C C S Technical Information

(2026) Technical Information No.24 Total No.726
Sep.28,2026
(Total 19 pages)

To: Relevant shipowners, ship management companies, shipyards and designers, product manufacturer, related departments of the Headquarters of CCS, the Society's surveyors, Plan Approval Centers

Technical Notice on Resolutions/Circulars by Adopted/Approved at IMO MSC 111

The Marine Safety Committee of the International Maritime Organization, at its 111th session (MSC 111), adopted 23 MSC resolutions including Amendments to Chapter IV and V, and the Appendix of the International Convention for the Safety of Life at Sea, 1974, Amendments to the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (2011 ESP Code), Amendments to the International Code of Safety for High-speed Craft, 1994, Amendments to the International Code of Safety for High-speed Craft, 2000, etc.

In addition, a total of 26 MSC circulars were approved, including Guidelines for the Onboard Operational Use of Shipborne VHF Data Exchange System (VDES), Revised Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems, Unified Interpretations of Paragraphs 4.4.7.6 and 4.7.7 of the LSA Code, as amended by Resolutions MSC.320(89) and MSC.589(111), respectively, Revised Guidelines on Safety during Abandon Ship Drills Using Lifeboats, etc.

This Notice only provides summaries of the 32 documents closely related to statutory surveys of ships (please refer to the Annex - List of resolutions/circulars by adopted/approved at IMO MSC 111). The original English version and a translation into Chinese will be made public at the column Technical Service/IMO Resolution &

Circular on CCS website (www.ccs.org.cn). The original English shall prevail in case of any doubt.

This Notice is made public on CCS website (www.ccs.org.cn), and is to be distributed to relevant ship owners, ship management companies, shipyards and marine product manufacturers by CCS survey branches within their responsible areas. Please contact the Technology & Information Department of CCS Headquarters for any inquiry in this regard (E-mail address: ti@ccs.org.cn).

Annex- List of resolutions/circulars by adopted/approved at IMO MSC 111

Annex： List of resolutions/circulars by adopted/approved at IMO MSC 111

No.	Title	No. of resolutions/circulars	Mandatory	Effective/ Approval date	Ship type	Ship size	Summary of IMO requirements
1	Amendments to Chapter IV and V, and the Appendix of the International Convention for the Safety of Life at Sea, 1974	MSC.583(111)	Yes	Effective date 2028.01.01	Passenger ships and cargo ships	All ships of 300 GT and over engaged on international voyages, cargo ships of 500 GT and over not engaged on international voyages, and passenger ships irrespective of size	VDES is introduced as an alternative to AIS. Ships shall be fitted with either VDES or AIS, with relevant certificate equipment records revised accordingly.

2	Amendments to the International Code on the Enhanced Programme of Inspection during Surveys of Bulk Carriers and Oil Tankers, 2011 (2011 ESP Code)	MSC.584(111)	Yes	Effective date 2028.01.01	Oil tankers and bulk carriers	500 GT and over	Remote Inspection Techniques (RIT) may be used to replace or assist close-up surveys of hull structure. This is to be applied together with the Guidelines on the use of remote inspection techniques for ESP Code surveys. (1) The RIT system shall meet the objectives, functional requirements and expected performance requirements specified in the Guidelines. (2) Companies undertaking RIT shall obtain relevant approvals and certificates in accordance with the requirements of the ESP Code. The certificate is valid for 3 years (this differs from IACS UR Z17, where paragraph 6.2 of UR Z17 specifies a validity period of 5 years). (3) The RIT inspection plan shall form part of the ESP survey plan and be approved prior to carrying out RIT. (4) RIT inspection results shall be reported in accordance with the requirements of the Guidelines.
3	Amendments to the International Code of Safety for High-speed Craft, 1994	MSC.585(111)	Yes	Effective date 2028.01.01	High-speed crafts	Any ship	VDES is introduced as an alternative to AIS. Ships shall be fitted with either VDES or AIS, with relevant certificate equipment records revised accordingly.
4	Amendments to the International Code of Safety for High-speed Craft, 2000	MSC.586(111)	Yes	Effective date 2028.01.01	High-speed crafts	Any ship	VDES is introduced as an alternative to AIS. Ships shall be fitted with either VDES or AIS, with relevant certificate equipment records revised accordingly.

