

**ANALISIS EFEKTIVITAS MESIN DI PT. DUTA BORNEO ABADI  
MENGUNAKAN METODE OEE SEBAGAI UKURAN KAPABILITAS  
LEAN SIX SIGMA**

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**Abstract**

Overall Equipment Effectiveness (OEE) is one of the tools to measure the effectiveness of a machine. OEE itself is considered to have many shortcomings so that development is needed in order to achieve maximum effectiveness measurement tools. Gibbons and Burgess proposed adding an element of Lean Six Sigma Capabilities to the OEE design with the aim of providing a more holistic view of business effectiveness indicators.

The research was conducted at PT. Duta Borneo Abadi to calculate the effectiveness of the machine using the OEE design according to Gibbons and Burgess for the batching plant machine. Based on the results of the study, it was found that the availability value was 84.31%, performance: 76,50%, quality: 99.91%, MTTR: 107, 47 minutes, MTBF: 1955,51 minutes, sigma level more than 3.4 and OEE by 64.43%. The OEE value is below international standards because the company does not have a regular schedule to perform maintenance on the machine and the workers are not disciplined in following the procedures for using the machine.

The implementation of improvements by applying the proposed improvements is carried out to increase the effectiveness of the batching plant machine. The implementation process produces a fairly good value, namely OEE of 88.92%, availability of 93.4%, performance of 95.21%, quality of 100%, MTTR of 60 minutes, and MTBF of 4890 minutes.

Keywords: OEE, Lean, Six Sigma