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WORK PROGRAMME

Proposal for a new output to amend SOLAS regulation II-2/6.2.1

Submitted by Islamic Republic of Iran and IACS

SUMMARY

Executive summary:	This document proposes a new output to amend SOLAS regulation II-2/6.2.1 to address the testing requirements for the floor covering materials, with a view to ensuring consistent implementation.
Strategic direction, if applicable:	7
Output:	Not applicable
Action to be taken:	Paragraph 26
Related documents:	FP 50/11/6; SSE 8/15/13; SSE 10/13 (annex 3) and SSE 10/20

Introduction

1 This document is submitted in accordance with the relevant provisions of the draft revision of the *Organization and method of work of the Maritime Safety Committee and the Marine Environment Protection Committee and their subsidiary bodies* (MSC-MEPC.1/Circ.5/Rev.5) (MSC 109/22, paragraph 19.14 and annex 26) on the submission of proposals for new outputs, and proposes a new output to revise paragraph 2.1 of SOLAS regulation II-2/6 to address the testing requirements for the floor covering materials, with a view to ensuring consistent implementation of IMO instruments.

Background

2 SOLAS regulations II-2/6.1 and 6.2.1 state:

> "**1 Purpose**
>
> The purpose of this regulation is to reduce the hazard to life from smoke and toxic products generated during a fire in spaces where persons normally work or live. For this purpose, the quantity of smoke and toxic products released from combustible materials, including surface finishes, during fire shall be limited.

2 Paints, varnishes and other finishes

2.1 Paints, varnishes and other finishes used on exposed interior surfaces shall not be capable of producing excessive quantities of smoke and toxic products, this being determined in accordance with the Fire Test Procedures Code."

3 The interpretation of SOLAS regulation II-2/6.2 as contained in MSC.1/Circ.1120 states, with respect to "Application to materials used for bulkheads and on surfaces of bulkheads, ceilings and linings":

> "Surfaces referred to in regulations 6.2 are those of bulkheads, decks, floor coverings, wall linings and ceilings as appropriate. The requirements described within these regulations are not meant to apply to plastic pipes, electric cables, and furniture."

4 IACS unified interpretation UI SC127 (Rev.2), related to SOLAS regulation II-2/6.2, was submitted to FP 50 (FP 50/11/6(IACS)). It states:

> "This regulation only applies to accommodation spaces, service spaces and control stations as well as stairway enclosures."

5 In addition, table 1 of annex 3 of the 2010 FTP Code mentions that the floor coverings installed (for exposed interior surfaces) on board passenger ships are to be tested as per part 2 of annex 1 of the 2010 FTP Code, with no restriction regarding the spaces concerned.

6 Furthermore, note 3 to table 1 of annex 3 of the 2010 FTP Code clarifies that the requirement for low flame-spread characteristics of floor covering materials applies to "corridors and stairway enclosures only"; note 3 does not limit the application of smoke and toxicity testing of the floor coverings.

7 Also, tables 1, 2 and 3 of annex 4 of the 2010 FTP Code indicate that the requirement for low flame-spread of the floor covering materials applies to "corridors and stairway enclosures only" and does not limit the application of smoke and toxicity testing of the floor coverings on board all ships. Tables 2 and 3 of annex 4 of the 2010 FTP Code were based on document FP 50/11/6, which also included a revision of IACS unified interpretation UI SC126. In fact, document FP 50/11/6 was universally agreed and was taken into account in the long process of elaboration of the 2010 FTP Code.

8 In document SSE 8/15/13 (IACS), IACS proposed revising MSC.1/Circ.1120 by adding the following text to the interpretation of SOLAS regulation II-2/6.2:

> **"Paints, varnishes and other finishes**
>
> This regulation only applies to accommodation spaces, service spaces and control stations, as well as stairway enclosures.
>
> Paints, varnishes and exposed interior surfaces finishes – including bulkheads, decks, floor coverings/finishing, wall linings and ceilings – installed in all accommodation, service spaces, control stations, including corridors and stairway enclosures, should be tested according to part 2 of annex 1 of the 2010 FTP Code."

