

عنوان مقاله:

(Static Analysis of Soil-Nailed Structures Using Three-Dimensional Finite Difference Method (FDM

محل انتشار:

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خلاصه مقاله:

Soil nailing is an efficient new technique to stabilize soil structures. This method has been increasingly used to improve stability of slopes. Soil nailing constructions commonly involve three basic process: excavation, nail installation and face stabilization. The nails are inserted into ground by either drilling or grouting and are usually arranged in both horizontal and vertical directions. In the present research a three dimensional finite difference model has been developed in order to perform a static analysis of soil-nailed structure. The soil behavior was predicted by an Elastic-Perfectly-Plastic model, associated to Mohr-Coulomb failure criterion. The numerical model simulates the soil medium, nail inclusions, shotcrete facing using different zone and structural elements. Different slope inclinations and nails lengths are considered to investigate the influence of these factors on the behavior of structure.

کلمات کلیدی:

Soil-Nailed wall, Finite difference method, Nails inclination, Nails length, Nails length pattern

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