

## SCHEDULE 3

Regulations 2(3), 5 and 6

### INFLATED BOATS

#### General

##### 1.

**1.1.** An inflated boat is a composite craft combining a flexible lower hull and an inflated tube fitted at the edge of the lower hull together forming a watertight boundary and which relies solely on the buoyancy of the inflated tube as the inherent buoyancy of the craft.

**1.2.** All inflated boats prescribed in this Schedule shall:

- (1.2.1) be constructed with proper workmanship and materials;
- (1.2.2) not be damaged in stowage throughout the air temperature range  $-30^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ ;
- (1.2.3) be capable of operating throughout a seawater temperature range of  $-1^{\circ}\text{C}$  to  $+30^{\circ}\text{C}$ ;
- (1.2.4) be rot-proof, corrosion-resistant, and not be unduly affected by seawater, oil or fungal attack;
- (1.2.5) be resistant to deterioration from exposure to sunlight;
- (1.2.6) be of a highly visible colour on all parts where this will assist detection;
- (1.2.7) be fitted with retro-reflective material where this will assist in detection and the dimensions and location of the material shall be to the satisfaction of the Secretary of State; and
- (1.2.8) be capable of satisfactory operation in a sea environment.

#### Construction

##### 2.

**2.1.** All boats shall be properly constructed and shall be of such form and proportion that they have ample stability in a seaway and sufficient freeboard when loaded with their full complement of persons and equipment. All boats shall be capable of maintaining positive stability in an upright position in calm water when loaded with their full complement of persons and equipment and fully swamped.

**2.2.** All boats shall be of sufficient strength to enable them to be safely lowered into the water when loaded with all their equipment and a crew of 2 persons.

**2.3.** At least one portable thwart shall be fitted to enable the boat to be rowed satisfactorily.

**2.4.** Each boat shall be of sufficient strength to withstand, when loaded with its full complement of persons and equipment and with, where applicable, skates or fenders in position, a lateral impact against the ship's side at an impact velocity of at least 3.5 metres per second and also a drop into the water from a height of at least 3 metres.

**2.5.** The number of persons which a boat shall be permitted to accommodate shall be equal to the lesser of:

(2.5.1) the number of persons having an average mass of 75 kg., all wearing lifejackets, that can be seated in a normal position plus one person lying down; all persons must be seated inboard of the buoyancy tubes and shall not interfere with the means of propulsion or the operation of any of the boat's equipment; or

(2.5.2) the number of spaces that can be provided on the seating arrangements in accordance with Figure 2 in Part I of Schedule 2 plus one person lying down.

**2.6.** Each seating position shall be clearly indicated in the boat.

**2.7.** All boats shall have a boarding ladder that can be used on either side of the boat to enable persons in the water to board the boat. The lowest step of the ladder shall be weighted and float at a level not less than 0.4 m below the boat's light waterline.

**2.8.** The boat shall be so arranged that helpless people can be brought on board either from the sea or on stretchers.

**2.9.** All surfaces on which persons might walk shall have a non-skid finish.

**2.10.** All inflated boats, when loaded with 50% of the number of persons the boat is permitted to accommodate seated in their normal positions to one side of the centreline, shall have a freeboard, measured from the waterline to the lowest opening through which the boat may become flooded, of at least 1.5% of the boat's length or 100 mm, whichever is the greater.

**2.11.** An inflated boat shall:

(2.11.1) be not less than 3.8 m and not more than 8.5 m in length; and

(2.11.2) be capable of carrying at least three persons and a person lying down.

**2.12.** Unless the boat has adequate sheer, it shall be provided with a bow cover of highly visible colour extending for not less than 15% of its length, and shall be angled upwards to deflect water and spray.

**2.13.** Boats shall be capable of manoeuvring at speeds of at least 6 knots in calm water with 2 persons on board, and maintaining a speed of 6 knots for a period of at least 2 hours.

**2.14.** Boats shall have sufficient mobility and manoeuvrability in a seaway to enable persons to be retrieved from the water, marshal liferafts, and tow the largest liferaft carried on the ship when loaded with its full complement of persons and equipment, or its equivalent, at a speed of at least 2 knots.

**2.15.** The boat shall be fitted with an outboard engine having a maximum power of 10 HP complying with the requirements of paragraph 3.

**2.16.** Arrangements for towing shall be permanently fitted in boats and shall be sufficiently strong to marshal or tow liferafts as required by paragraph 2.14.

