2. A Study on Monitoring and Collapse Prediction for Rock Slopes by Acoustic Emissions

Michinao Terada, Shigeru Shinohara, Koji Tsukamoto

It is very difficult to predict a failure phenomena of rock slopes in advance, since rock-slope failures are generated more faster than landslides. We had carried out AE observation for more than 2 years at the three unstable rock slopes in the southwest of Hokkaido using two different type of observation method in which the frequency band of sensors differs.

Consequently, it has turned out that a lot of AE occur frequently when earthquakes broke out near the slopes and in the season of heavy rain, below freezing and spring thaw because of rising of the pore pressure in the crack.

In this paper, we describes the scope of AE monitoring systems and some knowledge obtained from AE observation at Raiden-tunnel and Katanagake-tunnel rock slopes

Keywords : rock slope failure, acoustic emission, long-term observation., AE event mechanism.