

MARITIME SAFETY COMMITTEE
105th session
Agenda item 6

MSC 105/INF.9
15 February 2022
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GOAL-BASED NEW SHIP CONSTRUCTION STANDARDS

Status report addressing GBS audit observations common to IACS members

Submitted by IACS

SUMMARY

Executive summary: This document provides the updated status of the work which is undertaken to address the IACS "common" observations as of 31 January 2022

Strategic direction, 7 if applicable:

Output: 7.26

Action to be taken: Paragraph 7

Related documents: MSC 105/1/2; MSC 104/18, MSC 104/INF.8; MSC 103/21, MSC 103/INF.9; MSC 102/24, MSC 102/INF.20; MSC 101/24, MSC 101/INF.13; MSC 100/20, MSC 100/6/5, MSC 100/6/10; MSC 99/22, MSC 99/INF.19; MSC 98/23, MSC 98/INF.7, MSC 98/INF.12, MSC 98/INF.14; MSC 96/5, MSC 96/5/1, MSC 96/5/1/Add.1 and MSC 96/5/9

Background

1 The Maritime Safety Committee (MSC), at its 101st session, having received the information contained in document MSC 101/INF.13, noted that IACS and its members would provide an update to MSC 102 on the progress made regarding their audit observations.

2 Although the Committee, at its 102nd and 103rd session, received the information contained in documents MSC 102/INF.20 and MSC 103/INF.9 respectively, the MSC agreed to postpone the deliberation of these documents to a future session owing to time limitations.

3 Furthermore the Committee, at its 104th session, agreed to consider a number of documents submitted to MSC 102, MSC 103 and MSC 104, the consideration of which had been deferred owing to time constraints.

4 In this context, the Committee was invited to consider document MSC 105/1/2 containing the proposals by its Chair for actions to be taken in relation to the documents considered by correspondence prior to MSC 105.

Updated reports on the status as of 31 January 2022

5 IACS has prepared updated reports on the status of work to address the "common" (to IACS members) observations of both, the initial verification and the first maintenance verification. These updated reports are provided in the annex to this document and are relevant to the work in progress.

6 The reports related to the observations the work on which is completed, are not included in this document and can be found in documents MSC 98/INF.12, MSC 99/INF.19, MSC 101/INF.13, MSC 102/INF.20 and MSC 103/INF.9.

Action requested of the Committee

7 The Committee is invited to note the information provided.

ANNEX

STATUS REPORTS ON ADDRESSING OBSERVATIONS

<p>Submitted to: IMO Secretariat Date: 31 January 2022</p>	<p>Observation No.: IACS/2015/FR1-8/OB/02</p>
<p>Corrective Action Plan: Annex 2 of MSC 96/5/1/Add.1</p>	<p>Audit Report: Annex 13, page 8 of MSC 96/5</p>
<p>Observation (extracted from the audit report – part only)</p> <p>Modern data show both an increase in mean significant wave height for the North Atlantic and that more extreme weather is being experienced in recent years, including the existence of rogue waves and the possible effect of climate change. However, IACS Rec. No.34 that is based on old wave statistics was last revised in 2000/2001 and there is no evidence of monitoring since its adoption. While the TB report notes that significant discrepancies are observed between predictions by different databases, no studies have been submitted to show how new data have been assessed to conclude that none of the new databases could be used, nor has any sensitivity study been provided to assess the potential effect of the new data on motions and loads.</p> <p>[paragraphs omitted]</p> <p>The audit has not found sufficient justification that the wave data used in the rules properly represent North Atlantic conditions.</p> <p>Detailed Action Plan</p> <ol style="list-style-type: none"> 1. Periodical reviewing the available information on published or commercially available new wave data. 2. Updating the mathematical model and Technical Background Report using the information on new wave data when reliable data are available. 3. Updating the information contained in IACS Rec. 34 on probabilities of occurrence of the sea states (scatter diagram) in the North Atlantic when reliable and accepted data are available. <p>Deliverables</p> <ol style="list-style-type: none"> 1) Detailed plan to periodically review available wave data, taking into consideration weather routing as required. The plan to determine how IACS Rec. 34 can be updated and identification of the source(s) of necessary reliable wave data were completed in January 2018. 2) Revised IACS Rec. 34. A dedicated project team (PT) is working using data obtained by the latest technology; this work will be finalised up to 2022. <p>Timescales</p> <p>The next status report will be submitted to the IMO at the appropriate juncture.</p>	

