

عنوان مقاله:

Validation of the Proposed Theoretical Relationship to Evaluation the Bearing Capacity of a Two-layer Soil

محل انتشار:

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خلاصه مقاله:

In this study, a new theoretical relationship is proposed to evaluating the bearing capacity of a strip footing on the two cohesive-frictional layered soil, they were based on observations from ۱۲ sets loading tests of physical models, numerical analysis corresponding to physical samples and ago research. A series of parametric studies were performed to evaluate the accuracy of the proposed relationship using PLAXIS ۲D finite element software. The values of the bearing capacity obtained from the both numerical and theoretical methods for ۵۶ different modes of the strip foundation with dimensions $B=۱$ and ۲ meters and soil masses with different layering, depth and shear strength parameters were compared and a difference of about ۳.۹% and ۶.۲۶% were observed, respectively. The results showed that the theoretical relationship can evaluate the ultimate bearing capacity for various states of the strip footing on the two-layer ground with relatively good accuracy.

کلمات کلیدی:

Bearing Capacity, Strip Footing, Two Cohesive-Frictional Layered Soil, Laboratory Model, Numerical Model, Theoretical Relationship

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