9 Owing to time constraints, the consideration of that document was postponed to SSE 9. Subsequently, SSE 9 instructed the FP Correspondence Group to further consider document SSE 8/15/13, with a view to finalization. Nevertheless, the proposal drafted by the FP Correspondence Group (SSE 10/13 (Norway), paragraphs 9 to 11 and annex 3) was substantially different from the one in document SSE 8/15/13 as mentioned in paragraph 8 above, as it proposed to align the surfaces concerned by SOLAS regulation II-2/6.2 (smoke and toxicity) with the surfaces concerned by SOLAS regulation II-2/5.3.2.4 (low-flame spread characteristics). The proposal developed by the FP Correspondence Group consisted of replacing SOLAS regulations II-2/6.2.1 and 6.2.2 with:

> **"Regulation 6**
>
> **Smoke generation potential and toxicity**
>
> **2 Paints, varnishes and other finishes on exposed interior surfaces**
>
> 2.1 The following surfaces shall not be capable of producing excessive quantities of smoke and toxic products, this being determined in accordance with the Fire Test Procedures Code:
>
> .1 in passenger ships:
>
> .1 exposed surfaces in corridors and stairway enclosures and of bulkhead and ceiling, linings in accommodation and service spaces (except saunas) and control stations; and
>
> .2 exposed surfaces of cabin balconies, except for natural hard wood decking systems; and
>
> .2 in cargo ships: exposed surfaces in corridors and stairway enclosures and of ceilings in accommodation and service spaces (except saunas) and control stations."

10 The SSE Sub-Committee consequently concluded that this was not an interpretation but an amendment which needed further discussions as a new output.

IMO's objectives

11 The main goal of this proposal is to clarify the requirements applicable to the floor covering materials installed in passenger and cargo ships pertaining to SOLAS regulation II-2/6 on smoke generation potential and toxicity, in order to ensure uniform application. The proposed new output will contribute to strategic direction (SD) 7 "Ensure the regulatory effectiveness of international shipping", as defined in the *Strategic Plan for the Organization for the six-year period 2024 to 2029* (resolution A.1173(33)). In the context of SD 7, it will contribute to providing consistency through the effective and uniform implementation of the IMO instruments.

Need

12 SSE 10 noted the Fire Protection (FP) Correspondence Group's discussion on testing requirements in SOLAS for floor covering materials and endorsed the Group's conclusion that amendments to SOLAS regulation II-2/6.2 were necessary under a new output.

Analysis of the issue

13 The floor coverings are considered as surface materials, which can generate smoke and toxic gases at elevated temperatures in the event of a fire incident. Furthermore, it is believed that floor covering materials that do not produce excessive quantities of smoke and toxic products (in accordance with the criteria of the 2010 FTP Code) are available on the market.

14 Therefore, the co-sponsors consider that the floor coverings installed in all accommodations, service spaces, control stations and stairway enclosures in passenger and cargo ships should be tested according to part 2 of annex 1 of the 2010 FTP Code. The co-sponsors have noticed the non-uniform application of this regulation, especially concerning the spaces where this regulation should apply. It is believed that some ambiguity may arise from the fact that the surfaces concerned by testing for low-flame spread characteristics of floor coverings (i.e. corridors and stairways only) are different from the surfaces concerned by smoke and toxicity requirements (i.e. all floor coverings in accommodation spaces, service spaces and control stations), whereas generally type approval certificates for floor coverings include both properties (low-flame spread characteristics, and smoke and toxicity).

15 However, the difference in wording between SOLAS regulations II-2/5.3 and 6.2 originated from a safety concern regarding smoke and escape. For practical purposes, B-class bulkheads are fitted between cabins and corridors, which means that these bulkheads prevent the passage of flame, but do not prevent the passage of smoke. If floor coverings without any limitation regarding their capacity to emit toxic smoke are fitted in the cabins, as proposed in paragraph 9, the toxic smoke will pass through the corridor by the ventilation opening in the lower part of the door in case of fire in the cabin. Major accidents in the past have shown that the toxicity of smoke can kill persons very quickly. Therefore, the co-sponsors believe that the proposal developed by the FP Correspondence Group in paragraph 9 will dangerously lower the level of safety on board ships and that it has to be carefully considered.

16 Considering the ambiguity outlined in paragraph 14, however, it is recognized that there is a need to clarify SOLAS regulation II-2/6.2 in order to ensure straightforward uniform application of these requirements.

Analysis of implications

17 No costs to the maritime industry are anticipated. The administrative burden to the Organization and to the Member States is anticipated to be minimal. A completed administrative checklist, as set out in annex 6 to the draft revision of MSC-MEPC.1/Circ.5/Rev.5, is set out in annex 2.

