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THÔNG BÁO KỸ THUẬT TÀU BIỂN
TECHNICAL INFORMATION ON SEA-GOING SHIPS

Ngày 29 tháng 9 năm 2016

Số thông báo: 035TI/16TB

Nội dung: Bảo dưỡng, kiểm tra kỹ lưỡng, thử hoạt động, tháo mở và sửa chữa xuồng cứu sinh, xuồng cấp cứu, thiết bị hạ xuồng và cơ cấu nhả theo quy định của Công ước SOLAS được sửa đổi, bổ sung bởi Nghị quyết MSC.404(96).

Kính gửi: Các cơ sở đóng, sửa chữa tàu biển

Các cơ sở sản xuất, sửa chữa, bảo dưỡng, thử, kiểm tra xuồng cứu sinh, xuồng cấp cứu, thiết bị hạ xuồng

Các chủ tàu/ công ty quản lý tàu biển

Các đơn vị đăng kiểm tàu biển

Tại khóa họp thứ 96 (tháng 5/2016), Ủy ban An toàn hàng hải (MSC) của Tổ chức Hàng hải quốc tế (IMO) đã thông qua Nghị quyết MSC.404(96) sửa đổi, bổ sung đối với Công ước quốc tế về an toàn sinh mạng con người trên biển năm 1974 (SOLAS); trong đó, đưa ra sửa đổi, bổ sung đối với Quy định III/3 và III/20 của SOLAS, yêu cầu việc bảo dưỡng, kiểm tra kỹ lưỡng, thử hoạt động, tháo mở và sửa chữa xuồng cứu sinh, xuồng cấp cứu, thiết bị hạ xuồng và cơ cấu nhả phải được thực hiện theo Nghị quyết MSC.402(96). Nghị quyết MSC.402(96) và MSC.404(96) có hiệu lực từ ngày 01/01/2020, áp dụng cho cả tàu mới và tàu hiện có.

Nghị quyết MSC.402(96) áp dụng cho việc bảo dưỡng, kiểm tra kỹ lưỡng, thử hoạt động, tháo mở và sửa chữa đối với:

1. Xuồng cứu sinh (bao gồm cả xuồng hạ rơi tự do), xuồng cấp cứu, xuồng cấp cứu nhanh; và

2. Thiết bị hạ và cơ cấu nhả có tải/không tải của xuồng cứu sinh (bao gồm cả phương tiện chính và thứ cấp của thiết bị hạ xuồng hạ rơi tự do), xuồng cấp cứu, xuồng cấp cứu nhanh và phao bè hạ bằng cần.

Yêu cầu đối người/cơ sở thực hiện các công việc liên quan như sau:

1. Việc kiểm tra hàng tuần, hàng tháng và bảo dưỡng thường xuyên theo sổ tay bảo dưỡng trang thiết bị phải được thực hiện bởi cơ sở cung cấp dịch vụ được ủy quyền, hoặc thuyền viên của tàu dưới sự chỉ đạo của sỹ quan cao cấp trên tàu phù hợp với sổ tay bản dưỡng.

2. Việc kiểm tra kỹ lưỡng hàng năm và thử hoạt động phải được thực hiện bởi người được chứng nhận của nhà sản xuất hoặc cơ sở cung cấp dịch vụ được ủy quyền. Nhà cung cấp dịch vụ được ủy quyền có thể là người khai thác tàu với điều kiện được ủy quyền thích hợp.

3. Việc kiểm tra kỹ lưỡng 5 năm, bất kỳ việc tháo mở, thử hoạt động quá tải và sửa chữa nào cũng phải được thực hiện bởi người được chứng nhận của nhà sản xuất hoặc cơ sở cung cấp dịch vụ được ủy quyền.

4. Những người thực hiện các công việc nêu tại 2. và 3. phải được chứng nhận bởi nhà sản xuất hoặc cơ sở cung cấp dịch vụ được ủy quyền phù hợp với mỗi kiểu loại trang thiết bị liên quan.

5. Nhà cung cấp dịch vụ được ủy quyền phải được cơ quan có thẩm quyền của quốc gia tàu mang cờ quốc tịch đánh giá và cấp tài liệu công nhận phù hợp với phạm vi cung cấp dịch vụ (ví dụ như kiểu loại trang thiết bị liên quan).

