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**Passenger Vessel Stability Requirements**

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Reference: IMO's Marine Safety Committee (MSC 98) meeting

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**Passenger Vessel Stability Requirements**

IMO's Marine Safety Committee (MSC 98) meeting

IMO's Marine Safety Committee (MSC 98) has adopted amendments to SOLAS2020 that raise the damage stability requirements for passenger vessels in the event of flooding caused by a collision.

These changes used as a basis a series of E.U. and EMSA funded cooperative research projects conducted by academics, shipyards, ship operators, owners, classification societies and ship design consultants over several decades.

The amendments raise the 'required index R', the damage stability requirement representing the ship's capability to remain stable and afloat in the event of flooding after a collision. The requirement is based on a probabilistic damage stability methodology for passenger ships that was developed in the partially E.U. funded research project HARDER and mandated in SOLAS2009.

Since 1995, new IMO regulations must pass a formal safety assessment before adoption. This risk-based approach ensures that new regulations are transparent, fact-based and raise safety cost-effectively. In the partially E.U. funded research project SAFEDOR, formal safety

*Customer Service Center*

*5201 Blue Lagoon Drive, 9<sup>th</sup>. Floor,*

*Miami, Fl., 33126*

*Tel: 1 (305) 716 4116,*

*Fax: 1 (305) 716 4117,*

*E-Mail:*

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

*Technical Head Office*

*7111 Dekadine Ct.*

*Spring, Tx., 77379*

*Tel: 1 (832) 451 0185,*

*1 (713) 204 6380*

*E-Mail: [cbozenovici@vcmaritime.com](mailto:cbozenovici@vcmaritime.com)*

assessments were developed for several ship types and submitted to IMO. The results indicated that damage stability requirements could be raised cost-effectively for both RoPax and cruise ships.

Rolf Skjong, Chief Scientist at DNV GL – Maritime, says: “The adoption of the new requirements marks the implementation of 20 years of research from many stakeholders working cooperatively to make our industry safer.”

The MSC meeting, running from June 7 until June 16 and is expected to adopt the following amendments:

### **SOLAS amendments**

- A set of draft amendments to SOLAS chapter II-1, relating to subdivision and damage stability. This has followed a substantive review of SOLAS chapter II-1, focusing in particular on passenger ships. Also up for adoption are the draft Revised Explanatory Notes to SOLAS chapter II-1 subdivision and damage stability regulations. The MSC is also expected to approve revised guidance for watertight doors on passenger ships which may be opened during navigation.
- Draft amendments to SOLAS regulation II-2/3.56, relating to the definition of vehicle carrier and draft new SOLAS regulation II-2/20.2 on fire safety requirements for cargo spaces containing vehicles with fuel in their tanks for their own propulsion, specifically vehicles which do not use their own propulsion within the cargo space.
- Draft amendments to SOLAS regulation II-2/9.4.1.3 to clarify the requirements for fire integrity of windows on passenger ships carrying not more than 36 passengers and on special purpose ships with more than 60 (but no more than 240) persons on board.
- Draft amendments to SOLAS regulations III/1.4, III/30 and III/37 on damage control drills for passenger ships, to require damage control drills to take place on all passenger ships from 2020.

*Customer Service Center  
5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
Fax: 1 (305) 716 4117,  
E-Mail:*

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

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## IMSBC Code

- The next set of draft amendments (04-17) to the International Maritime Solid Bulk Cargoes Code (IMSBC Code), to update requirements for a number of cargoes. The draft amendments also include those relating to paragraphs 4.5.1 and 4.5.2, highlighting the responsibility of the shipper for ensuring that a test to determine the transportable moisture limit (TML) of a solid bulk cargo is conducted. Also included are draft amendments related to substances which are harmful to marine environment, to require the shipper to declare whether or not a solid bulk cargo, other than grain, is harmful to the marine environment.

## HSC Codes

- Draft amendments to the 1994 and 2000 High-Speed Craft (HSC) Codes, to exempt certain smaller vessels from the requirement to carry a rescue boat, provided minimum requirements for carrying survival craft are met and provided a person can be rescued from the water in a horizontal or near horizontal body position.

## LSA Code

- Draft amendments to the International Life-saving Appliances (LSA) Code, chapter VI, section 6.1 relating to the static tests and their proof loads that launching appliances have to withstand. Also related draft amendments to the Revised Recommendation on testing of life-saving appliances (resolution MSC.81(70)).

## MODU Code

- Draft amendments to the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 2009 (2009 MODU Code) to update and amend the 2009 MODU Code, taking into account recommendations arising from the investigation into the explosion, fire and sinking of the *Deepwater Horizon* in the Gulf of Mexico, in April 2010. Key revisions concern machinery and electrical installations in hazardous areas, fire safety, and life-saving appliances and equipment.

*Customer Service Center  
5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
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E-Mail:*

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

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Spring, Tx., 77379  
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1 (713) 204 6380*

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## **Adoption of ships routing systems**

The MSC is expected to adopt a number of new and amended ships' routing measures. They include the establishment of a new area to be avoided (ABTA) as an associated protective measure for the "Tubbataha Reefs Natural Park Particularly Sensitive Sea Area (PSSA) in the Sulu Sea" (the Philippines). The ABTA is linked to the proposed PSSA, which was approved in principle in 2016 and is expected to be formally designated by IMO's Marine Environment Protection Committee (MEPC 71) in July.

