

ASSESSMENT OF NOMINAL HORSE-POWER.

61. The nominal horse-power of a steamship, as given on the certificate of registry, may in all cases be accepted by the Examiner; or it may be determined by the following formula:—

$$\text{N.H.P.} = \frac{(3H + D^2 \sqrt[3]{S}) \sqrt[3]{P}}{700}$$

Where H = heating surface of main boilers in square feet, measured down to the level of the fire-bars, but excluding the front tube plate.

D² = square of diameter of low pressure cylinder, or sum of squares of diameters of cylinders in non-compound engines, measured in inches.

S = length of stroke of engines in inches.

P = pressure of main boilers in pounds per square inch.

SERVICE IN LAKE OR RIVER VESSELS.

62. Service as watch-keeping engineer on a lake or river vessel of horse-power not less than that required by these rules may be accepted for an ordinary, a motor, or a small-powered P.V.O.S. certificate under the following conditions:—

- (a) Such service will be accepted as equivalent to one-half of the same period of time served in foreign-going vessels.
- (b) Applicants for second-class certificates must, in addition to lake or river service, have performed at least three months' qualifying sea service in foreign-going ships of the requisite horse-power (see Rule 48), or four and a half months' similar service in home-trade ships.
- (c) Applicants for first-class certificates must have performed, in addition to qualifying lake or river service, not less than six months' qualifying service at sea while in possession of a second-class certificate, in foreign-going vessels of horse-power not less than that specified in Rule 52, or nine months' similar service in the home-trade.

SERVICE IN CABLE SHIPS.

63. A candidate who has performed a part of the requisite qualifying service in cable ships will be required to produce, in addition to the usual service certificates, a statement or certificate from the owners of the vessel showing the amount of time actually spent at sea. Should the time so spent amount to or exceed two-thirds of the total time on articles, the latter period may be accepted in full as qualifying service; but in the event of the actual sea service falling short of this proportion, the deficiency must be made up by additional service at sea before the total time on articles can be accepted in full as qualifying service.

SERVICE IN AUXILIARY SCREW SHIPS.

64. Service as engineer performed by a candidate for a second-class certificate on board auxiliary-screw whalers and other vessels with auxiliary power not less than that specified in Rule 48 may be accepted as qualifying service for a second-class certificate to the extent of one-half the time the vessel is actually at sea. If a candidate who has performed such service is able to prove that the main engines were running for longer than this, the whole of such extended service may be accepted as qualifying.

SERVICE IN DREDGERS, FISHING-BOATS, TUG-BOATS, OR PILOT-VESSELS.

65. Service in sea-going dredgers, fishing-boats, or tug-boats, and in pilot-vessels when on their stations or when proceeding to or returning from the same, may be accepted as equivalent to foreign-going sea service in the ratio of two months' service in such vessels to one month's qualifying service in a foreign-going vessel.

Candidates for second-class certificates may perform the whole of their sea service in sea-going dredgers, fishing-boats, tug-boats, or pilot-vessels of horse-power not less than that specified in Rule 48, but they must have been on regular watch on the main propelling machinery.