標題

救命艇負荷離脱装置（救命艇離脱回収装置）の検査

ClassNK
テクニカル
インフォメーション

No. TEC-0966
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各位

2011 年 8 月 1 日付テクニカルインフォメーション No.TEC-0858 第 1 項にて通知した SOLAS III 章 1.5 規則 MSC.317(89)改正への適合について、2014 年 7 月 1 日以後最初に計画されているドライドックにて、救命艇離脱回収装置の検査を行います。検査は救命艇の負荷離脱装置を有する船舶に適用されます。

現存救命艇離脱回収装置の型式は主管庁によって評価されており、次のケースがあります。

ケース 1　適合
ケース 2　改造後適合
ケース 3　不適合（要交換）

本船の救命艇離脱回収装置の型式と評価結果は救命艇メーカーにお尋ねください。

添付の実施フロー (添付 1、リベリア籍船用は添付 2) に従って、船主殿は救命艇メーカー又は整備事業者に救命艇離脱回収装置を規則に適合させるための措置を依頼してください。検査はこれらの実施フローに従って実施されます。

実施フローの詳細については、添付の MSC.1/Circ.1392 及び MSC.1/Circ.1206/Rev.1 を参照願います。

（次頁に続く）

なお、本件に関してご不明な点は、以下の部署にお問い合わせください。

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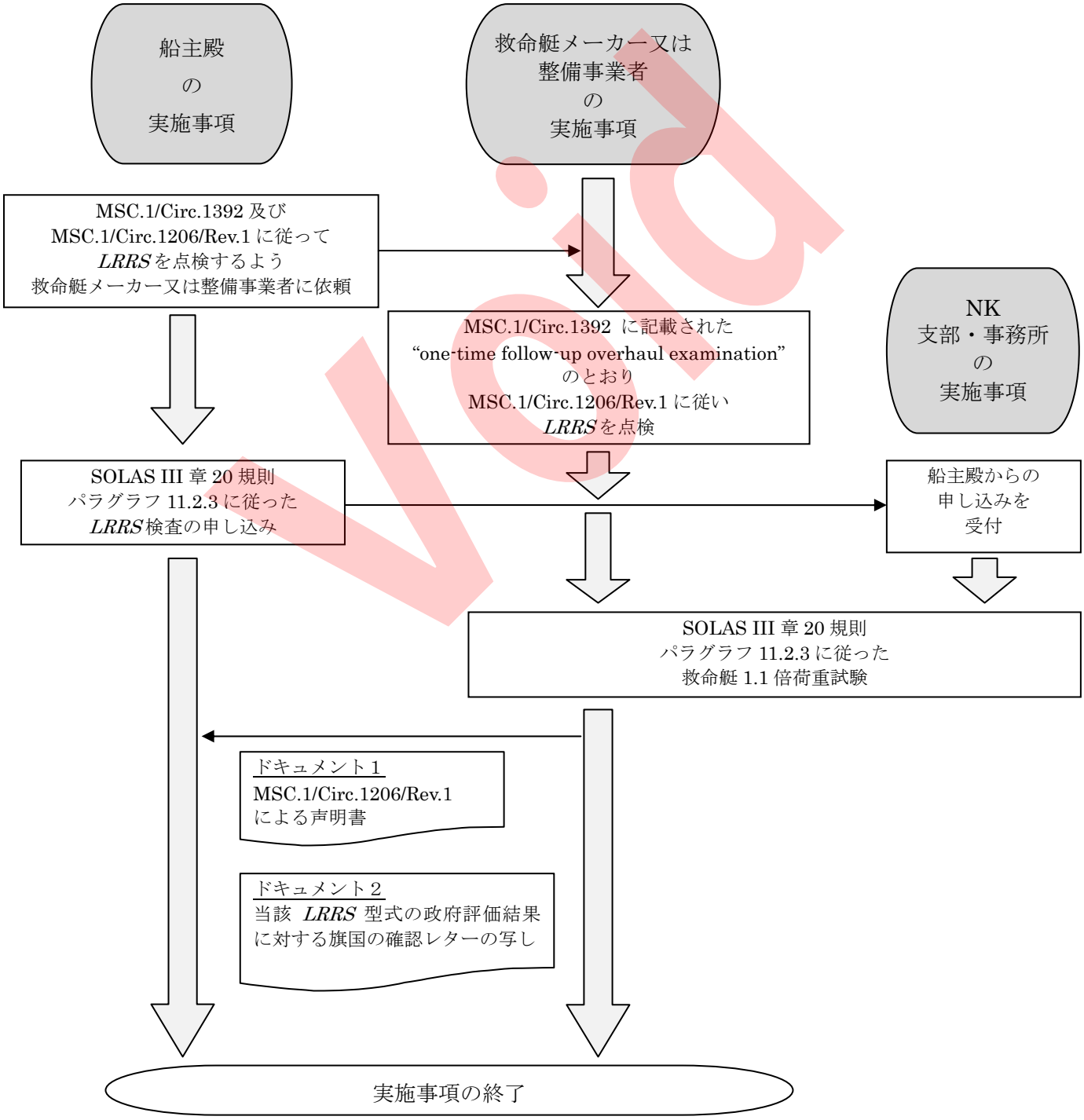
添付:

1. 救命艇離脱回収装置 SOLAS III 章 1.5 規則 MSC.317(89)改正へ適合のための実施フロー
2. 同リベリア籍船用
3. SOLAS III 章 1.5 規則の改正 (Resolution MSC.317(89))
4. 現存救命艇の離脱フックの評価及び交換のためのガイドライン (MSC.1/Circ.1392)
5. 救命艇の事故防止対策 (MSC.1/Circ.1206/Rev.1)

