

ABSTRAK

PERBANDINGAN *THRUST* DAN KEBISINGAN PADA *TOROROIDAL PROPELLER* DENGAN *PROPELLER* KONVENSIONAL SECARA EKSPERIMENTAL

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Propeller itu sendiri adalah suatu jenis baling-baling yang mentransmisikan daya dengan ngekonveksi gerak putar menjadi gaya dorong/*thrust*. *Propeller* dibedakan menjadi 2 jenis yaitu *fixed pitch propeller (FPP)*, dan *controllable pitch propeller (CPP)*. *Propeller* dengan sudut pitch tetap dicetak dalam satu blok tetap sehingga sudut pitch *propeller* blade (*propeller pitch angle*) tidak bisa diatur namun dirancang agar berfungsi optimum. *Propeller* jenis *controllable pitch* dirancang agar sudut pitch dari *propeller* dapat diatur walaupun *propeller* dalam keadaan berputar.

Berdasarkan pengujian performa dan kebisingan yang telah dilakukan, toroidal *propeller* menghasilkan *thrust* sebesar 0.02925 N dan *propeller* konvensional menghasilkan nilai *thrust* sebesar 0.02925 N, dan nilai kebisingan yang dihasilkan oleh kebisingan yang dihasilkan oleh toroidal *propeller* 82,3b dB dan nilai kebisingan yang dihasilkan *propeller* konvensional 78.5 dB.

Kata Kunci: *Thrust*, *Toroidal Propeller*, *Propeller*, Konvensional, Kebisingan

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COMPARISON OF THRUST AND NOISE IN TOROIDAL PROPELLER WITH CONVENTIONAL PROPELLER EXPERIMENTALLY

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The propeller itself is a type of propeller that transmits power by converting rotary motion into thrust. Propellers can be divided into 2 types, namely fixed pitch propeller (FPP), and controllable pitch propeller (CPP). Propellers with a fixed pitch angle are moulded in a fixed block so that the propeller blade pitch angle (propeller pitch angle) cannot be adjusted but is designed to function optimally. The controllable pitch propeller is designed so that the pitch angle of the propeller can be adjusted even when the propeller is rotating.

Based on the performance and noise testing that has been done, the toroidal propeller produces a thrust of 0.02925 N and the conventional propeller produces a thrust value of 0.02925 N, and the noise value produced by the noise produced by the toroidal propeller is 82.3 dB and the noise value produced by the conventional propeller is 78.5 dB.

Keywords: Thrust, Toroidal Propeller, Propeller, Conventional, Noise