Abstract

PT. Sipatex is a company engaged in the textile industry. One of the machines that exist on PT.Sipatex is Jet-Dyeing machine. Jet-Dyeing Machine is used for dyeing machines and give color to the fabric. This machine has an important role in the production process in PT.Sipatex, the determination of the proper care activities is an important thing to support the company's productivity.

This study will involve several methods such as RCM (Reliability Centered Maintenance). RCM (Reliability Centered Maintenance) is used to determine the preventive tasks in accordance with the characteristics of failure that occurred. So we get two types of preventive tasks to be implemented in jet-dyeing machine maintenance is scheduled discard tasks and on-condition tasks. Then from the RCM analysis also will get a calculation of the optimal maintenance time intervals according to the types of tasks each component and maintenance costs are also optimal if the proposed maintenance run. Maintenance costs optimal that can be achieved Jet-Dyeing machine is Rp 689,067,068.49. Proposed maintenance activities are executed properly will result in savings of Rp 399,020,520.55

This analysis will focus on the components in the sub-critical system that will be determined by using criticality analysis and information based on previous RCM analysis. The criticality analysis will result in item criticality ranking number, so that we can known sub-system of the most critical. By knowing the components on this critical sub-systems will be a need for spare parts forecasting by using 3 methods, the moving average, weighted moving average, and poisson. Best forecasting results is the poisson because by the rate of destruction.

Keywords: RCM (Reliability Centered Maintenance), Crtiticallity Analysis, moving average, weighted moving average, poisson.