

## Prediction of Burden Velocity in Bench Blasting

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### ABSTRACT

A blast casting model is proposed to predict the burden velocity in bench blasting. This blast casting model is the first theoretical model that 1) explains the throwing processes and mechanisms, 2) uses the explosion pressure as the primary source in throwing rock fragments, 3) applies them to field conditions successfully. Also the predicted burden velocities are based on the rock properties, the explosive properties, and the drilling and initiation patterns.

This blast casting model is programmed into a computer software "ROCKFRAG". The comparisons between "ROCKFRAG" predicted values and two field test data are in good agreement.