

SCHEDULE 6

LAUNCHING APPLIANCES AND EMBARKATION LADDERS Regulations 2(3), 5 and 6

PART II

LIFEBOAT AND RESUE BOAT LAUNCHING APPLIANCES

General

Definition of “Working Load”

1.

1.1. In this Part the expression “Working Load” means:

(1.1.1) in relation to davits to which paragraphs 2.1 and 2.2 apply, the sum of the weight of the lifeboat, its full equipment, the blocks and falls, and the maximum number of persons which the lifeboat is deemed fit to carry, the weight of each person being taken to be 75 kg.;

(1.1.2) in relation to winches the maximum pull exerted by the fall or falls at the winch drum during lowering, hoisting or stowing which in any case is to be taken as not less than the working load on the davit or davits divided by the velocity ratio of the lowering tackle.

Construction

General

2.

2.1. Every set of davits for a lifeboat or rescue boat shall be so constructed that a minimum amount of routine maintenance is necessary. All parts requiring regular maintenance by the ship’s crew shall be readily accessible and easily maintained.

2.2. A set of davits for a lifeboat and rescue boat shall not depend on any means other than gravity or stored mechanical power which is independent of the ship’s power supplies to launch the lifeboat or rescue boat it serves in the fully loaded and equipped condition and also in the light condition. If the rescue boat is dedicated rescue boat the mechanical power need not be independent of the ship’s power supplies.

2.3. The arrangements of the davits shall be such as to enable safe boarding of the lifeboat in accordance with the requirements of paragraph 3.11 of Part I of Schedule 1.

2.4. If partially enclosed lifeboats are carried, a davit span shall be provided, fitted with not less than two lifelines of sufficient length to reach the water with the ship in its lightest seagoing condition, under unfavourable conditions of trim and with the ship listed not less than 20° either way.

Strength

3.

3.1. Every davit serving a lifeboat which is required to be boarded and launched from the stowed position and put into the water when loaded with its full complement of persons shall, together with its winch, falls, blocks and all other associated launching equipment, be of such strength that the

lifeboat with its full equipment can be turned out and then safely lowered into the water from the stowed position with its full complement of persons, when the ship has a list of up to 20° either way and a trim up to 10°.

3.2. Every davit serving a lifeboat which is required to be boarded and launched from an embarkation position and put into water when loaded with its full complement of persons shall, together with its winch, falls, blocks and all other associated lowering gear, be of such strength that the lifeboat with its full equipment and manned by a launching crew of not less than two persons can be turned out and then safely lowered into the water from the embarkation position with its full complement of persons, when the ship has a list of up to 20° either way and a trim of up to 10°.

3.3. Every set of davits, davit or other means of launching to which a lifeboat is attached, together with its winch and associated gear shall be of such strength that the lifeboat can be hoisted with launching crew of at least two persons and its full equipment at a rate of not less than 0.05 metre per second when a powered winch is fitted. When an unpowered winch is fitted the hoisting rate shall be not less than 0.01 metre per second.

3.4. Every set of davits, davit or other means of launching to which a rescue boat is attached shall be fitted with a powered winch and shall, together with its associated gear, be of such strength that the boat to which it is attached can be hoisted when loaded with its full rescue boat complement of persons and equipment at a rate of not less than 0.3 metre per second. When a lifeboat is designated as a rescue boat, the davits, davit or other means of launching shall be capable of hoisting the boat to a disembarkation position at a rate of not less than 0.3 metre per second when loaded with its full rescue boat complement, or 6 persons whichever is the greater, and its full lifeboat equipment.

Gravity davits

4.

4.1. All gravity davits shall be so designed that there is a positive turning out moment during the whole of the davit travel from the inboard to the outboard position when the vessel is upright and also when the vessel is listed at any angle up to and including 30° either way from upright, or 10° more than the angle required by paragraph 1.2 of Part I of this Schedule. In the case of gravity type davits comprising arms mounted on rollers which engage with and travel down fixed inclined trackways, the trackways shall be inclined at an angle of not less than 35° to the horizontal when the vessel is upright.

Luffing davits

5.

5.1. The operating gear of all luffing type davits shall be of sufficient power to ensure that the lifeboats or rescue boats fully equipped and carrying:

(5.1.1) the total number of persons they are certified to carry; or

(5.1.2) a launching crew of not less than two persons when boarded at an embarkation deck can be turned out against a list of at least 20°.

Stresses

6.

