ABSTRACT

Single piston pump is one type of pump that has one cylinder only. The workings of this tool is to pump the water inside the cylinder to generate a pressure difference so that the pressure difference can dikonverter as electrical energy. This study, entitled Tracking Output Linear Systems With Single Piston Pump Cylinder Control Area. The purpose of this research is to understand the system model equations single piston pumps and designing a single piston pump controls the cylinder area. The method used is a system of linear equations, numerical methods Runge Kutta Order 4 and tracking systems of equations. Then using the equation control variable Area of Cylinder, Area of Cylinder value obtained by $0,004\ m^2$ to $0,19015\ m^2$. As well as the pressure in the upper reservoir will not always go up but reaches the specified maximum value that is equal to 196450 Pa.

Keywords: single piston pumps, systems of linear equations, Runge Kutta Order 4, tracking systems of equations.