

Evaluation and Modification Process of Release and Retrieval systems of Life Boats

According to new regulation III/1.5 added to SOLAS by resolution MSC 317(89), non-compliant release and retrieval systems in accordance with "LSA Code amended by resolution MSC 320(89)" shall be modified or replaced with compliant systems. Requirements about evaluation and replacement of lifeboat release and retrieval systems are defined by circular MSC.1/Circ.1392. Non-compliant/non-modified release systems shall be replaced not later than the next scheduled dry-docking after 1 July 2014. In this regard until 01.07.2019 -in five years period- non compliant hooks shall be modified or replaced.

LSA Code requirements about life boat release and retrieval systems for all ships (paragraphs 4.4.7.6.4 to 4.4.7.6.6):

- 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;
- locking devices shall be designed so that they cannot turn to open due to forces from the hook load; and
- if a hydrostatic interlock is provided, it shall automatically reset upon lifting the boat from the water.

Evaluation of existing release and retrieval systems on board according to MSC.1/Circ.1392 (Guidelines For Evaluation and Replacement of Lifeboat Release and Retrieval Systems)

Manufacturer shall make design review for all type of release and retrieval systems in accordance with guidelines. Then performance test shall be conducted in accordance with appendix 1 of guidance. The Administration should report the results of evaluation, based on the reporting procedure, as set out in appendix 3 of the guidelines to IMO. Depending on the outcome of the evaluation, every lifeboat release and retrieval system should be categorized as being compliant, compliant after modification or non-compliant.

Tests have been conducted by manufacturer according to Appendix 1:

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;

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

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

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.

Compliant type systems (compliant or compliant with modification) should be subject to an overhaul examination according to Annex 1 "*Guidelines for Periodic Servicing and Maintenance of Lifeboats, Launching Appliances and On-load Release Gear*" of MSC.1/Circ.1206/Rev.1 by the manufacturer or by one of their representatives, not later than the first scheduled dry-docking after 01.07.2014. The examination also includes

verification the system examined is of the same type as the system that passed the evaluation. The scope of the examination should also include a detailed assessment of the condition of the components of the 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 and keep on existing equipment, for retention on board.

Non-compliant type systems shall be replaced with a new system with on-load release capability. According to guidelines; lifeboat release and retrieval system should be replaced with equipment acceptable to the lifeboat manufacturer, where the manufacturer is unable the company may select alternative system. Replacement systems should be approved by Administration. Prior to installation determined information and drawings shall be reviewed and approved by the Administration or a recognized organization. The installation should be carried out by the manufacturer or by one of their representatives and all work carried out should be witnessed by the Administration, or by a recognized organization. Than post-installation tests (from resolution MSC 81(70)) determined in the guidelines should be carried out by the manufacturer or by one of their representatives, witnessed by the Administration or by a recognized organization. After all replacement procedure finalized the Administration, or a recognized organization should issue "Statement of Acceptance" for replaced release system in accordance with appendix of the guidelines.

Note: Evaluation process is determined with flow chart in the appendix of this document and appendix of the circular.

**EXISTING LIFEBOAT RELEASE AND RETRIEVAL SYSTEM
EVALUATION PROCESS FLOW CHART**

