

**“AIRBOAT VEHICLE CONSTRUCTION DESIGN FOR SEARCH AND  
RESCUE ON BENGKALIS ISLAND”**

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***ABSTRACK***

*Construction can be defined as buildings or infrastructure units in one or several areas. In Khairul's final assignment with the title Airboat Vehicle Design for Search and Rescue on Bengkalis Island. previously had designed the Lines plan and general arrangement with the main dimensions of the ship: length 9.2 meters, width 2.9 meters, height 1.55 meters and draft 0.7 meters. Next, construction design calculations are carried out based on the Indonesian Classification Bureau Volume VII Rules For Small Vessels up to 24m 2013 Edition, specifically for aluminum-based vessels. To ensure that the construction can accept the load, a construction strength analysis will be carried out using Ansys Static Structural software which allows for evaluating the static structural response of various components or FEM-based mechanical systems. From the software testing results, it was found that the maximum stress/stress value occurred on the side of the ship at 4,868 MPa, on the top/deck the stress/stress value was 11.288 MPa, and on the bottom of the hull the stress/stress was 31,23 MPa. The three sides analyzed meet the requirements according to the DNV-GL Rules For Clafification-Ship, Part 3, Chapter 1: General Principles.*

***Keywords:*** *Construction, Strength analysis, Finite Element Method.*