PROSPECTS OF THE PREDICTION OF EXPLOSION-INDUCED LIQUEFACTION BY L.P. PROBE

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The liquefaction potential of water-saturated sands due to explosions could be assessed by using an explosion simulation model to interpret Liquefaction Potential probe measurements. When a cylindrical probe is forced into the soil with a relatively high velocity, excess pore water pressure is generated, which can be compared with semi-dynamic or residual excess pore water pressure generated by explosions.
When these empirical relations have been established, the extent of pore pressure due to explosions, in space and in time, can be predicted. The appropriate consolidation coefficient for radial pore water flow can be determined by using a finite difference technique.