

to the Secretary of the Marine Department, together with the usual form of application for renewal of certificate, duly filled up, in order that a renewed certificate may be issued. This will be done free of charge in those cases where it is satisfactorily shown to the Marine Department that due care has been taken of the original. This power will have to be exercised with great discretion by the Superintendents of Mercantile Marine, so as not to interfere with any engagements for sea service which the possessor of the injured certificate may have entered into.

43. When the holder of a certificate passes the examination for a certificate of a higher grade, his certificate of the lower grade will be withdrawn and retained by the Marine Department.

44. *Value of Ordinary Certificates.*—Ordinary certificates will entitle the holders to go to sea, in the grade certified, as engineers of any vessel in the British Mercantile Marine.

QUALIFICATIONS FOR CERTIFICATES OF COMPETENCY.

45. *Third-class Engineer.*—Section 22 (5) of the Shipping and Seamen Act, 1908, as amended by the Second Schedule to the Shipping and Seamen Amendment Act, 1909, and by section 2 of the Shipping and Seamen Amendment Act, 1911, provides that—

“Every applicant for a third-class engineer’s certificate shall, before being admitted to examination, satisfy the Minister that he is at least twenty years of age, and has worked as apprentice for at least five years in a work shop or shops where engines are manufactured or repaired, or where other work of a similar class is performed, and during three years at least of such service has been employed in fitting or erecting machinery. When the workshop service has been performed in a place where engines are manufactured or repaired, or where other work of a similar class is performed, and the work on which the applicant has been principally employed is fitting, turning, machining, and erecting machinery, the Minister may accept the service and sanction the examination of the candidate if he is satisfied that the work was such as to be useful training for an engineer.”

“Provided that the Minister may exempt from examination any applicant for a third-class engineer’s certificate—

“(a.) Who, prior to the 1st day of January, 1897, had sailed and served as engineer on board a sea-going steamship for a period of not less than twelve months; or

“(b.) Who is the holder of the degree of Bachelor of Science in Engineering granted by the New Zealand University, or by any university which is recognized by the New Zealand University as entitling the holder to admission *ad eundem gradum*; or

“(c.) Who has worked for at least three years in a workshop as hereinbefore prescribed, and has also attended the engineering class for at least two years in any college affiliated to the New Zealand University, or in any university recognized by the New Zealand University as aforesaid; or

“(d.) Who has worked for at least three years in a workshop as hereinbefore prescribed, and has also completed to the satisfaction of the Minister a course of mechanical engineering extending over not less than two years at such classes recognized under Part VII of the Education Act, 1908, as are approved for the purpose by the Minister.”

46. A candidate must comply with the following requirements:—

(a.) He must produce proof of having served for at least five years as an apprentice in a work shop or shops where engines are made or repaired, or where work of similar nature is performed, and also testimonials of character and sobriety for one year immediately prior to date of application.

(b.) He must be able to work out the capacity of bunkers, tanks, area of flat surfaces, work done by simple machines (such as lever, wedge, and screw), and lever safety-valve; also questions relating to consumption of stores and weight of materials.

(c.) He must understand the use and construction of the salinometer, thermometer, hydrometer, and the working of boilers with salt water.

(d.) He must explain the use of all cocks and valves on boilers and connections generally on ship’s side and attached to engines.

(e.) He must understand the principle and construction of feed, common, and auxiliary pumps.

(f.) He must explain the construction of boilers and machinery used in simple, compound, triple, and quadruple engines, how the steam does its work in the engines, and the action of the slide and link motion and single eccentric.

47. *Second-class Engineer.*—A candidate for a second-class engineer’s certificate must be twenty-one years of age.

(a.) He must have served one year at sea as engineer on regular watch on the main engines or boilers of a foreign-going or intercolonial steamship of not less than 66 nominal horse-power, or eighteen months in a home-trade steamship of not less than 66 nominal horse-power, whilst possessed of or entitled to a third-class engineer’s certificate, or a Minister’s certificate of exemption from the third-class examination.

On and after 1st January, 1915, the applicant will be required to have served eighteen months at sea as engineer on regular watch on the main engines or boilers of a foreign-going steamer of not less than 66 nominal horse-power; or twenty-seven months in a home-trade steamer of not less than 66 nominal horse-power whilst possessed of or entitled to a third-class engineer’s certificate, or a Minister’s certificate of exemption from the third-class examination.

(b.) He must be able to give a satisfactory description of boilers, and the methods of staying them, together with the use and management of the different valves, cocks, pipes, and connections.

(c.) He must understand how to correct defects from accident, decay, &c., and the means of repairing such defects.

(d.) He must understand the use of the water-gauge, pressure-gauge, barometer, thermometer, and salinometer, and the principles on which they are constructed.

(e.) He must be able to state the causes, effects, and usual remedies for incrustation and corrosion.