Chúng tôi xin gửi kèm theo Thông báo kỹ thuật này Nghị quyết MSC.402(96) và MSC.404(96) để các Quý Đơn vị lưu ý thực hiện theo đúng quy định.

Thông báo kỹ thuật này được nêu trong mục: *Thông báo của VR/ Thông báo kỹ thuật TB* của trang tin điện tử của Cục Đăng kiểm Việt Nam: <http://www.vr.org.vn>.

Nếu Quý Đơn vị cần thêm thông tin về vấn đề nêu trên, đề nghị vui lòng liên hệ:

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Xin gửi đến các Quý Đơn vị lời chào trân trọng./.

Nơi nhận:

- Như trên;
- Phòng QP, TB, CN, HTQT;
- Trung tâm VRQC, TH;
- Các chi cục đăng kiểm;
- Lưu TB./.

ANNEX 3

**RESOLUTION MSC.404(96)
(adopted on 19 May 2016)**

**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 ALSO article VIII(b) of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning the amendment procedure applicable to the annex to the Convention, other than to the provisions of chapter I,

HAVING CONSIDERED, at its ninety-sixth session, amendments to the Convention 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 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 2019, 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 the Secretary-General of their objections to the amendments;

3 INVITES Contracting Governments to the Convention to note that, in accordance with article VIII(b)(vii)(2) of the Convention, the amendments shall enter into force on 1 January 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of 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 REQUESTS ALSO 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 II-2
CONSTRUCTION – FIRE PROTECTION, FIRE DETECTION
AND FIRE EXTINCTION**

**PART A
GENERAL**

Regulation 3 – Definitions

1 The following new paragraphs are added after the existing paragraph 56:

"57 *Helicopter landing area* is an area on a ship designated for occasional or emergency landing of helicopters but not designed for routine helicopter operations.

58 *Winching area* is a pick-up area provided for the transfer by helicopter of personnel or stores to or from the ship, while the helicopter hovers above the deck.

**PART D
ESCAPE**

Regulation 13 – Means of escape

1 The footnote to the title of paragraph 3.2 is deleted.

2 The following new paragraphs are added after the existing paragraph 3.2.6.2:

"3.2.7 *Evacuation analysis for passenger ships**

3.2.7.1 Escape routes shall be evaluated by an evacuation analysis early in the design process. This analysis shall apply to:

- .1 ro-ro passenger ships constructed on or after 1 July 1999; and
- .2 other passenger ships constructed on or after 1 January 2020 carrying more than 36 passengers.

3.2.7.2 The analysis shall be used to identify and eliminate, as far as practicable, congestion which may develop during an abandonment, due to normal movement of passengers and crew along escape routes, including the possibility that crew may need to move along these routes in a direction opposite to the movement of passengers. In addition, the analysis shall be used to demonstrate that escape arrangements are sufficiently flexible to provide for the possibility that certain escape routes, assembly stations, embarkation stations or survival craft may not be available as a result of a casualty.

* Refer to the *Revised Guidelines on evacuation analyses for new and existing passenger ships* (MSC.1/Circ.1533), as may be amended."

3 Paragraph 7.4 is deleted.

PART G
SPECIAL REQUIREMENTS

Regulation 18 – Helicopter facilities

4 A new paragraph 2.3 is added after the existing paragraph 2.2, as follows:

"2.3 Notwithstanding the requirements of paragraph 2.2 above, ships constructed on or after 1 January 2020, having a helicopter landing area, shall be provided with foam firefighting appliances which comply with the relevant provisions of chapter 17 of the Fire Safety Systems Code."

and the subsequent paragraphs are renumbered accordingly.

5 The renumbered paragraph 2.4 is replaced with the following text:

"2.4 Notwithstanding the requirements of paragraph 2.2 or 2.3 above, ro-ro passenger ships without helidecks shall comply with regulation III/28."

