T-004 FAILURE DIAGNOSIS WORKSHOP

A comprehensive, hands-on workshop on failure diagnosis that explains the tools available and shows how to apply them in real-life to improve equipment troubleshooting

The course utilises a mixture of lectures and workshops to develop the methodology applied in failure diagnosis and prevention. The lectures cover the basic mechanisms of failure such as fracture, fatigue, corrosion, wear and cavitation; and the information is applied into component groups such as gears, plain and rolling bearings. Participants examine failed samples with key learning points in afternoon workshops to employ their learnings.

Comprehensive lecture notes are provided with the course; these notes include colour photographs of representative failure samples.

This workshop was presented around the world in over 36 countries, with more than 5,000 participants attending the classes over 31 years.

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Who should Attend?

The course is suitable for the following:

- Plant maintenance engineers
- Reliability engineers and operators
- Project and design engineers

Duration

5 days

Course structure and content

A 5-day technical course aimed at responsible managers and engineers:

- Introduction
- Methodology of Root Cause Failure Analysis
- Fracture and Fatigue
- Practical Workshop
  Workshop Review
- Corrosion
- Rolling Bearings
- Practical Workshop
- Workshop Review
- Plain Bearings
- Gears
- Practical Workshop
- Workshop Review
- High-Temperature Materials
- Cavitation
- Practical Workshop
- Workshop Review

- Wear
- Course Examination
- Course Review

Training Outcome:

On completion of the course, you should be able to:

- Identify key features of failed components
- Make judgments about the cause of failure
- Identify the correct remedial steps required to prevent such failures occurring again.

Course Presenter

Sid Radcliff: Sid was employed by Shell for 35 years. He achieved positions of Principal UK Metallurgist; UK Regional Manager, Rotating Equipment; and Global Focal Point for Equipment Failure Diagnosis. Sid's major role was in Failure Diagnosis where he developed a specialist team carrying out a large number of equipment failure investigations, many with substantial financial implications. Sid is a recognised international expert on gas turbines, high-temperature corrosion and component failure diagnosis. He has written a substantial number of papers on these topics and was a regular guest speaker at international conferences and seminars. He has also acted as chairman of UK- and European-sponsored research programmes on high-temperature corrosion.