IMO News flash
CCC 10

The 10th session of Sub-Committee on Carriage of Cargoes and Containers (hereinafter referred to as "CCC") took place in a hybrid meeting from 16 to 20 September 2024. The primary focus of the meeting was to address items related to the safety of cargo and containers, the development of provisions `for alternative fuels and other relevant issues falling within the purview of the Sub-Committee. This news flash provides an overview of the key outcomes of CCC 10 regarding major technical issues

Summary of outcomes

Readers need to note that the information presented here only carries legal significance once officially adopted as mandatory instruments by Maritime Safety Committee(hereafter referred to as ''MSC'')**.** Below is a brief overview of the outcomes from CCC 10.

Interim guidelines for the safety of ships using ammonia as fuel

The development process for interim safety guidelines for ammonia-fueled ships began at the 9th CCC but was delayed due to a lack of consensus on safety principles regarding toxicity. Subsequently, the intersessional working group discussed various parts of the draft, but a full discussion on detailed requirements related to toxicity was not completed. At the 10th CCC, interim guidelines, including safety measures addressing ammonia toxicity, were finalized, and member states agreed on the need for guidelines for handling ammonia water. Key discussion points included standards for ammonia toxicity levels, the necessity of gas dispersion analysis, the provision of emergency evacuation spaces, and setting exposure limits and detection levels. Key principles include the exclusion of ships subject to the IGC Code from the guidelines, the establishment of toxic zones through gas dispersion analysis, and the definition of emergency evacuation spaces in case of ammonia exposure. The standard for ammonia reduction devices was agreed to be set at 110 ppm or lower, and the guidelines will be revised once more data on ammonia-fueled ships become available.

Amendments to the IGC Code

At the 8th CCC, it was decided to develop a consolidated version of the IGC Code, given the numerous amendments under discussion. The finalized amendments are expected to be approved at the 109th MSC, and adopted at the 110th MSC, with a target effective date of 1 January 2028.

Key updates include:

Cargo Tank Filling Limits (IGC Code Chapter 15): It was agreed to allow filling limit greater than 98%, irrespective of formation of isolated vapour pockets within cargo tanks, with a retroactive application to ships constructed on or after 1 July 2016.

Safety Provisions for Using LPG cargo as Fuel (IGC Code Chapter 16): Based on the interim guidelines (MSC.1/Circ.1679), the sub-committee finalized a draft amendment for LPG cargo as fuel, with permission of ethane as an authorized cargo that could be used as fuel.

Other IGC Code Amendments: Additional amendments were discussed, including changes related to fracture mechanics to type C tanks and thermal insulation for cargo pipes. Some amendments, such as Emergency shutdown (ESD) systems and special requirements for CO_2 will be applied retroactively to ships constructed on or after 1 July 2016.

Revised recommendations for entering enclosed spaces aboard ships

The draft revised recommendations have been finalized. The final draft of the recommendations includes requirements for maintaining an enclosed space register, crew training, clarifying the company's role in safety management for enclosed spaces, and providing guidance on oxygen, carbon dioxide, and carbon monoxide limits, along with emergency response plans.

Development of guidelines for low-flashpoint fuels and related technologies

With the growing urgency to expedite work on low-flashpoint fuels and swiftly develop safety regulations for alternative fuels to support the decarbonization of the shipping industry, CCC has been advancing the next stage in the development of the International Code of Safety for Ships Using Gases or Other Low-Flashpoint Fuels (IGF Code) and its associated guidelines

Draft Interim guidelines for ships using hydrogen as fuel

The draft Interim Guidelines for using hydrogen as fuel on ships were discussed but not significantly advanced during the session due to time constraints. These guidelines are goal-based, focusing on minimizing risks to ships, their crew, and the environment. They are non-mandatory and meant to be used alongside the IGF Code, particularly in the Alternative Design and Arrangements process under SOLAS Chapter II-1 regulation 55.
Key provisions include the arrangement, installation, control, and monitoring of hydrogen-related systems, with an agreement to separate guidelines for liquid and gaseous hydrogen due to their differing properties. While some aspects of hydrogen fuel supply were developed, further work will continue through correspondence and technical meetings, aiming for finalization in 2025 and approval in 2026.

Draft Interim guidelines for ships using ammonia as fuel

The draft interim guidelines for ammonia-fueled ships have been completed based on discussions from the CCC 10 and the Intersessional Working Group on Alternative Fuels (ISWG-AF1). These guidelines incorporate safety measures to address the toxic nature of ammonia, particularly in limiting and controlling its atmospheric release. and managing the resulting ammonia-water effluent. The guidelines are set to be discussed further at MSC 109 in December 2024 and MEPC 83 in April 2025. The majority of member states support the necessity of establishing standards for handling ammonia effluents generated Ammonia Release Mitigation Systems in ammonia-fueled ships. The Sub-Committee invited interested member states and international organizations to submit a proposal for a new output to MEPC concerning the need to develop guidelines for managing ammonia effluent.

