

ABSTRACT

PT. Indoneptune Manufacturing Net who produce fishing nets to fulfill demand is supported by the company's components such as netting machine. In this section there are 113 pieces of netting machine that serves to transform the raw material of threadlike / rope into the net. Because of netting machine is a key facilities of the production process and are required to always be in good condition is necessary calculation and optimization of the number of maintenance crews and optimal age machines using the life cycle cost to make a decision.

Based on the data TTF, TTR, DT in 2012, it can be done plotting the distribution and the determination of the distribution that represents. Further processing data of Acquisition Cost and Sustaining life cycle cost to get the smallest cost. Annual sustaining cost consists of operating costs, maintenance costs, and shortage cost. Acquisition costs consist of purchasing cost and cost population.

Based on the calculation of the life cycle cost for the smallest total LCC is Rp 132,547,039,995.50. This produces 5 set maintenance crew and 5 years life for 113 units.

In addition, it is also necessary TPM implementation using the Overall Equipment Effectiveness (OEE) as a tool used to measure and determine the current machine performance and evaluation of the results obtained OEE. Based on the calculation of OEE for ten machines XW 3.00 netting is used as the research object, the value of OEE for ten machines in 2012 was 58.64%. This value is quite far from the criteria set by JIPM, 85%. From OEE measurable results anyway total performance effectiveness within one calendar year using Total Effective Equipment Performance (TEEP). In 2012 the average of TEEP machine netting XW 3.00 is 48.85%.

Based on the analysis of the results from OEE and TEEP calculation, the opportunity to improve the machine effectiveness have to do such as improving preventive maintenance programs, enhance operator skills, increase working time operation machine, reducing the number of machines, and applying the principle of autonomous maintenance and 5S.

Keywords: *Maintenance Management, Optimization, Life Cycle Cost, Overall Equipment Effectiveness, Total Equipment Effective Performance*