INTERNATIONAL MARITIME ORGANIZATION

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SUB-COMMITTEE ON SHIP SYSTEMS AND EQUIPMENT
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ANY OTHER BUSINESS

Replacement of non-corrosion resistant components fitted outside a lifeboat

Submitted by IACS

SUMMARY

Executive summary:	Following discussions at SSE 2 and SSE 3, this document proposes revised amendments to paragraph 21 of the annex to the *Guidelines for evaluation and replacement of lifeboat release and retrieval systems* (MSC.1/Circ.1392), with a view to including a method of assessment for backing plates and bolts to confirm that they are in "good condition"
Strategic direction:	1.1; 5.2
High-level action:	1.1.2; 5.2.1
Output:	1.1.2.3
Action to be taken:	Paragraph 8
Related documents:	SSE 2/11/5, SSE 2/20 (paragraphs 11.16 and 11.17); SSE 3/15/7 and SSE 3/16 (paragraphs 15.22 and 15.23)

Background

1 The Sub-Committee on Ship Systems and Equipment (SSE), at its second session, considered document SSE 2/11/5 (IACS) that sought clarification on the need to replace non-corrosion resistant components fitted outside a lifeboat, i.e. backing plates and bolts that are found to be in good condition.

2 In this regard, SSE 2 noted, inter alia, the following views (SSE 2/20, paragraphs 11.16.3 to 11.16.5):

> "…
>
> .3 Backing plates and bolts, being categorized as part of the hook fastening arrangement, were subject to an annual thorough examination as prescribed by paragraph 2.4.5 of the appendix to annex 1 to the *Measures to prevent*

accidents with lifeboats (MSC.1/Circ.1206/Rev.1); thereby ensuring that their condition was monitored at regular intervals. In addition, being located outside the lifeboat, these components were normally easily accessible for inspection.

.4 A decision on whether backing plates and bolts which were found to be in good condition should be taken by the Administration on a case-by-case basis.

.5 The method of assessment for backing plates and bolts to confirm that they were in "good condition" was needed."

3 SSE 2 subsequently invited IACS to note the views that had been expressed and to submit draft amendments to MSC.1/Circ.1392 for further consideration by SSE 3 under the agenda item on "Any other business" (SSE 2/20, paragraph 11.17).

4 SSE 3 considered document SSE 3/15/7 (IACS), which proposed amendments to paragraph 21 of the annex to the *Guidelines for evaluation and replacement of lifeboat release and retrieval systems* (MSC.1/Circ.1392), with a view to including a method of assessment for backing plates and bolts to confirm that they are in "good condition". However, a number of delegations expressed their concern regarding the clarity of the proposed method and IACS was invited to submit a revised proposal for consideration at SSE 4 (SSE 3/16, paragraphs 15.22 and 15.23).

Discussion

5 While the use of corrosion resistant material is an overarching requirement according to paragraph 4.4.7.6.9 of the LSA Code, paragraph 21 of the annex to MSC.1/Circ.1392 states:

"The Administration, or a recognized organization acting on its behalf, may allow that hook fixed structural connections of the release mechanism and supporting structure which are not made of material corrosion resistant in the marine environment, as required by paragraph 4.4.7.6.9 of the LSA Code, need not be replaced if they are in a good condition and installed in a sheltered position inside the lifeboat."

Proposal

6 Further to the discussion at SSE 2 and SSE 3, IACS proposes that paragraph 21 of the annex to MSC.1/Circ.1392 should be amended to read as follows (additions/~~deletions~~):

"21 The Administration, or a recognized organization acting on its behalf, may allow that hook fixed structural connections of the release mechanism and supporting structure which are not made of material corrosion resistant in the marine environment, as required by paragraph 4.4.7.6.9 of the LSA Code, need not be replaced if they are in a good condition and installed in a sheltered position inside the lifeboat. The assessment for verifying that fixed structural connections and supporting structures are in "good condition" should be carried out by the manufacturer or by one of its representatives in accordance with paragraph 23 below.

The assessment for verification is not required if the materials of the foundation, bolts and supporting structure, internally and externally, are made of materials resistant to corrosion in the marine environment.

.1 Method of assessment:

The assessment of fixed structural connections and supporting structures should be carried out according to the manual developed by the manufacturer. However, if such a manual does not exist, this assessment should be carried out according to the following method:

.1 100% visual examination of all components within clear sight in order to assess the general condition and look for signs of corrosion. No dismantling or removal of components is required at this stage.

.2 At least 25% of bolts for each hook fixation should be removed for visual examination[1]. Additionally, a non-destructive testing (NDT) technique, such as magnetic particle inspection (MPI), where suitable, may be applied. If any of the removed bolts of the hook fixation shows signs of corrosion or are deemed to be in "bad condition", then the rest of the bolts for the same hook fixation should be removed and examined. As a general rule, any bolt that has lost material to corrosion of 2% from the original dimensions should be deemed to be "in bad condition" and replaced. Replacement bolts are to be made of material corrosion resistant in the marine environment based on a like for like principle.

.3 If fixed structural connections or supporting structures show signs of corrosion, then ultrasonic thickness measurement and corrosion mapping should be performed. For this non-destructive examination (NDE) to be possible, the probes need to have adequate access and the surface needs to be smooth and appropriate for ultrasonic scanning. As a general rule, a backing plate that has suffered corrosion wastage of 10% or more from the original plate thickness should be deemed to be "in bad condition" and replaced. Replacement of structural connections, backing plates, etc. are to be made of materials resistant to corrosion in the marine environment and based on a like for like principle.

.4 If after the assessment, the bolts, backing plates, keel shoes, etc. are in good condition, then all parts are to be cleaned and recoated, if necessary.

.2 Backing plates and bolts installed outside the lifeboat and deemed to be in "good condition" after the assessment, need not be replaced even when not made of material resistant to corrosion in the marine environment.

[1] In most types of lifeboats, the arrangement of keel shoe fixation allows for access and removal of bolts for inspection. When this is not the case, e.g where bolts are solidly embedded or built in to the FRP structure, the Adminstration, or recognized organization acting on its behalf, should handle it on a case-by-case basis."

Note

7 IACS would like to take this opportunity to highlight that backing plates and bolts, being categorized as part of the hook fastening arrangement, are subject to annual thorough examination as prescribed by paragraph 2.4.5 of the appendix to annex 1 to the *Measures to prevent accidents with lifeboats* (MSC.1/Circ.1206/Rev.1), thus ensuring that their condition is monitored at regular intervals. In addition, being located outside the lifeboat, these components are normally easily accessible for inspection.

Action requested of the Sub-Committee

8 The Sub-Committee is invited to consider the foregoing, in particular the proposal in paragraph 6 above, and take action as appropriate.