

**Engineering Of Slope Stability related to Work Safety in Tras Mining Area
at Kemiri Village, Jenangan, Ponorogo, Jawa Timur**

ABSTRACT

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Increased development has an impact on increasing demand for mineral non-metallic minerals tras. The existence of mining activities tras by the community that has not been planned properly is feared will cause adverse effects for the slope stability. This can threaten the safety of the tras miners. As a result, it is necessary to study the appropriate level of slope stability and engineering in the area of the mine.

The methods used were survey method and field mapping, survey and mapping were used to obtain data of existing condition of research area. Interviewing method with some miners and residents used to obtain historical disaster information ever. Laboratory analysis of some rock and soil samples from the site is useful to support the required data such as fill weight, cohesion, and shear angle, at the data analysis stage. Data analysis from field and laboratory results to obtain the value of Safety Factor by Janbu Method.

Based on the analysis of slope stability by using Janbu method, obtained safety factor of slope are 0,000128 for LP 01; 0,032455 for LP 05; 0,000182 for LP 07 and 0,000222 for LP 11, that indicates the slopes are in a unsafe condition. To improve the stability of the slope in mining area, technique used is changing the design of slope geometry by resloping into bench, which refer to the Regulation of Ministry of Mining and Energy No. 555 in 1995 concerning to Safety and Health of General Mining Work.

Keyword: Slope Stability, Engineering, Geometry, work safety, Janbu Method