Guideline No.:L-08(201510)

# L-08 LIFEBOAT RELEASE MECHANISM

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Foreword:

This Guide is a part of CCS Rules, which contains technical requirements, inspection and testing criteria related to classification and statutory survey of marine products.

This Guide is published and updated by CCS and can be found through http://www.ccs.org.cn . Comments or suggestions can be sent by email to ps@ccs.org.cn .

Historical versions and release date :

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# LIFEBOAT RELEASE MECHANISM

## 1 Application

1.1 This Guideline is applicable to the approval and inspection of the release mechanisms of the following lifeboats equipped on ships engaged in international voyage: each lifeboat launched by one or more falls other than free fall lifeboats.

## 2 Normative references

2.1 The reference documents for approval and inspection of lifeboat release mechanisms described in this Guideline are as follows:

Chapter III of SOLAS 1974 and MSC.47(66), MSC.216(82), MSC.317(89)

Chapters I &IV of MSC.48(66) International Life-saving Appliances Code and MSC.218(82), MSC.320(89)

Section 6, Part 1 of MSC.81(70) Revised Recommendation on Testing of Life-saving Appliances and MSC.226(82), MSC.321(89)

## 3 Definitions

(1) Release mechanism of load over center type: a release mechanism which is held fully closed by the weight of the lifeboat;

(2) Cam type: a method utilizing the cam shaft to either directly or indirectly securing the tail of the movable hook component;

(3) Normal (off-load) release: release of the lifeboat when it is waterborne or when there is no load on the hooks, which does not require manual separation of the lifting ring or shackle from the jaw of the hook;

(4) On-load release: release of the lifeboat with a load on the hooks, which generally means the emergency release required in case of failure or when the boat has not reached the water surface.

**4 Drawings and documentation**

4.1 When the approval is being applied for, the following drawings and documentation are to be submitted to CCS for approval:

(1) Product main properties and specifications;

(2) General assembly drawing;

(3) Main parts diagram;

(4) Warning/operation/control instruction board and arrangement plan;

(5) Calculations;

(6) Type test plan.

4.2 When approval is being applied for, the following drawings and documentation to be submitted are to be submitted to CCS for review:

(1) Relevant main acceptance criteria;

(2) Technical specification for acceptance of delivered products;

(3) Product description (to include maintenance manual).

**5 Critical components**

5.1 The following critical parts, materials and equipment of the release mechanism are to be furnished with CCS certificates:

(1) Stainless steel materials (when applicable)

(2)Operating cables, hook release box (purchased), hook.

**6 Welding procedure qualification**

6.1 The welding procedure of critical welded structural members of the release mechanism is to be qualified by CCS prior to commencement of manufacturing.

## 7 Design and technical requirements

7.1 The release mechanisms are to be designed and manufactured at least in accordance with the applicable requirements of 2.1(1), (2) and (3) of this Guideline.

## 8 Type test

8.1 Selection of test specimens

(1) For type approval, the release mechanisms of each type and specification are to be type tested.

8.2 Type test items

**Type Test Items-Visual inspection Table 8.2(1)**

| No. | Test item | Technical requirements and test method |
|---|---|---|
| 1.1 | On-load release safety interlock | LSA4.4.7.6.2; LSA4.4.7.6.7.2 |
| 1.2 | Locking range (if applicable) | LSA4.4.7.6.3; |
| 1.3 | Boat hook weight transfer analysis | LSA4.4.7.6.4; |
| 1.4 | Stability of hook lock component | LSA4.4.7.6.5 |
| 1.5 | Boat hook reset indicator | LSA4.4.7.6.10 |
| 1.6 | Instructions for operation | LSA4.4.7.6.11 |
| 1.7 | Release control marks | LSA4.4.7.6.12 |
| 1.8 | The release mechanism is to be provided with auxiliary lifting point | LSA4.4.7.6.13 |
| 1.9 | Confirmation of material | LSA4.4.7.6.9 |

**Type Test Items-Performance Tests** **Table 8.2 (2)**

| No. | Test item | Technical requirements and test method |
|---|---|---|
| 2.1 | On-load release | MSC81(70)Part1 6.9.1; LSA4.4.7.6.7.2; |
| 2.2 | Normal (off-load) release | MSC81(70)Part1 6.9.2; LSA4.4.7.6.7.1 |
| 2.3 | Simulated towing and release test | MSC81(70)Part1 6.9.3； |
| 2.4 | Load test | MSC81(70)Part1 6.9.4.1； |
| 2.5 | Disassembly and inspection | MSC81(70)Part1 6.9.4.2； |
| 2.6 | Periodic load release test | MSC81(70)Part1 6.9.4.3； |
| 2.7 | Test of the starting force of the release mechanism after load test | MSC81(70)Part1 6.9.4.4； |
| 2.8 | Test of the starting force of new release mechanism | MSC81(70)Part1 6.9.5.1； |
| 2.9 | 6 times working load test | MSC81(70)Part1 6.9.5.2; LSA4.4.7.6.14 |

**Type Test Items-Additional Tests** **Table 8.2 (3)**

| No. | Test item | Technical requirements and test method |
|---|---|---|
| 3.1 | Hydrostatic interlock test | LSA4.4.7.6.6 |
| 3.2 | Boat hook reset force test | LSA4.4.7.6.8 |
| 3.3 | Test of the resistance of material to marine environmental erosion | MSC81(70)Part1 8.2.3; LSA4.4.7.6.9 |
| 3.4 | Hydrostatic interlock device and cable strength test | LSA4.4.7.6.15 |
| 3.5 | Operating cable strength test | LSA4.4.7.6.16 |

## 9 Unit/batch inspection

9.1 Sampling proportion

(1) Unit/batch inspection of lifeboat release mechanisms will not be carried out by CCS after approval and the lifeboat release mechanisms are to be furnished with CCS approval certificates and manufacturer quality certificates for installation on board.

(2) Where unit/batch inspection of some components is to be carried out, one test specimen of each type and specification is to be selected from the products qualified through manufacturer inspection/test.

9.2 Inspection and test items for components

(1) Each batch of components is to be subject to inspections and tests, such as visual and dimensional inspection.

(2) The boat hook is to be static load tested to 2.5 times working load.

(3) Operating cables are to be subject to push-pull force test and idle stroke test.

(4) Hook release box is to be subject to load release test and operating force test.

(5) Hook is to be subject to material tests.

(6) Additional test items may be included as deemed necessary by the surveyor.

(7) Material certificates are to be checked as required by 8.5.