

ABSTRACT

PT. Sugih Alam Anugroho is a corporation runs in mining industry of limestone. This corporation has production operation permit (*Ijin Usaha Pertambangan Operasi Produksi*) for minerals specifically limestone in the area of Gunung Kidul region, Yogyakarta covering area of 24,9Ha. Research setting was in quarry of Sidowayah mountain. This corporation needs limestone as many as 80 ton/hari with loose weight of 1,64 gram/cm³ from the mining location to be processed into limestone powder. In order to cover the needs of limestone, they operates 1 unit of excavator Hitachi Zaxis 200 and 3 units of conveyance dumpruck Mitshubishi FE 73.

The issue faced by PT. Sugih Alam Anugroho nowadays is there is waiting time among the excavator. Based on the calculation and on-field observation result, the operation of dumpruck in used is excessive. The excessive used of conveyance working time stop when production goal has been reached thus the efficiency of conveyance lessens.

The effort done to adjust the number of conveyance with production goal is firstly, by improving effective working time and efficiency, therefore we could define production of conveyance latter used as reference in defining the number of mechanical tools which will be used. By the improvement of working time thus production of 1 excavator will add to 93,63m³/day, in addition production of conveyance will add to 45,19m³/day.

Based on the mechanical tools level which have been optimalized, it is suggested the number of mechanical tools used is 1 unit excavator Hitachi Zaxis 200 and 2 units of conveyance dumpruck Mitsubishi FE 73.