UNIVERSITI TEKNIKAL MALAYSIA MELAKA

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SOLAR POWERED FISH FEEDER

This report is submitted in accordance with the requirement of the Universiti Teknikal Malaysia Melaka (UTeM) for the Bachelor of Electrical Engineering Technology (Industrial Automation and Robotic) with Honours.

by

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FACULTY OF ENGINEERING TECHNOLOGY
2016

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

BORANG PENGESAHAN STATUS LAPORAN PROJEK SARJANA MUDA

TAJUK: **Solar Powered Fish Feeder**

SESI PENGAJIAN: **2016/17 Semester 1**

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I hereby, declared this report entitled "Solar Powered Fish Feeder" is the results of my own research except as cited in references.

Signature : .....

Author's Name : HAFIEZA BINTI ABDUL HAMID

Date : 9 December 2016

APPROVAL

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(Project Supervisor)

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ABSTRAK

Sistem automatik direka bentuk untuk mengawal proses pemberi makan secara automatik.Berdasarkan teknologi sedia ada, sistem ini telah dihasilkan dengan pelbagai reka bentuk dan revolusi. Kaedah sistem ini adalah untuk proses memberi makan ikan mengikut masa yang ditetapkan. Bekalan kuasa utama yang digunakan adalah tenaga suria dan bateri sebagai bekalan bantuan pada waktu malam. Tenaga suria boleh dijadikan satu penyelesaian alternatif kepada krisis tenaga kerana kuasa suria ialah satu tenaga yang boleh diperbaharui. Penyelidik percaya, peningkatan satu sistem ini sangat berguna dan sesuai untuk digunakan dalam persekitaran akuakultur. Sistem automatik ini membuat segala-galanya menjadi mudah dan akan membantu mengurangkan waktu kerja. Matlamat projek ini dengan memberi makan dengan cara sembur secara sebaran bukan sahaja menurunkan kepada satu posisi. Makanan akan dilepaskan dengan bantuan arus udara penghembus kuasa dan menyebarkan makanan ke atas permukaan kolam. Projek ini dilaksanakan untuk proses memberi makan ikan pada waktu yang betul dan tepat, menjadikan sistem ini lebih produktif. Makanan akan disimpan dalam sebuah tangki dan alat ini juga menyediakan penderia pengesan yang boleh mengesan jika makanan dalam tangki berkurangan. Kaedah ini lebih efisien dari kaedah sebelum ini dengan menggunakan sistem manual untuk memeriksa kuantiti makanan di dalam tangki.

ABSTRACT

The objective of this research is to design automatically feeding system. The existing technologies, this system was brought many design and revolutions. The method of this system needs to be considered as fish must be fed with regard to time. The device supply using solar energy and battery as a backup supply during the night. Solar energy can be an alternative solution to energy crisis because the power of solar is a renewable energy. The researchers believe, the improvement of this system can be useful and suitable to apply in aquaculture environment. This automatic system makes the works easier and may help reduces working hours. The aims of this project to distuributes the feed more widely not just to drop to one point. The feed will release with assistance of air stream of a power blower and disperses the feed onto surface of the pond. This project developed to accurate the feeding time in a correct period of time to be more productive. The feeds will be stored in a tank and this feeder also provide detector sensor which can detect if food in tank is decrease. This method is more efficient from previous design that use manual system to control food of capacity inside the tank.

DEDICATION

This thesis is dedicated to my parents for supporting and encouraging me on my life and always taught me to study hard and be success person for my future. This dissertation is dedicated also to my supervisor for guided me everything.

ACKNOWLEDGEMENT

I would like to thank everyone who had contribute to the successful completion of this project. I would like to express my heartily gratitude to my research supervisor, Dr Sahazati binti Md Rozali on guidance and advice given throughout the progress of this project.

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LIST OF ABBREVIATIONS, SYMBOLS AND NOMENCLATURE

LCD	-	Liquid crystal display
RTC	-	Real Time Clock
PV	-	Photovoltaic
V	-	Voltage
I	-	Current

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