The guidelines follow a high-level approach to establish goals and functional requirements for ammonia-fueled ships in response to international regulatory needs and the urgency for developing environmentally friendly alternative fuels. Member states agreed on several key provisions, including release limits for ammonia and detection thresholds, and acknowledged the need for rapid revisions as performance data for ammonia-fueled ships becomes available. Discussions on revising the interim guidelines are planned for the 13th CCC session in September 2027.

The main principles of the interim safety guidelines for ammonia-fueled ships were discussed. First, it was

agreed that, according to the "one ship, one code" principle, ships using ammonia as fuel that fall under the IGC Code will be excluded from the application of these guidelines.

Due to the lack of construction and operational data for ammonia-fueled ships, many member states acknowledged that it is currently impossible to establish complete interim guidelines. However, consensus was reached on key issues such as ammonia atmospheric releases and toxic concentration limits for safety measures.

Regarding toxic areas and spaces, a clear distinction was made between areas and enclosed toxic spaces containing a single point of leakage, and the concentration criteria for determining toxic areas was set at 220 ppm. Additionally, it was established that the boundaries of toxic areas would be set based on the safety distances defined by the IGC Code, while also ensuring that gas dispersion analysis demonstrates that the ammonia concentrations exceeding 220 ppm do not reach non-toxic spaces. The boundary conditions for gas dispersion analysis should be approved by the Administration.

Provisions regarding emergency evacuation sites were also discussed, defining them as independent spaces equipped with self-sustaining air supply systems to minimize the risk of ammonia exposure, and it was agreed to include provisions for emergency evacuation sites where all persons on board can evacuate in the event of ammonia release. It was recognized that defining exposure limits is difficult at this point due to differences among states, and three concentration thresholds were agreed upon. Each threshold corresponds to 25 ppm, 110 ppm, and 220 ppm, with local indication, alarm, and safety systems activated at these levels.

Concerning ammonia atmospheric release, it was decided that releases should be minimized through treatment systems during normal operations, allowing direct releases only in emergency situations. While opinions diverged on the discharge criteria for ammonia release mitigation system, the majority of member states agreed on 110 ppm as a compromise. The requirement to prioritize the installation of bunkering stations on open decks has been removed and reflecting the latest best practices for LNG bunkering systems. Finally, it was emphasized that the components of pipelines and systems must be compatible with ammonia, considering its corrosive properties including stress corrosion cracking.

Regarding fuel containment systems, it was decided that the ammonia fuel should be stored in a refrigerated state at atmospheric pressure as this provides the highest level of safety as the evaporation rate of cold ammonia is very low. Other storage conditions, such as pressurized or semi-refrigerated ammonia storage, may be acceptable through alternative design processes.

The Revised Work Plan for Developing Alternative Fuel Safety Guidelines

The development plan for alternative fuel safety guidelines has been revised due to delays in the schedule for creating interim safety guidelines for hydrogen-fueled vessels. The chair proposed the establishment of a Correspondence group (CG) and an Intersessional Working Group on Alternative Fuels (ISWG-AF) before CCC 11, and there was consensus on this proposal. The priority is now to complete the interim safety guidelines for hydrogen-fueled vessels during the meetings of the intersessional working group and the CCC 11 (scheduled for September 2025), with the goal of obtaining approval at MSC 111 in May 2026.

Considering the workload of the working group and the urgency of the safety guidelines for hydrogen-fueled vessels, it was agreed to discuss the agenda for amending the LNG-related IGF Code at the 12th session of the Sub-Committee on Carriage of Cargoes and Containers (September 2026).

Similarly, discussions regarding documents CCC 10/3/10 and CCC 10/INF.28, regarding adding ferrous casting concerning the Charpy impact test and acceptance criteria, related to MSC.1/Circ.1622 revision of have been postponed and are now scheduled for the CCC 13 (September 2027). The schedules for the intersessional working group and the revised work plan are outlined in the table below.

