

ABSTRACT

PT Pudak Scientific is one of manufacture companies in Indonesia which is producing parts and components for plane. PT Pudak Scientific has commitment to stay fulfilling the demand from subcontract companies because of its high demand. But, the actual condition is this company is not as easy as the planning that has been made. The company often suffers loss revenue because of damaged machine and it causing the production to stopped. This condition supports to checking and evaluate the performance of Mori Seiki NH4000 DCG machine. Methods that used to evaluate the machine's performance is Reliability Availability Maintainability (RAM) Analysis and Overall Equipment Effectiveness (OEE) to the machine's effectiveness. The Data that used are MTTR and MTBF from all the subsystem that forming the machine. Based on the calculation using RAM Analysis, reliability block diagram (RBD) was made so that the system got the amount of reliability value is 47% in 672 hours based on analytical approach. Then we do the maintainability calculation using RAM analysis method, we got that the system has the probability to be fixed in the interval between one until 27 hours to return to the origin condition with value of probability is 100%. The inherent availability value is 99,274% based on the analytical approach and the operational availability from the system is 97,145%. The Overall Equipment Effectiveness value that gotten from three parameters : availability, performance, and quality is 71,76%. From the six big losses calculation, the main factor that affects the machine's performance become bad especially the performance is idling and minor stoppages.

Keywords: Reliability, Availability, Maintainability, RBD, OEE, The Six Big Losses