ABSTRAK

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Julul : *Peningkatan struktur perkerasan jalan angkut batu bara dengan CTRB dan Chipseal*

Penelitian ini bertujuan untuk mengevaluasi peningkatan struktur jalan angkut batu bara melalui penerapan metode *Cement Treated Recycling Base* (CTRB) dengan lapis penutup *Chipseal*. Metodologi yang digunakan meliputi pengumpulan data lapangan, pengujian laboratorium, serta analisis data teknis. Hasil penelitian menunjukkan tiga temuan utama: pertama, kadar semen sebesar 6% ditetapkan sebagai komposisi campuran optimal yang mampu mencapai kekuatan struktural minimal 30 kg/cm² sesuai spesifikasi teknis yang berlaku. Kedua, penggunaan kombinasi CTRB dan *Chipseal* secara signifikan meningkatkan daya dukung struktur perkerasan dibandingkan metode tanpa stabilisasi, dengan peningkatan sebesar 26,40% berdasarkan pengukuran *Clegg Hammer* dan 87,20% berdasarkan alat *Light Weight Deflectometer* (LWD). Ketiga, metode ini terbukti efisien dengan tingkat produktivitas mencapai 128,60 m²/hari serta efektif dalam mengatasi masalah debu dan deformasi permukaan. Secara keseluruhan, integrasi CTRB dan *Chipseal* menawarkan solusi teknis yang unggul, ekonomis, dan berkelanjutan bagi pengembangan infrastruktur jalan angkut di area pertambangan.

Kata Kunci: *hauling road*, *CTRB, chipseal*

ABSTRACT

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Title : *Improving Coal Hauling Road Pavement Structures using CTRB and Chipseal*

This study aims to evaluate the enhancement of coal haul road structures through the application of the Cement Treated Recycling Base (CTRB) method combined with a Chipseal surface treatment. The methodology employed consists of field data collection, laboratory testing, and comprehensive technical data analysis. The results yield three primary findings: first, a cement content of 6% was identified as the optimal mixture composition, capable of achieving a minimum structural strength of 30 kg/cm² in accordance with applicable technical specifications; second, the combination of CTRB and Chipseal significantly increased the bearing capacity of the pavement structure compared to non-stabilization methods, showing improvements of 26.40% via Clegg Hammer measurements and 87.20% via Light Weight Deflectometer (LWD) measurements; and third, the method proved efficient with a productivity rate of 128.60 m²/day while effectively addressing issues of dust and surface deformation. In conclusion, the integration of CTRB and Chipseal offers a superior, economical, and sustainable technical solution for haul road infrastructure in mining areas.

Keywords: hauling road, CTRB, chipseal