ABSTRACT

Pipeline system is important because it supplies oil from Wells to oil shelters. Pipeline systems have problems like pressure drop and leaks. To fix the problem would require a system that monitors and controls the fluid in the pipeline system.

In the final project was designed an online monitoring system and control pressure and flow prototype oil pipeline system. The control system uses pole placement methods that are applied to network control system (NCS). The network control system (NCS) uses Bluetooth as its communication medium.

The results obtained from this study are obtaining a system that can monitor pressure and flow in the pipeline system and control flow water output. The test is the flow air tracking output to set points in the work area 0.00021 m^3/s *up to 0.00007* m^3/s*. For tracking to set point 0.00018* m^3/s *has a value of %OS 17.8% and* T_s *of 27.2 seconds, set point 0.00015* m^3/s *has a value of %OS of 13.4% and* T_s *of 6 seconds, set point 0.00010* m^3/s *has a value of %OS of 8% and* T_s *of 11 seconds on a wireless prototype pipeline system.*

Keywords: *Pipeline, Flow, Pressure, Pole-Placement, Network Control System*