Brief: CCC 12

Session Dates: 14 - 18 September 2026

OVERVIEW

The IMO Sub-Committee on Carriage of Cargoes and Containers (CCC) held its latest session, making substantive progress across a broad range of maritime safety, security, and operational regulatory areas. Key milestones of the session included advancing the revision of the interim guidelines for methyl/ethyl alcohol-fueled ships, initiating safety guidelines for Onboard Carbon Capture and Storage (OCCS) systems, updating the IMSBC and IMDG Codes, and revising the Guidelines for the Preparation of the Cargo Securing Manual to establish a harmonized performance standard for lashing software.

This brief provides an overview of the significant issues progressed during the meeting.

KEY TAKEAWAYS

1. **Revision of the Interim Guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621):** The Sub-Committee finalized the revision of the Interim Guidelines, which will be submitted to MSC 113 (June 2027) for formal approval.

2. **GHG Safety:** The Sub-Committee initiated the drafting of the Interim Guidelines for the safety of ships using an Onboard Carbon Capture and Storage (OCCS) System, targeting completion at CCC 14 (2028), with formal adoption scheduled for MSC 116 (2029). The Sub-Committee also updated the Work Plan based on the outcomes of this session.

3. **IMSBC Code Amendments:** Nine new bulk cargoes (including Contaminated Soil and Direct Shipping Ore Spodumene) advance to Amendment 09-27, while complex items like Polymetallic Nodules were deferred to CCC 13 to resolve testing issues. Shippers must prepare for expanded cargo declarations explicitly covering subsidiary hazards and MHB notations, as well as the 2028 voluntary Bulk Cargo Number system rollout.

4. **IMDG Code Amendments:** Targeting 2030 entry into force, new Special Provision SP980 mandates consignor safety checks for electric/hybrid vehicle shipments while removing general exemptions. To close the SP188 safety gap, work is progressing on container-level energy thresholds to require full dangerous goods documentation for bulk small-battery shipments, alongside meter-based Class 7 segregation updates.

5. **Harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual:** The Sub-Committee finalized interim guidelines establishing a two-module performance standard that permits lashing software to supplement - but not replace - approved containership Cargo Securing Manuals. Issued as a non-mandatory circular, its interim status allows for future updates as operational experience grows, like real-time motion sensor and automated weather data integration.

6. **Low-Flashpoint fuel oils:** The Sub-Committee further developed the draft Interim Guidelines for ships using Low-Flashpoint fuel oils. The work will continue intersessionally through Correspondence Group. The Maritime Safety Committee will be invited to re-establish the Intersessional Working Group on Alternative Fuels (ISWG-AF 4) to further develop these guidelines.

CONTENTS *(CLICK TO FOLLOW)*

GUIDELINES FOR ALTERNATIVE FUELS AND RELATED TECHNOLOGIES

- **Revision of the Interim Guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621)**
- **Draft Interim Guidelines for ships using low-flashpoint oil fuels**
- **Amendments to the IGF Code regarding LNG**
- **Revision of the Interim Guidelines for the safety of ships using Fuel Cell Power Installations (MSC.1/Circ.1647)**

SAFETY REGULATORY FRAMEWORK TO SUPPORT THE REDUCTION OF GHG EMISSIONS

- **Draft Interim Guidelines for the safety of ships using an Onboard Carbon Capture and Storage (OCCS) System**
- **Updated Work Plan for the Development of Safety Provisions for Alternative Fuels**

OTHER DEVELOPMENTS

- **Amendments to the IMSBC Code and Supplements**
- **Amendments to the IMDG Code and Supplements**
- **Revision of the Revised Guidelines for the preparation of the Cargo Securing Manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual**

GUIDELINES FOR ALTERNATIVE FUELS AND RELATED TECHNOLOGIES

Revision of the Interim Guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621)

MSC 110 highlighted the necessity to amend the *Interim Guidelines for the safety of ships using methyl/ethyl alcohol as fuel (MSC.1/Circ.1621)* to address distinct physical, chemical, and toxicity property differences between methanol and ethanol. To address the regulatory gap identified at MSC 110 (Gap G-3), the CCC Sub-Committee was instructed to finalize a comprehensive revision of the Interim Guidelines with a view to developing future mandatory instruments under the IGF Code.

