

ABSTRACT

PT XYZ is a business group that focuses on providing, processing and distributing ready-to-use steel and concrete materials. One of the products is a steel pipe for electric poles. To produce electricity poles there are several stages of the production process that are mutually sustainable, meaning that if one of the machines has failed the electricity pole cannot be produced. The cutting machine is a machine that often suffers from 527 failures in 2017 and causes of loss of revenue Rp 85,224,000,- to PT XYZ. Therefore, a maintenance policy with a cost approach is needed using the Life Cycle Cost (LCC) method, to determine the optimal total life cycle cost, retirement age, and maintenance set crew for the cutting machine. Another method used is the Cost of Unreliability (COUR) method to identify the cost of losses incurred by the company for critical component damage to the cutting machine. Based on the LCC method, the total LCC on the cutting machine is Rp 1,013,100,871,- and the optimal retirement age is 7 years with the optimal number of crew set maintenance as $M = 1$, which is 4 engineers in one team. Meanwhile, based on calculations using the COUR method, the losses incurred by PT XYZ are due to the reliability of the cutting machine, which is Rp 165,011,447,790,-

Keywords – Maintenance Management, Cutting Machine, Life Cycle Cost, Maintenance Set Crew, Retirement Age, Cost of Unreliability.