

Study on the Dynamic Behavior of foundations on Saturated Loose Sand by means of 1-G Shaking Table Tests

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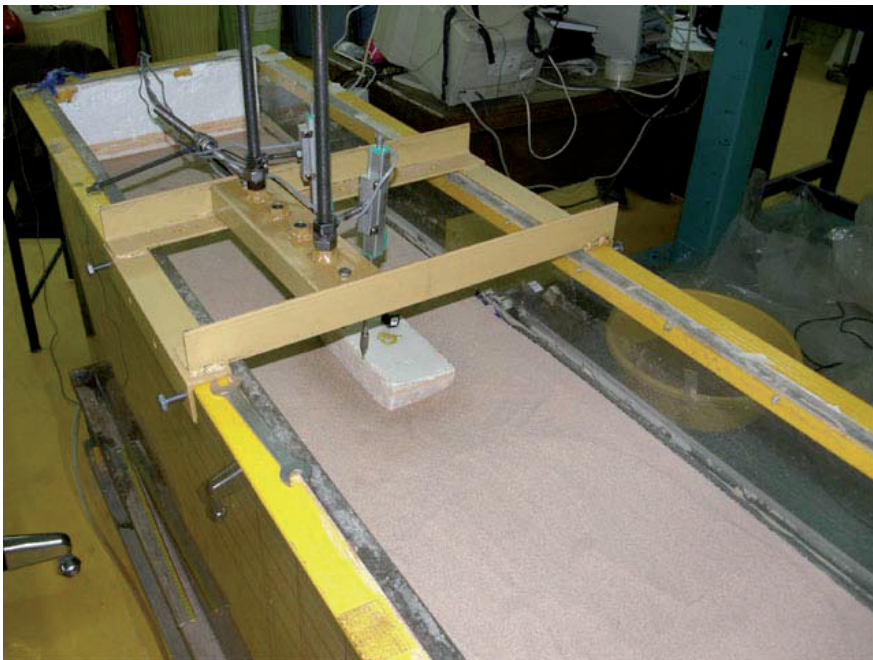
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Many researches in dynamic behavior of granular soils have been mostly developed in the recent past decades. One the widely used apparatuses in gaining data from physical models is the shaking table. It plays very important roles in recognition of soil-structure interaction (SSI). Model testing is intensely essential in earthquake geotechnical engineering, because it helps in comprehending the behavior of facilities and their efficiency during earthquake.

This research consists of two main parts. At the first part, we have focused on simulation of dynamic behavior of a shallow foundation on loose saturated sand by means of 1-G shaking table and concrete reinforced small-scale foundations that have various dimensions ratio. In the second part a series of finite difference effective-stress analyses to support the experimental results, are performed. Results showed the effects of dimensions ratio of the foundation in its displacements and also quantitative displacements in soil profile of loose saturated sand, before and after our excitation. Failure curves in each test, have been illustrated too.



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