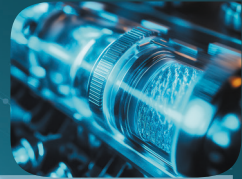
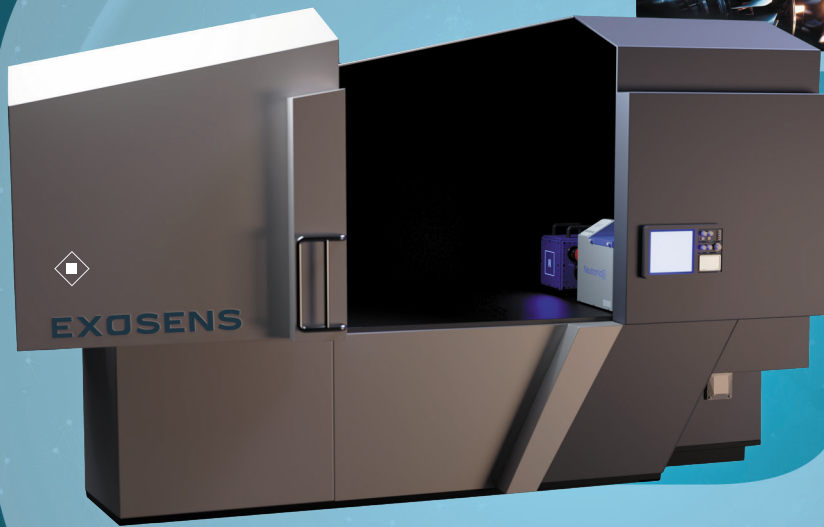


Neutronis™



REVEAL THE INVISIBLE

**DISCOVER HOW NEUTRONIS™
BRINGS NON-DESTRUCTIVE NEUTRON
IMAGING ON-SITE**

NEUTRON RADIOGRAPHY

Immediate Results, In Your Own Lab

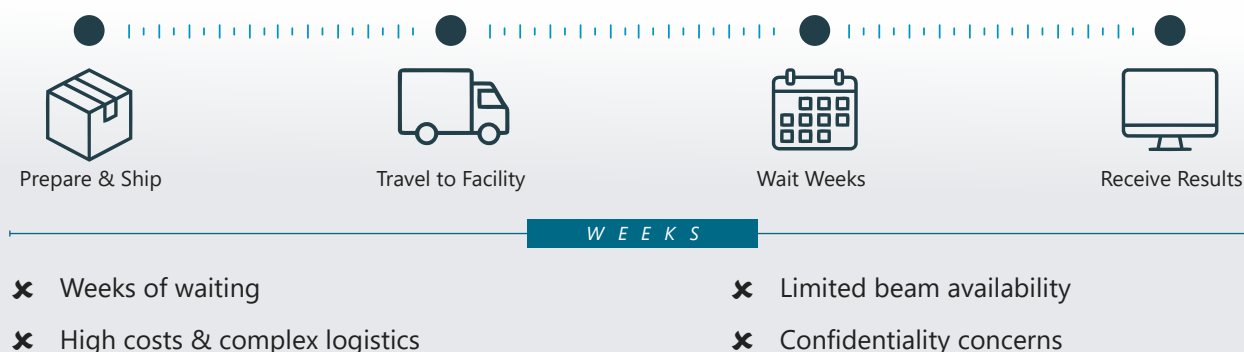
THE INSPECTION CHALLENGE

For decades, neutron radiography has delivered insights unavailable through conventional x-ray inspection methods. Yet access has been restricted to specialized facilities, limiting how often the technology could be used in industrial environments. Neutron imaging has traditionally relied on high-flux reactors or large accelerator facilities and only a limited number of laboratories worldwide perform neutron imaging.