Taking over the intersessional progress made by the Correspondence Group and the 3rd Intersessional Working Group on Development of Technical Provisions for Safety of Ships using Alternative Fuels (ISWG-AF 3), the Sub-Committee finalized the draft revised Interim Guidelines. Key topics of the revised chapters of the Interim Guidelines consist of:

Chapter	Title	Description
1	Introduction	Distinguishes toxicity between methyl and ethyl alcohol; notes that denaturants or additives may alter safety characteristics.
2	General	Updated definitions for cofferdams, secondary enclosures, open-ended vent pipes, and single failure.
4	General Provisions	Risk assessments should cover fuel-specific hazards (e.g., ignition, flame visibility, vapor explosion, toxicity).
5	Ship design and arrangement	Added functional requirements for cofferdams; finalized provisions for tank locations, drain tanks, and alarms.
6	Fuel containment system	Restructured into three distinct subsections covering pressure/vacuum relief systems, atmospheric control, and inerting. Provisions for pressure and vacuum relief system have been finalized.
7	Material and general pipe design	Material compatibility should account for additives, impurities, and polymer/elastomer degradation.
8	Bunkering	Added specific sections for bunkering on open decks, semi-enclosed, and enclosed spaces per the amended IGF Code.
9	Fuel supply to consumers	Introduces a two-stage ventilation requirement for annular spaces: 10 ACH (normal operation) and 30 ACH (emergency activation upon leak detection).
10	Power generation including propulsion and other energy converters	Exhaust systems require explosion relief unless the engine design accommodates overpressure. Evaluation of unburnt fuel potential from cylinders to the open end is to be undertaken.
11	Fire safety	Finalized provisions for alcohol-resistant fire-extinguishing systems, water spray dilution, and local application arrangements.
12	Explosion prevention and area classification	Clarified hazardous zones (0, 1, and 2) for tanks, bunkering, and pipe ducts, alongside passenger/crew access restrictions.
13	Ventilation	Applies the same 10/30 ACH two-stage approach to fuel preparation spaces, enclosed bunkering stations, and ventilated ducts.
15	Control, monitoring or safety systems	Methyl alcohol requires a 200 ppm local alarm/visual indicator at crew space entrances. Permits single self-monitoring detectors and sequential sampling for cofferdams.
16	Training, drills and emergency exercises	Crews should be trained and qualified in the use of methyl/ethyl alcohol fuels in accordance with STCW Regulation V/3 and STCW Code Section A-V/3, accounting for fuel-specific hazards.
17	Operation	Finalized operational and maintenance guidelines.
18	Personnel protection	Mandates specific PPE, decontamination showers, and oxygen resuscitation equipment; explicitly prohibits filter-type masks for emergency escape.

CCC 12 endorsed sending Chapter 11 (Fire Safety) of the revised guidelines to the Sub-Committee on Ship Systems and Equipment (SSE) to support the development of system certification standards for alcohol fire-extinguishing arrangements (foam/water-mist) within the FSS Code.

Next steps: The draft revised Interim Guidelines will be submitted to MSC 113 (June 2027) for formal approval. Once approved by MSC 113, the revised circular will formally supersede MSC.1/Circ.1621.

