"AIRBOAT VEHICLE DESIGN FOR SEARCH AND RESCUE ON BENGKALIS ISLAND"

Student Name	: Khairul
NIM	: 1304191025
Supervisor	: Romadhoni, ST., MT

ABSTRACT

Airboat vehicle is a ship that utilizes thrust through the work of an air propeller, this airboat is also known for having the advantage of being able to walk in swamps and water. Airboats are designed with the aim of search and rescue on Bengkalis Island and its surroundings, used for natural disasters such as floods, missing persons (drowned) and so on. In designing this airboat using the parent design approach method (comparison or comparison method) and the design of this ship using maxsurf and autocad software. Determination of the main size was obtained from the linear regression method with a length of 9.2 meters, a width of 2.9 meters, a height of 1.55 meters and a draft of 0.7 meters. Furthermore, the analysis of ship resistance using numerical and computational methods (maxsurf software), the resistance values obtained by comparison are 9.03 KN (numeric) and 9.31 KN (computable) according to the 5% range. And the horse power needed for this airboat is 160 horse power. For the stability of airboats using the criteria of IMO (International Maritime Organization) Code A.749 (18) Ch 3 – Design Criteria applicable to all ships, with a GZ value of not <0.20 meters, stability is designed with 3 conditions, loadcase conditions 100 %, 50% and 0% with an actual value of 0.417 meters (condition 1), 0.427 meters (condition 2), 0.44 meters (condition 3) with a pass status.

Keywords: Airboat vehicle, design, rescue