5	Amendments to the International Maritime Dangerous Goods (IMDG) Code	MSC.587(111)	Yes	Effective date 2028.01.01 (Contracting Governments to the SOLAS may apply the amendments on a voluntary basis from 1 January 2027)	Ships to which the IMDG Code applies	N/A	1. Special provisions relating to the transport of vehicles: New SP980 is added. The consignor shall assess the safety condition of the vehicle prior to offering for transport. Vehicles deemed unsuitable for sea transport shall not be carried. SP961 and SP962 are revised accordingly to incorporate safety requirements of overriding effect from SP 980. Hybrid and lithium battery-powered vehicles are conditionally excepted. Marking requirements are specified for unpackaged vehicles and vehicles contained within cargo transport units. 2. Some examples of observations on substances and articles for inclusion in column 17 that would be useful to the crew are provided. 3. Aligned with the latest revised edition of the *UN Recommendations on the Transport of Dangerous Goods*. 4. Six new entries are added. 5. Four new special provisions SP410 – SP413 are added, and twenty-four existing special provisions are revised. 6. Requirements for portable tanks made of fibre reinforced plastic are revised; Table 7.1.4.5.18 - CLASS 7 - Radioactive material Segregation table for persons in is replaced with a new one.
6	Amendments to the International Code of Safety for Ships Carrying Industrial Personnel (IP Code)	MSC.588(111)	Yes	Effective date 2028.01.01	Ships carrying industrial personnel	GT≥500	The mass of each industrial personnel shall be assumed to be 90 kg instead of 75 kg in the ship stability calculation.

7	Amendments to the International Life-saving Appliance (LSA) Code	MSC.589(111)	Yes	Effective date 2028.01.01	Any ship	Any ship	Collate application information of all previous amendment resolutions to the LSA Code onto the cover page of the LSA Code. For the amended LSA provisions adopted in recent sessions under Resolutions MSC.554(108), MSC.535(107) and MSC.459(101), namely buoyancy and stability of lifejackets, lifeboat hooks, ventilation of totally enclosed lifeboats, simulated release arrangements for stern-launched lifeboats, rescue boat launching appliances, and lowering speed for fully loaded survival craft or rescue boats, insert application statements (scope of application and time frame) into the text of the corresponding technical provisions.
8	Amendments to the Requirements for Maintenance, Thorough Examination, Operational Testing, Overhaul and Repair of Lifeboats and Rescue Boats, Launching Appliances and Release Gear (Resolution MSC.402(96))	MSC.590(111)	Yes	Effective date 2028.01.01	Any ship	Any ship	Add inspection and operational test items for free-fall lifeboat simulated release arrangements under paragraph 6.2 “Annual thorough examination and operational test” of Resolution MSC.402(96).
9	Amendments to the Protocol of 1988 Relating to the International Convention on Load Lines, 1966	MSC.591(111)	Yes	Effective date 2028.01.01	Any ship	Length $L_{LL} \geqslant$ 24 m	Guard rails shall be fitted around all exposed decks and all exposed sea access holes (such as edges of moonpools) accessible to the crew during navigation. The height of the guard rails shall be at least 1 m from the deck. Guard rails shall have at least three courses. Where chains are used in lieu of guard rails, they shall be tightened as far as practicable and be removable.

10	Introduction of VHF Data Exchange System (VDES) into the IMO Regulatory Framework	MSC.592(111)	Yes	Effective date 2028.01.01	Passenger ships and cargo ships	All ships of 300 GT and over engaged on international voyages, cargo ships of 500 GT and over not engaged on international voyages, and passenger ships irrespective of size	Whereas VDES has been introduced into the SOLAS Convention as an alternative alongside AIS, this resolution is adopted to uniformly clarify the parallel application of VDES and AIS, thereby avoiding the need to amend other IMO instruments.
11	Performance Standards for Shipborne VHF Data Exchange System (VDES)	MSC.593(111)	Yes	Effective date 2028.01.01	Passenger ships and cargo ships	All ships of 300 GT and over engaged on international voyages, cargo ships of 500 GT and over not engaged on international voyages, and passenger ships irrespective of size	1. The VDES equipment integrates four components and their functions. These components are the automatic identification system (AIS) component, the application-specific messages (ASM) component, the terrestrial component of VHF data exchange (VDE-TER) and the satellite component of VHF data exchange (VDE-SAT); 2. VDES should be capable of providing information exchange between ships, ships and shore authorities and services, automatically with minimal involvement of the ship's personnel.

