

BEST PRACTICE

LOCATION: Quarry

ARTICLE YEAR: 2006

ACTIVITY: Production and Processing

COMPANY: CEMEX



SUB ACTIVITY: Face activity

COMPANY LOCATION: Leyburn Quarry, N. Yorkshire

BEST PRACTICE No: BP269

COMPANY TEL: 01969 623197

TITLE

 Award Winner  On Video

Blast design calculator

ARTICLE

A new tool has been developed which allows shotfirers to accurately calculate the amount of explosives needed to safely charge holes. Simple data, such as face height and hole depth measurements, is entered into an excel spreadsheet. Warning messages appear if the shotfirer is attempting to carry out an action which goes against HSE recommendations, such as insufficient stemming, too much water in the hole or excessive face height.

The system identifies the section of the hole which is minimum burden. Where this is 10 per cent less than the designed burden, guidance is given on intermediate stemming.

Once all the relevant data has been input, the system calculates the amount of ANFO required and automatically adjusts the rise levels. The spreadsheet also calculates the amount of packaged explosive required where water in the hole is present. Finally, a summary of the entire blast is offered, including tonnage of blasted rock produced, amount of explosive used and cost per tonne.

A link to Environmental Monitoring is also available, which shows Seismograph PPV and Air Overpressure results, and a tool calculates regression lines to control vibration on future blasts.

ARTICLE IMAGES