Table 1 The Revised Work Plan for Developing Alternative Fuel Safety Guidelines

IMO Body	Work plan	Target date
MSC 109 (24.12.)	• Approve Interim guidelines for the safety of ships using ammonia as fuel	2024
ISWG-AF2 CCC 11 (25.9.1~5)	• Further develop/ finalize Interim guidelines for ships using hydrogen as fuel • If time permits, further develop/finalize Interim guidelines for low flashpoint oil fuels • If time permits, consider the revision of the interim guidelines for ships using methyl/alcohol fuels, with a view to developing mandatory instruments • If time permits, start discussion regarding the development of mandatory instruments regarding safety of ships using fuel cells	2025
MSC 111 (26.5)	• Approve interim guidelines for ships using hydrogen as fuel	2026
CCC 12 (26.9)	• Further consider the revision of the interim guidelines for ships using methyl/alcohol fuels, with a view to developing mandatory instruments • Further develop/finalize interim guidelines for low flashpoint oil fuels • If time permits, start discussion regarding the development of mandatory instruments regarding safety of ships using fuel cells • further consider amendments to the IGF Code regarding LNG • If time permits, consider the revision of the interim guidelines on the safety of ships using ammonia as fuel	2026
CCC 13 (27.9)	• Consider the revision of the interim guidelines on the safety of ships using ammonia as fuel • Finalize the revision of the interim guidelines for ships using methyl/alcohol as fuels, with a view to develop mandatory instruments • Consider amendments to MSC.1/Circ.1622/Rev.1 Guidelines for the Acceptance of Alternative Metallic Materials for Cryogenic Service in Ships Carrying Liquefied Gases in Bulk and Ships Using Gases or Other Low Flashpoint Fuels	2027

Review of the IGC Code

At the 8th CCC session, it was decided to develop a consolidated version of the IGC Code due to the numerous amendments under discussion. The consolidated draft amendments to the IGC Code finalized at this session are expected to be approved at MSC 109, and entered into force on 1 January 2028, with adoption at MSC 110.

The extensive list of amendments includes those applicable to ships constructed on or after 1 January 2028 and others applicable to both new and existing ships. In general, amendments that require changes in design or construction will apply to ships constructed on or after 1 January 2028, while operational amendments and editorial amendments will apply to new ships and existing ships under the 2014 IGC Code (ships constructed on or after 1 July 2016). Amendments would not be applicable to ships constructed before 1 July 2016, unless individual member States take a different view.

‘Amendments to IGC Code Regarding Cargo Tank Filling Limits (Chapter 15 of IGC Code)

The sub-committee agreed to revise the conditions allowing filling limit greater than the limit of 98%. It was also decided not to allow filling limit greater than 98% for type C tanks or tanks with MARVS greater than 0.7 bar, unless accepted by the Administration. Since Chapter 15 of the IGC Code pertains to operational requirements, it was considered appropriate to apply the amendments to existing ships as well. As a result, a filling limit greater than 98% may be permitted for ships constructed on or after 1 July 2016, regardless of creation of isolated vapor pockets within cargo tanks.

Development of Safety Regulations for Using LPG Cargo as Fuel (Chapter 16 of IGC Code)

Pending items in the IGC Code amendment, based on the "Provisional Guidelines for Using LPG Cargo as Fuel," were further discussed during the working group session. Although these regulations were intended to apply only to newly constructed ships, this distinction was not identified in the CCC 10/WP.4 document used for discussions. Due to time constraints, the group concluded that it would be impractical to reflect requirements separately for existing and new ships in the report. Therefore, it was agreed to mention this distinction on the resolution page for the implementation of the amended IGC Code.

Special requirements for CO_2

Discussion was made to designation of CO_2 as both asphyxiant and toxic product and it was concluded that it would only be considered as toxic product for the purpose of the IGC Code. Consistent with the practice used in the IBC Code, it was agreed to apply the amendments to both new and existing ships. As a result, ships constructed on or after 1 July 2016 should comply with additional special requirements as a toxic product, including the corrected 'triple point' of CO_2 (0.417 bar and -56.6 ℃).

Emergency Shutdown (ESD) Requirements

The table of cause and effect function contained in chapter 18 of the IGC Code has been reformulated. Given that the no additional sensors are required and minimal changes to the ESD logic may be required, it was agreed to the amendments are applied to new and existing ships, with the exception of the requirement for remotely controlled ESD valves at cargo tank connections. Consequently, all ships constructed on or after 1 July 2016 should take an appropriate action before 1 January 2028, if deemed necessary.

LPG and Ethane Cargoes as Fuel

The sub-committee finalized the draft amendments for LPG cargo as fuel, using the "Interim Guidelines for Use of Liquefied Petroleum Gas (LPG) Cargo as Fuel (MSC.1/Circ.1679)" as the base document. It was also agreed to add ethane as an authorized cargo that could be used as fuel. Given that the amendments to IGC Code for LPG cargo as fuel were developed for new ships constructed on or after 1 January 2028, the interim guidelines will remain in effect for ships constructed before 1 January 2028, and this will be reflected in the associated MSC resolution for the amendments to the IGC Code.

