P-084

The upgraded full-scale avalanche test-site Ryggfonn, Norway

Peter Gauer; Hedda Breien ; Dieter Issler; Krister Kristensen; Kalle Kronholm; Erik Lied; Karstein Lied
Norwegian Geotechnical Institute, Oslo, Norway

Measurements of full-scale avalanches are expensive and time consuming, but are indispensable to gain in-depth understanding of the flow behavior of avalanches. They are needed to crosscheck the scaling used in small-scale experiments and also form the basis for developing and calibrating numerical models. The recent partial upgrade of NGI's Ryggfonn test-site is focused on the processes occurring during interaction between avalanches and a catching dam in the runout zone. These processes are crucial for the efficiency of this type of avalanche mitigation measure, which has been the focus of several small-scale experiments in recent years. But qualitatively and quantitatively good observations from real avalanches for a crosscomparison are rare. Therefore, two new masts were constructed at Ryggfonn. One is located about 10 m upstream of the foot of a catching dam and has a height of 15 m. The other stands on the crown of the dam and is 6 m high. In this way, we also hope to complement the SLF full-scale tests at the Vall ´ee de la Sionne test-site. Instrumentation on the new masts consists of load-cells and LED-velocity sensors, each type with a vertical spacing of 0.5 m. In addition, flow-height switches are placed with 0.25 m vertical spacing. Thus, the instrumentation is quite similar to the instrumentation used in Vall ´ee de la Sionne, which will hopefully allow better cross-comparison of measurements. We present the upgraded set-up and show preliminary results from the first measurements.