

Evaluation Method for Rainfall Stability of Natural Slope Deposited with Volcanic Ash

Yuki KURAKAMI Takaki MATSUMARU Kenta SUGIYAMA

Takeshi KAWAGOE Shoichi KAWAMURA

Volcanic ash deposited on slopes by volcanic eruption causes changes of rainfall seepage into the slope, the volcanic ash outflow, and increase of the risk of mud flow. In this study, rainfall seepage of the slope deposited with volcanic ash is evaluated by rainfall infiltration tests and we propose the numerical modelling of seepage characteristics of volcanic ash used for seepage analysis. Rainfall infiltration tests show that the rainfall seepage on the slope with volcanic ash depends on the size and thickness of deposited ash. On the basis of the results of rainfall infiltration tests, the modeling is proposed where permeability coefficient decreases according to the increase of water content. The model shows that changes in rainfall seepage on slopes deposited with volcanic ash can be well evaluated.