ABSTRACT

PT. Printex Kharisma is a company engaged in the textile industry which produces fabric printing and dyeing cloth. The main engine is used to support production activities which STORK Rotari engine. If the machine was failured and lead to breakdown the production activities will be halted, so PT. Printex Kharisma must be able to know the risks that come if the machine is failured. The high frequency STORK Rotari engine failure lead to high maintenance costs and the risk of adverse failure. Therefore it is necessary to do the preventive maintenance activities optimally.

Based system breakdown structure, selected maintainable item (MI), namely MI dancing roll, roll padder MI, MI roll kloth guider, MI pompa obat, MI blanket, MI beam, MI washer, MI main motor blanket, MI conveyor, MI dryer, MI blower, MI main motor conveyor, MI tension bar, MI dancing matic, roll platter MI and main motor platter MI. The next item is maintainable as object of study for the determination of the maintenance time interval optimization using Risk-Based Maintenance (RBM). Optimal maintenance activities are effective and efficient care. Effective characterized by high reliability of the system, while referring to his efficient care costs and the risk of damage that may arise from maintenance activities in accordance with the optimization of maintenance intervals.

Based on the results of data processing, it was found that the optimal maintenance time intervals for dancing roll 1440 hours, 1440 hours to padder roll, 1080's roll kloth guider, 540 hours for pompa obat, 540 hours for blanket, 480 hours for beam, 1080 to washer, 480 hours for main motor blanket, 1080 for conveyor, 720 for dryer, 720 for blower, 480 for main motor conveyor, 1080 for the tension bar, 1440 for dancing matic, 1440 to roll platter and 540 for main motor platter with reliability value between 0, 3 to 0.5. Activity maintenance intervals this proposal gives a total risk of Rp 55,565,323.60 less than the total risk of the existing maintenance that is Rp 102,754,312.77.

Keywords : ***reliability,*** **RBM,** ***preventive maintenance, maintainable item, optimization interval time maintenance***