THE FUTURE OF NEUTRON RADIOGRAPHY IN YOUR LABORATORY

THE TRADITIONAL WAY

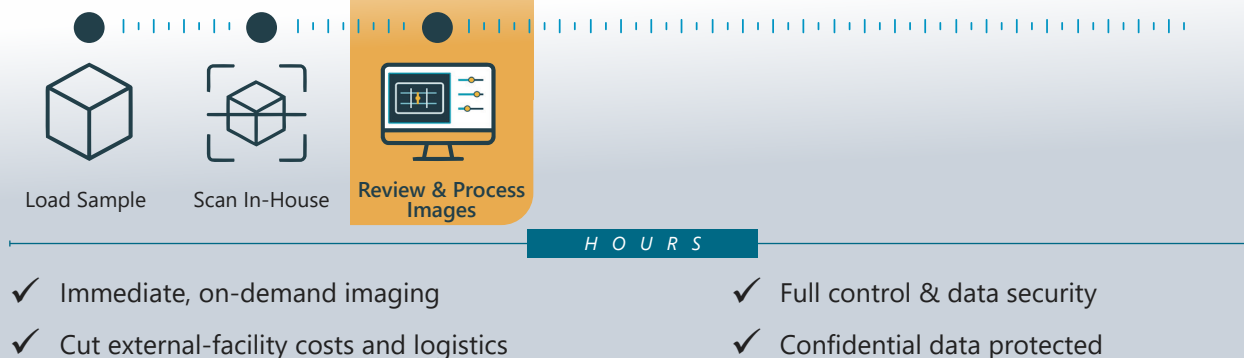
OFF-SITE & PHASED



V E R S U S

THE NEUTRONIS™ WAY

IN-HOUSE & ON DEMAND



GO BEYOND X-RAYS

X-RAY RADIOGRAPHY IS A PROVEN AND TRUSTED METHOD FOR NON-DESTRUCTIVE INSPECTION, ESPECIALLY WHEN EVALUATING DENSE STRUCTURES, GEOMETRY, METALLIC FEATURES, CRACKS, AND VOIDS. BUT SOME MATERIALS AND INSPECTION QUESTIONS REQUIRE A DIFFERENT TYPE OF CONTRAST.

THAT IS WHERE NEUTRON IMAGING ADDS VALUE.

Unlike X-rays, which interact primarily with electron shells and are strongly influenced by density, neutrons interact with atomic nuclei. This difference allows neutrons to reveal materials and features that may be difficult to distinguish with X-rays alone, including hydrogen-rich materials, water, lithium, boron, polymers, adhesives, and organic materials hidden within metals or ceramics.

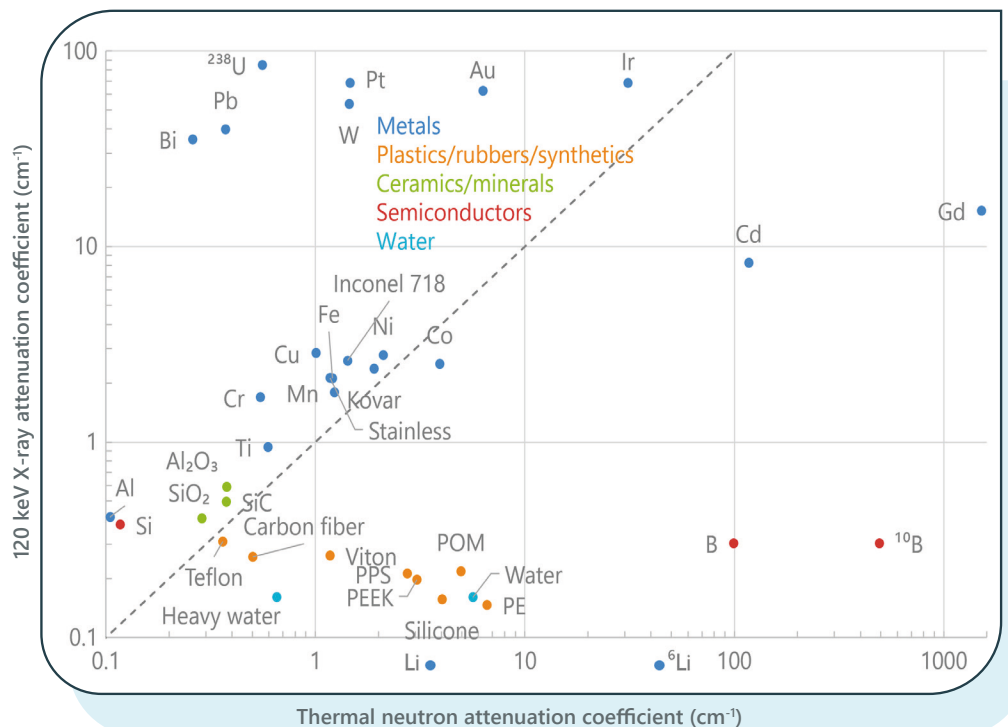
HOW IT WORKS



ADD ON-SITE NEUTRON IMAGING TO YOUR NDT TOOLBOX

CONTRAST: X-RAYS VS NEUTRONS

- ◆ Elements associated with sustainable energy tend to have high contrast with neutrons (H, Li, Cd)
- ◆ Some of the strongest X-Ray absorbers are transparent to neutrons
- ◆ Overall range of attenuation is much wider for neutrons



MEET NEUTRONIS™ : NEUTRON IMAGING SYSTEM

Neutronicis™ is an integrated neutron radiography platform designed to bring advanced imaging capabilities closer to the people who need them. Combining a compact neutron generator, the high-performance Neutronic[i] MCP-based neutron imaging detector, and AI-assisted image processing, Neutronicis delivers a complete end-to-end imaging solution in a single system. Rather than relying on access to large-scale facilities, organizations can evaluate neutron imaging as part of their own research, development, and inspection workflows. Neutronicis represents a new approach to neutron radiography, making this powerful technology more accessible, practical, and ready for real-world industrial and scientific applications.

