ABSTRACT

PT Semen Padang is one of the cement companies in Indonesia which is located in Padang, West Sumatra. This company is engaged in the cement industry. In 2019 and 2020 PT Semen Padang experienced a decline in production so that the production target was not achieved. Great Cooler machines experienced downtime due to the implementation of preventive maintenance and the determination of inventory policies that were not optimal. Therefore, it is necessary to analyze the Reliability Centered Maintenance (RCM) II and Min-Max Stock methods to obtain the proposed maintenance time interval policy and the policy in determining the amount of inventory. In determining the critical components, this study uses the FMEA method and the selected sub-system is a mechanical sub-system with 2 critical components, namely the hydraulic actuator and the bearing running axle. By using the RCM II method, the proposed maintenance task is obtained for periodic maintenance intervals. Based on the results of data processing, one proposed maintenance task was obtained, namely the Scheduled on-Condition Task for the hydraulic actuator and bearing running axle components. The hydraulic actuator component is repaired at intervals of once a month, and the bearing running axle component is repaired at intervals of once every 9 months. In making repairs to components, it is necessary to pay attention to inventory in the warehouse. By using the Min-Max Stock method, it is possible to determine inventory inventory policies for hydraulic actuator components and bearing running axles. Based on the calculation results, the minimum requirement for the hydraulic actuator component is 5 units and the maximum requirement is 8 units. Meanwhile, the minimum requirement for bearing running axle components is 3 units and the maximum requirement is 4 units.

Keywords**: **Maintenance, Reliability Centered Maintenance II, Min-Max Stock, Grate Cooler