CONSIDERATION AND ADOPTION OF AMENDMENTS TO MANDATORY INSTRUMENTS

Outcome of the Ad Hoc Intersessional Working Group on Lifeboat Release Hooks and DE 55 on the evaluation and replacement of lifeboat release and retrieval systems

Note by the Secretariat

SUMMARY

Executive summary: The document presents the outcome of the Ad Hoc Intersessional Working Group on Lifeboat Release Hooks, established by MSC 88, and DE 55 on matters related to the evaluation and replacement of lifeboat release and retrieval systems

Strategic direction: 5.1

High-level action: 5.1.2

Planned output: 5.1.2.1

Action to be taken: Paragraph 12

Related documents: MSC 88/3, annexes 1 and 3, MSC 88/3/4, MSC 88/26, paragraphs 3.34 to 3.43 and DE 55/22 (section 7 and annexes 5 to 9)

GENERAL

1 The Committee, at its eighty-eighth session, considered the report of the first intersessional meeting of the Ad Hoc Working Group on Lifeboat Release Hooks (MSC 88/3/4) and noted that there were divergent views on whether the Guidelines for evaluation and replacement of lifeboat release and retrieval systems (hereinafter the Guidelines), together with the associated draft amendments to SOLAS chapter III (MSC 88/3, annex 1) and the LSA Code (MSC 88/3, annex 3) should be approved and/or adopted, as appropriate, at that session.

2 Following the discussion, MSC 88, acknowledging the general concern with regard to the evaluation of lifeboat release and retrieval systems and the need to proceed with the matter as a whole package (i.e. new SOLAS regulation III/1.5, amendments to the LSA Code, draft Guidelines and amendments to the Revised recommendation on testing of life-saving appliances), decided to defer the adoption of the proposed new SOLAS regulation III/1.5 and the amendments to the LSA Code as well as the approval of the draft Guidelines to this session. Notwithstanding the above decision, the Committee agreed that the implementation date of the new SOLAS requirements should be 1 July 2014, and, subsequently, instructed DE 55 to urgently resolve the following matters with the highest priority:
.1 finalization of the draft Guidelines for evaluation and replacement of lifeboat release and retrieval systems;

.2 finalization of the associated draft amendments to SOLAS regulation III/1;

.3 finalization of the associated draft amendments to chapter IV of the LSA Code;

.4 preparation of associated draft amendments to the Revised recommendation on testing of life-saving appliances with a view towards finalization;

.5 preparation of a procedure for reporting the results of each type of existing lifeboat release and retrieval system evaluation to the Organization; and

.6 further consideration of matters related to the use of FPDs,

and report to MSC 89.

3 To facilitate the above tasks, MSC 88 also agreed to convene the second intersessional meeting of the Ad Hoc Working Group on Lifeboat Release Hooks (ISWG 2), to take place prior to DE 55, from 16 to 18 March 2011, whereby the group should continue its work through DE 55 as a DE Sub-Committee working group.

OUTCOME OF ISWG 2 AND DE 55

4 As instructed by MSC 88, the ISWG 2, under the Chairmanship of Mr. S. Ota (Japan), and DE 55, through its relevant working group, considered the matters set out in paragraph 2 and took action as summarized in the following paragraphs (see also section 7 of the report of DE 55 (document DE 55/22)).

Guidelines for evaluation and replacement of lifeboat release and retrieval system

5 Following extensive discussion, the Sub-Committee agreed to the draft MSC circular on Guidelines for evaluation and replacement of lifeboat release and retrieval systems, as set out in annex 1, for approval by the Committee. The Guidelines also include matters related to the use of FPDs and the procedure for reporting the results of each type of existing lifeboat release and retrieval system evaluation.

Draft amendments to SOLAS regulation III/1

6 In considering the draft amendments to SOLAS regulation III/1, on the basis of document MSC 88/3/4 (annex 2), the Sub-Committee, having considered the need for a time limit for the replacement of lifeboat on-load release mechanisms not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, agreed to a date of 1 July 2019, by which all non-compliant lifeboat on-load release mechanisms should be replaced, based on a five-year inspection period after 1 July 2014. Referring to the five-year inspection period, the Sub-Committee noted that the first scheduled dry-docking is the first scheduled out of water survey of the ship’s outer bottom.

7 Subsequently, the Sub-Committee agreed to the draft amendments to SOLAS regulation III/1, as set out in annex 2, for adoption by the Committee.
In considering the urgency of evaluating and replacing lifeboat release and retrieval systems, and in order to encourage the early implementation of the new SOLAS regulation III/1.5, pending its entry into force, the Sub-Committee agreed to a draft MSC circular on Early application of new SOLAS regulation III/1.5, as set out in annex 3, for approval by the Committee in conjunction with the adoption of the draft amendments to SOLAS chapter III.

**Draft amendments to chapter IV of the LSA Code**

In considering the draft amendments to chapter IV of the LSA Code, on the basis of document MSC 88/3 (annex 3), the Sub-Committee invited the Committee to consider the application date of the draft amendments to the LSA Code, taking into account the time necessary for the development and approval of new lifeboat release and retrieval systems.

Subsequently, the Sub-Committee agreed to the draft amendments to chapter IV of the International Life-Saving Appliance (LSA) Code, as set out in annex 4, for adoption by the Committee.