12	Amendments to the Revised Recommendation on Testing of Life-saving Appliances (Resolution MSC.81(70))	MSC.594(111)	No	Effective date 2028.01.01	Any ship	Any ship	Add requirements for prototype tests, manufacturing tests and installation tests of free-fall lifeboat simulated release arrangements in Resolution MSC.81(70).
13	International Code of Safety for Maritime Autonomous Surface Ships (MASS Code)	MSC.595(111)	No	Effective date 2026.07.01	Cargo ships to which SOLAS Chapter I applies, excluding cargo high-speed crafts to which SOLAS Chapter X applies, warships, naval auxiliaries, or other ships owned or operated by a Contracting Government and used only on government non-commercial service	500 GT and over	IMO Code of Safety for Maritime Autonomous Surface Ships, which enters into force on 1 July 2026, is a non-mandatory goal-based code. Building upon existing international conventions and codes, it sets out a regulatory framework for the application of new technologies such as autonomous operation and remote operation, filling the regulatory gaps in existing conventions including SOLAS for maritime autonomous and remotely controlled ships. The Code consists of three major parts: Part 1: Defines the purpose, scope of application, structure and core terminology. Part 2: General principles for the application of this Code, applicable to all autonomous and remotely operated scenarios. Such principles and their corresponding provisions shall be complied with as part of any MASS approval and certification process. Part 3: Goals, functional requirements and expected performance applicable to specific MASS operations and functions.

14	Amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code)	MSC.596(111)	No	Effective date 2027.01.01	Mobile offshore drilling units		Revise Chapter 6 of the Code to clarify requirements relating to electrical equipment that must remain operational after emergency shutdown, including: (1) “Emergency shutdown” in paragraph 6.5.5 refers to any stage of emergency shutdown, not merely the total shutdown of the entire installation. (2) A risk assessment shall be carried out for any equipment that is required to remain operational after shutdown. (3) Equipment which is located in spaces other than enclosed spaces and which is capable of operation after each stage of selective shutdown as given in paragraph 6.5.1 should be suitable for installation in zone 2 locations.
15	Performance Standards for Shipborne Beidou Satellite Navigation System (BDS) Receiver Equipment	MSC.379(93)/Rev.1	No	Effective date: installation on or after 31 July 2028	Any ship	Any ship	1. This resolution requires receiver equipment installed on or after 31 July 2028 to comply with the requirements of Resolution MSC.379(93)/Rev.1; equipment installed before that date shall meet the requirements of Resolution MSC.379(93). 2. This revision covers system status description, system service description, BDS-3 single-frequency/dual-frequency combined mode, positioning accuracy, coordinates and time, receiving level and other contents to support the application of BDS-3 shipborne equipment.

16	Revised Interim Recommendations for Carriage of Liquefied Hydrogen in Bulk	MSC.597(111)	No	Date of release 2027.05.18	Ships carrying liquefied hydrogen in bulk	Any size	1. On the basis of Resolution MSC.565(108), a new Part D is added, containing provisions for cargo containment systems of a membrane-type cargo tank maintaining the insulation spaces under vacuum, so as to achieve combustion prevention equivalent to the inertisation requirements specified in regulation 9.2 of the IGC Code. 2. The system consists of thin, tight and gas-tight layers supported through insulation by the adjacent hull structure. The cargo containment system creates and maintains vacuum conditions within the primary and secondary insulated spaces. These Recommendations set out corresponding additional requirements relating to: ● structural integrity of the inner hull, primary and secondary barriers and insulation components in the spaces under vacuum environment; ● generation, maintaining, and monitoring of the vacuum; and ● emergency cases: cargo leakage into the primary insulation space or loss of vacuum due to air ingress into the insulation spaces. 3. In addition to complying with the requirements in Table 2, the additional requirements specified in Table 6 shall also be met. 4. Revokes resolution MSC.565(108).

