

**ANALYSIS INFLUENCE OF GRADE AND DISTANCE HAULING ROAD
ON FUEL CONSUMPTION AND FUEL RATIO IN ANDESITE ROCK
MINING ACTIVITIES AT PT GUNUNG SAMPURNA MAKMUR
RENGASJAJAR VILLAGE, CIGUDEG SUBDISTRICT, BOGOR DISTRICT
WEST JAVA PROVINCE**

ABSTRACT

One component of mining production costs are the costs of fuel consumption, so it is a concern because it contributes towards the operating cost in mining activities. Some things that affect the fuel consumption on mechanical devices, including the condition of the equipment, the actual conditions in mine location, and operators treatment of the equipment. Therefore, it needs an evaluation and analysis of the factors that influence need for the fuel consumption.

Andesite mining activities in the PT Gunung Sampurna Makmur done by quarry mining methods. Loading equipment is used excavator **KOBELCO SK 330** and hauling used Dump Truck **MAN CLA 26.280**. Loading production is 69,66 BCM/hour and hauling production is 22,80 BCM/hour. As for the actual production transported from the loading point to the hopper in one day as much as 1830,24 BCM/Day. The average fuel consumption of loading equipment is 26,56 liters/hour, while the average fuel consumption of hauling equipment for distance 1.200 m as much as 8,36 Liters/Hour and for distance 1.400 m is 9,53 Liter/Hour.

By analyzing the slop road and distance of hauling road, it can be seen diesel fuel needs for Dump Truck **MAN CLA 26.280** on transport distance of 1,2 Km with grade 7,25% is 0,13 Liters/Km/%, while at a distance transport 1,4 Km with grade 6,42% is 0,16 Liters/Km/%. Fuel ratio actual value in the field for transport distance of 1,2 Km is 0,65 Liters/BCM, while transport distance of 1,4 Km is 0,79 Liter/BCM.

Keywords: Grade, Hauling Distance, Production, Fuel, Fuel Ratio