

Edertal Dam, Germany

osmos

Integrated safety for structures



View of the dam during reinforcement work



Apparatus equipped with vertical hydraulic jack for tightening tension rods



Detail of a tension rod fitted with three optical fibers

Safety monitoring during reinforcement works

Client

Federal Authority Water of Germany

Structure

Edertal Dam
The oldest dam in Germany

Context

A scour between the dam vault and its strip-raft foundation has been observed on over 60 meters.

A total of 100 of 4500 kN test rock anchors is scheduled to be installed for the rehabilitation of this dam.

Each of these anchors consists in multi-strand ties.

Client's Needs

Due to high cost, the client needs to be assured of the appropriateness of the rock anchors before their massive implementation.

Instrumentation Installed

3 of these anchors have been monitored by OSMOS multi-points optical fibers.

Initial Results

The data gathered by the monitoring have shown that the anchors' deformations are regular, and comply with the theoretical behavior.

Client Benefits

Thanks to the OSMOS system, the client knows that this technical solution is an efficient one.

The client can continue within this direction and decide the implementation of the rest of the anchors.