



ARP-A

ARP [A] – Reliability Advocate

Asset Reliability Practitioner Training & Certification

The Asset Reliability Practitioner [ARP] "Reliability Advocate " course is intended for maintenance & operations/production managers, graduate engineers, junior reliability engineers, team leaders, maintenance supervisors, spares parts personnel, planners and condition monitoring technicians who need to understand their role and opportunities that exist in the reliability improvement process.

Whether your organization manufactures products or a commodity; provides an essential service, relies on mechanical or electrical equipment, has either fixed plant or mobile equipment, this course will provide a thorough explanation of how and why to improve reliability and equipment performance.

Key Topics are:

- The negative consequences of unreliability
- How to eliminate the sources of systematic defects that cause unreliability
- How to gain management support to resource reliability initiatives
- Strategic maintenance work management as a foundation to reliability
- The process of criticality analysis and optimising maintenance activities
- Using data with reliability analysis tools to identify priorities
- Condition Monitoring technologies and their application
- The job roles and resources required to support a reliability program
- How to break away from reactive maintenance and have time for proactive activity
- Sustaining a long-term culture of reliability

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Detailed topic list:

INTRODUCTION

- Overview of reliability and performance improvement
- What causes equipment to be unreliable or perform poorly
- The relationship between reliability improvement and asset management, operational excellence, TPM and LEAN strategies
- The relationship between reliability and safety

ASSESSING THE BENEFITS

- An overview of the benefits
- What is important to your business?
- What are you good at, where do you need help?
- What do those gaps cost you?

CULTURE CHANGE

- The importance of developing the culture of reliability
- The steps necessary to change individual and an organization's culture
- Being aware of human error and human psychology (e.g. biases)
- The importance of defining who is responsible and accountable, who will provide support, who should be consulted, and who should be kept informed [RASCI]

GAINING SENIOR MANAGEMENT SUPPORT

- Building the business case based on the goals of the business, the identified gaps and the value of closing those gaps.
- How to ensure on-going management support

STRATEGY

- What is involved in developing a strategy
- Setting goals
- The need for a mission/vision statement
- The main components of a "roadmap" strategy
- The need to establish a "steering committee"
- Gaining support across the organization

UNDERSTANDING FAILURE

- Why does equipment fail?
 - Mechanical & Electrical failures
- Understanding equipment "failure patterns"
 - Does all equipment wear out with age?
 - What are "random failures"
 - Early age "infant mortality" failures
- Why is this so important?

DEFECT ELIMINATION

- Overview of the goals of defect elimination
- An overview of each of the main sources of defects and how to eliminate them:
 - Design for reliability, maintainability, operability, and sustainability
 - Procurement for lowest life cycle costs
 - Transport without damage
 - Acceptance testing to reject defective equipment
 - Storage to eliminate degradation
 - Eliminating maintenance induced failures through precision installation, maintenance and commissioning
 - Eliminating operator induced failures
 - Proactive tasks that reduce the likelihood of failure and poor performance

ASSET STRATEGY

- Overview of run-to-failure, condition-based and interval-based maintenance
- The need for the master asset list and bill of materials
- Establishing the asset criticality ranking
- Utilizing Preventive Maintenance Optimization [PMO], Reliability Centered Maintenance [RCM], and/or Failure Modes Effects (and Criticality) Analysis [FMECA] to develop the asset reliability strategy
- Operator driven reliability [ODR]

WORK MANAGEMENT

- The benefits of coordinated, planned, and scheduled work
- An overview of the complete cycle: work requests, planned tasks, kitting, scheduling, managing break-in work, precision job execution (and the need for written procedures), job feedback and improvement
- The opportunity to improve work efficiency (or “wrench time”)
- How planning can minimize time/costs with shutdowns and outages
- The role of the computerized maintenance management system [CMMS] or enterprise asset management [EAM] system

SPARES MANAGEMENT

- The financial and work management benefits of efficient spares management
- Basic introduction to spares selection
- Caring for spares

