

SUB-COMMITTEE ON SHIP SYSTEMS AND  
EQUIPMENT  
6<sup>th</sup> session  
Agenda item 9

SSE 6/9/X  
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## REQUIREMENTS FOR ONBOARD LIFTING APPLIANCES AND ANCHOR HANDLING WINCHES

**Consideration of the placeholder for the draft new SOLAS regulations (Part 1)**

**Submitted by Japan and ICS**

### **SUMMARY**

*Executive summary:* This document provides analysis and proposals relevant to consideration of the placeholder for the draft new SOLAS regulations for onboard lifting appliances and anchor handling winches.

*Strategic Direction, if Other work applicable:*

*Output:* OW 34

*Action to be taken:* Paragraph 19

*Related documents:* SSE 4/19, SSE 5/17, SSE 6/9, MSC 98/23, MSC 100/9/1 and MSC 100/WP.10

### **Introduction**

1 This document is submitted in response to the outcome of SSE 5 and the Sub-Committee's decision that the matter of the placeholder for the draft new SOLAS regulations for onboard lifting appliances and anchor handling winches (OLAW) would be further considered at a future session (SSE 5/17, paragraph 10.34). Recalling the target completion year for this work item is 2020, this document is submitted in anticipation that such further consideration may take place at this session.

### **Background**

2 At SSE 4, the Sub-Committee agreed that the new provisions for OLAW should be included in SOLAS chapter II-1 (SSE 4/19, paragraph 8.9).

3 At MSC 98, the Committee expressed the view that the determination of which SOLAS chapter should include the new OLAW provisions needed further consideration (MSC 98/23, paragraph 12.28).

4 At SSE 5, the Sub-Committee noted the diverging views either supporting the development of a new SOLAS chapter or to amend SOLAS chapter II-1, as originally agreed to by SSE 4 (SSE 5/17, paragraph 10.33).

## **Discussion**

5 The co-sponsors consider that establishing necessary, proportionate and effective mandatory requirements for OLAW is more complex than a single regulation in part B of SOLAS chapter II-1 can provide for. This complexity arises because:

- .1 there is significant variation in size, construction, safe working load (SWL), purpose and location on board of lifting appliances, anchor handing winches and associated loose gear which is used on board ships, and which may fall within the scope of this regulation;
- .2 different OLAW pose different risks. Whilst all OLAW may be considered to pose a risk to the safety of personnel, large OLAW may also pose a risk to the structure, stability and mechanical and electrical installations of a ship; and
- .3 the aspiration that the provisions of any SOLAS regulation are harmonised with the provisions of ILO Convention 152 (ILO C152).

### ***Management systems for lifting appliances and loose gear***

6 In general, existing flag Administration requirements for the safe condition of lifting appliances and loose gear are based on the provisions of ILO C152, or conformance to ILO C152 is an accepted equivalent. Regardless, industry practice is to comply with the requirements of SOLAS chapter IX by incorporating procedures based on ILO C152 into approved safety management systems. ILO C152 provides a minimum standard for a management system for lifting appliances and loose gear which would be acceptable to all stakeholders involved in the operation of on board lifting appliances, including persons other than ship's personnel.

7 As a result, during the development of the draft new SOLAS regulations for OLAW, ILO C152 has been a base reference including requirements for which member States and international organizations consider as providing an appropriate level of safety. ILO C152 is independent of any statutory certification requirements; duly authenticated records provide *prima facie* evidence of the safe condition of the lifting appliances and items of loose gear (ILO C152, article 25.1). Equally, duly authenticated records are, *inter alia*, evidence of an effective management system for lifting appliances and loose gear.

8 Therefore, there is already in active use an appropriate and effective management systems based approach for the safety of lifting appliance and loose gear which is accepted by flag Administrations, Companies, classification societies and other stakeholders as providing an appropriate level of safety when implemented correctly. No evidence has been presented that this is not the case. Crucially this is also achieved independently of the statutory survey and certification requirements of SOLAS chapter I. This raises a question: is application of the statutory survey and certification requirements of SOLAS chapter I to all OLAW and associated loose gear necessary, and a proportionate means of enhancing the safety of lifting operations?

9 The co-sponsors are concerned that the application of the statutory survey and certification of SOLAS chapter I to all OLAW unnecessarily and disproportionately affects the

management of lifting appliances and loose gear already being done by responsible Companies as required by flag Administrations, their classification societies, their approved safety management systems, and other relevant stakeholders. For example, by forcing alignment of existing examination and testing regimes for all lifting appliances and loose gear with the periodicity of surveys required by SOLAS chapter I. The compelling need for doing this has not, in our view, been established.

10 The co-sponsors further consider that the management of the majority of OLAW and loose gear, the appropriate statutory verification and certification regime is SOLAS chapter IX and the ISM Code, rather than SOLAS chapter I. The application of the statutory regime of SOLAS chapter I should be limited to OLAW of a size that affects the design and construction of a ship, and poses a risk to the structure, stability, electrical and mechanical installations on board.

#### ***Approval of OLAW for installation on board ships***

11 In general, lifting appliances are not an essential feature of ships. As such, Companies may request classification of lifting appliances and loose gear in accordance with the relevant rules and codes of the classification society. However, even in this case, the classification of the lifting appliances is independent of the statutory survey and certification requirements of SOLAS chapter I.

