ABSTRACT

Production scheduling is one element in the planning and production control. Scheduling is used to maximize the use of machinery equipment to avoid delays in the completion of a job so that the target number of production and job completion time of the company can be met in a specific time period.

Jobshop is processed according the flow pattern of the machine operation and the timing of different processes. This reason causes jobshop scheduling process is more difficult than the flowshop scheduling process. Jobshop scheduling can be done for static scheduling of jobshop scheduling by assuming the machine to be empty (same job arrival time) and dynimic jobshop scheduling which the arrival of each job is different whether it is already know (deterministic) or not (non - deterministic).

Many heuristic methods have been developed and used to generate the proper scheduling with relatively less computation time. One of the method is applied in this study, namely Simulated Annealing algorithm. Simulated Annealing algorithm is a scheduling method that resolves the problem of routing machines with the objective function to minimize the maskespan (the time required to complete the entire operation from a job).

Based on the calculations on data processing using the software Matlab R2009a, the result are obtained that the time required to complete 56 jobs is 241,5 hours. While the companies using the method of scheduling SPT (Shortest Processing Time) targeted 251 hours. This indicates that the magnitude of the time difference between job completion time using Simulated Annealing algorithm and the time targeted by the company to complete the job is 9.5 hours.

*KEY WORDS: **Production Scheduling, Dynamic Jobshop, Makespan, Simulated Annealing Algorithm.***