

“ANALISA PENGARUH PENAMBAHAN *HULL VANE* PADA LAMBUNG KAPAL PATROLI TERHADAP HAMBATAN”

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ABSTRACT

Patrol Boats are high-speed boats used to patrol an area. When the ship is patrolling there is ship resistance (resistance). To reduce the resistance value on the ship by using a Hull Vane. Hull Vane is a fixed foil located below the waterline at the stern of the ship. The size of the vane hull used in this research is a chord foil length of 0.34 m and a foil span of 2.30 m. This research aims to obtain the foil coordinate value that produces the smallest resistance. This research uses a computer program based on Computational Fluid Dynamics (CFD). The research was carried out by analyzing and calculating the total resistance of the ship. Based on the results of analysis using the Ansys Workbench R2 2020 software, it was found that the smallest total ship resistance value was 124.164 N at a speed of 25 knots, the Hull Vane 4418 model was reduced by 8% from ships without Hull Vanes with a 5⁰ angle variation, foil position 2%LWL behind the ship and 80%T. And the pressure value on the ship's hull with 5⁰ corner foil is 7566.4 Pa, smaller and optimal than 10⁰ corner foil which is 8125.31 Pa.

Keywords: Hull Vane, Ship Barriers, Computational Fluid Dynamic Method, Software.