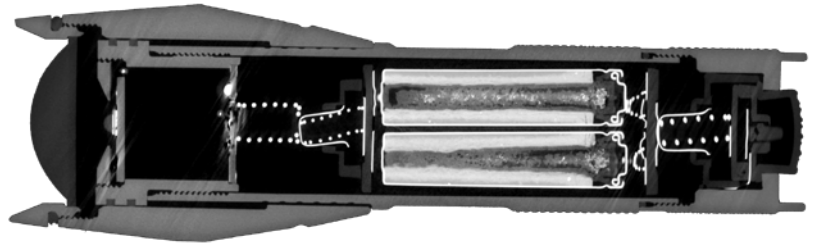
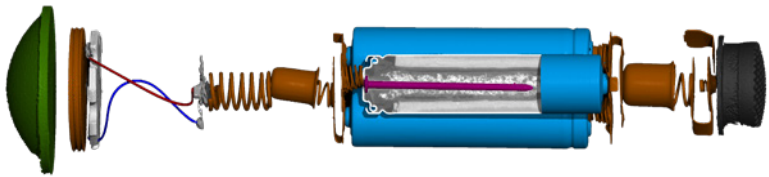


Have your products scanned with X-ray computed tomography at Nikon



Contract inspection services

Rethink Inspection with Quality 4.0

X-RAY AND CT SCANNING

The fastest insight to quality control

Contact us for a CT project offer

In a production environment where a fast solution to a problem is essential, internal material defects, complicated assemblies and hidden geometries can all be too complex and time consuming for manufacturers' inhouse inspection capabilities. Traditional destructive methods of potting and slicing parts to analyze internal structures are often ineffective and add considerable time and expense to your validation process.

Nikon Metrology X-ray & CT inspection services offer the right capabilities to explore prototypes, samples or series for internal deficiencies. It is **fast, non-destructive** and provides **insightful 3D analysis**. And at the Nikon Metrology contract inspection department, the CT experts go further; they not only provide a detailed 3D scan, but also interpret the CT results to help you find the cause of issues.

Nikon Metrology X-ray & CT inspection services help you to focus on what matters to you. Delivering high quality products in the shortest time possible.

X-RAY & CT INSPECTION SERVICES

1

UNDERSTAND YOUR PROBLEM



2

SCAN




3

ANALYZE



4

CONSULT ON THE RESULTS

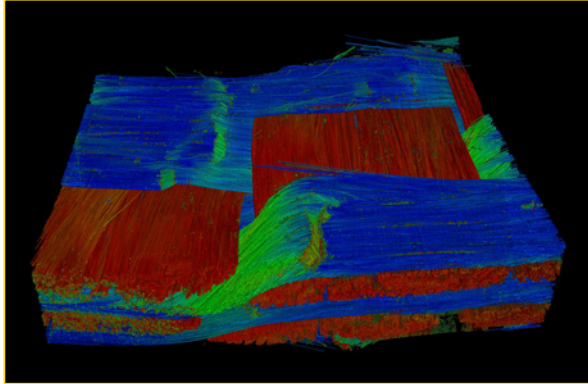


What Nikon Metrology CT technology offers

- High power microfocus sources for highest resolution
- Unique high-flux rotating targets for fast scan times
- Wide range of systems for scanning small parts to large assemblies
- Inspection of a wide variety of materials: metals, alloys, plastics, ceramics, composites, bone and tissue
- Non-destructive analysis preserves (expensive) samples
- Material/defect analysis, porosity analysis, composite fiber analysis, part-to-CAD comparison, GD&T, STL creation, BGA analysis and 2D radiography
- Accurate measurement of internal and external dimensions

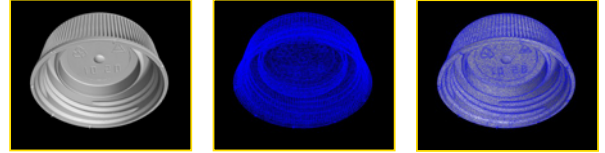
Benefits of Nikon Metrology X-ray & CT services

- Over 30 years expertise in X-ray CT
- Fully equipped laboratories featuring 160-450 kV microCT systems
- In case your inhouse CT capacity is limited or not adequate for specific projects, rely on Nikon CT service capability
- Small one-off projects to large batch inspections
- Customized reporting and analysis to meet your requirements
- Controlled project costs instead of investment in own CT facilities
- Short turnaround times
- Nearby services throughout Europe



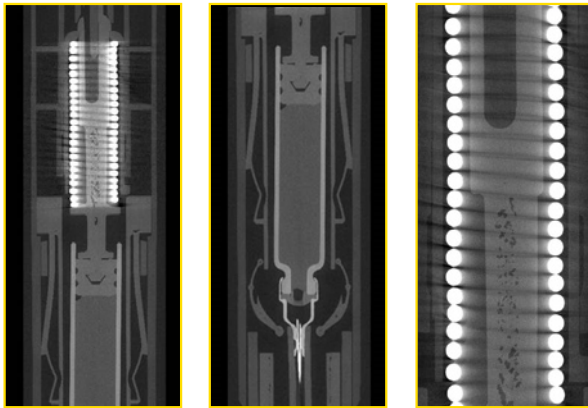
FIBER COMPOSITE MATERIAL

Gain insights into materials such as carbon-fiber-reinforced plastic (CFRP) or glass-reinforced plastic (GRP). Calculate, e.g., local fiber orientations, local fiber volume fractions, global fiber orientation distributions, and global volume fractions.