Draft Interim Guidelines for ships using low-flashpoint oil fuels

Back in 2022, CCC 8 suggested developing Interim Guidelines for ships using oil fuels with a flashpoint between 52°C and 60°C, covering oil-based fossil fuels, synthetic fuels, biofuels, and any mixture thereof. MSC 110 formally identified the regulatory gap for these safety provisions (Gap G-38) and instructed the CCC Sub-Committee to develop the draft Interim Guidelines. Taking over these instructions and intersessional progress, CCC 12 further advanced the draft text. Key topics of discussion included:

- **Primary Machinery Space Safety Philosophy:** It was agreed that the Fuel-Safe Machinery Space concept will serve as the primary safety philosophy for the draft guidelines. Unlike conventional machinery spaces, this approach provides an enhanced level of protection by requiring secondary barriers or double-walled fuel piping connected to drain/detection systems to safely capture and detect any fuel leaks before they enter the space.
- **Temperature-controlled Machinery Spaces:** The proposal for prescriptive rules on temperature-controlled machinery spaces was not supported for inclusion at this stage due to a lack of technical maturity.
- **Alternative Design Flexibility**: It was recognized that alternative machinery space concepts or non-prescriptive arrangements can still be evaluated and accepted on a case-by-case basis through the Alternative Design Process (SOLAS regulation II-1/55).

Next steps: Work on the draft Interim Guidelines will continue intersessionally through the re-established Correspondence Group and the Intersessional Working Group on Alternative Fuels (ISWG-AF 4). Both groups will submit progress reports and finalized draft text to CCC 13 (September 2027) with a view to finalization. The formal establishment of the ISWG-AF 4 will be submitted to MSC 112 (December 2026) for endorsement.

Amendments to the IGF Code regarding LNG

Due to time constraints during the CCC 12 session, progress on draft amendments to the IGF Code regarding LNG was limited. The Sub-Committee focused its consideration on specific technical proposals regarding bunkering line arrangements and pressure-relief systems. Discussion centered on the requirements for emptying and gas freeing LNG bunkering lines after fuel transfer. The discussion addressed whether mandatory gas freeing should apply to the entire bunkering line up to the fuel containment system or be limited to the manifold section. However, it was agreed that the issue would benefit from further technical consideration.

Next steps: The Sub-Committee agreed to re-establish a Correspondence Group to further consider draft amendments to the IGF Code regarding LNG. The Correspondence Group will submit a written report to CCC 13 (September 2027).

Revision of the Interim Guidelines for the safety of ships using Fuel Cell Power Installations (MSC.1/Circ.1647)

Due to time constraints during the CCC 12 session, progress on the revision of the *Interim Guidelines for the safety of ships using Fuel Cell Power Installations (MSC.1/Circ.1647)* was limited. The Sub-Committee focused on how to progress with this work item, and which text will be used as a basis.

Next steps: Work on the revision of the Interim Guidelines will continue intersessionally through the re-established Correspondence Group and the Intersessional Working Group on Alternative Fuels (ISWG-AF 4).

Both groups will submit progress reports to CCC 13 (September 2027). The formal establishment of the ISWG-AF 4 will be submitted to MSC 112 (December 2026) for endorsement.

SAFETY REGULATORY FRAMEWORK TO SUPPORT THE REDUCTION OF GHG EMISSIONS

Draft Interim Guidelines for the safety of ships using an Onboard Carbon Capture and Storage (OCCS) System

Following instructions from MSC 110, the CCC Sub-Committee prioritized addressing safety regulatory gaps for Onboard Carbon Capture and Storage (OCCS) systems (Gap G-34) under the IMO GHG safety framework. While OCCS offers a direct route to mitigate shipboard carbon emissions, integrating these systems introduces specific safety considerations, including exhaust gas interaction, high-pressure/low-temperature carbon handling, hazardous process media, and structural impacts. During this session, the Sub-Committee agreed on the following key topics:

