ABSTRACT

This research analyzes the effectiveness of the maintenance system for the raw mill machine used in the cement production process, as well as providing recommendations to improve productivity and operational efficiency. The methods used include Overall Equipment Effectiveness (OEE) analysis, Mean Time to Failure (MTTF), and Mean Time to Repair (MTTR), as well as the identification of the six main losses (Six Big Losses) that affect machine performance. The results show that the OEE value for the raw mill machine is recorded at 75.85%, still below the ideal standard of 85%. Although the quality rate reaches 100%, the low availability rate (92.52%) and performance efficiency (81.98%) indicate potential for improvement. The MTTF and MTTR analysis reveals an average repair time of 32.34 hours. Based on the analysis results, it is recommended to implement a more structured and regular preventive maintenance schedule, with repair frequency every 10 days and a repair duration of 1 day. This study is expected to reduce downtime and achieve the production targets that have been set.

Keywords*: downtime*, MTTR, OEE, *preventive maintenance, raw mill*.