

ABSTRACT

Production equipment for mining operations is one of the vital means to support the final production target which has been determined by the Companies management. Estimating the importance of performance and production capabilities of heavy equipment because anything to do with production targets to be achieved by the company. Interaction between the production target per unit of production of heavy equipment will determine the number of devices that must be purchased in accordance with the capacity, the type of material to be handled and the level of ease of operation and maintenance.

On the other hand, the selection of heavy equipment capacity must be adjusted to the field conditions, the environment, and so the mine entrance. In addition, by increasing the hours of operation will reduce the ability tool that will eventually degrade the performance of equipment, so that operation and maintenance costs will increase. To determine the ability of a device has been declining continuously needs to be done to control its versatility estimated through the calculation of the production tool

PT. Geo Mining Energy is a multi national company engaged in coal mining. The company will plan soon open coal mines in the region IUP exploitation PT. GME is located in Binai village, Eastern District of Tanjung Palas, Bulungan, the province of East Kalimantan, covering an area of 5,071 Ha. For the development of the mining plan, necessary mechanical equipment selection so that the mining plan can be supported by accurate data in terms of a mechanical device of digging ability in order to meet production targets.

Mining system to be used by PT. GME is a system of open-pit mining. Coal mining activity plan that will be implemented by PT. Geo Mining Energy use mechanical devices form-fit excavator and conveyances (dump truck). For loading activities carried out by two units backhoe Komatsu PC600LC-8 to serve 39 units of Scania Dump Truck P310 (6x2) with a working time of 18 hours / day.

Subjected to mine coal production amounted to 10,900 tons / day. while the production plan of unloading and conveyances tools by theoretical calculations to 2 units backhoe Komatsu PC600LC-8 is at 11,002.32 tons / day, and 39 units of Scania Dump Truck P310 (6x2) of 13,113.12 tons / day. As for the match factor obtained by $MF = 0.99$.