

Effect of material property in foundation during earthquake on the embankment

Abstract :

Dynamic analysis process had been started after any loose of embankment with associated huge damages like to cracks during the earthquake. Literature review indicated that the maximum displacement during the earthquake is conducted to the crest and interface between embankment with water reservoir, and foundations were cased. This paper evaluated the effect of material properties of foundation for two conditions so result is related at the end of construction with supplying water. Numerical analyses of models were performed by finite element with plane strain method and ANSYS13 software. Earthquake record as Nagan with 5.02 second and peak ground acceleration equal to $PGA=0.65$ is used. Results indicated that with comparison of horizontal and vertical displacement, shear strain and shear stress so non –isotropic behavior of embankment specially in the up to part of structure was obviously. It is required to consider an improvement of dynamic settlement with reinforcement structure in the future.