

## ***ABSTRACT***

PT.BMJ with Offset Packaging Division with a company engaged in the cigarette packaging industry has a production system with the characteristics of Flow Production Process Make-to-Order and Make-to-Stock. Current issues facing the company is shipping to customers the level of accuracy which decreased and the level of output also declined amid a sales situation PT.BMJ rates are rising. This is indicated also by the work in process (WIP) is high, due distasiun processing time is very long and limited capacity. These conditions eventually frequent production delays, so the company can not complete the products in accordance with the schedule (on time)

To overcome these problems required an action to address the overall production system so happens the synchronization of all sub-systems. Synchronization is the arrangement of production flow rate of each subsystem in order to avoid an excessive burden on the working station as the station has the lowest capacity constraint. From the above description, production scheduling using Drum-Buffer-Rope to the concept of Theory Of Constraint (TOC) is one method that can be used to handle constraints that can inhibit the production flow and reduce the bottleneck.

Application of TOC is done by creating a simulation model comprises a model of the real system and a model proposed by grade products Djarum Istimewa 12 and Djarum 76/12 HLP. Before making a simulation model of production scheduling of job sequencing with two methods of craftsmanship that is FCFS and EDD. Water Base engine is a constraint because it has a huge amount of work load compared to other machines .. The amount of buffer needed calculated by Algorithm Zijm. Setting a schedule with this method can reduce the WIP, which decreased by 13% and value of throughput increased by 23%.