36 Myeongji ocean city 9-ro,
Gangseo-gu, Busan, 618-814
Republic of Korea

Phone : +82-70-8799-8328
Fax : +82-70-8799-8339
E-mail : convention@krs.co.kr
Person in charge: KIM, Kyoungyong

TECHNICAL INFORMATION

No : 2023-IMO-04
Date : 11 Oct 2023

Subject: Provision of operational information after a flooding casualty to passenger ships constructed before 1 January 2014

This Technical Information intends to bring to the attention of all concerned parties for their needful actions on the amendments to SOLAS regulations II-1/1.1 and II-1/8-1.3, as adopted through resolution MSC.436(99).

1. General

Since 2014, SOLAS regulation II-1/8-1.3 adopted through resolution MSC.325(90) has required that passenger ships constructed on or after 1 January 2014 shall have either onboard stability computer or shore-based support based on MSC.1/Circ.1400[1] for the provision of operational information for safe return to port after a flooding casualty. Further, the guidelines annexed in MSC.1/Circ.1400 was later revised by MSC.1/Circ.1532 for the enhanced application on passenger ships constructed on or after 13 May 2016. Until 1 January 2020, the requirements were not applicable to existing passenger ships constructed before 1 January 2014.

Fig. 1 Onboard Stability Computer

Fig. 2 Shore-based support

[1] GUIDELINES ON OPERATIONAL INFORMATION FOR MASTERS OF PASSENGER SHIPS FOR SAFE RETURN TO PORT BY OWN POWER OR UNDER TOW

However, with the amendments to SOLAS regulation II-1/8-1.3, as adopted by resolution MSC.436(99) in 2018, existing **passenger ships constructed before 1 January 2014** are similarly required to have either **onboard stability computer system**[2] or **shore-based support** capable of receiving and processing data for provision to the master with regularly updated operational information on their residual damage stability after a flooding casualty. Such an onboard stability computer or shore-based support should be developed and approved based on **MSC.1/Circ.1589**[3].

The new requirements have already entered into force on **1 January 2020** but have a period of grace until the first renewal survey after **1 January 2025** for their retroactive application on **passenger ships constructed before 1 January 2014**. For passenger ship constructed on or after 1 January 2014, the amendments do not have substantive implications.

2. Applicability

The retroactive requirements apply to passenger ships;

- constructed[4] before 1 January 2014, including those constructed before 1 January 2009[5]; and
- having length[6] of 120 m or more or having three or more main vertical zones (MVZ)

The mean length of main vertical zones does not in general exceed 40 m[7]. Passenger ships having length of less than 120m (or even less than 80m) may be also subject to the requirements, provided they have three or more main vertical zones (MVZ). In this regard, careful consideration should be given by owners/operators in assessing the applicability by confirming relevant drawings[8].

In addition, where special purpose ships subject to the 2008 SPS Code[9] (albeit they are originally classified as cargo ships) are certified to carry 240 persons or more and if they fall into the aforementioned two(2) bullet points, they also need to comply with SOLAS regulation II-1/8-1.3, regardless of the above criteria, based on paragraph 2.4 of the 2008 SPS Code. Therefore, where the terms "passenger ships" and "Passenger Ship Safety Certificate" are mentioned in this document, they mean to include special purpose ships subject to the 2008 SPS Code and SPS Safety Certificate respectively for the application of these new retroactive

[2] An onboard stability computer system should consist of at least two(2) independent stability computers as per MSC.1/Circ.1589.

[3] GUIDELINES ON OPERATIONAL INFORMATION FOR MASTERS IN CASE OF FLOODING FOR PASSENGER SHIPS CONSTRUCTED BEFORE 1 JANUARY 2014

[4] The term "ships constructed" hereby means ships the keels of which are laid or which are at a similar stage of construction, in accordance with SOLAS regulation II-1/1.3.1.

[5] Refer to SOLAS regulations II-1/1.1.2.2 and II-1/8-1.3 as amended by resolution MSC.436(99)

[6] The term "length" hereby means the length as defined in SOLAS regulation II-1/2.5, i.e., in other words, freeboard length (Lf).

[7] Refer to SOLAS regulation II-2/3.32

[8] The information on how many main vertical zones (MVZ) exist on a passenger ship may be found in the drawings such as General Arrangement, Fire Protection Plan, etc.

