

## Research about snow avalanche deterrent effect of trees and new construction method

### [ Point ]

As a research for effective snow avalanche prevention, snow pressure change depending on new-type snow avalanche prevention facilities under the test construction was measured, and snow-cover property around a structure was measured. Measurement was conducted regarding snow avalanche occurrence conditions and snow-cover transference as well as its properties in the area without trees and in the tree area, in order to compare with the design method by the existing snow pressure calculation formula from such properties, and to quantitatively assess the snow avalanche prevention effect of trees.

As a result, a standard-type design method could be applied to vertical prevention fence among other new-type facilities. However, the following was revealed.

1. There were differences between calculated values and the actual measurement values of snow-cover density and snow pressure respectively.
2. There was a load with snow net that exceeded the predicted load value even at the designed snow-cover depth or lower.
3. It was possible to expect the effective prevention by combining trees with a structure because trees including even deciduous trees have the effect of changing the quality of snow layer in warm places.

Keywords: snow avalanche prevention facility, trees, vertical prevention fence, snow net, snow-cover property