

IN NAVIGATION.—In addition to the qualification required for an Only Mate, he must be able to observe azimuths and compute the variation; to compare chronometers and keep their rates, and find the longitude by them from an observation by the sun; to work the latitude by single altitude of the sun off the meridian; and be able to use and adjust the sextant by the sun.

IN SEAMANSHIP.—In addition to the qualification required for an Only Mate, a more extensive knowledge of seamanship will be required, as to shifting large spars and sails, managing a ship in stormy weather, taking in and making sail, shifting yards and masts, &c., and getting cargo in and out; getting heavy spars and weights, anchors, &c., in and out; casting a ship on a lee-shore; and securing the masts in the event of accident to the bowsprit.

(d.) A MASTER must be twenty-one years of age, and have been six years at sea, of which one year must have been as First or Only Mate, and one year as Second Mate; or two years as First and Only Mate.*

In addition to the qualification for a First Mate he must be able to find the latitude by a star, &c. He will be asked questions as to the nature of the attraction of the ship's iron upon the compass, and as to the method of determining it. He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew; as to penalties and entries to be made in the official log. He will be questioned as to his knowledge of invoices, charter-party, Lloyd's agent, and as to the nature of bottomry, and he must be acquainted with the leading lights of the channel he has been accustomed to navigate, or which he is going to use.

In cases where an applicant for a certificate as master ordinary has only served in a fore and aft rigged vessel, and is ignorant of the management of a square rigged vessel, he may obtain a certificate on which the words "*fore and aft rigged vessel*" will be written. This is not, however, to apply to Mates, who, being younger men, are expected for the future to learn their business completely.

(e.) An EXTRA MASTER'S EXAMINATION is intended for such persons as wish to prove their superior qualifications. Before being examined for an Extra Master's Certificate an applicant must have served one year either as a Master with an *ordinary Certificate of Competency*, or as a Master having a *First Class Certificate* granted by one of the former boards of Examiners.

IN NAVIGATION.—As the vessels which such Masters will command frequently make long voyages, to the East Indies, the Pacific, &c., the candidate will be required to work a lunar observation by both sun and star, to determine the latitude by the moon and star, by polar star off the meridian, and also by double altitude of the sun, and to verify the result by Sumner's method. He must be able to calculate the altitudes of the sun or star when they cannot be observed, for the purposes of lunars,—to find the error of a watch by the method of equal altitudes,—and to correct the altitudes observed with an artificial horizon.

He must understand how to observe and apply the deviation of the compass; and to deduce the set and rate of the current from the D. R. and observation. He will be required to explain the nature of great circle sailing, and know how to apply practically that knowledge; but he will not be required to go into the calculations. He must be acquainted with the law of storms, so far as to

* Service in a superior capacity is in all cases to be equivalent to service in an inferior capacity.

know how he may probably best escape those tempests common to the East and West Indies, and known as hurricanes.

IN SEAMANSHIP.—The extra examination will consist of an inquiry into the competency of the party to heave a ship down, in case of accident befalling her abroad; to get lower masts and other heavy weights in and out; how to construct rafts, and as to his resources for the preservation of the ship's crew in the event of wreck, and in such operations of a like nature as the Examiner may consider necessary.

Qualifications for Certificates of Competency for "Home Trade Passenger Ships."

(a.) A MATE must write a legible hand, and understand the first four rules of arithmetic. He must know and understand the rule of the road, and describe and show that he understands the Admiralty regulations as to lights. He must be able to take a bearing by compass, and prick off the ship's course on a chart. He must know the marks in the lead line, and be able to work and heave the log.

(b.) A MASTER must have served one year as a Mate in the Foreign or Home Trade. In addition to the qualifications required for a Mate, he must show that he is capable of navigating a ship along any coast, for which purpose he will be required to draw upon a chart produced by the Examiner the courses and distances he would run along shore from headland to headland, and to give in writing the courses and distances corrected for variation, and the bearings of the head lands and lights, and when the courses should be altered either to clear any dangers or to adapt it to the coast. He must understand how to make his soundings according to the state of the tide.

General Rules as to Examinations and Fees.

9. The candidates will be allowed to work out the various problems according to the method and the tables they have been accustomed to use, and will be allowed five hours to perform the work; at the expiration of which, if they have not finished, they will be declared to have failed, unless the Local Marine Board see fit to extend the time.

Fees to be paid by Applicants for Examination.

10. The fee for examination must be paid to the Shipping Master. If a candidate fail in his examination, half the fee he has paid will be returned to him by the Shipping Master on his producing a document which will be given him by the Examiner. The fees are as follow:—

FOR "FOREIGN-GOING SHIPS."

	£	s.	d.
Second Mate - - - - -	1	0	0
First and Only Mate, if previously possessing an inferior certificate	0	10	0
If not - - - - -	1	0	0
Master, whether Extra or Ordinary	2	0	0

FOR "HOME TRADE PASSENGER SHIPS."

Mate - - - - -	0	10	0
Master - - - - -	1	0	0

11. Any one who has been one year in possession of a Master's First-class Certificate granted by one of the former Boards of Examiners, or of an Ordinary Master's Certificate of Competency granted under the present Examiners, may pass an Extra Examination, and receive an Extra Certificate in exchange for his former one, without payment of any fee; but if he fails in his first examination he must pay half a Master's fee on