

Title:

"Evaluation of spectral analysis of added resistance in irregular waves by model experiment. "

A Suggestion for MSC Thesis

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Introduction:

There are two methods to measure added resistance of a ship in towing tank.

Method1:

Measuring the added resistance of a model in a range of regular waves frequency as added resistance RAO. Calculation of irregular wave spectrum from regression formula such as ITTC 2-P Spectrum. Calculation of added resistance spectrum by multiplying RAO and wave spectrum.

Method2:

Measuring time series of added resistance in irregular wave in towing tank.

Extraction of added resistance from time series.

The two results must be the same if the spectral analysis is applicable for added resistance. As far as I know, there is no recommended or preferred method issued by ITTC.

In this research, the student my try to check it for a merchant ship in certain sea states by model experiment.

Content:

1-Introduction (definition of the problem, literature review and the aim of this study)

2-A study to define model and test scenarios

3- Execution of tests and the results

4- Analysis of test results and discussions

5- Conclusions

A research paper must be prepared according to outcome of this thesis.