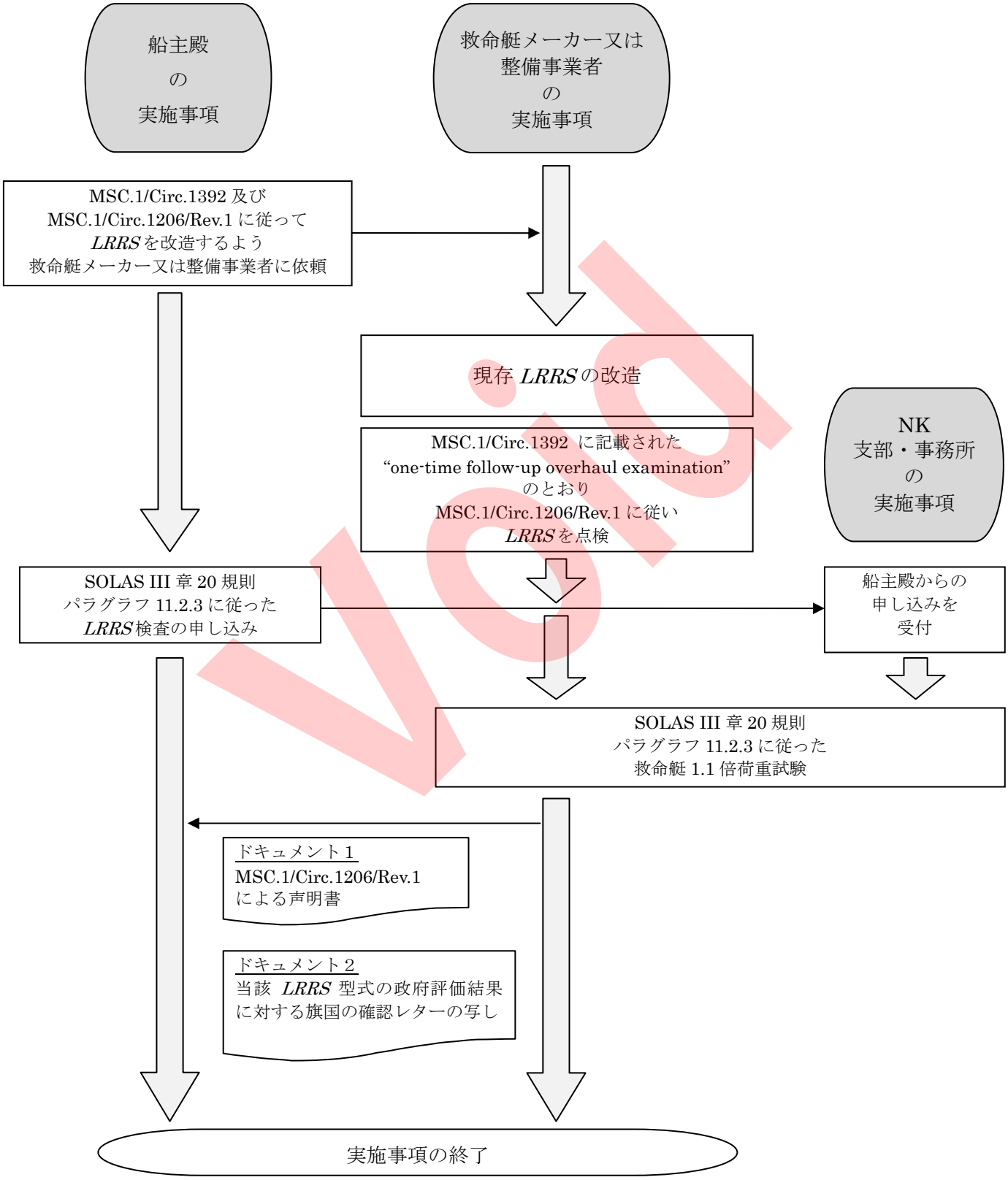
救命艇離脱回収装置 SOLAS III 章 1.5 規則
MSC.317(89)改正へ適合のための実施フロー

略語: *LRRS*: 救命艇離脱回収装置 Lifeboat Release and Retrieval System

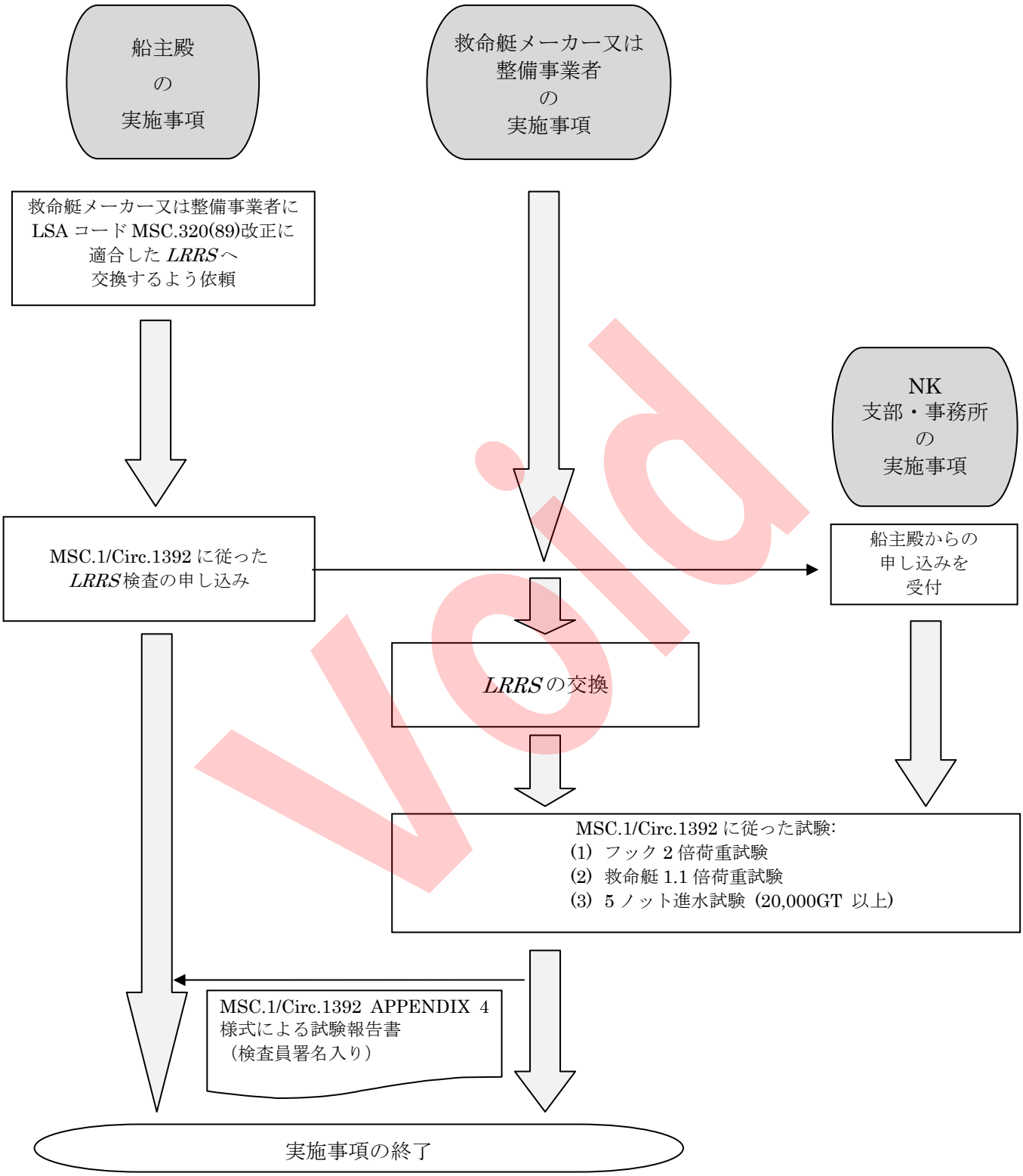
ケース 1
SOLAS III 章 1.5 規則 MSC.317(89)改正に適合しているケース