6 A new paragraph 5.1.6 is added after the existing paragraph 5.1.5 as follows:

".6 in lieu of the requirements of paragraphs 5.1.3 through 5.1.5, on ships constructed on or after 1 January 2020 having a helideck, foam firefighting appliances which comply with the provisions of the Fire Safety Systems Code."

and the remaining paragraphs are renumbered accordingly.

CHAPTER III
LIFE-SAVING APPLIANCES AND ARRANGEMENTS

PART A
GENERAL

Regulation 3 – Definitions

7 The following new paragraph 25 is added after the existing paragraph 24:

"25 *Requirements for maintenance, thorough examination, operational testing, overhaul and repair* means the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear, adopted by the Maritime Safety Committee of the Organization by resolution MSC.402(96), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article VIII of the present Convention concerning the amendment procedures applicable to the annex other than chapter I."

PART B
REQUIREMENTS FOR SHIPS AND LIFE-SAVING APPLIANCES

Regulation 20 – Operational readiness, maintenance and inspections

- 8 The existing paragraph 3.1 is replaced with the following text:
- "3.1 Maintenance, testing and inspections of life-saving appliances shall be carried out in a manner having due regard to ensuring reliability of such appliances."
- 9 The existing paragraph 11 is replaced with the following text:
- "11 **Maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats and fast rescue boats, launching appliances and release gear**
- 11.1 **Launching appliances shall be:**
- .1 subject to a thorough examination at the annual surveys required by regulations I/7 or I/8, as applicable; and
- .2 upon completion of the examination referred to in paragraph 11.1.1, subjected to a dynamic test of the winch brake at maximum lowering speed. The load to be applied shall be the mass of the survival craft or rescue boat without persons on board, except that, at intervals of at least once every five years, the test shall be carried out with 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.
- 11.2 **Lifeboat and rescue boat release gear, including fast rescue boat release gear and free-fall lifeboat release systems, shall be:**
- .1 subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8;
- .2 in case of on-load release gear, operationally tested under a load of 1.1 times the total mass of the boat when loaded with its full complement of persons and equipment whenever the release gear is overhauled. Such overhauling and operational test shall be carried out at least once every five years;* and
- .3 notwithstanding paragraph 11.2.2, the operational testing of free-fall lifeboat release systems shall be performed either by free fall launch with only the operating crew on board or by a test without launching the lifeboat carried out based on Requirements for maintenance, thorough examination, operational testing, overhaul and repair.

* Refer to *Recommendation on testing of life-saving appliances* (resolution A.689(17)), as amended. For life-saving appliances installed on board on or after 1 July 1999, refer to *Revised Recommendations on testing of life-saving appliances* (resolution MSC.81(70)), as amended.

- 11.3 Davit-launched liferaft automatic release hooks shall be:
- .1 subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8; and
 - .2 operationally tested under a load of 1.1 times the total mass of the liferaft when loaded with its full complement of persons and equipment whenever the automatic release hook is overhauled. Such overhauling and operational test shall be carried out at least once every five years.*
- 11.4 Lifeboats and rescue boats, including fast rescue boats, shall be subject to a thorough examination and operational test during the annual surveys required by regulations I/7 and I/8.
- 11.5 The thorough examination, operational testing and overhaul required by paragraphs 11.1 to 11.4 and the maintenance and repair of equipment specified in paragraphs 11.1 to 11.4 shall be carried out in accordance with the Requirements for maintenance, thorough examination, operational testing, overhaul and repair, and the instructions for onboard maintenance as required by regulation 36.

* Refer to *Recommendation on testing of life-saving appliances* (resolution A.689(17)), as amended. For life-saving appliances installed on board on or after 1 July 1999, refer to *Revised Recommendations on testing of life-saving appliances* (resolution MSC.81(70)), as amended."

