

SpotOn® U

NVI, LLC uses a permanently-installed real-time corrosion monitoring solution called SpotOn® U. This type of technology is designed to operate in most environments and locations.



Offshore

Offshore structures can be very costly and challenging to inspect. SpotOn® U developed IP69K, a fully submersible version, designed specifically for offshore inspection. SpotOn® U works directly with on-deck and onshore facilities via wireless networks or local wires that give real-time updates on the conditions of the pipe. It can also provide satellite data links.

Above Ground

NVI, LLC performs spotOn® U on facilities and structures above ground. This type provides pipe wall thickness and temperature in real-time. Our technicians will be able to identify corrosion trends which will help reduce the need of intrusive tools and frequent inspections. In real-time, data is sent to the shield-cube portal or the client's designated server. On the other hand, data can be stored on the instrument and manually collected. NVI, LLC's corrosion engineers can quickly establish the efficiency of inhibitors or the effect of temperature on the corrosivity of the products flowing inside pipes.

Below Ground

Normally buried pipelines are inspected using in-line to test the integrity of the pipe. This technique is very effective at identifying threats. However, to clients, it may not always be budgeted to address every identified threat immediately.

Mounted on a buried pipe, SpotOn® U is used to monitor the threats until the remedial action becomes either strictly necessary or convenient. SpotOn® U is a fundamental tool that obtains and monitors the reference thickness value that many other monitoring tools rely upon.

SpotOn® U

Simple

- Installs in 30 minutes – timed!
- Fully automatic software configuration and network connection
- Works with existing IT systems.

Accurate

- Wall thickness and corrosion trends can be carefully measured.
- Remotely configurable data collection rate to track fast – evolving events and test corrosion inhibitors.

Cost-Effective

- One time access to difficult and challenging locations.
- No need for additional IT investments.

Works Everywhere

- -10°C to 350°C
- 14°F to 662°F
- IP67 to IP69K
- Cellular, WirelessHART, or satellite link
- Submersible up to 300 metres.
- Intrinsically safe tablet datalogger

Robust

- Withstands harsh environments, and can be buried or submerged.

Real Time

- Data is available in real-time.
- Custom thresholds can be defined, and warnings are dispatched automatically
- Remotely configurable to track fast-evolving events and test corrosion inhibitors.

Reliable

- Automated sensing for minimal measurement error.
- Continuously self-checking.
- Remotely configurable to maximize battery life.

Safe

- Ex II 3 GD EEx is IICT4 intrinsic safety rating.
- Non-Intrusive operation.
- Minimum access risk.

SpotOn® U Technical & Operating Specifications

Probe type	3-5MHz frequency longitudinal wave, dry coupled dual-crystal UT probe
Pipe diameter	2" (DN90) and above
Pipe nominal wall thickness	1/8"(3.175mm) to 2" (50.8mm)
Pipe temperature	Low Temp. -10°C to 120°C (14°F to 248°F) High Temp. -10°C to 350°C (14°F to 662°F)
Ambient temperature	-40°C to 85°C (-40°F to 185°F)
Ingress protection	IP68 – IP69K optional, submersible up to 300m
Intrinsic safety	Ex II 3G, Ex ic IIA T4 Gc
Battery type	Lithium metal, located on pipe or away from pipe for easy replacement
Battery life	In excess of 10 years, with remotely-controlled active management system
Data link	Cellular, WirelessHART, Iridium or Inmarsat, internal or external antenna with optional intrinsically safe tablet datalogger for manual data collection
Device management	Custom scheduling via shieldCube to maximize battery life or data collection frequency
Data management	Data delivered to shieldCube platform, or to designated private server
Data analysis	State-of-the-art shieldCube statistical, with custom-defined fixed and intelligent threshold and automatic notifications via email and mobile phone.
Installation	Minimum surface preparation, no metal-to-metal contact on low temperature system

