Axpo Hydro Digital – Robotics Services

Surface inspection of concrete structures – efficient, risk-free, cost-saving

Accurate condition data for informed decisions – available from the office at any time

Documentation and analysis of the condition of dam surfaces is an important part of their safe and long-lasting operation. Conventional documentation with photos and manual feature mapping is not only time-consuming, but also makes it difficult to locate features in the 3D space, especially when inspecting the facilities.

With our digital visual feature register for concrete surfaces, you can easily access precise and objective information on the condition of the surface at any time, directly from the office. Whether for regular checks or modelling the behavior of the structure, the data can be used in a variety of ways.

We offer a complete service package

Flexible deployment
Safe, fast, and efficient

Automated 3D reconstruction and feature analysis
Precise digital models and objective classification

Digital provision of models and feature register
Access via web browser, at any time and regardless of location

Expert analysis
Expert assessment if required

Details on the service package

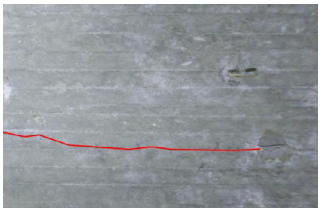
Our digital feature register enables detailed surface analysis at the time of capture as well as comparison with previous surveys to detect changes. The data for the exterior areas is available on a web platform and can be accessed via a web browser. The data for the interior areas is currently made available digitally, but will be integrated into the web platform in the medium term. On request, our dam safety experts can provide a professional analysis and evaluation of the results. Thanks to our modular service packages, you are free to decide which services you use (e.g. only the data capture) – entirely according to your needs.

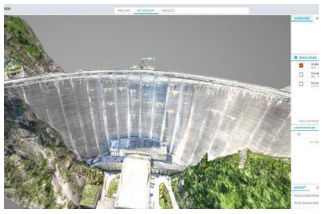
Detailed results

- 3D models
- Feature register
- Changes over time

Modules of the monitoring concepts

- Data collection in interior and exterior areas
- Automated 3D reconstruction and feature identification for interior and exterior areas
- Provision and management of data via a cloud-based web platform





References

„From the dam engineer's point of view, the new version of the crack register, together with the platform solution, offers decisive advantages over traditional documentation methods: automatic classification of cracks ensures consistent assessments, even in the event of personnel changes. It's very easy to track crack pattern and length changes thanks to the layer structure. In addition, the monitoring unit's platform solution enables easy access to the data at all times."

Michel Cuska - Dams Departement, Axpo Power AG

„Customizable to individual needs, very user-friendly, and high performance."

Rocco Panduri - Dams Departement, Axpo Power AG

Want to know more?

Digital condition assessment – accessible anytime, objectively documented and simple.

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