Benefits

18 This clarification of SOLAS regulation II-2/6.2 will ensure uniform application of the requirements for floor coverings, so as to ensure a safe evacuation of the crew and passengers in case of fire by avoiding intoxication by smoke.

Industry standards

19 No industry standards which are directly relevant to the issue exist.

Output

20 The following new output is proposed for inclusion in the Committee's post-biennial agenda: "Revision of paragraph 2.1 of SOLAS regulation II-2/6".

21 It is anticipated that this item could be completed in one session of the SSE Sub-Committee. Parts I and II of the check/monitoring sheet, as set out in annex 2 to MSC.1/Circ.1500/Rev.3, have been completed and are provided in annex 3.

22 For illustrative purposes, draft amendments to SOLAS regulation II-2/6 are set out in annex 1.

Human element

23 The completed checklist for considering human element issues contained in annex 5 to the draft revision of MSC-MEPC.1/Circ.5/Rev.5 is set out in annex 4. As the proposal consists of clarifying requirements applicable to the floor covering materials installed in passenger and cargo ships in order to ensure uniform application, no impact on the human element is anticipated.

Urgency

24 It is proposed to include the output in the Committee's post-biennial agenda, with one session needed to complete the item, assigning the SSE Sub-Committee as the associated organ.

Identification of capacity-building implications

25 A checklist for the identification of capacity-building implications, as set out in appendix 1, annex 2 to the draft revision of MSC-MEPC.1/Circ.5/Rev.5, is set out in annex 5.

Action requested of the Committee

26 The Committee is invited to consider the information provided above, in particular paragraphs 13 to 16 and the proposal in paragraph 20, and to take action, as appropriate.

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ANNEX 1*

DRAFT AMENDMENTS TO SOLAS REGULATION II-2/6.2

Regulation 6

Smoke generation potential and toxicity

2 Paints, varnishes and other finishes on exposed interior surfaces

2.1 Paints, varnishes and other finishes used on exposed interior surfaces – including bulkheads, decks, floor coverings/finishing, wall linings and ceilings – installed in all accommodation, service spaces, control stations, including corridors and stairway enclosures shall not be capable of producing excessive quantities of smoke and toxic products, this being determined in accordance with the Fire Test Procedures Code.

2.2 On passenger ships constructed on or after 1 July 2008, paints, varnishes and other finishes used on exposed surfaces of cabin balconies, excluding natural hard wood decking systems, shall not be capable of producing excessive quantities of smoke and toxic products, this being determined in accordance with the Fire Test Procedures Code.

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* These are illustrative changes for the purpose of the new output proposal. Modifications are shown in grey shading.

ANNEX 2

CHECKLIST FOR IDENTIFYING ADMINISTRATIVE REQUIREMENTS

This checklist should be used when preparing the analysis of implications required in submissions of proposals for inclusion of outputs. For the purpose of this analysis, the term "administrative requirement" is defined in accordance with resolution A.1043(27), as an obligation arising from a mandatory IMO instrument to provide or retain information or data.

Instructions:

(A) If the answer to any of the questions below is **YES**, the Member State proposing an output should provide supporting details on whether the requirements are likely to involve start-up and/or ongoing costs. The Member State should also give a brief description of the requirement and, if possible, provide recommendations for further work, e.g. would it be possible to combine the activity with an existing requirement?

(B) If the proposal for the output does not contain such an activity, answer **NR** (Not required).

(C) For any administrative requirement, full consideration should be given to electronic means of fulfilling the requirement in order to alleviate administrative burdens.

1. Notification and reporting? Reporting certain events before or after the event has taken place, e.g. notification of voyage, statistical reporting for IMO Members	**NR**	Yes □ Start-up □ Ongoing
Description of administrative requirement(s) and method of fulfilling it: (if the answer is yes)		
2. Record keeping? Keeping statutory documents up to date, e.g. records of accidents, records of cargo, records of inspections, records of education	**NR**	Yes □ Start-up □ Ongoing
Description of administrative requirement(s) and method of fulfilling it: (if the answer is yes)		
3. Publication and documentation? Producing documents for third parties, e.g. warning signs, registration displays, publication of results of testing	**NR**	Yes □ Start-up □ Ongoing
Description of administrative requirement(s) and method of fulfilling it: (if the answer is yes)		
4. Permits or applications? Applying for and maintaining permission to operate, e.g. certificates, classification society costs	**NR**	Yes □ Start-up □ Ongoing
Description of administrative requirement(s) and method of fulfilling it: (if the answer is yes)		
5. Other identified requirements?	**NR**	Yes □ Start-up □ Ongoing
Description of administrative requirement(s) and method of fulfilling it: (if the answer is yes)		

