Proposal on drafting new modules to Performance standards for integrated navigation system (INS) (resolution MSC.252(83))

Submitted by IHB

SUMMARY

Executive Summary: This document provides comments and proposals related to the drafting of additional modules to the Revised Performance standards for Integrated Navigations Systems (INS) (resolution MSC.252(83)) relating to the harmonization of bridge design and display of information.

Action to be taken: Paragraph 2.

Related documents: NCSR 3/6/2 dated 23 December 2015

1. See attached document.

2. The Sub-Committee is invited to note the information provided and take action as appropriate.

INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON NAVIGATION, COMMUNICATIONS AND SEARCH AND RESCUE
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ADDITIONAL MODULES TO THE REVISED PERFORMANCE STANDARDS FOR INTEGRATED NAVIGATIONS SYSTEMS (INS) (RESOLUTION MSC.252(83)) RELATING TO THE HARMONIZATION OF BRIDGE DESIGN AND DISPLAY OF INFORMATION

Proposals to draft additional modules to the Revised Performance standards for Integrated Navigations Systems (INS) (resolution MSC.252(83))

Submitted by Norway

SUMMARY

Executive summary:	This document provides comments and proposals related to the drafting of additional modules to the Revised Performance standards for Integrated Navigations Systems (INS) (resolution MSC.252(83)) relating to the harmonization of bridge design and display of information
Strategic direction:	5.2
High-level action:	5.2.6
Planned output:	5.2.6.1
Action to be taken:	Paragraph 18
Related documents:	Resolution MSC.252(83); MSC 95/19/8 and MSC 95/19/14

Introduction

1 At MSC 95, the Committee approved 5 of the 6 outputs related to the implementation of e-navigation. In particular, it agreed to output 2, an update, by adding new modules, to the *Revised performance standards for Integrated Navigation Systems (INS)* (resolution MSC.252(83)).

2 This output was included in the High-level Action plan as item 5.2.6.1 and on the 2016-2017 biennial agenda of the NCSR Sub-Committee and the provisional agenda for NCSR 3, with a target completion year of 2017.

Background

3 E-navigation is expected to equip shipboard users and those ashore responsible for the safety of shipping with effective, user-friendly, proven tools that are optimized for effective decision-making, in order to make marine navigation and communications more reliable, resilient and user-friendly.

4 To reduce the risk of accidents that may result from important information not being acted upon due to, for example, lack of situational awareness or information overload, it is necessary to integrate received navigational information via communications equipment into the integrated navigation system in a harmonized and agreed way. In this way, information will be available at the appropriate display while not affecting the mandatory navigational tasks.

5 E-navigation relies on integration of relevant navigational information and INS provides an effective means to integrate navigation equipment data. By providing integrated and combined functions to avoid geographic, traffic and environmental hazards, INS enhances the safety of navigation.

Modular Performance standards for INS

6 The last revision of the Performance standards for INS (resolution MSC.252(83)) made the performance standards modular. This means that provision for any new facility can be added to the performance standards by adding an appropriate module for that facility.

7 The modular concept of INS Performance standards provides provisions for individual configurations and extensions, where required. Currently, the performance standards contain four modules relating to: integration of navigational information (A), operational requirement (B), alert management (C) and documentation requirements (D).

8 The navigation and communication systems on board need to be harmonized and integrated and made interoperable with e-navigation. The existing performance standards for INS being modular can be revised by adding new modules to deal with new demands and standards as the industry and technology develop new systems.

9 For the purpose of e-navigation, INS will support and enhance the safety of navigation by providing integrated and augmented functions to avoid geographic, traffic and environmental hazards.

10 Although module A of the INS Performance standards is suitable for integrating navigation information required for e-navigation, the INS performance standard will require two new modules so that information received by communications equipment can be integrated as well as properly displayed. The proposed two new modules relate to:

.1 harmonization of bridge design; and

.2 display of information.

Harmonization of bridge design

11 A new module on harmonization of bridge design will assist designers in realizing an ergonomic design of the bridge, with the objective of improving the reliability and efficiency of navigation. This module will support the provisions of SOLAS regulation V/15 relating to bridge design and arrangement of navigational systems and equipment and bridge procedures.

Display of Information

12 A new module on display of information will ensure that the INS can display the information received via communications equipment. This module will outline the standardized interfaces for data exchange to support transfer of information from communication equipment to an INS interface so that information received via such equipment can be processed, filtered, routed and displayed on the navigational system.

13 This module should take into account the new guidelines being drafted for the harmonized display of navigation information received by communications equipment under agenda item 9.

14 Consideration should be given to the functionality of a conning display bringing all the relevant and important information for conning the ship to one place.

15 These two new modules will add functionality to the INS Performance standards which will facilitate a simplified and harmonized bridge design and ensure relevant information is displayed, including information received via communications equipment. This will result in reducing complexity without compromising existing navigational functionality in INS.

16 The use of a common maritime data structure based on the work of IHO's S-100 data structure should be made available for all INS functions.

Existing standards

17 International standard IEC 61924-2 refers to INS.

Action requested of the Sub-Committee

18 The Sub-Committee is invited to consider the proposed additional modules to the *Revised performance standards for Integrated Navigations Systems (INS)* (resolution MSC.252(83) relating to the harmonization of bridge design and display of information, when discussing the information above, and take action, as appropriate.