ABSTRACT

PT. Goodrich PINDAD ASI is a company which running the business in the manufacture of Aerospace components. Some leading companies become one of their customers such as Boeing and Airbus.

The company divides its production floor in seven cells, where each cell has a different product to be produced. This research itself was conducted in cell 6. Cell 6 has a duty to perform the production processes of three types of parts ordered by customers of PT. Goodrich PINDAD. These parts are the Piston Rod, Rod Centre, and Actuator Body.

In doing the production there are some problems that inhibit the companies to complete their orders in a timely manner. This is shown by the performance in cell 6 is not optimal. Review that the jobs that come at the same time has a large amount, then that's a potential for the forming of more number of bottlenecks in several machine that cause the idle time. Then, with the less effective job sequence making of the production cycle time become longer. This causes the entire production completion time (makespan) becomes longer.

Based on these cases, the research in this final project will be given an alternative method of production scheduling by applying Shifting Bottleneck Heuristic Method in scheduling. In order to do so that the bottleneck shifts from the machine idle time is reduced and ultimately can reduce the makespan time so the company can complete orders them in a timely manner. Problems delay completion of the order could affect the company's financial problems. Because the customer will not pay the full cost to PT.Goodrich PINDAD if orders are not completed on target.

Shifting Bottlenecks Heuristic methods that simulated in 6-cell production scheduling can provide an improvement in the performance of shop floor. Compared with the methods of the company, the machine utilization rate increased by 5.4% and makespan is also decreased by 9.86% from 32228 minute to 29048 minute.

Keywords: Production Scheduling, Job Shop, Shifting Bottlenecks Heuristic Methods