF policy.

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