ABSTRAK

KAJIAN TEKNIS ALAT GALI MUAT DAN ANGKUT UNTUK MENCAPAI SASARAN PRODUKSI ANDESIT PT PASI DANADIPA GAJENDRA

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PT Pasi Danadipa Gajendra merupakan perusahaan pertambangan andesit di Kabupaten Kulon Progo dengan target produksi 65.700 m^3/hari. Penelitian ini bertujuan menganalisis kinerja alat gali muat dan alat angkut, mengidentifikasi faktor penyebab ketidaktercapaian target produksi, serta menentukan kebutuhan alat agar tercapai keseimbangan kerja. Metode penelitian menggunakan data primer melalui observasi langsung meliputi geometri jalan angkut, waktu siklus, waktu hambatan, dan jam kerja efektif, serta data sekunder seperti kondisi iklim, geologi, spesifikasi alat, dan laporan produksi. Hasil analisis menunjukkan produksi aktual alat gali muat sebesar 205,95 m^3/hari (114%) telah melampaui target, sedangkan alat angkut hanya mencapai 160,38 m^3/hari (89%). Faktor penghambat utama meliputi lebar *front* penambangan dan jalan angkut yang belum memenuhi standar, waktu siklus alat angkut yang tinggi, efisiensi kerja rendah, serta ketidaksesuaian jumlah alat angkut dengan kapasitas alat muat. Upaya perbaikan dilakukan melalui peningkatan dimensi *front* dan jalan angkut, peningkatan efisiensi kerja alat. Setelah perbaikan, produksi *backhoe* meningkat menjadi 217,37 m^3/hari (121%) dan *dump truck* menjadi 180,78 m^3/hari (100%). Hasil penelitian menunjukkan bahwa optimasi kondisi operasional dan keserasian jumlah alat mampu meningkatkan produktivitas sistem penambangan secara signifikan.

Kata kunci: Produksi, Alat Gali Muat, Alat Angkut, Andesit.

ABSTRACT

TECHNICAL STUDY OF EXCAVATION AND HAULAGE EQUIPMENT TO ACHIEVE ANDESITE PRODUCTION TARGETS PT PASI DANADIPA GAJENDRA

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PT Pasi Danadipa Gajendra is an andesite mining company in Kulon Progo with a production target of 65,700 m³/year or 180 m³/day. This study aims to analyze the performance of loading and hauling equipment, identify factors causing production targets not to be achieved, and determine equipment requirements to achieve operational balance. The method uses primary data obtained from field observations, including haul road geometry, cycle time, delay time, and effective working hours, as well as secondary data such as climate conditions, geological data, equipment specifications, and company production reports. The results show that the actual productivity of loading equipment reached 205,95 m³/day (114%), exceeding the target, while hauling equipment only achieved 160,38 m³/day (89%). The main constraints include insufficient mining face and haul road width, long hauling cycle time, low work efficiency, and mismatch between the number of haul trucks and loader capacity. Improvement efforts were carried out by widening the mining face and haul roads, increasing equipment efficiency. After optimization, backhoe productivity increased to 217,37 m³/day (121%) and dump truck productivity reached 180,78 m³/day (100%). The study concludes that optimizing operational conditions and equipment matching significantly improves mining productivity.

Keywords: *Production, Loading Units, Hauling Units, Andesite.*