

**ANALISIS EFEKTIFITAS PADA MESIN *EXTRUDER (CY65-II)*  
MENGUNAKAN PENDEKATAN KONSEP *TOTAL PRODUCTIVE  
MAINTENANCE* DENGAN METODE *OVERALL EQUIPMENT  
EFFECTIVENESS* DAN *SIX BIG LOSSES* DI PT. ABC**

**Andini Lusiana Permata Sari**

**ABSTRAK**

Perawatan pada mesin sangatlah penting untuk menjaga performa kinerja mesin sehingga target produksi akan terpenuhi. PT. ABC merupakan perusahaan yang bergerak usahanya pada bidang industri pangan, khususnya kudapan ringan. Berdasarkan pengamatan di lapangan produksi dan hasil wawancara dengan Kepala Produksi di PT. ABC pada tahun 2021, terdapat mesin yang mengalami *breakdown* dalam aktivitas produksi snack krim susu manis yaitu mesin *Extruder (CY65-II)* yang mengakibatkan banyaknya produk *defect*. Tujuan dilakukannya penelitian ini adalah mengetahui tingkat keefektifitas mesin dengan OEE, mengidentifikasi faktor penyebab *time losses* dengan *Six Big Losses*, serta memberikan usulan perbaikan berdasarkan analisis data yang telah diolah serta rancangan melalui simulasi *ProModel*. Penelitian ini dilakukan dengan menggunakan metode *Overall Equipment Effectiveness*, *Six Big Losses*, Diagram Pareto, Diagram *Fishbone*, dan dilanjutkan dengan pembuatan simulasi dengan *software ProModel*. Hasil penelitian menunjukkan bahwa nilai rerata OEE pada bulan September 2020-Januari 2021 adalah sebesar 68.28% yang diartikan masih dibawah standar JIPM yaitu 85%, nilai persentase tertinggi pada *six big losses* didapat pada faktor *Idling and minor stoppages* sebesar 30.95%, serta usulan perbaikan berupa mengubah sistem kerja menjadi 5-2 yaitu adanya penurunan *output* produksi rata-rata dari 10352 menjadi 7396 dus dengan persentase penurunan *output* sebesar 28.55% serta penurunan produksi dapat mengurangi *overproduction* dengan nilai 26.83%.

**Kata kunci:** *Breakdown, Overall Equipment Effectiveness, Six Big Losses, Simulasi, Overproduction*

**EFFECTIVENESS ANALYSIS OF THE EXTRUDER MACHINE (CY65-  
II) USING TOTAL PRODUCTIVE MAINTENANCE CONCEPT  
APPROACH WITH OVERALL EQUIPMENT EFFECTIVENESS AND  
SIX BIG LOSSES METHODS AT PT. ABC**

**Andini Lusiana Permata Sari**

**ABSTRACT**

Maintenance on machines is very important to maintain engine performance so that production targets will be met. PT. ABC is a company that moves its business in the food industry, especially snacks. Based on observations in the production field and the results of interviews with the Head of Production at PT. ABC in 2021, there was a machine that experienced a breakdown in the production of sweet milk cream snack, namely the Extruder machine (CY65-II) which resulted in many defective products. The purpose of this research is to determine the level of machine effectiveness with OEE, identify the factors causing time losses with Six Big Losses, and provide suggestions for improvements based on the analysis of the processed data and the design through ProModel simulation. This research was conducted using Overall Equipment Effectiveness, Six Big Losses, Pareto Diagrams, Fishbone Diagrams, and continued with simulations using ProModel software. The results show that the average value of OEE in September 2020-January 2021 is 68.28% which means it is still below the JIPM standard, which is 85%, the highest percentage value for the six big losses is obtained from the Idling and minor stoppages factor of 30.95%, and the proposed improvements are in the form of changing the work system to 5-2, namely a decrease in average production output from 10352 to 7396 boxes with a percentage decrease in output of 28.55% and it can reduce overproduction with a value of 26.83%.

**Keywords:** *Breakdown, Overall Equipment Effectiveness, Six Big Losses, Simulation, Overproduction*