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TRAINING AND WATCHKEEPING
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COMPREHENSIVE REVIEW OF THE 1978 STCW CONVENTION AND CODE

Development of interim guidance on training for seafarers on ships using alternative fuels

Submitted by ICS

SUMMARY

Executive summary: This document provides statistical evidence of the ascendancy of new build ships using alternative fuel technology and presents a rationale for initiating development of interim guidance on training for seafarers on ships using alternative fuels.

*Strategic direction,
if applicable:* 1

Output: Not applicable

Action to be taken: Paragraph 21

Related documents: MSC 107/20; MEPC 80/17; CCC 9/14 and CCC 9/WP.3

Introduction

1 The Marine Environment Protection Committee, at its eightieth session (3 to 7 July 2023), adopted resolution MEPC.377(80) on the *2023 IMO Strategy on reduction of GHG emission from ships* (2023 IMO GHG Strategy) outlining the Organization's commitment to reducing GHG emissions from international shipping and, as a matter of urgency, aiming to phase them out as soon as possible, while promoting, in the context of this strategy, a just and equitable transition (MEPC 80/17, paragraph 7.54).

2 Prior to this, the Maritime Safety Committee, at its 107th session (31 May to 9 June 2023), agreed to include in its biennial agenda for 2024-2025 a continuous output on "Development of a safety regulatory framework to support the reduction of GHG emissions from ships using new technologies and alternative fuels", assigning the Committee as the coordinating organ, in association with the CCC, HTW, III, SSE and SDC Sub-Committees as and when requested by the Committee and invited MEPC to consider being an associated organ (MSC 107/20, paragraph 17.6).

Discussion

3 ICS considers that, as regulatory and policy decisions relating to emissions are continuing to develop and evolve to achieve the 2023 IMO GHG Strategy, there is an urgent need to develop training standards in relation to alternative fuels.

Current trends on the uptake of alternative low- and zero-carbon fuels

4 According to [2022: Shipbuilding Review \(Clarksons\)](#), a record 61% (by tonnage) of new build orders were alternative fuelled. 35% of the number of new build orders were alternative fuelled.

5 A breakdown of new builds ordered in 2022 can be found in [Green Technology Tracker: January 2023 \(Clarksons\)](#). 51% (397 orders, 36.4 million GT) are LNG dual-fuelled, 7% (43 orders, 5 million GT) are methanol fuelled, 1.1% (17 orders, 0.8 million GT) are LPG fuelled and 1.2% include battery hybrid propulsion.

6 Shipowners are also investing in "alternative fuel-ready" technology evidenced by a further 10.8% orders that are ammonia "ready" (90 orders, 7.7 million GT), 1.4% orders that are LNG "ready" (31 orders, 1.0 million GT). A further three orders (15,000 GT) are hydrogen "ready".

7 The above statistics provide evidence of an increasing trend as compared with earlier years. In 2021, 30.6% (483 orders) were alternative fuel capable, up from 210 orders and 49 orders in 2020 and 2016, respectively.

8 Of the total orderbook, 39.9% of tonnage is set to use LNG (825 orders), 3.5% to use methanol (64 orders), 2.1% to use LPG (88 orders) and 2.4% capable of using other alternative fuels (c.250 orders; including ethane (16), hydrogen (13), biofuels (7) and battery/hybrid propulsion (c.200)).

9 In terms of ships in operation, the uptake of alternative fuels continues to progress, with 5.1% (start 2022: 4.4%, 2017: 2.3%) of the fleet capable of using alternative fuels or propulsion.

10 ICS believes that, in view of this trend, it is necessary to develop interim training standards for seafarers working on board alternatively-fuelled ships, in order to ensure the safety of life and property at sea and the protection of the marine environment.

Interim guidance as a precursor to formal training requirements under the 1978 STCW Convention and Code

11 The Maritime Safety Committee has addressed the safety of ships using alternative fuels, including the development of the following interim guidelines:

- .1 *Interim guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621);*
- .2 *Interim guidelines for the safety of ships using fuel cell power installations (MSC.1/Circ.1647); and*
- .3 *Interim guidelines for the safety of ships using LPG fuels (MSC.1/Circ.1666).*

12 MSC 86 (27 May to 5 June 2009) adopted the *Interim guidelines on safety for natural gas-fuelled engine installations in ships* (resolution MSC.285(86)).

13 MSC 94 (17 to 21 November 2014) approved the draft International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code) and also approved the *Interim guidance on training for seafarers on ships using gases or other low-flashpoint fuels* (STCW.7/Circ.23). Subsequently, MSC 95 (3 to 12 June 2015) adopted the IGF Code (resolution MSC.391(95)).

14 This was followed by the adoption of STCW regulation V/3 and STCW Code sections A-V/3 and B-V/3 (vide resolution MSC.396(95), resolution MSC.397(95) and STCW.6/Circ.11). STCW regulation V/3 and STCW Code sections A-V/3 and B-V/3 entered into force on 1 January 2017.

Utilizing experience gained with the implementation of interim guidelines for the safety of ships using alternative fuels and technologies

15 Whilst ICS observes that the resolutions in paragraphs 12 and 13 above preceded the adoption of International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (IGF Code), resolution MSC.391(95), it is noted that the approval of the Interim guidance (STCW.7/Circ.23, supplemented by STCW.7/Circ.23/Add.1) on training for seafarers coincided with the approval of respective IGF Code provisions.

16 A similar approach is therefore required for other alternative fuel options such as methyl/ethyl alcohols. As per the updated work plan for the development of new alternative fuels under the IGF Code approved by CCC 9 (annex 3 to CCC 9/WP.3), if time permits, discussions on the development of mandatory instruments for methyl/ethyl alcohols will commence at CCC 10. ICS believes that this would be the right time to initiate the development of interim guidance on training for seafarers on ships using methyl/ethyl alcohols as fuel so that relevant interim training provisions can be approved along with the mandatory provisions for methyl/ethyl alcohols.

17 Development of interim guidance on training for seafarers on ships using other alternative fuels having their interim guidelines under development, such as ammonia and hydrogen, should also follow similar process whereby experience is gained in the use of interim guidelines for the safety of ships using these fuels and technologies following which interim training guidance should be developed in parallel to the development of mandatory instruments regarding these fuels.

Proposal

18 ICS considers that an output for a new agenda should be introduced into the agenda of the Sub-Committee on Human Element, Training and Watchkeeping (HTW) to facilitate the development of interim guidance on training in this area in parallel with the ongoing review of the STCW Convention and Code, and to complement the work approved at MSC 107. ICS welcomes the opportunity to work with interested Member States and other international organizations to submit a related proposal for a new output to MSC 109.

19 As explained in paragraphs 16 and 17 above, this output will work concurrently with the work plan of the CCC Sub-Committee and the ongoing comprehensive review of the 1978 STCW Convention and Code.

20 The proposed new agenda item should be entitled "Development of interim guidance on training for seafarers on ships using alternative fuels".

Action requested of the Sub-Committee

21 The Sub-Committee is invited to consider the proposal in paragraphs 18 to 20 and take action as appropriate.