

AUSCULTATION OF CIVIL ENGINEERING WORKS

The auscultation of civil engineering works allows the owners of electricity generating facilities to assess the viability of their installations, as well as renewal or maintenance operations to be carried out and their frequency.



It applies to the following constructions :

- storage dam
- weir
- reservoir embankment
- gallery
- channel
- water intake (channel head, silt chamber)
- plant
- operational building
- dwelling
- road
- forced conduit
- structure
- distribution substation

Methodology

- collection of constructive and historical data for the construction
- detailed inspection to prepare the inventory
- determination of maintenance or renewal operations to be carried out
- planning of operations
- proposed measuring instruments targeted to particular circumstances
- report containing an estimate of the remaining service life, an assessment of the behaviour of the construction and its safety

PRESTATIONS COMPLÉMENTAIRES

Inspection of forced conduits

The inspection of forced conduits allows the owners of hydroelectric facilities to assess the viability of their anticorrosion protection, as well as the renewal or maintenance operations to be carried out and their frequency.

Geodesy

Geodetic measurements determine the absolute three-dimensional movements of reference points on a dam or any other structure. In other words, they make it possible to evaluate and monitor their movements.

Dam monitoring

The objective of dam monitoring is to prevent long-term dam deterioration and to ensure dam safety. The Swiss concept for monitoring dams provides for 4 levels of monitoring.

CONTACT

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Specific skills

The HYDRO Exploitation Technical Department provides the following specific skills :

- perfect understanding of the operation of electricity generating facilities regardless of size or output,
- experienced engineers recognised by the Swiss Federal Office of Energy (SFOE) for Level 2 and 3 auscultation of dams
- global instrumentation concept (geodesics and data communications)
- proprietary means available for geodesics (acquisition and processing)

Client benefits

The owners of the hydroelectric facility have a better understanding of the risks inherent in its operation.

They can also :

- optimize maintenance and renewal work
- plan their investments over the long term
- rely on a single intermediary for an all-inclusive service