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**DEVELOPMENT OF A SAFETY REGULATORY FRAMEWORK TO SUPPORT THE
REDUCTION OF GHG EMISSIONS FROM SHIPS USING NEW TECHNOLOGIES AND
ALTERNATIVE FUELS**

**Proposal for amendments to regulation V/3 of the STCW Convention and section B-V/3
of the STCW Code addressing ship and equipment-specific familiarization**

Submitted by ICS and ITF

SUMMARY

Executive summary: This document proposes amendments to regulation V/3 of the STCW Convention and section B-V/3 of the STCW Code to address familiarization aspects for masters, officers and other personnel on board ships subject to the IGF Code. A rationale is presented for the necessity of companies to develop bespoke familiarization programmes to address ship-, technology-, system- and equipment-specific aspects while providing guidance for developing such programmes available as part of the Maritime Just Transition Task Force's Baseline Training Framework for Seafarers in Decarbonization project.

*Strategic direction, 3
if applicable:*

Output: 3.8

Action to be taken: Paragraph 13

Related documents: None

Introduction

1 As the maritime industry shifts towards reducing greenhouse gas emissions, there is an urgent need to prepare seafarers for handling zero- and near-zero emission fuels. To meet this need, the Maritime Just Transition Task Force¹ (MJTTF) is an initiative set up in 2021 by the International Chamber of Shipping (ICS), the International Transport Workers' Federation (ITF), and the UN Global Compact (UNGC), in collaboration with the International Labour Organization (ILO) and the IMO Secretariats, as well as the World Maritime University (WMU).

¹ <https://www.mjtff.org/>

This initiative seeks to ensure that there is a human-centred approach to the transition as the industry decarbonizes.

Background

2 The MJTTF has delivered a project to develop a Baseline Training Framework for Seafarers in Decarbonization. The purpose of this project is to provide training frameworks to maritime education and training (MET) institutions that can be adapted into training programmes that prepare seafarers to operate ships powered by ammonia, methanol and hydrogen.

3 The MJTTF embarked on this project to provide the industry with a global baseline standard as there were no globally recognized training standards which addressed these fuels in accordance with IMO guidelines. This project seeks to complement the ongoing work of IMO through unifying the industry by highlighting the importance of the safety and training of seafarers as the industry decarbonizes. The project has produced the first global training frameworks for ammonia, methanol and hydrogen to be used as marine fuels in accordance with the IMO interim fuel-specific guidelines; the links for which are provided below:

- .1 [Basic Training Framework and Instructor Handbook for Methanol, Ammonia and Hydrogen as Marine Fuel](#)
- .2 [Advanced Training Framework and Instructor Handbook for Ammonia as Marine Fuel](#)
- .3 [Advanced Training Framework and Instructor Handbook for Methanol as Marine Fuel](#)
- .4 [Advanced Training Framework and Instructor Handbook for Hydrogen as Marine Fuel](#)

Discussion

4 [Guidelines for Developing Generic Familiarization Programmes](#) for all seafarers handling alternative fuels have also been produced by the MJTTF, which can be utilized by shipping companies and ship management companies to design onboard familiarization programmes. The guidelines seek to present the argument that maritime competence develops through:

- .1 education, leading to a Certificate of Competency (CoC), for generic aspects, which is the basis for;
- .2 training, leading to a Certificate of Proficiency (CoP), which addresses specialized aspects, which is enhanced by; and
- .3 company-led familiarization for ship- and role-specific operational readiness.

5 In the context of developing competence in handling future zero or near-zero (ZNZ) fuels, familiarization programmes for all seafarers are intended to supplement any mandatory training requirements specified within the 1978 STCW Convention and the STCW Code. Such programmes should ideally encompass:

- .1 ship-specific induction i.e. layout, equipment, systems, technologies, and fuel handling arrangements unique to each ship;

- .2 role-specific duties i.e. tasks and emergency procedures tailored to each crew member's responsibilities; and
- .3 shore-based integration i.e. orientation for technical, operational, and emergency-response staff ashore, ensuring alignment with onboard practices.

