



Ireland's Largest Industrial CT and X-ray Imaging Centre

Making the Invisible Visible



x-ray and CT Inspection Services

Why Choose SEAM's Imaging Centre?

Our new Industrial CT and X-Ray Imaging Centre is set to be a game-changer for businesses across Ireland. Here's why:

1. **Biggest of its Kind** SEAM's Imaging Centre is the largest in Ireland, offering the most comprehensive suite of CT and X-Ray imaging services under one roof. This means faster turnaround times and more capacity for urgent or large-scale projects.
2. **State-of-the-Art Technology** Our facility is equipped with the latest CT and X-Ray equipment, ensuring superior imaging resolution and clarity to detect even the smallest defects or anomalies in complex structures.
3. **Expert Team** Our team of experienced engineers and technicians are specialists in non-destructive testing, committed to providing accurate and insightful analysis tailored to your industry needs.
4. **Cost-Effective Solutions** With our advanced technology and expertise, we help you reduce costs associated with product defects, recalls, and rework, improving your bottom line.
5. **Comprehensive Service Range** From prototype testing to production monitoring and failure analysis, our imaging centre supports every stage of your product lifecycle.

15 Years Multi-sectorial Experience

1

UNDERSTAND
YOUR PROBLEM



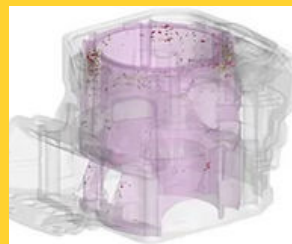
2

SCAN



3

ANALYSE



4

CONSULT ON
THE RESULTS



Our Services

Whether made of plastic or light metal: With the help of CT measurement, you can easily and non-destructively visualize failures in different material components. After the CT measurement, each workpiece is available as a complete data set and can be checked for defects such as blowholes, cracks, pores or inclusions during material testing. With our CT measurements you benefit from:

- 3D CT Scanning
- 2D Imaging
- Dimensional Inspections
- Porosity and inclusion analysis of workpieces
- Damage and failure analysis of complete assemblies (P203/P202/P201 analysis)
- Assembly check of components already in place
- Wear inspection
- Non-destructive component testing
- Quality Control

Our Equipment



diondo d5

The diondo d5 is a high-resolution triple-source industrial CT scanner designed for non-destructive testing, offering precise 3D imaging for complex materials and components on large scale.

- A primary 450kV Minifocus X-ray Source
- A secondary 240 kV Microfocus X-ray Source
- A high-resolution 450kV Mesofocus X-ray Source



Vitomex L300

The phoenix GE V|Tome|x L 300 is a dual source system equipped with the first unipolar 300 kV / 500 W microfocus source and a 180kV/20 W nanofocus X-ray source. The 300 kV / 500 W source is excellent for high magnification applications as well as scans of strongly absorbing samples. The 180kV/20 W source uses a transmission target system to achieve nanofocus with detail detectabilities in the sub-500 nm range.



High Speed Detector

The High-Speed Industrial Photon Counting Detector is an advanced imaging device used for non-destructive testing, providing highly accurate and fast detection of X-ray photons. It provides an active area of 100x50mm with a maximum speed of 6000 fps allowing imaging of active devices.

