Where energies make tomorrow

Acoustic emission Monitoring of structures

Control of the mechanical integrity of materials and structures under stress

Control by Acoustic Emission

- Acoustic emission is the phenomenon of energy release in the form of transient elastic waves resulting from local internal micro-displacements within a material subjected to stress (AFNOR NFA 09350 standard).
- The method is particularly effective for the detection and monitoring of damage (cracks, leaks, corrosion, ...) in materials and mechanical structures under stress.
- This technology is field proven and adaptable to a large number of test structures and production processes.

Offer / expertise

Our skills in acoustic emission are the result of a double expertise in nondestructive testing and in the behavior of materials and structures.

Monitoring
Of real-time damage propagation

Detection and localization
Of damages to structures

Identification/Characterization
Of existing or emerging failures

Applications

- Monitoring of stressed structures (transportation, energy, oil and gas industries)
- Mechanical performance of prototypes qualification, damage to structures monitoring
- Static and dynamic mechanical tests follow-up (metallic materials, composites, polymers, etc.)
- Process elements and systems monitoring (reactors, distillation columns, etc.)
- Buildings, installations, dams, bridges, etc. surveillance

Our means / Skills

- More than one hundred acquisition channels
- Different types of sensors to cover a wide range of applications
- Real-time data acquisition and processing software
- Algorithms for damages detection, localization and identification
- Monitoring tools development

Acoustic Emission technology advantages

- Structures global control
- Followup in operations
- Detection sensitivity
- Nonintrusive method
- Easy to implement / Portability

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