MEASUREMENT OF SOIL-MODEL FOOTING DAMPING CHARACTERISTICS FROM RESONANCE TESTING

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Abstract:
The objective of the research reported in this paper is to measure the damping (D) of Soil-model footing system using resonance testing technique. A technique of applying a constant dynamic excitation force was used to vibrate the system. System damping was measured by the "band-width method" and compared with theoretical prediction from the Hsieh [1] and Lysmer [3] analyses. It is observed that radiation damping is constant for mass ratio (B_z) greater than 30 and varies considerably for mass ratio less than 10. Furthermore, the test results indicated that theory overestimates the radiation damping by about 30% to 50%.

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