



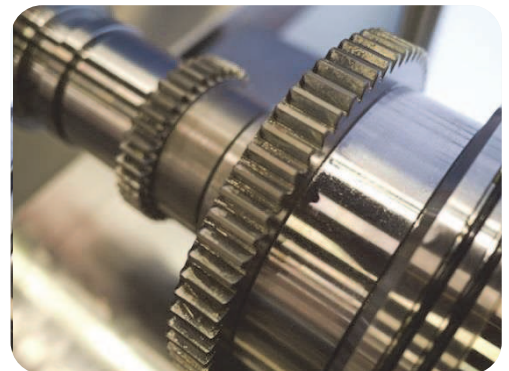
# FAILURE ANALYSIS

*Enhancing the longevity of asset life.*

Asset failure and underperforming assets can severely impact the productivity, profitability and safety performance of an organisation. Where the root cause(s) of a failure is not identified, the failures will keep reoccurring.

Bureau Veritas provides a wide range of services (analysis, studies, expertise and advice) to help clients enhance the longevity of asset life, while ensuring reliability, availability, maintainability and safety:

- Collecting and analysing data associated with the failure;
- Conducting an objective investigation/facilitation of the failure analysis;
- Using the best tools and techniques to accurately identify the root cause of the failure;
- Providing input from subject experts;
- Identifying and evaluating the active deterioration mechanisms and failure modes;
- Advising possible solutions to prevent reoccurring failures;
- Selecting the best technique based on techno-economical factors to detect possible failures; and
- Applying non-destructive testing and metallurgical evaluations.



Analysing failures to determine a root cause requires a structured approach, the right tools and techniques, and a disciplined, knowledgeable team. Typical techniques used for facilitation includes, 5 why, fault tree, fishbone and cause and consequence analysis.

## Key benefits

The proper use of failure analysis provides several benefits:

- Improved reliability and quality;
- Increased profitability;
- Increased customer satisfaction;
- Early identification and elimination of potential failure modes;
- Optimised maintenance plans;
- Prioritised deficiencies;
- Captured organisation knowledge;
- Emphasised problem prevention;
- Captured risks and risk mitigation activities; and
- Changed work culture.

## Related services

- Asset maintenance strategies and plans
- Operating and maintenance procedures
- Fitness for service (FFS) assessments
- Accident/incident investigations
- On site metallurgical analyses
- Metallic material testing
- Plastic and composite materials testing
- Non-destructive testing
- Risk-based inspection (RBI) studies