



UNDERGROUND ROCK FALLS – GEOTECHNICAL CONSIDERATIONS

Two fatal accidents which involved rock falls in underground mines during 1996 were recently the subject of coronial inquests.

In the first accident a mine worker was struck by a rock fall while watering down from an elevated work platform after blasting. In the second accident an airleg miner was installing ground support when the rock fall occurred.

The juries in both cases found that death arose by way of accident. The same rider was issued by the Coroner in each case:

1. Employers and mine managers of an underground mine must continue to ensure that geotechnical information is obtained, assessed and made available in an understandable form to ensure a safe workplace.
2. Industry continues to review and analyse the adequacy of ground support and reinforcement in every underground mine.
3. The lack of geotechnical training at all levels of underground mining must be addressed.

These riders might be viewed as a re-statement of the application in two specific cases of the geotechnical requirements contained in Regulation 10.28 and the training requirements in Regulation 4.13 of the Mines Safety and Inspection Regulations 1995.

Geotechnical considerations play an important role in the proper design and operation of mines.

The potentially hazardous nature of underground mining requires the application of sound geotechnical engineering practice to analyse ground conditions and determine the ground support and reinforcement requirements as well as the size, shape and orientation of each opening to be excavated in a particular rock mass.

Rock falls continue to be the largest single cause of serious and fatal accidents in underground metalliferous mines in Western Australia.

Only when sound knowledge and diligent application of geotechnical principles have reached all elements of the mining workforce will this toll be reduced.

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