

Effect of rainfall characteristics on slope stability

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ABSTRACT

Due to recent climate change, rainfall intensity from June to August is increasing. As a result, there are many cases in which the slope is collapsed or damaged. In this regard, it is necessary to analyze the slope stability considering the rainfall intensity. Currently, Limit Equilibrium Method(LEM) is widely used in the existing slope stability analysis. In this method, the strength-displacement characteristic of the soil is non-brittle, and the value of shear strength is the same even there are large displacements. In other words, the Limit Equilibrium Method(LEM) provides a safety factor for shear strength, but does not consider displacement. In recent years, with the development of measurement technology, it has become possible to obtain real-time measurement data for displacement of slope. However, studies on the correlation between the measured displacement and the stability factor of the slope are still insufficient. Therefore, in order to analyze the slope stability using the displacement measured in real time with rainfall, the linkage between the seepage analysis using Seep/W and the slope stability analysis using FLAC which can consider displacement will be applied.

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