

## 压实土不固结不排水单剪、直剪试验对比

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**摘要** 对国内外单剪、直剪试验装置进行调研, 总结、分析单剪和直剪试验的优缺点。结合具体填方工程中的压实土体, 利用一种类似NGI单剪仪的仪器, 进行不固结不排水情况下单剪和直剪试验, 并将结果进行对比。研究发现, 压实土的黏聚力值, 单剪比直剪低20.3%, 内摩擦角低5°。结合国内外的研究成果, 详细分析试验结果的差异所在。

**关键词** [土力学](#); [单剪试验](#); [直剪试验](#); [强度参数](#); [压实土](#); [不固结不排水剪](#)

分类号

## COMPARISON BETWEEN UNCONSOLIDATED UNDRAINED SIMPLE AND DIRECT SHEAR TESTS ON COMPACTED SOIL

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### Abstract

The purpose of this investigation is to ascertain the proper strength parameter(UU) of compacted soil of Wushan high embankment and is to calculate the stability of the compacted soil reasonably. Some findings in simple and direct shear tests are analyzed to summarize the drawbacks and strongpoints of the simple and direct shear devices. By utilization of a simple equipment like NGI simple shear device, unconsolidated undrained simple and direct shear tests are conducted to determine and compare the strength properties of the compacted soil of Wushan high embankment. The shear test samples are made to simulate the real compacted soil of embankment. The optimum water content is 12% and the coefficient of compaction is not less than 0.95. The results of the simple and direct shear are compared. The results show that the cohesion of the simple shear test is lower than that of the direct test by up to 20.3%; and the internal friction angel of the simple shear is 5° lower than that of the direct shear. Based on the predecessors achievements, the differences of the results obtained are analyzed in detail.

**Key words** [soil mechanics](#); [simple shear test](#); [direct shear test](#); [strength parameter](#); [compacted soil](#); [unconsolidated undrained shear](#)

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