عنوان مقاله:

Evaluation of Static and Dynamic Stability of Slopes by the Zero Extension Line Method

محل انتشار:

چهارمین کنفرانس بین المللی زلزله شناسی و مهندسی زلزله (سال: 1382)

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خلاصه مقاله:

The application of the Zero Extension Line Method in evaluating the static and dynamic stability of earth slopes has been presented. Both associated and non-associated flow rules can be assumed for the soil. When the flow of soil is assumed to be associated, the results are similar to those obtained by the Stress Characteristics Method. It has been shown that this assumption is not on the safe side. The analysis by the zero extension line method takes the nonassociativity of soil into account and therefore is advantageous. The geometry of critical slope and failure mechanism can be obtained as a function of surcharge, cohesion, friction angle, and earthquake coefficient. A computer program has been written for the analysis. Dynamic states are considered by incorporating horizontal and vertical earthquake coefficient. The effects of horizontal earthquake coefficient, dilation angle, friction angle on the results have been investigated. It has been concluded that for non-ssociative soil it is always better to consider the effect of dilation angle into account, otherwise, the analysis may not be on the safe side.

کلمات کلیدی:

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