

CEMENTYS



Asset Integrity Monitoring

Our Know-How:

Asset Integrity Monitoring
Infrastructure Aging Expertise
Risk Based Inspection
Service Life Extension

Your Critical Assets:

Large Civil Structures and Infrastructures
Military and Nuclear Facilities
Oil & Gas Assets
Water and Power Utility Networks

Hydraulic Dam Instrumentation



Your Challenges

- Service life maintenance optimization (Service Life Extension, Operating Maintenance Cost Reduction, Hydraulic and Structural Performance Enforcement)
- Mandatory surveillance of critical dams and hydraulic infrastructures
- Aging risk Assessment to ensure long term safety

Our solutions

- Design, Installation, Commissioning and Maintenance of Structural Health Monitoring systems (sensors, cabling, data logger, Real-Time Measurements)
- Long Term Instrumentation through Traditional Vibrating Wire Sensors with 50 year track record
- Innovative measurement through optical fiber sensors (no maintenance, no noise, long cable lines)
- Storage, real-time monitoring data visualization and alarm definition (*THMInsight™*)
- In-situ concrete measurement (hydration heat, maturity, inside stress, etc.)
- Geodetic Monitoring Systems (GPS, InSAR, Total Robotic Station)

Our added Value

- Our quality management system
- Our expertise in both civil and hydraulic engineering
- Team work between structural engineers and measurement experts
- Our expertise to design the best monitoring system adapted to your application (Long Term - High Value - Low cost Monitoring System)
- Our innovative approach to reduce maintenance costs and mitigate risks by continuous and long term surveillance
- Our professional training program on surveillance of hydraulic structures with our academic partner IRSTEA



Our References

Saône-et-Loire County, Burgundy Region, EDF CIH, ENEO Cameroon, Seine River District, SNEL Democratic Republic of Congo, Côte d'Emeraude Water District.

Diagnosis and Aging Expertise



Your Challenges

- Service life maintenance optimization (OPEX reduction)
- Aging risk control to ensure long term safety
- Concrete Pathology Expertise and Aging Forecast

Our solutions

- Risk based prioritization of detailed, periodic or post-event visual inspection (*DuraDiag™* tool)
- Concrete property characterization (in-situ or laboratory):
 - In-situ mechanical stresses determination (*InsideStress™*)
 - Chemical degradation (carbonation, alkali-aggregate reaction, Delayed Ettringite Formation, etc.)
 - Durability KPI Measurements
- Non Destructive Testing of aged materials and structures
- Ground and Foundation Geophysical Measurements (Non Destructive Testing and Geological Surveys)

Our added Value

- Our quality management system
- Our team expertise in both civil and hydraulic engineering
- Our team expertise in concrete structures aging and cementitious material pathology
 - Our diagnosis and decision-making tool for optimized maintenance scheduling
 - Technical and Economical Complementarity of Monitoring and Non Destructive Testing (NDT)
 - Our professional training program on surveillance and maintenance of hydraulic structures with IRSTEA academic partner



Our References

ARTELIA, Burgundy Region, Creusot-Montceau Water District, ENEO Cameroon, IRSTEA, ISL, Parall'Axe - EDF, SAFEGE, SETEC, Stucky, TRACTEBEL Engineering, Bourges City District, Navigables Waterways of France.

Earth dam and dyke instrumentation

Your Challenges

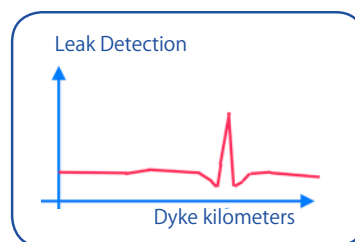
- Service life maintenance optimization and Service Life Extension
- Mandatory surveillance of critical infrastructures
- Aging risk control to ensure long term safety
- Safety before, during and after exceptional event (flood, seism, etc.)
- Leak and intrusion detection

Our solutions

- Design, installation, commissioning and maintenance of Condition Based Monitoring systems (sensors, cabling, data logger, Real-Time Measurements)
- Long Term instrumentation with vibrating wire and optical fiber sensors.
- Linear Leak detection (internal erosion monitoring) through innovative distributed optical fiber sensors (*SensoLuxTM* and *SensoLux^{DETECT}*)
- On-Line Storage, Real-Time monitoring data visualization and alarm definition (*THMInsightTM*)
- Geodetic monitoring (Robotic Station, GPS, InSAR), bathymetric measurements and subaquatic inspection
- Geophysical Surveys (GPR, Acoustic, Electrical and Magnetic Methods)

