

ABSTRACT

This paper describes the design and manufacture of an underwater explorer robot that is useful as an alternative solution for observation in the waters. The robot in this design is controlled by a remote (Remotely Operated Vehicle) which is controlled using a cable that is recognized above the water. In this research, the robot is designed in the form of a mini diving vehicle, but the robot can be applied to a larger robot that can operate in the depths of marine waters. ROV stability is needed to support its needs when maneuvering in water. In this study, the design of the ROV aims to maintain stability using PID control. Based on the design and research, the ROV must obtain the correct PID constant to maintain stability and maneuver well. The robot requires k_p , k_i , k_d , which must be filled in with the correct value. PID control saves memory on the controller, and the system will execute commands given by the controller faster.

Keywords - PID control, ROV, Raspberry Pi , telemetry