## **E-navigation strategy**

The MSC is expected to adopt or approve a number of new and revised performance standards and guidelines related to operational safety, including those to implement the e-navigation strategy. These include draft amendments to the revised guidelines and criteria for ship reporting systems (resolution MSC.43(64)), addressing mandatory ship reporting systems established in accordance with SOLAS regulation V/11. The revisions update the resolution and encourage the use and recognition of automated electronic means of ship reporting.

## **Goal-based standards**

In 2016, the MSC confirmed that ship construction rules for oil tankers and bulk carriers submitted by 12 classification societies conform to the goals and functional requirements set by the Organization for new oil tankers and bulk carriers set out in the international goal-based ship construction standards for bulk carriers and oil tankers (resolution MSC.287(87)) which were adopted in 2010.

The MSC is expected to consider revisions to the Guidelines for Verification of Conformity with Goal-Based Ship Construction Standards, based on the experience gained during the initial verification audits.

The MSC will also consider the GBS non-conformities verification audit report, which relates to rectification of non-conformities stemming from the initial verification audit.

## **Development of functional requirements of SOLAS chapter III**

*Customer Service Center  
5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
Fax: 1 (305) 716 4117,  
E-Mail:*

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

*Technical Head Office  
7111 Dekadine Ct.  
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The MSC will review the progress made by the Sub-Committee on Ship Systems and Equipment (SSE) in developing draft functional requirements and the draft expected performance for each functional requirement, for SOLAS chapter III on life-saving appliances and arrangements. The Committee is expected to consider the next steps in the process of developing the functional requirements and their related expected performance, for SOLAS chapter III.

### **Scoping exercise proposed on autonomous vessels**

The MSC will be invited to consider proposals for the Committee to undertake a regulatory scoping exercise to determine how the safe, secure and environmentally sound operation of Maritime Autonomous Surface Ships (MASS) may be introduced in IMO instruments.

### **Cyber risk management**

The MSC will discuss issues relating to cyber security and is expected to approve a joint MSC-FAL circular on Guidelines on maritime cyber risk management, based on the interim guidelines on guidelines on maritime cyber risk management (MSC.1/Circ.1526), following the recent approval of the circular by the Facilitation Committee.

### **GMDSS modernization plan**

The MSC is expected to approve the draft Modernization Plan of the Global Maritime Distress and Safety System (GMDSS), prepared by the Sub-Committee on Navigation, Communications and Search and Rescue (NCSR). The plan envisages the development of amendments to SOLAS and related instruments for approval in 2021 and their adoption in 2022, with entry into force in 2024.

### **Approval of guidance and guidelines**

The MSC is expected to:

- Approve draft guidelines on safety during abandon ship drills using lifeboats and draft amendments to update the Guidelines for developing operation and maintenance manuals for lifeboat systems (MSC.1/Circ.1205). Both sets of guidelines have been reviewed following the adoption at MSC 96 of the requirements for maintenance, thorough examination, operational

*Customer Service Center  
5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
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Tel: 1 (305) 716 4116,  
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E-Mail:*

[joel@conarinagroup.com](mailto:joel@conarinagroup.com)

*Technical Head Office  
7111 Dekadine Ct.  
Spring, Tx., 77379  
Tel: 1 (832) 451 0185,  
1 (713) 204 6380*

*E-Mail: [cbozenovici@vcmaritime.com](mailto:cbozenovici@vcmaritime.com)*

testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (resolution MSC.402(96)) and the related SOLAS amendments which make them mandatory. The package of requirements, expected to enter into force on January 1, 2020, aim to prevent accidents with survival craft and addresses longstanding issues such as the need for a uniform, safe and documented standard related to the servicing of these appliances, as well as the authorization, qualification and certification requirements to ensure that a reliable service is provided.

- Approve draft MSC Circular on amendments to MSC.1/Circ.1503 on ECDIS - Guidance for good practice.
- Approve draft Guidelines for port State control officers on certification of seafarers, hours of rest and manning and refer it to the Sub-committee on Implementation of IMO Instruments (III 4) for inclusion in the ongoing work on the revision of resolution A.1052(27) on Procedures for port State control, 2011.
- Approve draft guidelines for vessels and units with dynamic positioning (DP) systems. The draft guidelines, generally applicable to new vessels and units with dynamic positioning systems, have been developed to current industry practice and DP technologies, since the previous set of guidelines was issued in 1994 (Guidelines for vessels with dynamic positioning (DP) systems (MSC/Circ.645)). Compliance with the new Guidelines would be documented by means of a Dynamic Positioning Verification Acceptance Document (DPVAD) for the dynamic positioning system.
- Approve draft escape route signs and equipment location markings, together with the associated draft Assembly resolution, with a view to subsequent adoption by the IMO Assembly. The symbols reflect the international standard ISO 24409 2:2014.

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1 (713) 204 6380*

*E-Mail: [cbozenovici@vcmaritime.com](mailto:cbozenovici@vcmaritime.com)*

REFERENCES:

- MSC 98

ATTACHMENTS: No.

Kindest Regards,  
Cosmin Bozenovici  
Naval Architect – Conarina Technical Head Office

*Customer Service Center  
5201 Blue Lagoon Drive, 9<sup>TH</sup>. Floor,  
Miami, Fl., 33126  
Tel: 1 (305) 716 4116,  
Fax: 1 (305) 716 4117,  
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