

## REPLACEMENT OF CERTIFICATES.

22. (a) Any person who proves to the satisfaction of the Board of Examiners that a certificate of which he was the rightful holder has been lost or destroyed may obtain a replacement of such certificate.

(b) All applications for replacement of lost or destroyed certificates must be made on form Marine 378 as set forth in the Schedule hereto.

## QUALIFICATIONS REQUIRED FOR THE VARIOUS CERTIFICATES.

## EXTRA FIRST-CLASS STATIONARY ENGINEER (COMPETENCY).

23. This certificate entitles the holder to drive and have charge of any stationary steam-engine (other than a winding-engine) and of any stationary boiler.

24. An applicant for examination for the extra first-class stationary engineer's certificate must—

- (a) Be at least twenty-one years of age :
- (b) Hold the first-class engine-driver's (or equivalent) certificate :
- (c) Forward with his application a fee of £1 :
- (d) Furnish a testimonial as required by Regulation 15 (c) :
- (e) Produce satisfactory proof of having worked as an apprentice engineer for at least five years in a workshop or workshops where engines are manufactured or repaired, or where work of a similar nature is performed :

*Scope of Examination.*

- (f) Be proficient in the measurement of superficies and solids, and the extraction of square and cube roots :
- (g) Be able to give a correct description of any class of stationary engine, including turbines, and of all classes of stationary boilers used on land, and be able to calculate the strength of any part of such engine and boiler and understand their construction :
- (h) Be able to describe and be conversant with the construction of electric motors, dynamos, freezing machinery, economizers, feed-filters, feed-heaters, evaporators, also forced and induced draught as applied to boilers :
- (i) Be able to show clearly how defects in engines and boilers, either from natural decay or corrosion, should be remedied :
- (j) Possess a creditable knowledge of the prominent facts relating to combustion, heat, and temperature problems :
- (k) Be able to calculate indicator cards, and draw proper conclusions from cards to be given to him by the Examiner, and answer questions relative to the adjustment of slide valves and eccentrics :
- (l) Be able to work out lever, dead-weight, spring-balance, and direct-spring safety-valves, and calculate the size of steel, &c., in the latter case :
- (m) Be able to work out questions relative to strength of copper, cast-iron, or steel pipes, strength of shafting, and questions generally that may arise regarding strength of parts of machinery that he might be called upon to take charge of in the event of his becoming an extra first-class engineer :
- (n) Be able to make a hand-sketch of a working-drawing, without a copy, of any part of an engine or boiler, and to mark in, without a copy, all the necessary dimensions in figures so that the sketch or drawing could be worked from.

## FIRST-CLASS ENGINE-DRIVER (COMPETENCY).

25. This certificate entitles the holder to drive and have charge of any stationary steam-engine (other than winding-engines) and of any boiler.

26. An applicant for examination for the first-class engine-driver's certificate must—

- (a) Be at least twenty years of age :
- (b) Forward with his application a fee of £1 :
- (c) Furnish a testimonial as required by Regulation 15 (c) :
- (d) Produce satisfactory proof of one of the following service qualifications :—
  - (1) Having served for four years as an apprentice engineer in a workshop or workshops where engines are made or repaired, or where work of a similar nature is performed :