ABSTRACT

Efficient facility layout design plays an important role in increasing productivity and reducing travel distance. This study proposes a layout redesign using the Automated Layout Design Program (ALDEP) method as a systematic approach in arranging facility elements. The study was conducted at CV. XYZ, a garment industry that produces wangki clothes, with the main problem of backtracking and crosstracking, which causes long distances for material handling. Based on the analysis of the relationship between the proximity of work stations and the number of transfers between departments, the ALDEP method is used to produce a more efficient layout alternative. The design results show a decrease in the total travel distance of 35.68 m and orderly work stations. This, the application of the ALDEP theory has been proven to provide an effective solution in redesigning a better-performing facility layout."

Keywords: Facility layout, ALDEP, displacement distance, backtracking, crosstracking.