The use of ammonia cargo as fuel

As amendments to the IGC Code to permit the use of anhydrous ammonia cargo as fuel were agreed at MSC 108, if they are adopted at MSC 109 they will be entered into force 1 July, 2026,. Furthermore, a circular allowing voluntary early application of this amendments, subject to flag Administration agreement, is expected to be issued at MSC 109.

Regarding the interim guidelines for the use of anhydrous ammonia cargo as fuel has been submitted to CCC 10 for discussion but, were not discussed due to time constraints. The intersessional working group will prepare draft interim guidelines for use of ammonia cargo as fuel taking into account CCC 10/4/1, CCC 10/4/7, and CCC 10/WP.4 and the results will be submitted at CCC 11.

Other Amendments to the IGC Code

The draft amendments to the IGC Code incorporate several unified interpretations on the IGC Code, listed below. Considering the existing ships constructed on or after 1 July 2016, the unified interpretations will remain in effect, and this will be reflected in the associated MSC resolution for the amendments to the IGC Code. The implementation dates for each proposed amendment have been reflected in the IGC Code.

- MSC.1/Circ.1543 - Unified Interpretation regarding to the IGC Code
- MSC.1/Circ.1559 - Unified Interpretations of the IGC Code
- MSC.1/Circ.1590 - Unified Interpretation of Paragraph 13.3.5 of the IGC Code
- MSC.1/Circ.1606 - Unified Interpretation of Paragraph 4.19.1.6, 5.13.1.1.4, 11.3.1, 11.3.3 of the IGC Code
- MSC.1/Circ.1617 - Unified Interpretation of Paragraph 11.3.6, 11.4.8 of the IGC Code
- MSC.1/Circ.1625 - Unified Interpretations relating to the IGC Code
- MSC.1/Circ.1651 - Amendments to MSC.1/Circ.1625 on Unified Interpretations of the IGC Code
- MSC.1/Circ.1669 - Unified Interpretation of the IGC Code
- MSC.1/Circ.1679 - Interim Guidelines for Use of Liquefied Petroleum Gas Cargo as Fuel.

Paragraph 5.11.4.1: The sub-committee agreed that cargo piping systems is to be provided with a thermal insulation system to protect personnel from direct contact with hot surfaces having design temperature of 60℃ or above, taking into account the warm-up and the gassing-up operation. This amendment is applied to new ships constructed on or after 1 January 2028.

Amendments to the IGC Code for Type C Tank Design and Analysis (Chapter 4 of IGC Code)

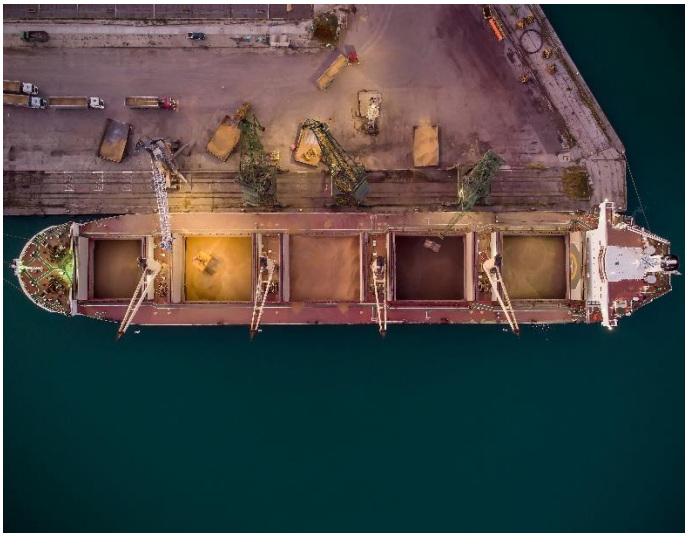
The Correspondence Group reached a consensus on important amendments to sections 4.23 and 4.28 of the IGC Code. These changes introduce fracture mechanics and finite element analysis (FEA) as an alternative design criterion for Type C independent tanks, specifically aimed at ensuring safer and more reliable tank structures. Notably, paragraph 4.23.1 was amended to clarify that the minimum design vapour pressure is intended to limit dynamic stress, thereby preventing the propagation of surface flaws. Additionally, paragraph 4.23.4, which applies fracture mechanics to large Type C independent tanks, was amended to add a layer of rigor to fatigue verification, requiring that the predicted failure development time from an assumed initial defect to a critical state shall not be less than three times the tank's lifetime, or that C_w shall be kept below 0.1. The new paragraphs 4.28.4 and 4.28.5 added under section 4.28 provide detailed guidance on applying FEA and conducting buckling assessments for ships constructed on or after 1 January 2028.

