ABSTRACT

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Evaluation of Blasting Geometry Design on the Result of Rock Fragmentation, Digging Time, and Blasting Recovery at di Pit B PT Darma Henwa Tbk Bengalon Coal Project East Kalimantan

PT. Darma Henwa Tbk is a mining contractor assigned by PT. Kaltim Prima Coal to conduct mining production and overburden production at Bengalon Coal Project, East Sepaso Village, Sub-district Bengalon, District East Kutai, Province East Kalimantan. Blasting is an important activity to make sure the productivity reach company target. PT. DH use Sanvik D50KS and Sanvik D245S to support drilling activity of blast holes and explosives used are Emulsion Synergy 335 product by PT. AEL Indonesia. Base on distribustion analysis of rock fragmentation result from actual blasting geometry data, the average rock fragmentation result from 5 times blasting that passed at 100 cm in size with split desktop software at 88.43%. Base on observation, average digging time recorded by excavator from 5 times blasting is 12,85 s/bucket. Beside that, recovery blasting archived by actual blasting is 85,4% less than 90% target. Whereas, the actual fees received is $ 2,807,629.10, less 21% from planned fees which is $ 3,541,889.10. Therefore solution needed to solve this problem by evaluate the blasting geometry using RL Ash method. Geometry will be choose by compare the fragmentation prediction using Kuz-Ram equation. As a results, three geometry option has been found and geometry option I selected to applied..

Keywords: Blasting Geometry,Split Desktop, Rock Fragmentation, Recovery Blasting, Explosive Cost