

ABSTRACT

The aim of this research is to explain the process designing distance measuring tool with laser using the angle of changes in servo motor. In the design process, there are some condition that must be considered such as the characteristics of the measuring object and laser placement. Measuring object must meet predetermined, object must have flatfields, a level of reflectivity above 90%, and is directly proportional to the measuring instrument. In designing the system, the microcontroller used is ATmega8535. For the process simulation using Proteus 8 Professional application. In this study, variable change were given a large delay in the servo motor and the distance of the object is modified periodically. On delay of 1000 ms, precision level of measuring instrument to be the highest when compared with the 200 400, 600, and 800 ms delay. The level of precision in the delay of 1000 ms, 100%. Besides having a high level of precision, the delay of 1000 ms average value calculation of the resulting object approaching the actual value measurement. This result show on delay 1000 ms, measurment tool work well.

Keyword: servo motor; delay; lasers; precision.