

ABSTRACT

PT XYZ (Persero) is a company engaged in the production and sales of main tool weapon systems, industrial products, and some commercial products. Excellent products are produced such as construction products, agriculture, shipping, mining and electricity. Excellent products with a large sizes produced by heavy equipment division. Waldrich Siegen machine is the production machine that has the highest downtime so that the machine can not work optimally and require maintenance policy. The method used in this research is Risk Based Maintenance (RBM) and Life Cycle Cost (LCC). Risk Based Maintenance method is used to find out how big the consequences and the value of risk resulting from damage on Waldrich Siegen machine. Life Cycle Cost (LCC) method is used to determine retirement age, maintenance set crew, and know the optimal total Life Cycle Cost on Waldrich Siegen machine. Based on RBM method we get the value of consequence and risk of Rp 284.817.600,00 with percentage 0,90%. This risk exceeds the risk acceptance criteria of 0.40% on the Waldrich Siegen machine. Based on the LCC method there was a retirement age of Waldrich Siegen machine for three years, with one maintenance crew consisting of one person, and a minimum Life Cycle Cost of Rp 413.882.541.00.

Keyword : Risk Matrix, Risk Based Maintenance, Life Cycle Cost, Retirement Age, Maintenance Set Crew