Regulatory context

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

6 Regulation I/14 of the Convention apportions responsibility on companies to ensure seafarers are familiar with their duties, equipment and emergency procedures that are relevant to their routine or emergency duties, with section A-I/14 of the Code specifying those obligations and sections B-I/14 providing additional guidance.

7 Regulation V/3 and section A-V/3 set the mandatory training requirements for service on ships subject to the IGF Code, while section B-V/3 provides guidance to comply with mandatory requirements. The guidance is restricted to elaborating on limited aspects of regulation V/3 and does not specifically address familiarization.

International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code)

8 Paragraph 6.3 of the ISM Code places the obligation on companies to establish procedures to ensure that newly appointed personnel are given proper familiarization with their duties and with relevant safety and environmental protection procedures, including emergency preparedness and response before they assume responsibility.

Key principles for developing familiarization programmes

9 While each programme must, in addition to the unique characteristics of the vessels, reflect the unique characteristics of the ship and company, effective familiarization should recognize the human element² as a critical factor for safety on board. Human performance remains a decisive contributor to both safe operations and the majority of incidents in the maritime sector. Building on this foundation, familiarization should also follow the guiding principles below:

- .1 Integration with the safety management system – Familiarization should be embedded in the company's SMS and linked to operational risk assessments. SMS integration enables companies to address technology-specific risks in greater detail than is possible within the regulatory framework;
- .2 Competence-based design – Programmes should define clear learning outcomes aligned with relevant KUPs, focusing on both normal and emergency operations;

² <https://www.imo.org/en/ourwork/humanelement/pages/default.aspx>

- .3 Progressive learning pathway – Familiarization should complement formal education and training, reinforcing theoretical knowledge with practical, hands-on experience;
- .4 Documentation and verification – Procedures should include records of completion and competency verification before independent duty assignment; and
- .5 Continuous review – Programmes must evolve with technological advances, regulatory updates, and lessons learned from operations.

10 By adhering to these principles, companies can ensure compliance with international requirements while maintaining the flexibility to address the unique characteristics of their vessels and fuels.

Familiarization focus areas

11 Chapter V in part B of the STCW Code gives guidance regarding special training requirements for personnel on certain types of ships. Section B-V/1 has inspired the proposed amendments. Section B-V/1 of the Code is specifically intended for personnel on oil and chemical tankers and is thus not directly relevant to the context of training for alternative fuels and new technologies. Nevertheless, several of the familiarization topics identified in that section may serve as useful reference material when enhancing training frameworks or familiarization programmes for ships using gases or low-flashpoint fuels.

Proposal

12 It is proposed to amend:

- .1 regulation V/3 of the Convention, as set out in annex 1; and
- .2 section B-V/3 of the Code, as set out in annex 2.

Action requested of the Sub-Committee

13 The Sub-Committee is invited to consider the information provided and proposal in paragraph 12, and annexes 1 and 2, and take action, as appropriate.

ANNEX 1*

PROPOSED DRAFT AMENDMENTS TO REGULATION V/3 OF THE CONVENTION

CHAPTER V

Special training requirements for personnel on certain types of ships

Regulation V/3

Mandatory minimum requirements for the training and qualifications of masters, officers, ratings and other personnel on ships subject to the IGF Code

1 Paragraph 3 of regulation V/3 is proposed to be amended, as follows:

"3 All seafarers serving on board ships subject to the IGF Code shall, prior to being assigned shipboard duties, receive appropriate ship and equipment specific familiarization as specified in regulation I/14, paragraph 1.5 and taking into account guidance in section B-V/3."

* Proposed modifications are indicated using "strikeout" for deleted text and "grey shading" to highlight all modifications, including deleted text and new insertions.

