

## **ABSTRACT**

As the rapid development of technology, encourages manufacturing companies to be able to implement the technology into its production process, one of the technologies is automation that can improve the productivity. PT. Dharma Precision Parts is one of the manufacturing company that producing machining parts with various types of products, one of them is stopper valve.

The problems that arise in stopper valve production process is the manufacturing process still manual that rely on the operator's involvement and also the inability of the company to fulfill production targets. Automation system design using a Programmable Logic Controller (PLC) as the main controller in the process and pneumatic technology as driver is done in order to resolve the these problems and can be applied to the chamfering process of stopper valve part.

From research conducted it can be concluded that, automation system design for chamfering process stopper valve parts on Bench Lathe machine SD-32A at PT. Dharma Precision Parts has been completed and the new process time for chamfering process is around 5 seconds/parts. Using automation system in the stopper valve part production process is expected to increase production capacity and reduce the use of labor then provide a positive impact to the company.

**Keywords** : Automation, Programmable Logic Controller, PLC Programming, Pneumatic, Omron PLC