Amendments to the IMDG Code

Following the fire that broke out in 2020 on the Höegh Xiamen, a car carrier loaded with vehicles, the sub-committee has been reviewing the special provisions for the sea transport of vehicles and considering amendments. The Sub-Committee at CCC 8 established the Correspondence Group on the Review of Transport Provisions for Vehicles to continue the development of new transport provisions in response to recent fire incidents on vehicle carriers. The Sub-Committee engaged in broad and extensive discussions on the topics that should be considered in any future submissions to CCC 11 on transport provisions for vehicles, including the following list of topics

- Non-consumer vehicles
- Charging Electric Vehicles (EVs) and Hybrids while underway
- State of charge
- Disconnection of battery/removing battery/leave in place
- Fuel Quantity
- Inspections of Ro-Ro passenger ships
- Damage from the weather (seawater versus freshwater)
- Refrigerated vehicles
- Packaged vehicles
- Special provision for Roll-on/roll-off passenger ships
- State of health (battery)
- Fuel Flashpoint
- Provisions for hybrid
- Recall provisions
- General damage
- Prototype components/vehicles

Amendments to the IMSBC Code



The IMSBC Code is regularly amended to take into account new requirements for existing solid bulk cargo and newly identified solid bulk cargo. The amendments (07-23) to the IMSBC Code, adopted by MSC 107 as resolution MSC.539(107) and issued as a consolidated edition, shall enter into force on 1 January 2025. However, starting from 1 January 2024, the Administrations may apply the aforementioned amendments in whole or in part on a voluntary basis. The Sub-Committee has given its, in principle, agreement to the draft amendment (08-25) to the IMSBC Code, prepared by E&T 40 in February 2024. The amendment (08-25) to the IMSBC Code is scheduled to enter into force on 1 January 2027, with voluntary application by the Administration starting from 1 January 2026, and is expected to be adopted at MSC 110 in June 2025.

Furthermore, the Sub-Committee has instructed that the following table item be further considered at E&T 41 in September 2024 and incorporated, as appropriate, into draft amendment (08-25) to the IMSBC Code.

Table 2 Revision of existing individual schedules

Group B	ALUMINIUM FERROSILICON POWDER UN 1395
	ALUMINIUM SILICON POWDER, UNCOATED UN 1398
	ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS UN 3170
	CASTOER BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE UN 2969
	DIRECT REDUCED IRON (A) Briquettes, hot-moulded
	DIRECT REDUCED IRON (B) Lumps, pellets, cold-moulded briquettes
	FERROSILICON UN 1408 with 30% or more but less than 90% silicon (including briquettes)
	FERROSILICON with at least 25% but less than 30% silicon, or 90% or more silicon
	FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS UN 2793 in a form liable to self-heating
	FISH MEAL (FISH SCRAP), STABILIZED Anti-oxidant treated
Group C	IRON ORE PELLETS

Table 3 New individual schedules

Group A	APATITE CONCENTRATE
	PHOSPHATE ROCK FINES (uncalcined)
Group B	ALUMINIUM SULPHATE GRANULAR
	FERRIC SULPHATE GRANULAR
Group C	ASPHALT GRANULATES (non-hazardous)
	CRUSHED GRANODIORITE, COARSE
	FISH MEAL (FISH SCRAP), STABILIZED
	IRON ORE BRIQUETTES
	PEA PROTEIN CONCENTRATE PELLETS (non-hazardous)
	PETROLEUM COKE (calcined or uncalcined)
	TUFF (COARSE)
	WHEAT GULTEN PELLETS
	ZINC SLAG (coarse)
Group A & B	UNTREATED INCINERATOR BOTTOM ASH (U-IBA)

Other Consideration of IMSBC Code

• Regarding the Introduce bulk cargo identification numbers in the IMSBC Code, Revision 5 of IACS UI SC 89 on SOLAS Ch.II-2/Reg.19.3.4 and the IMSBC Code cargo space ventilation requirements, and Safety issues identified during the marine safety investigation for fatality of stevedores, the Sub-Committee agreed to include these items in the agenda for E&T 41 for further consideration, with a view to providing further advice to CCC 11

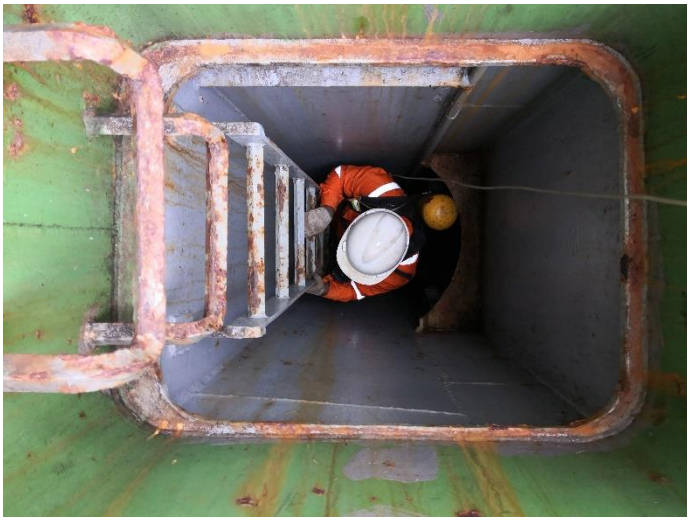
• To Amend the recommendation on the use of pesticides in ships applicable to the fumigation of cargo holds (MSC.1/Circ.1264) the Sub-Committee agreed to this agenda to E&T 41 for further consideration, with a view to approval at MSC 110.

