Research and Application of the Three-Dimensional Visualization Geological Modeling of Mine

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Abstract : Today's mining industry is advancing gradually toward digital and visual direction. The three dimensional visualization geological modeling of mine is the digital characterization of mineral deposit, and is one of the key technology of digital mine. The three-dimensional geological modeling is a technology that combines the geological spatial information management, geological interpretation, geological spatial analysis and prediction, geostatistical analysis, entity content analysis and graphic visualization in three-dimensional environment with computer technology, and is used in geological analysis. In this paper, the three-dimensional geological modeling of an iron mine through the use of Surpac is constructed, and the weight difference of the estimation methods between distance power inverse ratio method and ordinary kriging is studied, and the ore body volume and reserves are simulated and calculated by using these two methods. Compared with the actual mine reserves, its result is relatively accurate, so it provided scientific bases for mine resource assessment, reserve calculation, mining design and so on.