

## **ABSTRACT**

PT Dharma Precision Parts is a high-end precision machining services based company which established in 1997. It supplies components and assemblies to major OEMs throughout Indonesia. Several machines that PT Dharma Precision Parts owns are still manually operated, one of them is SD 32-A bench-lathe machine that used to process one of their product, stopper valve. To increase the production capacity in order to achieve the production target, PT Dharma Precision Parts are going to replace the machine with the automated one. There are two options that feasible to be done in order to change the SD 32-A bench-lathe machine into an automated one. The first option is to build a new machine, and the second one is using the existing bench lathe, and modify its machine into an automated one. Based on several consideration, the modification of the existing bench lathe machine into the automated one would be the most feasible alternative. In modifying the existing machines, there are several mechanical design concept generated. After the selection, the D concept are selected to be implemented. By applying the proposed mechanical design for stopper valve chamfering process automation, the process time can reduced from 9.92 seconds into 5 seconds.

Keywords— Mechanical, Automation, Product, Design