

عنوان مقاله:

Evaluation of liquefaction potential based on SPT and CPT data in the Bandar-Abbas city

محل انتشار:

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خلاصه مقاله:

The geotechnical characteristics of the soil layers is one of the main factors influencing liquefaction potential of the ground. In common usage, liquefaction refers to the loss of strength in saturated, cohesionless soils due to the build-up of pore water pressures during dynamic loading. The following five screening criteria, are recommended for completing a liquefaction evaluation: Geologic age and origin, Fines content and plasticity index, Saturation, Depth below ground surface and Soil penetration resistance. The liquefaction resistance of soils can be evaluated using laboratory tests such as cyclic simple shear, cyclic triaxial, cyclic torsional shear, and field methods such as Standard Penetration Test (SPT), Cone Penetration Test (CPT), and Shear Wave Velocity (V_s). The present study is aimed at comparing the results of two field methods used to evaluate liquefaction resistance of soil, i.e. SPT and CPT. Finally, it could be concluded that the liquefaction evaluation methods based on the SPT data show more conservative results compared with those based on the CPT data.

کلمات کلیدی:

Liquefaction Potential, Standard Penetration Test (SPT), Pore Water Pressure, Dynamic Loading

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