Submitted to: IMO Secretariat Date: 31 January 2022	Observation No.: IACS/2015/FR1-8/OB/04
Corrective Action Plan: Annex 4 of MSC 96/5/1/Add.1	Audit Report: Annex 13, page 11 of MSC 96/5
<p>Observation (extracted from the audit report – part only)</p> <p>No benchmarking of reference values (values obtained by direct analysis) with experimental or service data has been found, as requested by the GBS audit standard 2.2.4.</p> <p>IACS replied 6 November 2014 that: "current CSR-OT and CSR-BC have been developed based on experiences from successful operation of ships and have been modified based on feedback from operational experience. This indicates current CSR-OT and CSR-BC already comprise service history data." However, the successful operation and operational experience referred to has not been reported as evidence of benchmarking to the audit.</p> <p>[paragraphs omitted]</p> <p>However, upon a direct question at the last meeting with IACS 7 May 2015, IACS could not provide evidence that procedures for a systematic collection of data to benchmark CSR-H is in place.</p> <p>Detailed Action Plan</p> <ol style="list-style-type: none"> 1. Development of a procedure for collection of experimental and service history data to benchmark IACS CSR requirements. 2. Validation and benchmarking of a method for determining the life-time ship motions and loads based on available experimental and service history data. <p>Deliverables</p> <ol style="list-style-type: none"> 1) IACS common procedure for the systematic collection of data to benchmark IACS CSR requirements. <p>IACS decided to hold in abeyance the discussion on a common procedure for collection of experimental and service history data to benchmark design loads in the IACS CSR until the on-going work related to IACS/2015/FR1-8/OB/02 is completed.</p> <p>Timescales</p> <p>The next status report will be submitted to the IMO at the appropriate juncture.</p>	

<p>Submitted to: IMO Secretariat Date: 31 January 2022</p>	<p>Observation No.: IACS/2015/FR1-8/OB/10</p>
<p>Corrective Action Plan: Annex 10 of MSC 96/5/1/Add.1</p>	<p>Audit Report: Annex 13, page 25 of MSC 96/5</p>
<p>Observation (extract from the audit report – part only)</p> <p>[paragraphs omitted]</p> <p>Limit standards for fabrication, fairness, alignment, welding, etc. are closely linked with the structural safety level adopted in the rules. Although, rules allow alternative standards, no guidance or criteria have been found for keeping the same safety level when accepting alternative standards.</p> <p>In a reply to the teams' early comments on this issue 6 November 2014, IACS replied: '<i>One should assume that other standards force shipbuilders to apply measures of ship construction accuracy not lesser than those defined in IACS Rec.47. Maintenance Team will be asked to reconsider wording of [5.1.2].</i>' In a later reply to our interim report 14 March 2015, this was changed to: '<i>The acceptance of another standard as an alternative to IACS Rec. 47 is left up to the individual Class Societies with IACS Rec. 47 as a reference document.</i>'</p> <p>However, neither of these interpretations '<i>not lesser than those defined in IACS Rec.47</i>' or '<i>with IACS Rec. 47 as a reference document.</i>' provide enough evidence to support IACS self-assessment about compliance with this audit standard since equivalence criteria have not been established in CSR-H and the consideration of this recommendation by the individual Class Societies cannot be predicted.</p> <p>Detailed Action Plan:</p> <ol style="list-style-type: none"> 1. Consider the development of an IACS Guideline for acceptance of other recognized standards <ol style="list-style-type: none"> a) Identify accepted recognized standards in order to develop, document and verify equivalency b) Develop a procedure for accepting other standards c) Develop acceptance criteria for accepting other standards <p>Deliverables</p> <ol style="list-style-type: none"> 1) Report of the study that addressed issues raised in the audit report. 2) IACS Guidelines, or updates to Recommendations as considered necessary. <p>IACS completed the study on the issues raised in the audit report and included the report of this study in IACS explanatory paper. In addition, IACS decided to revise its unified requirement UR Z23. UR Z23/rev.7 was approved and uniformly implemented by IACS members from 1 July 2021.</p> <p>Timescales</p> <p>The outcome will be submitted to the IMO Secretariat as part of 3rd "IACS common package" for the first three-year cycle GBS maintenance of verification in March 2022.</p>	

Submitted to: IMO Secretariat Date: 31 January 2022	Observation No.: IACS/2018/Maint/ OB/2
Improvement Action Plan: Annex 2 of MSC 100/6/10	Audit Report: Annex, page 12 of MSC 100/6/5
Improvement Action to address IACS/2018/Maint/OB/2 As shown in page 12 of the Annex to MSC 100/6/5, IACS will develop the Technical Background document to justify that the acceptable limits of yielding have been considered in revising the requirement about net connection area of connecting bracket (Pt 2, Ch 1, Sec 3, [1.4.2]). Deliverables 1) New Technical Background document. IACS work to address this observation is in progress. Timescales The next status report will be submitted to the IMO at the appropriate juncture.	

Submitted to: IMO Secretariat Date: 31 January 2022	Observation No.: IACS/2018/Maint/ OB/4
Improvement Action Plan: Annex 2 of MSC 100/6/10	Audit Report: Annex, page 22 of MSC 100/6/5
Improvement Action to address IACS/2018/Maint/OB/4 As shown on page 23 of the annex to MSC 100/6/5, IACS will revise the rules in order to ensure consistency in definitions of NDT/NDE. Deliverables 1) Revised UR Z23 and/or IACS CSR for BC&OT. UR Z23/Rev.7 was approved and uniformly implemented by IACS members from 1 July 2021. Timescales The outcome will be submitted to the IMO Secretariat as part of 3rd "IACS common package" for the first three-year cycle GBS maintenance of verification in March 2022.	