ANNEX 1

**RESOLUTION MSC.402(96)
(adopted on 19 May 2016)**

REQUIREMENTS FOR MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR

THE MARITIME SAFETY COMMITTEE,

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

RECALLING ALSO the *Measures to prevent accidents with lifeboats* (MSC.1/Circ.1206/Rev.1) and the *Interim recommendation on conditions for authorization of service providers for lifeboats, launching appliances and on-load release gear* (MSC.1/Circ.1277) approved by it,

RECOGNIZING the need to establish a uniform, safe and documented standard for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats (including free-fall lifeboats) and rescue boats (including fast rescue boats), launching appliances and release gear,

NOTING that, by resolution MSC.404(96), it adopted amendments to regulations III/3 and III/20 of the International Convention for the Safety of Life at Sea, 1974 ("the Convention"), concerning maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear,

NOTING ALSO that the aforementioned regulation III/20 of the Convention provides that the maintenance, thorough examination, operational testing, overhaul and repair shall be carried out in accordance with the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear ("the Requirements"),

HAVING CONSIDERED, at its ninety-sixth session, the recommendation made by the Sub-Committee on Ship Systems and Equipment, at its third session,

1 ADOPTS the Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear, the text of which is set out in the annex to the present resolution;

2 INVITES Contracting Governments to the Convention to note that the Requirements will take effect on 1 January 2020 upon entry into force of the associated amendments to regulations III/3 and III/20 of the Convention;

3 ALSO INVITES Contracting Governments to the Convention to take measures they consider appropriate to ensure that national manufacturers of equipment certified under chapter III of the Convention for installation and use on board ships undertake to ensure that equipment, instructions, specialized tools, spare parts, training and accessories, as required, are available to independent service providers in a timely and cost-effective manner;

4 REQUESTS the Secretary-General to transmit certified copies of this resolution and the text of the Requirements contained in the annex to all Contracting Governments to the Convention;

5 REQUESTS ALSO the Secretary-General to transmit copies of this resolution and the annex to all Members of the Organization which are not Contracting Governments to the Convention.

ANNEX

REQUIREMENTS FOR MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR OF LIFEBOATS AND RESCUE BOATS, LAUNCHING APPLIANCES AND RELEASE GEAR

1 GENERAL

1.1 The objective of these Requirements for maintenance, thorough examination, operational testing, overhaul and repair of lifeboats and rescue boats, launching appliances and release gear (the Requirements) is to establish a uniform, safe and documented standard for maintenance, thorough examination, operational testing, overhaul and repair of the equipment specified in paragraph 2.1.

1.2 The detailed procedures covered by these Requirements are provided in section 6.

1.3 These Requirements relate to the following regulations:

- .1 SOLAS regulation III/20 – Operational readiness, maintenance and inspections; and
- .2 SOLAS regulation III/36 – Instructions for onboard maintenance.

1.4 The Company¹ shall ensure that maintenance, thorough examination, operational testing, overhaul and repair on board its ships is conducted in accordance with these Requirements and SOLAS regulation III/20. The Company shall establish and implement health, safety and environment (HSE) procedures covering all activities set out in these Requirements.

1.5 The personnel carrying out maintenance, thorough examination, operational testing overhaul and repair as described in paragraphs 4.2 and 4.3 shall be certified by an authorized service provider in accordance with the requirements specified in section 8. When performing such activities on board ships they shall comply with health, safety and environment (HSE) instructions and procedures established by the Company.

2 APPLICATION

2.1 These Requirements shall apply to the maintenance, thorough examination, operational testing, overhaul and repair of:

- .1 lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats; and
- .2 launching appliances and on-load and off-load release gear for lifeboats (including primary and secondary means of launching appliances for free-fall lifeboats), rescue boats, fast rescue boats and davit-launched liferafts.

2.2 For the purpose of these Requirements:

- .1 *Authorized service provider* means an entity authorized by the Administration in accordance with section 3 and section 7.

¹ For the purpose of these Requirements, Company is as defined in SOLAS regulation IX/1.2.

- .2 *Equipment* means the aforementioned equipment to which the Requirements apply.
- .3 *Manufacturer* means the original equipment manufacturer or any entity which has taken legal and legitimate responsibilities for equipment when the original equipment manufacturer no longer exists or supports the equipment.
- .4 *Off-load release mechanism* means a release mechanism which releases the survival craft/rescue boat/fast rescue boat when it is waterborne or when there is no load on the hooks.
- .5 *On-load release mechanism* means a release mechanism which releases the survival craft/rescue boat/fast rescue boat with load on the hooks.
- .6 *Repair* means any activities requiring disassembly of equipment, or any other activities outside the scope of the instructions for on-board maintenance and for emergency repair of life-saving appliances prepared in accordance with SOLAS regulations III/36.2 and III/35.3.18, respectively.
- .7 *Overhaul* means a periodical activity defined by the manufacturer that proves continued fitness for purpose for a defined period subject to correct maintenance.