ANNEX 2*

PROPOSED DRAFT AMENDMENTS TO SECTION B-V/3 OF THE CODE

CHAPTER V

Guidance regarding special training requirements for personnel on certain types of ships

Section B-V/3

Guidance regarding the training and qualifications of masters, officers, ratings and other personnel on ships subject to the IGF Code

2 Section B-V/3 is proposed to be amended, as follows:

"PERSON WITH IMMEDIATE RESPONSIBILITY

1 The term "person with immediate responsibility" as used in regulation V/3, paragraphs 7 and 9 means a person being in a decision-making capacity with respect to handling of fuel addressed by the IGF Code or other fuel-related operations.

PROOF OF QUALIFICATION

2 The master of every ship subject to the IGF Code should ensure that the officer or the person with immediate responsibility for the fuel on board possesses the appropriate certificate, issued or endorsed or validated as required by regulation V/3, and has had adequate recent practical experience on board an appropriate type of ship to permit that officer or person to safely perform the duties assigned.

GUIDANCE REGARDING SEAGOING SERVICE

3 The purpose of qualifying shipboard service is to provide training and knowledge for the safe use of fuels addressed by the IGF Code.

4 To satisfy the experience appropriate to their duties on the ship on which they serve as referred to in regulation V/3, onboard training should:

- .1 emphasize practical "hands-on experience" and be related to the employment of the seafarer, i.e. the training of deck and engineering departments may be different;
- .2 be under the supervision of personnel qualified and experienced in the handling, characteristics and safety procedures of the fuels being used by the ship; and
- .3 be on board a ship carrying fuels relative to the Certificate of Proficiency being sought and should be such that the specialized equipment is brought into operation for the use of the fuels addressed by the IGF Code.

* Proposed modifications are indicated using "strikeout" for deleted text and "grey shading" to highlight all modifications, including deleted text and new insertions.

5 The onboard training programme must in no way affect the safe running or the seaworthiness of the ship.

FAMILIARIZATION FOR MASTERS, OFFICERS, RATINGS AND OTHER PERSONNEL

6 All personnel should undergo familiarization on board and, where appropriate, ashore before being assigned to shipboard duties, which should be given by qualified personnel experienced in the handling and characteristics of fuels subject to the IGF Code, as appropriate, and the safety procedures involved. Such familiarization programmes should at least cover the matters set out below:

.1 Hazards and precautions

.1 Master and officers

In-depth understanding of physical, chemical, operational hazards and mitigations.

.2 Ratings

Awareness of hazards and precautions.

.3 Other personnel

Protection of other persons, such as fellow crew members and passengers in the event of emergencies.

.2 Fire prevention and fire fighting

.1 Master and officers

In-depth understanding of fire prevention and leadership in fire drills and decision-making.

.2 Ratings

Ability to exercise fire prevention and apply fire-extinguishing techniques.

.3 Other personnel

Knowledge of restricted areas, basic extinguishing techniques and evacuation points.

.3 Pollution prevention

.1 Master and officers

Familiarity with operational compliance for spills/leaks and regulatory compliance with MARPOL.

.2 Ratings

Awareness on handling emissions or leaks.

.3 Other personnel

Awareness on who to notify in case of an incident.

.4 Safety equipment and its use

.1 Master and officers

In-depth understanding of PPE, gas detection and drills.

.2 Ratings

Hands-on experience with PPE to the role on board.

.3 Other personnel

Awareness on location of muster stations.

.5 Safety and Security Plans

.1 Master and officers

In-depth knowledge of the SMS and SSP and their implementation.

.2 Ratings

Understanding of daily operations in compliance with the SMS and SSP.

.3 Other personnel

Awareness of restricted zones.

.6 Emergency procedures

.1 Master and officers

In-depth knowledge of emergency response and decision making.

.2 Ratings

Understanding of emergency and escape routes.

.3 Other personnel

Understanding emergency locations."