A METHOD FOR ESTIMATING THE BACKWARD EROSION SENSIBILITY OF ROAD SLOPES

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Tóm tắt bằng tiếng Việt:

Erosion is one of the main causes of instabilities within earth structures as embankment dam, dikes, or road slope. A Jet Erosion Test (JET) and energy approach to determine the sensitivity of interface erosion were presented. This paper focus on the assessment the backward erosion sensibility of road slopes by overtopping. The erodibility is characterized by an erosion resistance index (Iα) which is calculated from a relationship with easily measurable physical parameters (degree of saturation, dry density, degree of compaction, water content ratio and clay fraction). The analysis is performed on eleven specimens collected from three cut slopes and one fill slope of four roads located in the province of Quang Nam and Danang city. In comparison with field observations, n comparison with field observations the results showed that the potential for slope instability by backward erosion may be apparent when the value of the erosion resistance index is lower than 2.

Từ khóa: Jet Erosion Test; backward erosion; erodibility; erosion resistance index; energy analysis.

Tóm tắt bằng tiếng Anh:

Erosion is one of the main causes of instabilities within earth structures such as embankment dams, dikes, or road slopes. In this paper, a Jet Erosion Test (JET) and an energy approach to determine the sensitivity of interface erosion are presented. This paper focuses on the assessment the backward erosion sensibility of road slopes by overtopping. The erodibility is characterized by an erosion resistance index (I□) which is calculated from a relationship with easily measurable physical parameters (degree of saturation, dry density, degree of compaction, water content ratio and clay fraction). The analysis is performed on eleven specimens collected from three cut slopes and one fill slope of four roads located in Quang Nam province and Danang city. In comparison with field observations, the results show that the potential for slope instability by backward erosion may be apparent when the value of the erosion resistance index is lower than 2.

Key words: Jet Erosion Test; backward erosion; erodibility; erosion resistance index; energy analysis.