ABSTRACT

PT. Betts Indonesia is a manufacturing company with laminates tubes as the main product. It has three machines to accomplish the process of production, there are arpeco, aisa and nissei machines. Arpeco is a vital or critical machine, because that company just have one and arpeco machine play an important part to make a laminate tubes especially to print a picture on that tubes.

PT. Betts Indonesia have a big problem in maintenance department, there is a performance of human resources in maintenance department wasn't effective. Maintenance department to do the maintenance activity based on machine database system. This system made based on the company experience and historical data about machine breakdown, so from that system can be known when a machine have failure. This database system doesn't yet given right time when a machine or component had been failure.

Something means to make good system of maintenance management is RCM (Reliability centered-Maintenance) method. In RCM has qualitative analyze like Functional Block Diagram (FBD), System Function and Functional Failure, FMEA (Failure Mode and Effect Analysis), and Decision Diagram, another that RCM has also quantitative analyze. Quantitative analyze is a part in RCM method like maintenance interval, spare parts and quantity of labour. This research use survey result from PT. Betts Indonesia as a data, including primary data and secondary data. Primary data is machine of production, kind of component, kind of failure, etc. Besides that secondary data is information data from PT. Betts Indonesia.

With to accomplish RCM method to solve problem in PT. Betts Indonesia, the result for unwind sub system is kind of maintenance activity scheduled restoration task, infeed sub system is scheduled on-condition task, print station sub system is scheduled on-condition task and scheduled restoration task, and rewind & outfeed is scheduled restoration task. Where to calculation maintenance interval, the result is roll follower component from unwind sub system have a biggest difference cost between first maintenance activity cost and maintenance activity cost based on maintenance interval. The difference cost is Rp. 2,113,211,-. Quantity of labour to accomplish preventive maintenance activity in PT. Betts Indonesia is enough. So that company doesn't need to take more labour to do that job. I think PT. Betts Indonesia must accomplish RCM method in maintenance department to get optimal maintenance interval activity.

Key words: reliability centered maintenance, FMEA, scheduled on-condition task, minimize cost.