12 The design and construction of lifting appliances, in particular, do not always reflect the challenges and effects on equipment of installation in exposed locations on board ships. This includes the use of components which are not designed for use in the marine environment, and inadequate recognition of the potential consequences of component failure on equipment where single point failures are a particular hazard.

13 Where a lifting appliances is of a size that affects the design and construction of a ship, and poses a risk to the structure, stability, electrical and mechanical installations on board, the manufacturer should be required to have its equipment type-approved against the design and construction standards of the Administration or the classification society. Those standards should adequately reflect the characteristics and challenges of the marine environment. This issue can and should be addressed through amendments to SOLAS chapter II-1, and OLAW which poses a risk to the structure, stability, electrical and mechanical installations should be covered by the statutory survey and certification requirements of SOLAS chapter I.

#### ***Impact of the Goal-Based Standards (GBS) approach***

14 The development of new requirements for OLAW has taken a significant period of time. Most recently, this has been unnecessarily complicated and the scope expanded because of the pursuit of GBS where straightforward prescriptive requirements to enhance OLAW and loose gear safety are more appropriate. In contrast to the SOLAS requirements, ILO C152 is prescriptive and is necessarily so given the variety of stakeholders that make use of its requirements. In this regard, and taking into account the analysis provided above, The co-sponsors consider that it is time to reconsider the approach. This is with a view to expediting, not delaying the conclusion of this work, and refining the extent to which OLAW is covered by the statutory survey and certification requirements of SOLAS chapter I.

#### ***Appropriate, proportionate and effective requirements***

15 Consequently, the co-sponsors accept that for now at least new requirements for OLAW may need to remain in SOLAS chapter II-1. However, if this is to be the case, then there is an urgent need to ensure that the new requirements are appropriate, proportionate and

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effective, particularly with regard to the application of the statutory survey and certification regime of SOLAS chapter I. Moreover, they should also address the concerns raised which led MSC 98 to express the view that the determination of which SOLAS chapter should include the new OLAW provisions needed further consideration (MSC 98/23, paragraph 12.28).

16 This means having requirements which:

- .1 mandate the approval of the design, construction and installation of new OLAW where such equipment poses a potential risk to the structure, stability, and electrical and mechanical installations of a ship; and
- .2 mandate the management of all OLAW and loose gear (selection, maintenance and inspection, operation, examination and testing), regardless of safe working load and in a manner which is consistent with the provisions and approach of ILO C152, based on Guidelines developed by the Organization.

### **Proposal**

17 Taking into account the discussion in paragraphs 5 to 16, it is proposed that the Sub-Committee:

- .1 re-considers the need for GBS for OLAW, with a view to focusing on prescriptive requirements better suited to the maturity of lifting on board ships, taking into account paragraphs 37 and 38.8.3 of MSC 100/WP.10, i.e. report of the GBS working group;
- .2 develops requirements based on the work already done (annex 1 to SSE 6/9), to include in SOLAS chapter II-1 a refined set of prescriptive requirements for the approval of the design, construction, installation and marking of new OLAW which presents a risk to the safety of the ship, as well as ship's personnel. Such equipment would include anchor handling winches and the lifting appliances listed in the annex to MSC 100/9/1 (New Zealand et al);
- .3 includes a requirement that all OLAW and associated loose gear, regardless of SWL and date of installation, shall be inspected and maintained, examined and tested, and operated in accordance with Guidelines developed by the Organization. These Guidelines would be based on the work already done (annex 2 to SSE 6/9) and would:
  - .1 address the concerns in paragraph 5 above that proportionate and effective requirements for OLAW are more complex than a single regulation in part B of SOLAS chapter II-1 can provide for;
  - .2 remove the need to apply a SWL threshold to equipment which poses a risk to personnel;
  - .3 make management of OLAW and loose gear mandatory but would make how it is done a matter for an approved safety management system subject to the statutory verification and certification of SOLAS chapter IX (ISM); and
  - .4 address the concerns expressed at previous sessions and at MSC 98 which resulted in the Committee expressing the view that

the determination of which SOLAS chapter should include the new OLAW provisions needed further consideration (MSC 98/23, paragraph 12.28);

- .4 further develop the current draft Guidelines to achieve the outcome in paragraph 17.3 of this document, and to establish equivalency between the IMO guidance on how to manage OLAW and the provisions of ILO C152; and
- .5 include the draft Guidelines in the GISIS module on “Non-Mandatory Instruments” so that they have to be taken into account by Companies when continuously improving safety management systems, and by Administrations approving and auditing safety management systems as required by SOLAS chapter IX and the ISM Code.

18 The proposed formulation of the draft new SOLAS regulation based on the analysis provided in paragraphs 5 to 16 and the proposals in paragraph 17 is provided in part 2.

**Action requested of the Sub-Committee**

19 The Sub-Committee is invited to consider the proposal in paragraph 17 in conjunction with specific amendments proposed in part 2 of the submission when further considering the placeholder for the draft new SOLAS regulations for OLAW, and take action as appropriate.

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