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Optimizing Wake Field Management for Bubu boat: A Computational Fluid Dynamics (CFD) Approach

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ABSTRACT

The study of Malaysian fishing boats encompasses several disciplines, such as maritime history, marine engineering, and fishery science [1]. The problem statement of this project is the traditional design of small-scale fishing boats usually has organized wake patterns that give greater use of fuel in which has caused lots of damage to the environment especially to the marine life. This project has a gap of study which has limited knowledge and research which aims on strengthen on the fishing boats hydrodynamic performance to decrease the existing consequences. The objectives of this project to design fishing boat Bubu using POLYCAD software and to analyze wake field management Bubu boat using Computational Fluid Dynamic software. In this project, the propulsion system of the Rigid hull RIB boat was designed using POLYCAD while the boat wakefield are analyzed using ANSYS software, also it can be used to calculate propulsion. In conclusion, if this project succeeds the potential to enhance the sustainability, efficiency, and ecological compatibility of fishing practices, which is crucial for the long-term viability of marine ecosystems and the livelihoods of fishing communities is guaranteed.

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