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基于Bishop条分法的边坡可靠度应用研究

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摘 要：基于Bishop条分法，研究隐式功能函数边坡工程稳定可靠度计算方法。将传统的响应面分析方法与Bishopt条分法相结合，形成一种新的边坡稳定可靠性响应面分析方法。采用此方法分析某一边坡工程的稳定可靠性，并把分析结果与蒙特卡洛模拟法计算结果进行对照。研究结果表明：该方法计算效率较高，原理简单，精度满足 要求。

关键字：边坡可靠度；Bishop条分法；隐式功能函数；响应面法

Application analysis of slope reliability based on Bishop analytical method

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Abstract: Based on Bishop slice method, a calculation method of reliability for slope stability whose state function was implicit function was studied. Combining classical response surface method with Bishop slice method, a new response surface method of slope stability reliability analysis was established. The new method was applied to analyze the stability of slope and the procedure and calculation result were compared with those obtained by MonteCarlo method. The results show that the calculation efficiency of the proposed method is high and the accuracy of calculation result is acceptable.

Key words:slope reliability; Bishop slice method; implicit performance function; response surface method

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