



**RESPONSE OF DYNAMIC WAVE FOR STRESS IMPACT ON
SEMI-SWATH**

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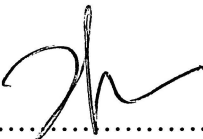
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“I declare that I have read this thesis and in my point of view this thesis is qualified in term of scope and quality for the purpose of awarding the Bachelor of Engineering (Hons), Mechanical”.

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ABSTRACT

Wave is a disturbance that propagates through space and time, usually with transference of energy. Wave travel and transfer energy from one point to another, often with no permanent displacement of the particles of the medium. SWATH is an acronym for Small Waterplane Area Twin Hulls while Semi-SWATH is a combination of a SWATH ship in the forward half and a conventional Catamaran in the stern half. This type of ship usually has ability to deliver big ship platform steadiness and ride quality in a small vessel and ability to sustain a high proportion. This project is important in order to explore the wave pattern effect to Semi-Swath hull. The suitable wave pattern is selected and developed by using Finite Element Method (FEM). The result obtains from FEM then is compare to experimental result to validate it. This project emphasized the used of CAD software which is CATIA v5 in order to conduct the FEM. At first, some relevant literature reviews are reviewed to obtain information for this project. The calculation on wave force acting on the structure also been calculated as it is needed in FEM later. Then, the modeling of Semi-SWATH is modeled based on the scaled down Semi-SWATH hull. After that, the meshing process in conducted to prepare the modeling for analyzing in FEM. All the modeling, meshing and analyzing in this project are done in CATIA v5. At the end of this project, the result obtained is based on the force distribution around the hull.

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