

DEVELOPMENT OF AUTOMATIC WATER LEVEL
MOTOR CONTROL SYSTEM

Design Project

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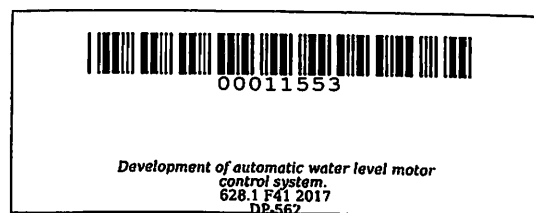
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✓ **DEVELOPMENT OF AUTOMATIC WATER LEVEL MOTOR CONTROL
SYSTEM**

Undergraduate Design Project
Submitted to the faculty of the
College of Engineering and Information Technology
Cavite State University
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In partial fulfilment
of the requirements for the degree
Bachelor of Industrial Technology Major in Electrical Technology



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ABSTRACT

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One of the core field of study of Bachelor of Industrial Technology major in Electrical Technology student is motor control. Motor control topic is difficult to learn and to teach when there is lack of equipments and facilities to be used for demonstration. In this project, Motor Control with the used of safety devices also plays an important role in academic growth and excellence of the students.

Materials that used in the project design was canvassed and checked through online shopping. The researchers research for the needed materials and checked its availability for the design project. The materials to be used were considered and analyzed where to buy the needed materials. Electrical supplies are bought directly from Raon St. Quiapo and Sta. Cruz, Manila. The electrical supplies were generated from the cheaper but respectable suppliers. The frame of the prototype was constructed in Brgy. Luciano, Trece Martires City, Cavite. Angular bars was used of different dimension for the frame and marine plywood for the electrical components of the design project. Screw, bolts and nuts was used in the installation of the electrical devices. Wiring connections and proper placing of the sensors for the project was properly installed to function correctly.

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INTRODUCTION

Anyanwu C.N.(2012) states that a motor controller is the actual device that energizes and de-energizes the circuit to the motor so that it can start and stop. All motors must have a control device to start and stop a motor. It is called as “motor controller.” A motor controller might include a manual or automatic means for starting and stopping the motor, selecting forward or reverse rotation, selecting and regulating the speed, regulating or limiting the torque, and protecting against overloads and faults.

This project design will develop a water level control which can automatically run the motor when the water reach its minimum level and shut down when the water reach its maximum level. The sensors senses the presence of water and give indication to the micro controller. The microcontroller produces the control signals to drive the motor. If there is no water then microcontroller gives control signal to start the motor and if there is sufficient water in the field then the microcontroller give control signal to stop the motor. Also, the microcontroller enables