TMP Manufacturing: ISO 9000

Overview:
TMP manufacturing does not utilize any type of tangible documentation for their processes in the operating area. The company uses one broad ISO 9000 manual for documentation for the machinery and verbal conversation to communicate process instructions and any other kind of information to their operators. This poses an issue when there is need to pull workers from areas in the factory to work in unfamiliar areas when they are short of staff.

Objectives:
The main objective of Penn State design team was to solve the operator instruction documentation problem at TMP Manufacturing. The main goal was to make the factory a safer and quality-aware environment for workers on the factory floor.

Approach:
The design team brainstormed a wide range of alternatives and evaluated these approaches based on significance of criteria for the company. They came up with 8 alternatives: Hanging Clipboard with Paper, Laminated Printed Sheets, Bended, Covered Booklet, Voice & Audio Recording, Physical Instruction, Online Pass/Fail Courses, Electronic Touch iPads and Extreme Virtual Goggles.

Outcomes:
Making laminated sheets was considered the best solution to the problem of documentation at TMP’s factory since they allow a good visual for operators, are easy to use and understand, and are durable and cost efficient. The team carried out a time study comparing the time taken by a temporary operator to learn the steps for the metal room machines with the time taken to learn the steps using laminated documentation. Implementing the laminated sheets resulted in 5.07% to 23% improvement in training time of a temporary operator in machine usage. The average percentage improvement for the 6 machines was 17.94%. In addition, the quality of documentation was improved for the ISO 9000 binder.