

ABSTRACT

In manufacturing operations, fulfilling the demand by the due dates is one way to keep customer satisfaction level. If the demand was delivered after the due dates, the tardiness penalty was occurred due to maintain the customer satisfaction level. Scheduling was needed to reduce the tardiness that may occur in manufacturing operations. The production scheduling system in part fabrication is considered identical parallel machine scheduling due to several machine with same capabilities and characteristic. Thus in order to get optimal solution to minimize tardiness, this research used the genetic algorithm as method to minimize the total tardiness. The proposed schedule minimize the total tardiness by 78,4% from 2584 hours to 557,6 hours.

Keyword: Identical Parallel Machine, Scheduling, Tardiness, Genetic Algorithm