ケース２
改造後 SOLAS III 章 1.5 規則 MSC.317(89)改正に適合するケース

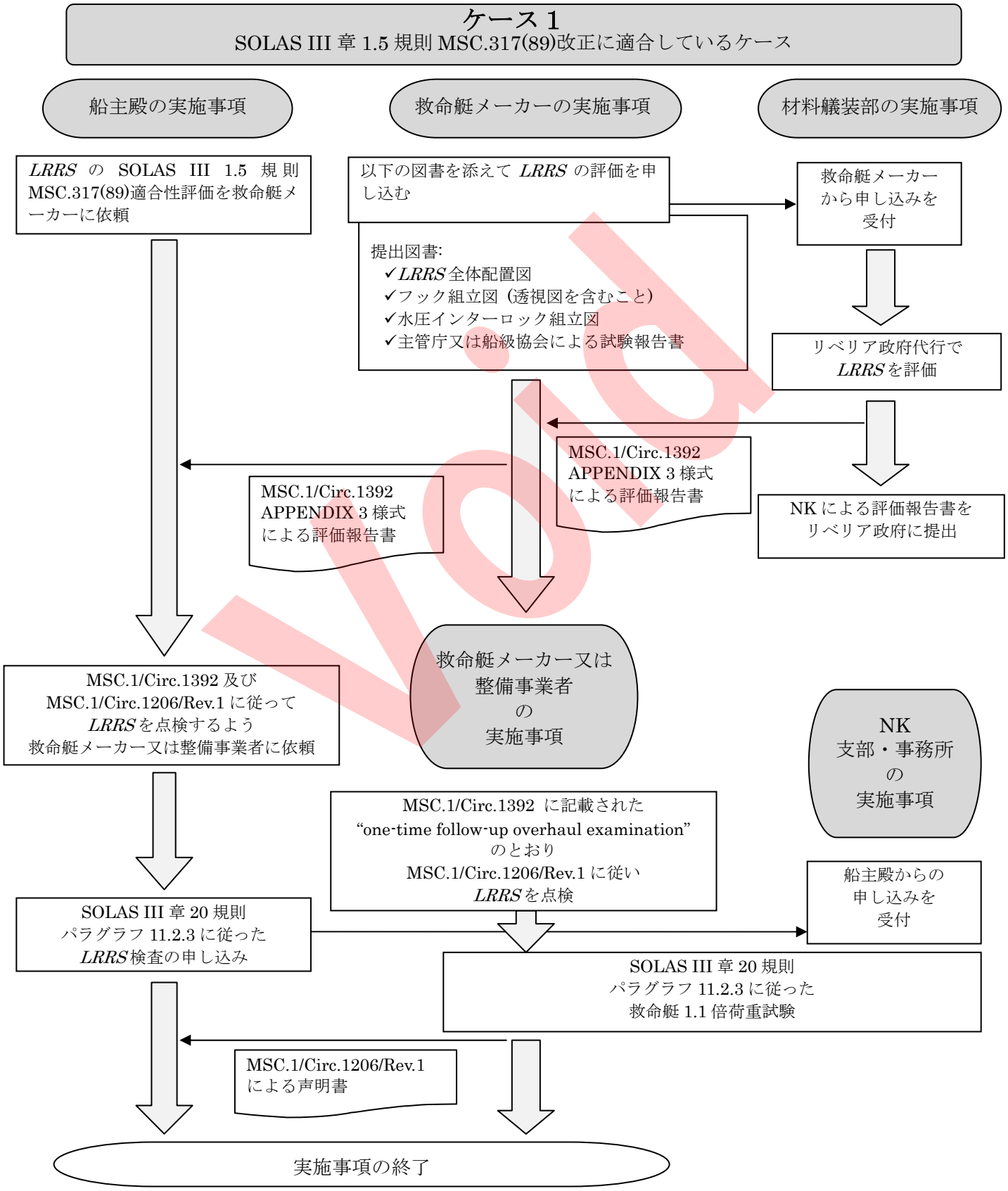


ケース３
LSA コード MSC.320(89)改正に適合した *LRRS* へ交換するケース



救命艇離脱回収装置 SOLAS III 章 1.5 規則
MSC.317(89)改正へ適合のための実施フロー（リベリア籍船に限る）

略語: *LRRS*: 救命艇離脱回収装置 Lifeboat Release and Retrieval System



ケース２
改造後 SOLAS III 章 1.5 規則 MSC.317(89)改正に適合するケース

船主殿の実施事項

救命艇メーカーの実施事項

材料艤装部の実施事項

LRRS の SOLAS III 1.5 規則 MSC.317(89)適合性評価を救命艇メーカーに依頼

以下の図書を添えて *LRRS* の評価を申し込む

提出図書:
- ✓*LRRS* 全体配置図
- ✓フック組立図（透視図を含むこと）
- ✓水圧インターロック組立図
- ✓主管庁又は船級協会による試験報告書

救命艇メーカーから申し込みを受付

リベリア政府代行で *LRRS* を評価

MSC.1/Circ.1392 APPENDIX 3 様式による評価報告書

NK による評価報告書をリベリア政府に提出

MSC.1/Circ.1392 APPENDIX 3 様式による評価報告書

MSC.1/Circ.1392 及び MSC.1/Circ.1206/Rev.1 に従って *LRRS* を改造するよう救命艇メーカー又は整備事業者に依頼

救命艇メーカー又は整備事業者の実施事項

現存 *LRRS* の改造

NK 支部・事務所の実施事項

MSC.1/Circ.1392 に記載された “one-time follow-up overhaul examination” のとおり MSC.1/Circ.1206/Rev.1 に従い *LRRS* を点検

