ABSTRACT

There are so many manufacturing industries that can be found at this time, one of which is PT. Padina Baraya Jaya. PT. Padina Baraya Jaya is an industry that is engaged in manufacturing such as making magazines and dashboards that use a production system when there is an order from a consumer or it can be called a job order system in the production process. The formulation of the problem that will be discussed in this final project is how to determine job shop scheduling that can minimize the makespan value at PT. Padina Baraya Jaya in the production process to be more optimal.

The data needed in this final project are processing time data for each product, process sequence data for each product, machine setting time data, number of machines used data and completion time data for each product. After observation, some products experienced delays in the production process. This is an indicator that the scheduling is still not optimal in the production process that occurs in the company. This final project uses the Non-Delay Scheduling Algorithm method. Non-delay Scheduling Algorithm is a system or method that in its application does not let the machine experience a state of idle or idle during the production process. After applying the Non-Delay Scheduling Algorithm method, the results of the new production process scheduling sequence with a smaller makespan value than the makespan value in the proposed scheduling, then the new scheduling sequence will be described in the form of a gantt chart. The percentage decrease in the initial scheduling makespan value with the proposed scheduling makespan value is 51.34%. The conclusion of this final project is that the use of the Non-Delay Scheduling Algorithm method can minimize the makespan value and provide an output of a new scheduling process that is more optimal than before.Keyword: ***Job shop, Makespan, Non-Delay Algorithm, Gantt Chart Production Process***