

TRAINING TITLE

OIL & GAS SHUTDOWN VALVES

Training Duration

5 day

Training Venue and Dates

Ref. No. RM203	Oil & Gas Shutdown Valves	5	18-22 Aug. 2025	\$5,500	DUBAI, UAE
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In any of the 4 or 5-star hotels. The exact venue will be informed later.

Training Fees

- \$5,500 per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Lunch

Training Certificate

Define Management Consultants Certificate of course completion will be issued to all attendees.

TRAINING DESCRIPTION

In the oil and gas industry, shutdown valves are critical safety components designed to isolate sections of a process system during emergencies, prevent the escalation of hazardous events, and ensure the protection of personnel, equipment, and the environment. This 5-day intensive course is designed to provide participants with comprehensive knowledge of shutdown valves, covering their design, operation, maintenance, and integration into safety systems.

TRAINING OBJECTIVES

Toward the end of the session, participants will be able to understand:

- Understand the function, design, and types of shutdown valves used in oil and gas operations.
- Learn about industry standards and regulations governing the use of shutdown valves.
- Develop practical skills for the operation, maintenance, testing, and troubleshooting of shutdown valves.
- Gain insights into integrating shutdown valves into safety instrumented systems (SIS).
- Enhance their ability to perform risk assessments and respond effectively during emergency situations.

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WHO SHOULD ATTEND?

- Maintenance and reliability engineers
- Instrumentation and control engineers
- Process and safety engineers
- Operators and technicians involved in valve maintenance and operation
- Supervisors and managers overseeing oil and gas operations
- Safety professionals responsible for hazard mitigation

TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions and motivating everybody to find the right answers. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

COURSE PROGRAM:

Day 1: Introduction to Shutdown Valves

- Overview of shutdown valves and their role in the oil and gas industry.
- Types of shutdown valves: Emergency Shutdown Valves (ESDVs), Blowdown Valves (BDVs), and other safety-related valves.
- Standards and regulations (API, ISO, ASME, IEC 61508/61511, etc.).
- Valve components: Actuators, positioners, and control systems.
- Materials and construction for harsh oil and gas environments.
- Interactive Q&A and discussions.

Day 2: Shutdown Valve Operation and Control Systems

- Valve actuation mechanisms (pneumatic, hydraulic, electric).
- Integration with Distributed Control Systems (DCS) and Safety Instrumented Systems (SIS).

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- Fail-safe modes and operational reliability.
- Functional testing of shutdown valves.

Day 3: Maintenance and Troubleshooting

- Preventive and corrective maintenance strategies.
- Common issues in shutdown valves: Sticking, leaks, actuator failures.
- Inspection techniques (visual, ultrasonic, etc.).
- Disassembly, inspection, and reassembly.
- Troubleshooting exercises using diagnostic tools.
- Maintenance scheduling and record-keeping best practices.

Day 4: Testing, Calibration, and Certification

- Testing protocols: Hydrostatic, leak testing, and functional testing.
- Calibration of actuators and positioners.
- Safety considerations during testing.
- Simulation exercises: Testing and calibration in controlled scenarios.
- Regulatory compliance and certification requirements.
- Open discussion on challenges in testing and calibration.

Day 5: Safety and Emergency Preparedness

- Role of shutdown valves in process safety.
- Risk assessment and Hazard and Operability Study (HAZOP).
- Emergency response planning and drills.
- Emergency shutdown simulation.
- Course review and Q&A.
- Assessment and certification distribution.

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NOTE:

Pre-& Post Tests will be conducted.

Case Studies, Group Exercises, Group Discussions, Last Day reviews, and assessments will be carried out.

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