船主殿からの申し込みを受付

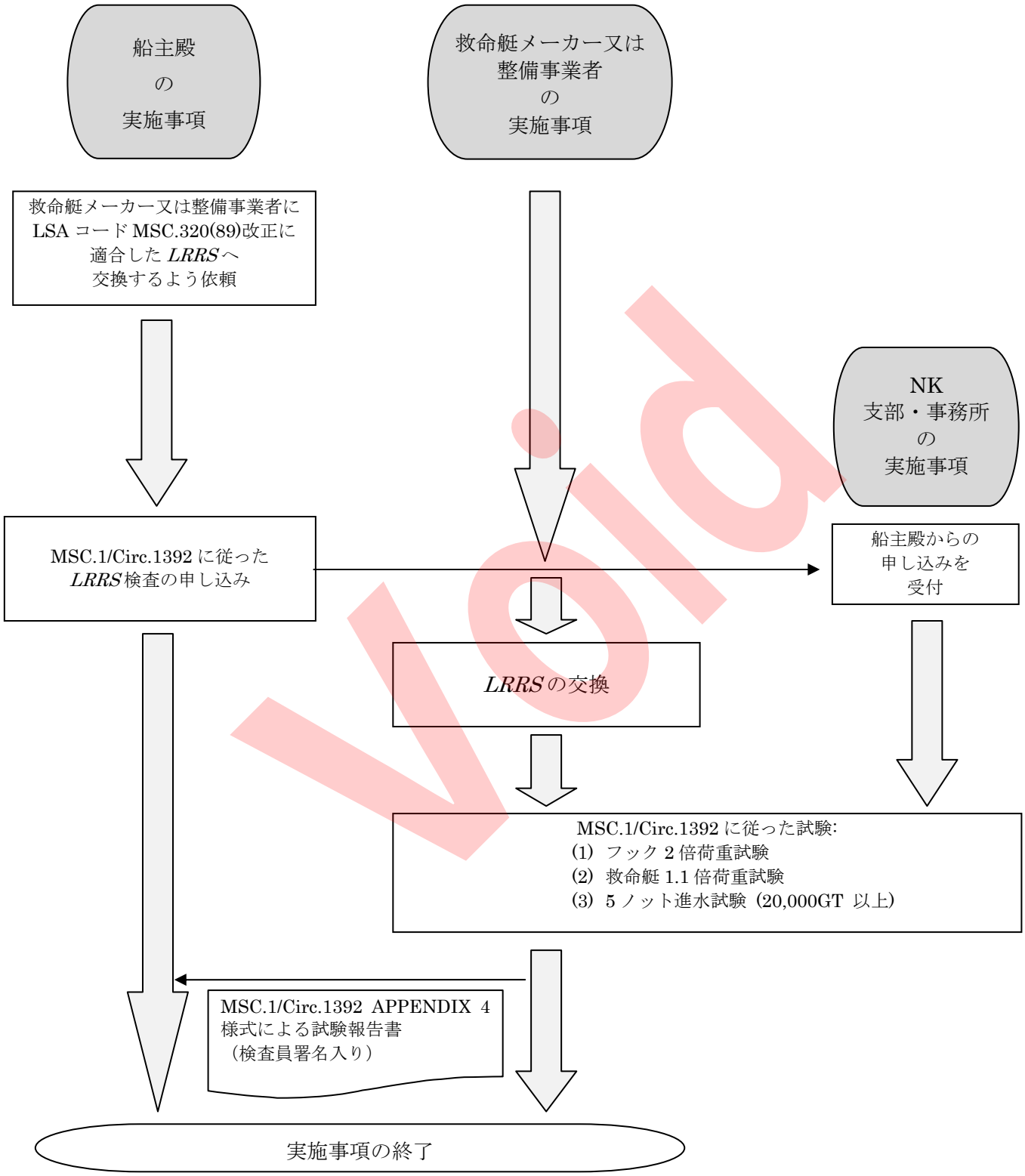
SOLAS III 章 20 規則 パラグラフ 11.2.3 に従った *LRRS* 検査の申し込み

SOLAS III 章 20 規則 パラグラフ 11.2.3 に従った救命艇 1.1 倍荷重試験

MSC.1/Circ.1206/Rev.1 による声明書

実施事項の終了

ケース３
LSA コード MSC.320(89)改正に適合した *LRRS* へ交換するケース



ANNEX 1

RESOLUTION MSC.317(89)
(adopted on 20 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 1 July 2012, 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 1 January 2013 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.1392)."

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MSC.1/Circ.1392
27 May 2011

GUIDELINES FOR EVALUATION AND REPLACEMENT OF LIFEBOAT RELEASE AND RETRIEVAL SYSTEMS

1 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).

2 Member Governments are invited to use the annexed Guidelines when applying SOLAS regulation III/1.5, as adopted by resolution MSC.317(89), and to bring them to the attention of all parties concerned.

3 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.*

4 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 at the earliest available opportunity.

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

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* Reference is made to MSC.1/Circ.1393 on Early application of new SOLAS regulation III/1.5.

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 1 January 2013, 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.320(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 not later than 1 July 2013 and the report should be submitted in accordance with paragraph 14 below.

4 Administrations, or recognized organizations acting on their behalf, should, when applying SOLAS regulation III/1.5, ensure that an evaluation of the type of existing lifeboat release and retrieval system is undertaken, 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 A flowchart of the lifeboat release and retrieval system evaluation process, is set out in appendix 2.

6 On 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 with the LSA Code; or

.2 modified and found compliant with the LSA Code; or

.3 found compliant with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and paragraphs 16 and 17 (overhaul examination) of these Guidelines; or

.4 modified and found compliant with paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and paragraphs 16 and 17 (overhaul examination) of these Guidelines; or

.5 replaced by a new lifeboat release and retrieval system.

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* 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).

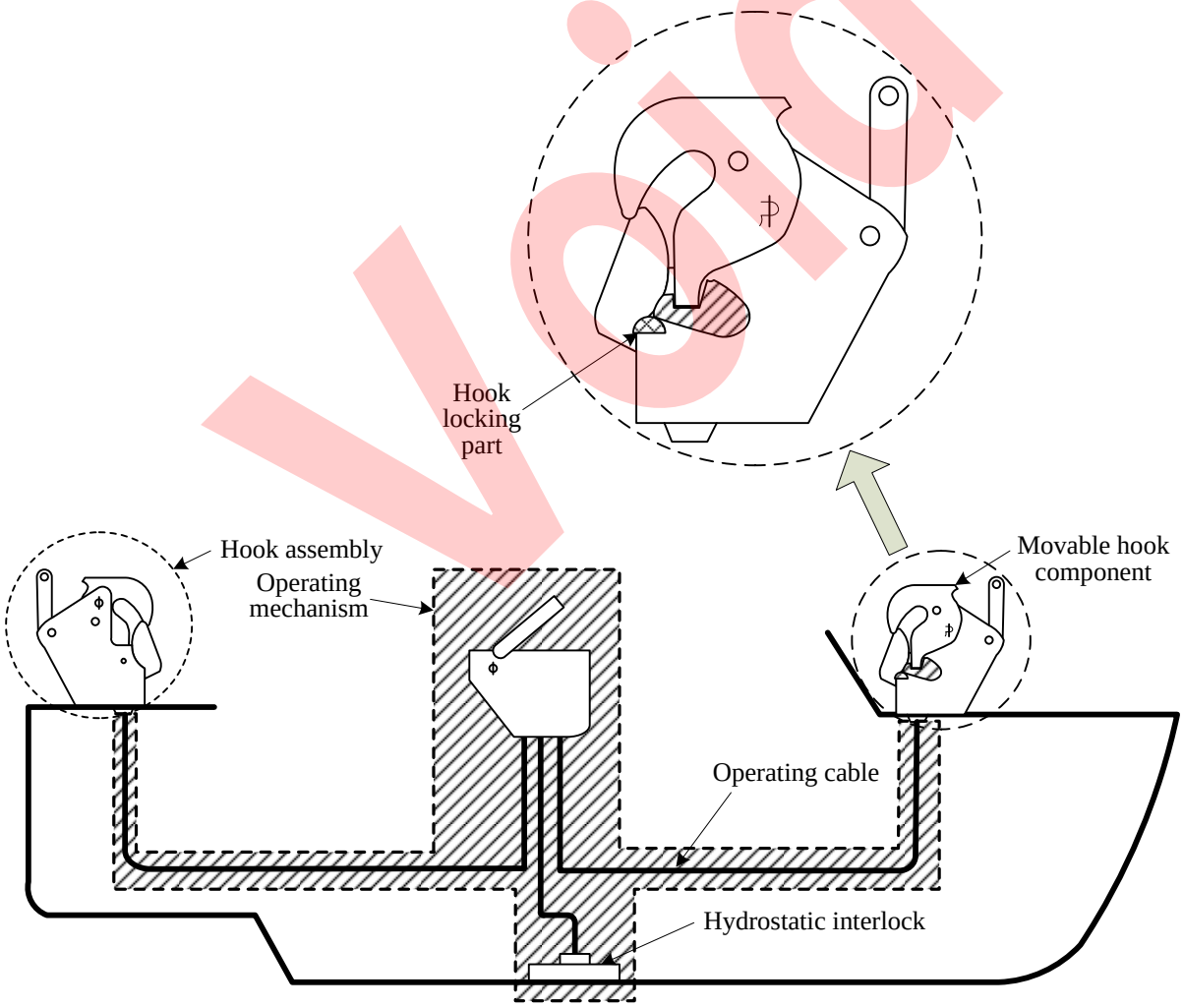
Modifications

7 A lifeboat release and retrieval system that has been determined to be non-compliant in accordance with these Guidelines may be modified to comply with the requirements of the revised paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and the requirements of 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 the revised paragraphs 4.4.7.6.4 to 4.4.7.6.6 of the LSA Code and the requirements of 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 accordance with the following figure.



