Program: Biomedical Engineering

Master's Thesis

Title: Human Error Reduction in Production and Picking process

Summary:

This work is focused on the improvement of the "Picking Process", with the avoidance of human errors in the product storages of Stryker Corporation facilities. Storages for raw material, semi-finished products as well as for the packing storages in implants, instruments and Navigation manufacturing areas are considered for this project.

Together with the Stryker's Sentinel Program, the project objective is to detect any potential weak points in the workplace and production procedures in order to improve the picking process of the material from the storages.

Several tools for assessment are revised. Failure Mode and Effects Analysis (FMEA), human behavior error analysis, human performance improvement handbooks and Human Factor Risk Index assessment are used to provide information about human performance and process evaluation. With these tools, it is possible to anticipate and prevent errors in the picking processes.

The picking process was assessed through an evaluation method. The assessment consists of a questionnaire, evaluating the workers' performance and workplace conditions. With the results of this analysis, it is possible to determine where the most critical areas of risk are located, as well as the weaker parameters, which are involved within the picking process.

The results of this assessment have exposed the necessity of better product visualization in the storages. The acquired information has also showed that the storages for plate implants and packing have weak points. Finally, nine proposals for improvement in the picking process are explained and prioritized according to the most important necessities in the storages.

Keywords: Picking process, Assessment, Human Error, Risk, Storages.

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