• Regarding the editorial modification to the segregation table in 9.3.3 of the IMSBC Code the Sub-Committee agreed, in principle, to refer the draft amendments to the IMSBC Code to E&T 41 for consideration and incorporation, as appropriate, into draft amendment (08-25) to the IMSBC Code. To align the table in 9.3.3 of the IMSBC Code with the table in 7.6.3.5.2 of the IMDG Code, amendments to the segregation table in 7.6.3.5.2 of the

IMDG Code, to E&T 42 for consideration and incorporation, as appropriate, into draft amendment (43-26) to the IMDG Code.

• For Annual listing and real-time updating of solid bulk cargoes not listed in the IMSBC Code but shipped based on provision assessments (Tripartite agreements) the Sub-Committee will keep the request to develop a new GISIS module for the competent authority of the port of loading to submit information on an application made to IMO under 1.3.2 of the IMSBC Code on hold until the finalization of the GISIS review.

Revision of the Revised recommendations for entering enclosed spaces onboard ships



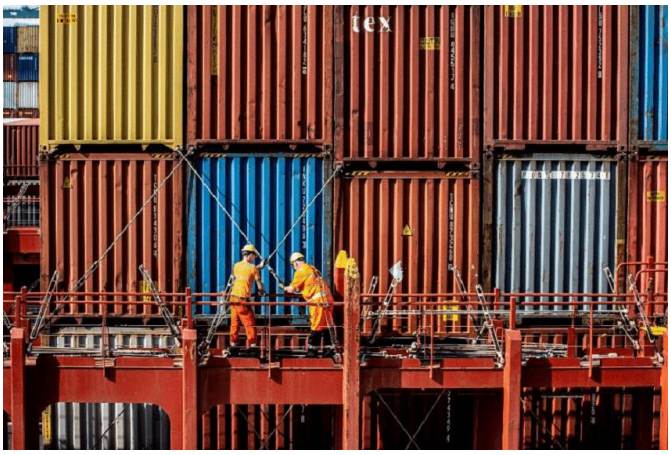
Entering enclosed spaces on ships poses significant safety risks due to hazardous gases and low oxygen levels. To address these dangers, the International Maritime Organization (IMO) has implemented safety protocols through various recommendations. In 2011, the IMO adopted resolution A.1050(27), which provided initial guidance on safe entry into enclosed spaces. Recently, the IMO updated these recommendations to reflect evolving risks and improve maritime safety measures.

The revised recommendations include several key updates. The section on **Safety Management for Entry into Enclosed Spaces** now emphasizes enhanced **training** for personnel and introduces new requirements for **drills**.

The **Identification of Hazards and Assessment of Risks** section has been expanded with updated guidance for developing an **Enclosed Space Register**, while the **General Precautions** section highlights the necessity of risk assessments prior to cargo operations. This includes setting **minimum oxygen limits** and outlining **training requirements** for those entering enclosed spaces. Additionally, there are updates on the **Testing of Atmospheres** using SOLAS-compliant equipment, as well as revisions related to **oxygen-depleting cargoes** and **steel-related hazards**, which are now included in the new appendices. The previous example of an Enclosed Space Register was removed, allowing companies to develop their own registers, and updated examples of an **Entry Permit** and **Emergency Response Plan** have been introduced.

Member states also agreed to not include a list of oxygen-depleting cargoes, as the IMSBC Code already addresses these issues. The finalized recommendations include requirements for creating an enclosed space register, crew training, company responsibilities, and acceptable levels for oxygen, carbon dioxide, and carbon monoxide, along with examples of emergency response plans. The revised recommendations are set to be submitted for approval at the MSC 109 in December 2024.

Revision of the Revised guidelines for the preparation of the Cargo Securing Manual to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual



Discussions are underway to amend MSC.1/Circ.1353/Rev.2 to recognize lashing software as a tool to enhance the Cargo Securing Manual (CSM) for container stowage and securing plans. According to SOLAS VI/5.6, all cargo except for bulk cargo must be loaded in accordance with an approved CSM, which should follow the recommendations set forth in MSC.1/Circ.1353/Rev.2 as approved at MSC 102. Due to the variability of actual loading conditions on container ships—dependent on the arrangement and weight of containers for each voyage—relying solely on the approved CSM to evaluate compliance with securing regulations may not adequately reflect real-world scenarios.

