Acoustic Emission Testing
Corrosion Cracking and Flaw Detection at an Early Stage

Corrosion and diverse flaws can cause serious damage to metallic pressure equipment and be very costly. Innovation and complex geometries of vessels are demanding new solutions that are both cost and time-effective. Acoustic emission is a non-destructive testing method which offers a large number of benefits.

Our experts at TÜV Rheinland provide you acoustic emission testing services to help you take full advantage of this exclusive method and ensure the safe operation for your pressure equipment.

Our experts at TÜV Rheinland have many years of experience and practice in NDT techniques and strive to provide clients with the most fitted and tailored non-destructive method for their pressure equipment while offering reliable, time- and cost-efficient solutions.

Acoustic emission testing is one of the most comprehensive and adapted proceduresto detect defects and flaws in your pressure equipment because it can be conducted during operation and does not require any interruption of activity. It also allows for global monitoring of the complete pressure equipment asset and is the best solution for vessels with complex geometries.

Finally, acoustic testing provides early warnings and detects stress corrosion cracking at an early stage, enabling you to find preventive solutions and expeditiously undertake maintenance or corrective actions.

Inspection approach

Contrary to other non-destructive testing approaches, acoustic testing does not require operators to get inside the pressure equipment and does not send energy into the vessel. This method, using external sensors, monitors sound waves and energy emitted by the material during failure, cracking or stress.

The testing can be performed during material operation and enables the detection of active failures at an early stage, helping to implement preventive solutions. The use of sensors allows the monitoring and inspection of the complete pressure equipment asset by means of triangulation.

Benefits at a glance

- Comprehensive inspection and testing services of your equipment while in operation.
- Detection, measurement and reporting of any structural degradation.
- Corrosion cracking and flaws detection at an early stage.
- A tailored inspection method for pressure vessels with complex geometries.
- Early crack detection during the welding process.
- Global monitoring and inspection of the complete pressure equipment asset.

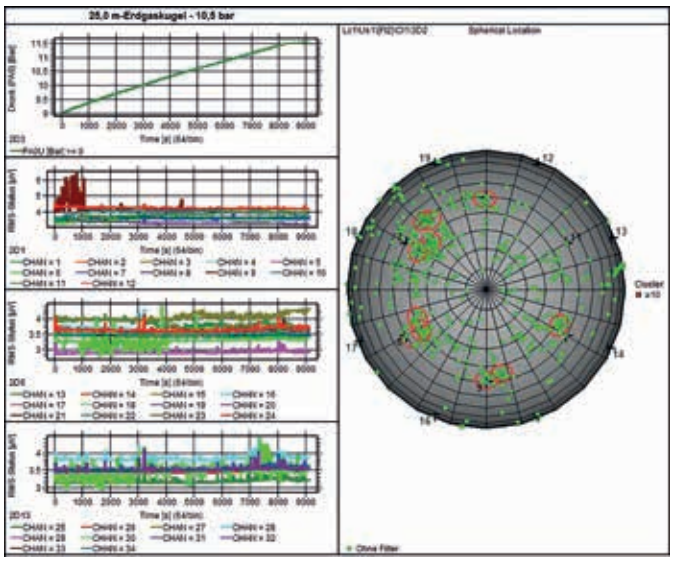
Areas for application

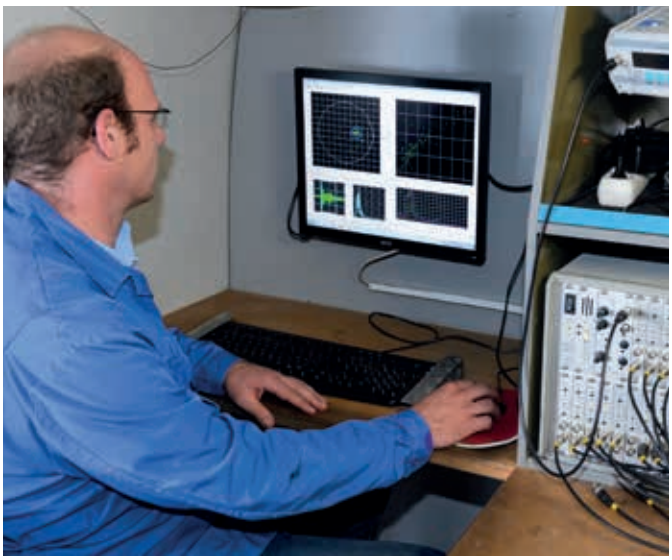
The acoustic emission testing and inspection method can be effectively applied to a wide range of pressure equipments such as:

- Containers and tanks for gas stations
- Spherical reservoirs
- Reservoirs of hydrogen and gas
- Fiber-reinforced materials
- Tubes and tanks

Saving efforts for more advantages

- No test inside the pressure equipment.
- No activity interruption.
- No shutdown or decommissioning.
- No refilling or rinsing process.
- No corrosion through the introduction of water.
- No time wasted on inactive defects.





About TÜV Rheinland:

Founded more than 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

Our experience - your benefit

TÜV Rheinland has over twenty years of experience in advanced NDT techniques and special applications. Our inspection team is one of the best-resourced in the world. Our deep involvement in equipment development, inspection solutions and accredited training courses demonstrate our commitment and leadership in this segment.

Your contact:

TÜV Rheinland Group
Industrial Services

industrial-services@tuv.com
www.tuv.com/advanced-ndt

TÜVRheinland®
Precisely Right.