ABSTRACT

PT. Eastern Pearl Flour Mills is a company engaged in the food industry that produces various wheat flour products. In November 2020 – October 2021, the company experienced instability in total production that went up and down so that it did not meet the production target of 30,000 tons per month. Based on the results of the identification of problems, the main cause of the production target not being achieved was due to engine performance that was no longer optimal due to the high frequency of machine breakdowns and the service life of the machine used since 1999. Conditions on the machine can cause downtime which will interfere with work productivity on the machine in carrying out the production process is not optimal. Machine work productivity that is not optimal will cause long production time and production does not reach the target. Steps that can be taken to solve these problems are to evaluate the effectiveness of the machine using the OEE and ORE methods. Based on damage history data for November 2020 – October 2021, the machine packer chronos 6 has the highest number of damage frequencies, which is 62 times, so the machine will be used as the object to be studied. The results showed that the OEE value was 62.38% and the ORE value was 52%. This value shows the low level of machine effectiveness because it is below the world class standard set by JIPM, which is 85%. Based on the calculation results six big losses, the most dominant type of loss is factor reduced speed loss and idling and minor stoppages loss with a value of 31.54% and 20.92%. This causes the performance machine is low so that it can affect the quality of the resulting product. The proposed design results are in the form of a TPM-based machine maintenance system, namely the application of two TPM pillars, namely quality maintenance and autonomous maintenance.

Keyword — Overall Equipment Effectiveness, Overall Resource Effectiveness, Six Big Losses, Total Productive Maintenance