

SCHEDULE 15

DAVITS AND LIFEBOAT LAUNCHING GEAR

Rule 96(9)

PART I

GENERAL

Definition of “working load”. In this Schedule the expression “working load” means—

- (a) in relation to davits to which sub-paragraph (a) of paragraph 1 of Part II of this Schedule applies, 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 kilogrammes;
- (b) in relation to davits and other means of launching to which sub-paragraph (b) or (c) of paragraph 1 of Part II of this Schedule applies, the sum of the weight of the lifeboat, Class C boat or other boat, its full equipment, the blocks and falls, and a launching crew consisting of two persons, the weight of each person being taken to be 75 kilogrammes;
- (c) 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.

PART II

CONSTRUCTION

1. Strength.

- (a) Every davit serving a lifeboat which is required by Rule 96(1) of these Rules to be put into the 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 vessel has a trim of up to 10 degrees and is listed up to 15 degrees either way.
- (b) Every mechanically controlled single-arm davit shall, together with its winch, falls, blocks and all other associated lowering gear be of such strength and the operating gear shall be of such power that the lifeboat when fully equipped and manned with a launching crew of two members can be turned out and then safely lowered into the water with the vessel listed to 25 degrees.
- (c) Every set of davits, davit or other means of launching to which a lifeboat, Class C boat or other boat is attached, other than a davit the strength of which is specified in sub-paragraph (a) or (b) above, shall, together with its winch, falls, blocks and all other associated lowering gear be of such strength that the lifeboat, Class C boat or other boat with its full equipment and manned by a launching crew of two members, can be turned out and then safely lowered into the water when the vessel has a trim of 10 degrees and is listed up to 15 degrees either way.
- (d) Every set of davits, davit or other means of launching to which a lifeboat, Class C boat or other boat is attached, together with its winch and all associated hoisting gear shall be of such strength that the boat can be safely hoisted and stowed when loaded with its full

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equipment and at least two persons, and in addition, in the case of an emergency lifeboat, that it can be safely hoisted from the water to the embarkation deck at a speed of not less than 18 metres per minute when loaded with its full equipment and a distributed load of 1 tonne.

2. Gravity davits. 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 25 degrees either way from upright.

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 30 degrees to the horizontal when the vessel is upright:

3. Luffing davits. The operating gear of all luffing type davits shall be of sufficient power to ensure that the lifeboats, Class C boats or other boats fully equipped and manned with the launching crew, but not loaded with other persons, can be turned out against a list of at least 15 degrees.

4. Mechanically controlled single-arm davits. The working load of any mechanically controlled single-arm davit shall not exceed 1.5 tonnes.

5. Stresses.

(a) In the case of davits other than mechanically controlled single-arm davits the designed stress on the davit arms, when operating under maximum load and conditions of trim and of list, shall afford an adequate factor of safety having regard to the quality of the material used, the method of construction and the live nature of the load to which the davits are subjected.

(b) In the case of mechanically controlled single-arm davits the designed stress on the davit when operating under maximum load and conditions of favourable list shall afford an adequate factor of safety having regard to the quality of the material used, the method of construction and the live nature of the load to which the davit is subjected.

6. Static load test. Each davit with its arm at full out-reach shall be capable of withstanding a static load test of not less than 2.2 times that part of the working load supported by the arm.

7. Attachments at the davit head. 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 2½ times the maximum load on the attachments.

8. Blocks.

(a) All blocks used in the operation of hoisting and lowering of lifeboats, Class C boats or other boats shall be of a design that affords an adequate factor of safety. Lower blocks, when fitted, shall be non-toppling and in the case of emergency lifeboats, provision shall be made to prevent the falls from cabling. The size of blocks shall be commensurate with the size of the falls.

(b) A metal block shall be capable of withstanding a proof load test of not less than 2½ times the maximum load it is intended to carry in service. The clearance between the sheaves and the block cheeks of metal blocks in which wire rope is used shall be kept to a practical minimum that will prevent the rope from overriding the rim of the sheave of any block or lead sheave. Component parts of blocks other than their sheaves shall be of ductile material.

(c) A wood block shall be capable of withstanding a proof load of not less than 2½ times the load on the block. The width between the cheeks shall be 10 millimetres greater than the diameter of new cordage ropes when those ropes are 95 millimetres in circumference, and less in proportion to the circumference of the ropes when they are smaller.

