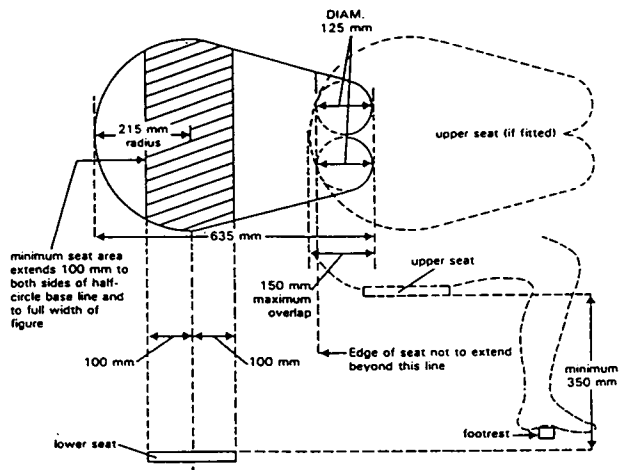


all wearing lifejackets, that can be seated in a normal position without interfering with the means of propulsion or the operation of any of the lifeboat's equipment; or

(b) the number of spaces that can be provided on the seating arrangements in accordance with Figure 1. The shapes may be overlapped as shown, provided footrests are fitted and there is sufficient room for legs, and the vertical separation between the upper and lower seat is not less than 350mm.



(10) Each seating position shall be clearly indicated in the lifeboat.

(11) Every passenger ship lifeboat shall be so arranged that it can be rapidly boarded by its full complement of persons. Rapid disembarkation shall also be possible.

(12) Every cargo ship lifeboat shall be so arranged that it can be boarded by its full complement of persons in not more than 3 minutes from the time the instruction to board is given. Rapid disembarkation shall also be possible.

(13) Lifeboats shall have a boarding ladder that can be used on either side of the lifeboat to enable persons in the water to board the lifeboat. The lowest step of the ladder shall be not less than 0.4 metres below the lifeboat's light waterline, and shall be weighted if of buoyant material.

(14) The lifeboat shall be so arranged that helpless people can be brought on board either from the sea or on stretchers.

(15) All surfaces on which persons might walk shall have a non-skid finish.

(16) All lifeboats shall have inherent buoyancy or shall be fitted with inherently buoyant material which shall not be adversely affected by seawater, oil or oil products, sufficient to float the lifeboat with all its equipment on board when flooded and open to the sea. Additional inherently buoyant material, equal to 280 Newtons of buoyant force per person shall be provided for the number of persons the lifeboat is permitted to accommodate. Buoyant material, unless in addition to that required above, shall not be installed externally to the hull of the lifeboat.

(17) Every lifeboat, when loaded with 50 percent of the number of persons the lifeboat is permitted to accommodate seated in their normal positions to 1 side of the centreline, shall have a freeboard, measured from the waterline to the lowest opening through which the lifeboat may become flooded, of at least 1.5 percent of the lifeboat's length or 100mm, whichever is the greater.

4. Lifeboat Propulsion—(1) Every lifeboat shall be powered by a compression ignition engine. No engine shall be used for any lifeboat if its fuel has a flashpoint of 43°C or less (closed cup test) and the engine shall:

(a) be provided with either a manual starting system, or a power starting system with 2 independent rechargeable energy sources. Any necessary starting aids shall also be provided. The engine starting systems and starting aids shall start the

engine at an ambient temperature of -15°C within 2 minutes of commencing the start procedure unless, in the opinion of the Director, having regard to the particular voyages in which the ship carrying the lifeboat is constantly engaged, a different temperature is appropriate. The starting systems shall not be impeded by the engine casing, thwarts or other obstructions;

(b) be capable of operating for not less than 5 minutes after starting from cold with the lifeboat out of the water;

(c) be capable of operating when the lifeboat is flooded up to the centreline of the crankshaft; and

(d) be capable of operating when the lifeboat is listed 10° either way or trimmed 10° either way.

(2) Unless the propeller is arranged so as to avoid its rotation constituting a danger to people in the water adjacent to it, the drive arrangement between the prime mover and the propeller shall be such that the propeller can be brought to rest without stopping the prime mover. Provision shall be made for ahead and astern propulsion of the craft.

(3) The exhaust pipe shall be so arranged as to prevent water from entering the engine in normal operation, and insulated as necessary.

(4) All lifeboats shall be designed with due regard to the safety of persons in the water and to the possibility of damage to the propulsion system by floating debris.

(5) The speed of a lifeboat when proceeding ahead in calm water, when loaded with its full complement of persons and equipment and with all engine-powered auxiliary equipment in operation, shall be at least 6 knots and at least 2 knots when towing a 25 person liferaft loaded with its full complement of persons and equipment or its equivalent. Sufficient fuel, suitable for use throughout the temperature range expected in the area in which the ship operates, shall be provided to run the fully loaded lifeboat at 6 knots for a period of not less than 24 hours.

(6) The lifeboat engine, transmission and engine accessories shall be enclosed in a fire-retardant casing or other suitable arrangements providing similar protection. Such arrangements shall also protect persons from coming into accidental contact with hot or moving parts and protect the engine from exposure to weather and sea. Adequate means shall be provided to reduce the engine noise. Starter batteries shall be provided with casings which form a watertight enclosure around the bottom and sides of the batteries. The battery casings shall have a tight fitting top which provides for necessary gas venting.

(7) The lifeboat engine and accessories shall be designed to limit electromagnetic emissions so that engine operation does not interfere with the operation of radio lifesaving appliances used in the lifeboat.

(8) Means shall be provided for recharging all engine-starting, radio and searchlight batteries. Radio batteries shall not be used to provide power for engine starting. Means shall be provided for recharging lifeboat batteries from the ship's power supply. The electric power supply connection from the ship to any lifeboat shall be at a voltage not exceeding 55 volts direct current or 55 volts root mean square alternating current and shall be capable of being disconnected automatically at the lifeboat embarkation station.

(9) Water-resistant instructions for starting and operating the engine shall be provided and mounted in a conspicuous place near the engine starting controls.

5. Lifeboat Fittings—(1) All lifeboats shall be provided with at least 1 drain valve fitted near the lowest point in the hull, which shall automatically open to drain water from the hull when the lifeboat is not waterborne and shall automatically close to prevent entry of water when the lifeboat is waterborne. Each drain valve shall be provided with a cap or plug to close the valve, which shall be attached to the lifeboat by a lanyard, a chain, or other suitable means. Drain valves shall be readily