

ABSTRACT

PT. Bina Bara Sejahtera (PT. BBS) is a company that operates in coal mining contractor and located in Ketaun, Bengkulu. The agreement with the owner of the coal mining is PT. Firman Ketaun (PT. FK).

The overburden production target of mechanical equipment work in PT. Bina Bara Sejahtera is 150.000 bcm/month. The combination of mechanical equipment are 1 unit *excavator backhoe komatsu PC300* combined with 3 units *articulated dump truck Volvo BM A35A* and 2 units *excavator backhoe komatsu PC200* combined with 4 unit *articulated dump truck Volvo BM A35A*. The combination of the mechanical equipment works at 3 different front. Dig and load method tha used on the field is Top Loading and Single Back up.

The production of overburden in April is 133.981 bcm/month, so production target of 150.000 bcm/month is unachievable, The problem is because the productivity from the combination work of mechanical equipments are not optimal, it's because the working hours is not effective, and there are delay time, and match factor of mechanical equipments combination *front* 1 is 1,12 ($MF > 1$), front 2 is 0,80 ($MF < 1$) and front 3 is 0,69 ($MF < 1$), it's means the combination not too match with work factor of dig-load equipment is less than work factor of hauler.

To achieve the target production per month, have to analyze about the factors which affected the production of mechanical equipment and to study the effective working hours which possibility to decrease delay time and then to create the match between dig-load equipment and hauler equipment.

With decrease the controlling delay time, it can increase the working hours. And the production become 150.000 bcm/month. To create the match in work between dig-load and hauler equipment, have to add 1 hauler at third front, the production become 152.416 bcm/month and add 1 hauler in second front, the production of overburden become 170.798 bcm/month. It means the production of mechanical equipment is achievable.