**DESIGN OF END EFFECTORS FOR DRILLING IN AUTOMATED PROCESSES**

Abstract

Robots play a vital role in automation of machines. The performance of robotic manipulator is completed by the end effectors. The choice of end effector is depended on the type of task to be performed. For holding the component and pick & place activities to the specified location gripper is selected and for different types of workshop operations various tools are fixed on the manipulator e.g. welding electrode holder, painting spray gun etc

As a part of the project this study aims to help solve the drilling problem, the goal of this thesis is to design an end effectors that will help avoid slipping when drilling. This project presents the development of a drill end effector for use on industrial robots. The end effector has low weight and high rigidity. The drill end effector is fully programmable and will realize different drilling mode. The real-time force feedback can detect dull or broken bits, drill to breakthrough, and plot thrust force while drilling. Additionally, the end effector can also be equipped with a coolant/lubricant device. Solid works is used to design the end effectors of a driller. The structural static analysis carried out to determine the critical stresses and deformation values. For selecting the better material analysis is done with different materials. The analysis is done in solid works simulation.