

Possibility of Organizing and Analyzing Drilling - Blasting with a Computer Program (DelPat)

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ABSTRACT

This computer program has been developed under the field conditions for use in control of surface drilling-blasting operations. This paper outlines the relevance of fragmentation to quarrying, open pit mining or road cutting and key features and operating principles of the software (DelPat for Windows 95).

At first, it begins to calculate with given values about working place conditions. This part is "Main Menu" section and includes easy understandable and sufficient parameters. Also, it controls harmony between drilling machinery, bench heights and explosives.

The block size distribution; in required block size (cm) and percentage by weight (%) can be chosen directly by user. DelPat begins to search with the just right drilling pattern according to Block Size Coefficient (S50); which is calculated with these two parameters. If there is a solution in hole diameter, output of the values are shown on the screen, else it pass to another diameter until can find the result ϕ .

In "Output of the Values" section, according to calculated different number of hole diameters; drilling pattern, number of required machine, resign of charge configuration, specific charge and drilling blasting cost can be compared.

At result, this software is helpful for planning the rock excavation in different projects (quarrying, open pit mining operations, road cut etc.), different rock characteristics, with different kind of drilling machinery.