9. Wire ropes.

- (a) The breaking tensile load of each wire rope used for lowering lifeboats, Class C boats or other boats shall be not less than six times the maximum load on the wire rope when lowering, hoisting or stowing.
- (b) Wire ropes shall be securely attached to the drum of the winch, and the end attachment of the wires and other parts from which the lifeboat, Class C boat or other boat is to be suspended shall be capable of withstanding a proof load of not less than 2½ times the load on such attachments and other parts.
- (c) Where wire rope splices or ferrule-secured eye terminals are used they shall be capable of withstanding a proof test of not less than 2½ times the load imposed on them in service unless samples representing each size of wire on which they are used show a factor of safety of at least 5 when tested to destruction.

10. Winches.

- (a) In the case of davits other than mechanically controlled single-arm davits, winch drums shall be arranged to keep the two falls separate and to enable them to pay out at the same rate. The leads of the wire ropes shall be such that they will wind evenly on the drums and 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.
- (b) Winch brakes 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 weight on the brake lever shall be sufficient to operate the brake effectively without additional pressure. The brake gear shall include means for automatically controlling the speed of lowering to ensure that the lifeboat, Class C boat or other boat is lowered expeditiously without exceeding a rate of lowering consistent with safety. For this purpose, the automatic brake shall be set to give a speed of lowering of the lifeboat of between 18 and 36 metres per minute. Ratchet gear shall be incorporated in the hand brake mechanism of lifeboat winches. Where practicable the brake gear shall be so situated as to enable the man operating the winch to have the lifeboat, Class C boat or other boat under observation during the whole process of its being launched into the water, provided that winches serving emergency lifeboats shall in any case be so placed.
- (c) Each winch shall be capable of lowering and holding a test load of 1.5 times the working load as defined in paragraph (c) of Part I of this Schedule.
- (d) Winches shall be so constructed that the crank handle or handles are not rotated by moving parts of the winch when the lifeboat, Class C boat or other boat is being lowered or when it is being hoisted by power, and provision shall be made to allow the falls to be manually unwound.

11. Cordage rope falls, Cordage rope falls shall be of manilla or some other suitable material and shall be durable, unkinkable, firm laid and pliable. They shall be able to pass freely under any conditions through a hole 10 millimetres larger than the nominal diameter of the rope. The breaking load of each rope used for lowering life-boats, Class C boats or other boats shall be not less than 6 times the maximum load on the rope when lowering or hoisting. Rope of less than 65 millimetres in circumference shall not be used for lifeboat falls. Winding reels or flaking boxes for the manilla rope falls shall be provided.

12. Bollards. Suitable bollards or other equally effective appliances for lowering any lifeboat, Class C boat or other boat shall be provided in all cases where cordage rope falls are used. Such bollards or other appliances shall be sited so as to ensure that the lifeboat, Class C boat or other boat

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served by them can be safely lowered, and fairleads or lead sheaves shall be fitted so as to ensure that it shall not be lifted during the process of turning out or swinging out.

PART III

TESTS AFTER INSTALLATION ON BOARD

1. General, Tests shall be made to ensure that all lifeboats, Class C boats or other boats attached to davits can be re-stowed from the embarkation position safely and with facility when loaded with the required equipment and that when so loaded the lifeboat, Class C boat or other boat can, when released, be lowered by gravity into the water against the frictional resistance of the winch, falls, blocks and other associated gear.

2. Lowering tests.

- (a) Each pair of davits to which sub-paragraph (a) of paragraph 1 of Part II of this Schedule applies and any associated lifeboat winches and their brakes shall be capable of withstanding the following test:—

the lifeboat at each set of davits shall be lowered from the embarkation deck into the water, loaded with the equipment required by these Rules and a distributed weight equal to the full number of persons which it is deemed fit to accommodate plus 10 per cent of the working load. Winch brakes exposed to the weather shall be capable of withstanding the foregoing test with the braking surface wetted.

- (b) In the case of davits to which sub-paragraph (b) or (c) of paragraph 1 of Part II of this Schedule applies, the lifeboats, Class C boats or other boat shall be lowered into the water with the equipment required by these Rules and a distributed weight equal to the weight of a launching crew of two persons plus 10 per cent of the working load.
- (c) For the purpose of the test required under sub-paragraphs (a) and (b) above the weight of a person shall be taken to be 75 kilogrammes.

3. Hoisting tests for emergency lifeboats. Emergency lifeboats which are required by these Rules to be served by winches for recovery shall, in addition to the tests required by paragraphs 1 and 2 of this Part of this Schedule, be tested by hoisting the emergency lifeboat with the equipment required by these Rules and a distributed load of 1 tonne plus 10 per cent of the total hoisting load, including blocks and falls, from the water to the embarkation deck at the maximum hoisting speed.