STUDY ON ENVIRONMENTAL GEOLOGICAL PROBLEMS CAUSED BY SLOPE MANAGEMENT

Mingwei Guo*, Chunguang Li, Shuilin Wang, Xiurun Ge, Hong Zheng

State Key Laboratory of Geomechanics and Geotechnical Engineering, Institute of Rock and Soil Mechanics, Chinese Academy of Sciences, Wuhan, Hubei 430071, China

Abstract

The influence of slope management on the surrounding environment is an important environmental geological problem. How to evaluate the slope stability is the most important problem in slope management, and reasonable slope supporting measures can be selected based on the stability of slope and surrounding environment. This paper proposed a new method for evaluating the slope stability. This method is based on the current stress state and the preferred sliding direction. This method is simple in calculating process, and has clear physical meaning. Then, this method is applied in practical slope engineering and the calculating results show that this results obtained with this method are reliable. Finally, based on the calculating results and practical surrounding environment, the slope supporting measures are suggested.

Key words: slope management, environmental protection, stability analysis, geological problem

Received: August, 2012; Revised final: July, 2013; Accepted: August, 2013

* Author to whom all correspondence should be addressed: E-mail: guomingwei2001@163.com