

ABSTRACT

PT Dirgantara Indonesia was the first aircraft industry in Indonesia and southeast Asia to produce various types of aircraft, such as CN235 for civilian or military transport, maritime Surveillance aircraft, maritime patrol aircraft, and Coast Guard aircraft. In producing the aircraft part there are two groups of machines that are Machining and Metal Forming. Based on the historical data damage that has been obtained, that the engine TOSHIBA BMC-100 (5) E is a machine that has a high degree of damage. Toshiba Machine is one of the key facility in the machining center.

There are nine engine subsystems Toshiba, among which are Electrical & Control, Axis, Spindle, APC (Automatic pallet Change), ATC (Automatic Tools Change), Hydraulic Unit, Lube & Coolant, Cooling System and Filter & Fan. Selection of the most critical subsystem of the nine subsystems using the Fuzzy AHP. Based on the Fuzzy AHP calculations selected is spindle, so the spindle subsystem is the most critical and further research done. The method used is Risk Based Maintenance to determine the value of the risk borne by the company, when the critical subsystem is experiencing failure in operation.

Based on the results of calculations that have been done using the Risk Based Maintenance method obtained a risk value of Rp 216,900,293 or with a risk percentage of 8.98%. The risk percentage exceeds the tolerances that have been determined, then the proposed interval time maintenance performed every 3400 hours with a maintenance fee of Rp 89,013,252 and a risk value of Rp 210,512,971.

Key Words : Fuzzy AHP, Risk Based Maintenance (RBM), Interval Time Maintenance