ABSTRACT

Industrial growth from year to year and the growing continues to increase, many new industries appear in the field of manufacturing, where the process is essentially a set of input become input that have added value by making the process effective and efficient manner in which all resources must be used. Resources available should be utilized to meet the required quality of the product. It's one thing to note here, although the quality of the product is in conformity with the expected, but there's one important thing you need to look at the company need to stress customer satisfaction through the delivery order is the delivery on time in the face of tight competition in the market. Problems delivery on time is highly influenced by the settlement order / cycle time and Work In Process. If an order more and more buried in front of the workstation order is completed the old. The longer the cycle time, the longer the product will be up to the hands of consumers. In this case, the scheduling of production need to be a more optimal.

PT Gramedia, which is the largest printing company in Indonesia is a company that is Make To Order (MTO). Problems that often occur is due date completion, which is often later than determined schedule, it is the effect of long duration of regular order making process. Other problems is long duration of process which is caused by the similarity of batch transfer and batch process. And the last problems discovered is the determination of the reference standard, especially in the process of printing and binding is too high from the actual situation, this is the case, which caused the work that late because the company incorrectly in estimation every time the engine, because of lack of capacity. So we have to do some study to prove the effectivity of Earliest Due Date that company did compare with other scheduling method and we have to choose the best lot (batch) size.

From the results of the calculation of available capacity that each workstation is as follows : print work station (2 webcom machine) : 580.352 CPD (Copy per Day), binding glue (2 glue binding machine) : 31,056 copies per day, binding wire (3 wire binding machine): 86,496 copies per day. Paste work station (15 workers): 241,560 copies, work station shrink (5 shrink machine): 22,272 copies. Packing workstation (10 workers: 160,104 copies. And optimal scheduling method based on the results obtained by simulation is a method with the Earliest Due Date = transfer batch ¼ batch process, differences that occur with Existing systems that have the 1242 to 1259 minutes for an average of each product produced dilantai production.

Keyword: scheduling, simulation, promodel, standard time