3 AUTHORIZATION

3.1 Administrations shall ensure that the thorough examination, operational testing, repair and overhaul of equipment (see paragraphs 4.2 and 4.3) shall be carried out in accordance with SOLAS regulation III/20 by service providers authorized in accordance with section 7.

3.2 The requirements in section 7 shall equally apply to manufacturers when they are acting as authorized service providers.

4 QUALIFICATION LEVELS AND CERTIFICATION

4.1 Weekly and monthly inspections and routine maintenance as specified in the equipment maintenance manual(s), shall be conducted by authorized service providers, or by shipboard personnel under the direction of a senior ship's officer in accordance with the maintenance manual(s).

4.2 Annual thorough examinations and operational tests, as described in section 6.2, shall be conducted by certified personnel of either the manufacturer or an authorized service provider in accordance with section 7 and section 8. The service provider may be the ship operator provided that it is authorized in accordance with section 3 and section 7.

4.3 Five-year thorough examination, any overhaul, overload operational tests², as described in section 6.3, and repair shall be conducted by certified personnel of either the manufacturer or an authorized service provider in accordance with section 7 and section 8.

² See SOLAS regulations III/20.11.1.2, III/20.11.2.2 and III/20.11.3.2.

5 REPORTS AND RECORDS

5.1 All reports and checklists shall be completed and signed by the person who carries out the inspection and maintenance work and countersigned by the Company's representative or the ship's master.

5.2 Records of maintenance, thorough examination, operational testing, overhaul and repair shall be updated and filed on board the ship for the service life of the equipment.

5.3 When thorough examination, operational testing, overhaul and repair are completed, a statement confirming that the lifeboat arrangements remain fit for purpose shall be promptly issued by the manufacturer or authorized service provider that conducted the work. A copy of valid documents of certification and authorization as appropriate shall be included with the statement.

6 SPECIFIC PROCEDURES FOR INSPECTION, MAINTENANCE, THOROUGH EXAMINATION, OPERATIONAL TESTING, OVERHAUL AND REPAIR

6.1 General/Maintenance

6.1.1 Any inspection, maintenance, thorough examination, operational testing, overhaul and repair shall be carried out according to the maintenance manuals and associated technical documentation developed by the manufacturer.

6.1.2 A full set of maintenance manuals and associated technical documentation as specified in paragraph 6.1.1 shall be available on board.

6.1.3 The maintenance manuals and associated technical documentation as specified in paragraph 6.1.1 shall include the items listed in sections 6.2 and 6.3 as a minimum and shall be kept up to date by the Company taking into account relevant information provided by the manufacturer.

6.2 Annual thorough examination and operational test

6.2.1 All items listed in checklists for the weekly/monthly inspections required by SOLAS regulations III/20.6 and III/20.7 also form the first part of the annual thorough examination.

6.2.2 Records of inspections and routine on-board maintenance carried out by the ship's crew and the applicable certificates for the equipment shall be reviewed.

6.2.3 For lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats, the following items shall be thoroughly examined and checked for satisfactory condition and operation:

- .1 condition of the boat structure including fixed and loose equipment (including a visual examination of the external boundaries of the void spaces, as far as practicable);
- .2 engine and propulsion system;
- .3 sprinkler system, where fitted;
- .4 air supply system, where fitted;

- .5 manoeuvring system;
- .6 power supply system;
- .7 bailing system;
- .8 fender/skate arrangements; and
- .9 rescue boat righting system, where fitted.

6.2.4 For release gear of lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts, the following shall be thoroughly examined for satisfactory condition³ and operation after the annual operational test of the winch brake with the empty boat or equivalent load, as required by paragraph 6.2.10:

- .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 lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and davit launched liferafts. Utmost care shall be taken when carrying out all inspection and maintenance operations on the equipment.

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

6.2.5 The operational test of davit-launched lifeboats' and rescue boats' on-load release function shall be carried out as follows:

- .1 position the boat partially in 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.