[9] Special purpose ships certified on or after 13 May 2008

requirements.

3. Stability computer system

Stability computer system installed on board or provided through shore-based support are required to comply with MSC.1/Circ.1589.

Stability computer software should use an accurate and detailed computer model of the entire hull, the pre-damage loading condition and the status of the watertight doors to calculate the residual damage stability following any flooding casualty. Such a stability software may be equivalent to Type 4[10] as defined in IACS UR L5 or KR Class Rules Part 1 Annex 1-10[11].

As the system should be pre-loaded with a detailed computer model of the complete hull, concerned parties may need to start preparing it as early as possible to collect necessary information from ship's construction drawings, lines, or any other available sources.

At least two independent stability computers should be always available (either two on board, or two through shore-based support, or one of each). Further, the onboard system should have an uninterruptible power supply (UPS) connected to both the main and the emergency switchboards.

For more details, please refer to MSC.1/Circ.1589.

3.1 Ships with onboard damage stability computers fitted before 1 January 2020

Where ship's flag Administration authorizes in a written manner, damage stability computers already installed onboard before 1 January 2020 may not fully comply with MSC.1/Circ.1589. In this case, however, it should be verified if such systems have the minimum functions as scoped in paragraph 23 of Annex to MSC.1/Circ.1589 or any other functions as required by the flag Administration. For such verification, please apply KR[12] for related technical review.

4. Shore-based support

Where shore-based support is provided, such a ship should have a two-way communication link[13] and a contract for the supply of such service at all the times during the validity of ship's Passenger Ship Safety

[10] Type 4 software means software calculating damage stability associated with an actual loading condition and actual flooding case, using direct application of user defined damage, for the purpose of providing operational information for safe return to port (SRtP).

[11] Loading Instrument on Stability

[12] KR Stability & Tonnage Team (stability@krs.co.kr)

[13] Recognized Mobile Satellite Service (e.g., INMARSAT and IRIDIUM) Ship Earth Station, or any other voice/data communication accessible to shore-based support at all the time may be accepted.

Certificate.

5. Approval and testing

The stability computer system should be initially approved by KR Head Office[12] and initially/periodically confirmed by attending KR surveyor(s). In doing so, the approval procedure and general requirements in **KR Rules Part 1 Annex 1-10** can be followed.

Such approval and onboard testing are to be completed no later than ship's first renewal survey after **1 January 2025**. To assist the implementation, a relevant statutory note will be imposed, regardless of its applicability[14], to all passenger ships constructed before 1 January 2014 and issued a SOLAS Passenger Ship Safety Certificate.

Where verified the compliance but unless previously assigned, the class notation "LI" (Loading Instrument) may be also assigned, and the Certificate of Loading Instrument may be subsequently issued in accordance with KR Rules Part 1 Chapter 1 Section 307 and Annex 1-10.

6. Actions requested of concerned parties

Shipowners/operators are invited to **assess** the applicability of **SOLAS regulation II-1/8-1.3**, as amended by resolution MSC.436(99), on their **passenger ships constructed before 1 January 2014**, if any; **take** needful actions for the retroactive compliance, where relevant; and/or **ensure** the completion of the followings by **applying for** the drawing approval and subsequent surveys no later than ship's first renewal survey after **1 January 2025**.

to verify the stability computer software and relevant documentation, based on MSC.1/Circ.1589 and KR Rules Part 1 Annex 1-10, and approve them as appropriate	KR Stability & Tonnage Team
to confirm the provision of either onboard stability computer system or shore-based support complying with MSC.1/Circ.1589 on the relevant passenger ships, and check their correct working[15]	KR Branch Office

Enclosure: Resolution MSC.436(99), MSC.1/Circ.1589, and KR Rules Part 1 Annex 1-10

Distributions: KR surveyors, Ship owners, Other relevant parties

Disclaimer :
Although all possible efforts have been made to ensure correctness and completeness of the contents contained in this information service, the Korean Register is not responsible for any errors or omissions made herein, nor held liable for any actions taken by any party as a result of information retrieved from this information service.

[15] Refer to KR Rules Part 1 Annex 1-10 Section 3(9) "Installation Testing"