

## PART C.—ELECTRICAL INSTALLATIONS

(Part C applies to passenger ships only)

**Regulation 21***General*

(a) Electrical installations in ships shall be such that:—

- (i) services essential for safety will be maintained under various emergency conditions; and
- (ii) the safety of passengers, crew and ship from electrical hazards will be assured.

(b) Every ship, the electrical power of which constitutes the only means of maintaining the auxiliary services indispensable for the propulsion and the safety of the ship, shall be provided with at least two main generating sets. The power of these sets shall be such that it shall still be possible to ensure the functioning of the said services in the event of any one of these generating sets being stopped.

**Regulation 22***Emergency Source of Power*

(a) There shall be above the bulkhead deck a self-contained emergency source of electrical power. It shall be situated outside the machinery casings. The power available shall be sufficient to supply all those services that are, in the opinion of the Administration, necessary for the safety of the passengers and the crew in an emergency, due regard being paid to such services as may have to be operated simultaneously. Special consideration shall be given to emergency lighting at every boat station on deck and oversides, in all alleyways, stairways and exits, in the machinery spaces and in the control stations as defined in Regulation 26, and to navigation lights if solely electric. The power shall be adequate for a period of 36 hours, except that, in the case of ships engaged regularly on voyages of short duration, the Administration may accept a lesser supply if satisfied that the same standard of safety would be attained. The source of emergency power may be either—

- (i) an accumulator (storage) battery capable of carrying the emergency load without recharging or excessive voltage drop; or
- (ii) a generator driven by a suitable type of compression ignition engine, with an independent fuel supply and with starting arrangements approved by the Administration. The fuel used shall have a flash point of not less than 110° F. (or 43·3° C.).

(b) Arrangements shall be such that the emergency plant will function efficiently when the ship is inclined 22½° and or when the trim of the ship is 10° from an even keel.

(c) (i) Where the emergency power is derived from an accumulator battery, arrangements shall be made to ensure that emergency lighting will automatically come into operation in the event of failure of the main lighting supply.