## *ABSTRACT*

*PT. Indoneptune Net Manufacturing is a company that produces fishing nets as primary commodity. Fishing nets products are mostly exported to various countries in the world. It requires the company to pay attention to product quality and timeliness of production by optimizing existing resources, especially machines. Production Department, especially Netting Department as core department of the company, supported by 113 netting machines that role in formed fishing nets. If netting machines failed, production process will be disrupted and even stalled. In addition, machines work 24 hours a day, which means machines availability factor is vital for continuity production process. Currently, preventive maintenance activities conducted by time interval that hasn't made optimal maintenance with noted characteristics of damage. Based on machine maintenance data, corrective maintenance is still high at over 75%. Therefore, it needs an effective maintenance policy for netting machines and optimization of maintenance interval that considered characteristics of damage, parameter distribution and maintenance costs.*

*From determination result of critical systems and subsystems using frequency netting machine damage and Pareto diagrams, generated mechanical system as critical system with five critical subsystems, namely Needle Worker, Knot Tightening, Net Feeder Out, Weft Feeder and Warp Feeder. Critical subsystem further will be the object of study then determined maintenance policy and appropriate maintenance intervals using Reliability-Centered Maintenance (RCM) and Risk-Based Maintenance (RBM). By combining both methods is expected to result maintenance activities that can improve the reliability of critical subsystems with minimum cost.*

*Based on the results of data processing using RCM, obtained five policies for all netting machine components covering scheduled restoration task, scheduled discard task, scheduled on-condition task, finding failure and run to failure. There are 9 components that are included in scheduled restoration task, 2 components with scheduled discard task, 16 components with scheduled on-condition task, 5 components with failure finding and 3 components with run to failure. Maintenance intervals for each component is determined by maintenance policy that considered characteristics of damage, the parameter distribution and maintenance costs. The total cost to implement the proposed maintenance is Rp 52,237,352.00. By implementing the proposed maintenance activities, the company could save Rp 57,858,048.00.*



*Keywords: reliability, RCM, RBM, preventive maintenance*