**2.17.** Boats shall be fitted with weathertight stowage for small items of equipment.

**2.18.** A boat shall be constructed in such a way that, when suspended by its bridle or lifting hook:

(2.18.1) it is of sufficient strength and rigidity to enable it to be lowered and recovered with all its equipment and a crew of two persons;

(2.18.2) it is of sufficient strength to withstand a load of 1.1 times the mass of its equipment and a crew of two persons at an ambient temperature of  $-30^{\circ}\text{C}$  with relief valves operative; and

(2.18.3) it is of sufficient strength to withstand a load of 4 times the mass of its equipment and a crew of two persons at an ambient temperature of  $20 \pm 3^{\circ}\text{C}$  with all relief valves inoperative.

**2.19.** Inflated boats shall be constructed so as to be capable of withstanding exposure:

(2.19.1) when stowed on an open deck on a ship at sea; and

(2.19.2) for 30 days afloat in all sea conditions.

**2.20.** The buoyancy of an inflated boat shall be provided by either a single tube subdivided into at least five separate compartments of approximately equal volume or two separate tubes neither exceeding 60% of the total volume. The buoyancy tubes shall be so arranged that, in the event of any one of the compartments being damaged, the intact compartments shall be able to support, with positive freeboard over the boat's entire periphery, the number of persons which the inflated boat is permitted to accommodate, each having a mass of 75 kg., and seated in their normal positions.

**2.21.** The buoyancy tubes forming the boundary of the inflated boat shall on inflation provide a volume of not less than 0.17 m<sup>3</sup> for each person the boat is permitted to accommodate, and the diameter of the main buoyancy chamber must be at least 0.43 metres.

**2.22.** Each buoyancy compartment shall be fitted with a non-return valve for manual inflation and means of deflation. A safety valve designed to operate at a pressure not exceeding 125% of the designed working pressure of the buoyancy chamber shall also be fitted to each buoyancy compartment.

**2.23.** When inverted in the water an inflated boat shall be capable of being righted by not more than two persons.

**2.24.** Rubbing strips shall be provided underneath the bottom and on vulnerable places on the outside of the boat.

**2.25.** Where a transom is fitted it shall not be inset by more than 20% of the overall length of the inflated boat.

**2.26.** Suitable patches shall be provided for securing painters forward and aft and becketed lifelines inside and outside the boat.

**2.27.** The boat shall be maintained at all times in a fully inflated condition.

**2.28.** All inflated boats shall be fitted with a protective stowage cover and shall be kept covered at all times when the boat is not in use. The cover should be arranged for quick removal in an emergency.

## **Boat Propulsion**

### **3.**

**3.1.** A petrol-driven outboard engine with an approved fuel system may be fitted to an inflated boat provided the tank is specially protected against fire and explosion.

**3.2.** A petrol engine shall be provided with a manual starting system. The engine starting system shall start the engine at an ambient temperature of  $-15^{\circ}\text{C}$  within 2 minutes of commencing the start procedure. The starting system shall not be impeded by the engine casing, thwarts or other obstructions.

**3.3.** Unless the propeller is so 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 boat.

**3.4.** The exhaust pipe shall be so arranged as to prevent water from entering the engine in normal operation.

**3.5.** The boat engine and accessories shall be designed to limit electromagnetic emissions so that engine operation does not interfere with the operation of radio life-saving appliances used in the boat.

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

## **Boat Fittings**

### **4.**

**4.1.** All boats shall be provided with at least one drain valve fitted near the lowest point in the hull, which shall automatically open to drain water from the hull when the boat is not waterborne and shall automatically close to prevent entry of water when the boat is waterborne. Each drain valve shall be provided with a cap or plug to close the valve, which shall be attached to the boat by a

lanyard, a chain, or other suitable means. Drain valves shall be readily accessible and capable of being closed from inside the boat and their position shall be clearly indicated.

4.2. Except in the vicinity of the outboard engine, a buoyant lifeline shall be becketed around the inside and outside of the boat.

4.3. Boats which are not self-righting when capsized shall have suitable handholds on the underside of the hull to enable persons to cling to the boat. The handholds shall be fastened to the boat in such a way that, when subjected to an impact sufficient to cause them to break away from the boat, they break away without damaging the boat.

4.4. A boat shall be capable of being launched by means of a launching appliance complying with the requirements of Part IV of Schedule 6.

4.5. Unless expressly provided otherwise, every boat shall be provided with effective means of bailing or be automatically self-bailing.

