EMPLOYER PROJECT WITH GE POWER SOLUTIONS (MALAYSIA)

Title: Design and Structural Analysis of a Robotic Arm

Field: Mechanical Engineering

Level: Bachelor's Degree

Project Description:

To build a robotic arm using the materials provided that will reduce manual labour and increase efficiency. In this project, a pick and place machine is to be designed to lift the raw material sheets one by one to the shearing machine.

The main intention of designing this pick and place machine is there will be no need of manual operation of picking the sheet form stack to shearing machine and the auto feeding mechanism is a continuous process where the productivity could be affected.

This project undergoes an in-depth study of the mechanics that will be implemented, including the use of technologies such as Arduino with its related parts. Students will be handling 10 manually operated systems (picking of sheet from stack to feed) into automation, such that it reduces the risk-factor during feeding operation. On developing this system, it reduces the time of action performed that leads to increase in productivity.

Students are to determine the areas in which the stresses occur the most and be able to show that those stresses are in limit, and do not cause any considerable damage to the robot arm. A stress analysis is to be performed to detect that those stresses are in limit and do not cause any considerable damage to the robot arm.

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sample signature

Supervisor's signature Date: May 1st, 2021