trimming of cargoes, and the carrying of deck loads indiscriminately.'"

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NOMINAL AND INDICATED HORSEPOWER

Our readers must certainly have noticed that, when describing the engines of vessels which are featured in these pages, we sometimes refer to the Nominal Horsepower of the machinery, while on other occasions it is the Indicated Horsepower that is reported. The reason for using these two differen measurements, seemingly at random, is that the various shipping registers and other documents from which our information is taken, have used either one or the other with no apparent attempt (at least in Canada) to standardize the reporting. The editors of the monthly magazine "Canadian Railway and Marine World" ran up against the same problem and, accordingly, the following explanation occurred in the August 1924 issue.

"A matter of interest to marine men, and one that is evidently more or less puzzling to those of them who are not directly connected in marine engineering work, was brought to our attention in connection with the sinking of the Mathews Steamship Co.'s steamer HURONTON, as mentioned in 'Canadian Railway and Marine World' for November. The Marine and Fisheries Department list of ships on the Canadian register shows that the HURONTON was equipped with engines of 127 h.p., while we were informed by the ship's owners that they were of about 900 h.p. The discrepancy is explained by the fact that the Department, in its list of ships on the register, uses the engines' Nominal Horsepower and not the Indicated Horsepower, the latter being what the HURONTON's owners had in mind when giving the information referred to.

"The Nominal Horsepower of a ship's engines is determined from the formula

$$h.p. = \frac{D^2 + D1^2 + D2^2 + \ldots}{30}$$ where D, D1, D2, etc., are the diameters of the respective cylinders in inches, the number of cylinders according with the number of expansions given the steam; that is, the nominal horsepower is the sum of the squares of the cylinder diameters, in inches, divided by 30. The figure resulting from the application of this formula is of little or no value in arriving at a determination of the actual power of a ship's engines, but is merely of use as a reference for appraisal or other similar purposes.

"The actual power of a ship's engines, or the Indicated Horsepower, is determined by applying the well known formula $h.p. = \frac{p \, l \, a \, n}{33,000}$ to each cylinder, and adding the results. In this formula, 'p' is the mean effective pressure in lb. per sq. in., as established by the indicator cards, 'l' the length of the stroke in feet, 'a' the area of the piston face in square inches, and 'n' the number of single strokes of the piston per minute.

"While Nominal Horsepower is used by the Marine and Fisheries Department in its list of shipping (to which we usually refer in "Scanner" as the Canadian or perhaps Dominion List of Shipping -Ed.), the actual or Indicated Horsepower of any ship's engines should appear on the registry certificate."

Feeling better now that you realize that you were not the only person confused by horsepower calculations, even if the formulae still mean nothing practical to you? Nevertheless, we are still left with a historian's dilemma in that, if the relatively useless Nominal Horsepower measurement is given by the only record(s) available to us in respect of any particular ship, we still must report that measurement even though we would rather use the Indicated Horsepower. In those cases where both figures are available to us, we will report both for the edification of our readers.

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Please remember to order your tickets for the ANNUAL DINNER MEETING to be held on Saturday, May 13th. See the first page, this issue, for details. Hope we'll see you there.

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