

If it is impossible to work the ship at sea without opening some particular door, the door is only to be opened when absolutely necessary and with the express permission of the master. During the time that such doors are open the members of the crew detailed for this work should be ready to close them as soon as the order is given. The door should be closed again as soon as possible, and the fact reported to the master at once.

7. All watertight doors which are liable to be opened at sea should be kept in thorough working-order, and should be capable of being closed expeditiously. Doors worked by a ratchet cannot be closed quickly enough, and whenever possible the ratchet should be supplemented by a wheel and handle or by some other gear giving continuous closing-action.

8. The master should appoint the chief engineer or some other officer as the officer definitely responsible for the working of the watertight doors in each part of the ship. Before the ship proceeds to sea on any occasion such officer should have the doors opened and closed in his presence, and should satisfy himself that they are in good working-order and can be quickly closed. An entry should be made in the official log, and signed by the master and by the responsible officer, every time this is done. Before the ship leaves the United Kingdom at the beginning of a voyage the officer responsible for the doors in each part of the ship should give the owner or his Marine Superintendent a certificate in writing to the effect that the doors were worked in his presence and closed to his satisfaction, and should report to the master that he has done so. Opportunities should be taken as often as possible during the voyage to see that the doors remain in good condition, and door drill should be practised at regular intervals, an entry being made in the official log on each occasion.

9. Great care should be taken to ensure that any portable plates on the bulkheads or tunnels, any manholes in double-bottoms, or any sluice-valves, are thoroughly closed watertight before the ship proceeds to sea.

BILGE-PUMPS.

10. All bilge-pumping installations should be maintained in efficient condition. The bilges and strum-boxes in each hold and machinery compartment should be cleaned and any defects in the system remedied before proceeding to sea. If practicable, an additional screw-down non-return valve should be fitted in each pipe-line on the watertight bulkhead inside the compartment in which the strum-box for that line is situated. The valves should be secured to the bulkhead in each case by studs screwed into the bulkhead.

OPENINGS IN THE SHIP'S SIDES.

11. All side-scuttles and other openings in the ship's sides below the uppermost continuous deck and in the first tier of deck erections above that deck should be kept closed so long as the ship is in a submarine area, with the exception of apertures, such as ash-shoots, which require to be opened for the working of the ship. Ash-shoots and slop-shoots should be fitted with suitable appliances for closing them watertight unless the shoots extend to the bulkhead deck and at least 15 ft. above water, and the shoots should be kept closed except when actually in use.

Sanitary discharges and scuppers not fitted with appliances which will be watertight under pressure should, if below the bulkhead deck and less than 15 ft. above water, be closed up, and, if necessary, other arrangements made. Any other sanitary discharges the use of which can be dispensed with should also be closed up.

Where side-scuttles below the uppermost continuous deck are fitted with inside metal dead-lights and [or] other metal plugs, the plugs should be shipped in place and the dead-lights closed; but if the side-scuttles are not provided either with dead-lights or outer plugs they should be permanently closed and made watertight by riveted or bolted plates, or in some equally efficient manner, unless they are at least 15 ft. above water.

BERTHING OF PASSENGERS.

12. All passengers should be berthed when in a danger-zone above the uppermost continuous deck if there is sufficient accommodation, and the watertight doors and scuttles in the passengers' quarters below that deck, as well as any sanitary discharges connected with those quarters, should be kept permanently closed.

LIGHTING.

13. All living and working spaces liable to be rendered dark through the closing of side-scuttles should be provided with adequate artificial light. In addition, adequate provision should be made for giving light for egress from the living-compartments to the deck and for the launching of the boats and the embarkation into them of those on board. For this purpose lanterns placed in suitable positions are recommended, as electric-lighting systems may be rendered inoperative by a mine or torpedo explosion. Lanterns should be kept burning in a submarine area but obscured from view until required. A supply of electric torches should also be provided.

WARNING ENGINE-ROOM STAFF.

14. Suitable provision should be made to enable the master or officer in charge to give immediate warning in case of emergency to those men who may be on duty in the engine-room, stokehold, or other compartment below deck. A mutual understanding should exist whereby these men may know that they will receive notice by a signal agreed upon when it is time to leave their posts.

The explosion of a mine or torpedo may result in the engine-room telegraph or telephone being disabled, and arrangements should therefore be made for conveying a message promptly in some other way.