

ABSTRACT

CV. Siliwangi Jaya is one of the companies which is engaged in the manufacture of soil mechanics tool spare-parts that has been established since 1980. One way to gain competitive with the newly established company, CV. Siliwangi Jaya should be able to increase the productivity of the company, one of way is to make some production cost savings. To save on production costs, there are a lot of ways, for example by minimizing the costs of moving materials and layout of the production floor. Existing condition on the CV. Siliwangi Jaya shows that it doesn't have an efficient plant layout, this can be seen from many operators who often walk back and forth to take the material to be worked and move with very long distance moving between successive operations. This layout inefficiency can cause large material handling cost.

One effort to improve the flow of production processes and inefficiencies in layout is to redesign the layout of the facility with an approach that can minimize the material handling activities. In this study, facility layout design created by product-layout type. Before designing the new layout, it takes an initial layout, from to-chart, move cost-chart that became input for the CRAFT algorithm. Software which can be used to do CRAFT algorithm is WinQSB-software. After that, it is simulated to determine the initial layout and performance of the proposed layout using Promodel-software.

Through this research, obtained the design of facility layout is more efficient, it can be seen from the moment of displacement in the reduction up to 22.79% in the proposed layout. In addition, the results of the simulation showed, with the implementation of the layout of the proposal to increase the amount of finished goods amounting to 13.6% and reduced cycle time by 8.66%.

Keywords: Layout, CRAFT algorithm, Material handling, Simulation