

失稳岩石边坡加固处理实例

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摘要 某一工程主体部分属于国家重点工程, 在施工过程中岩石边坡出现险情, 直接威胁着下部结构物和施工人员的安全。依据周边环境和地质条件, 采用工程类比法和经验法对边坡采用预应力锚索、自钻式锚杆、钢筋网和喷射混凝土联合加固的措施; 合理的设计参数、正确的支护结构形式和科学的施工步骤, 使该加固措施充分发挥了锚固作用; 根据锚杆钻孔施工过程中遇到的裂缝位置及边坡极限平衡理论, 采用反算法得出岩体力学参数, 进而对加固后边坡的安全系数进行计算。结果显示, 安全系数得到大幅度的提高, 确保了边坡稳定和后续施工的顺利进行。重点介绍本边坡加固工程的设计和施工情况。

关键词 [边坡工程](#); [岩石边坡](#); [预应力锚索](#); [自钻式锚杆](#); [抢险加固](#)

分类号

CASE OF AN UNSTABLE ROCK SLOPE REINFORCEMENT

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Abstract

The main work of a project is the state key one. The rock slope is unstable during the construction process and threatens the safety of lower structures and workers. According to the environment and the concrete geological conditions, the comprehensive reinforcement method of prestressed anchor cable, self-drilling anchor bolt, steel-net and shotcrete is adopted for the slope using the engineering analogism and experiential method. Rational design parameters, reasonable reinforcement structure form and scientific construction process ensure the reinforcement measures to play roles fully. Based on the crack location surveyed during drilling hole and slope limit equilibrium theory, the mechanical parameters of rock are obtained by inverse calculation method. Then the safety factor of the reinforced slope is gained. Results show that the safety factor increases largely, which ensures the safety and the subsequent construction. The design and construction of the reinforced rock slope are introduced in detail.

Key words [slope engineering](#); [rock slope](#); [prestressed anchor cable](#); [self-drilling anchor bolt](#); [fast maintenance](#)

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