The rockfall protection fence ISOSTOP 2000, certified according to the Swiss guidelines, retains free falling blocks of up to 2000 kJ. This product is also applicable to debris flows and shallow landslides. Conducted 1:1 field-tests show, that the Isostop 2000 has the capability for protecting from both, rockfall and shallow landslides.

Barriers for the protection from natural hazards, which are capable of resisting different types of impacts, are taking on greater significance. Regarding the development and testing of protection fences, the company Pfeifer Isofer from Knonau/Switzerland focuses on Multi Hazard Barriers. These barriers can protect sensible infrastructures and settlements from shallow landslides or debris flows and rockfall events. For an undoubted proof of function as a protection fence against different impact effects, 1:1 field-tests were carried out with the protection fence Isostop 2000. This barrier showed impressively its capability for dealing with the two different hazard processes.

Swiss proved high performance protection fence

Modern rockfall protection fences have also established as mitigation measures for shallow landslides and debris flows. On the one hand the rockfall protection system Isostop 2000, which is proved according to the Swiss guidelines, has impressively demonstrated its effectiveness in numerous natural rockfall events and, on the other hand, it showed its performance for the protection from shallow landslides. Due to independently operating field break elements, close primary mesh netting and strain-resistant HEB-160-posts, the system construction is excellently suitable for the protection from multi hazard processes.

Protection from different hazard processes

So far the effects of debris flows and shallow landslides on protection barriers have predominantly been generated with numerical simulations. Hereby the loading capacity of the single components, the load application on the anchors and the deformation of the barrier have been calculated based on computer models. However, the varying loading cases on a barrier caused by dynamic impacts and static loads from debris flows, are just weakly represented by analytical simulations.

In a 1:1 debris flow field test in Japan, the 2000 kJ system was loaded under near-natural conditions with debris flow material, completely filled and flooded. Hence the Isostop 2000 kJ is the only reliable system with an approved certification for rockfall and a convincing proof of suitability for shallow landslides available.

Based on documented debris flow loads on Isostop rockfall catchfences, modelling results and the field test in Japan, the Debris Stop 200-HM system was designed especially for the protection against shallow landslides and was tested successfully. Pfeifer Isofer offers its customers 1:1 tested product solutions for an economical protection from rockfall, debris flows and multiple hazard processes.

Technical data ISOSTOP 2000

- Energy absorption: > 2000 kJ
- System height: 5 – 7 m
- HEB 160 posts, zinc coated
- Diagonal wire rope net, hot dip zinc coated
- Rope brake elements, zinc coated

Project Manager:
Marcel Fulde
(mfulde@pfeifer-isofer.ch)

Sales Manager:
Marco Toniolo
(mtoniolo@pfeifer-isofer.ch)

ISOFER AG
HASENTALSTRASSE 8
CH-8934 KNONAU

TELEFON +41 (0) 44 - 768 5555
TELEFAX +41 (0) 44 - 768 5530
E-MAIL info@pfeifer-isofer.ch
INTERNET www.pfeifer-isofer.ch