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ANNEX 3

PARTS I AND II OF THE CHECK/MONITORING SHEET FOR THE PROCESS OF AMENDING THE CONVENTION AND RELATED MANDATORY INSTRUMENTS (PROPOSAL/DEVELOPMENT) (MSC.1/CIRC.1500/REV.3)

Part I – Submitter of proposal (refer to section 3.2.1.1)

1	*Submitted by (Document Number and submitter)* **MSC 110/18/11 – Islamic Republic of Iran and IACS**
2	*Meeting session* **MSC 110**
3	*Date (date of submission)* **18 March 2025**

Part II – Details of proposed amendment(s) or new mandatory instrument (refer to sections 3.2.1.1 and 3.2.1.2)

1	*Strategic Direction* **7**
2	*Title of the output* **Revision of paragraph 2.1 of SOLAS regulation II-2/6**
3	*Recommended type of amendments* (MSC.1/Circ.1481) (delete as appropriate)
	• **Four-year cycle of entry into force**
4	*Instruments intended for amendment (SOLAS, LSA Code, etc.) or developed (new code, new version of a code, etc.)* **SOLAS**
5	*Intended application (scope, size, type, tonnage/length restriction, service (International/non-international), activity, etc.)* **All ships to which SOLAS chapter II-2 applies**
6	*Application to new/existing ships* **New ships**
7	*Proposed coordinating sub-committee* **SSE Sub-Committee**
8	*Anticipated supporting sub-committees* **None**
9	*Time scale for completion* **2028**
10	*Expected date(s) for entry into force and implementation/application* **1 January 2032**
11	*Any relevant decision taken or instruction given by the Committee* **None**

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ANNEX 4

CHECKLIST FOR CONSIDERING HUMAN ELEMENT ISSUES BY IMO BODIES
Draft revision of MSC-MEPC.1/Circ.5/Rev.5, annex 5

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
Workload			*Other relevant references may be added* *Strike out references that are not relevant*	*If answer to question is "yes" identify considerations. If answer is "no" make proper justification*	*Identify how human element considerations should be addressed in the output*
1	**Does the "output" affect workload?**				
1.1	**On board, especially in the already intensive phases of the voyage and port operations to:**		*Revised guidelines for the operational implementation of the International Safety Management (ISM) Code by Companies* (MSC-MEPC.7/Circ.8) *Guidelines on fatigue* (MSC.1/Circ.1598) *Principles of minimum safe manning* (Resolution A.1047(27)) *Guidelines for the investigation of accidents where fatigue may have been an issue* (MSC/Circ.621)		

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
1.1.1	Operations including navigation, cargo and engineering	No			
1.1.2	Maintenance of the ships structure and its equipment	No			
1.1.3	Onboard administration in support of the ships' management systems	No			
1.1.4	Onboard administration related to regulation involving flag States, classification societies, port State and other bodies such as charterers and port authorities	No			
1.1.5	Increased workload or time pressure on personnel if involved in implementation of changes prior to the implementation date	No			
1.2	**Ashore, in a manner that would affect the ships operation to:**				
1.2.1	Companies' administration	No			
1.2.2	Flag State, port State and classification societies administration such that certification and other processes are compromised or delayed	No			

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
Decision-making			*Other relevant references may be added* *Strike out references that are not relevant*	*If answer to question is "yes" identify considerations. If answer is "no" make proper justification*	*Identify how human element considerations should be addressed in the output*
2	**Does the "output" impact decision-making on board the ship?**				
2.1	By confusion with existing requirements and regulations	No			
2.2	By changing responsibilities as laid out in the ISM Code	No			
2.3	By creating complexity in its implementation and/or in the safety management systems	No			
2.4	By requiring increased mental effort, such as the need to find, transform and analyse data or result in the need to make judgements based on incomplete information	No			
2.5	By limiting the time available to establish situational awareness, decide, communicate (possibly across time zones) or check	No			
2.6	By increasing reliance on judgement and administrative controls to manage major risks such as oil spills and collisions	No			

