ADD ENERGY ACADEMY

M100 Field Maintenance Course

Course Overview

The Add Energy Academy's Field Maintenance course has been designed to provide a foundation level of knowledge across a wide range of skills relating to maintenance and asset management.

From design through to operation of a facility, the course covers the focuses on everything from the identification of the main degradation and failure mechanisms through to 'loss elimination' practices used by maintenance professionals.

Performance Criteria

The course is designed to provide students with the ability to:

- Identify the maintenance work processes that support and control operations
- Reference back-office activities that improve maintenance of facilities in a safe and efficient manner
- Apply, refer, and report risk correctly as needed when plant failure mechanisms and potential equipment degradation appear

Knowledge and Understanding

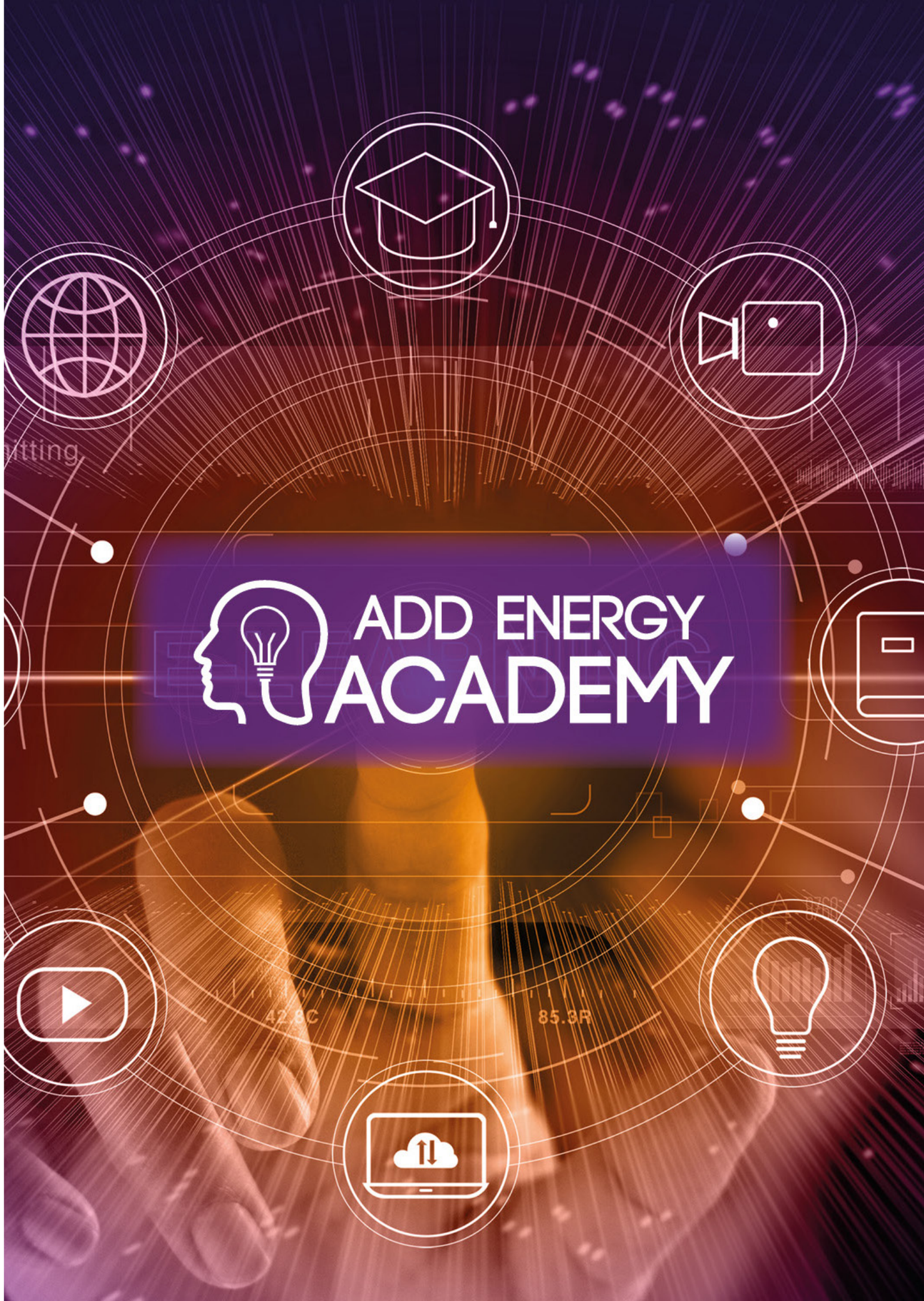
The student will learn:

- What the common international standards are for Maintenance practice
- To recall standard terminology used in Maintenance and supporting activity.
- To describe continuous improvement cycles
- To understand the requirements for planning and scheduling of work
- To understand identification of threats and opportunities, assessment of risk, the methods (RCM, SIL, RBI), and applications in mitigating consequences of failure
- The purpose and importance of closeout, feedback, and analysis
- Supply Chain terminology and theory (including contractor management)
- Change management theory and practice

Who Should Attend

This course is suitable for personnel who have an interface with maintenance disciplines or who are involved in the operation of live asset performance.

The course supports the development of crafts, trades and technical professionals by enhancing knowledge of their role within an operating environment whilst laying a solid foundation of the skills and knowledge required to enhance their work.



Course Outline

The course will cover the topics listed below:

Asset Management
- Relationships to international standards (ISO 55000)

Health, Safety, and the Environment
- Consequences of decisions, process and personal safety, disposal obligations (ISO 10418/ 45000/14000)

Field Maintenance Execution
- Introduction to work management - IPSECA (identify, plan, schedule, execute, complete and analyze) and continuous improvement
- Identification: Root Cause, Inspection, Metallurgy, Materials and Degradation mechanisms (API 571)
- Planning and Prioritization: Batching, campaigns, tools, techniques and risk-assessment
- Scheduling and execution processes: Autonomous care, CLAIR, TPM, 5-why, operations checks
- Close and feedback: continuous improvement, problem-solving, failure classes and codes (ISO 14224)
- Analysis: back-office use of CMMS, 'bad actors' and performance indicators

Risk based methods
- RCM, RBI and SIF, life costs, reliability data and modelling (SAE JA1011)

Managing information
- Data collection enrichment, information and knowledge-based systems (BS/EN 13460)

Assurance
- Overview of technical auditing, use of performance measures (ISO 9000) Inspection (ISO 17020)

Managing threats and opportunities
- Overview of risk (ISO 31000)

Managing contractors
- Outsourcing and collaboration (ISO 44001)

Managing change
- Projects
- Turnarounds
- Change management and MoC
- Humans and equipment Configuration
- Obsolescence (ISO 21500)

Course Structure

The course follows a blended approach to learning, which includes:

Online registration and induction
- The course begins with an online introduction to delegates and instructors, highlighting the course expectations
- Learning agreements are then issued for the delegates to discuss with their line managers

Online assignments
Delegates are given 8 one-hour assignments, which are spread over 6 weeks.

- The assignments are selected from the workshop titles at the course outset and based on the needs of the delegates
- Each assignment consists of the selection of a 'subject matter expert' in their place of work, a short 'discovery' session followed by a summary submission

Note: Alternative independent research can also be used. All submissions are graded, and commentary issued to the delegate.

Workshops
- Students are given 24 hours of direct instruction covering 13 courses. There are a further 11 hours of instructor supported activity

There are two learning options available, condensed and operational:
- **Condensed delivery** - where instructors are mobilized to a learning facility and spend 4.5 working days with delegates
- **Operational delivery** - includes video conferencing to maximize delegate interaction

Each module is designed for content delivery followed by discussions based on the online work. This maximizes the value to the business by including delegates' own experiences across a range of disciplines.

Note: Examples used in the modules are from Rotating and Static mechanical Equipment, Instrumentation, Electrical, Civil, and structural domains.

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