Lifeboat release and retrieval system

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.320(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.320(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;

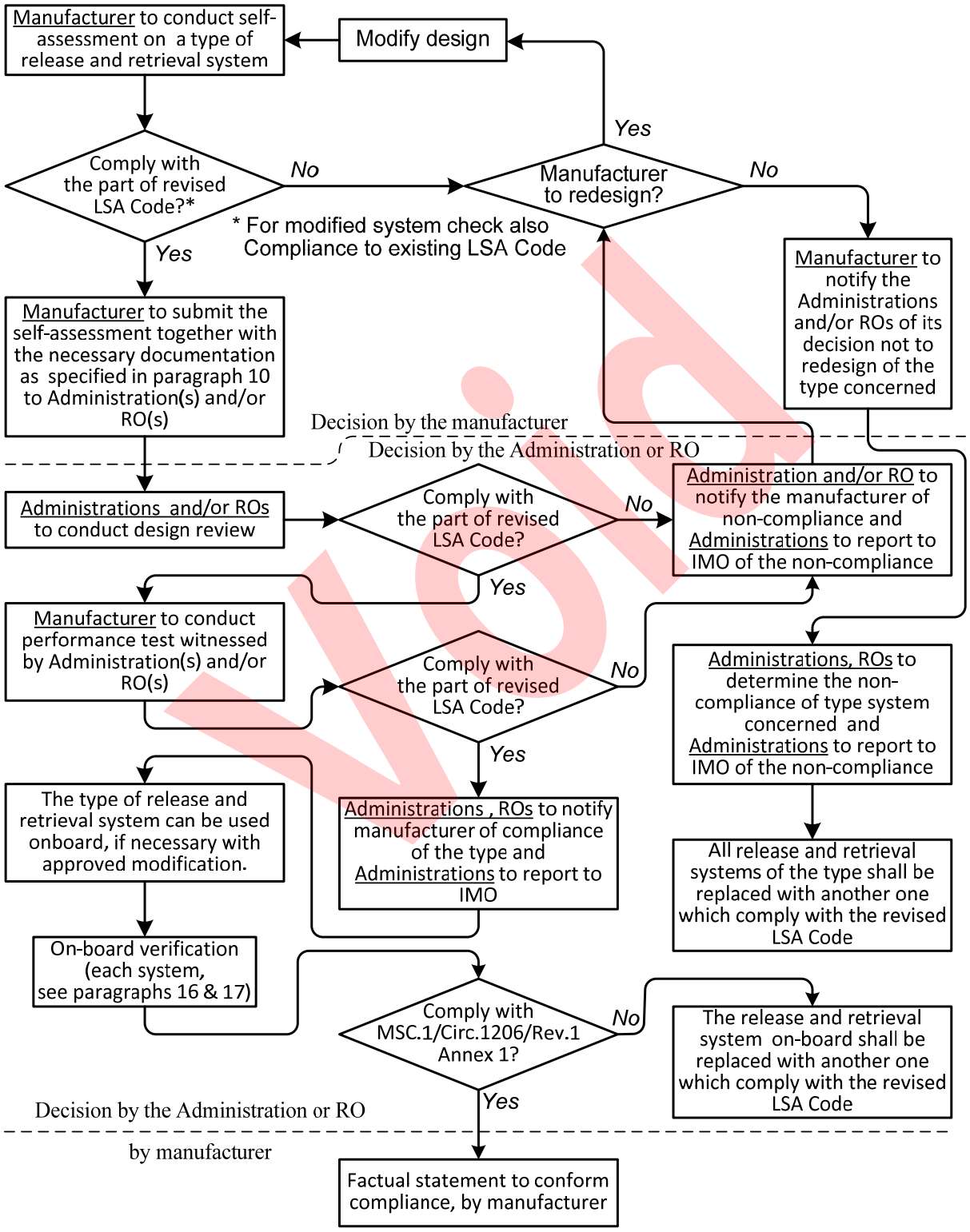
.2 the lifeboat release and retrieval system should then be disassembled, the parts examined and wear recorded. The release and retrieval system should then be reassembled;

.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



APPENDIX 3

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

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

Manufacturer's Details	**Name**
	Address
	E-mail address
Lifeboat release and retrieval system	**Type (see paragraph 9.6) and identification**
In case of modification	**Original type and identification**
	Details of modification
Specification of type (e.g., Maximum Safe Working Load (SWL))	
Details of the Administration, or recognized organization acting on its behalf, undertaking the evaluation of the lifeboat release and retrieval system	**Name**
	Address
	E-mail address
Evaluation report details	**No.**
	Date
Evaluation result	**Compliant / Non-compliant / Compliant after modification**
Report information	**Link to the relevant report (url)**
Reported by	**Name of the Administration**

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:

Lifeboat identity	Lifeboat serial number	Release and retrieval system serial number (fwd)	Release and retrieval system serial number (aft)
No.1 (Stbd)			
No.2 (Port)			

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.

INTERNATIONAL MARITIME ORGANIZATION
4 ALBERT EMBANKMENT
LONDON SE1 7SR

Telephone: 020 7735 7611
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IMO

E

Ref. T4/3.01

MSC.1/Circ.1206/Rev.1
11 June 2009

MEASURES TO PREVENT ACCIDENTS WITH LIFEBOATS

1 The Maritime Safety Committee, at its eighty-first session (10 to 19 May 2006), recalled that at its seventy-fifth session (15 to 24 May 2002), it had considered the issue of the unacceptably high number of accidents with lifeboats in which crew were being injured, sometimes fatally, while participating in lifeboat drills and/or inspections, and noted that most accidents fell under the following categories:

.1 failure of on-load release mechanism;

.2 inadvertent operation of on-load release mechanism;

.3 inadequate maintenance of lifeboats, davits and launching equipment;

.4 communication failures;

.5 lack of familiarity with lifeboats, davits, equipment and associated controls;

.6 unsafe practices during lifeboat drills and inspections; and

.7 design faults other than on-load release mechanisms.