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. 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 operational test of the winch brake. Special consideration shall be given to ensure that no damage has occurred during the winch brake test, especially to the hook fastening.

6.2.6 The operational test of davit-launched lifeboats' and rescue boats' off-load release function shall be carried out as follows:

- .1 position the boat so that it is fully waterborne;
- .2 operate the off-load release gear;
- .3 reset the off-load release gear; and
- .4 recover the boat to the stowed position and prepare for operational readiness.

During the test, prior to hoisting, it shall be checked that the release gear is completely and properly reset. The final turning-in of the boat shall be done without any persons on board.

6.2.7 The operational test of the free-fall lifeboat release function shall be carried out as follows:

- .1 engage the arrangements for the test without launching the lifeboat, required by paragraph 4.7.6.4 of the LSA Code, as specified in the manufacturer's operating instructions;
- .2 if required to be on board, ensure that the operator is 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 the procedures referred to in .2 to .4 above, using the back-up release mechanism, if applicable;
- .6 remove the arrangements for the test without launching the lifeboat, required by paragraph 4.7.6.4 of the LSA Code; and
- .7 verify that the lifeboat is in the ready to launch stowed configuration.

6.2.8 The operational test of the davit-launched liferaft automatic release function shall be carried out as follows:

- .1 manually release the hook with a load of 150 kg on the hook;
- .2 automatically release the hook with a dummy weight of 200 kg on the hook when it is lowered to the ground; and
- .3 examine the release hook and hook fastening to ensure that the hook is completely reset and no damage has occurred.

If a raft is used for the test instead of a dummy weight, the automatic release function shall release the raft when waterborne.

6.2.9 For launching appliances for lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts, the following items shall be examined for satisfactory condition and operation:

- .1 davit or other launching structures, in particular with regard to corrosion, misalignments, deformation and excessive free play;
- .2 wires and sheaves, possible damage such as kinks and corrosion;
- .3 lubrication of wires, sheaves and moving parts; and
- .4 if applicable:
 - .1 functioning of limit switches;
 - .2 stored power systems;
 - .3 hydraulic systems; and
- .5 for winches:
 - .1 inspecting the braking system in accordance with winch manual;
 - .2 replacing brake pads, when necessary;
 - .3 winch foundation; and
 - .4 if applicable:
 - .1 remote control system; and
 - .2 power supply system.

6.2.10 For winches of the launching appliances for lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts, annual operational testing shall be done by lowering the empty craft or boat or equivalent load. When the craft has reached its maximum lowering speed and before the craft enters the water, the brake shall be abruptly applied. Following these tests, the stressed structural parts shall be reinspected⁴ where the structure permits the reinspection.

6.3 Five-year thorough examination, overhaul and overload operational tests

6.3.1 The five-year operational test of the winches of the launching appliances shall be carried out with 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. When the proof load has reached its maximum lowering speed, the brake shall be abruptly applied.

6.3.2 Following these tests, the stressed structural parts shall be reinspected⁴ where the structure permits the reinspection.

⁴ In loading the craft or boat for this test, precautions should be taken to ensure that the stability of the craft or boat is not adversely affected by free surface effects or the raising of the centre of gravity.

6.3.3 The operational tests and overhaul at five-year intervals of release gear for lifeboats (including free-fall lifeboats), rescue boats, fast rescue boats and liferafts shall include:

- .1 dismantling of hook release units;
- .2 examinations with regard to tolerances and design requirements;
- .3 adjustment of release gear system after assembly;
- .4 operational tests as per paragraphs 6.2.5, 6.2.6, 6.2.7 or 6.2.8 above, as applicable, but with a load equal to 1.1 times the weight of the survival craft or rescue boat and its full complement of persons and equipment; and
- .5 examinations of vital parts with regard to defects and cracks⁵.

