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HARMONIZING ENGINEERING GEOLOGY WITH ROCK ENGINEERING FOR ASSESSING ROCK SLOPESTABILITY: A REVIEW OF CURRENT PRACTICE

Summary:

Progresses in understanding, analysis and control of rock slope movements have been the result of interdisciplinary efforts involving engineering geologists and rock engineers. In addition to rock engineeringmethodologies, the inputs from engineering geology are absolutely a fundamental to any rock slope design. This paper aims to emphasize the importance of harmonizing engineering geology with rock engineering on stability ofnatural and engineered rock slopes. The main engineering geological factors featured in the design and construction of rock slopes, role of engineering geological and hydrogeological conceptual models and their combination with the stability analysis methods used in rock slope engineering, input parameter selection, current back-analysis techniques and movement monitoring methodsare briefly discussed through some real cases selected from practice and on hypothetical examples.

Key words:

Rock slope stability, engineering geology, rock engineering, back-analysis, movement monitoring, slope design, engineering geological model, hydrogeological conceptual model

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