ABSTRACT

PT. Lotus Indah Textile is a company engaged in the field of textiles or the manufacture of yarn and fabric. In operation, this company produces solid and liquid waste. Liquid waste is managed in the waste water treatment plant in processing department is the result of the production process that uses hazardous chemicals. Risks arising from these wastes, among others, namely leakage of waste and damage to the components that affect the threshold value of industrial waste. Effort given to minimize the risk to the installation of waste water management is to provide preventive maintenance.

This research designs a schedule maintenance task by using FMEA to identify risks and determine the Risk Priority Number from the waste water treatment plant. As for the preventive maintenance strategy will be analysis of component reliability using a time interval specified maintenance and by taking into account the cost of maintenance (CM) and the cost of repair (CR).

From the research result shows that the components on the installation of waste water treatment plant which includes priority items are dose pump, mechanical pump 2, a mechanical pump 4a-b, the stirrer motor slow, mechanical pump 1, tub mixer motor 3 and motor speed stirrer. While waste water treatment component which are included in preventive maintenance calculation only dose pump, mechanical pump 1, tub mixer motor 3 and motor speed stirrer. This is because the timing of the failure of these components is random (random) while 4 other components have a low value of the RPN, so not suitable if done Preventive maintenance. The have highest risk priority number is dose pump with risk maintenance value is Rp 63,540.00 / day and the risk of repairs amounted to Rp 232,500.00 / day. While the optimal time interval for maintenance dose component at the pump is 128,4533 days. With the risk analysis and design of preventive maintenance is expected to help improve efficiency waste water treatment components and assist in preparing a planned maintenance schedule.

Keywords: FMEA, Reliability Preventive Maintenance