Inspection and analysis

DIMENSIONAL

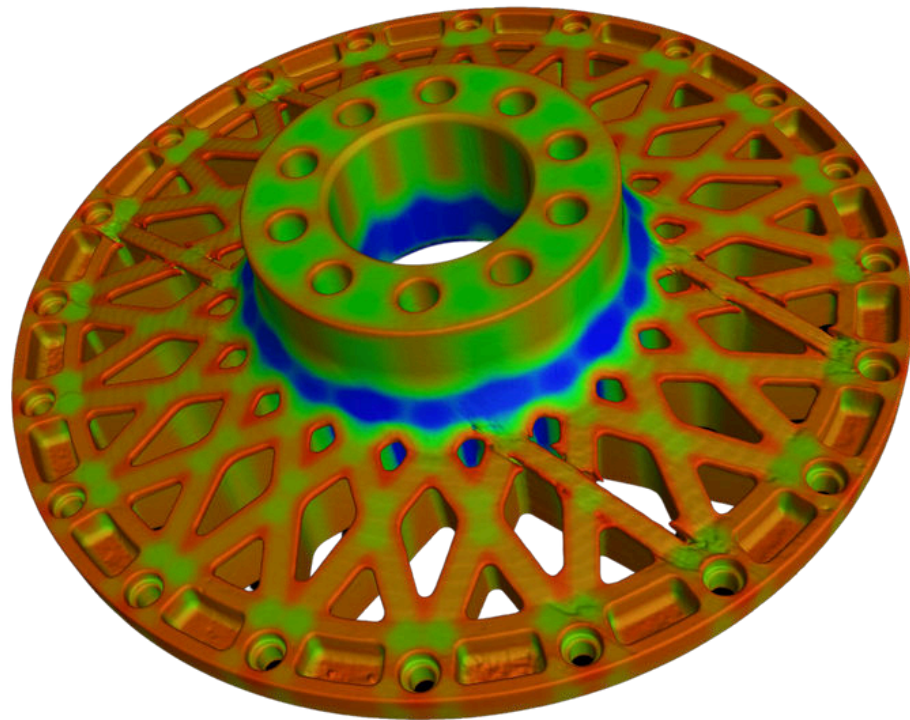
Allows for a quick and accurate inspection of multiple dimensions, internal and external and identify specified part tolerances without destroying the component.

FAILURE/ASSEMBLY

Non-destructively investigate the root cause of failure of a part or an assembly. Cross-sectional views can be taken to measure internal features, inspect for cracks or defects, identify leak paths or missing parts...

HELICAL CT SCANNING CAPABILITIES

Mounts and moves the workpiece in a vertical manner. The result is a drastic reduction in processing time and an overall improvement in image quality.



PART-TO-PART COMPARISON

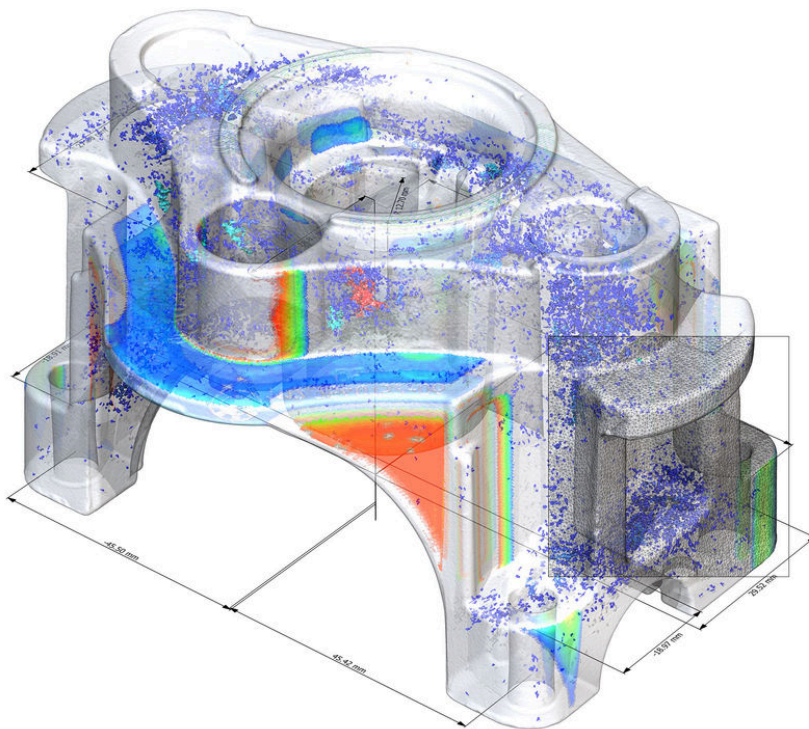
Accurately detect geometry differences between 2 seemingly identical parts or CAD. Results are provided in a color-coded model showing deviations between the parts.

Inspection and analysis

OUR EXPERTISE
REVEAL ALL
DETAILS OF YOUR
PARTS

POROSITY/INCLUSION

Identify internal defects such as voids and inclusions within a sample. Pores can be analysed for location, volume and size.



