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## PRECISION DRILLING

### WE HAVE OVER 1,000 METERS OF DRILLING EXPERIENCE

Float and plumb lines are used in retaining walls to monitor the inclination and horizontal shift of the structure. With their sophisticated precision drilling technology, Stump-BTE AG offers a process that works with a maximum deviation of +/- 8 millimeters at a depth of up to 120 meters. This surpasses the legal provisions for the installation of plumb systems. In addition, the drilling systems of Stump-BTE AG can be used even in the tightest of spaces.

#### 1 Vermuntsee (Austria)

As part of a renovation, the Lake Vermunt retaining wall was equipped with a 45-meter float line system. Despite the water buoyancy in the friable rock areas, the hole was drilled with the utmost precision.

#### 2 Krokströmmen (Sweden)

Eight pendulum bores measuring between 14 and 40 meters in depth had to be drilled into hard granite for the first dam in Sweden with a float line/pendulums. We also installed stainless-steel pipes (ø 102 millimeters) in preparation to mount anchor systems with plumb wire.



DATA AND ACTS WITH DEPTH

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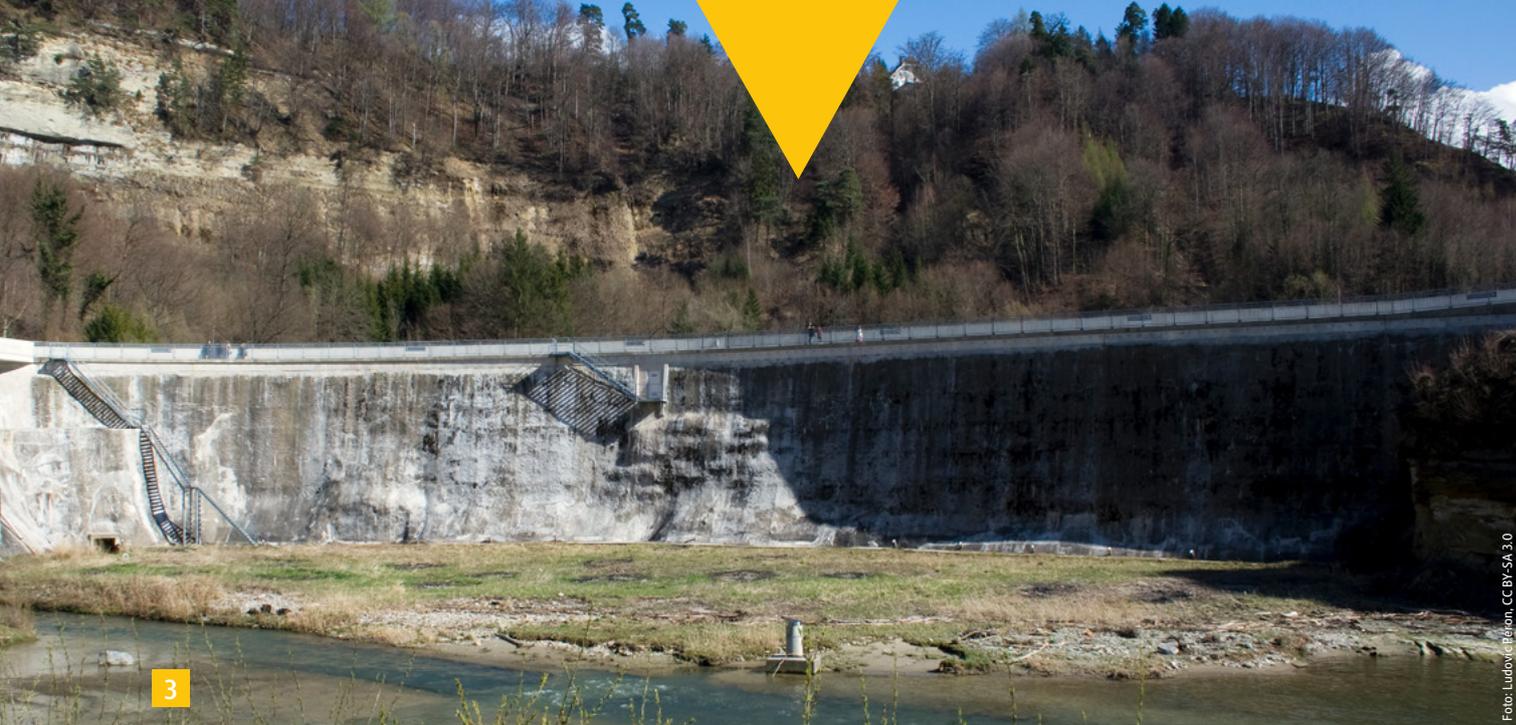


Foto: Ludovic Héron, CC BY-SA 3.0

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## WE PROVIDE ADDITIONAL SECURITY ACROSS EUROPE WITH PRECISION-DRILLING TECHNOLOGY

### 3 La Maigrauge Abbey (Fribourg, Switzerland)

The old dam installation needed new anchor reinforcement and must be continuously monitored in the future via measuring instruments. We drilled a precision hole measuring 45 meters in depth into the molasse of the riverbed.

### 4 Ulza (Albania)

A Russian-design retaining wall from 1957 was modified to comply with European standards. This includes 2 x 25 meters float line systems. A true feat is the installation of the whole pendulum bore system within the gallery measuring just approximately 2.5 meters in height.

### 5 Yusufeli (Turkey)

This is the third biggest dam site in the world. 7 inverted pendulum needed to be installed. The deepest pendulum has a final depth of 112 m.

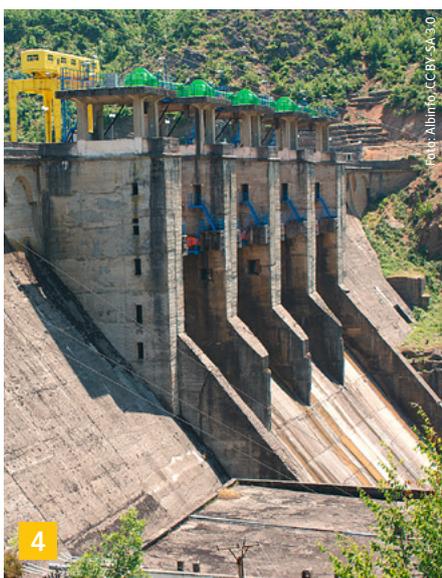


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