عنوان مقاله:

Investigating the efficiency of micropiles in the stability of soil slopes; a case study

محل انتشار:

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خلاصه مقاله:

Landslides are a common geological hazard that can cause harm to human lives and property. Effective measures are necessary to prevent landslides and reduce their impact. This study investigates the effectiveness of micropiles in stabilizing a soil slope against landslides. The researchers used a computer simulation based on an example from the Plaxis software manual to model the soil slope. The simulation results showed that the safety factor, a measure of the stability of the slope, was ۹% higher in the ۳D model than in the ۲D model when all three rows of nails were applied. In the ۳D model of the soil slope, the researchers suggested using a pattern of steel pipes as micropiles to increase the safety factor of the slope and prevent landslides. It was found that a simple arrangement of steel pipes in the middle of the slope was able to stabilize the slope and result in the same level of stability as all three rows of nails. The results showed that this micropile system could be used as a low-cost and easily implementable alternative method for stabilizing soil slopes. The system is a fast and efficient way to prevent landslides, making it a potentially valuable option for those seeking to reduce the risk of landslides.

کلمات کلیدی:

Safety Factor، Soil Slope,,, ،Micropiles,,, ،Landslides,,,