REVERSE ENGINEERING

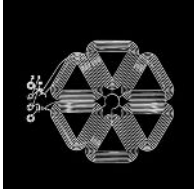
Generate part data in a point cloud/polygon format that can be imported into various CAD software where they can be further developed or modified.

WALL THICKNESS

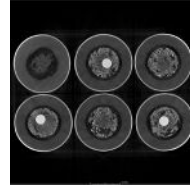
Evaluate thin walls or excessive material within a sample. Non-destructively take cross-sectional views to identify any deviations. Ideal for Additive Manufactured parts with complex internal geometry.

Applications

Electronics/PCB Boards



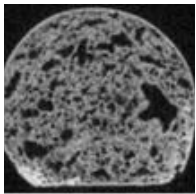
- Solder Joints
- Tracks and Vias
- Misalignments
- Component Placement
- Internal Components



Battery Packs

- Modules and Packs
- Manufacturing Defects
- Delamination of layers
- Cracks and Swelling
- Foreign Material

Food



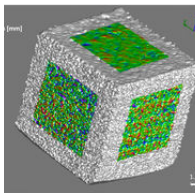
- Air bubble/Void Analysis
- Outer Layer Thickness
- Foreign Material
- Quality Control
- Packaging Inspection



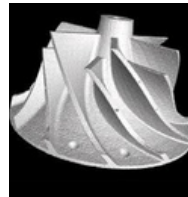
Medical Devices

- Failure Analysis
- R&D Support
- In-situ Testing
- Internal Inspections
- Dimensional Analysis

Additive Manufacturing



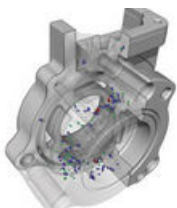
- Critical Defect Detection
- Density anomalies
- Void Analysis
- Lattice Structure
- Nominal Comparison



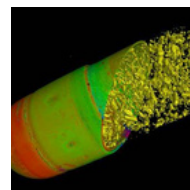
Aerospace

- Turbine Blade Integrity
- Weld Analysis
- Foreign Material
- Assembly Inspection
- Metrology

Automotive



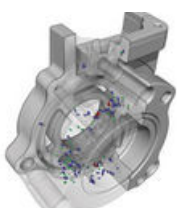
- Assembly Verification
- Dimensional Inspection
- Foreign Material
- Material Integrity
- Reverse Engineering



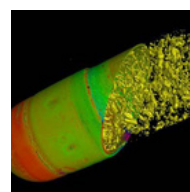
Pharma

- Defects
- Coating Uniformity
- Foreign Material
- Pore Analysis
- Blister Pack Inspection

Injection Molding



- Assembly Verification
- Dimensional Inspection
- Foreign Material
- Material Integrity
- Reverse Engineering



Research

- Defects
- Coating Uniformity
- Foreign Material
- Pore Analysis
- Blister Pack Inspection

Meet our Team

Dr Ramesh Raghavendra

Dr. Raghavendra has over 25 years of expertise in Industrial Computed Tomography (CT) and X-ray Micro Tomography (XMT). His deep knowledge spans the application of these advanced imaging techniques to analyze and inspect materials and components across various industries.



Mr Eoghan O Donoghue

Eoghan O'Donoghue, SEAM Gateway Manager, has over 15 years of experience in X-Ray Micro Tomography (XMT), applying his expertise both in research and direct industry collaborations.



Ms Agnieszka Furman

Agnieszka specializes in utilizing X-Ray Micro Computed Tomography (XMT) to analyze and visualize 3D components and materials. She holds a Bachelor of Engineering (Hons) in Manufacturing Engineering from Waterford Institute of Technology and a Master's Degree in Mechanical Engineering



Dr Sara Karam

Sara focuses on utilising non-destructive techniques mainly x-ray micro-computed tomography, tactile and laser scanning CMM systems, as well as optical measurement and inspection systems



Mr Karl Costello

After completing a Bachelor's Degree in Mechanical & Manufacturing Engineering from SETU, Karl joined SEAM as a research assistant engineer working in both Additive Manufacturing and X-Ray Microtomography.



Ready to discover how SEAM's Industrial CT and X-Ray Imaging Centre can benefit your business? Contact us today to discuss your imaging needs or schedule a consultation.

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