

عنوان مقاله:

Effect of Facing Stiffness in composite soil anchor-nailing

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خلاصه مقاله:

In the stabilization of ground slope using composite soil anchor-nailing, the stiffness of facing has important effect on the behavior of supporting system. In this paper the effect of facings stiffness was studied using small-scale physical models. In this model the particle image velocimetry (PIV) method was undertaken to see the deformation of soil. Digital photographs were taken after each step of excavation and also during the loading steps applied by a strip footing adjacent excavation. The results show that in the stiff facing, for short and very long anchors placed in top of excavated wall, the bearing capacity of footing is maximum and horizontal displacement of facing is minimum. This also occurs when the mediocre length of anchors are placed in the middle height of the excavated wall; However the maximum bearing capacity and minimum horizontal displacement in the flexible facing occur when different length of anchors placed in middle row.

کلمات کلیدی:

soil anchor-nailing, strip footing, physical model, facing, PIV

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