DEVELOPMENT OF HYBRID PROPULSION SYSTEM (BATTERY - DIESEL ELECTRIC) FOR FERRY LINER MERAK - BAKAUHENI

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ABSTRACT

The issue of the endless energy of fossil fuels as a material for ship propulsion has long worried about by this energy users. So a few years ago has begun to develop alternative energy as a fuel substitute derived from fossils. Ships as a means of transportation that uses a propulsion diesel engines which use a lot of energy from fossil fuels also produces gas emissions or waste that can pollute the environment.

One way to overcome the above is to develop an eco-friendly ship (eco ship) system - an efficient propulsion system and a low content of dump gas emissions. One alternative propulsion systems are widely studied today is a hybrid propulsion. This research will develop a hybrid propulsion system using a parallel combination of a lithium battery and diesel electric. This hybrid system will be developed on the ferry with a fixed shipping routes (ferry liner) on the crossing area Merak - Bakauheni. Configuration model and the performance of the hybrid propulsion system models will be analyzed and simulated using Matlab software assistance.

Key words: hybrid, eco ship, propulsion system, lithium, Matlab.