

## **ABSTRACT**

*Company PT. Sipatex is a company engaged in the textile industry. One of the machines that exist on this is PT.Sipatex Finishing machine. 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. Therefore, need an effective engine maintenance policy for determining engine optimization Finishing and engine maintenance intervals taking into account the characteristics of the damage, the parameter distribution and maintenance costs.*

*In this study conducted by several methods such as SRCM (Streamlined Reliability Centered Maintenance) are used in the determination of the appropriate task with his characteristic failure. And a focus on the study of critical systems and subsystems based on the number of machines Finishing kerusakn happened and by using analysis of RPN (Risk Priority Number) to get the critical sub-systems based on the risks that the failure, resulting critical systems, namely mechanical system with five critical subsystems , ie Feeding device, Drying & heating, Entrance Device, Cooling Device and Plaiting. Critical subsystem is further the object of research is then defined policies and appropriate treatment time intervals using Streamlined Reliability-Centered Maintenance (SRCM) and Risk Based Maintenance (RBM). By combining the two methods is expected to result in maintenance activities that can improve the reliability of critical subsystems with minimum cost.*

*The results of data processing using SRCM, obtained total cost to implement the proposed treatment is Rp 563 180 742. By By implementing the proposed maintenance activities, the company could make savings of Rp 179.453.406.78. with details of maintenance task is 3 Task Finishing policy for engine components that include scheduled restoration task, scheduled discard task, and scheduled on-condition task. There are 3 components included in the policy scheduled discard task, 2 component with scheduled restoration task, 9 components with scheduled on-condition task. Treatment time interval for each component is determined based maintenance policies by considering the characteristics of damage, the parameter distribution and maintenance cost.*

**Keywords:** SRCM (Streamlined Reliability Centered Maintenance), RBM (Risk Based Maintenance), RPN (Risk Priority Number).