عنوان مقاله:

A new model for mining method selection based on grey and TODIM methods

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خلاصه مقاله:

One of the most important steps involved in mining operations is to select an appropriate extraction method for mine resources. After choosing the extraction method, it is usually impossible to replace it with another one because it may be so expensive that implementation of the entire project could be economically impossible. Choosing a mining method depends on the geological and geometrical characteristics of the mine. Due to the complexity of the process of choosing an appropriate mining method and the effect of the parameters involved on the results of this process, it is necessary to utilize the new decision-making methods that have the ability to consider the relationship between the existing parameters and the mining methods. Grey and TODIM (an acronym in Portuguese, i.e. Tomada de Decisão Interativa Multicritério) decision-making methods are among the existing ones, which in addition to the convenience, show high accuracy. The proposed models are presented to determine the best mining method in the Gol-e-gohar iron ore mine in Iran. The results obtained are compared with the methods used in the previous research works. Among the decision-making methods introduced, the open pit mining method is the most appropriate option and the square-set mining is the worst one.

کلمات کلیدی:

Mining Method Selection, Multi-Criteria Decision-Making Methods, Grey, TODIM

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