

## **ABSTRACT**

*PT. Putra Mahkota Plastindo is a manufacturing company engaged in the plastic industry, especially producing plastic containers, namely buckets and tubs. The problem that occurs in the company is the frequent interruption of the production process due to a damaged injection molding machine caused by a disturbance in the machine so that the machine does not work optimally. This research is focused on the CF-460 injection molding machine which has the highest frequency of damage, which aims to determine the effectiveness value and the factors that cause the low effectiveness value of the machine. Then provide suggestions and improvement designs through the Total Productive Maintenance approach. The results of the calculation of Overall Equipment Effectiveness on the machine have an average value of 68.5% and the factors causing the low OEE value are the Reduced Speed Losses factor of 22.48% and Idling and Minor Stoppage of 14.29%. The high factor of Reduced Speed Losses is caused by a decrease in machine productivity due to component reliability, so the calculation of the reliability value is carried out to determine the reliability of critical components. Through data processing and analysis of the problems that occur, proposals for improvements are made using the Total Productive Maintenance approach. In accordance with the results of the recommended actions on the FMEA analysis, the proposed improvement uses the Total Productive Maintenance approach which focuses on the scope of Planned Maintenance, Autonomous Maintenance and Training. With the proposed improvements to the design of replacement and inspection schedule templates, SOPs, and training request sheets.*

**Keywords:** *Total Productive Maintenance, Overall Equipment Effectiveness, Reduced Speed Losses, Idling and Minor Stoppage, FMEA*