

**DESIGN OF WATER LEVEL CONTROLLER USING FUZZY
LOGIC TECHNIQUE FOR WATER TANK SYSTEM**

**Project report presented in the partial fulfillment for the award of the
Bachelor of Electrical Engineering (Hons)
UNIVERSITI TEKNOLOGI MARA**



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ACKNOWLEDGEMENT

In the name of almighty Allah s.w.t, I would like to express my gratitude and appreciations to my supervisor, Cik Ruhizan Liza Ahmad Shauri for her invaluable suggestions, guidance and constant encouragement.

Special thanks to all my friends for their assistance and support especially to Mohd Asmidar Abdul Wahab, Muhd Nurafizal Mohammad Razmi and Sufian Mohd Aris

Last but not least, I am grateful to my family, especially my parents for their moral support, invaluable advices and all the people who had involved in this project

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ABSTRACT

The measurement of liquid level is important in industrial plants. In most of the operations, the ability to conduct accurate level measurement is very crucial since that it can make a difference in making a profit or taking a loss. Therefore, inaccurate level measurement or failure to take measurement can and will cause serious results.

This project is to design a valve controller to control the liquid inlet flow in the water level control system. The suitable type of controller has been identified to be using Fuzzy Logic technique, thus the proposed method could be used to solve the inaccurate level of measurement problem. This valve controller uses intelligent feedback control scheme to produce an ideal liquid level for the next process

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CHAPTER 1

INTRODUCTION

Measurement of liquid level in storage and processing vessels, tanks, wells and reservoirs is commonly needed. The most common way to control the liquid level is by controlling the flow of liquid through pipes and valves. The flow can be either shutoff completely or released totally, these valves are called on-off valves in the industry [1].

The liquid flow can be controlled by mechanical or electronic techniques. In this project, the liquid flow controls are depending on the water level in the tank. There are many types of level sensors that has been developed and different method to get the accurate measurement. This operation of the valve controller is controlled by the Fuzzy Logic technique that can control the fractional opening or closing of a valve [5]. The controller compares a measured value from water level with a reference rules and make a decision to open the liquid flow valve.

The purpose of this project is to analyze the performances of the water level system by using Fuzzy Logic technique. This project presents a new approach to control the water level in the tank by replacing the existing controller such as PLC and PID.