Reliability and Materials Analysis

Conekt provides reliability and materials analysis services to enable its clients to improve the operating performance and integrity of electronic and electromechanical products.

By combining a wide variety of materials skills in metallic and non-metallic systems and expert knowledge of materials processing and electronics manufacturing techniques with modern analytical methods, Conekt is able to meet the most challenging client requirements.

Defining the reliability requirements is a pre-requisite for a successful design. Over many years, Conekt has built up extensive knowledge of life cycle usage environments and understands how products can fail. This knowledge is incorporated into the design process using established tools such as Fault Tree Analysis (FTA) and Failure Modes and Effects Analysis (FMEA).

Conekt's highly qualified and experienced team serves customers in a wide range of industries, including automotive, aerospace, defence, energy and commercial and off-highway vehicles.

The reliability and materials team maintains extensive contacts with industrial and academic networks, ensuring that it can apply up-to-date analysis and materials knowledge.

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Conekt's reliability and materials analysis services range from standalone component tests to comprehensive forensic engineering projects and include:

- Failure investigation
- Materials characterisation
- Materials testing
- Supplier evaluation and audit
- Product inspection
- Materials selection
- Product development
- Certification and training for IPC-A-600 and IPC-A-610

Conekt is also able to provide routine laboratory services over a short or long-term period, with all services being delivered on a confidential basis.

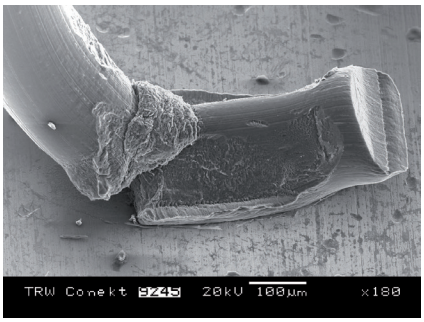
Capabilities and facilities

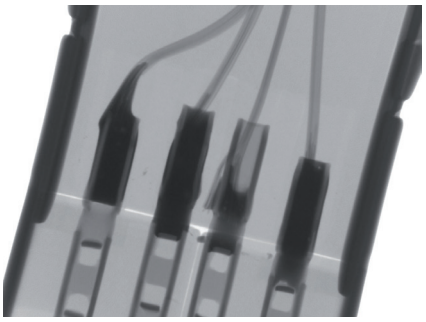
Our team is able to determine root causes of failures by applying a suite of scientific tools and analytical techniques, enabling our clients to identify design and process improvement opportunities.

To support the delivery of Conekt's services we operate a well equipped materials laboratory which can undertake a variety of tasks including:

- SEM (scanning electron microscopy)
- X-Ray radiography
- FTIR (Fourier transform infra red) organics analysis
- Strain gauging for electronic assemblies
- Mechanical testing
- Metallography
- Optical inspection and measurement (eg to IPC-A-610)

Materials analysis is complemented by an on-site prototyping facility so that jigs and fixtures can be made to allow for the testing of even the most unusual shaped products. Conekt's UKAS accredited testing laboratory (No. 0332) also provides a range of testing services (climatic, environmental, vibration and EMC) to support individual test requirements.





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