Therefore, lashing software is proposed as a supplementary tool that can provide a more accurate assessment of actual loading conditions, and this technology is already available and in use. The proposed amendment will also consider including performance standards and guidelines for the approval of lashing software specifically for container ships contracted for construction on or after July 1, 2025. These standards will be based on the International Association of Classification Societies (IACS) UR C6 requirements for lashing software, ensuring a robust framework for implementation and compliance.

While there were no clearly defined outcomes from CCC 10, a mandate was established for the correspondence group to review the wording of the proposed amendments, expand the scope of revisions, and develop unified performance standards, with a report to be presented at CCC 11.

Development of measures to prevent the loss of containers at sea

At MSC 107, it was decided to develop measures to prevent the loss of containers at sea as a two-year project under the CCC, aiming for completion by 2025. The CCC was designated as the coordinating body to discuss the issue with related committees such as SDC, NCSR, HTW, and III (MSC 107/20, paragraph 17.37). A correspondence group (CG) has been established to finalize an inventory and work plan. This inventory, which includes 11 documents submitted to CCC 10, lists existing measures as Table 4 and new proposals as Table 5, related to container loss and relevant conventions and regulations. After a technical review and the finalization of the work plan by the CG, the results will be submitted to CCC 11 in September 2025.

TABLE 4: INVENTORY OF EXISTING MEASURES

ITEM	TOPIC	RELEVANT REGULATION/IMO INSTRUMENT/ANY OTHER	STATUS
1	VGM (verified gross mass)	SOLAS Reg. VI/2.4 (VGM)	Finalized
2	Routing Measures		Finalized
3	Mandatory carriage of electronic inclinometers	SOLAS Reg. V/19.2.12 (Electronic inclinometer)	Final stage
4	Detection and tracking of containers lost at sea	SOLAS Reg. V/31,32 Mandatory reporting of container loss enters into force 1 January 2026	Final stage
5	Detection and tracking of containers lost at sea		In process
6	Double reporting of container losses	Nairobi convention on wreck removal	In process
7	Applicability of Interim guidelines on the second generation intact stability criteria (MSC.1/Circ.1627) on container ships	Interim guidelines on the second generation intact stability criteria (MSC.1/Circ.1627) ITTC Recommendations Procedures and Guidelines 7.5	In process

TABLE 5: INVENTORY OF NEW PROPOSALS

ITEM	TOPIC	RELEVANT REGULATION/IMO INSTRUMENT/ANY OTHER	STATUS
1	Revision of MSC.1/Circ.1353/Rev.2 and development of performance standards and guidelines for lashing software as a supplement to cargo securing manual	MSC.1/Circ.1353/Rev.2 Resolution A.714(17) IACS UR C 6	New initiative
2	Strength issues (Container structural properties)	ISO 1161: 2016 Series 1 freight containers - corner and intermediate fittings - Specifications ISO 1496-1 to 1496-5:2013 Specification and Testing. Parts 1 through 5 ISO/TR 15070:1996/Amd 2:2007. Series 1 freight containers — Rationale for structural test criteria — Amendment 2 CSC Convention	New Proposal to be discussed
3	Strength issues (Container securing gear properties)	ISO 3874: 2017-10 Series 1 freight containers – handling and securing. ISO TR 15069:2018 Series 1 freight containers — Handling and securing — Rationale for ISO 3874:2017, Annexes A to E CSS Code	New Proposal to be discussed
4	Loading, stowage and validation	SOLAS, Reg. VI/2.4 (VGM)	New Proposal to be discussed
		Resolution A.714 (17) Code of Safe Practice for Cargo Stowage and Securing (the CSS code)	New Proposal to be discussed
		The International Convention for Safe Containers (CSC Convention)	New Proposal to be discussed
		CTU code MSC.1/Circ.1497	New Proposal to be discussed
		SOLAS chapter VI (Carriage of cargoes)	New Proposal to be discussed
5	Conditions at sea	SOLAS Reg. V/19.2.12 (Performance Standards for Electronic Inclinometers)	New Proposal to be discussed
		2008 Intact Stability Code, Chapter 8	New Proposal to be discussed

