

عنوان مقاله:

A Review on the Hydrodynamic Characteristics of the SPP Concerning to the Available Experimental Data and Evaluating Regression Polynomial Functions

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خلاصه مقاله:

Surface-piercing propellers have been widely used in light and high-speed vessels because of their superior performance. One of the major steps in propeller selection algorithm is the determination of thrust as well as torque hydrodynamic coefficients. For the purpose of simplifying design and selection procedure, some relations are presented for determining hydrodynamic coefficients in some studies, precision, and accuracy of which must be validated due to the importance of the issue as well as having high development and operational costs. Therefore, these issues are evaluated in this study by field study and recognizing the presented relation set as well as acquiring experimental test data. The acquired results show lack of full agreement between semi-experimental relations and experimental data. In the following, due to the limitations of the regression relations presented in the determination of hydrodynamic coefficients, the database was developed from experimental data, the number of series is determined by extracting the regression relations for each series, these relations are used to determine the hydrodynamic coefficient of thrust and torque in the propeller selection algorithm. Finally, a suitable algorithm for selecting the surface-piercing propeller was presented and discussed.

کلمات کلیدی:

.Surface-piercing propeller, Propeller experimental test, Hydrodynamic coefficients, Regression relations

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