6.3.4 Any other overhaul if required shall be carried out in accordance with paragraph 6.3.3.

7 REQUIREMENTS FOR AUTHORIZATION OF SERVICE PROVIDERS

7.1 Authorization as required by paragraph 3.1 shall include, as a minimum, demonstration of:

- .1 employment and documentation of personnel certified in accordance with a recognized national, international or industry standard as applicable, or a manufacturer's established certification programme. In either case, the certification programme shall comply with section 8 for each make and type of equipment for which service is to be provided;
- .2 availability of sufficient tools, and in particular any specialized tools specified in the manufacturer's instructions, including portable tools as needed for work to be carried out on board ship;
- .3 access to appropriate parts and accessories as specified for maintenance and repair;
- .4 availability of the manufacturer's instructions for repair work involving disassembly or adjustment of on-load release mechanisms and davit winches; and
- .5 a documented and certified quality system, which covers at least the following:
 - .1 code of conduct for personnel involved in the relevant activity;
 - .2 maintenance and calibration of measuring tools and gauges;
 - .3 training programmes for personnel;
 - .4 supervision and verification to ensure compliance with operational procedures;
 - .5 recording and reporting of information;

⁵ Non-destructive examination (NDE) techniques, such as dye penetrants (DPE), may be suitable.

- .6 quality management of subsidiaries and agents;
- .7 job preparation; and
- .8 periodic review of work process procedures, complaints, corrective actions and issuance, maintenance and control of documents.

Note: A documented quality system complying with the most current version of the ISO 9000 series and including the above items would be considered acceptable.

7.2 Administrations shall ensure that information regarding authorized service providers is made available.

7.3 In cases where a manufacturer is no longer in business or no longer provides technical support, Administrations may authorize service providers for the equipment on the basis of prior authorization for the equipment and/or long-term experience and demonstrated expertise as an authorized service provider.

7.4 Issuance and maintenance of authorization document:

- .1 upon successful initial audit of a service provider, an authorization document shall be issued by the Administration defining the scope of services provided (e.g. makes and types of equipment). The expiry date shall be clearly written on the document;
- .2 the Administration shall ensure that work continues, e.g. by periodic audit, to be carried out in accordance with these Requirements, and shall withdraw the authorization of service providers who are not in compliance; and
- .3 the Administration may accept or recognize service providers authorized by other Administrations or by their Recognized Organizations.

8 REQUIREMENTS FOR CERTIFICATION OF PERSONNEL

8.1 Personnel for the work specified in paragraphs 4.2 and 4.3 shall be certified by the manufacturer or authorized service provider for each make and type of the equipment to be worked on in accordance with the provisions in this section.

8.2 Education and training

8.2.1 Initial certification shall be issued only to personnel having completed education, training and competence assessment. Education shall address, as a minimum:

- .1 relevant rules and regulations, including international conventions;
- .2 design and construction of lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats, including on-load release gear and launching appliances;
- .3 causes of lifeboat and rescue boat accidents;
- .4 education and practical training in the procedures specified in section 6 for which certification is sought;

- .5 detailed procedures for thorough examination, operational testing, repair and overhaul of lifeboat (including free-fall lifeboats), rescue boats and fast rescue boats, launching appliances and on-load release gear, as applicable;
- .6 procedures for issuing a report of service and statement of fitness for purpose based on paragraph 5.3; and
- .7 work, health and safety issues while conducting activities on board.

8.2.2 Training shall include practical technical training on thorough examination, operational testing, maintenance, repair and overhaul techniques using the equipment for which the personnel are to be certified. The technical training shall include disassembly, reassembly, correct operation and adjustment of the equipment. Classroom training shall be supplemented by field experience in the operations for which certification is sought, under the supervision of a certified person.

8.2.3 Prior to issuance of certification, a competency assessment shall be satisfactorily completed, using the equipment for which the personnel are to be certified.

8.3 Validity of certificates and renewal

8.3.1 Upon completion of training and competency assessment, a certificate shall be issued defining the level of qualification and the scope of the certification (i.e. makes and types of equipment and specifically state which activities in paragraphs 4.2 and 4.3 are covered by the certification). The expiry date shall clearly be written on the certificate and shall be three years from the date of issue. The validity of any certificate shall be suspended in the event of any shortfall in performance and only revalidated after a further competency assessment.

8.3.2 A competency assessment shall be conducted to renew the certification. In cases where refresher training is found necessary a further assessment shall be carried out after completion.
