

ABSTRAK

PT. Prima Komponen Indonesia adalah salah satu perusahaan manufaktur yang bergerak dibidang *automotive component parts manufacture*, produk yang dihasilkan yaitu *License Plate*, *Triangle Reflector*, dan *SBM Granmax*. Mesin *injection moulding* FCS HT-450SV merupakan mesin utama yang digunakan untuk memproduksi *plastic part*. Permasalahan yang berhubungan dengan efisiensi mesin diakibatkan tidak tepatnya penanganan dan pemeliharaan mesin produksi. Tujuan dari penelitian ini adalah menghitung nilai OEE serta menentukan faktor dominan *six big losses* dan memberikan rekomendasi perbaikan dalam peningkatan kinerja mesin *injection moulding* FCS HT-450SV. Dari hasil penelitian diperoleh nilai *Overall Equipment Effectiveness* (OEE) sebesar 81,67% yang masih berada dibawah standar OEE perusahaan yaitu 85,00%. Permasalahan terhadap rendahnya nilai OEE dikarenakan penyebab penurunan nilai *availability ratio* sebesar 88,66% yang berada dibawah standar perusahaan yaitu 90,00% dan penurunan nilai *quality ratio* sebesar 94,85% yang berada dibawah standar perusahaan yaitu 98,00%. Sedangkan untuk perhitungan *six big losses* yang memberikan kontribusi terbesar terhadap rendahnya nilai OEE adalah *Breakdown Losses* dengan *total time losses* sebesar 504,73 jam dan *Process Defect Losses* dengan *total time losses* sebesar 202,81 jam. Tindakan perbaikan yang difokuskan adalah menerapkan prosedur penjadwalan *preventif maintenance* berdasarkan perbaikan kinerja mesin dalam jangka waktu tertentu dan usulan penerapan *autonomous maintenance* serta memberikan pelatihan kepada operator mesin mengenai teknik inpeksi, cara mendeteksi cacat produk dan tindakan korektif yang tepat.

Kata Kunci: *Mesin Injection Moulding, Overall Equipment Effectiveness, Six Big Losses, Breakdown Losses, Process Defect Losses, Cause and Effect Diagram, Analisis 5W1H*

ABSTRACT

PT. Prima Component Indonesia is one of the manufacturing companies engaged in automotive component parts manufacture, the products produced are License Plate, Triangle Reflector, and SBM Granmax. FCS HT-450SV injection molding machine is the main machine used to produce plastic parts. Problems related to machine efficiency are caused by improper handling and maintenance of production machines. The purpose of this study is to calculate the OEE value as well as determine the dominant factor of six big losses and provide recommendations for improvement in improving the performance of the FCS HT-450SV injection molding machine. From the results of the study, the Overall Equipment Effectiveness (OEE) value was obtained of 81.67%, which is still below the company's OEE standard, which is 85.00%. The problem with the low OEE value is due to the cause of the decrease in the availability ratio value of 88.66% which is below the company standard of 90.00% and the decrease in the quality ratio value of 94.85% which is below the company standard of 98.00%. Meanwhile, the calculation of six big losses that contributed the most to the low OEE score was Breakdown Losses with a total time loss of 504.73 hours and Process Defect Losses with a total time loss of 202.81 hours. The focused corrective actions are to implement preventive maintenance scheduling procedures based on improving machine performance within a certain period of time and proposals for the implementation of autonomous maintenance as well as providing training to machine operators on inspection techniques, how to detect product defects and appropriate corrective actions.

Keywords: *Injection Molding Machine, Overall Equipment Effectiveness, Six Big Losses, Breakdown Losses, Process Defect Losses, Cause and Effect Diagram, 5W1H Analysis.*