PRECISION AND PROACTIVE WORK

- What is precision and the importance of precision work
 - The basics of precision shaft and belt alignment, soft foot correction, fastening, machine balancing, and other common mechanical and electrical tasks
 - The importance of developing and following written procedures
 - The importance of precision installation, such as bearings, seals, gears, belts, pumps, electrical equipment, and other equipment
 - The importance of commissioning
- The importance of taking proactive steps to avoid future problems, including precision lubrication, resonance correction, power quality control and keeping equipment and workplaces clean and organized

ROOT CAUSE ANALYSIS

- The importance of conducting RCA/RCFA
- The importance of making the improvements and managing the process
- How to perform RCA/RCFA

CONDITION MONITORING

- Overview of CM principles for mechanical and electrical equipment
- The relationship between CM and planning/scheduling and operations
- A detailed overview of:
 - Vibration analysis
 - Ultrasound
 - Oil analysis
 - Wear particle analysis
 - Electric motor testing
 - Infrared analysis
 - Non-Destructive Testing [NDT]
 - Process/performance monitoring
 - Visual inspections
- The future of CM and predictive analytics

BREAKING OUT OF REACTIVE MAINTENANCE

- What to do if you are trapped in the reactive maintenance cycle

CONTINUOUS IMPROVEMENT

- The principle of and importance of continuous improvement, Kaizen, PDCA, and Lean
- The need to reassess business conditions and what is critical
- Utilizing metrics to measure and improve performance
 - Benchmarking against industry and the facilities “best day”
 - The importance of establishing the right KPIs
 - Suggested metrics and KPIs and the most effective use of KPIs
 - The importance of accurate data collection
- The importance of constant communication
- The need for on-going education, skills and awareness training

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Course Details

Classroom Course:

Duration: 3 days

Classroom courses are held either as public courses or in-house.

Classroom students are given free access to the on-line course for 4 months from enrollment.

A hard copy course manual is supplied at the course.

Certification Exam:

The certification exam is held on the afternoon of the last day of the course.

Distance Learning (on-line) Course:

The course is made up of videos of short studio recordings, totaling 18 hours, presented by Jason Tranter, the renowned Mobius CEO and founder. It is very comprehensive and informative, with audio commentary and animated visual slides.

Students can watch the videos more than once.

A colour bound printed course manual is provided to follow the course and study offline. Students can choose either 4 months study access or Life-Time access (with no expiry date).

Certification Exam:

The certification exam can be taken on-line with supervision of an approved invigilator.

ARP[A] Certification requires:

1. Prerequisite of a minimum of 6 month's verified relevant work experience
2. Completing the whole course either in a classroom or on-line
3. Passing the exam with a minimum of 70%

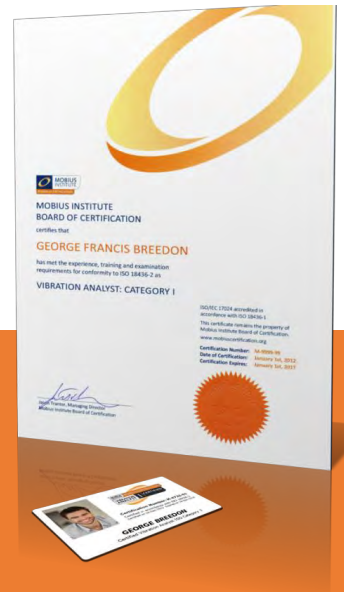
Exam: The exam is 2 hours, closed-book with 60 multiple choice questions.

Highly credentialed certification

The Asset Reliability Practitioner (ARP) certification scheme follows the independent format of the time-tested ISO certification program ISO 18436, and it follows the guidelines defined under ISO/IEC 17024 – the same process followed by the independently accredited Mobius Institute Board of Certification [MIBoC] certification scheme that has already certified tens of thousands of men and women from over 170 countries.

All MIBoC certified reliability practitioners receive personalized logos with their certification number and name for their own professional use. Mobius Institute also maintains a listing of all certified analysts on their website and provides each person with a certification confirmation webpage.

For more information about Mobius Institute's accreditation, please visit www.mobiusinstitute.com/certification.



Learn more about other Classroom, Distance Learning or On-Line training options.

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