6	Operational guidance	MSC.1/Circ. 1228 MSC.1/Circ. 1627	New Proposal to be discussed
7	Training	STCW CTU Code CSS Code	New Proposal to be discussed
8	Accident reporting	SOLAS Reg. V/31,32 Mandatory reporting of container loss enters into force 1 January 2026	New Proposal to be discussed
9	Inspection programmes (container handling, packing and transport	MSC.1/ Circ. 1649 CTU Code [CSC]	New Proposal to be discussed
10	Inspection programmes (container securing and lashing gear)	MSC.1/Circ. 1353/Rev.2 MSC.1/Circ. 1352 CSC	New Proposal to be discussed

Revision of the Interim recommendations for carriage of liquefied hydrogen in bulk

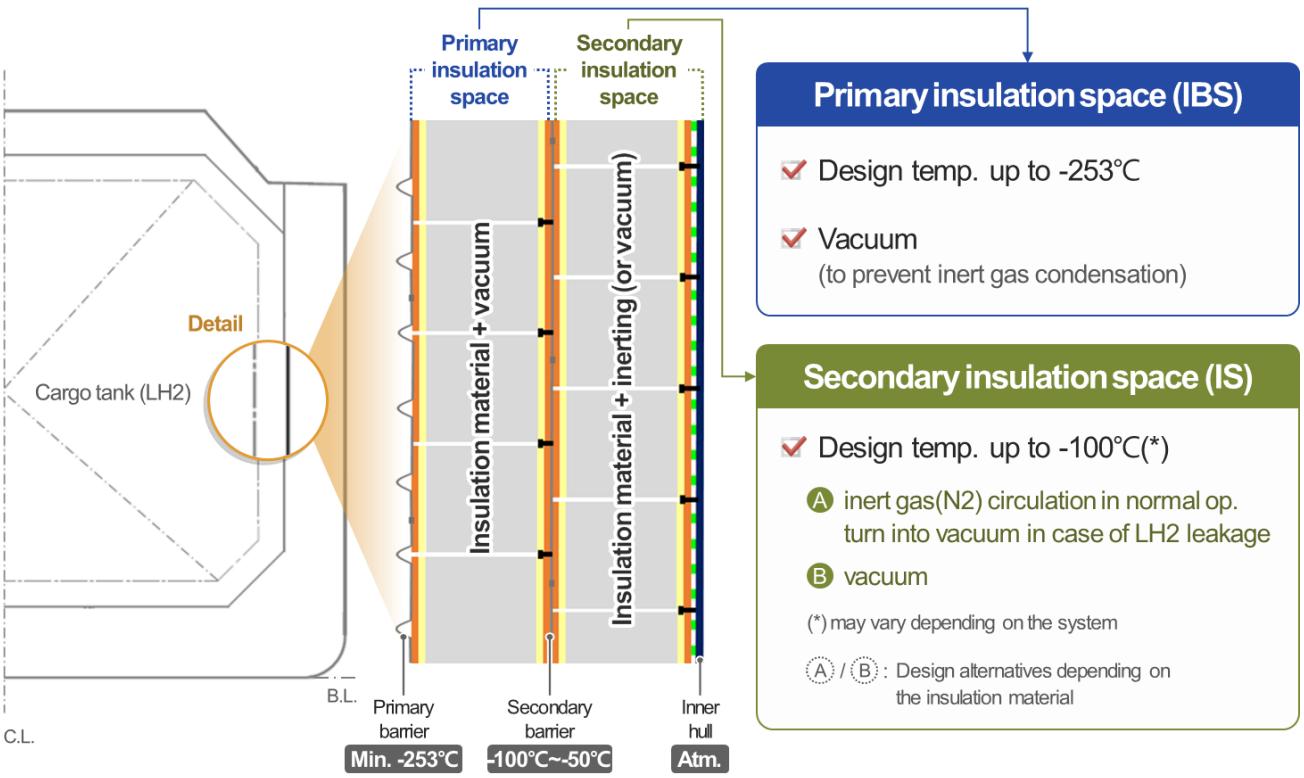


Figure Membrane-type Cargo Containment System for Liquified Hydrogen

The interim recommendations for the bulk transport of liquefied hydrogen consist of Part A, which outlines general requirements applicable to all cargo containment systems for liquefied hydrogen storage, Part B for cargo containment systems using vacuum-insulated independent tanks, and Part C for systems using hydrogen gas in the insulation and internal insulation space of independent tanks.

The interim recommendations address safety requirements for independent cargo containment systems but do not cover membrane-type cargo containment systems. Therefore, Part D is proposed to be newly added to specify the safety requirements for membrane-type cargo containment systems as Figure 5, along with suggested revisions to Part A to apply the safety requirements for the new cargo containment systems.

To incorporate developing technology for liquefied hydrogen membrane cargo tanks into the interim recommendations for the bulk transport of liquefied hydrogen, The Republic of Korea will take the lead in discussions with interested member states and organizations during the intersessional period. The agenda document is planned to be submitted at the 11th session of the CCC in September 2025.

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