

# 真空预压法对周边地基变形影响的研究

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**摘要** 基于真空预压加固软土地基的机理, 研究了该方法实施时对周边地基造成的影响, 从侧向卸载的角度探讨了真空预压加固区外土体的受力和变形情况。结合工程实测资料, 分析了真空预压法加固软土地基时加固区外土体水平位移和竖向沉降的特性。指出由于加固区边界无法做到完全封闭, 随着加固区内真空度增加和地下水位下降, 加固区外地下水位也会存在不同程度的下降, 并导致土体在真空预压卸载后仍会继续发生固结和沉降。论文阐述了减少其影响的措施, 所得结论可供工程实践借鉴。

**关键词** [基础工程](#); [真空预压法](#); [水平位移](#); [地表沉降](#); [工程措施](#)

分类号

## STUDY ON INFLUENCE OF VACUUM PRELOADING METHOD ON SURROUNDING ENVIRONMENT

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### Abstract

Based on the mechanism of vacuum preloading method to improve the soft foundation, the influence of this method on surrounding environment is studied. From the perspective of side-discharging, the stress and deformation of soil out of vacuum preloading field are discussed. Combined with the results of observed field data, the characteristic of the horizontal displacement and vertical settlement of surrounding environment is analyzed. The results show that, because the border of improved area is unable to seal totally, with the decreasing of groundwater level in the vacuum preloading field, the groundwater level of surrounding area will decrease in various degrees too. Then the soil will keep on consolidation and surface settlement continues after unloading. The measures to reduce its influence have been described and the conclusions can be used for reference to the similar engineering project.

**Key words** [foundation engineering](#); [vacuum preloading method](#); [horizontal displacement](#); [precaution](#); [surface settlement](#)

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