Subject

Technical appraisal service of ship performance in actual seas "10 Mode Performance Index for Ships"

ClassNK
Technical Information

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To whom it may concern

Coupled with a growing increase in environmental awareness, unstable fuel prices in recent years have spurred demand for further review of the fuel efficiency and operational economics of ships in terms of the effect that winds and waves have on ship performance.

While the evaluation and judgment of ships performance are conducted during sea trials in calm sea conditions, there is currently no comprehensive standard method for evaluating ship performance in actual sea conditions, especially at the design stage. It is therefore extremely difficult to accurately estimate a ship's true performance until it is actually in operation. Further, it is not easy to conduct comparative performance studies because of differences in loading conditions, routes, and sea conditions encountered by ships during regular operation.

Since 2007, ClassNK has been developing a method to calculate the effects of reductions in speed as part of a ship performance index associated with actual sea conditions. This approach is based on a hybrid calculation method utilizing both model tank tests and theoretical calculations. Based on the results of this research, ClassNK has developed the "Guideline for the Technical Appraisal of Ship Performance in Actual Seas - 10 Mode Performance Index for Ships" for appraising the performance of ships, and established a third-party certification program for performance appraisals conducted in accordance with the Guideline.

The distribution and widespread use of this comprehensive index will help promote the design and construction of ships with superior performance in actual ocean conditions, and also provide a more accurate understanding of ship performance in actual areas where subject ships operate, thereby contributing to enhanced operational performance.

The full text of the Guideline may be accessed at the following URL.
(http://www.classnk.or.jp/hp/Publications/Publications_image/10mode_guideline_e_mid.pdf)

(To be continued)

For any questions about the above, please contact:

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