

ABSTRAK

ANALISIS PRODUKTIVITAS ALAT MUAT DAN ALAT ANGKUT PADA PENGUPASAN OVERBURDEN DENGAN METODE OEE PT CIPTA KRIDATAMA SITE BORNEO INDOBARA

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PT Cipta Kridatama *site* Borneo Indobara *pit* Girimylya Batulaki (GRB) menetapkan target produksi pengupasan *overburden* pada bulan Januari 2026 sebesar 400.000 BCM/bulan. Namun realisasi di lapangan menunjukkan produksi *backhoe* CAT 6020 hanya mencapai 357.353 BCM, sedangkan alat angkut OHT CAT 777 sebesar 322.238 BCM. Penelitian ini bertujuan untuk menganalisis produktivitas alat muat dan alat angkut menggunakan metode *Overall Equipment Effectiveness* (OEE), mengidentifikasi faktor-faktor operasional yang memengaruhi efektivitas kinerja alat, serta memberikan rekomendasi perbaikan guna mencapai target produksi. Metode OEE diterapkan melalui empat parameter, yaitu *availability factor* (A), *utilization factor* (U), *speed factor* (S), dan *bucket factor* (B). Hasil penelitian menunjukkan nilai OEE alat muat *backhoe* CAT 6020 sebesar 54% (kategori rendah) dengan produksi 383.568 BCM/bulan, dan nilai OEE alat angkut OHT CAT 777 sebesar 79% (kategori sedang) dengan produksi 336.154 BCM/bulan. Faktor utama yang memengaruhi efektivitas kinerja adalah tingginya hambatan kerja sebesar 4,81 jam/hari pada alat muat dan 3,93 jam/hari pada alat angkut, serta waktu edar aktual alat muat sebesar 32,75 detik yang melebihi waktu edar rencana 30 detik. Setelah dilakukan upaya perbaikan pada *utilization factor* dan *speed factor*, nilai OEE alat muat meningkat menjadi 60% dengan produksi 426.187 BCM/bulan, dan nilai OEE alat angkut meningkat menjadi 83% dengan produksi 353.178 BCM/bulan.

Kata kunci: OEE, *Overall Equipment Effectiveness* (OEE), Produktivitas

ABSTRACT

PRODUCTIVITY ANALYSIS OF LOADING AND HAULING EQUIPMENT IN OVERBURDEN REMOVAL USING THE OEE METHOD AT PT CIPTA KRIDATAMA, BORNEO INDOBARA SITE

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PT Cipta Kridatama, Borneo Indobara site, Girimulya Batulaki (GRB) pit, set an overburden stripping production target of 400,000 BCM/month for January 2026. However, field data revealed that the CAT 6020 backhoe achieved only 357,353 BCM, while the CAT 777 Off-Highway Truck (OHT) reached 322,238 BCM. This study aims to analyze the productivity of loading and hauling equipment using the Overall Equipment Effectiveness (OEE) method, identify operational factors affecting equipment performance, and provide improvement recommendations to meet the production target. The OEE method was applied through four parameters: availability factor (A), utilization factor (U), speed factor (S), and bucket factor (B). The results show that the OEE value of the CAT 6020 backhoe was 54% (low category), yielding a production output of 383,568 BCM/month, while the OEE value of the CAT 777 OHT was 79% (moderate category), with a production output of 336,154 BCM/month. The primary factors affecting equipment effectiveness were the high working delay times of 4.81 hours/day for the loading equipment and 3.93 hours/day for the hauling equipment, as well as the actual cycle time of the loading equipment at 32.75 seconds, which exceeded the planned cycle time of 30 seconds. Following improvement measures applied to the utilization factor and speed factor, the OEE of the loading equipment increased to 60%, raising production to 426,187 BCM/month, and the OEE of the hauling equipment increased to 83%, raising production to 353,178 BCM/month.

Keywords: OEE, Overall Equipment Effectiveness, Productivity