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岩土工程地质

真空预压法加固吹填土的孔隙水压力试验研究

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摘要:

利用真空预压法处理吹填土时,孔隙水压力变化常常反映土体固结程度的好坏。通过6个模型箱试验,监测不同排水系统下孔隙水压力变化,确定有效排水体间距。研究发现0.4m间距的土内孔压下降效果比0.8m间距的土内孔压下降效果好;排水体内的孔隙水压力与排水体类型有关,且距离排水体10cm处土体内的孔隙水压力仅为排水体内孔隙水压力的1/2弱;滤膜排水系统中的吹填土孔隙水压力下降幅度最快,B型排水板系统次之,而砂井系统最慢。另外,对于吹填土而言,排水体有效间距介于0.4m与0.8m之间,其中滤膜的有效间距最大,B型排水板次之,砂井远小于前两者。

关键词: 真空预压 吹填土 孔隙水压力 排水体间距

TEST RESEARCH ON PORE WATER PRESSURE OF DREDGER FILL CONSOLIDATION WITH VACUUM PRELOADING

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Abstract:

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Pore water pressure is changing often reflect the degree of soil consolidation which using vacuum preloading method to deal with dredger fill. Drainage body was determined by measure drainage system under different pore water pressure on 6 test chambers. The results show that the soil pore water pressure drop in 0.4m was better than 0.8m, different drainage body had its own soil pore water. And the pore water pressure in the distance of 10cm to drainage body was half of the pore water pressure in drainage body. Membrane drain system was the best for drainage and then B-type drain system was better than sand drain system. In addition, in the dredger fill, the effective distance between drain pipes was between 0.4m and 0.8m. Moreover, membranes had large effective distance of drainage body, while B-type is the second and sand wells much smaller than the former two.

Keywords: Vacuum preloading Dredger fill Pore water pressure Distance of drainage body

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