**Draft amendments to the Revised recommendation on testing of life-saving appliances**

The Sub-Committee, having prepared associated provisions for the testing of life-saving appliances and draft amendments to the Revised recommendation, agreed to the draft MSC resolution on Amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70), as amended), as set out in annex 5, for adoption by the Committee.

**Action requested of the Committee**

The Committee is invited to approve the outcome of DE 55 regarding the evaluation and replacement of lifeboat release and retrieval systems in general and, in particular, to:

1. approve the draft MSC circular on Guidelines for evaluation and replacement of lifeboat release and retrieval systems (paragraph 5 and annex 1);
2. adopt the proposed amendments to SOLAS regulation III/1 and the associated draft MSC resolution (paragraphs 6 and 7 and annex 2);
3. approve the draft MSC circular on Early application of new SOLAS regulation III/1.5, in conjunction with the adoption of the draft amendments to SOLAS regulation III/1 (paragraph 8 and annex 3);
4. agree on an application date for the amendments to the LSA Code, taking into account the time necessary for the development and approval of a new lifeboat release and retrieval systems, and adopt the proposed amendments to the LSA Code, together with the associated draft MSC resolution (paragraphs 9 and 10 and annex 4); and
5. adopt the draft MSC resolution on Amendments to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), as amended (paragraph 11 and annex 5).
The Maritime Safety Committee, at its [eighty-ninth session (11 to 20 May 2011)], approved the Guidelines for evaluation and replacement of lifeboat release and retrieval systems, set out in the annex, as per SOLAS regulation III/1.5, following the recommendations made by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session, and the Ad Hoc Working Group on Lifeboat Release Hooks (16 to 18 March 2011).

Member Governments are invited to use the annexed Guidelines when applying SOLAS regulation III/1.5, as adopted by resolution MSC...(89), and to bring them to the attention of all parties concerned.

Member Governments, shipowners and manufacturers of lifeboat release and retrieval systems are also strongly urged, pending the entry into force of SOLAS regulation III/1.5, to use the annexed Guidelines to evaluate existing lifeboat release and retrieval systems at the earliest available opportunity.

Member Governments are strongly urged to ensure that all ships fitted with on-load release systems for lifeboats, are equipped with fall preventer devices as per paragraph 6 of these Guidelines from the earliest available opportunity.

Member Governments are encouraged to consider the results of evaluation reported to the Organization by other Member Governments on types of existing lifeboat release and retrieval systems.
ANNEX

GUIDELINES FOR EVALUATION AND REPLACEMENT OF LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS

General

1. New SOLAS regulation III/1.5, which is expected to enter into force on [date], requires that for all ships, on-load release mechanisms not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, as amended by resolution MSC...(89) (hereinafter called the "LSA Code"), be replaced or modified not later than the next scheduled dry-docking after [1 July 2014], but not later than [1 July 2019].

2. Considering that paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code represent important safety improvements, manufacturers should carry out a self assessment of their types of existing lifeboat release and retrieval systems in accordance with these Guidelines at the earliest available opportunity.

3. An Administration, or a recognized organization acting on its behalf, should carry out a Design Review to check that the type of existing lifeboat release and retrieval systems comply with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and should witness the Performance Test to check that it is performed in accordance with appendix 1 of these Guidelines. This evaluation should be completed and report submitted in accordance with paragraph 14 below, no later than 1 July 2013.

4. Administrations, or recognized organizations acting on their behalf, should, when applying SOLAS regulation III/1.5, ensure that an evaluation is undertaken of the type of existing lifeboat release and retrieval systems for compliance with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, in accordance with these Guidelines.

5. For a flowchart of the lifeboat release and retrieval system evaluation process, refer to appendix 2.

6. In each ship, fall preventer devices in accordance with the Guidelines for the fitting and use of fall preventer devices (FPDs) (MSC.1/Circ.1327) should be employed for each existing lifeboat release and retrieval system until the system is:

   .1 found compliant to the LSA Code; or
   .2 modified and found compliant to the LSA Code; or
   .3 found compliant to paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and paragraphs 16 and 17 (overhaul examination) of the Guidelines; or
   .4 modified and found compliant to paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and paragraphs 16 and 17 (overhaul examination) of the Guidelines; or
   .5 replaced by new lifeboat release and retrieval system.

* For the purpose of these Guidelines, the expression "on-load release mechanism" has been replaced by "lifeboat release and retrieval system" (see paragraph 9.1).
Modifications

7 A lifeboat release and retrieval system that is determined non-compliant in accordance with these Guidelines may be modified to comply with the requirements of paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and the existing applicable Code, provided that the modified release and retrieval system is evaluated in accordance with these Guidelines.

8 A type of lifeboat release and retrieval system that after modification complies with the requirements of paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and the existing applicable Code should be identified as a system compliant after modification and reported as such. The report should include both the identification of the original type and the modified type.

Definitions

9 For the purpose of these Guidelines, the definitions given hereunder should apply, in conjunction with the following figure.
9.1 **Lifeboat release and retrieval system** is the means by which the lifeboat is connected to, and released from, the lifeboat falls for lowering, launch and retrieval. It comprises the hook assembly and operating mechanism.

9.2 **Hook assembly** is the mechanism, attached to the lifeboat, which connects the lifeboat to the lifeboat falls.

