

CONCLUSION

The goal of this paper was to develop the adjustable clamping system for the product family “Meyer”, to examine the existing fixtures and to implement their advantageous features in the solution, which would minimize the operator’s effort and time. The thesis aims to follow the product development, from the statement of the problem to the theoretical implementation of the concept.

In the context of the problem, the intention was to facilitate the operator and positively affect the workflow of the production, therefore the development does not limit within itself, and allows the modification of the various systems to obtain the most suitable solution.

To acquire sufficient background in the field before establishing any methodology extensive study and research was conducted, different concepts and approaches were examined. The various ideas and possible solutions were presented and discarded when proved invalid. In order to ensure the design will perform as expected and not fail during the machining operations, the calculations were done based on three different approaches and equations. The objectives the design has to fulfill were concluded.

The developed design solutions comply with most of the established objectives and therefore the comparison between them in the form of the table is presented, this eliminates the first design in the favor of the second system, which was expected, since the overall arrangement and the mechanism is more reliable and better elaborated. Although, to be fully incorporated with the system the design might need some improvements or enhancements.

There are seven element of fixture in the current system, yet only two parts have to be mounted in the proposed design. The main goal of reducing the set up time is attained, as the number of moves the operator needs to clamp the part is lowered.

In conclusion, the paper carries out all the necessary stages of the development and achieves the assigned outcomes.