同济大学学报自然科学版

饱和砂的动孔压演化特性试验研究

Experimental study on evolutionary characteristics of dynamic pore water

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中文摘要

利用GDS 10Hz/20kN双向振动三轴系统，对饱和砂进行不排水动三轴液化试验，研究了液化进程中动孔压的发展规律，并阐述了和砂的动孔压应变模型。该模型直接和动力分析中应变幅相联系，能够弥补应力模型的不足，并具有较好的适用性。等压固结条件下较小，动孔压发展规律可近似用同一模型表示。不同动应力和固结压力作用下，饱和砂土动孔压的增长模式用Seed提出的孔压应力模

英文摘要

With the GDS 10Hz/20kN dynamic triaxial system, undrained tests on the saturated sands during liquefaction pro water pressure of saturated sands during liquefaction process was studied and its evolution mechanism was represente model of dynamic pore water pressure under isotropic consolidation was proposed. The model relates with the strain a make up for the deficiency of stress pore water pressure model and has better applicability. There is little effect pressure ratio and dynamic strain ratio from the variation of dynamic stress and confining pressure under isotropic pressure can be described by the same model. The test constant can adopt an identical value when the characteristics dynamic pore water pressure model under isotropic consolidation proposed by Seed in different dynamic stress and con