2 Pending further consideration of the problem, the Committee approved MSC/Circ.1049 on Accidents with lifeboats, to draw the attention of manufacturers, shipowners, crews and classification societies to the personal injury and loss of life that may follow inadequate attention to the design, construction, maintenance and operation of lifeboats, davits and associated equipment and urged all concerned to take necessary action to prevent further accidents with lifeboats. It invited Member Governments to:

.1 bring the circular to the attention of their maritime Administrations, relevant industry organizations, manufacturers, shipowners, crews and classification societies;

.2 take the necessary action to prevent further accidents with lifeboats pending the development of appropriate IMO guidance;

.3 ensure that:

.3.1 on-load release equipment used on ships flying their flag is in full compliance with the requirements of paragraphs 4.4.7.6.2.2 to 4.4.7.6.5 of the LSA Code;

.3.2 all appropriate documentation for the maintenance and adjustment of lifeboats, launching appliances and associated equipment is available on board;

.3.3 personnel undertaking inspections, maintenance and adjustment of lifeboats, launching appliances and associated equipment are fully trained and familiar with these duties;

.3.4 maintenance of lifeboats, launching appliances and associated equipment is carried out in accordance with approved established procedures;

.3.5 lifeboat drills are conducted in accordance with SOLAS regulation III/19.3.3 for the purpose of ensuring that ship's personnel will be able to safely embark and launch the lifeboats in an emergency;

.3.6 the principles of safety and health at work apply to drills as well;

.3.7 personnel undertaking maintenance and repair activities are appropriately qualified;

.3.8 hanging-off pennants should only be used for maintenance purposes and not during training exercises;

.3.9 all tests required for the design and approval of life-saving appliances are conducted rigorously, according to the Guidelines developed by the Organization, in order to identify and rectify any design faults at an early stage;

.3.10 the equipment is easily accessible for inspections and maintenance and is proven durable in harsh operational conditions, in addition to withstanding prototype tests; and

.3.11 the approving authorities or bodies pay close attention to proper workmanship and state-of-the-art possibilities when assessing equipment for approval; and

.4 encourage shipowners, when undertaking maintenance and repair activities, to employ qualified personnel, preferably certified by the manufacturer.

3 Member Governments were further invited, while enforcing the provisions of SOLAS regulation IX/4.3, to ensure that the above issues are addressed through the Safety Management System of the company, as appropriate.

4 The Committee further recalled that, at its seventy-seventh session (28 May to 6 June 2003), recognizing the experience gained since the approval of the Guidelines on inspection and maintenance of lifeboat on-load release gear (MSC/Circ.614) at its sixty-second session (24 to 28 May 1993), and that the implementation of expanded and improved guidelines could contribute towards a reduction of the incidence of accidents with lifeboats, it had approved the Guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear (MSC/Circ.1093), superseding MSC/Circ.614. Taking into account subsequent amendments to SOLAS chapter III and the LSA Code, and having considered proposals by the fiftieth session of the Sub-Committee on Fire Protection, the Committee approved amendments to the Guidelines, and further noted that the guidance developed for lifeboats could also apply to the periodic servicing and maintenance of liferafts, rescue boats and fast rescue boats and their launching appliances and on-load release gear.

5 The Committee further recalled that, at its seventy-ninth session (1 to 10 December 2004), it had endorsed the intention of the Sub-Committee on Ship Design and Equipment, in cooperation with the Sub-Committee on Standards of Training and Watchkeeping, to develop further IMO guidance as envisioned in MSC/Circ.1049 and, accordingly, approved the Guidance on safety during abandon ship drills using lifeboats (MSC/Circ.1136), as set out in annex 2. The Committee further recalled that the Guidance developed for lifeboats has relevance, in general, for emergency drills with other life-saving systems and should be taken into account when such drills are conducted. In connection with MSC/Circ.1136, and recognizing the need to provide a basic outline of essential steps to safely carry out simulated launching of free-fall lifeboats in accordance with SOLAS regulation III/19.3.3.4, and having considered proposals by the forty-seventh session of the Sub-Committee on Design and Equipment, the Committee further approved the Guidelines for simulated launching of free-fall lifeboats (MSC/Circ.1137), as set out in the appendix to annex 2.

6 Having considered the need to update several of the circulars discussed above, and having considered proposals by the fiftieth session of the Sub-Committee on Fire Protection to consolidate the numerous circulars on the subject of measures to prevent accidents with lifeboats in order to better serve the mariner, the Committee approved Guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear and Guidelines on safety during abandon ship drills using lifeboats, as set out in annexes 1 and 2, respectively, to MSC.1/Circ.1206.

7 The Maritime Safety Committee, at its eighty-sixth session (27 May to 5 June 2009), approved amendments to the aforementioned Guidelines (annexes 1 and 2 to MSC.1/Circ.1206) concerning inspection and maintenance of lifeboats, launching appliances and on-load release gear, following the recommendations made by the Sub-Committee on Ship Design and Equipment, at its fifty-second session. The revised Guidelines are set out in annexes 1 and 2 to this circular.

8 Member Governments are invited to give effect to the annexed Guidelines as soon as possible and to bring them to the attention of shipowners, ship operators, ship-vetting organizations, ship personnel, surveyors, manufacturers and all others concerned with the inspection and maintenance of lifeboats, liferafts, rescue boats and fast rescue boats and their launching appliances and on-load release gear.

9 This circular supersedes MSC/Circ.1049, MSC/Circ.1093, MSC/Circ.1136, MSC/Circ.1137 and MSC.1/Circ.1206.

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ANNEX 1

GUIDELINES FOR PERIODIC SERVICING AND MAINTENANCE OF LIFEBOATS, LAUNCHING APPLIANCES AND ON-LOAD RELEASE GEAR

General

1 The objective of these Guidelines is to establish a uniform, safe and documented performance of periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear.

2 These Guidelines relate to the application of the ISM Code to periodic servicing and maintenance of lifeboat arrangements and should therefore be reflected in procedures developed for a ship under that Code.

3 The general principle in these Guidelines may also be applied for the periodic servicing and maintenance of liferafts, rescue boats and fast rescue boats and their launching appliances and release gear.

4 Detailed guidance regarding some procedures covered by these Guidelines is provided in the appendix.

SOLAS regulations

5 These Guidelines relate to the requirements contained in:

.1 SOLAS regulation III/20 – Operational readiness, maintenance and inspections; and

.2 SOLAS regulation III/36 – Instructions for onboard maintenance.

Responsibility

6 The company* is responsible for servicing and maintenance on board its ships in accordance with SOLAS regulation III/20 and for the establishment and implementation of health, safety and environment (HSE) procedures covering all activities during servicing and maintenance.

7 The personnel carrying out servicing and maintenance are responsible for the performance of the work as authorized in accordance with the system specified in paragraph 10.

8 The above personnel are also responsible for complying with HSE instructions and procedures.

9 Service providers carrying out the thorough examination, operational testing, repair and overhaul of lifeboats, launching appliances and on-load release gear should be authorized in accordance with MSC.1/Circ.1277.

* For the purpose of these Guidelines, company is as defined in SOLAS regulation IX/1.2.

Certification

10 Where these Guidelines call for certification of servicing personnel, such certification should be issued in accordance with an established system for training and authorization in accordance with MSC.1/Circ.1277.

Qualification levels

11 Weekly and monthly inspections, and routine maintenance as specified in the equipment maintenance manual(s), should be conducted under the direct supervision of a senior ship's officer in accordance with the maintenance manual(s).

