

## ABSTRAK

### **Rancang Bangun *Trainer Programmable Logic Control* Menggunakan *Human Machine Interface* Berbasis *ATmega328P***

Penelitian ini bertujuan merancang *trainer* PLC dan HMI berbasis *ATmega328P* menggunakan metode pemrograman *ladder diagram* dan *Statement List*. Menggunakan metode penelitian *Research and Development* dengan teknik ADDIE dari Robert Maribe Branch (2009) yaitu: Analisis, Desain, *Develop*, Implementasi, dan Evaluasi. *Trainer* PLC dan HMI ini telah diuji rangkaian *self interlock*, *forward/reverse*, *time off delay relay* dan *star-delta*, serta uji reliabilitas menggunakan uji *blackbox* secara berulang. Hasil uji rangkaian dan reliabilitas dapat bekerja sesuai fungsi.

Kata kunci: *Trainer*, *PLC*, *HMI*, *Research and Development*, ADDIE



## ABSTRACT

### ***Design of Programmable Logic Control Trainer Use Human Machine Interface Based on ATmega328P***

*This research aims how to design and implement PLC with HMI based on ATmega328p use Ladder Diagram and Statement List programming methods. This research with use Research and Development methods ADDIE (Analysis, Design, Develop, Implementation and Evaluation) techniques from Robert Maribe Branch (2009). The PLC and HMI trainers have tested the series of self interlock, forward/reverse, time off delay relay and star-delta, and reliability tests using the blackbox test repeatedly. The results of the test circuit and reliability can work according to function.*

*Keywords: Trainer, PLC, HMI, Research and Development, ADDIE*

