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矿床模型块段权重与露天矿设计统一模型

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要: 净利法是至今仍广泛使用的一种矿床模型块段权重的计算方法,适用于矿床单一露采的情况。对于矿床采用露天与地下联合开采的 情况及露天矿优化设计的各种经济目标,依据经济合理剥采比的计算原理可以提出净利差额法、收支比率法和费用差额法3种新的块段权重计算 方法及其参数分析算法。三者中的前两者是净利法的推广。基于上述块段权重计算技术可以建立露天矿设计的统一模型这个统一模型可以用来 描述露天矿最终境界、分期境界和初始境界的优化设计。

关键字: 块段权重: 矿床模型: 计算方法: 参数化法: 露天矿: 优化设计

Weights of blocks within an ore body model and unified model for design of open pit mines

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Abstract: The net-value method is a calculation method for the weights of the blocks within an ore body model, which is widely used even today and applied to the case of mining an ore body only by the open-pit method. For the case of mining an ore body by the method combined open-pit and underground mining and for the various economic objects of the optimum design of the open pit mines, three new calculation methods of the block weights referred to as the net-value difference method, the value-cost ratio method and the costs difference method, and their parametrizations were proposed on the calculation principles of the economic stripping ratio. Among of them the first two methods are the extension of the net-value method. An unified model for the design of the open pit mines was developed on the basis of the calculation technique for the weights of the blocks. The unified model can be applied to describe the optimum designs for the final limit, the intermediate limits and the original limit of a pit.

Key words: block weight; orebody models; calculation; parametrization; open pit mines; optimum design

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