

ABSTRACT

The process of dismantling the rock layers interburden B2-C in Pit Pre-Bench Tambang Air Laya (TAL) PT. Bukit Asam (Persero) Tbk Unit Pertambangan Tanjung Enim (UPTE), is performed using blasting method. One of the successes blasting activities are the production target is reached and the resulting fragmentation of the rock produces little boulder. Target production unloading rock layers interburden B2-C in February 2012 amounted 400.000 Bcm, while the yield obtained in February 2012 amounted to 501.240 Bcm. These results have exceeded the targets set by the company.

One of the causes is the fragmentation boulder blasting design geometry is applied. Fragmentation with sizes larger than 100 cm desired by the company is less than 15%. Geometry blasting is currently implemented using 6,0 m burden, spacing 7,0 m, hole depth of 8,3 m with a burst of high levels of 8,0 m, stemming the use of 3,8 m, the powder charge is 4,5 m, subdrilling used by 0,3 m and the resulting powder factor 0,23 kg/m³.

Based on the analysis of the results obtained in the fragmentation of the field based on the volume of rock that is not transported as boulder material of 17,21%, while the result of fragmentation is greater than 100 cm (boulder) were obtained by using the Kuz-Ram of 16,1%. Therefore, the study of geometry blasting done currently implemented by creating a new geometry blasting.

Blasting new geometry is created with the aim to address the fragmentation results greater than 100 cm (boulder) that exist. Geometry blasting generated using the formula RL Ash is using burden 5,0 m and 7,0 m spacing, with a hole depth of 9,0 m, stemming is 4,25 m, subdrilling of 1,0 m, the depth of the powder charge is used at 4,75 m and powder the resulting factor 0,30 kg/m³.

Fragmentation results greater than 100 cm (boulder) were obtained using a new blasting geometry is 11,3%. It can solve problems that occur in blasting activities carried out in the *Pit Pre-Bench* Tambang Air Laya PT. Bukit Asam (Persero) Tbk Unit Pertambangan Tanjung Enim (UPTE).