

Raw material stored location Identification in the Garment Factory using RFID Technology

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RFID is a technology for automated identification of objects, which different applications were used successfully with two distinct advantages; uniqueness and automation such as animals in farm, containers, humans, etc. In the Apparel Industry, it is difficult to finding the raw materials rolls, which have certain meters in a large pallet. Due to that case, raw material waste is higher than consumer. This process was developed to solve such cases and reduce waste percentage and time management. This research aimed to approach with factors which resulting in efficiencies and labour savings, do away with manual case counting, Reduce negotiations with retailers over missing roll, lower overall inventory levels. As initial process, details of rolls were computerized in database by GUI interface. Entered details of raw material were automatically updated database of MySQL workbench. Tags were attached to the rolls and noted which rolls have which UID No.:. Read data was displayed in LCD panel such as UID No., roll No., rolls type or yardage etc. It was given easy as solution of find roll which determined meters. Location of rolls was given by GUI interface with respect to entered details. Readers were attached in precise points to cover areas. Mapping system is useful at the inspection, because it was given what are the available rolls in its certain areas by comparison of the given data and entered data missing rolls can specify. Wired communication was used, because wireless communication is not allowed to access in intern. Angle of sense range was adjusted to 90°, because same details were given more than one RFID reader due to reason of sensing ranges are overlapping. Pallets arranging can be follow as an option of 5S and LEAN to avoiding sensing range overlapping. Inability of using long-range distance RFID readers and its suitable tags better communication was not updated details automatically.

Keywords: RFID, GUI-interface, Lean, MySQL-workbench, LCD