ABSTRACT

Plastic waste is a major problem in many countries, including Indonesia. One way to utilize plastic waste, in this case polyethylene terephthalate (PET) plastic, is to convert it into fuel oil using pyrolysis reactor.Controlling the temperatur of a pyrolysis reactor is usually done manually. In this work, a temperature controller for a pyrolysis reactor is designed based on proportional, integral and derivative (PID) methode The reactor, as the plant in a closed loop control system, is heated with electric power and the PID controller is implemented to adjust the voltage level to the electric heater By controlling the temperature, the pytolysis furnace is expected to be able be optimized in producing fuel oil from PET.

Keywords: pyrolysis, fuel oil, plastic Polyethylene Terephthalate (PET), PID, temperature control