9.3 **Movable hook component** is that part of the hook assembly in direct contact with the connection with the lifeboat falls which moves to enable release from the falls.

9.4 **Hook locking part** is the component(s) within a hook assembly which holds the movable hook component in the closed position until activated by the operating mechanism to release the hook. This activation may be performed through other components within the hook assembly.

9.5 **Operating mechanism** is the means by which the operator activates the opening, or release, of the movable hook component. It includes the operating handle, linkages/cables and hydrostatic interlock, if fitted.

9.6 **Type**, in relation to the design of a lifeboat release and retrieval system, means an identical lifeboat release and retrieval system of given safe working load, make and model (thus any change to the materials of construction, design arrangement or dimensions constitutes a change of type).

9.7 **On-load release** is the action of opening the lifeboat release and retrieval system whilst there is load on the hook assemblies.

9.8 **Evaluation** is a design review and a performance test of a type of lifeboat release and retrieval system.

9.9 **Manufacturer**, with respect to existing lifeboat release and retrieval systems, is:

   .1 the original equipment manufacturer; or

   .2 a manufacturer of lifeboat release and retrieval systems who has taken on the responsibility for a range or type of lifeboat release and retrieval system; or

   .3 any other person or entity which has taken responsibility for a range or type of lifeboat release and retrieval system when the original manufacturer no longer exists or supports the equipment.

9.10 **Modifications** are changes to the design of an approved lifeboat release and retrieval system which may affect compliance with the original approval requirements or the prescribed conditions for the use of the product.

9.11 **New lifeboat release and retrieval system** is a lifeboat release and retrieval system that has been approved in accordance with paragraph 4.4.7.6 of chapter IV of the LSA Code, as amended by resolution MSC...(89).

9.12 **Existing lifeboat release and retrieval system** is a lifeboat release and retrieval system that has not been approved in accordance with paragraph 4.4.7.6 of chapter IV of the LSA Code, as amended by resolution MSC...(89).

9.13 **Company** means company as defined in SOLAS regulation IX/1.2.
Design review

10 Documentation and information for each type of lifeboat release and retrieval system should be submitted to the Administration, or recognized organization acting on its behalf, in order that an assessment can be carried out to determine compliance with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code. The manufacturer should submit the approval certificate, along with all associated supporting design calculations, plans and testing documentation to the Administration or recognized organization acting on its behalf. The design information should include the specification and the installation instructions for the complete operating system as well as all safety instructions regarding the operating system and any interlocks provided. Any submission for testing of a lifeboat release and retrieval system that cannot be supported with the above-mentioned information should not be eligible for testing against the requirements of the LSA Code.

11 If the outcome of the design review is non-compliance with the applicable paragraphs of the LSA Code, the lifeboat release and retrieval system should be replaced or modified to be made compliant.

Performance test

12 After a successful completion of the design review, a Performance Test should be conducted by the manufacturer for each type of lifeboat release and retrieval systems for compliance with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code, using the test specified in appendix 1 to these Guidelines. The Performance Test should be witnessed by the Administration or a recognized organization acting on its behalf.

13 Should any part of the lifeboat release and retrieval system fail at any stage during the test specified in paragraphs 1 to 4 of appendix 1, this type of lifeboat release and retrieval system should be deemed to be non-compliant and reported as such.

Reporting of the results of evaluation of existing lifeboat release and retrieval system

14 The Administration should report the results of each type of existing lifeboat release and retrieval system evaluation carried out in accordance with these Guidelines to the Organization, based on the reporting procedure, as set out in appendix 3.

15 Depending on the outcome of the evaluation, every lifeboat release and retrieval system should be categorized as being either compliant, compliant after modification or non-compliant. Thereafter:

.1 systems categorized as being compliant, or compliant after modification, may remain in service; and

.2 every system categorized as being non-compliant should be replaced with a new system or modified to be made compliant.

One-time follow-up overhaul examination

16 Not later than the first scheduled dry-docking after [1 July 2014], every lifeboat release and retrieval system of a type found to be compliant in respect of the existing lifeboat release and retrieval system evaluation should be subject to an overhaul examination according to annex 1 to the Measures to prevent accidents with lifeboats (MSC.1/Circ.1206/Rev.1), by the manufacturer or by one of their representatives. The examination also includes verification that the system examined is of the same type as the system that passed the evaluation and is suitable for the ship.
17 The scope of the overhaul examination should also include a detailed assessment of the condition of the components of the lifeboat release and retrieval system to observe the extent of wear, corrosion, erosion and other types of material degradation that may have occurred. Upon satisfactory completion of the overhaul examination, the manufacturer or one of their representatives should issue a factual statement to confirm this, for retention on board.

Procedure for replacement of non-compliant lifeboat release and retrieval systems

18 The procedure outlined below should be followed in all cases where a lifeboat is to be fitted with replacement lifeboat release and retrieval systems with on-load release capability. It is noted that every lifeboat, complete with lifeboat release and retrieval system, is type-approved at manufacture and it is important to recognize that a lifeboat which is retro-fitted with a replacement lifeboat release and retrieval system to the satisfaction of the Administration should be regarded as offering a level of safety which is higher than that of the original installation.