NEUTRONIS ALPHA SITE

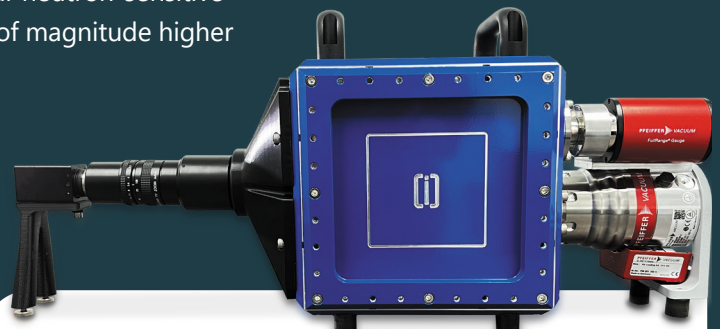


POWERED BY THE NEUTRONIC[i]: NEUTRON DETECTOR

The Neutronic[i] is a 100×100 mm² thermal neutron imager based on Exosens' patented microchannel plate technology. This detection mechanism gives our neutron-sensitive MCPs their revolutionary detection efficiency, more than an order of magnitude higher than conventional neutron imaging techniques.

Key Features of Neutronic[i]

- ◆ Patented Neutron-Sensitive MCP Technology
- ◆ >50% Thermal Neutron Detection Efficiency
- ◆ High-Resolution Imaging
- ◆ Nanosecond Timing Capability
- ◆ Modular, Upgradeable Platform



To learn how the Neutronic[i]
works, scan the QR code

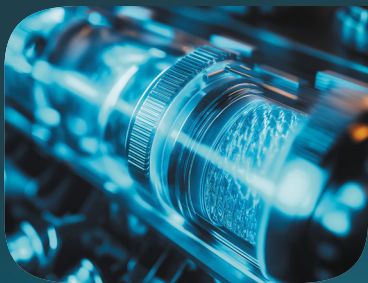


APPLICATIONS TRANSFORMING INSPECTION & RESEARCH



Batteries & Energy Storage

Lithium distribution, electrolyte levels, internal structures



Hydrogen Technologies

Map hydrogen and water-rich materials in fuel cells, tanks and pipelines



Aerospace

Detect ceramic core residue



Sealed and Dense Assemblies

Inspect lubricants, sealants, bond lines, and internal components



Advanced Manufacturing

Additive parts, composites and multi-material assemblies

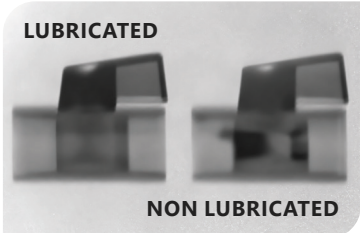
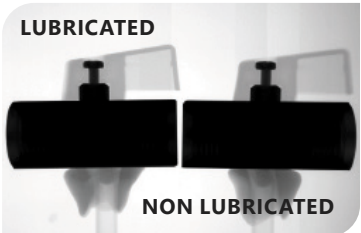
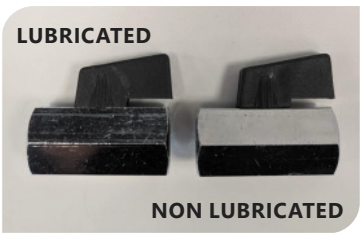
SEE WHAT NEUTRONS ADD

Original Image

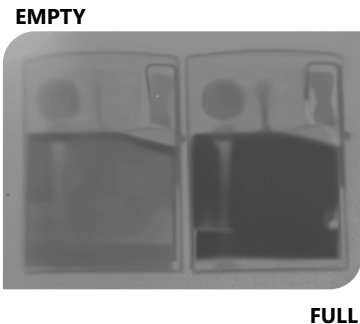
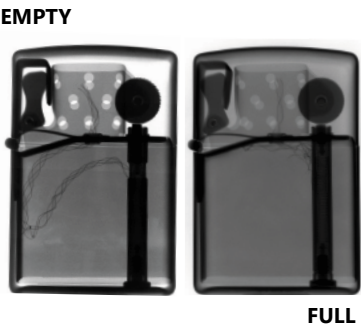
X-Ray Image

Neutron Image

Valves



Zippo
Lighter



NEUTRONIS™

Bring us your samples & inspection challenges



HAVE A
SAMPLE?



A HIDDEN
DEFECT?

LET'S TALK!

*Let's explore how neutron imaging can
complement X-Ray inspection.*



exosens.com | science@exosens.com

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