Our added Value

- Our quality management system
- Our team expertise in both civil and hydraulic engineering
- Our optical fiber experts
- Our expertise to design the best monitoring system for your application
- Our innovative approach to reduce maintenance costs by continuous and long term surveillance
- Our professional training program on surveillance and maintenance of hydraulic infrastructures with IRSTEA



Our References

CNR (Engie Group), EDF, Seine River District, Le Havre Harbor, Dunkerque Harbor, Marine Defense Infrastructure District (SID), TMBYS (Saipem-Bouygues), Bourges City District.

Monitoring Report and Data Analysis

Your Challenges

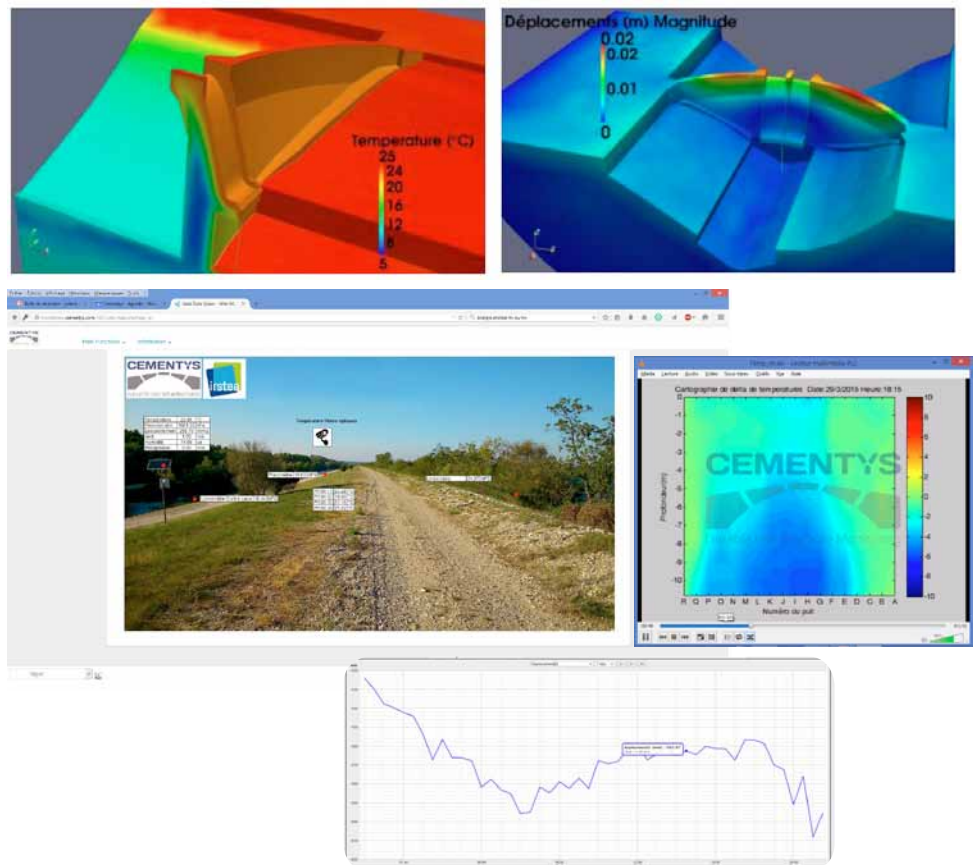
- Service life maintenance optimization
- Mandatory surveillance of critical dams and hydraulic infrastructures
- Aging risk control to ensure long term safety
- Understanding of dam behavior and aging process

Our solutions

- Physico-statistical analysis of monitoring data (HST, HSTT, EFR analysis)
- 3D Thermo-Hydro-Mechanical simulations of structure behavior through Finite Element Method Computations
- Monitoring, Safety and Surveillance Reports
- Risk analysis and mitigation

Our added Value

- Our quality management system
- Our expertise on long term dam behavior analysis
- Our innovative approach to reduce maintenance costs by continuous and long term surveillance
- Our professional training program on surveillance and maintenance of hydraulic structures with our IRSTEA academic partner



Our References

ARTELIA, Saône-et-Loire County, Marine Defense Infrastructure District (SID), IRSTEA, ISL, SAFEGE, SETEC, SNEL Democratic Republic of Congo, Stucky, TRACTEBEL Engineering

They trust us:



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