

Optimalisasi konsumsi bahan bakar kapal skala penuh berdasarkan analisa uji tarik kapal model

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Abstrak

[ABSTRAK

Dalam berbagai penelitian uji tarik kapal ditemukan rentang Froude number tertentu yang memiliki kenaikan koefisien hambatan yang tidak terlalu ekstrim. Hal ini menyebabkan kenaikan hambatan dan daya kapal pada rentang ini tidak terlalu jauh sehingga nilai Froude number yang masuk ke dalam rentang tersebut dianggap sebagai Froude number ideal. Nilai konsumsi bahan bakar pada Froude number ideal tersebut nantinya merupakan nilai konsumsi bahan bakar optimal. Analisa lain dalam optimalisasi konsumsi bahan bakar juga dilakukan dengan meninjau konsumsi bahan bakar kapal terhadap DWT serta ditinjau dari kecepatan dinas kapal yang digunakan oleh kapal penelitian ini pada skala penuh.

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ABSTRACT

In many research of ship model pulling tests it was found that in certain intervals of Froude numbers have not an extreme escalation of ship's resistance coefficient. This cause the escalation of ship's resistance and power for each Froude number's interval are small, and these Froude number's are determined as ideal Froude number. The fuel consumption in this ideal Froude number will be determined as the optimum fuel consumption of the ship. The optimum fuel consumption also will be analyzed based on ship's deadweight tonnage and the service speed that will be used on the full scale ship., In many research of ship model pulling tests it was found that in certain intervals of Froude numbers have not an extreme escalation of ship's resistance coefficient. This cause the escalation of ship's resistance and power for each Froude number's interval are small, and these Froude number's are determined as ideal Froude number. The fuel consumption in this ideal Froude number will be determined as the optimum fuel consumption of the ship. The optimum fuel consumption also will be analyzed based on ship's deadweight tonnage and the service speed that will be used on the full scale ship.]