

SpotOn® AE

NVI, LLC uses a fast, accurate and reliable Acoustic Emission monitoring system that can identify both onset and existing **leaks** in a pipeline, as well as **cracks** and **third party interference**.

Acoustic Emission (AE) is the most flexible NDT method.

NVI, LLC utilizes AE for monitoring large structures.

AE can be used for monitoring the 'acoustic activity' generated while hitting the pipe both accidental (digger hitting pipe) and intentional (theft attempt) third-party interference are detected using spotOn® AE and appropriate alarms are sent to the asset owner or pipeline operator.



AE enables to monitor pipelines for identification of:

Cracks: Utilizing Acoustic Emission, you can detect noise/emission of cracks growing, and other active damages in pressure vessels, tanks, and piping systems.



Leaks: AE is an excellent tool for detecting and locating leaks in buried and liquid-filled pipelines. Locally, it is required to have access to the pipe to mount AE sensors.

The AE sensors detect the turbulent flow at the leak orifice, and with the use of digital AE systems and specialized



Corrosion: Different types of corrosive processes can be detected using Acoustic Emission, including stress – corrosion cracking, pitting, crevice corrosion, and intercrystalline corrosion.



SpotOn® AE

Accurate

- Detect leaks quickly
- Issue no false alarms

Works Everywhere

- -10°C to 70°C
- IP67 to IP69K
- Cellular, WirelessHART or satellite link
- Works effectively under all operating conditions.

Robust

- Withstands harsh environments, and can be buried or submerged

Cost Effective

- Retrofit only at specific location.
- Long range

Reliability

- Use sensors with high reliability and low maintenance

SpotOn® AE detects any noise produced along a pipeline, including noise caused by:

Cracks originated by excessive tension after earth movement.



Mechanical work on the pipeline. Objects falling on subsea pipelines.



Product leaks and valve openings.



spotOn® AE Technical & Operating Specifications

AE probe type	25kHz – 80kHz dry coupled 90kHz – 295kHz 240kHz – 800kHz
Pipe diameter	2" (DN50) and above
Pipe nominal wall thickness	1/8" (3.175mm) to 2" (50.8mm)
Pipe temperature	-10°C to 70°C (14°F to 158°F)
Battery	Lithium metal, located in control unit away from pipe for easy replacement
Data management	Data delivered via shieldCube platform, or via designated private server
Data analysis	State-of-the-art shieldCube statistical, with custom-defined fixed and intelligent threshold.
Probe ingress protection	IP68 – IP69K optional, submersible up to 300 m
Data Visualization	Active visualization on Google Maps