最新目录 | 下期目录 | 过刊浏览 | 高级检索          ◀◀ Previous Articles  |  Next Articles ▶▶

# 传递系数法中条块间应力的探讨

易朋莹[①②], 邓时义[③], 吕涛[④]

①重庆大学土木工程学院 重庆 400045;
②重庆市高新工程勘察设计院有限公司 重庆 401121;
③四川宏扬建筑集团有限公司 资阳 641500;
④重庆市交通规划勘察设计院 重庆 401121

## DISCUSSION OF INTER-SLICE ACTION IN TRANSMITTING COEFFICIENT METHOD

YI Pengying[①②], DENG Shiyi[③], LV Tao[④]

①College of Civil Engineering,Chongqing University,Chongqing 400045;
②Chongqing Hi-Tech Engineering Reconnaissance & Design Institute,Chongqing 401121;
③Sichuan Hong-yang Construction Clan Company,Ziyang 641500;
④Chongqing Communications Planning Survey & Design Institute,Chongqing 401121

- 摘要
- 参考文献
- 相关文章

全文: PDF (576 KB)    HTML ( KB)    输出: BibTeX | EndNote (RIS)       背景资料

摘要 根据对传递系数法条块间作用力性质及与主动土压力和被动土压力关系进行的分类,揭示了其中3类计算成果与条块间的实际应力状态不符,分析成果偏危险。结合Mohr-Coulomb屈服准则,分析了问题原因,并求解了条块间应力的极限值。结论表明:当条块间作用力小于主动土压力时后侧条块发生主动破坏,条块间作用力应采用主动土压力,当作用力大于被动土压力时前侧条块将发生被动破坏,条块间作用力采用被动土压力,并将研究成果运用到工程案例。

关键词: 传递系数法   Mohr-Coulomb   主动土压力   被动土压力   下滑力

服务

▸ 把本文推荐给朋友
▸ 加入我的书架
▸ 加入引用管理器
▸ E-mail Alert
▸ RSS

作者相关文章

Abstract: The inter-slice action of transmitting coefficient method is classified according to its properties and the relationship among the inter-slice action and active earth pressure and passive earth pressure. This paper reveals that the three types of calculation results discord with the real stress state, which is more dangerous. The reason for the problem is analyzed. The limit value of the inter-slice stress is solved with the Mohr-Coulomb yield criterion. The finding shows that the rear slice can occur active destruction when the inter-slice action is less than the active earth pressure. So the inter-slice action should take active earth pressure. The anterior slice can occur passive destruction when the inter-slice action is more than the passive earth pressure. So the inter-slice action should take passive earth pressure. The research results are applied to engineering cases.

Key words: Transmitting coefficient method   Mohr-Coulomb   Active earth pressure   Passive earth pressure   Downslide strength

引用本文:

. 传递系数法中条块间应力的探讨[J]. 工程地质学报, 2012, 20(4): 478-482.

. DISCUSSION OF INTER-SLICE ACTION IN TRANSMITTING COEFFICIENT METHOD[J]. Journal of Engineering Geology, 2012, 20(4): 478-482.

[1]   苏爱军, 冯明权.滑坡稳定性传递系数计算法的改进[J].地质灾害与环境保护, 2002, 13 (3): 51~55.

     Su Aijun,Feng Mingquan.Improving on transfer coefficient method applied to landslide stability analyse and landslide thrust value calculation.Journal of Geological Hazards and Environment Preservation, 2002, 13 (3): 51~55.

[2]   苏爱军. 滑坡稳定性评价原理与方法——条分法的改进[M].武汉:中国地质大学出版社, 2008.

[3]   Su Aijun.The Principle and Method for Landslide Stability Evaluation-revision on Sliced Method.Wuhan: China university of Geosciences

press, 2008.

[4]  童广勤, 苏爱军.改进的传递系数法[J].长江科学院院报, 2010, 27 (6): 43~48.

[5]  Tong Guangqin,Su Aijun.Improved transfer coefficient method.Journal of Yangtze River Scientific Research Institute, 2010. 27 (6): 43~48.
cross ref

[6]  何木, 赵其华.基于方向角修正的改进传递系数法[J].地质灾害与环境保护, 2010, 21 (1): 79~82.

[7]  He Mu,Zhao Qihua.Improved transfer coefficient method based on correcting direction angle.Journal of Geological Hazards and Environment Preservation, 2010. 21 (1): 79~82. cross ref

[8]  李广信. 高等土力学[M].北京:清华大学出版社, 2005.

[9]  Li Guangxin.Advanced soil Mechanics.Beijing: Tsinghua University Press, 2005.

[10]  郑颖人, 孔 亮.岩土塑性力学[M].北京:中国建筑工业出版社, 2010.

[11]  Zheng Yingren,Kong Liang.Geotechnical Plastic Mechanics.Beijing: China Architecture & Building Press, 2010. cross ref

[12]  易朋莹, 唐红梅.对用传递系数法求滑坡稳定系数的商榷——以万州太白岩中东段欠稳定斜坡为例[J].重庆交通学院学报, 2004. 23 (2): 78~89.

[13]  Yi Pengying,Tang Hongmei.Discussion about calculating the stabilization coefficient through transfering coefficient method—Wanzhou Taibaiyan middle east segment unstable slopes as the example.Journal of Chongqing Jiaotong University, 2004, 23 (2): 78~89.

[14]  张 丹,李同春,乐成军.论传递系数法求边坡稳定安全系数的2种解法[J].水利水电科技进展, 2004, 24 (2): 23~25.

Zhang Dan,Li Tongchun,Yue Chengjun.Two methods for calculation of safety factor of slope stability by use of transfer coefficient method.Advances in Science and Technology of Water Resources, 2004, 24 (2): 23~25.

[1]  张年学, 李晓. 极限平衡平顶垂直坡的新公式[J]. 工程地质学报, 2008, (S1): 251-256.

[2]  和海芳, 祁生文, 伍法权, 贺可强. 抗滑桩设计推力计算方法研究[J]. 工程地质学报, 2008, 16(5): 694-698.

[3]  李同录, 李萍. 抗滑桩设计计算研究现状与发展方向[J]. 工程地质学报, 2007, 15(S1): 191-197.

[4]  方玉树. 滑坡稳定分析传递系数法若干问题探讨[J]. 工程地质学报, 2007, 15(5): 607-611.

[5]  李同录, 赵成, 付昱凯. 滑坡稳定性及推力计算中的几个概念解析[J]. 工程地质学报, 2006, (S1): 291-296.