RESEARCH ON AVALANCHE RISK ASSESSMENT METHOD IN HEAVY SNOW

A number of snow avalanche hazards caused serious social problems in the Heisei 18 heavy snow. To overcome these problems, we collected examples of inspection and emergency measures from the administrative offices and published “Guidelines for Inspection of Avalanche Danger Slope (draft)” and “Case Study Book of Emergency Measures for Avalanche” for systematic inspection and emergency measures.

Additionally we investigated avalanche risk evaluation method of calculating stability index of the snowpack by use of radar rain gauge and digital elevation model. We suggested the avalanches during snowstorm can be predicted since the time series of the stability index in Heisei 18 heavy snow decreased below dangerous level in the storm.

Furthermore, we proposed methods of estimating snowy avalanche track from digital elevation model in non-snow season and setting parameters of avalanche dynamics model verified by runout data in the Heisei 18 heavy snow, for accurate numerical simulation of avalanche runout.

Keyword: snow avalanche, inspection, emergency measure, radar rain gauge, stability index, avalanche dynamics model