12 All other inspections, servicing and repair should be conducted by the manufacturer's representative or other person appropriately trained and certified for the work to be done in accordance with MSC.1/Circ.1277.

Reports and records

13 All reports and checklists should be correctly filled out and signed by the person who carries out the inspection and maintenance work and should also be signed by the company's representative or the ship's master.

14 Records of inspections, servicing, repairs and maintenance should be updated and filed on board the ship.

15 When repairs, thorough examinations and annual servicing are completed, a statement confirming that the lifeboat arrangements remain fit for purpose should be promptly issued by the service provider who performed the work.

* * *

APPENDIX

SPECIFIC PROCEDURES FOR MAINTENANCE AND SERVICING

1 GENERAL

1.1 Any inspection, servicing and repair should be carried out according to the maintenance manuals and associated technical documentation developed by the manufacturer or an alternative body authorized in accordance with MSC.1/Circ.1277.

1.2 A full set of maintenance manuals and associated technical documentation as specified in 1.1 should be available on board for use in all operations involved in the inspection, maintenance, adjustment and re-setting of the lifeboat and associated equipment, such as davits and release gear.

1.3 The maintenance manuals and associated technical documentation as specified in 1.1 should include the following items as a minimum and should be periodically reviewed and updated as necessary.

2 ANNUAL THOROUGH EXAMINATION

2.1 As items listed in checklists for the weekly/monthly inspections also form the first part of the annual thorough examination, when carrying out this examination the inspection of these items should be performed by the ship's crew in the presence of the manufacturer's representative or other person appropriately trained and certified for the work to be done in accordance with MSC.1/Circ.1277.

2.2 Inspection and maintenance records of inspections and routine maintenance carried out by the ship's crew and the applicable certificates for the launching appliances and equipment should be available.

Lifeboats

2.3 The following items should be examined and checked for satisfactory condition and operation:

.1 condition of lifeboat structure including fixed and loose equipment;

.2 engine and propulsion system;

.3 sprinkler system, where fitted;

.4 air supply system, where fitted;

.5 manoeuvring system;

.6 power supply system; and

.7 bailing system.

Release gear

2.4 The following should be examined for satisfactory condition and operation after the annual winch brake test with the empty boat, as required by 3.1:

.1 operation of devices for activation of release gear;

.2 excessive free play (tolerances);

.3 hydrostatic interlock system, where fitted;

.4 cables for control and release; and

.5 hook fastening.

Notes:

1 The setting and maintenance of release gear are critical operations with regard to maintaining the safe operation of the lifeboat and the safety of personnel in the lifeboat. All inspection and maintenance operations on this equipment should therefore be carried out with the utmost care.

2 No maintenance or adjustment of the release gear should be undertaken while the hooks are under load.

3 Hanging-off pennants may be used for this purpose but should not remain connected at other times, such as when the lifeboat is normally stowed and during training exercises.

4 The release gear is to be examined prior to its operational test. The release gear is to be re-examined after its operational test and the dynamic winch brake test. Special consideration should be given to ensure that no damage has occurred during the winch brake test, especially the hook fastening.

2.5 Operational test of on-load release function:

.1 position the lifeboat partially into the water such that the mass of the boat is substantially supported by the falls and the hydrostatic interlock system, where fitted, is not triggered;

.2 operate the on-load release gear;

.3 reset the on-load release gear; and

.4 examine the release gear and hook fastening to ensure that the hook is completely reset and no damage has occurred.

2.6 Operational test of off-load release function:

.1 position the lifeboat fully waterborne;

.2 operate the off-load release gear;

.3 reset the on-load release gear; and

.4 recover the lifeboat to the stowed position and prepare for operational readiness.

Note:

Prior to hoisting, check that the release gear is completely and properly reset. The final turning-in of the lifeboat should be done without any persons on board.

2.7 Operational test of free-fall lifeboat release function:

.1 engage the simulated launching arrangements as specified in the manufacturer's operating instructions;

.2 the operator should be properly seated and secured in the seat location from which the release mechanism is to be operated;

.3 operate the release mechanism to release the lifeboat;

.4 reset the lifeboat in the stowed configuration;

.5 repeat procedures referred to in .2 to .4 above, using the back-up release mechanism, when applicable;

.6 remove the simulated launching arrangements; and

.7 verify that the lifeboat is in the ready to launch stowed configuration.

Davit

2.8 The following items should be examined for satisfactory condition and operation:

.1 davit structure, in particular with regard to corrosion, misalignments, deformations and excessive free play;

.2 wires and sheaves, possible damages such as kinks and corrosion;

.3 lubrication of wires, sheaves and moving parts;

.4 functioning of limit switches;

.5 stored power systems; and

.6 hydraulic systems.

Winch

2.9 The following items should be examined for satisfactory condition and operation:

.1 open and inspect brake mechanism;

.2 replace brake pads, if necessary;

.3 remote control system;

.4 power supply system; and

.5 winch foundation.

3 DYNAMIC WINCH BRAKE TEST

3.1 Annual operational testing should preferably be done by lowering the empty boat. When the boat has reached its maximum lowering speed and before the boat enters the water, the brake should be abruptly applied.

3.2 The five-year operational test should be done by lowering the boat loaded to a proof load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment, or equivalent load. When the boat has reached its maximum lowering speed and before the boat enters the water, the brake should be abruptly applied.

3.3 Following these tests, the brake pads and stressed structural parts should be re-inspected.

Note:

In loading the boat for this test, precautions should be taken to ensure that the stability of the boat is not adversely affected by free surface effects or the raising of the centre of gravity.

4 OVERHAUL OF ON-LOAD RELEASE GEAR

Overhaul of on-load release gear includes:

.1 dismantling of hook release units;

.2 examination with regard to tolerances and design requirements;

.3 adjustment of release gear system after assembly;

.4 operational test as per above and with a load according to SOLAS regulation III/20.11.2.3; and

.5 examination of vital parts with regard to defects and cracks.

Note:

Non-destructive examination (NDE) techniques, such as dye penetrants (DPE), may be suitable.

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ANNEX 2

GUIDELINES ON SAFETY DURING ABANDON SHIP DRILLS USING LIFEBOATS

1 GENERAL

1.1 Introduction

1.1.1 It is essential that seafarers are familiar with the life-saving systems on board their ships and that they have confidence that the systems provided for their safety will work and will be effective in an emergency. Frequent periodic shipboard drills are necessary to achieve this.

1.1.2 Crew training is an important component of drills. As a supplement to initial shore-side training, onboard training will familiarize crew members with the ship systems and the associated procedures for use, operation and drills. On these occasions, the objective is to develop appropriate crew competencies, enabling effective and safe utilization of the equipment required by the 1974 SOLAS Convention. The time limits set out in SOLAS for ship abandonment should be considered as a secondary objective when conducting drills.

