

ABSTRACT

PT. AKS is a company engaged in textile, the fabric produced by the company one of which is a polyester. Lateness in completion order becomes a company issue. One of the causes of production delay is a fluency production disturbed cause a bottleneck in the Belah machine due to incoming jobs amount exceeding the ability of the machine to produce cloth added with the number of unit loads that must be worked from one work station to another work station resulting in length of manufacturing lead time to completion order. The scheduling with drum buffer rope method is applied to this problem. The constraint work station be created the drum that becomes the controlling point of the whole system. Implementation of rope (backward scheduling) before Belah operation with buffer time can reduced queue time and controls WIP buildup. The result of sequencing by Campbell, Dudek, and Smith (CDS) algorithms and also implementation of forward scheduling on operation after Belah Machine with unit load 3 calculations can reduced idle and manufacturing lead time in production activity. Based on the calculation of the proposed condition, the average manufacturing lead time was 390,31 minutes, go down 61.88% from the actual condition 1024,04 minutes. Then, the queue time generated 76.41 minutes decreased 82.45% from actual amount 435.55 minutes, and the last, level lateness order to be 162 rolls decreased by 35.71% from actual conditions as much as 252 rolls lateness.

Keyword : *Drum buffer rope, algoritma CDS, unit load, manufacturing lead time, queue time*