

عنوان مقاله:

Investigation of strip footing behavior on Bamboo reinforced sandy soil

محل انتشار:

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خلاصه مقاله:

This research concerns with the experimental investigation to determine the possibility of using naturally existing bamboo for increasing the sandy soil bearing capacity. For this aim, the behavior of a 1 meter wide strip footing on a sandy soil with different relative densities was investigated using PLAXIS software. Soil modeling was conducted using the Mohr-Coulomb model. For soil reinforcement, five meters of bamboos with 0.5 meter spacing interval were used for soil modelling. The results of this study show that bamboo fibers significantly increase the load bearing capacity of footing and decrease its settlement. Also, the amount of bamboo reinforcement impact on lower density soils is high and decreases with increasing soil density. In fact, the amount of load bearing capacity is affected by the combination of both soil density and reinforcements. The results of this research represent that natural bamboo fibers can be properly used in soils reinforcement.

کلمات کلیدی:

Bamboo, Bearing capacity, Reinforced soil, Relative density, PLAXIS

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