

**PENILAIAN EFEKTIVITAS MESIN PRODUKSI DENGAN METODE  
OVERALL EQUIPMENT EFFECTIVENESS DI PLANT KLATEN  
PT TIRTA INVESTAMA, KLATEN, JAWA TENGAH**

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**ABSTRAK**

PT Tirta Investama Klaten merupakan perusahaan yang bergerak di bidang manufaktur yaitu memproduksi air minum dalam kemasan dengan merk dagang AQUA. Penelitian ini dilatarbelakangi oleh proses produksi *Line* AQUA 1500 ml yang sudah menggunakan mesin secara keseluruhan sehingga efektivitas mesin mempengaruhi kualitas dan kuantitas produk yang diproduksi. Penelitian ini bertujuan untuk mengetahui tingkat efektivitas mesin yang digunakan serta penyebab kurangnya efektivitas mesin. Pengukuran efektivitas mesin dengan menggunakan metode *Overall Equipment Effectiveness* dan melakukan perbandingan terhadap standar *OEE World Class*.

Pengukuran nilai OEE menggunakan data tiga rasio utama yaitu *availability ratio*, *performance ratio*, dan *quality ratio*. Untuk mengetahui faktor-faktor yang mempengaruhi nilai OEE dilakukan analisa data hasil perhitungan menggunakan Diagram Pareto, Diagram Ishikawa, dan analisa Six Big Losses. Hasil yang diperoleh yaitu nilai rata-rata *Availability Ratio* sebesar 80,99%, *Performance Ratio* sebesar 99,75% dan *Quality Ratio* sebesar 99,53% serta pencapaian OEE mesin produksi harian yaitu 80.44%.

Berdasarkan hasil penelitian dan hasil analisa OEE tingkat efektivitas mesin nilai *Performance Ratio* dan *Quality Ratio* dari mesin produksi telah melampaui standar *OEE World Class*. Namun, nilai *Availability Ratio* belum melampaui standar *OEE World Class* dikarenakan adanya waktu henti tidak terencana yang tinggi yaitu *Idling and Minor Stoppage Losses*, *Equipment Failure Losses* dan *Setup and Adjustment Losses*.

Kata kunci: AMDK, *Overall Equipment Effectiveness* , *Six Big Losses*

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**ASSESSMENT OF THE EFFECTIVENESS OF PRODUCTION  
MACHINES USING OVERALL EQUIPMENT EFFECTIVENESS  
METHOD IN KLATEN PLANT PT TIRTA INVESTAMA,  
KLATEN, JAWA TENGAH**

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**ABSTRACT**

PT Tirta Investama Klaten is a company engaged in manufacturing that is producing bottled water with the AQUA trademark. This research was motivated by the production process of the 1500 ml Line AQUA which used the whole machine, so that the effectiveness of the machine affected the quality and quantity of the production. This research aimed to determine the level of effectiveness of the machines used and the causes of the low value of effectiveness. Measurement of machine effectiveness used Overall Equipment Effectiveness method and then compared the results with OEE World Class standards.

OEE value measurement requires three main ratios of data, which are availability ratio, performance ratio, and quality ratio. To find out the factors that affected the OEE value, the analysis of the calculation data was used the Pareto Diagram, Ishikawa Diagram, and Six Big Losses analysis. The results obtained were the average value of Availability Ratio is 80.99%, Performance Ratio is 99.75% and Quality Ratio is 99.53% and the achievement of OEE daily production machines is 80.44%.

Based on the research results and the results of OEE analysis, the level of machine effectiveness, Performance Ratio value and Quality Ratio of the production machinery was exceeded the OEE World Class standard. However, the Availability Ratio value was not exceeded the OEE World Class standard due to high unplanned downtime, which are Idling and Minor Stoppage Losses, Equipment Failure Losses, also Setup and Adjustment Losses.

**Key Words:** AMDK, Overall Equipment Effectiveness , Six Big Losses

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