RINGKASAN

Kegiatan penambangan batubara di PT. TCM menggunakan sistem tambang terbuka (*Open Pit*) dengan metode (*Strip mine)*. Area penambangan di PT. TCM dibagi menjadi dua lokasi, yaitu *north block* dan *south block*. Lokasi penelitian berada di *north block*, yaitu *ex-pit* 3000 *block* 3. Kegiatan penambangan akan menghasilkan lubang bekas bukaan tambang (*Void*) yang harus dilakukan penutupan sesuai dengan ketentuan yang berlaku. Dalam kegiatan penutupan lubang bekas bukaan tambang, PT. TCM dilakukan di area ex-pit 3000 block 3 north block. menggunakan rangkaian kerja alat muat dan alat angkut untuk memindahkan material dari loading point ke area lubang bekas bukaan tambang.

Kegiatan penutupan lubang bekas bukaan tambang tidak sesuai dengan rencana perusahaan. Sehingga dalam penelitian ini dikaji keserasian kerja alat mekanis yaitu alat muat dan alat angkut berdasarkan waktu edar alat kerja mekanis, faktor – faktor yang mempengaruhi produktifitas alat muat dan alat angkut, keserasian kerja alat makanis dengan memperbaiki waktu edar alat mekanis, untuk meningkatkan produksi alat muat dan alat angkut.

Dari hasil penelitian yang dilakukan, kajian alat mekanis dalam rangka kegiatan penutupan void, adapun didapatkan sebagai berikut, Nilai keserasian alat kerja mekanis secara actual 0,63, sehingga masih bisa dilakukan peningkatan. Faktor – Fatktor yang mempenggaruhi kegiatan produksi penutupan void yaitu, Waktu kerja efektif aktual alat muat dan alat angkut , efisiensi kerja alat muat dan alat angkut, c*ycle time* alat muat dan alat angkut, dan Geometri jalan. Peningkatan Faktor Keserasian Alat Muat dan Alat Angkut Setelah perbaikan sebesar 0,90, Terjadinya peningkatan *match factor* dikarenakan adanya perbaikan perbaikan di *cycle time dumptruck* dan penambahan jumlah curah. peningkatan produksi alat muat dan alat angkut produksi plan bulan januari 129.624 Bcm/bulan. Produksi perhitungan aktual bulan januari 90.375 Bcm/bulan. Produksi perbaikan bulan januari 135.421 Bcm/bulan. Sehingg target produksi kegiatan penutupan lubang bekas bukaan tambang telah mencapai target.

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ABSTRACT

Coal minining activity in PT. TCM is using open pit system and strip mine method. Mining area in PT. TCM has two locations there are north block and south block. Researched location in north block is ex-pit 3000 block 3. Mining activity will be resulting the mine opening hole (void) that have to close in accordance with the applicable provisions. Mine opening hole activity is doing in ex-pit 3000 block 3 area north block that using loading and transportation mechanical equipments to move the material from loading point to mine opening hole.

The closing activity of mine opening hole is not accordance with company's plan. To in this researched is studied th working suitability of mechanical equipments are loading and transportation based on time of mechanical equipments, the factors affect productivity of loading and transportation mechanical equipments, the suitablity of mechanical equipments with improve the time of mechanical equipments to increase the production of loading and transportation mechanical euipments.

From the researched result that did, study of mechanical equipment in activity of void closing, there are the result, suitability value of mechanical equipment is 0,63, that can do the enhancament. Factors affect production activity of void closing are the effectivity of actual time of loading and trasnportation, and ramp geometry. The increase match factor of production of loading and transportation mechanical equipment after improvement is 0,90. The increase of suibality factor of loading and tranportation after improvement in cycle time dumptruck, addition loading total, loading and tranportation mechanical equipment production plan in January is 129.624 Bcm/month. The actual calculate production in January is 90.375 Bcm/ month. Repair production in January 135.421 Bcm/ month. To target production of mine opening hole activity had reached target.