HIGHER TECHNICAL INSTITUTE

MECHANICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN AND CONSTRUCTION OF A MINIATURE UNDERWATER VEHICLE

M/1020

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DESIGN AND CONSTRUCTION OF A MINIATURE UNDERWATER VEHICLE

(Project Number: M/1020)

by

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ABSTRACT

The objective of this diploma project is to construct an underwater vehicle. For this purpose a survey on the design of underwater motorized vessels was conducted. The vessel will be radio controlled and able to submerge and execute simple movements under water. Detailed drawings of the proper design will be presented.

Firstly, the parameters of marine engineering design and construction were research, so as to understand and comprehend the principles upon which an underwater vessel depends on. Then literature survey was carried out, regarding the mechanical engineering section of the project. When the theoretical part was dealt with, several experiments were conducted to resolve factors, such as the construction material of the vessel, the power of the motor and the hydrodynamics of different shapes. All the above, were of great importance and vital to the final design of the vessel.

For the construction of the vessel the machinery and workspace of several workshops were utilised, in order to achieve maximum quality for the vessel. Despite practical problems and minor setbacks in the construction procedure, the vessel was finished and operated successfully.

Through this project, I was able not only to comprehend the marine and mechanical engineering aspects that were involved, but also to put into practical application all the knowledge gained through my studies at HTI. This is, in my opinion, my most important reward and achievement, since the idea behind such a diploma project is exactly that.

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