



New inspection tool from James Fisher Nuclear providing vital information for EDF-Energy.

PRESS RELEASE 13 March 2017

James Fisher Nuclear (JFN) is celebrating another substantial contract, with the award of a commission from electricity generator EDF-Energy to produce inspection tools that will use innovative eddy current technology to assess the condition of the graphite cores across their fleet of nuclear reactors to a level that has not previously been possible.

The Eddy Current Inspection Tools (ECIT), developed by JFN in collaboration with EDF-Energy, Serco (now AMEC), Bloodworth Consultancy and Manchester University are designed to assess the condition of the graphite within vacated fuel channels by applying an electromagnetic field to the graphite. As graphite is electrically conductive eddy currents are induced in the material from which the electrical conductivity can be measured and graphite density inferred. Understanding the density variations within each reactor on such a short turn around (compared to trepanning) provides significant support to the safe operation of the reactor fleet. The enhanced understanding of graphite density also enables EDF Energy to improve the assessment of station lifetimes.

Project Lead for JFN Sarah Town said: “We originally developed a Proof of principle Eddy Current tool with EDF-Energy which led to the Prototype Eddy Current Inspection Tool. The prototype was only intended for a limited number of deployments but has exceeded expectation and now, several years later, is still providing EDF with valuable inspection information from within the graphite channels of their reactors.”

Moving on from this very successful prototype, the ECIT devices have been further developed to be robust and adaptable enough to provide reliable and accurate data in the hostile and highly radioactive environment of the reactor cores of EDF-Energy’s fleet of operating AGR nuclear power stations. The data from each inspection is relayed to operators on the charge face and enables rapid assessment of the condition of the core by the EDF-Energy inspection team.

Production will commence at JFN’s modern engineering facility in Malton in the next few weeks and the first full deployment completed during 2018. The new contract includes control consoles, specialist strongback for transportation and storage and a calibration unit for each tool. Two test rigs have also been commissioned to conduct the Factory Acceptance Tests (FAT) and Temperature Controlled Calibration Tests (TCCT) to ensure that, once manufactured, the ECIT tool will function as expected when deployed on station.

EDF Energy is the UK’s largest producer of low-carbon electricity, meeting around one-fifth of the country’s demand and supplying millions of customers and businesses with electricity and gas. It generates electricity with eight nuclear power stations, more than 30 wind farms, one gas and two coal power stations, as well as with combined heat and power plants.

James Fisher Nuclear Ltd, Gordon House, Sceptre Way, Bamber Bridge, UK
T: +44 (0)1772 622200
www.jfnl.co.uk



Note to editors:

James Fisher Nuclear is an established supplier of specialist engineering, manufacturing and technical services for applications within challenging environments or with high integrity requirements.

For more information see: www.jfnl.co.uk

James Fisher and Sons plc is a leading service provider in all sectors of the marine industry and a specialist supplier of engineering services to the nuclear industry in the UK and abroad. Operating in over 40 countries worldwide, the company serves both the private and public sectors and adopts a practical approach to the management of assets and provision of high quality services, ensuring an appropriate use of technology and a sound understanding of each customer's requirements. Building on the experience and expertise gained over more than 165 years of operating in the marine environment, James Fisher brings practical experience, innovation and commercial best practice to all clients' projects and services.

For more information see www.james-fisher.com

Media enquiries:

Name: David Buchanan

Title: Marketing and Communications Manager

Tel: +44 (0)1772 622200

Email: david.buchanan@jfnl.co.uk

James Fisher Nuclear Ltd, Gordon House, Sceptre Way, Bamber Bridge, UK

T: +44 (0)1772 622200

www.jfnl.co.uk