ABSTRACT

Abstract. PT. Indocement Tunggal Prakarsa Tbk is a producer engaged in limestone mining, which is located in the village of West Palimanan, Gempol District, Cirebon Regency, West Java. The mining method used by PT. Indocement Tunggal Prakarsa Tbk is an open pit mining system, using the Quarry mining method. From the results of the author's observations at PT. Indocement Tunggal Prakarsa Tbk saw a lot of fragmentation resulting from blasting which resulted in boulder. The size of the boulder based on company standards is 50 cm with the percentage of rock fragmentation resulting from blasting 50 cm at PT. Indocement Tunggal Prakarsa Tbk is still relatively high at around ± 30%, while the fragmentation expected by PT. Indocement Tunggal Prakarsa Tbk < 50 cm with a blast yield of 80%. This study aims to design the optimum blasting geometry to reduce the percentage of boulder so that the jaw crusher specifications are met and do not increase the cost of renting the breaker unit again. The research method is carried out by providing the results of the analysis of the Kuz-Ram method. Then one of the proposed geometries is chosen which is better while the proposed geometry is given, namely Burden 2 m, Spacing 2.5 m, Stemming 2.2 m, Subdrilling 0.19 m, Level height 5,8 m, Depth of the blast hole 6.68 m, Powder column 4.4 m, Powder factor 0.59, Kuzram Fragmentation 20 %.

Keywords : Blasting Geometry, Blasting Fragmentation, Kuz - Ram Proposed Geometry.