

SciSite On Site

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Over the past few months we have left the laboratory and been undertaking case studies and commercial contracts on sites across England and Wales. Ranging from car parks to motorways, bridges to power stations and petrochemical plants, we now have a portfolio of test cases which can be viewed on our website. In all cases the results from our investigations have been corroborated by means of alternative NDT methods and destructive tests. In all cases the SciSite probe has performed at least as well as other test methods employed. In December we entered our first commercial phase and are operating with a suite of probes from the very small, which can reach inaccessible areas, to a metre-wide version for rapid scanning of large areas.

The SciSite probe is based on a proprietary combination of electromagnetic techniques. It enables surveyors to determine in absolute terms where corrosion has occurred on steel embedded in any non-ferrous material. It is fast, non-contact, completely non-destructive, capable of high resolution, and can be used on coated and non-coated surfaces alike. The probe can currently give an indication of the degree of corrosion. Further calibration trials being undertaken at Keele University will ultimately allow more precise determination of the state of the steel under test.

SciSite Limited is a spin-out company from Keele University, utilizing technology developed by the Detectors and Testing Group over the past 12 years. The research group is led by Professor Peter Haycock, who has worked with Dr Matthew Hocking on the application of Keele technology to the testing of steel reinforcement. They co-founded SciSite in 2005, spinning out the company from the university the following year. In 2006 SciSite engaged Dr Roger Lambert as Managing Director to lead its commercial development. Peter Haycock remains Technical Director and is our technology champion within the global academic community. Matthew Hocking is Operations Director, developing products to solve a range of scanning requirements and leading a skilled team in the on-site work.

About the SciSite Corrosion Probe

The SciSite Corrosion Probe uses a patented technique developed over 10 years by leading materials scientists. Whether from the outside of a building or from above a motorway, the Corrosion

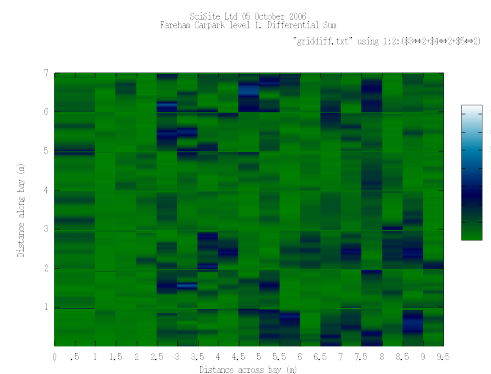
Probe detects the presence of rust on any ferrous material.

The testing of reinforced concrete uses electrical, electrochemical and destructive techniques to show if the steel reinforcement is corroded. These trusted tests show the likelihood of corrosion processes and provide detailed information only where drill holes are made. These testing methods do not and cannot directly detect rust non-destructively.

The SciSite Corrosion Probe uses a proprietary combination of electromagnetic signals to energise the steel and rust together. By taking a scan of the steel, applying an energising field, then scanning again, the rust is highlighted.

- Only where rust is present does the corrosion probe detect a signal.
- The scanning is rapid and can quickly cover large areas
- No connection to the steel is required
- Scans through thick layers of tarmac, concrete or any non-ferrous material

The SciSite Corrosion Probe can be fitted to automatic scanning vehicles. It can be made only a few centimetres in diameter to fit into expansion gaps or inaccessible structures. Many probes can be used at once to scan large areas such as runways or road carriageways. Resolution can be as small as 1 cm.



Above is a typical corrosion map. A full report from SciSite uses maps like this to grade the corrosion signal using colours from green through blue to white. Green shows no corrosion, dark blue, light blue and white indicate increasing corrosion levels. SOME OTHER TEXT MAYBE..?



Images of 'SciSite on Site' from top: Battersea Power Station chimney stack; trials at Keele University; a pedestrian foot bridge; M6 junction 5 remedial work; underneath the M6.

SciSite – Revolutionizing Rust Detection

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