

ABSTRACT

PT XYZ is one of the manufacturing industries engaged in ready-made Steel and Concrete for construction industry, electricity, mining, telecommunication and transportation. Cutting machine is one of the machines that must always be ready to use because it affects the production process and production targets. Due to the high level of downtime frequencies in Cutting Machines, an effective maintenance activity is required, the way in which the reliability research of the machine is to use Reliability, Availability, Maintainability (RAM) analysis and also to determine the effective and appropriate maintenance policy for Cutting Machine is using Reliability Centered Maintenance (RCM) method. Based on calculation method of RAM Analysis by using Reliability Block Diagram is known that Reliability system at 112 hour system have value Reliability (1%). The value of Maintainability system at 5 hours is 100%. Inherent Availability value of 97,34% and the value of Operational Availability of 88,77%. Based on the evaluation conducted using World Class Key Performance Indicator, indicator of Lagging Indicator has not reached the target indicator given while Leading Indicator has reached the target. With RCM method, 2 Schedule On-Condition Tasks, 3 Schedule Restoration Tasks and 1 Schedule Discard Task with different maintenance intervals based on their respective subsystems, and Rp 3.467.688.301 reduction in preventive maintenance cost.

Keywords : Reliability Availability Maintainability (RAM), Reliability Centered Maintenance (RCM), Preventive Maintenance, Key Performance Indicator, Downtime