By measuring geometry above and underwater, the Tracker Toolkit and the WireScan laser scanning system provide complete diagnostic data for hydraulic gates.

**Measure embedded parts:**
- when motor current is abnormally high during a hoisting test
- when seal leakage arises

**Avoid major costs by performing the right repairs at the right time.**

**Safer operations**

About 20% of dam failures are due to malfunctioning spillways.

**Evaluating hydraulic gate reliability requires geometric measurements:**
- deformation of embedded parts
  - straightness deviations
  - losses in functional clearance
  - roller marks
  - corrosion
- hoist misalignment

Presently, only trial-and-error repair of components is possible based on hoisting tests and motor current readings.

**Two new tools are now available to measure embedded parts.**

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Tracker Toolkit

Points survey in the dry

Characteristics
Ideal for:
- Spillway gates embedded parts
- Hoisting systems
- Hydraulic Gates

Measurement by probing with a laser tracker:
- Deployment in about 1 hour (2 operators)
- Inspections in 1 or 2 days per opening
- Automatic charts
- Georeferenced data
- Precision of ± 0.1 mm

Access to vertical guides by rope access, ladder, bucket or scaffolding
Results available on site for immediate checking of measurements
Compact, hand-transportable in confined spaces
Possibility to deploy under a gate in upper position

WireScan

Underwater laser scanning

Avoid coffer dams and production losses.

Characteristics
Ideal for:
- Stoplogs guides
- Water intakes embedded parts
- Draft tube embedded parts

3D reconstruction using laser measurements:
- In calm water or in the dry
- Deployment in about 2 hours (3 operators)
- Inspections in 1 or 2 days per opening
- Automatic charts
- Georeferenced data
- Precision of ±1 mm
- Maximum depth: 30 m

Results available on site for immediate checking of measurements
Compact, hand-transportable in confined spaces
Possibility to deploy under a gate in upper position
Measurements obtained safely without divers

Cost savings

Apply a minor fix instead of going through a complete rehabilitation process.

Monitoring of assets:
- Supports condition-based maintenance for long-term operability of facilities.
- Avoids premature wear of mechanical and electrical components.

Refurbishment pre-projects:
- Investments are prioritized based on degradation.
- Major investments may be postponed (e.g., replacing embedded parts).
- Uncertainty is reduced for project cost control (contract amendments and work to be redone).