



MARITIME SAFETY COMMITTEE  
87th session  
Agenda item 5

MSC 87/5/6  
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## **GOAL-BASED NEW SHIP CONSTRUCTION STANDARDS**

### **Harmonized Common Structural Rules (HSR) for oil tankers and bulk carriers**

#### **Submitted by the International Association of Classification Societies (IACS)**

#### **SUMMARY**

*Executive summary:* The Committee is invited to consider the ongoing IACS project to develop Harmonized Common Structural Rules (HSR) for oil tankers and bulk carriers, which are based on the current two separate sets of IACS Common Structural Rules (CSR) for oil tankers and bulk carriers, in the context of the implementation of the new goal-based ship construction standards for bulk carriers and oil tankers

*Strategic direction:* 10

*High-level action:* 10.0.1

*Planned output:* 10.0.1.1

*Action to be taken:* Paragraph 15

*Related documents:* MSC 87/3, MSC 87/3/2, MSC 87/5/1 and MSC 87/5/2

1 This document is submitted in accordance with paragraph 4.10.5 of the Guidelines on the organization and method of work of the Committees and their subsidiary bodies (MSC-MEPC.1/Circ.2) and provides information and comments that are considered to be relevant to the Committee's consideration of documents MSC 87/3, MSC 87/3/2, MSC 87/5/1 and MSC 87/5/2 (Secretariat).

#### **Background**

2 IACS fully recognizes that the Maritime Safety Committee wishes to see the adoption of the GBS-related amendments to SOLAS (attached at annex 1 to document MSC 87/3) and the mandatory MSC resolution (attached at annex to document MSC 87/3/2) at MSC 87, together with the approval of the Verification Guidelines (attached at annex to document MSC 87/5/1). IACS will work constructively with delegations at MSC 87 with the aim of achieving these outcomes.

3 During the discussions held to date in the Committee on the implementation of the GBS verification scheme (Tier III), it has been assumed that IACS members will request initial verification for their Rules, each of which are based on IACS Common Structural Rules

(CSR) for oil tankers and bulk carriers. In short, at least a total of 20 Rule sets have been presumed to be in need of verification.

4 IACS now considers it appropriate to inform the Committee of the IACS ongoing project to develop Harmonized Common Structural Rules (HSR). These Rules are being based on the current two separate sets of IACS Common Structural Rules (CSR) for oil tankers and bulk carriers.

5 Some time ago, IACS, having carefully considered the resources that would be necessary, the technical complexity of the issues involved and the need to deliver a technically robust and practically implementable set of HSR, agreed that this project should be completed by 2013. IACS now notes that the IMO Secretariat is proposing in document MSC 87/5/2 that Classification Society Rules should be submitted for verification by the end of 2012.

### **IACS Common Structural Rules (CSR)**

6 In December 2005, the Common Structural Rules (CSR) for oil tankers and bulk carriers were adopted by IACS for implementation on 1 April 2006. The CSR are based on sound technical grounds, and achieve the goals of more robust and safer ships.

7 These CSR for oil tankers and bulk carriers were developed separately and were based on different technical approaches. During the review process of CSR prior to their adoption, industry stakeholders urged IACS to harmonize key technologies such as wave loads, fatigue, finite element analysis and buckling; and IACS committed to develop a harmonized version of these Rules.

### **IACS Harmonized Common Structural Rules (HSR)**

8 IACS is therefore now undertaking a project to develop Harmonized Common Structural Rules (HSR) for oil tankers and bulk carriers. Through a harmonization process, the HSR will be developed into a consistent methodology, which will satisfy the commitments made to Industry.

9 The HSR will consist of three parts – a common part for "general hull requirements" that will contain requirements for both ship types, and separate parts for "ship type specific" requirements applicable to oil tankers and bulk carriers respectively. Noting that the CSR were developed and adopted prior to the substantive development of the GBS provisions in IMO, the development of HSR provides an opportunity for IACS to consider and take account of the discussions and decisions taken in the development of the GBS. The development of HSR is also taking account of the experience gained in the application of the separate CSRs, including feedback from industry partners. The goal of the HSR remains the same as the original CSR development, which is to establish unified rules and procedures for safe and robust ships, but now also includes the formal consideration of the IMO GBS. The new HSR will therefore be of great benefit to industry in providing a set of Rules based on a holistic and common set of principles for both ship types.

10 In particular, the benefit to IMO of the HSR is that it will need a significantly reduced effort to undertake the verification process to demonstrate that the Classification Society Rules deliver the goals and functional requirements specified in the GBS framework.

11 The HSR development, review, testing, adoption and implementation process requires ample time for:

- .1 the extensive technical work, testing and calibration needed to harmonize the two CSR Rule sets;
- .2 review, testing, and commenting on the draft HSR by external stakeholders;
- .3 careful and proper account of this external feedback in finalizing and adopting the HSR;
- .4 formal consideration and adoption of the HSR by each Society's technical and governing bodies; and
- .5 an appropriate period of time (normally 6 months) between adoption of significant Rule changes and their entry into force (in order for designers/shipyards to develop or adapt their designs to comply with the revised requirements).

There is simply not enough time to do all of this properly in time to submit the HSR for verification by 31 December 2012.

#### **Timing of GBS verification audits**

12 According to the draft GBS SOLAS amendments (annex 1 to document MSC 87/3), GBS will apply to bulk carriers and oil tankers of 150 m in length and above:

- .1 for which the building contract is placed on or after 1 January 2015; or
- .2 in the absence of a building contract, the keels of which are laid or which are at a similar stage of construction on or after 1 January 2016; or
- .3 the delivery of which is on or after 1 January 2019.

13 In this context, IACS notes operative paragraph 6 of the draft MSC resolution on the adoption of the GBS SOLAS amendments that was approved at MSC 86, whereby the Committee resolves to review the progress towards the implementation of the amendments in 2012 and, if proven necessary, to adjust the time periods for application of the GBS SOLAS amendments.

14 Noting the comments provided above, if the Committee agrees to set such interim deadlines as proposed in annex 3 of document MSC 87/5/2, IACS proposes that it would be reasonable, at this time, to expect Classification Societies to submit their Rules for verification by the end of 2013, and that the principle, underlying operative paragraph 6 of the draft MSC resolution on the adoption of the GBS SOLAS amendments, should also be applied to the interim deadlines during the implementation of the GBS verification scheme.

**Action requested of the Committee**

15 The Committee is invited to consider the above information and comments and, in particular, to:

- .1 note the ongoing project within IACS to develop Harmonized Common Structural Rules (HSR), which will be verified for conformity with the goal-based ship construction standards for bulk carriers and oil tankers;
- .2 agree that it will be impractical to meet the proposed deadline for submission of Classification Society Rules by the end of 2012;
- .3 agree that, at this time, the most realistic date to aim for submitting Rules for verification would be the end of 2013;
- .4 agree, notwithstanding paragraph 15.3 above, that operative paragraph 6 of the draft MSC resolution on the adoption of the GBS SOLAS amendments, should also be adopted for all phases of the implementation of the GBS verification scheme,

and to take action as appropriate.

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