

Boats shall be provided for detaching the lifeboat or rescue boat from the falls.

17. Winches—(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 rate when hoisting and the lead blocks shall be arranged to give a fleet angle or angle of lead of not more than 5° for grooved drums and 3° 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.

(2) 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 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:

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

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

(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 percent of the speed required above.

(4) Notwithstanding the requirements of sub-clause (3) of this clause the speed of lowering shall not exceed 1.3 metres per second.

(5) The brake gear of the winch shall include means for automatically controlling the speed of lowering to within the limits specified in sub-clauses (3) and (4) of this clause. A ratchet gear shall be incorporated in these winches.

(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.

(7) The launching mechanism shall be so arranged that it may be actuated by 1 person from a position on the ship's deck. It should also be operable by 1 person from within the lifeboat or rescue boat. 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.

(8) When the lowering of the lifeboat or rescue boat is controlled from within the craft by means of a control wire paid off from an auxiliary drum on the winch:

(a) the mass of the control wire shall be sufficient to overcome the friction of the various pulleys on the control wire, when turning out the lifeboat or rescue boat from the stowed position;

(b) the winch brake shall be operable from within the boat;

(c) the winch brake shall not be affected by the mass of the fully extended control wire, nor the wind effects on it;

(d) there shall be sufficient length of control wire available at the boat during all stages of lowering; and

(e) means shall be provided to retain the free end of the control wire in the boat until the boat is detached from the falls.

Part III

Liferaft Launching Appliances

18. Definition of "Working Load"—In this Part the expression "working load" means the sum of the mass of the liferaft and its equipment, all other associated gear that is supported by the launching appliance during the lowering operation and the maximum number of persons which the liferaft is deemed fit to carry, the mass of each person being taken to be 75 kg.

19. Construction—(1) Each liferaft launching appliance 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) A liferaft launching appliance shall not be solely dependent on the use of means other than manual effort, gravity or stored mechanical power which is independent of the ship's power supplies to launch the liferaft. The arrangements shall be such that the liferaft can be lowered in the fully loaded and equipped condition by gravity.

(3) The arrangements of the launching appliance shall be such as to enable safe boarding of the liferaft in accordance with the requirements of clauses 6(3) or 6(4) of Part I of the Performance Standard for Liferafts.

20. Strength—(1) Every launching appliance serving a liferaft which is required by the Shipping (Lifesaving Appliances) Regulations 1989 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 launching equipment, be of such strength that the liferaft with its full equipment can be 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°, or such higher angle as may be required by clause 1(2) of Part I of this performance standard.

21. Stresses—(1) Structural members and all blocks, falls, padeyes, links, fastenings and all other fittings used in connection with a launching appliance 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 a minimum factor of safety of 6 shall be applied to falls, links and blocks.

22. Static Load Test—(1) Every launching appliance and its attachments other than the winch brakes shall be capable of withstanding a static test load, in a direction simulating a 20° list and 10° trim or such greater angle as may be required by clause 1(2) of Part I of this performance standard, of not less than 2.2 times the maximum working load.

23. Wires Ropes—(1) Falls shall be of rotation-resistant and corrosion-resistant steel wire rope.

(2) The breaking tensile load of each wire rope used for lowering shall be not less than 6 times the maximum load on the wire rope when lowering, hoisting or stowing.

(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 liferaft 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.

(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.

(5) The falls of a liferaft launching appliance shall be at least long enough to reach the water with the ship at its lightest seagoing draught under unfavourable conditions of trim and listed to 20° either way.

24. Winches—(1) Winch brakes shall be of robust