

## ROCKFALL PROTECTION AT BHUMIBOL DAM

### BHUMIBOL , TAK PROVINCE, THAILAND

#### Simple Drapery

##### Problem

Bhumibol dam is Thailand's largest dam located at the northern part of Thailand and was constructed in 1964 mainly to control flood and generate electricity power. The dam is located very close to mountains and hilly areas which mostly are made up of Hornfel and Gneiss types of rocks. Due to the height (30 m to 50 m) and steepness of the slope (80 degrees), any falling debris or rocks can cause severe damage to the spillway of the concrete dam. Since the whole slope is stable in terms of global stability, the client was looking for a simple and effective method to control the debris and falling rocks.

##### Solution

Maccaferri proposed simple drapery system as the most effective and economical solution to protect the dam from falling rocks. It consist of double twist hexagonal mesh with fixed anchorage at the top and removable anchorage at the bottom to facilitate during the maintenance. Maccaferri Macro 2 inhouse software was used to calculate the safety factor of the mesh. The net will be secured to the slope using rockbolt at 4 m x 4 m spacing and 50 cm depth. EGAT accepted the proposal based on the following advantages:

- Effective and Simple Installation Method
- Permanent Solution
- Guaranteed Quality of The Product

**Client:** ELECTRICITY GENERATING AUTHORITY (EGAT)

**Designer / Consultant:** ELECTRICITY GENERATING AUTHORITY (EGAT)

**Contractor:** KENBER GEOTECHNICS CO., LTD.

**Products used (Qty.)**

- DT Mesh 4,700 sqm

**Date of construction:** 09/2008 - 10/2008



During construction (September 2008)



During construction (September 2008)



Project completed