19 Companies should, where possible, select replacement equipment acceptable to the lifeboat manufacturer. However, in cases where the lifeboat manufacturer is unable to offer a suitable replacement lifeboat release and retrieval system, the Company may select an alternative lifeboat release and retrieval system, with the agreement, if possible, of the lifeboat manufacturer.

20 The replacement equipment should be approved by the Administration or a recognized organization acting on its behalf, under the provisions of the LSA Code. Prior to the installation commencing, the Company should submit to the Administration, or a recognized organization acting on its behalf, for review and approval, as a minimum the following information:

1. the proposed replacement equipment including approval certification;

2. the engineering analysis of the replacement installation including:
   1. drawings of the original lifeboat release and retrieval system arrangement;
   2. detailed drawings showing clearly the proposed changes (e.g., position of suspension, lifeboat release and retrieval system, fixed structural connections of the release mechanism, link plates, including materials used for nuts and bolts with regard to strength and corrosion resistance); and
   3. if the drawings show that forces and/or force couples will change and/or the lifeboat release and retrieval system fixed structural connections of the release mechanism will change, calculation of static forces including a safety factor of 6, according to the LSA Code, from lifeboat release and retrieval system into lifeboat structure, including tension and shear forces in bolts, link plates, welds and keel shoe(s);

3. considering that a lifeboat release and retrieval system does not consist just of the hook assemblies themselves, but also of release handles, cabling, etc., in the lifeboat, the evaluation of a replacement hook assembly other than that originally provided in the lifeboat should include such factors as loadings of the release handle on the console, efficiency of any hydrostatic
interlock in light and loaded conditions, whether the size/configuration of the replacement equipment would affect the stability or seating space of the lifeboat, and its compatibility with its launching appliance;

.4 amended operating and training manuals; and

.5 identification of the person(s) responsible for design appraisal, installation work and post-installation testing and evidence of their competence.

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.

22 A copy of the engineering drawing(s) approved by the Administration, or by the recognized organization acting on its behalf, should be used during installation and testing and retained on board.

23 The installation should be carried out by the manufacturer or by one of their representatives. All work carried out should be witnessed by the Administration, or by a recognized organization acting on its behalf. Valid operating and safety instructions should be posted at the operating position and adjacent to the lifeboat release and retrieval system(s).

24 Post-installation testing should be carried out by the manufacturer or by one of their representatives and comprise the following:

.1 1.1 x load and simultaneous release test according to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, paragraph 5.3.1, or an equivalent method acceptable to the Administration;

.2 load test according to the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, paragraph 5.3.4, as amended by resolution MSC.226(82), if the fixed structural connections of the release mechanism of the lifeboat is modified; and

.3 if the lifeboat is also a rescue boat and/or is installed on a cargo ship of 20,000 gross tonnage or above, the 5 knots installation test should be carried out, in accordance with the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, paragraph 5.4.

25 All tests should be witnessed by the Administration, or by a recognized organization acting on its behalf, which should also verify that the installation complies in all respects with the documentation submitted by the Company and approved by the Administration, or a recognized organization acting on its behalf.

26 Following completion of installation testing, the Administration, or a recognized organization acting on its behalf, should issue a Statement of Acceptance, using the template set out in appendix 4, to the Company, for retention on board.
APPENDIX 1

TEST REQUIREMENTS FOR THE EVALUATION OF LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS

A release and retrieval system should be conditioned and tested as follows:

.1 the lifeboat release and retrieval system and the longest used connection cable/linkage associated with the system should be mounted and adjusted according to instructions from the original equipment manufacturer and then loaded to 100% of its safe working load and released. Load and release should be repeated 50 times. During the 50 releases, the lifeboat release and retrieval system should be released simultaneously from each fall to which it is connected without any binding or damage to any part of the lifeboat release and retrieval system. The system should be considered as "failed" if any failure during the conditioning or unintended release occurs when load is applied but the system has not yet been operated;

.2 the lifeboat release and retrieval system should then be disassembled, the parts examined and wear recorded. The release and retrieval system should then be reassembled;

.3 the hook assembly, whilst disconnected from the operating mechanism, should then be tested 10 times with cyclic loading from zero load to 1.1 times the safe working load, at a nominal 10 seconds per cycle; unless the release and retrieval system has been specifically designed to operate as an off-load hook with on-load capability using the weight of the boat to close the hook, in this case the cyclic load should be from no more than 1% to 1.1 times the SWL; and

.4 the cable and operating mechanism should then be reconnected to the hook assembly; and the lifeboat release and retrieval system should then be demonstrated to operate satisfactorily under its safe working load. The actuation force should be no less than 100 N and no more than 300 N, if a cable is used it should be the maximum length specified by the manufacturer, and secures in the same manner it would be secured in the lifeboat. The demonstration should verify that any interlocks, including hydrostatic interlocks, where fitted, indicators and handles are still functioning and are correctly positioned in accordance with the operation and safety instruction from the original equipment manufacturer. The release and retrieval system is deemed to have passed the testing under this appendix when the tests have been conducted successfully. The system should be considered as "failed" if any failure during this test or any unintended release or opening occurs.
APPENDIX 2
EXISTING LIFEBOAT RELEASE AND RETRIEVAL SYSTEM EVALUATION PROCESS FLOW CHART

Manufacturer to conduct self-assessment on a type of release and retrieval system → Modify design

Comply with the part of revised LSA Code?*

Yes → Manufacturer to conduct self-assessment together with the necessary documentation as specified in paragraph 10 to Administration(s) and/or RO(s)

No → Comply with the part of revised LSA Code?

