

Liquefaction prediction of Saemangeum silty sand using LiqAS program

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ABSTRACT

To increase global trade and to develop residential and commercial areas in South Korea, land reclamation projects such as the Songdo international business district project and Saemangeum development project have been initiated in the country. However, reclaimed lands are known to be vulnerable to liquefaction especially if the reclaimed deposits are not properly treated. Reclamation projects require geotechnical analysis, and liquefaction assessment of these natural and artificially placed soils have not been widely investigated in the country. In this study, the Liquefaction Analysis Software (LiqAS) was developed to be able to predict the liquefaction of Saemangeum silty sand. Predicted data using the program were compared with measured data from shaking table tests conducted in this study, in which good agreement was observed. The results of the study have shown that the LiqAS program can adequately describe the seismic response of Saemangeum silty sand and other Korean soils.

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