17	Guidelines for the Onboard Operational Use of Shipborne VHF Data Exchange System (VDES)	MSC.1/Circ.1699	Yes	Date of release 2027.07.27	Passenger ships and cargo ships	All ships of 300 GT and over engaged on international voyages, cargo ships of 500 GT and over not engaged on international voyages, and passenger ships irrespective of size	The guidelines provide guidance for mariner and shore-based station operators on the safe and effective operation and use of VDES, clarifying its functional positioning, operational limits and application scenarios. (1) Supplementary to, and not a replacement for, GMDSS: Frequencies used by VDES are not distress and safety communication frequencies under the Global Maritime Distress and Safety System (GMDSS). Accordingly, information received via VDES shall not be regarded as GMDSS information; (2) Unchanged operation of AIS component: The AIS incorporated as part of VDES shall continue to be operated and used in accordance with the existing Guidelines for the onboard operational use of shipborne automatic identification systems (Resolution A.1106(29)); (3) Positioning and limitations of VDES: VDES itself is a communication equipment rather than a navigation system. It may be connected to other navigational equipment such as radar and ECDIS. Nevertheless, its functions and services beyond those of AIS are not equivalent to the AIS functions required under SOLAS regulations; (4) Requirement for crew vigilance: The Officer of the Watch (OOW) should always be aware that not all ships (e.g. fishing boats, leisure craft, warships) are fitted with VDES or AIS, and that on some ships the equipment may be switched off at the Master's professional judgement; (5) Cybersecurity:The guidelines recommend compliance with the IMO Guidelines on maritime cyber risk management (MSC-FAL.1/Circ.3, as revised).

18	Revised Guidelines for Developing Operation and Maintenance Manuals for Lifeboat Systems	MSC.1/Circ.1205/Rev.2	No	Date of release 2027.07.14	Any ship	Any ship	Add standard terminology for simulated release arrangements under the entry for free-fall lifeboats.
19	Unified Interpretations of Paragraphs 4.4.7.6 and 4.7.7 of the LSA Code, as amended by Resolutions MSC.320(89) and MSC.589(111), respectively	MSC.1/Circ.1529/Rev.1	No	Date of release 2027.07.15	Any ship	Any ship	Include simulated release arrangements for free-fall lifeboats alongside the original unified interpretation for lifeboat hooks, mainly to specify the corrosion resistance requirements for their materials.
20	Revised Guidelines on Safety during Abandon Ship Drills Using Lifeboats	MSC.1/Circ.1578/Rev.1	No	Date of release 2027.07.06	Any ship	Any ship	Clarify the operational details of simulated release arrangements within the simulated launching procedure for free-fall lifeboats.
21	Revised Standardized Life-saving Appliance Evaluation and Test Report Forms (Survival Craft)	MSC.1/Circ.1630/Rev.4	No	Date of release 2027.07.14	Any ship	Any ship	Add relevant test evaluation forms and particulars for the load test of simulated release arrangements for free-fall lifeboats.

22	Guidelines on the Use of Remote Inspection Techniques for ESP Code Surveys	MSC.1/Circ.1700	No	Date of release 2027.07.17	Oil tankers and bulk carriers	500 GT and over	To support the revision of the ESP Code, the Guidelines for Remote Inspection Techniques establish the requirements to be fulfilled for the operation of RIT, including: ● General requirements; ● Approval management of RIT service suppliers; ● Competency requirements for personnel training; ● Conditions and limitations on the use of RIT; ● Inspection planning and preparation; ● Conduct of on-site surveys; ● Requirements for the preparation of inspection reports; ● Requirements for the evaluation of RIT equipment and systems.
23	Interim Guidelines for the Safety of Ships Using Hydrogen as Fuel	MSC.1/Circ.1701	No	Date of release 2027.07.07	Ships using gases or other low-flashpoint fuels to which part G of SOLAS chapter II-1 applies	Cargo ships ⩾ 500 GT and all passenger ships	1. The risk assessment shall take into account hazards associated with hydrogen and liquefied hydrogen systems (including vacuum systems); 2. Consider the special requirements for hydrogen containment systems, hydrogen fuel preparation rooms and fuel tank connection spaces; 3. Hydrogen dispersion, thermal radiation and explosion analyses shall be carried out during ship design and risk assessment; 4. Functional requirements are set out for hydrogen fuel containment systems, piping systems, hydrogen bunkering, fire protection, inerting and ventilation of fuel tanks and fuel piping, control and monitoring of hydrogen leakage, as well as material evaluation, testing and operation of relevant systems and piping.

