

Failure Mechanisms

Identifying Mechanisms of Failures

Virtual Classroom

Practical Training Designed & Delivered by Real-World Practitioners



Becoming a go-to resource in the maintenance and reliability field begins with a thorough understanding of how things fail.

The manner in which parts fail is foundational to understanding the correct inspection methods and techniques.

Additionally, a deep understanding of how something fails is paramount to selecting the correct prevention, detection, or mitigation strategy as well as the correct frequency for these activities.

2-day – Online- Practitioner's Session

Core Concepts

- Types of Failures of Most Common Parts and Components
- Specific (Chemical, Electrical, Mechanical, and Process)
 Failure Mechanisms
- Identification, Prevention, and Mitigation Techniques
- Failure Profiles for Common Component Types



What will you learn?

- Understanding what failure modes are and how to identify them
- The difference between a failure mode, failure mechanism, and a failure effect...and why these differences are pertinent
- The most typical <u>mechanical</u> mechanisms for the most typical parts of common industrial asset types and component types
- The most typical <u>electrical</u> mechanisms for the most typical parts of common industrial asset types and component types
- The most typical **chemical** mechanisms for the most typical parts of common industrial asset types and component types

Who is this class for?

- Maintenance Managers
- Reliability Engineers
- Maintenance Engineers
- Operational Leaders
- Maintenance Supervisors
- Operational Supervisors
- Plant Managers
- Reliability Leaders
- Maintenance Planners
- Plant/Facility Engineers



Net Results Inc. presents:

Failure Mechanisms

Identifying the Mechanisms of Failures

Practical Training Designed & Delivered by Real-World Practitioners

Session 1

- Failure Mechanisms
- Failure Modes
- Failure Effects
- Bearing & Gear Failures

3-hour

Session

Monday

Session 2

- Seals
- Couplings
- Motor Winding Insulation

3-hour Session

Tuesday

Session 3

- Pumps
- Compressors
- Transformers

3-hour Session

Wednesday

Session 4

- Breakers & Starters
- Pipes
- Pressure Vessels
- Tanks

3-hour

Session

Thursday

Daily Sessions from 11:00 – 2:00 Central Time

Delivered via Secure Microsoft Teams Meeting

Real World Examples Breakout Exercises

Group Discussions

Case Histories

Plant Reliability is the foundation on which Asset Management is built. The best developed Asset Strategy will prove ineffective if your plant behaves in an unpredictable manner.

Unforeseen failures foster a selfreinforcing reactive maintenance culture.



An understanding of reliability tools & techniques will help break the reactive maintenance cycle.



Meet your Instructor - Andy Page, Ph.D.

- Andy is a Certified Maintenance & Reliability Professional (CMRP) with over 30+ years
 of Physical Asset Management & Operational Field experience in multi-technique
 Condition Monitoring, Maintenance Management, Process Reliability & Improvement,
 Defect Elimination & Facilitation of Staff Training, Development & Mentoring.
- He is recognized internationally as an expert in predictive maintenance and reliability.
 He has spoken at maintenance conferences in several countries, and regularly leads clients through successful implementations of maintenance and reliability improvements.



