

DESIGN, DEVELOPMENT, AND CONSTRUCTION OF A MODEL OF SINGLE SEATER AIR-CUSHIONED CRAFT

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ABSTRACT

A task has been assigned to a group of individuals to collaborate in the construction of a model of a given specification. The vision behind this project is to open the minds of students to the design and production of a prototype model of a product. The mission is to design build a single seated petroleum powered air cushion vehicle with a steering mechanism. The aim is to design and build a vehicle with cost effectiveness in mind. The concept of which is a low cost hovercraft capable of mass production with minimal production cost. The goal of which is to make this vehicle affordable and accessible a wide consumer market.

This report will discuss about the introduction of the vehicle. This chapter will include the principles that the vehicle operates on and the background of this concept of the vehicle. This matter will include the methods that are used in the system of the vehicle. Other than that, this chapter will also explain the methods that were implemented in the design process of the vehicle based on the research and experimentation that has been done from the information of the basic principles of functionality of the system that is utilized by the vehicle that are considered in the production of the prototype. At the end of this chapter, readers will get a clear picture of what a hovercraft is, how it function and how it is useful in this modern age.

The next section of this report will cover the outcome of the information collected. It will be a conclusion of the studies that has been done based on the theoretical information of the vehicle and the experimentation of this theoretical information. From the information gathered, the rough output of the design of a prototype was produced that will be the implemented on the initial stages of the construction of the model prototype till the finals stages of the vehicle before initial testing of the model. Further information on this topic will show how the selection of materials for the construction has been done with the consideration of the team's goal in mind. At the end of this chapter, an understanding of how the basic knowledge and information gathered from the process of research and the designing stage of the vehicle was implemented in the construction of the prototype model, the testing of the model and the analysis of the testing for further improvements of the final product of the model before going for production.

Last but not least, the problems encountered when building the model and the improvements can be done will be stated.