

ABSTRACT

PT. Semen Indonesia (Limited) obtains raw materials of clay by means of mining in two locations, namely in Kuari Mliwang, Subdistrict of Kerek and Kuari Tlogowaru, Subdistrict Merakurak. The activity of clay mining is done by subsidiary, namely PT. United Tractor Semen Gresik (UTSG). The activity of clay mining implements an open mining system with quarry method.

Clay mining in Kuari Mliwang uses one unit of backhoe Komatsu PC300 to serve 10 units of trucks Scania P420, whereas in Kuari Tlogowaru uses one unit of backhoe Komatsu PC300 combined with 10 units of trucks Scania P380. Digging tool and loading tool used today have not met the production target of clay production determined by PT. Semen Indonesia (Limited) Tbk., namely amounting to 3.729.320 ton/year, thus it needs efforts of repair to increase the production of digging tool and loading tool.

In addition to perform efforts to increase the production of digging tool and loading tool, it also needs to know how much fuel of digging tool is consumed used today, that in the end it will be known the ratio value of fuel (liter/ton) of the digging tool and loading tool. Standards for fuel ratio value implemented by the company is 0,5 liter/ton of clay.

Thus, in addition to perform efforts of repair to increase the production of digging tool and loading tool, it needs also a study to known the fuel ratio value of digging tool and loading tool in Kuari Mliwang and Tlogowaru whether it has been based on the standards implemented by the company.

The results of the study showed the production of digging and loading tool clay today is 5.781,984 ton/day with the consumption of fuel of 741,412 liter/day, fuel ratio value 0,128 liter/ton, fuel cost ratio Rp 915,2/ton, and fuel consumption cost Rp 5.290.828,86/day, whereas for the production of loading tool today amounts to 5.654,24 ton/day, with fuel consumption 2.911,99 liter/day, fuel ratio value 0,515 liter/ton, fuel cost ratio Rp 3.682,25/ton, and fuel consumption cost Rp 20.798.257,48/day.

After efforts were made, the production of loading tools clay increased to 11.582,34 ton/day with the consumption of fuel of 1.155,076 liter/day, fuel ratio value experienced a decrease to 0,099 liter/ton, fuel cost ratio also experienced a decrease of Rp 707,85/ton, and fuel consumption cost of Rp 8.238.216,67/day. The production of loading tool also experienced an increase to 10.908,084 ton/day with fuel consumption 5.474,699 liter/day, fuel ratio value experienced a decrease of 0,501 liter/ton, fuel cost ratio also experienced a decrease of Rp 3.582,15/ton, and fuel consumption cost of Rp 39.121.293,35/day.

Keywords: loading tool, conveyance, production, fuel ratio, fuel cost ratio, fuel cost