Yes → Manufacturer to redesign?

No → Manufacturer to submit the self-assessment together with the necessary documentation as specified in paragraph 10 to Administration(s) and/or RO(s)

Manufacturer to redesign?

Yes → Comply with the part of revised LSA Code?

Yes → Manufacturer to notify the Administrations and/or ROs of its decision not to redesign of the type concerned

No → Decision by the manufacturer

No → Administration and/or RO to conduct design review

Comply with the part of revised LSA Code?

Yes → Decision by the manufacturer

No → Administration and/or RO to notify the manufacturer of non-compliance and Administrations to report to IMO of the non-compliance

Manufacturer to conduct performance test witnessed by Administration(s) and/or RO(s)

Comply with the part of revised LSA Code?

Yes → Comply with the part of revised LSA Code?

Yes → Administrations, ROs to notify manufacturer of compliance of the type and Administrations to report to IMO

No → Administrations, ROs to determine the non-compliance of type system concerned and Administrations to report to IMO of the non-compliance

The type of release and retrieval system can be used onboard, if necessary with approved modification.

On-board verification (each system, see paragraphs 16 & 17)

Comply with MSC.1/Circ.1206/Rev.1 Annex 1?

Yes → The release and retrieval system on-board shall be replaced with another one which comply with the revised LSA Code

No → Factual statement to conform compliance, by manufacturer

All release and retrieval systems of the type shall be replaced with another one which comply with the revised LSA Code

Administrations, ROs to notify the manufacturer of compliance of the type and Administrations to report to IMO

Decision by the Administration or RO

Decision by the manufacturer

* For modified system check also compliance to existing LSA Code

Comply with MSC.1/Circ.1206/Rev.1 Annex 1?
APPENDIX 3

INFORMATION TO BE REPORTED ON THE EVALUATION OF EXISTING LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS

The following information should be provided in the database for each lifeboat release and retrieval system:

<table>
<thead>
<tr>
<th>Manufacturer's Details</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifeboat Release and Retrieval System</td>
<td>Type (see paragraph 9.6) and identification</td>
</tr>
<tr>
<td>In case of modification</td>
<td>Original type and identification</td>
</tr>
<tr>
<td></td>
<td>Details of modification</td>
</tr>
<tr>
<td>Specification of type (e.g., Maximum Safe Working Load (SWL))</td>
<td></td>
</tr>
<tr>
<td>Details of the Administration, or recognized organization acting on its behalf, undertaking the evaluation of Lifeboat Release and Retrieval System</td>
<td>Name</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation Report's Details</td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td>Date</td>
</tr>
<tr>
<td>Evaluation result</td>
<td>Compliant / Non-compliant / Compliant after modification</td>
</tr>
<tr>
<td>Report information</td>
<td>Link to the relevant report (url)</td>
</tr>
<tr>
<td>Reported by</td>
<td>Name of the Administration</td>
</tr>
</tbody>
</table>
APPENDIX 4

STATEMENT OF ACCEPTANCE OF THE INSTALLATION OF REPLACEMENT RELEASE AND RETRIEVAL SYSTEM TO AN EXISTING LIFEBOAT

Issued in accordance with the provisions of regulation I/5 of the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, under the authority of [Administration]*

Name of ship: 
Port of registry: 
IMO Number: 

Lifeboat details:
Replacement release and retrieval system details:

<table>
<thead>
<tr>
<th>Lifeboat identity</th>
<th>Lifeboat serial number</th>
<th>Release and retrieval system serial number (fwd)</th>
<th>Release and retrieval system serial number (aft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.1 (Stbd)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No.2 (Port)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above release and retrieval system has been installed and tested under the supervision of the [Administration, or a recognized organization authorized to act on its behalf]*, as documented in Survey report no...; certificate no.... dated ... and [installation] drawing(s) no(s) ... dated ... .

This statement is to confirm that:

.1 The replacement release and retrieval system meets the relevant requirements of the LSA Code, chapter IV, section 4.4.7.6.

.2 The replacement release and retrieval system construction and the equipment of the above-mentioned ship was found to comply with the provisions of SOLAS regulation III/4 when tested in accordance with the Revised recommendation on testing of life-saving appliances (resolution MSC.81(70)), part 2, section 5.3.1. [The test required by paragraph 5.3.4 is waived as impracticable for this replacement procedure.]*

.3 The validity of the relevant Safety Certificate is not affected by the installation of the replacement release and retrieval system.

.4 The installation of the replacement release and retrieval system offers a level of safety which is at least as effective as the original manufacturer's equipment.

The [Administration, or a recognized organization authorized to act on its behalf]* certifies that this Statement of Acceptance augments and supersedes the affected sections of the original lifeboat approval certification. The statement must be kept on board the ship with all other relevant documentation at all times.

