



## Hot Tapping and Plugging in Petroleum Industries

| Date                | Venues | (\$)Fees | Book your seat               |
|---------------------|--------|----------|------------------------------|
| 22 Dec -26 Dec 2024 | Cairo  | 2900     | <a href="#">Register Now</a> |

### Introduction

This interactive, applications-driven 5-day training seminar will highlight the added value that Hot Tapping and Plugging practices advised by API standards can offer to support engineers and technicians working in pipe lines installation and maintenance. It will show how to safely use the equipment and apply the modern techniques in successful hot tapping and plugging a pipe line.

The training seminar will emphasize the application of related recommended API practices for pipe lines hot tapping and plugging, focus on proper equipment selection, retrieval and interpretation of data from equipment manuals, preparatory actions prior to process execution, and safely carry out the hot tapping and plugging process.

#### This training seminar will feature:

- Discussions on the benefits and applications of hot tapping and plugging process
- The importance of proper selection of hot tapping and plugging equipment and understanding the related API recommended practice
- The detailed procedure of pipelines hot tapping and plugging, and the specific safety precautions
- Focusing on in-service hot tapping emergency action plan

### Objectives

#### By the end of this training seminar, participants will be able to:

- Outline the economic and environmental benefits of pipelines hot tapping and plugging
- Retrieval and interpretation of data and procedure from hot tapping and plugging equipment manuals
- Properly select the hot tapping and plugging equipment for specific applications
- Describe the procedure of hot tapping and plugging
- Apply the safety precautions in conducting the hot tapping and plugging process
- Apply H&S instruction when conducting pipelines hot tapping and plugging process

### Training Methodology

This training seminar will utilise a variety of proven adult learning techniques to ensure maximum understanding, comprehension and retention of the information presented. The daily seminar sections will be highly interactive and participative. It also involves detailed discussions accompanying the presentation of videos showing the equipment, the safety precautions, and the whole procedure of pipe lines' hot tapping and plugging. Delegates are strongly encouraged to bring and analyse data from their own work domain; this adds greater relevancy to the content.

### Organizational Impact

When a company sends their employees to attend this particular seminar, it expects that following benefits will be gained:

- Optimization of delegates` usage of tools, equipment, and materials while maintaining the organization` oil and gas pipelines.
- Adding a set of delegates` skills that reflect positively on organization activities and reputation.
- Improved operational hot tapping and plugging` equipment integrity and performance.
- Minimizing hot tapping and plugging failures as a result of delegates` enhanced ability to risk analyses.
- Better specification of new and replacement of old elements of oil and gas piping system.
- Enhancing delegates` abilities to act properly in related oil and gas piping hazardous situations.
- Better safety record.

## **Personal Impact**

When a company employee attends this particular seminar, he expects to add to his underpinning knowledge and practical experience the following:

- Better grasp of oil and gas pipelines maintenance and instrumentation on incident prevention.
- Improved confidence when facing oil and gas pipelines related hazardous safety issues.
- Enhanced confidence and ability to select the appropriate hot tapping and plugging thereby improving reliability and personal profile to senior management.
- Better awareness of his job-related recent technical developments and a great deal of personal satisfaction will be achieved.
- Better daily work performance as a result of deeper understanding of the technologies and operation principles of hot tapping and plugging systems.
- Enhancing his self-learning ability.
- Achieving the required level of technical knowledge and skills that will be used effectively in their professional duties.
- Deep understanding of H&S international regulations & requirements related to hot tapping and plugging.

## **Who Should Attend?**

**This training seminar is suitable to a wide range of professionals but will greatly benefit:**

- Pipelines Project managers
- Mechanical Maintenance Engineers
- Professionals in Pipelines Installations and Maintenance
- Engineers who are planning for hot tapping and plugging process
- Technicians involved in Pipelines Construction, Maintenance and Inspection
- Welding and Pipeline Professionals
- Safety Engineers and Professionals

## **SEMINAR OUTLINE**

### **DAY 1**

#### **Oil and Gas Pipelines**

- Introduction: Oil and gas pipelines types and standards
- Layout of oil and gas pipelines: Components and relevant functions
- Glossary of terms used in pipelines hot tapping and plugging operations
- Pipelines construction: Site preparation – Pipes transportation – Ground trenching – Pipes laying and covering – Pipes bending – Pipes welding and joint coating – Pipes cleaning – Pipeline` inspection and testing

## DAY 2

### Pipelines Hot Tapping and Plugging

- The concept of hot tapping and plugging
- Hot tapping and plugging applications: Branch connection attachment – Monitor installation – Redirect flow – Defects removal - Line stopping
- Factors affecting the hot tapping and plugging process: Pipe size – Distance flanges – Distance to welded portions – Distance to valves
- Hot tapping orientation: Standard and non-standard
- Hot tapping and plugging standards: API and ASME related standards

## DAY 3

### Hot Tapping and Plugging Equipment

- Types: Hand – Hydraulic – Electric – Pneumatic
- Equipment basic data and considerations
- Equipment design features and construction
- Examples of hot tapping equipment: Description, specifications, features and fitting applications of the tapping machines – the sandwich valve
- Branch connection fitting
- Thread O-ring flanged fitting
- Spherical three-way Tee
- Composite warp
- The plugging machine
- The lock-up ring flanges & plugs
- Wedge-lock pipe plug
- Equipment test
- Freeze plugging

## DAY 4

### Hot Tapping and Plugging Procedure

- Cases where hot tapping is prohibited
- Selection of hot tap location
- Design considerations
- Preparatory work to hot tapping
- Hot tapping operation management
- Technicians` qualifications and skills
- Hot tapping of lines pipes
- Hot tapping basic requirements and operations
- Welding preparation, procedure, and inspection
- Hot tapping machine installation
- Hot tapping operations and work completion
- Hot tapping check lists
- Line stops: Types – Layout – Operation – Completion plug

## DAY 5

### Hot Tapping and Plugging Hazards and Risk Reduction

- In-service hot tapping emergency action plan
- Hot tapping features and relevant hazards
- Various hazards : Physical – Thermal – Chronic – Toxic – Combustible

- Hazards risk reduction
- Case studies: Hot tapping economy – Hot tapping hazards



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