



# Non-destructive testing process study

We can help you improve your non-destructive testing processes, and de-risk investment in new capabilities.

Non-destructive testing (NDT) covers a wide range of techniques to evaluate the structure and integrity of a component without damaging it. The Nuclear AMRC's NDT capabilities are tailored to the requirements of the nuclear industry, with a focus on weld inspection and crack detection. We can use this expertise to identify the best technologies or approach for your NDT needs.

## Your challenge

An NDT process study can add value if:

- You are looking to invest in NDT equipment, and want to reduce the risk of your capital purchases.
- You want to understand the latest NDT technologies.
- You want an independent assessment of the best NDT technology for your specific application and needs.

## Our service

- We work with you to understand your NDT needs and business drivers, by reviewing drawings, visiting your site, inspecting your current equipment, and talking to your manufacturing and quality teams.
- We work with your team to understand the key criteria for our assessment, such as cost, accuracy or training needs.
- We review relevant emerging and off-the-shelf NDT technologies. We analyse the costs, benefits, risks and disadvantages of these technologies against your needs, and recommend the most suitable approach.
- We can organise demonstrations of the recommended technologies.

## Benefits

An NDT process study can help you:

- Reduce your investment risk through independent verification of technology.
- Better understand emerging and off-the-shelf NDT equipment.
- Ensure your business is meeting the needs of your client.

## Our expertise & capabilities

The Nuclear AMRC simulation and verification group includes around 20 research engineers, post-doctoral research associates and project managers, delivering multi-disciplinary programmes for industry customers of all sizes. We offer access to a wide range of state-of-the-art equipment and software, and are constantly looking to push the boundaries of current technology to solve manufacturing challenges for our partners and customers.

We have advanced capabilities in numerous NDT processes, including:

- Ultrasonic processes such as phased array, pulsed echo, and time of flight diffraction.
- Surface inspection processes such as visual, dye penetrant and magnetic particle inspection.
- Eddy current inspection.

We can demonstrate these processes on your application, or arrange trials at your facility. We can also access additional advanced equipment through our network of Catapult centres and industrial partners.

For more information, contact

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The Nuclear Advanced Manufacturing Research Centre, part of the High Value Manufacturing Catapult, helps UK companies improve their capabilities and performance for nuclear and other high-value industries. We focus on large-scale high-precision manufacturing processes for quality-critical applications.

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## Process

A typical NDT process study includes the following steps:



### 1 Scoping and planning

We work with you to scope out the project and develop a delivery plan. We will provide a statement of work which will detail our scope, costs and timescales. NDT process studies typically take eight to 12 weeks.



### 2 Understanding your needs and drivers

We review your product drawings, relevant codes and standards and your current NDT process to understand your challenges, drivers and operational constraints, and agree the criteria for analysis.



### 3 Information gathering

We gather the relevant equipment information, and review current and emerging NDT technologies against your needs and drivers.



### 4 Down selection & assessment

We independently select the most appropriate measurement systems to meet your business needs, and assess their capabilities against the agreed criteria.



### 5 Present findings

We present our findings to you, with underpinning evidence and recommendations.