.........................................  ...............  (Stamp)
(Date)  ***

* Insert as appropriate.
ANNEX 2

DRAFT RESOLUTION MSC.[…(89)]
(adopted on […] May 2011)]

ADOPTION OF AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR
THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization
concerning the functions of the Committee,

RECALLING FURTHER article VIII(b) of the International Convention for the Safety of Life at
Sea (SOLAS), 1974 (hereinafter referred to as “the Convention”), concerning the amendment
procedure applicable to the Annex to the Convention, other than to the provisions of chapter I
thereof,

HAVING CONSIDERED, at its [eighty-ninth] session, amendments to the Convention,
proposed and circulated in accordance with article VIII(b)(i) thereof,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to
the Convention, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that
the said amendments shall be deemed to have been accepted on […] unless, prior to that
date, more than one third of the Contracting Governments to the Convention or Contracting
Governments the combined merchant fleets of which constitute not less than 50% of the
gross tonnage of the world's merchant fleet, have notified their objections to the
amendments;

3. INVITES SOLAS Contracting Governments to note that, in accordance with
article VIII(b)(vii)(2) of the Convention the amendments shall enter into force on […] upon
their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the
Convention, to transmit certified copies of the present resolution and the text of the
amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution
and its Annex to Members of the Organization which are not Contracting Governments to the
Convention.
ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AS AMENDED

CHAPTER III
LIFE-SAVING APPLIANCES AND ARRANGEMENTS

Regulation 1 – Application

The following new paragraph 5 is added after the existing paragraph 4:

"5 Notwithstanding paragraph 4.2, for all ships, not later than the first scheduled dry-docking after [1 July 2014], but not later than [1 July 2019], lifeboat on-load release mechanisms not complying with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the Code shall be replaced with equipment that complies with the Code.*

* Refer to the Guidelines for evaluation and replacement of lifeboat release and retrieval systems (MSC.1/Circ...)."

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ANNEX 3

DRAFT MSC CIRCULAR

EARLY APPLICATION OF NEW SOLAS REGULATION III/1.5

1 The Maritime Safety Committee, at its [eighty-ninth session (11 to 20 May 2011)], adopted, by resolution MSC…(89), new SOLAS regulation III/1.5 and, by resolution MSC…(89), amendments to chapter IV of the LSA Code, which are expected to enter into force on […]. The Committee also approved the associated Guidelines for evaluation and replacement of lifeboat release and retrieval systems (MSC.1/Circ…).

2 In adopting the aforementioned amendments, the Committee agreed to the recommendation by the Sub-Committee on Ship Design and Equipment, at its fifty-fifth session (21 to 25 March 2011), that parties concerned should be encouraged to take necessary action to evaluate existing lifeboat release and retrieval systems, based on the aforementioned Guidelines, at the earliest available opportunity, pending the entry into force of new SOLAS regulation III/1.5.

3 Member Governments and shipowners are invited to take account of this circular and bring it to the attention of all parties concerned. In particular, manufacturers are urged to evaluate existing lifeboat release and retrieval systems at the earliest available opportunity, in accordance with the aforementioned Guidelines.

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ANNEX 4

DRAFT RESOLUTION MSC.[…(89)]
(adopted on […] May 2011)

ADOPTION OF AMENDMENTS TO THE
INTERNATIONAL LIFE-SAVING APPLIANCE (LSA) CODE

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization
concerning the functions of the Committee,

NOTING resolution MSC.48(66), by which it adopted the International Life-Saving Appliance
Code (hereinafter referred to as "the LSA Code"), which has become mandatory under
chapter III of the International Convention for the Safety of Life at Sea, 1974 (hereinafter
referred to as "the Convention"),

NOTING ALSO article VIII(b) and regulation III/3.10 of the Convention concerning the
procedure for amending the LSA Code,

HAVING CONSIDERED, at its [eighty-ninth] session, amendments to the LSA Code,
proposed and circulated in accordance with article VIII(b)(i) of the Convention,

1. ADOPTS, in accordance with article VIII(b)(iv) of the Convention, amendments to
the LSA Code, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article VIII(b)(vi)(2)(bb) of the Convention, that
the amendments shall be deemed to have been accepted on […], unless prior to that date,
more than one third of the Contracting Governments to the Convention or Contracting
Governments the combined merchant fleets of which constitute not less than 50% of the
gross tonnage of the world's merchant fleet, have notified their objections to the
amendments;

3. INVITES Contracting Governments to note that, in accordance with
article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on […] upon
their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article VIII(b)(v) of the
Convention, to transmit certified copies of the present resolution and the text of the
amendments contained in the Annex to all Contracting Governments to the Convention;

5. FURTHER REQUESTS the Secretary-General to transmit copies of this resolution
and its Annex to Members of the Organization, which are not Contracting Governments to
the Convention.
ANNEX

AMENDMENTS TO THE INTERNATIONAL LIFE-SAVING APPLIANCES (LSA) CODE

CHAPTER IV
SURVIVAL CRAFT

1. In paragraph 4.4.7.6, the following new subparagraphs .2 to .6 are inserted after the existing subparagraph .1:

".2 notwithstanding paragraph 7.2 the mechanism shall only open when the release mechanism is operated with the boat fully waterborne or, if the boat is not waterborne, by multiple, deliberate and sustained action which shall include the removal or bypassing of safety interlocks designed to prevent premature or inadvertent release;

.2.1 the mechanism shall not be able to open due to wear, misalignment and unintended force within the hook assembly or operating mechanism, control rods or cables as may be connected to, or form part of the hook assembly and with trim of up to 10° and a list of up to 20° either way; and

