工程地质学报 2010, 18(4) 543-547 DOI: ISSN: CN:

论文

膨胀土-胶粉（ESR）强度特性室内试验研究

魏永耀①,孙树林②③,郑华章④

(①江苏省地质调查研究院〓南京〓210049）
（②河海大学〓地球科学与工程系〓南京〓210098）
（③河海大学〓水文水资源与水利工程科学国家重点实验室〓南京〓210098）
（④新蒲建设集团有限公司〓驻马店〓463000)

摘要：

膨胀土是一种特殊的区域性黏土,在我国分布非常广泛,所引起的灾害问题也日益突出。为了提高资源的循环利用,减少膨胀土灾害潜在的影响,笔者进行一系列用废弃轮胎胶粉改良膨胀土的探索。主要是通过室内无侧限抗压强度试验,研究膨胀土及膨胀土 胶粉（expansive soil rubber,简称ESR）强度特性,进一步分析胶粉含量、含水率等因素对无侧限抗压强度的影响,根据试验结果总结出胶粉改良膨胀土无侧限抗压强度的最佳含量为20%,同时证明了废弃轮胎胶粉改良膨胀土具有良好的效果,从而为膨胀土改良开拓一个新的方法。

关键词： 废弃轮胎胶粉〓膨胀土〓ESR〓改良〓无侧限抗压强度

LABORATORY TESTS ON UNIAXIAL COMPRESSIVE STRENGTH OF EXPANSIVE SOIL RUBBER(ESR)

WEI Yongyao①,SUN Shulin②③,ZHENG Huazhang④

(①Geological Survey of Jiangsu Province|Nanjing〓210049）
（②Department of Earth Sciences and Engineering,Hohai University,Nanjing〓210098)
（③State Key Laboratory of Hydrology water Resources and Hydraulic Engineering,Hohai University,Nanjing〓210098）
（④New Pu Construction Group Limited Company| Zhumadian〓463000）

Abstract:

Nowadays in China the construction of infrastructure has been expedited. The methodologies to prevent destruction caused by expansive soil have been put in the frontier. Expansive soil is a kind of special regional clay which can be found in many places of China. Geological disasters caused by expansive soil happened in a more and more frequent trend. With the intention to bolster the resources recycling,and meanwhile alleviate the damages to be incurred by the expansive soil,a string of explorations has been undertaken in this paper. In the present study,a uniaxial compressive strength soil test is conducted. It studies the impact of wasted tire rubber powder content and water content for the mixture uniaxial compressive strength. The test results indicate the characteristics of the improved expensive soil shear strength. They confirm the assumption that wasted tire rubber powder can improve the expansive soil greatly. This finding opens up a new improving method to reduce the engineering disaster caused by expensive soil.

Keywords: Wasted tire rubber powder Expansive soil ESR Ground improvement Uniaxial compressive strength

收稿日期 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

作者Email: weiyongyao@163.com

参考文献：

本刊中的类似文章

文章评论

反馈人		邮箱地址	
反馈标题		验证码	6621