

ABSTRACT

CV. Gradient is one of the company that provide jigs, dies, molds and spare parts services. Plastic injection machine is one of the machines used by company for production and operate for 24 hours continuously. Therefore, the reliability of the engine will decrease as time goes which causes the engine to fail. To ensure that the performance of a plastic injection machine works according to its function, the company can carry out maintenance activities. The objective of this research is to determine the optimal maintenance time interval for selected critical components and the total cost of maintenance. In determining the critical components of a plastic injection machine, Risk Matrix was used and three components were selected, namely hydraulic hose, barrel and motor. Using the RRCM method, we get a proposed maintenance policy and the total maintenance cost. Based on the result, show that there are 7 proposed maintenance tasks with 3 scheduled on-condition tasks, 4 scheduled restoration tasks with an average maintenance interval is two months. The total maintenance cost is proposed at Rp 91,595,318 where the cost is smaller Rp 10,177,258 compared to the existing maintenance costs of the company.

Keywords : Maintenance, Risk Matrix, Reliability and Risk Centered Maintenance, RCM Information Worksheet, Uncertainty Assessment