.2.2 the functional criteria of 4.4.7.6.2 and 4.4.7.6.2.1 apply for the range of loads, representing 0% to 100% of the safe working load of the lifeboat release and retrieval system for which it may be approved;

.3 unless a release mechanism is of the load over centre type, which is held fully closed by the weight of the lifeboat, the hook assembly shall be designed so that the moveable hook component is kept fully closed by the hook locking parts capable of holding its safe working load under any operational conditions until the hook locking part is deliberately caused to open by means of the operating mechanism. For designs utilizing the tail of the moveable hook component and cam either directly or indirectly securing the tail of the movable hook component, the hook assembly shall continue to be closed and hold its safe working load through rotation of the cam of up to 45 degrees in either direction, or 45 degrees in one direction if restricted by design, from its locked position;

.4 to provide hook stability, the release mechanism shall be designed so that, when it is fully reset in the closed position, the weight of the lifeboat does not cause any force to be transmitted to the operating mechanism;

.5 locking devices shall be designed so that they can not turn to open due to forces from the hook load;

.6 if a hydrostatic interlock is provided, it shall automatically reset upon lifting the boat from the water;"."
2 In paragraph 4.4.7.6, the existing subparagraph .2 is replaced by the following:

".7 the mechanism shall have two release capabilities: normal (off-load) release capability and on-load release capability:

.7.1 normal (off-load) release capability shall release the lifeboat when it is waterborne or when there is no load on the hooks, and not require manual separation of the lifting ring or shackle from the jaw of the hook; and

.7.2 on-load release capability shall release the lifeboat with a load on the hooks. This release mechanism shall be provided with a hydrostatic interlock unless other means are provided to ensure that the boat is waterborne before the release mechanism can be activated. In case of failure or when the boat is not waterborne, there shall be a means to override the hydrostatic interlock or similar device to allow emergency release. This interlock override capability shall be adequately protected against accidental or premature use. Adequate protection shall include special mechanical protection not normally required for off-load release, in addition to a danger sign. The protection shall be deliberately destroyed by applying a suitable minimum force, for instance by breaking a protection glass or translucent cover. A label or thin wire seal is not considered sufficiently robust. To prevent a premature on-load release, on-load operation of the release mechanism shall require multiple, deliberate and sustained action or actions by the operator;".

3 In paragraph 4.4.7.6, the existing subparagraph .3 is renumbered as subparagraph .8 and the words "without excessive force" are replaced by the words ", and any indicators shall not indicate the release mechanism is reset".

4 In paragraph 4.4.7.6, the following new subparagraph .9 is inserted after the renumbered subparagraph 8:

".9 all components of the hook unit, release handle unit, control cables or mechanical operating links and the fixed structural connections in a lifeboat shall be of material corrosion resistant in the marine environment without the need for coatings or galvanizing. Design and manufacturing tolerances shall be such that anticipated wear throughout the service life of the mechanism shall not adversely affect its proper functioning. Mechanical operating links such as control cables shall be waterproof and shall have no exposed or unprotected areas;".

5 In paragraph 4.4.7.6, the existing subparagraphs .4 to .8 are renumbered as subparagraphs .10 to .14, respectively.

6 In paragraph 4.4.7.6, in the renumbered subparagraph .10, the word "clearly" is replaced by the word "unambiguously".

7 In paragraph 4.4.7.6, in the renumbered subparagraph .14, the words "the load-bearing components of the release mechanism and" are added at the beginning and the words "of the release mechanism" are deleted.
8 In paragraph 4.4.7.6, the following new subparagraphs .15 and .16 are inserted after the renumbered subparagraph .14:

".15 a hydrostatic interlock shall be designed for a factor of safety of not less than 6 times maximum operating force based on the ultimate strength of the materials used;

.16 the operating cables shall be designed for a factor of safety of not less than 2.5 times maximum operating force based on the ultimate strength of the materials used; and".

9 In paragraph 4.4.7.6, the existing subparagraph .9 is renumbered as subparagraph .17 and in the renumbered subparagraph .17, the references to paragraphs "4.4.7.6.2.2 and 4.4.7.6.3" are replaced by the references to paragraphs "4.4.7.6.7, 4.4.7.6.8 and 4.4.7.6.15".

10 In paragraph 4.4.7.6, the referenced subparagraph .9 is replaced by .17.

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ANNEX 5

DRAFT MSC RESOLUTION

AMENDMENTS TO THE REVISED RECOMMENDATION ON TESTING OF
LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70)), AS AMENDED

THE MARITIME SAFETY COMMITTEE,

RECALLING Article 28(b) of the Convention on the International Maritime Organization
concerning the functions of the Committee,

RECALLING ALSO resolution A.689(17) entitled "Testing of life-saving appliances", by which
the Assembly, at its seventeenth session, adopted the Recommendation on testing of
life-saving appliances,

RECALLING FURTHER that the Assembly, when adopting resolution A.689(17), authorized
the Committee to keep the Recommendation on testing of life-saving appliances under
review and to adopt, when appropriate, amendments thereto,

NOTING resolution MSC.81(70), by which, at its seventy-sixth session, it adopted the Revised
recommendation on testing of life-saving appliances, introducing more precise provisions for
the testing of life-saving appliances based on the requirements of the International
Life-Saving Appliances (LSA) Code,