6.1. Structural members and all block falls, padeyes, links, fastenings and all other fittings used in connection with launching equipment shall be designed with not less than a minimum factor of safety on the basis of the maximum working load assigned and the ultimate strength of the material used for construction. A minimum factor of safety of 4.5 shall be applied to all davit and winch

structural members, and bowing tackle and tricing pendants where required and a minimum factor of safety of 6 shall be applied to falls, suspension chains, links and blocks.

Static load test

7.

7.1. Each davit, and its attachments, shall, with its arm in any position which gives a maximum stress concentration be capable of withstanding a static test load, in a direction simulating a 20° list or such greater angle as required by paragraph 2.1 of Part I of this Schedule and 10° trim, of not less than 2.2 times that part of the working load supported by the arm, or attachment.

Attachments at the davit head

8.

8.1. The attachments at the davit head from which the blocks are suspended shall be capable of withstanding a proof load test of not less than 2.2 times the maximum load on them.

Blocks

9.

9.1. Lower blocks, when fitted, shall be non-toppling and in the case of rescue boats provision shall be made to prevent the falls from cabling. The size of blocks shall be commensurate with the size of the falls.

9.2. The blocks shall be capable of withstanding a proof load test of not less than 2.2 times the maximum load it is intended to carry in service. The clearance between the sheaves and the cheeks of the blocks in which wire rope is used shall be kept to a practical minimum to prevent the rope from overriding the rim of the sheave of any block or load sheave. Component parts of blocks other than their sheaves shall be of ductile material.

Wire ropes

10.

10.1. Falls shall be of rotation-resistant and corrosion-resistant steel wire rope.

10.2. The breaking tensile load of each wire rope used for lowering lifeboats or rescue boats shall be not less than six times the maximum load on the wire rope when lowering, hoisting or stowing.

10.3. Wire ropes shall be securely attached to the drum of the winch, and the end attachments of the wires and other parts from which the lifeboat or rescue boat is to be suspended shall be capable of withstanding a proof load of not less than 2.2 times the load on such attachments and other parts.

10.4. Where wire rope splices or ferrule-secured eye terminals are used they shall be capable of withstanding a proof test of not less than 2.2 times the load imposed on them in service.

10.5. Lifeboats and rescue boats attached to davits shall have the falls ready for service, and the falls shall be at least long enough to reach the water with the ship at her lightest sea-going draught under unfavourable conditions of trim and listed to 20° either way. Disengaging gear complying with the requirements of Part III of Schedule 1 or Part IV of Schedule 2, shall be provided for detaching the lifeboat or rescue boat from the falls.

Winches

11.

11.1. In the case of a multiple drum winch, unless an efficient compensatory device is fitted, the falls shall be so arranged as to wind off the drums at the same rate when lowering, and to wind on to the drums evenly at the same angle when hoisting and the lead blocks shall be arranged to give a fleet angle or angle of lead of not more than five degrees for grooved drums and three degrees for ungrooved drums. In the case of mechanically controlled single-arm davits, the lead of the wire rope fall shall be such that the fall winds evenly on the drum.

11.2. Winch breaks shall be of robust construction and afford complete control and limitation of speed in the operation of lowering. The hand brake shall be so arranged that it is normally in the "ON" position and returns to the "ON" position when the control handle is not being operated. The mass of the brake lever shall be sufficient to operate the brake effectively without additional pressure. The winch brakes shall be of sufficient strength to withstand:

(11.2.1) a static test with a proof load of not less than 1.5 times the maximum working load; and

(11.2.2) a dynamic test with a proof load of not less than 1.1 times the maximum working load at maximum lowering speed.

11.3. The speed at which the fully laden lifeboat or rescue boat with its equipment and launching crew is lowered into the water shall be not less than that obtained from the formula:

$$S = 0.4 + (0.02 \times H)$$

where

S= speed of lowering in metres per second and

H= height in metres from davit head, at the outboard position, to the waterline at the lightest seagoing condition.

In the case of a ship where "H" exceeds 30 metres the lowering speeds need not exceed 1 metre per second. The lowering speed of the light craft shall be within 70% of the speed required above.

11.4. Notwithstanding the requirements of paragraph 11.3 the speed of lowering shall not exceed 1.3 metres per second.

11.5. The brake gear of the winch shall include means for automatically controlling the speed of lowering to within the limits specified in paragraphs 11.3 and 11.4. A ratchet gear shall be incorporated in these winches.

11.6. Hand gear handles shall not be rotated by moving parts of the winch when the lifeboat or rescue boat is being lowered or when it is being hoisted by power. Provision shall be made to allow the falls to be manually unwound.

11.7. The launching mechanism shall be so arranged that it may be actuated by one person from a position on the ship's deck. The launching and recovery arrangements shall be such that the winch operator on the ship's deck is able to observe the craft at all times during launching and recovery.