### **Lifting Arrangements**

#### **5.**

5.1. Bridle slinging arrangements shall be fitted to enable the boat to be lowered or raised from the water. The bridle sling shall comprise of at least four legs which should be joined at the top in the form of an eye or be connected to a lifting ring or shackle. The arrangement shall be such that the boat is stable when suspended and either:

(5.1.1) the length of the legs are of equal length; or

(5.1.2) the bridle is permanently attached; or

(5.1.3) it is not possible to connect any of the bridle legs to the wrong position in the boat.

5.2. The bridle shall be manufactured of a material which will not adversely affect the material of the boat and, if necessary, shall be sheathed to prevent abrasion of the fabric.

5.3. The forward lifting attachments shall be securely fastened to the hull and may be bands passing under the hull to the tops of the buoyancy tubes terminating in D rings or eyes to take bridle slings.

5.4. The after lifting attachments shall be similar to the forward attachments or may be made directly to the transom.

5.5. The bridle slinging arrangements used for lowering and recovering the boat shall be such that the breaking tensile strength is at least 6 times the sum of the mass of the boat, its full equipment and a crew of 2 persons each having a mass of 75 kg.

5.6. The bridle sling lifting arrangements shall be proof tested to not less than 4 times their respective working loads. The proof testing can be carried out either:

(5.6.1) individually on each item associated with the lifting arrangements; or

(5.6.2) on the assembly of a structurally completed boat with its lifting arrangements and particular bridle sling. In each case fabric webbings and cordages forming part of the lifting arrangements shall have a breaking strength of not less than six times their respective working loads.

### **Markings**

#### **6.**

6.1. The dimensions of the boat, the number of persons which it is permitted to accommodate, the makers serial number, name or trade mark and the date of manufacture shall be marked on the boat in clear permanent characters;

**6.2.** The name and port of registry of the ship to which the boat belongs shall be marked on each side of the boat's bow in block capitals of the Roman alphabet;

**6.3.** Means of identifying the ship to which the boat belongs and the number of the boat shall be marked in such a way that they are visible from above;

**6.4.** All material used to mark an inflated boat shall be of a type which is compatible with the boat's coated fabric and approved by the boat manufacturer.

## **Boat Equipment**

### **7.**

**7.1.** All items of boat equipment, with the exception of the boat hook which shall be kept available for fending off purposes, shall be secured within the boat by lashings, storage in lockers or compartments, storage in brackets or similar mounting arrangements, or other suitable means. The equipment shall be secured in such a manner as not to interfere with any launching or recovery procedures. All items of boat equipment shall be as small and of as little mass as possible and shall be packed in suitable and compact form.

**7.2.** The equipment of every boat shall consist of:

(7.2.1) at least two buoyant oars or paddles to make headway in calm seas; crutches or equivalent arrangements shall be provided for each oar, and shall be permanently attached to the boat;

(7.2.2) a buoyant bailer;

(7.2.3) a sea-anchor complying with the requirements of Part I of Schedule 7;

(7.2.4) one buoyant line, not less than 50 metres in length, of sufficient strength to tow a liferaft as required by paragraph 2.14.

(7.2.5) a painter 20 metres in length;

(7.2.6) one waterproof electric torch suitable for Morse signalling, together with one spare set of batteries and one spare bulb in a waterproof container;

(7.2.7) one whistle or equivalent sound signal;

(7.2.8) a first-aid outfit in a waterproof case capable of being closed tightly after use, and complying with the requirements of Part II of Schedule 7;

(7.2.9) two buoyant rescue quoits, attached to not less than 30 metres of buoyant line with a breaking strain of at least 1.0 kN;

(7.2.10) a buoyant safety knife;

(7.2.11) two sponges;

(7.2.12) an efficient manually operated bellows or pump;

(7.2.13) a repair kit in a suitable container for repairing punctures;

(7.2.14) a safety boat hook; and

(7.2.15) a portable fire extinguisher.

## **Instructions and Information**

### **8.**

**8.1.** Instructions and information required for inclusion in the training manual specified in Part I of Schedule 11 and in the instructions for on-board maintenance specified in Part II of Schedule 11 shall be in a form suitable for inclusion in such training manual and instructions for on-board maintenance. Instructions and information shall be in English in a clear and concise form and shall include the following:

- (8.1.1) general description of the boat and its equipment;
- (8.1.2) installation arrangements;
- (8.1.3) operational instructions including use of equipment;
- (8.1.4) emergency repair instructions;
- (8.1.5) deployment, boarding and launching instructions;
- (8.1.6) release from launching appliance;
- (8.1.7) on board maintenance requirements;
- (8.1.8) servicing requirements;
- (8.1.9) use of engine; and
- (8.1.10) recovery of boat including stowage and securing.