

ABSTRACT

PT Dirgantara Indonesia is an aircraft manufacturing company that has the type of production made to order (MTO). Delay or discrepancy between the aircraft part production plan that has been planned with the actual activities undertaken and the lack of scheduling on the crane to transport equipment to meet the target due date predetermined happen on the production floor of the Departement Surface Treatment.

In fulfillment of the order of the optimal scheduling sequence for the company, then the method Dudek Campbell Smith (CDS) is applied to produce a minimum makespan time and Genetic Algorithms in part to the placement of the hanger to increase the utility hanger.

From the results of research conducted, it can be concluded that the scheduling by using the method of Dudek Campbell Smith (CDS) has resulted in the optimal scheduling sequence with minimum makespan time of 448.28 minutes with a number of hanger 8 pieces. From the results of the comparison between the condition of the actual scheduling and scheduling method, it turns out makespan can be reduced by 31.77%. While the results of the optimization of part placement on one hanger that is routing 1 (Chemical Conversion Coating) as the fitness value of the objective function value by 83.33%.

Keywords: Flowshop scheduling, makespan, Dudek Campbell Smith (CDS), Genetic Algorithms