

ABSTRACT

PT. Holcim Beton Maloko is a company engaged in the provision of concrete material for the construction of andesite stone buildings located in Mount Maloko Cipinang Village and Village Sukasari District Rumpin Bogor Regency West Java Province. This study aims to produce a planned technical design of mining in achieving the production target of 2,500,000 tons per year. Mining activity at PT. Holcim Beton is divided into two categories: short-term and long-term activities. Short-term activity is the leveling activity of the hill using the method of quasi-side hill type by mining from the side of the hill, while long-term activities begin to mine downward starting from the last boundary of mining on short-term activities.

Currently mining activities at PT. Holcim Beton is a short-term activity with a side hill type quarrel method with a final limit of 90 mdpl elevation. After short-term activities it will be mining at elevation of 90 mdpl to 25 mdpl which is classified into long-term design.

This research is focused on long-term mining design. In the design of data mining that needs to be taken is a geotechnical test data so that it can create a bench design and a safe road. In this study did not conduct geotechnical test but only take data from the company based on previous research. Geotechnical test data of PT. Holcim Concrete in the previous study yielded a safety factor of 2.68 in the overall slope with a total height of 65 meters bench with an overall slope of 40° .

The technical design of andesite stone mining at PT. Holcim Beton uses open pit system with hill type slide and pit type. Geometry level used on the recommendation of the company that is high level 15 m, the slope of single ladder 80o, slope of whole level 40° , and width of ladder end 20 m. Minimum front mining width is 43 m, while the minimum length of mining front is 34 m minimum dimension of mining front is used as minimum pit bottom recommendation. The width of the haul road on a straight road is 20 m and the width of the haul road on the bend is 23 m. Grade of road on the climb used is 8%. Based on production target of 2.500.000 ton per year and recommendation from company, hence can be known age of mine at elevation 90 mdpl until elevation 25 mdpl is 19 year