

ABSTRACT

Beam and ball system is the system consisted of rectangular block and a ball. Beam and ball system is popular system in learning about control system. Beam and ball system is the most used plant model for educational purpose. Beam and ball system often used because of its simplicity, easy to understand, and a lot of controlling method can be applied in this system.

Beam and ball system consisted a sensor, a rectangular block integrated with electrical motor and a ball. This system works by detecting the movement of the ball on the rectangular block. When the ball is moving, the electrical will propel the rectangular block to reach the desired setting point of the ball. To obtain output with minimum error and simple controlling method, PID controller is used.

The results from this experiment are beam and ball system output with 1%, 1.6%, 3.67% of error steady state and 6.7%, 28.8%, 22.7% overshoot.

Keyword: *beam and ball system, PID*