

## ABSTRACT

PT.Smart Teknik Utama is a company engaged in the industry that produces Rodhing Point products that provide in Jl. Cimencrang No. 41, Gedebage, where the company is producing rodhing Point as an annual request from PT Lan Indonesia. Production of rodhing itself uses a variety of machines such as lathes. Lathe machine is a machine that is used to clear parts of the rodhing so that the lathes must have a good performance and optimal work. Then the maintenance policy on the lathe should be precise. The method used is the overall equipment effectiveness analysis (OEE) to determine the performance and level of requirements of the machine. In OEE is calculated to know the value of availability, the level of performance, and the level of product quality of a machine, as well as a factor of six major losses to figure out what factors cause low OEE value. The next method is reliability availability of Maintainability (RAM) analysis on critical systems and understanding the value of performance indicators in machine critical systems.

Based on the overall method of effective equipment OEE obtained an OEE value of 65.02% in the can of multiplication rate of availability level 96.28%, performance level 70.95%, and quality level 95.18%. The value of OEE that has been acquired has not fulfilled the standard criteria set by JIPM of 85%. Based on six major losses, the biggest factor that is hampered against the decline in lathe needs is a small reason and termination factor of 25.75% while the figure is 69% of total damage resulting in increased engine performance. The lathes also has 3 critical sub-systems, namely headstock, leadscrew, and Toolpost. Each sub system has  $R(t) = 200$  hours namely, namely headstock 39%, leadscrew 99%, and Toolpost 95%, while to achieve treatment conditions more than 95% it takes  $M(t) = 5$  hours with the amount produced as much, headstock 90%, leadscrew 96%, and Toolpost 96%. The value of the inherent availability system is 99.81% and the operational availability system 94.08%.

Keyword : Reliability Availability Maintenance (RAM), Overall Equipment Effectiveness (OEE), Six Big Losses, MTBF, MTTR.