

# Analisis kombinasi penggunaan tunnel dan ducted propeller terhadap peningkatan thrust pada kapal pelat datar: fishing trawler = Analysis of combination tunnel with ducted propeller to increase thrust on flat plate ships: fishing trawler

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## Abstrak

The flat plate ship is a ship that is being developed and has entered the mass production stage of the Ministry of Research and Technology Republic of Indonesia. This is related to the function of flat plate vessels that are suitable with the conditions and needs of the Indonesian state, namely the massive production of marine fleets. Flat plate ships provide advantages including production cost efficiency which is far more economical than ships in general because it does not go through the bending process, so does the production time which can be shortened. But the flat plate ship still needs improvement, one of them is the ship propulsion.

This study will combine a flat plate ship tunnel with a ducted propeller as an effort to increase thrust and hydrodynamic efficiency, with the ultimate goal of reducing fuel demand from flat plate vessels. The title of the research that was raised was the Analysis of the Combination of the Use of Tunnel and Ducted Propeller Against Increased Thrust on Flat Plate Ships: Trawler Fishing.

The research method used is bollard pull / trawl pull using reference bollard pull guidelines - ITTC. Using a 70cm model ship with three configurations to be a comparison of the resulting value. The configuration used is conventional fishing trawler type flat plate without tunnel, and flat plate ship with Tunnel with all configurations using open and ducted propeller.

This study succeeded in producing the desired destination with a combination of Tunnel and Ducted able to increase hydrodynamic efficiency and thrust values compared to other configurations. So that this research is expected to be one of the references to propulsion solutions and designs on flat plate vessels.