

ABSTRACT

The high market demand for steel materials makes PT XYZ which is one of the group companies that focus on providing, ordering, and distributing ready-to-use steel and concrete materials for the construction, electricity and mining, telecommunications and transportation industries. cutting machine is a machine that has the highest downtime. Therefore, care is needed for the machine by using the Risk Based Maintenance (RBM) method to determine the risk of engine damage and warranty to find out how long the engine can operate. RBM requires MTTF and MTTR data to determine risk estimation. The data is also used to calculate warranty, but in warranty, comparison with previous policies is needed. The results of the RBM calculation, cutting machines have a risk of Rp 16,612,031,322.10 with a percentage of 8.26%. The risks experienced by cutting machines have exceeded the risk acceptance criteria set by the company by 1% of each production capacity. This risk is obtained if there is no preventive maintenance for a period of one year. While the results of the warranty are the machine can be operated 56,1689544 hours after overhaul.

Keywords: *cutting Machine, Risk Based Maintenance, Risk Estimation, MTTF, MTRR, Warranty.*