24	Interim Guidelines for Use of Ammonia Cargo as Fuel	MSC.1/Circ.1702	No	Date of release 2027.07.07	Liquefied gas carriers	Any size	1. The guidelines are developed in accordance with the goal-based standards approach, with relevant chapters setting out goals and functional requirements. 2. The design and arrangement of ammonia fuel storage and distribution systems shall comply with the general requirements of the IGC Code and the specific requirements for ammonia specified in section 17.12 of the Code. The carriage, maintenance, distribution and use of ammonia fuel shall comply with the relevant requirements of chapter 19 of the IGC Code for the transport of anhydrous ammonia (sections 14.4, 17.2.1 and 17.12). 3. A risk assessment of the design and arrangement of the entire ammonia fuel system is required to demonstrate that it achieves a level of safety equivalent to that for natural gas. Other key requirements include: ● Ammonia fuel supply piping: The requirements of section 16.4 of the IGC Code apply to fuel piping outside the cargo area. Ammonia fuel supply piping (including double-wall piping) shall be colored in a distinguishable way. ● Gas detection: A fixed ammonia gas detection system shall be installed. ● Ventilation of fuel arrangements: The ventilation capacity (including the positions of ventilation inlets and outlets) shall be supported by numerical calculations (e.g. CFD: Computational Fluid Dynamics analysis). For ammonia fuel preparation rooms, the requirements of section 12.1.8 of the IGC Code shall apply. ● Ammonia release mitigation system: Uncontrolled direct release of ammonia may only occur in emergency situations. Therefore, the fuel supply system shall incorporate an ammonia release mitigation system capable of collecting and treating released ammonia. However, considering that ammonia release mitigation systems have not yet been developed, no specific requirements have been established to facilitate the development of new technologies. ● Machinery spaces containing fuel-consuming or ammonia-fuelled equipment: Such spaces shall be gas-safe spaces. Fuel piping shall be of double-walled design or routed within a pipe duct, and the outer boundary of piping within such spaces shall be continuous and gastight. Discontinuous double barriers shall not be used within machinery

25	Escape Arrangements from the Lower Part of Machinery Spaces (SOLAS Regulations II-2/13.4.1 and 13.4.2)	MSC.1/Circ.1689/Rev.1	No	Date of release 2027.07.15	Ships to which SOLAS applies	N/A	1. The Committee confirmed the text agreed at SDC 11 that "the term 'lower part of the space' in SOLAS regulations II-2/13.4.1.1 and 13.4.2.1 should be regarded as either the lowest deck level or a platform or passageway." 2. Amend the wording in the original circular from "The PSCO should in principle accept the design arrangement approved by the flag State and when appropriate consult with the flag Administrations..... until any relevant amendments to SOLAS regulation II-2/13 have entered into force, or the conclusion of the work....." to " the Committee urged that PSCO should accept in principle the design arrangement approved by the flag State and, when appropriate, consult with the flag Administrations.....".
26	Unified Interpretations of the IGC Code and the 1983 IGC Code	MSC.1/Circ.1703	No	Date of release 2027.07.07	Ships carrying liquefied gases in bulk	Ships to which the IGC Code applies	Unified interpretations of the paragraphs of the current IGC Code (4.4.1, 4.5, 4.6.2.1, 4.6.2.4) and the 1983 IGC Code (4.7.1, 4.7.3, 4.7.4.1, 4.7.7). This covers common terms used in both Codes, including "any envisaged leakage of liquid cargo", "capable of being periodically checked", "full secondary liquid-tight barrier ", "effectiveness".
27	Guidelines on Carriage and Use of Electronic Nautical Publications (ENP) System	MSC.1/Circ.1705	No	Date of release 2027.07.06	Any ship	Any ship	This circular provides guidelines on the carriage and use of Electronic Nautical Publications (ENP), aiming to regulate the carriage and use of ENP on board ships. It does not apply to ENP displayed via Electronic Chart Display and Information System (ECDIS). The content covers the purpose of the guidelines, definitions, publications included in ENP and issuing authority, hardware and software, power supply, display, backup arrangement, requirements on operation, applications, etc. It is proposed to enter into force upon the issuance of this circular.

