

ABSTRACT

PT. XYZ is one of the Indonesian companies engaged in energy including oil, gas, and renewable energy. One of the equipments that is needed to support the business activities of PT. XYZ is a production pump. Production pump has an important function that is to send fuel oil from the storage tank to the filling part of the car distribution of fuel oil. To ensure the performance of the production pump then the company can perform maintenance activities. The maintenance method used in this research are Risk Based Maintenance and Life Cycle Cost. Risk Based Maintenance Method is used to know the value of risk received by the company if the critical component in the production pump fails the function. Based on the Risk Based Maintenance method obtained a risk of 3.73% at a cost of Rp2.589.856.202. Life Cycle Cost method is used to determine the optimal life of production pump machine and the optimal number of maintenance set crew. Based on the Life Cycle Cost method, the optimal life of the machine is 8 years with the optimal number of maintenance crew 1 set consisting of 2 workers.

Keywords: Maintenance, Production Pump, Risk Based Maintenance, Life Cycle Cost