

Industrial Research Project Title	Building System of Preventive Maintenance of Extrusion Blow Molding Machine in Plastic Packaging Manufacturing Industry
Industrial Research Project Credits	6
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Abstract

The objective of this research was to reduce the down time and failure rates of extrusion blow molding machines in the plastic packaging manufacturing industry. A preventative maintenance system was designed to reduce failures and increase production. For the case study a SMC 500 D machine was selected. It was found that machine maintenance was previously performed only when the machine broke down and that no machine maintenance planning was in place and there was no data collection for failure analysis. The methodology of the preventive maintenance system design was as follows: 1) evaluate the machine activity, tracking each part 2) calculate Mean Time between Failures (MTBF) 3) assess the reliability of each part 4) implement a maintenance plan with proposed routines on daily, weekly, and annual schedules. In addition, operational control of the machine was documented and recorded. After implementation of the preventative maintenance program, average time between machine failures increased by 44.23 percent, average repair time decreased by 86.24 percent, and average time machine was available for use increased by 8.2 percent.

Keywords: Extrusion Blow Molding Machine / Preventive Maintenance