ABSTRACT

PT Buana Intan Gemilang is one of the companies engaged in the field of textiles that produce various types of fabrics as products it produces. With the large number of products demanded by the market, requires the company to keep the production machine in order to keep working optimally. Weaving M19 machine is one of the highest production downtime machines that make the machine can not work optimally. To overcome these problems required maintenance activities on Weaving machine. Overall equipment effectiveness (OEE) is a comprehensive measure that indicates the level of engine effectiveness and performance in theory. By calculating the OEE value, we can identify the losses in the system, which can be seen from the availability, performance and quality rate values contained in the OEE value. Further research on six big losses factor to find out what factors cause low OEE. This study uses the Risk based Maintenance (RBM) method to reduce overall risk that may occur due to unexpected failure when the machine is operating. The calculation resulted in OEE value in Weaving M19 machine is 76.79%. The value is quite far from the criteria set by the Japanese Institute of Plant Maintenance (JIPM) is 85%. From six big losses it is known that the most influential factor on the decrease of machine effectiveness is the equipment failure which is 82.19% of the total losses. Based on the calculation of risk, the critical subsystem of Weaving M19 machine has a risk value greater than the acceptance criteria. In this study, the criterion of company acceptance is 0.4% of total production capacity for one year. This research produces information about the cause of failure, type of damage and critical risk value of Weaving machine at Rp 22.898.221.

Keywords : *Preventive Maintenance, Risk Based Maintenance, Overall Equipment Effectiveness, Six Big Losses*