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
Living and working environment			*Other relevant references may be added* *Strike out references that are not relevant*	*If answer to question is "yes" identify considerations. If answer is "no" make proper justification*	*Identify how human element considerations should be addressed in the output*
3	**Does the "output" affect the living and working environment?**		*Guidelines on the basic elements of a shipboard occupational health and safety programme* (MSC-MEPC.2/Circ.3) *Guidelines on fatigue* (MSC.1/Circ.1598)		
3.1	By interfering with existing arrangements for abandonment, fire-fighting and other emergency plans or procedures	No			
3.2	By introducing new materials that could create an explosion, fire, environmental or occupational health risk	No			
3.3	By introducing new high energy sources such as high-voltage, high pressure fluids	No			
3.4	By affecting access or egress and causing lack of ventilation in working spaces	No			
3.5	By affecting the habitability of accommodation spaces due to noise, vibration, temperatures, dust and other contaminants	No			

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
	Operation and maintenance		*Other relevant references may be added* *Strike out references that are not relevant*	*If answer to question is "yes" identify considerations. If answer is "no" make proper justification*	*Identify how human element considerations should be addressed in the output*
4.	**Does the "output" affect the operation and maintenance of the ship, its structure or systems and equipment?**		*Revised guidelines for the operational implementation of the International Safety Management (ISM) Code by Companies* (MSC-MEPC.7/Circ.8) *Guidelines for bridge equipment and systems, their arrangement and integration (BES)* (SN.1/Circ.288) *Principles of minimum safe manning* (Resolution A.1047(27)) *Issues to be considered when introducing new technology on board ships* (MSC/Circ.1091) *Guideline on software quality assurance and human-centred design for e-navigation* (MSC.1/Circ.1512)		

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
			Guidelines for the standardization of user interface design for navigation equipment (MSC.1/Circ.1609)		
4.1	By introducing equipment that the user may find difficult to operate or maintain or may be unreliable	No			
4.2	By introducing new and/or novel technology, or technology that changes the role of the person	No			
4.3	By introducing requirements for new competencies and roles	No			
4.4	By overloading existing infrastructure, such as power generation and ventilation systems	No			
4.5	By poor integration with existing systems and controls	No			
4.6	By introducing new and unfamiliar operations/procedures	No			
4.7	By introducing new and unfamiliar operating interfaces?	No			
4.8	By introducing risks to the ship during any modifications required prior to the implementation date of the output	No			

	1 Question	2 Yes/ No	3 IMO references	4 Considerations	5 Instructions
Measures to address the human element			*Other relevant references may be added* *Strike out references that are not relevant*	*If answer to question is "yes" identify considerations. If answer is "no" make proper justification*	*Identify how human element considerations should be addressed in the output*
5.	**Does the "output" require changes to:**		*Shipboard technical operating and maintenance manuals* (MSC.1/Circ.1253) *Revised guidelines for the operational implementation of the International Safety Management (ISM) Code by Companies* (MSC-MEPC.7/Circ.8)		
5.1	Training	No			
5.2	Practical skill development and competences	No			
5.3	Operating, management and/or maintenance procedures	No			
5.4	Information/manuals for operation and maintenance	No			
5.5	Spares outfit	No			
5.6	Occupational safety requirements including guarding and PPE	No			
5.7	Shore support	No			

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ANNEX 5

CHECKLIST FOR THE IDENTIFICATION OF CAPACITY-BUILDING IMPLICATIONS
(Appendix 1 of annex 2 of draft revision of MSC-MEPC.1/Circ.5/Rev.5)

1 For Administrations

- ☐ Is new legislation required? No, but it will require an amendment.
- ☐ Is there a requirement for new equipment and/or systems? No
  - o Does equipment manufacturing capacity exist internationally? NA
  - o Do equipment repair/servicing facilities exist internationally? NA
  - o Is there capacity to develop new systems? NA
- ☐ Will the implementation require additional financial resources? No
- ☐ Is there a need for additional human resources or new skills? No
- ☐ Will there be a need to upgrade current infrastructure? No
- ☐ Is there enough lead time towards implementation? Yes
- ☐ Will a rapid implementation procedure be adopted? No
- ☐ Is there a substantial modification of existing standards? No
- ☐ Will a guide to implementation be needed? No

2 For the industry

- ☐ Would the industry require new and/or enhancement of existing systems? No
  - o Does capacity exist internationally to develop new systems? NA
- ☐ Is there a need for additional training of seafarers? No
  - o Do related and validated training courses exist? NA
  - o Are sufficient simulation training courses available internationally? NA
- ☐ Will there be a requirement for new equipment? No
  - o Does manufacturing capacity exist internationally? NA
- ☐ Is there repair/servicing and/or retrofitting and does maintenance capacity exist internationally? NA