REVERSE ENGINEERING

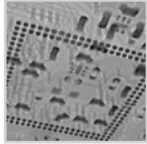
Generate part data in a point cloud/polygon format. Data can be exported as an STL, WRL, TXT, PLY or OBJ file. Any of these file formats can be imported into various CAD software's.



HELICAL CT SCANNING CAPABILITIES

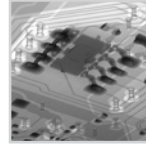
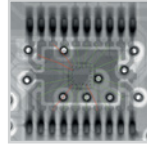
Scanning tall parts often causes a dilemma. Nikon Metrology offers a revolutionary Helical CT Scanning ability that mounts and moves parts vertically through the X-ray beam. The result is a drastic reduction in processing time and an overall improvement in image quality.

X-ray inspection



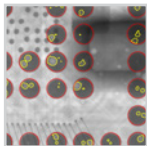
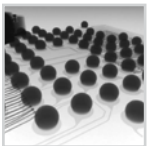
ELECTRONICS

Get insight into printed circuit board assemblies, components, or electrical devices in an intuitive, non-destructive inspection process.



BOND WIRE ANALYSIS

Automatically identify and detect broken bond wires, wire sweep with pass/fail status.



BGA DEVICE INSPECTION

Voiding (single and total ball percentage), Ball circularity, Ball count, Bridging, Pass/Fail detection.



REAL TIME X-RAY INSPECTION

From small one off projects to large lot projects, samples can be accurately inspected instantly. Locate missing parts, broken wires, cracks/defects and cause of part failure.

INDUSTRIES

Additive Manufacturing
Aerospace
Archaeology
Automotive
Castings
Composites
Consumer Products
Military & Defense
Electronics
Energy
Engineered Products
Forensics
Geology
Medical Devices
Pharmaceutical
Plastic Injection Molding
Research

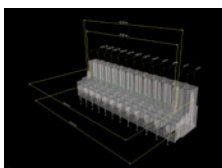
MATERIALS

Ceramics
Composites
Glass
Fiber
Metal & Alloys
Mixed Material
Plastics
Silicone/Rubber

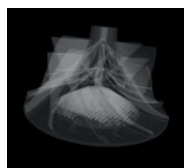
APPLICATION EXAMPLES



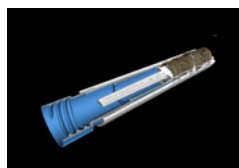
Connectivity issues in electrical components



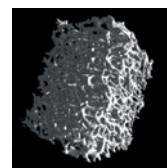
Measuring small internal geometries



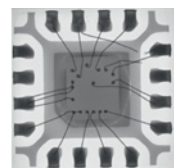
Internal voids or cooling channels in AM parts



Assembly verification of one-off or critical use components



Material analysis (foam)



PCB(A): BGA voids, broken bonds, wire sweep etc

DATA RESULTS

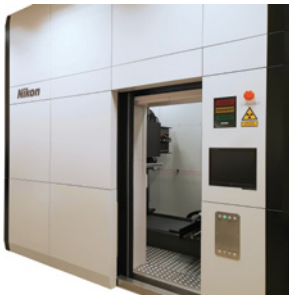
A Volume Graphics shared viewing software is provided with every CT scanning project. The software allows you to visualize the 3D reconstructed volume of a part scanned, along with the analysis performed. This allows for internal cross sectional views and full 360 degree rotational views. Data can be transferred via our secure Nikon file store, a customer's provided Hard Drive/USB drive or your company secured FTP site.

Turnaround Times: Our standard turnaround time to complete projects is 5-7 business days. We also offer expedited services. Please inquire.

RESULT OPTIONS

- Volume Graphics shared viewing software with CT scans
- JPEG Image Stacks, 2D X-ray Images
- Point Cloud Data – STL file
- PDF Presentation
- Metrology Reports - First Article Inspection (FAI) Reports/Excel charts
- Transfer data to our secure Nikon File Store
- A provided Hard Drive/USB drive
- Your companies own secure FTP site
- Webinar Conference – Hosted by one of our experienced Applications Engineers

What's in our lab



- XT V 160 kV high-quality PCB/electronics inspection system
- XT H 225 kV for all-purpose X-ray and CT inspection
- XT H 320 kV for X-ray and CT inspection of larger samples
- XT H 450 kV – Unique micro-focus X-ray and CT system for turbine blade and casting inspection
- WALK-IN ROOM – C2 high-precision, extra large-envelope modular inspection system – with 3 targets: 450kV and 225kV micro-focus rotating, plus 450kV mini-focus
- MCT225 – unique pre-calibrated CT system for metrology applications and measurement analysis

Contact us for a quote

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