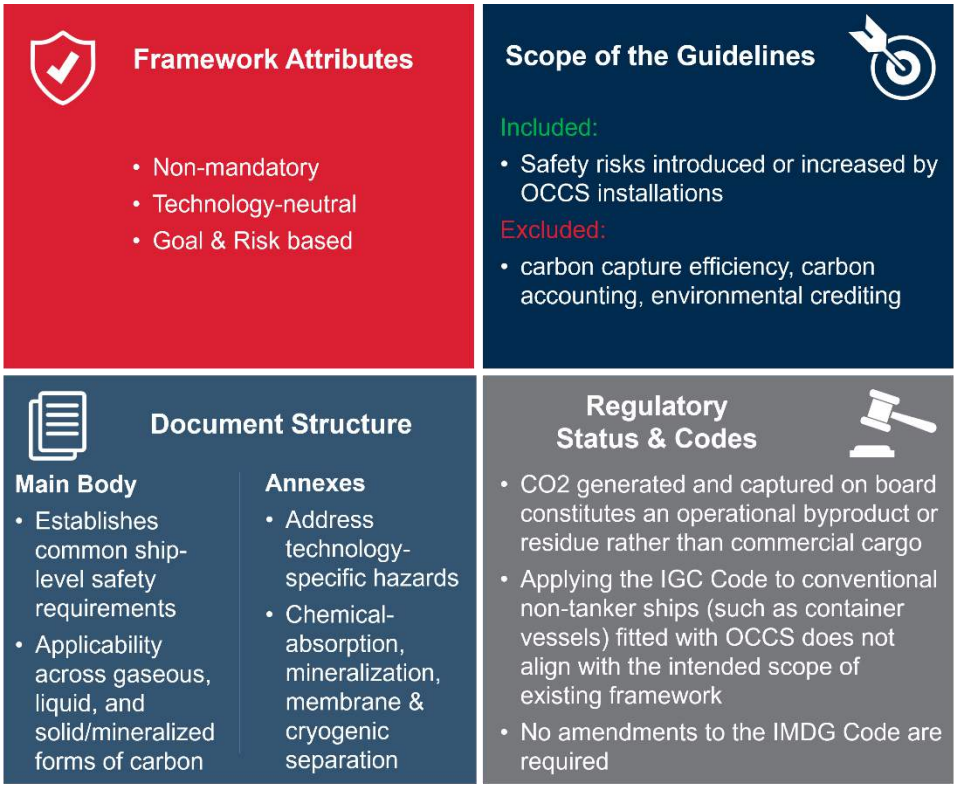

Figure 1: Key topics of OCCS interim Guidelines

The following list summarizes the agreed structure of the draft interim guidelines:

- Chapter 1: Introduction
- Chapter 2: General
- Chapter 3: Goal and Functional Requirements
- Chapter 4: General Provisions
- Chapter 5: Ship Integration and Arrangements
- Chapter 6: Piping
- Chapter 7: Carbon Capture Systems
- Chapter 8: Carbon Conditioning, Handling and Storage
- Chapter 9: Carbon Transfer/Offloading Arrangements
- Chapter 10: Safety and Personnel Protection
- Chapter 11: Instrumentation and Alarms

- Annex 1: Safety Requirements for Chemical-Absorption-Based OCCS
- Annex 2: Safety Requirements for Mineralization-Based OCCS

Next steps: The Sub-Committee agreed to re-establish a Correspondence Group to advance the drafting of common ship-level requirements and technology-specific annexes. The group will submit its written report to CCC 13 (September 2027). According to the updated CCC work plan, finalization of the Interim Guidelines is targeted for CCC 14 (2028), with formal adoption scheduled for MSC 116 (2029).

Updated Work Plan for the Development of Safety Provisions for Alternative Fuels

To support the reduction of GHG emissions from ships using new technologies and alternative fuels under the purview of the CCC Sub-Committee, CCC 12 agreed on the updated work plan for the development of a safety regulatory framework by taking into account the progress made at this session.

Next steps: The following updated work plan will be submitted to MSC 113 (June 2027) for endorsement.

