

降雨前、后夯实填土边坡破坏模式试验研究

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摘要 依据相似模型原理, 通过室内大型试验箱试验模拟了7 d持续降雨及随后2 h强降雨条件下夯实填土边坡的变形、破坏特性, 并与非降雨条件下的结果作了对比分析, 探讨了此类边坡在降雨前、后的破坏模式, 指出夯实填土边坡在降雨前取平面-凸弧面组合破坏模式, 降雨后取平面-悬链面(一支)组合破坏模式, 它们均为复杂破坏模式, 以往近似地沿用圆弧破坏模式对其进行稳定性分析和支护参数的计算是不尽合理的。

关键词 [土力学](#); [夯实填土](#); [边坡](#); [降雨](#); [破坏特性](#); [试验研究](#)

分类号

TESTING STUDY ON FAILURE MODE OF FILLED-SOIL SLOPE BEFORE AND AFTER RAINFALL

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Abstract

According to the principles of similar models, the failure characteristics of a tamped filled-soil slope under continual rainfall of 7 days and strong rainfall of 2 hours later are studied by indoor experiments in a large experiment box, and the result is compared with that without rainfall. The failure modes of the slope before and after rainfall are discussed. It is pointed out that the tamped filled-soil slope takes the combined failure mode of plane and convex camber before rainfall and takes the combined failure mode of plane and catenoid after rainfall, and both of them are complicated failure modes. So it is unreasonable to analyze the stability and design the support parameters with the arc failure mode.

Key words [soil mechanics](#); [tamped filled-soil](#); [slope](#); [rainfall](#); [failure characteristics](#); [testing study](#)

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