

ABSTRAK

KAJIAN PRODUKTIVITAS *HAMMER CRUSHER* PADA *CRUSHING PLANT* PIROPILIT DI PT ALKEN PREMIER SEJAHTERA KABUPATEN MALANG

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Meningkatnya kebutuhan mineral industri seperti piropilit mendorong perusahaan pertambangan untuk meningkatkan kinerja proses pengolahan agar mampu memenuhi permintaan pasar. Salah satu tahapan penting dalam proses tersebut adalah peremukan menggunakan *hammer crusher* yang berfungsi memperkecil ukuran material sesuai spesifikasi produk. Penelitian ini bertujuan menganalisis produktivitas *hammer crusher* pada proses peremukan piropilit di PT Alken Premier Sejahtera, Kabupaten Malang. Target produksi perusahaan sebesar 90 ton/hari, sedangkan produksi aktual rata-rata hanya mencapai 62,52 ton/hari atau 69,47% dari target dengan total waktu hambatan 180,2 menit. Metode yang digunakan adalah kuantitatif dengan data primer berupa waktu kerja alat, waktu hambatan, dan produksi aktual, serta data sekunder berupa spesifikasi alat dan target produksi. Hasil analisis menunjukkan nilai *Mechanical Availability* 88,01% dan *Physical Availability* 91,47% tergolong baik, sedangkan *Use of Availability* 68,26% dan *Effective Utilization* 62,45% masih rendah. Rendahnya produktivitas disebabkan oleh hambatan operasional seperti kerusakan alat, hujan, gangguan listrik, keterlambatan kerja, serta pengumpanan material yang tidak kontinu. Perbaikan dilakukan dengan mengurangi waktu hambatan dan mengoptimalkan pengumpanan, sehingga hambatan menurun menjadi 85,76 menit dan produksi meningkat menjadi 110,66 ton/hari sehingga target produksi perusahaan tercapai.

Kata kunci: *hammer crusher*, produktivitas, hambatan, ketersediaan, piropilit.

ABSTRACT

PRODUCTIVITY ANALYSIS OF HAMMER CRUSHER AT THE PYROPHYLLITE CRUSHING PLANT OF PT ALKEN PREMIER SEJAHTERA, MALANG REGENCY

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The increasing demand for industrial minerals such as pyrophyllite has encouraged mining companies to improve the performance of their processing operations to meet market needs. One of the crucial stages in this process is comminution using a hammer crusher, which functions to reduce material size according to product specifications. This study aims to analyze the productivity of a hammer crusher in the crushing process of pyrophyllite rock at PT Alken Premier Sejahtera, Malang Regency. The company's production target is 90 tons per day; however, the actual average production only reaches 62.52 tons per day, or 69.47% of the target, with a total delay time of 180.2 minutes. This research employs a quantitative method using primary data in the form of equipment working time, delay time, and actual production, as well as secondary data including equipment specifications and production targets. The analysis results indicate that Mechanical Availability (88.01%) and Physical Availability (91.49%) are categorized as good, while Use of Availability (68.26%) and Effective Utilization (62.45%) remain relatively low. The low productivity is mainly caused by operational delays such as equipment breakdowns, rainfall, power outages, work delays, and non-continuous material feeding. Improvements were carried out by reducing delay time and optimizing material feeding, resulting in a decrease in delays to 90,76 minutes and an increase in production to 110.66 tons per day, thereby enabling the company to achieve its production target.

Keywords: *hammer crusher, productivity, delay, availability, pyrophyllite.*