

Centrifugal modeling of bearing capacity of shallow foundations on sands

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Abstract: An experimental program has been devised taking into account some factors that affect theoretical assumptions. In this paper, the centrifuge has been utilized to study the effects of load eccentricity, load inclination, and initial burial on the bearing capacity of shallow strip footings on a dense sand. Results show that the linear pressure distribution at the base of the footing is a good approximation of observed behavior. It was noticed that single-sided failure always occurs regardless of load eccentricity and inclination. In addition, results show that failure occurs in a progressive manner. -from Authors