RECOGNIZING the need to appropriately align the relevant provisions of the Revised
recommendation on testing of life-saving appliances with the associated amendments to the
LSA Code adopted by resolution MSC...(89),

HAVING CONSIDERED, at its [eighty-ninth session], proposed amendments to the Revised
recommendation on testing of life-saving appliances, prepared by the Sub-Committee on
Ship Design and Equipment at its fifty-fifth session,

1. ADOPTS amendments to the Revised recommendation on testing of life-saving
appliances (resolution MSC.81(70)), as amended, the text of which is set out in the Annex to
the present resolution;

2. RECOMMENDS Governments to apply the annexed amendments when testing
life-saving appliances.
ANNEX

AMENDMENTS TO THE REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES (RESOLUTION MSC.81(70)), AS AMENDED

PART 1

PROTOTYPE TESTS FOR LIFE-SAVING APPLIANCES

1 The existing paragraphs 6.9.3 and 6.9.4 are replaced by the following:

"6.9.3 With the operating mechanism disconnected it should be demonstrated when the lifeboat is loaded with its full complement of persons and equipment and towed at speeds of 5 knots that the moveable hook component stays closed. Furthermore, with the operating mechanism connected it should be demonstrated that the lifeboat when loaded with its full complement of persons and equipment when towed at speeds of 5 knots can be released. Both of the above should be demonstrated as follows as follows:

.1 a force equal to 25% of the safe working load of the hook should be applied to the hook in the lengthwise direction of the boat at an angle of 45° to the vertical. This test should be conducted in the aftward as well as the forward direction;

.2 a force equal to the safe working load of the hook should be applied to the hook in an athwartships direction at an angle of 20° to the vertical. This test should be conducted on both sides; and

.3 a force equal to the safe working load of the hook should be applied to the hook in a direction halfway between the positions of tests 1 and 2 (i.e. 45° to the longitudinal axis of the boat in plan view) at an angle of 33° to the vertical. This test should be conducted in four positions.

There should be no damage as a result of these tests.

6.9.4 A release mechanism should be conditioned and tested as follows:

.1 the lifeboat release and retrieval system and the longest used connection cable/linkage associated with the system should be mounted and adjusted according to instructions from the original equipment manufacturer and then loaded to 100% of its safe working load and released. Load and release should be repeated 50 times. During the 50 releases, the lifeboat release and retrieval system should be released simultaneously from each fall to which it is connected without any binding or damage to any part of the lifeboat release and retrieval system. The system should be considered as "failed" if any failure during the conditioning or unintended release occurs when load is applied but the system has not yet been operated;

.2 the lifeboat release and retrieval system should then be disassembled, the parts examined and wear recorded. The release and retrieval system should then be reassembled;
the hook assembly, whilst disconnected from the operating mechanism, should then be tested 10 times with cyclic loading from zero load to 1.1 times the safe working load, at a nominal 10 seconds per cycle; unless the release mechanism has been specifically designed to operate as an off-load hook with on-load capability using the weight of the boat to close the hook, in this case the cyclic load should be from no more than 1% to 1.1 times the SWL. For cam-type designs, the test should be carried out at an initial cam rotation of 0º (fully reset position), and repeated at 45º in either direction, or 45º in one direction if restricted by design. The specimen should remain closed during the test. The system should be considered as "failed" if any failure during this test or any unintended release or opening occurs; and

the cable and operating mechanism should then be reconnected to the hook assembly; and the lifeboat release and retrieval system should then be demonstrated to operate satisfactorily under its safe working load. The actuation force should be no less than 100 N and no more than 300 N, if a cable is used it should be the maximum length specified by the manufacturer, and secures in the same manner it would be secured in the lifeboat. The demonstration should verify that any interlocks, indicators and handles are still functioning and are correctly positioned in accordance with the operation and safety instruction from the original equipment manufacturer. The release mechanism is deemed to have passed the testing under paragraph 6.9.4 when the tests have been conducted successfully. The system should be considered as "failed" if any failure during this test or any unintended release or opening occurs.

A second release mechanism should be tested as follows:

the actuation force of the release mechanism should be measured loaded with 100% of its safe working load. The actuation force should be no less than 100 N and no more than 300 N. If a cable is used, it should be of the maximum length specified by the manufacturer, and secured in the same manner it would be secured in a lifeboat. The demonstration should verify that any interlocks, indicators and handles are still functioning and are correctly positioned in accordance with the operation and safety instruction from the original equipment manufacturer; and

the release mechanism should be mounted on a tensile strength testing device. The load should be increased to at least six times the working load of the release mechanism without failure of the release mechanism."

The existing paragraphs 6.9.5 and 6.9.6 are renumbered as 6.9.6 and 6.9.7, respectively.

In paragraph 6.11.3, the referenced paragraph number "6.9.4" is replaced with "6.9.3".
4 In paragraphs 7.1.1 and 7.4.1, the referenced paragraph numbers "6.9.5" and "6.9.6" are replaced by "6.9.6" and "6.9.7", respectively.

5 In paragraphs 7.2.1, 7.3.1, 7.5 and 7.6, the referenced paragraph numbers "6.9.1 to 6.9.4" are replaced by "6.9.1 to 6.9.5".