



A Graphene Sensor for Defect Detection
and Predictive Maintenance in Composite Materials

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Graphosite Partner:

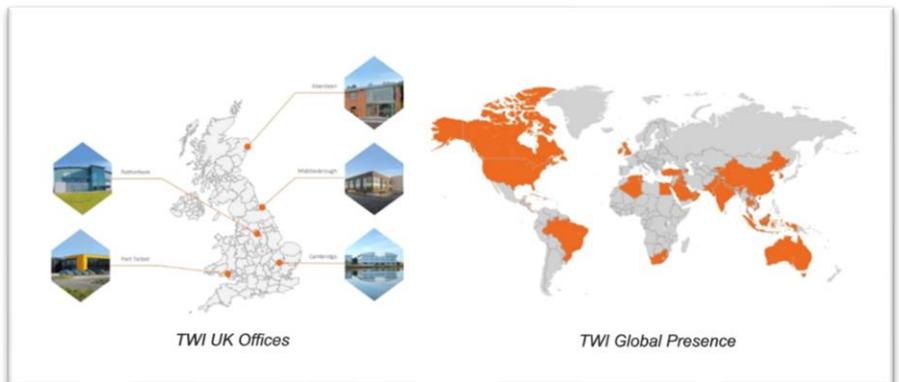


TWI

www.twi-global.com

Who we are

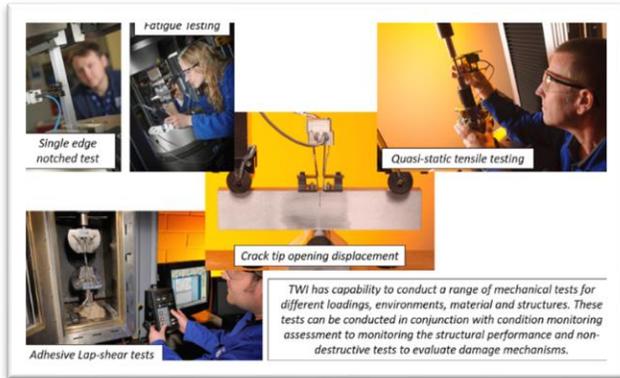
TWII is one of the world's foremost independent research and technology organisations, with expertise in materials joining and engineering processes as applied in industry. TWI specialises in innovation, knowledge transfer and solving problems across all aspects of manufacturing, fabrication and whole-life integrity management. Established in Cambridge, UK in 1946, the organisation has gained a first-class reputation for service through its teams of respected consultants, scientists, engineers and support staff. With around 800 employees, it works with over 1800 Industrial Member companies in over 70 countries. TWI currently operates from 54,000 square metres (581,000 square feet) of manufacturing, testing and training space; five UK and 13 overseas facilities serve both its Industrial Membership and its training and examination needs. A successful international Training and Examinations programme sees around 25,000 students trained each year in welding and inspection technologies.



Our Product and Services

TWI carries out confidential research contracts for Industrial Members and has an extensive programme of core research and collaborative projects. TWI's experts can offer consultancy on all aspects of fabrication and performance of structures, including expert witness and arbitration services.

The NDE Group at TWI conducts development and research in a number of different NDE technology areas including automated inspection, condition monitoring and bespoke inspection innovations for specific challenges. The NDE group operates across a wide range of industrial sectors include aerospace, renewable energy, nuclear, defence, and oil and gas. The Monitoring and Inspection Research (MIR) section within the NDE group provides expertise in the development of new and innovative technologies driven by industry demand. Through a series of collaborative projects with selected partners, MIR is working to develop the next generation of monitoring and inspection solutions through multidisciplinary strategies. In regards to condition and structural monitoring, MIR offers expert advice in condition and structural monitoring strategies for



unique problems and harsh environments, signal processing, algorithm development, embedded sensing, technology and procedure qualification. MIR particularly focuses on acoustic emission, vibration, ultrasonics and strain measurement.

Our Team

Dr Ryan Marks is the Section Manager of the Monitoring and Inspection Research Section at TWI. Ryan has a Masters' degree in Mechanical Engineering and a PhD in Acoustic Emission monitoring from Cardiff University as well as being a Chartered Engineer. Ryan has previously worked for Airbus as a structures design engineer before moving into Condition Monitoring and Non-destructive testing research.

Natalia Garban is a Chartered Engineer and Project Leader at ITWI in the Monitoring and Inspection Research Section. She has lead the development and application of advanced innovative inspection, assessment and risk management solutions and has significant experience in mechanical testing of materials, prototype system development and condition monitoring related data analysis. She has a Materials Engineering degree and an MSc in Structural Integrity from Brunel University London.

Dr Fokion Oikonomidis is the quality advisor of the Materials and Structural Integrity group in Cambridge since 2014. During the six years before joining TWI, he worked in the area of Fracture Mechanics both in a research centre in Belgium and during his 1st PhD at the University of Bristol. Fokion is a chartered mechanical engineer with work experience in the fields of water and wastewater treatment, building services, health and safety and business process management in the aerospace industry. Fokion has an MBA degree in general business administration from the University of Hull. Fokion recently obtained his 2nd PhD in Management at the University of Newcastle upon Tyne.

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Innovate UK

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