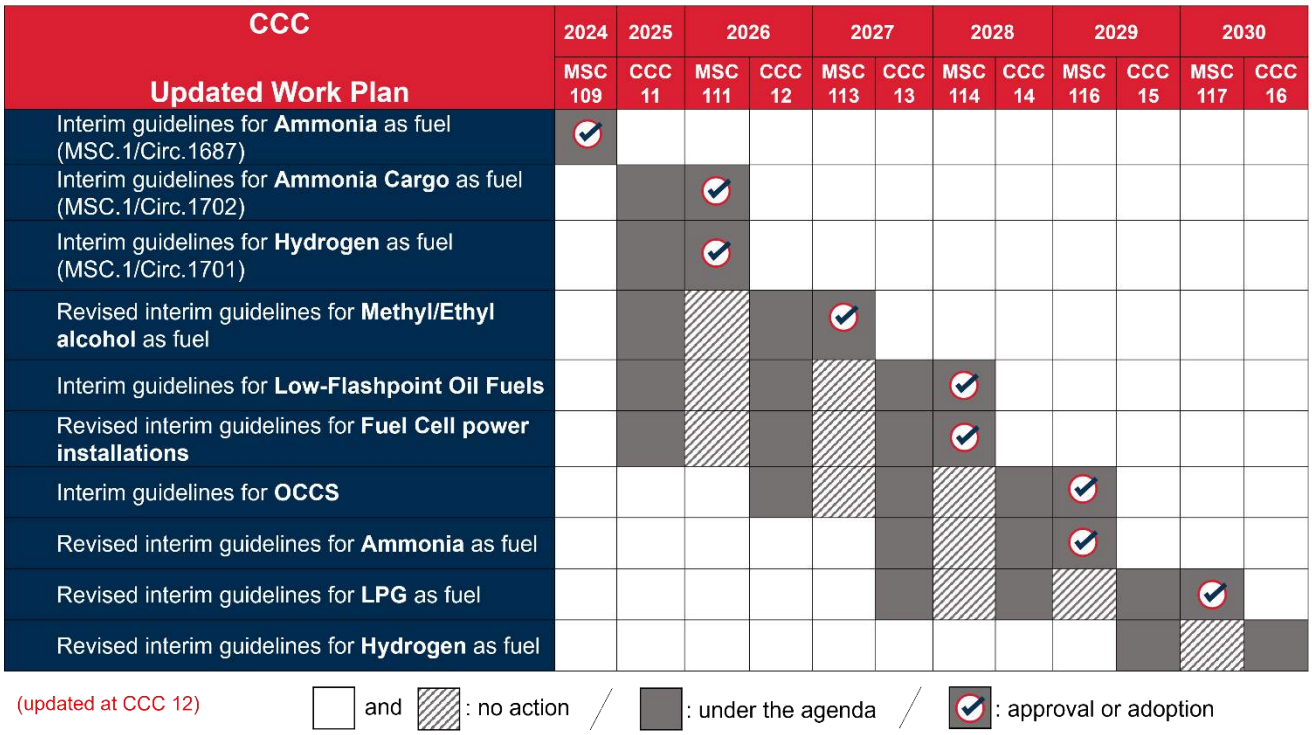

Figure 2: Updated Work Plan for items falling under the purview of CCC Sub-Committee.

OTHER DEVELOPMENTS

Amendments to the IMSBC Code and Supplements

Cargoes Referred to E&T 45 for Incorporation into Draft Amendment 09-27

These cargoes were Agreed in Principle (AiP) at CCC 12 and forwarded to the Editorial & Technical Group (E&T 45) to be formally drafted into the upcoming amendment:

- Bituminous Granulates Coarse (Group C)
- Mullite (Group C)
- Kaolinite (Group C)
- Lime Mud
- Untreated Incinerator Bottom Ash (U-IBA)
- Contaminated Soil (Hydrocarbons, PFAS, Asbestos, Heavy Metals)

- Tabular Alumina
- Direct Shipping Ore Spodumene
- Seed Cake (Group C Reinstatement)

Cargoes & Topics Referred to E&T 45 for Further Consideration / Advice to CCC 13

These items were deferred due to technical issues, testing concerns, or missing data, and require further evaluation by E&T 45 before returning to CCC 13 (September 2027):

