

ABSTRACT

PT. Dwitama Mulya Persada is a national private company that focuses its business activities by offering various solutions and solving problems faced by many industries. Conventional lathes are one of the machines used by the company and are the most frequently experienced engine downtime. Downtime is due to the old engine life so often cause much damage to the component, other than that the production capacity of the machine does not reach the target in the years 2017, 2018, 2019. Unfulfilled targets can be caused by treatment habits and less precise or inappropriate treatment intervals. The purpose of this study is to determine the optimal maintenance time intervals for selected critical components and their total maintenance costs. In determining the critical components of the conventional lathes, it uses a risk matrix and three critical components are selected namely transmission activation lever, gearbox, and bar for lathe activation. Using the RRCM method based on the European standards application guide RCM (CSN EN 60300-3-11), the maintenance policy and total maintenance costs were obtained. Based on the results of data collection and data processing, it was found that there were five proposed maintenance tasks with one scheduled on-conditional, four scheduled restoration tasks with an average interval of maintenance time of 1.5 months. The total proposed maintenance costs obtained amounted to Rp 40,182,296 per year's where the costs were Rp 5,357,639 lower than the existing's company maintenance costs.

Keyword : Maintenance, Risk Matrix, Reliability and Risk Centered Maintenance, RCM CSN EN 60300-3-11, RCM Information Worksheet, Uncertainty Assessment