

FAILURE ANALYSIS AND EXPERTISE

More than just a simple diagnosis, a true driver of competitiveness!



Your expectations

The average cost of quality defects (losses, scraps, repairs) and production downtimes is estimated at between 10 and 15% of manufacturers' turnover.

Yet only one in four companies makes the decision to conduct failure analysis!

You are an industrial manufacturer, an operator, an insurance or a court-appointed expert, you are looking for a recognized and independent specialist in the field of product, component, equipment, structure, system or process failures.

Whether in an industrial setting or as part of a dispute, you are faced with damage or problems related to:

- Fracture, cracking, damage to metal, plastic, polymer, composite, elastomer, ceramic or glass parts
- Corrosion or anti-corrosion protection
- Operating anomaly (noise, vibrations, etc.)
- Abnormal wear
- Malfunction or loss of performance
- Ageing
- Mixing of parts
- Product or process non-conformity
- Leakage or loss of tightness
- Particulate pollution
- Etc.

You need to quickly identify the causes and prevent a recurrence by implementing an emergency action plan and long-term solutions.

Our solutions

As a key partner in failure analysis, Cetim's experts will assist you worldwide throughout the troubleshooting process through to the implementation of the most appropriate solutions.

Our methodologies, based on over 50 years of experience, are designed to meet your specific needs and challenges:

- On-site diagnosis in various environments and possible sample collection
- On-site investigations (NDT, metrology, instrumentation, etc.) and laboratory analysis (physico-chemical, fractography, etc.)
- Tests to reproduce the failure or damage
- Numerical simulation (Finite Elements, CFD, etc.) to understand or recreate damage situations

- Identification of solutions and the provision of a detailed report with documented conclusions, including our technical opinion and recommendations
- Implementation and follow-up of corrective actions
- We offer tailor-made solutions to improve the performance, safety, reliability and availability of your equipment and facilities, in order to ensure their dependability and integrity (Asset Integrity Management – AIM):
 - Residual life assessment
 - Monitoring and supervision
 - Predictive maintenance plan
 - RBI (Risk Based Inspection)
 - Through-life support
 - Etc.
- Training of employees to respond to deviations

Your benefits

With Cetim, an independent expert in identifying the root causes of failures and a technical support for court-supervised and insurance investigations for all industrial sectors, you can take advantage of these failures to reduce your OPEX-CAPEX.

Leveraging on the skills and experience of its **materials and sector specialists**, Cetim, as and Industrial Technical Centre, **will provide you with:**

- A neutral and independent approach to ensure the objectivity of our results
- A comprehensive and multi-skilled solution, which tackles the failure from its source through to the implementation of tangible solutions
- Access to the most advanced technologies, skills and resources: drones and robots, 3D scanning and simulation, non-destructive testing, tomography, etc.
- Solutions to evaluate the residual life, implement predictive maintenance and extend the operating and service life of your pressure equipment and machines: monitoring, industrialized solutions, etc.
- A high level of responsiveness and availability of our teams in France and abroad for your emergencies
- An organization and experts accustomed to insurance or court-supervised investigations

Cetim and failure analysis:

- Over 50 years of experience, leading player in France and the Asia-Pacific **especially in Asia through its Singapore-based subsidiary, Matcor.**
- Over 200 experts worldwide
- More than 1,500 multi-sector investigations carried out every year
- Extensive knowledge of a wide range of materials (metals, polymers, composites, glass, ceramics, etc.)
- Over 25 laboratories with innovative equipment and various accreditations: Cofrac / NF EN ISO 17025
- Over 35 specific Cetim Academy® [training courses](#) dedicated to failure analysis in French and 12 in English
- A turnover of more than 9 million euros



Question and Answer Service

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