

ABSTRACT

The problems that often arise on the production floor are line balancing. Line balancing is a series of work stations (machines and equipment) which used to make the product. Line balancing usually composed of some work stations which are handled by one or more operators and may be handled using the various tools. Line balancing aims to balance the workload that allocated to each work station. If this balance is not done, it will lead to employment in several work stations are not efficient, the imbalance of workload in workstation.

In this research, do improving the production line balancing at a shoe repair shop JK Collection. The data used is time of process, number of requests and precedence constraint from JK Collection. Data was processed using Kilbridge Wester method and Ranked Positional Weight (RPW) method. Based on the results of processing, Kilbridge Wester method produces a line balancing that more balance than the results of Ranked Positional Weight (RPW) method. Results from Kilbridge Wester method simulated as a proposed model which can increase the amount of production of a shoe repair shop JK Collection 44 pieces shoes per day, nine pieces shoes more than the existing system, the cycle time for proposed system is shorter from 650.48 seconds into 510.32 seconds and the system is increased line efficiency 25.52% of the existing system.

KEYWORD: Line Balancing, Production Line Balancing, Kilbridge Wester, Simulation