Cargo / Topic	Issue / Reason for Deferral
Bituminous Granulates Fines (Group A)	Unresolved TML testing methodology concerns
Ulexite	Group C classification conflicts with TML test results
Diatomite	Group C classification inconsistencies and SDS ambiguity
Polymetallic Nodules	Missing test data and legal/operational offshore loading questions
Amorphous Graphite & Graphite Fines	Particle size criteria, flow moisture points, and hazard classifications
Bulk Cargo Number (BCN) System	Outstanding structural and legal scope questions

Other Outcomes

The following items were also addressed:

Item	Outcomes
Shipper cargo information (section 4.2)	Proposal considered to require explicit declaration of subsidiary hazards and MHB notational references (CB, SH, WF, WT, TX, CR, OH), and to align certificate requirements with the declaration form.
Ventilation requirements	CCC agreed to progress IMSBC Code ventilation amendments (Annex 1) while referring Annex 2 and noting IACS submission CCC 12/9 without action, as SOLAS Chapter II-2 and MSC circulars fall outside its remit.
Database of non-listed cargoes	Template and assessment criteria agreed; the Secretariat was instructed to develop a database of provisional assessments for publication on the IMO website pending a GISIS module.
Plastic pellets in bulk	Noting that existing carriage provisions address safety considerations rather than pollution hazards, the Sub-Committee considered the rationale for the proposal insufficiently justified. Consequently, the Sub-Committee agreed not to refer PPR 13/11/7 to E&T 45 for draft Amendment 09-27 and invited PPR to explore alternative avenues for its objective.

Amendments to the IMDG Code and Supplements

At this session the Sub-Committee considered the E&T 43 report and instructed E&T 46 to prepare Amendment 44-28, which would enter into force on 1 January 2030.

Safe Transport of Vehicles — New Special Provision SP980

E&T 43 completed a package of amendments addressing vehicle transport, prompted by the growth in electric and hybrid vehicle shipments.

Provision	Change
SP980 (new)	Assigned to UN Nos. 3166, 3171, 3556, 3557 and 3558; requires the consignor to assess vehicle safety condition before offering for transport; confirms waste vehicles are subject to 2.0.5.
SP961 (amended)	Exceptions do not apply to lithium-ion battery-powered and hybrid electric vehicles, except SP961.1.
SP962 (amended)	Clarifies placarding requirements for cargo transport units carrying packaged and unpackaged vehicles.
SP404 (deleted)	Duplicated SP961.6.

Key Debates & Safety Gaps

- **State of Charge (SOC):** No SOC limits were adopted due to a lack of formal proposals. The priority is now set on undertaking research into maritime risks, ro-ro firefighting capabilities and holistic battery safety.
- **SP188 Safety Gap:** Small lithium/sodium-ion batteries are exempt at the package level (≤ 30kg), leaving a loophole where an unplacarded CTU can carry massive energy loads (e.g., a 40-ft container with 4,200 laptops / approximately 416 kWh).
- **Proposed Solution:** Adopt an SP963-style CTU threshold (by watt-hours or gross mass) to trigger section 5.4.1/5.4.3 documentation and section 5.3 placarding. Views will be forwarded to SCETDG 69 and referred to E&T 46 for Amendment 44-28.

