

TRAINING TITLE

CHEMICAL HANDLING AND INJECTION – BASICS

Training Duration

5 day

Training Venue and Dates

Ref. No. HS113	Chemical handling and injection - Basics	5	01-05 Sep. 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

Chemical handling and injection play a critical role in oil and gas operations, ensuring the integrity of equipment, enhancing production efficiency, and preventing operational issues such as corrosion, scaling, and emulsion formation. This 5-day introductory course is designed to provide participants with a solid foundation in the principles, practices, and safety requirements of chemical handling and injection systems.

TRAINING OBJECTIVES

Upon the successful completion of this course, participants will be able to:-

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

1. Understand the fundamentals of chemical handling and injection in oil and gas operations.
2. Recognize and safely handle the different types of chemicals used in the industry.
3. Operate and maintain basic chemical injection systems.
4. Apply safety protocols and industry standards for chemical handling.
5. Troubleshoot common challenges in chemical injection systems and optimize their performance.

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WHO SHOULD ATTEND?

This course is ideal for personnel involved in chemical handling, injection system operation, and maintenance, including:

- Operators
- Technicians
- Production Engineers
- Maintenance Personnel
- HSE (Health, Safety, and Environmental) Professionals
- Field Supervisors
- New Entrants and Trainees in oil and gas operations

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: Fundamentals of Chemical Handling and Injection

- Introduction to chemical handling and injection in oil and gas operations.
- Importance of chemical injection for production efficiency, asset integrity, and flow assurance.
- Overview of commonly used chemicals: corrosion inhibitors, scale inhibitors, demulsifiers, biocides, and surfactants.
- Safety fundamentals in chemical handling: PPE, hazard identification, and safe work practices.
- Key regulations and standards related to chemical handling and injection.

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Day 2: Chemical Injection Systems Overview

- Components of a chemical injection system: pumps, tanks, valves, and distribution networks.
- Types of injection systems: continuous injection, batch treatment, and automated injection systems.
- Design considerations for chemical injection systems: flow rates, pressure, and compatibility.
- Overview of dosing methods and control systems.
- Monitoring chemical injection performance: key indicators and parameters.
- Identifying and understanding chemical injection system components.

Day 3: Safe Chemical Handling Practices

- Safe transportation, storage, and disposal of chemicals.
- Understanding Safety Data Sheets (SDS) and labeling requirements.
- Handling emergencies: chemical spills, leaks, and exposure incidents.
- Environmental considerations: minimizing waste and reducing environmental impact.

Day 4: Chemical Selection and Optimization

- Criteria for selecting chemicals for specific applications.
- Laboratory testing and field trials to determine chemical effectiveness.
- Understanding the compatibility of chemicals with pipelines, equipment, and fluids.
- Optimizing chemical dosage: achieving desired results with minimal wastage.
- Troubleshooting injection issues: clogging, underdosing, and overdosing.
- Developing a basic chemical injection plan for a given scenario.

Day 5: Maintenance, Troubleshooting, and Future Trends

- Routine maintenance of chemical injection systems: cleaning, calibration, and inspections.
- Common system failures and troubleshooting techniques.
- Best practices for prolonging equipment life and ensuring consistent performance.
- Emerging technologies in chemical handling and injection: smart systems and automation.
- Sustainability trends: eco-friendly chemicals and reduced chemical dependency.

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- Course review, Q&A, and certification distribution.

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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