1.2 Drill frequency

Experience has shown that holding frequent drills furthers the goals of making the crew familiar with the life-saving systems on board their ships and increasing their confidence that the systems will work and will be effective in an emergency. Drills give the crew opportunity to gain experience in the use of the safety equipment and in cooperation. The ability to cope with an emergency and handle the situation, if the ship needs to be abandoned, needs to be well rehearsed. However, frequent crew changes sometimes make it difficult to assure that all on board have had the opportunity to participate in drills if only the minimum required drills are conducted. Therefore, consideration needs to be given to scheduling drills as necessary to ensure all on board have an early opportunity to become familiar with the systems on board.

1.3 Drills must be safe

1.3.1 Abandon ship drills should be planned, organized and performed so that the recognized risks are minimized and in accordance with relevant shipboard requirements of occupational safety and health.

1.3.2 Drills provide an opportunity to verify that the life-saving system is working and that all associated equipment is in place and in good working order, ready for use.

1.3.3 Before conducting drills, it should be checked that the lifeboat and its safety equipment have been maintained in accordance with the ship's maintenance manuals and any associated technical documentation, as well as noting all the precautionary measures necessary. Abnormal conditions of wear and tear or corrosion should be reported to the responsible officer immediately.

1.4 Emphasis on learning

Drills should be conducted with an emphasis on learning and be viewed as a learning experience, not just as a task to meet a regulatory requirement to conduct drills. Whether they are emergency drills required by SOLAS or additional special drills conducted to enhance the competence of the

crew members, they should be carried out at safe speed. During drills, care should be taken to ensure that everybody familiarizes themselves with their duties and with the equipment. If necessary, pauses should be made during the drills to explain especially difficult elements. The experience of the crew is an important factor in determining how fast a drill or certain drill elements should be carried out.

1.5 Planning and organizing drills

1.5.1 The 1974 SOLAS Convention requires that drills shall, as far as practicable, be conducted as if there was an actual emergency.* This means that the entire drill should, as far as possible, be carried out. The point is that, at the same time, it should be ensured that the drill can be carried out in such a way that it is safe in every respect. Consequently, elements of the drill that may involve unnecessary risks need special attention or may be excluded from the drill.

1.5.2 In preparing for a drill, those responsible should review the manufacturer's instruction manual to assure that a planned drill is conducted properly. Those responsible for the drill should assure that the crew is familiar with the guidance provided in the life-saving system instruction manual.

1.5.3 Lessons learned in the course of a drill should be documented and made a part of follow-up shipboard training discussions and planning the next drill session.

1.5.4 The lowering of a boat with its full complement of persons is an example of an element of a drill that may, depending on the circumstances, involve an unnecessary risk. Such drills should only be carried out if special precautions are observed.

2 ABANDON SHIP DRILLS

2.1 Introduction

It is important that the crew who operate safety equipment on board are familiar with the functioning and operation of such equipment. The 1974 SOLAS Convention requires that sufficiently detailed manufacturers' training manuals and instructions be carried on board, which should be easily understood by the crew. Such manufacturers' manuals and instructions should be accessible for everyone on board and observed and followed closely during drills.

2.2 Guidance to the shipowner

2.2.1 The shipowner should ensure that new safety equipment on board the company's ships has been approved and installed in accordance with the provisions of the 1974 SOLAS Convention and the International Life-Saving Appliances (LSA) Code.

2.2.2 Procedures for holding safe drills should be included in the Safety Management System (SMS) of the shipping companies. Detailed procedures for elements of drills that involve a special risk should be evident from workplace assessments adjusted to the relevant life-saving appliance.

* Refer to SOLAS regulation III/19.3.1.

2.2.3 Personnel carrying out maintenance and repair work on lifeboats should be qualified accordingly.*

2.3 Lifeboats lowered by means of falls

2.3.1 During drills, those responsible should be alert for potentially dangerous conditions and situations and should bring them to the attention of the responsible person for appropriate action. Feedback and improvement recommendations to the shipowner, the Administration and the system manufacturer are important elements of the marine safety system.

2.3.2 When performing drills with persons on board a lifeboat, it is recommended that the boat first be lowered and recovered without persons on board to ascertain that the arrangement functions correctly. In this case, the boat should then be lowered into the water with only the number of persons on board necessary to operate the boat.

2.3.3 To prevent lashings or gripes from getting entangled, proper release should be checked before swinging out the davit.

2.4 Free-fall lifeboats

2.4.1 The monthly drills with free-fall lifeboats should be carried out according to the manufacturer's instructions, so that the persons who are to enter the boat in an emergency are trained to embark the boat, to take their seats in a correct way and to use the safety belts; and also are instructed on how to act during launching into the sea.

2.4.2 When the lifeboat is free-fall launched as part of a drill, this should be carried out with the minimum personnel required to manoeuvre the boat in the water and to recover it. The recovery operation should be carried out with special attention, bearing in mind the high risk level of this operation. Where permitted by SOLAS, simulated launching should be carried out in accordance with the manufacturer's instructions, taking due note of the Guidelines for simulated launching of free-fall lifeboats at appendix.

* Refer to the Guidelines for periodic servicing and maintenance of lifeboats, launching appliances and on-load release gear (see annex 1).

APPENDIX

GUIDELINES FOR SIMULATED LAUNCHING OF FREE-FALL LIFEBOATS

1 Definition

Simulated launching is a means of training the crew in the free-fall release procedure of free-fall lifeboats and in verifying the satisfactory function of the free-fall release system without allowing the lifeboat to fall into the sea.

2 Purpose and scope

The purpose of these Guidelines is to provide a basic outline of essential steps to safely carry out simulated launching. These Guidelines are general; the lifeboat manufacturer's instruction manual should always be consulted before conducting simulated launching. Simulated launching should only be carried out with lifeboats and launching appliances designed to accommodate it, and for which the manufacturer has provided instructions. Simulated launching should be carried out under the supervision of a responsible person who should be an officer experienced in such procedures.

3 Typical simulated launching sequence

3.1 Check equipment and documentation to ensure that all components of the lifeboat and launching appliance are in good operational condition.

3.2 Ensure that the restraining device(s) provided by the manufacturer for simulated launching are installed and secure and that the free-fall release mechanism is fully and correctly engaged.

3.3 Establish and maintain good communication between the assigned operating crew and the responsible person.

3.4 Disengage lashings, gripes, etc., installed to secure the lifeboat for sea or for maintenance, except those required for simulated free-fall.

3.5 Participating crew board the lifeboat and fasten their seatbelts under the supervision of the responsible person.

3.6 All crew, except the assigned operating crew, disembark the lifeboat. The assigned operating crew fully prepares the lifeboat for free-fall launch and secures themselves in their seats for the release operation.

3.7 The assigned operating crew activates the release mechanism when instructed by the responsible person. Ensure that the release mechanism operates satisfactorily and, if applicable, the lifeboat travels down the ramp to the distance specified in the manufacturer's instructions.

3.8 Resecure the lifeboat to its stowed position, using the means provided by the manufacturer and ensure that the free-fall release mechanism is fully and correctly engaged.

3.9 Repeat procedures from 3.7 above, using the back-up release mechanism when applicable.

3.10 The assigned operating crew disembarks the lifeboat.

3.11 Ensure that the lifeboat is returned to its normal stowed condition. Remove any restraining and/or recovery devices used only for the simulated launch procedure.

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