Other Outcomes

Item	Outcomes
Class 7 radioactive material	Segregation distances in table 7.1.4.5.18 changed from TEU-based to metre-based; the term "(closed containers)" was deleted from tables 7.1.4.5.3.1 and 7.1.4.5.3.4 following clarification from the International Atomic Energy Agency.
Sodium-ion batteries	Proposal considered to amend paragraph 5.4.1.4.3.8 so transport documents carry "SODIUM ION BATTERIES FOR DISPOSAL/RECYCLING" wording, aligning with existing package marking under SP376 and SP377.
Self-reactive substances and organic peroxides	Proposal considered to relocate the explosion hazard provision from paragraph 7.3.7.2.1 (temperature-controlled units) to section 7.3.3, confirming it applies to all such substances as in the Model Regulations.
Diesel fuel in multimodal transport	No consensus reached; referred to UNTDG as the appropriate body to amend the Model Regulations.
Control temperature for flammable liquids (flashpoint below 23°C in non-explosion-proof reefers)	Further submission invited, addressing commercial rationale and safety benefits.
Biocoal, biocarbon and biochar	Research noted indicating the UN N.4 self-heating test may produce false negatives for these materials; 68 container fires recorded between 2015 and 2022; precautionary classification recommended pending improved test methods.
SOLAS regulation VII/3	Views on the review of appropriateness and effectiveness reported to MSC 111; further proposals invited on shore-side personnel training and the role of competent authorities.

Revision of the Revised Guidelines for the preparation of the Cargo Securing Manual (MSC.1/Circ.1353/Rev.2) to include a harmonized performance standard for lashing software to permit lashing software as a supplement to the Cargo Securing Manual

The Sub-Committee finalized interim revised guidelines confirming lashing software supplements (but does not replace) approved CSMs on containerships, with mandatory carriage requiring a SOLAS amendment. Published as a non-mandatory circular with a two-module performance standards appendix (operational/functional and interfacing/integration), the "Interim" status allows future enhancements like real-time motion sensor and automated weather data integration.

Key Issues

Issue	Position
Acceptable tolerances	Resolved: accuracy must be below 1.0% of allowable values. Deviations accepted only on review by the Administration or recognized organization (RO), where satisfactorily explained and without adverse effect on safety
Application	Mainly new containerships, keels laid on or after [1 July 2027] - and subject to MSC 113 approval. Voluntary application to existing ships requires the CSM to be re-approved in its entirety; a view was recorded that this could cause misunderstandings during Port State Control inspections

Operational manual	Expanded to add a quick start guide, guidance on test loading conditions at annual and special surveys, and a pre-departure check of input data and lashing arrangement. The check does not require comparing actual container positions with the stowage plan
Interface and data exchange	Clear warning and time stamp required if a connection updating input parameters is lost. Import and export of stowage data using the UN/EDIFACT BAPLIE format, with backward compatibility maintained
Approval and survey	Approval by the Administration or an RO. Accuracy verified annually by the master using test loading conditions, and at each special survey with a surveyor present — remote survey permitted subject to secure, authenticated data transmission. Approval does not relieve owner or master of responsibility for data accuracy.

Lashing software was also defined to cover both stand-alone packages and extensions to the loading program, with onboard familiarization required for all staff operating it. The Sub-Committee also agreed that modular ships should **not** be separately addressed in the revised Guidelines.

Proposed Widening of Scope - Amendments to the CSS Code

The Sub-Committee agreed to expand output 7.40 to add an annex to the CSS Code covering harmonized force calculations, acceleration methodologies, input parameters, and allowable strength standards. Supported by IACS's ongoing harmonization project (concluding Q4 2027), completion was extended to 2030. Pending MSC approval of the expanded scope, no formal correspondence group was established, but the International Union of Marine Insurance (IUMI) invited informal stakeholder collaboration before the next session.

Next steps: MSC 113 (June 2027) is expected to approve the revised Guidelines and the expanded output. Informal IUMI-led coordination continues ahead of CCC 13 (September 2027), where work on the CSS Code annex begins, developing through CCC 14 and CCC 15, with finalization at CCC 16 (2030) and approval at MSC 119.

ABS RESOURCES

- ABS Regulatory News (link)
- ABS Regulatory Lessons (link)
- ABS Safety in Minutes Video Series (link)
- ABS Remote Survey Services (link)
- ABS Port State Control Checklist (link)
- ABS Rules and Guides (link)

WORLD HEADQUARTERS

1701 City Plaza Dr.
Spring, Texas 77389, USA
Tel: +1-281-877-6000
Email: RegAffairs@eagle.org

© 2026 American Bureau of Shipping. All rights reserved.

ABS™