

ABSTRACT

One of many fields that have an important role in manufacturing is modern control system and automatic control techniques, which one of its uses is make manufacturing activities easier. Generally, there is a one-axis position configuration system that requires accuracy to support the production activities. Therefore, an automatic control technique that provide accuracy to position displacement in the system is necessary.

Model reference is the method studied in this final task. The outline of its work principle is that the actual position measured by the sensor will always be compared to reference position according to model reference, so that the actuator will adjust to the given feedback.

The implementation of model reference control is intended to achieve accuracy in position displacement. In this case, accuracy can be assessed by how small the final position error percentage value is compared to the given set-point. Based on the study that has been done, the implementation of this control method works well to achieve the objective with an percent error range of 0.2 - 0.78%.

Keywords : model reference, position configuration system