

ABSTRACT

The development of textile industry in Indonesia is one of the industries that become the priority of development in the long term because it affects the human needs and the Indonesian economy. PT Buana Intan Gemilang is one of the medium-sized enterprise in the field of textiles using Weaving machine to produce kain motif and sajadah. The production process of sajadah is more complex than the production process of kain motif so that Weaving machine is producing the sajadah is expected to operate optimally and always be ready to use because its produces routinely. In general, maintenance of machine, facilities or equipment less attention from a head of production in the company, especially small and medium-sized enterprise. This is felt in PT Buana Intan Gemilang which is still not optimal in maintenance and spare part management. Based on the number of failure, Weaving machine M19 has the highest failure. Failure occurs because preventive maintenance activities are not optimal and unavailable of spare part when needed so that corrective maintenance and downtime are high. High downtime show need for preventive maintenance policy and spare part management. Based on the result of determination of critical subsystem with Risk Priority Number method, Shedding Motion as a critical subsystem that needs to be determined the appropriate maintenance policy with Reliability Centered Maintenance method and spare part management with Reliability Centered Spares method. Results of Reliability Centered Maintenance method based on the qualitative measurement, obtained Scheduled On-Condition Tasks for all critical components in Shedding Motion. Critical components are included in the preventive task is card, needle, hook and harness cords. And based on the quantitative measurement, obtained the maintenance interval for card is 238,4 hours, for needle is 157,39 hours, for hook is 130,9 hours and for harness cords is 133,23 hours. From the result of preventive task and maintenance interval can be obtained the total cost of maintenance per year is Rp 113.192.949. And the results of RCS method, obtained the spare part needs per month is needed 35 units for card, 61 units for needle, 73 units for hook and 58 units for harness cords.

Keywords: Preventive Maintenance, Risk Priority Number, Reliability Centered Maintenance, Reliability Centered Spares