

ABSTRACT

PT. Garsel Fashion Shoes is a company engaging in industry manufacture of shoes. This company has problem at assembly line of shoes, which is not balance and it makes the company can not reach their target of production. Line balancing is needed to balance work load at every workstation so it can increased efficiency and productivity

The purpose of this research is to make an improvement in shoes production line assembly to balance the workload and decrease the idle time of each operator so it can make efficiency and productivity increase. This research requires data such as time of process, operator skill, work environment, number of demands, and precedence constraint. Whereas the methods used for line balancing are Ranked Positional Weight and Killbridge Wester and then they will be processing in simulation using Pro Model 7.5.

Based on the results of the research, simulation from line balancing using Ranked Positional Weight method give efficiency and productivity better than the use of Kilbridge Wester Heuristic method. Line balancing using Ranked Positional Weight method produced 93.02% of line efficiency or increased about 30% from existing line and also increased production capacity to 61 units per day with the number of work stations decreased from 6 work stations to 4 work stations. In addition, there are alternative of the other line balancing that they are used to reach production target. The alternative has 4 workstations. The alternative gives 92.1375% of line efficiency and number of production of 82 units per day with 2 hours overtime for worker.

Key Words : Line Balancing, Efficiency, Productivity, Ranked Positional Weight Killbridge Wester