ABSTRACT

Conventional lathe machine is one of the machines in PT Dwitama Mulya Persada, which serves as a machine that produces various types of bearings that are indicated to have the highest production rate annually in the company. Because of the function of the machine, if there is downtime in the machine, the production process will be hampered because one of the machines in the bearing production scheme can not work. Downtime occurs due to several factors, namely damage to the engine components, the engine life that crosses the optimal limit and the number of maintenance technicians that are not suitable. Then the method representing Life Cycle Cost (LCC) with the aim to know the optimal age of the machine as well as the number of maintenance technicians suitable for the machine. In addition to the proposed calculation of treatment time intervals to achieve certain reliability values, reliability is carried out the improvement of the simulation to achieve the optimal time limit that the machine can apply at the time of maintenance of the simulation will be obtained comparison as well as the percentage contribution of each variable at the total value of LCC. Based on data processing with LCC method is known total LCC 2020 is Rp. 214.341.264, while LCC Optimum is Rp. 199.935.916 with Optimum engine life of 5 years and total maintenance technician as much as 1 person. The improved reliability simulation will affect the cost reduction of the total LCC on the machine.

Keywords: Machine, Life Cycle Cost, Reliability, Maintenance Management