

FRAGMENTING OVERSIZE BOULDERS

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Abstract

Often large boulders of rock have to be fragmented in civil or mining engineering operations. These oversize boulders are encountered after primary blasts in both surface and underground excavations of minerals. Various methods are employed to break large boulders into a manageable size for loading and crushing. These methods range from mechanical breaking (such as drop-ball and hydraulic impactor) to the use of explosives. Apart from these, static agents (such as expanding chemicals) are used in special circumstances.

The most common secondary blasting methods are "pop shooting" and "plaster shooting". A comprehensive investigation is in progress at the School of Mines, University of New South Wales, where the performance characteristics of these two methods, together with "shaped-charge shooting" are being evaluated. This paper highlights some of the results in hand.