

ONLINE CONTROLLER FOR LEVEL MEASUREMENT

By

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CERTIFICATION OF APPROVAL

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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.

Azri Hafriz Bin Abdullah

ABSTRACT

As a final year student in UTP, final year project (FYP) was required to be undertaken, which is a design and/or research-based subject. This report discusses the preliminary research done and basic understanding of the topic, which is **ONLINE CONTROLLER for LEVEL MEASUREMENT**. Level measurement is the method of determination of the linear vertical distance between a reference point or datum plane and the surface of a liquid or the top of a pile of divided solids. The objective of the project is to simulate and develop online level controller for measurement. The challenge in this project is to develop online monitoring (Graphical User Interface (GUI)) using LabVIEW programming based on the conditions of the level controller itself and to manage a suitable design of the system. The online monitoring with Graphical User Interface (GUI) will ease the operator to analyze the system and at the same time monitor the level of the oil in the vessel. The author was using a differential pressure transmitter as an instrument for this project. The differential pressure transmitter is used to measure a different of pressure and convert it to the level. It was designed for process control applications, these 2-wire transmitters generate a 4-20 mA or 1-5V signal proportional or characterized to the applied differential pressure. This signal can be transmitted over a pair of twisted wires through long distances Lab testing and circuit simulation have done with a model of the system to ensure the online system will work accordingly due to desire objective.

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LIST OF ABBREVIATIONS

HMI	Human Machine Interface
DAQ	Data Acquisition
DDK	Driver Development Kit
HART	Highway Addresses Remote Transducer
GUI	Graphical user interfaces
LabVIEW	Laboratory Virtual instrument Engineering Workbench
MAX	Measurement and Automation Explorer
VI	Virtual Instrument