

## ***ABSTRACT***

The high amount of damage to the machine certainly has downtime consequences. This happened to the C1110-JC machine at PT XYZ which experienced downtime during 2090.72 hours from 2016 to 2019. The downtime occurred due to failure of components on the machine could affect the production process. In addition, the high level of corrective maintenance activities carried out by the company which is > 50% of the total time of maintenance activities will certainly cause an increase in maintenance costs.

In overcoming downtime and the high level of corrective maintenance activities on the C1110-JC machine the company needs to determine the right maintenance policy. The RCM method can be applied in determining the appropriate maintenance task for critical components of the C1110-JC machine by considering the RM maintenance strategy to prevent the root cause of failure of critical machine components.

Through the application of the RCM method by considering RM the results obtained in the form of maintenance strategy RM to prevent the root cause of the failure of critical components of the C1110 machine and maintenance tasks consisting of three scheduled restoration tasks and four scheduled on-condition tasks with a total proposed maintenance cost for critical machine components of Rp. 806,785,851.

A total of 29 root causes of failure that have been detected are the main causes of the main failure of the critical components of the C1110-JC machine, so it is necessary to prepare a maintenance strategy RM to prevent the root causes of failure with maintenance time intervals from the scheduled restoration task and the scheduled on-condition task. This also has an effect on reducing maintenance costs because it can minimize corrective maintenance activities that cause cost overruns.

**Keywords:** *Maintenance, Reliability Centered Maintenance, Radical Maintenance*