MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

API 618 STANDARD FOR RECIPROCATING COMPRESSOR FOR PETROCHEMICAL INDUSTRY

""Ensuring Safety, Reliability & Compliance in the Specification and Operation of Reciprocating Compressors""

Schedule

Date	Venue	Fees (Face-to-Face)
23 – 25 Feb 2026	Manama, Bahrain	USD 2495 per delegate

Introduction

API 618 sets the global standard for the design, manufacturing, installation, and maintenance of reciprocating compressors used in critical petrochemical and gas processing applications. With increasing focus on reliability, emissions control, and operational safety, understanding the API 618 requirements is essential for engineers and technicians working with high-performance compressors.

This three-day intensive course provides a practical understanding of API 618 and its application in the petrochemical industry. Participants will gain insight into compressor selection, design considerations, component requirements, inspection protocols, and performance monitoring. Real-world case studies and failure analysis examples ensure immediate applicability in day-to-day operations.

Objectives

By the end of this course, participants will be able to:

- Interpret and apply API 618 requirements for reciprocating compressors
- Understand design and material specifications critical to petrochemical service
- Evaluate compressor performance and identify causes of inefficiency or failure
- Ensure proper inspection, installation, and maintenance procedures in line with standards
- Enhance equipment reliability, safety, and regulatory compliance

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

Why Attend

- Gain in-depth knowledge of API 618 and its practical relevance in petrochemical operations
- Learn how to specify, evaluate, and maintain reciprocating compressors with confidence
- Avoid costly equipment failures and unplanned shutdowns through proactive compliance
- Improve communication between operations, engineering, and OEM vendors
- Ensure consistency with international engineering and procurement practices

Target Audience

This program is designed for:

- Mechanical and reliability engineers
- Rotating equipment specialists
- Maintenance and operations personnel
- Engineering managers and project engineers
- Inspectors and technical procurement professionals in oil, gas, and petrochemical sectors

Individual Benefits

Key competencies that will be developed include:

- Application of API 618 clauses and compressor selection criteria
- Identification of design flaws and operational risks in reciprocating compressors
- Understanding of vibration control, pulsation analysis, and lubrication systems
- Failure analysis and preventive maintenance planning
- Specification review and vendor document evaluation

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Improved compliance with international compressor standards (API 618)
- Enhanced operational reliability and mean time between failures (MTBF)
- Reduced downtime and maintenance costs through informed practices
- More effective communication with compressor manufacturers and third-party vendors
- Increased safety and environmental performance across facilities

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings – Overview of API 618 structure, purpose, and compliance drivers
- Case Studies – Failure investigations and lessons learned from field operations
- Workshops – Hands-on exercises in specification, inspection, and troubleshooting
- Peer Exchange – Group discussions on site-specific challenges and solutions
- Tools – API checklists, specification templates, and maintenance planning worksheets

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net

Course Outline

Detailed 3-Day Course Outline

Training Hours: 07:30 AM – 3:30 PM **Daily Format:** 3–4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 – 02:00

Day 1: Overview and Design Requirements of API 618

- Module 1: Introduction to Reciprocating Compressors and API 618 (07:30 – 09:30) • Types and applications of reciprocating compressors • Role of API 618 in design and procurement • Structure and key sections of the standard
- Module 2: Design Parameters and Equipment Ratings (09:45 – 11:15) • Pressure, temperature, and service classifications • Frame types, load ratings, and design margins • Compressor sizing and driver selection
- Module 3: Components, Materials, and Specifications (11:30 – 01:00) • Cylinder, valves, piston rings, packing, and connecting rods • Material selection for petrochemical environments • Vendor documentation and approval requirements
- Module 4: Workshop – Interpreting API 618 Design Clauses (02:00 – 03:30) • Review and discussion of sample compressor specs

Day 2: System Integration and Operational Considerations

- Module 1: Vibration and Pulsation Control (07:30 – 09:30) • Guidelines on pulsation bottles, supports, and dampeners • Vibration limits and field monitoring • Dynamic analysis and compliance with API 618
- Module 2: Auxiliary Systems and Instrumentation (09:45 – 11:15) • Lubrication, sealing, cooling, and control systems • Instrumentation requirements for safety and performance monitoring
- Module 3: Inspection, Testing, and Acceptance Criteria (11:30 – 01:00) • Shop tests, performance verification, and inspection protocols • Tolerances, NDE, hydrotesting, and documentation
- Module 4: Workshop – Evaluating a Compressor Package (02:00 – 03:30) • Analyze sample vendor package for completeness and compliance

Day 3: Operation, Maintenance, and Failure Prevention

- Module 1: Installation, Commissioning, and Alignment (07:30 – 09:30) • Foundation design and grouting • Alignment tolerances and start-up procedures
- Module 2: Condition Monitoring and Troubleshooting (09:45 – 11:15) • Identifying abnormal vibrations, overheating, or pressure issues • Data interpretation and trending techniques
- Module 3: Maintenance Planning and API 618 Compliance (11:30 – 01:00) • Preventive and predictive maintenance approaches • Documentation and recordkeeping aligned with API standards
- Module 4: Certification and Final Wrap-Up (02:00 – 03:30) • Group discussion and recap • Certificate distribution and course close

Certification

Participants will receive a Certificate of Completion in API 618 Standard for Reciprocating Compressor for Petrochemical Industry, confirming their ability to apply and interpret API 618 for safe, compliant, and reliable compressor operation in petrochemical facilities.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
- **Industry-Leading Faculty:** Courses delivered by seasoned professionals with hands-on experience.
- **Practical Insights:** Learn to turn theory into actionable strategies for real-world business impact.
- **Client-Focused Solutions:** Customized programs designed to achieve your organisation’s unique goals.

In-House / Customized Training Interested in running this course for your team? Please contact us:	TEL: **+601116373203**	EMAIL: **info@mawaevents.net**

MAWA EVENTS

Address: No. 857, Block A2. Leisure Commerce Square - No 9., 46150 Petaling Jaya, Selangor, Malaysia

Phone: +601116373203 | **Email:** info@mawaevents.net