28	Guidance on Assessments and Applications of Remote Surveys, ISM Code Audits and ISPS Code Verifications	MSC-MEPC.5/Circ.17	No	Date of release 2027.06.18	No restriction on ship type	1. Remote surveys: applicable to ships of 500 GT and over engaged on international voyages; 2. Remote audits under the ISM Code: applicable to all ships subject to mandatory implementation of the ISM Code; 3. Remote verifications under the ISPS Code: applicable to all ships subject to the ISPS Code.	These Guidelines consist of the following four parts: Part A: General Guidelines, providing the overarching elements of using remote techniques for activities related to statutory certification under the relevant IMO mandatory instruments. Part B-I: Specific guidance for remote surveys of ships under the Survey Guidelines under the HSSC. Part B-II: Specific Guidance for remote audits for ships and companies under the International Safety Management (ISM) Code. Part B-III: Specific Guidance for remote verifications of ships under the International Ship and Port Facility Security (ISPS) Code.

29	Revised Unified Interpretation of the Date of Completion of the Survey and Verification on which the Certificates are Based	MSC-MEPC.5/Circ.3/Rev.1	Yes	Date of release 2027.06.18	Any ship	Any ship	1. This circular supersedes MSC-MEPC.5/Circ.3. 2. Where the completion date is indicated on the certificate, the date is based on the date of the last initial/renewal survey and verification visit, as relevant, on which all items required to be surveyed or verified have been surveyed or verified regardless of whether the items were found satisfactory or with minor deficiencies or non-conformities.
30	Guidelines on Maritime Cyber Risk Management	MSC-FAL.1/Circ.3/Rev.4	No	Date of release 2027.05.28	Any ship	Any ship	MSC-FAL.1/Circ.3/Rev.4 adds the newly published IAPH Cyber Resilience Guidelines for Emerging Technologies in the Maritime Supply Chain by the International Association of Ports and Harbours (IAPH) to the reference documents in section 4.3 of the Guidelines, on the basis of Rev.3.
31	Explanatory Notes for Safe Return to Port and Orderly Evacuation and Abandonment after a Fire or Flooding Casualty	MSC.1/Circ.1369/Rev.1	No	Date of release 2027.07.17	Passenger ships	Passenger ships with length of 120 m and over or having three or more main vertical zones	The new Explanatory Notes (EN) are not limited to SRtP, but also cover Orderly Evacuation and Abandonment (OEA). The title is revised to Explanatory Notes on Safe Return to Port and Orderly Evacuation and Abandonment following a fire casualty or flooding casualty. The scope of the EN has also been amended. Instead of being confined to system capability assessment, it is extended to the full life cycle, including key issues to be addressed at the pre-contract / early project phase; design requirements and acceptance criteria for all Safe Return to Port (SRtP) and Orderly Evacuation and Abandonment (OEA) systems; the SRtP assessment process; documentation, verification and approval; tests and trials; onboard documentation for SRtP and OEA; and operational aspects. A new appendix is added to illustrate the responsibilities of relevant stakeholders (visualisation).

32	Revised Interim Guidelines for the Use of Fibre-reinforced Plastic (FRP) Elements within Ship Structures: Fire Safety	MSC.1/Circ.1574/Rev.1	No	Date of release 2027.07.17	Any ship	Any ship	This circular revokes MSC.1/Circ.1574. Compared with the previous version, the main revisions to the new Guidelines are as follows: (1) The title is revised to Revised Interim Guidelines for the Use of FRP Elements within Ship Structures: Fire Safety; (2) All definitions are consolidated in Chapter 1. New definitions for terms such as HDT (Heat Deflection Temperature) and design load are added, and reference standards (e.g. ISO 75) are specified; (3) Elements are classified into three categories, namely: non-load-bearing elements; load-bearing elements not contributing to global strength; and load-bearing elements contributing to global strength. Resins are extended to thermoset resins or thermoplastic resins, and dedicated considerations for thermoplastic materials are added (e.g. detection of the possible permanent effects and the need for visual inspection). It is clarified that these Guidelines apply to both non-load-bearing and load-bearing FRP elements, but not to elements contributing to the hull global strength; (4) With regard to fire-extinguishing systems, it is specified that gas or aerosol fire-extinguishing systems shall be avoided, highlighting the suitability of water-based fire-extinguishing systems; (5) "Life Cycle considerations of FRP elements" is added in Appendix A, requiring adoption of a life-cycle assessment approach covering all phases of soucing of materials, construction, operation phase of the ship, and end of life/recycling.

Note: In the column “Mandatory”, “Yes” = mandatory; “No” = guidance;
In the column “Ship size” , “GT” = gross tonnage.