Acoustic Emission Testing

A Powerful screening tool

Acoustic emission testing (AET) is a powerful screening technique that provides real time, %100 volumetric monitoring of in-service equipment.

AET uses advanced equipment to detect the acoustic signals produced within material that is under stress. Software analyzes the collected signals and identifies the location and severity of any structural defects found, such as:

- Cracking
- Embrittlement
- Corrosion

Advanced Services

For dynamic processes

AET is unique within NDT techniques in that it deals with dynamic processes, or changes, in a material. Because only active features, such as crack growth, are highlighted, AET lets you distinguish between developing and stagnant defects.

The result is you can monitor how different processes or changes in load, pressure, or temperature affect your components.

Minimum disruption

With AET, equipment can be inspected on-line. Since AET can be used with temperatures as high as °1475F (°800C), it is an excellent means for inspecting insulated components and for use during cool-downs and start-ups.

Background noise

Background noise is an issue when collecting acoustic emissions. Our tools include software, sensors, and preamplifiers designed to help eliminate unwanted signals. However, in some cases background noise may make AET unusable.

Broad applications

AET is appropriate for both on-stream monitoring and remote long term monitoring. It can be applied to:

- Above ground storage tanks
- Pressure containment vessels, including columns, bullets, and cat crackers
- Horton spheres and legs
- Fiberglass reinforced plastic tanks and piping
- Offshore platform monitoring
- Nuclear reactors and piping
- Tube trailers
- Railroad tank cars
- Bridge critical members monitoring
- Pre- and post-stressed concrete beams
- High-energy seam-welded piping systems in power plants.
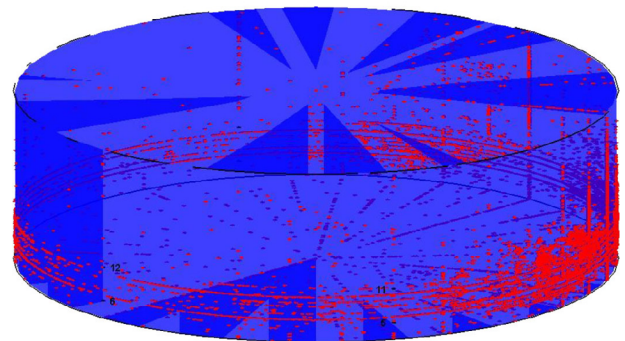
3D image showing the acoustic activity of a tank shell bottom and side walls with red indicating corrosion