Advanced Piping System Repair and Welding Techniques Course

2027 □□□□ 6 – 2
Online



Advanced Piping System Repair and Welding Techniques Course

Ref: 20222965_e2023 Duration: Online Fees: 2700 GBP

Course Description

This comprehensive 1-week course covers advanced techniques for repairing and maintaining industrial piping systems, including specialized welding methods. Participants will learn both theoretical concepts and hands-on skills for diagnosing, repairing, and preventing common piping issues. The course emphasizes practical application of industry-standard repair techniques and welding processes.

Learning Objectives

- Master various piping repair methods including welding, mechanical coupling, and composite wrapping
- Develop proficiency in advanced welding techniques for pipe repair and modification
- Learn to diagnose and address common piping system failures and leaks
- Understand safety protocols and best practices for piping system maintenance
- Gain hands-on experience with industry-standard tools and equipment

Course Modules

Day 1: Introduction to Piping Systems and Repair Fundamentals

- Overview of industrial piping systems and common materials
- Piping system failure modes and causes
- Basic repair techniques and tool familiarization
- Safety procedures for piping repair and welding

Day 2: Advanced Welding Techniques for Pipe Repair

- SMAW Shielded Metal Arc Welding for pipe repair
- GMAW Gas Metal Arc Welding applications in piping systems
- GTAW Gas Tungsten Arc Welding for precision repairs
- Pipe welding positions and techniques

Day 3: Non-Welding Repair Methods

- Mechanical coupling and flange repair techniques
- Composite wrap systems for pipe reinforcement
- Epoxy-based repairs for small leaks and pinholes
- Pipe freezing methods for live repairs



Day 4: Specialized Repair Techniques

- Hot tapping and line stopping procedures
- In-service welding considerations and methods
- Pipe lining and relining technologies
- Corrosion prevention and mitigation strategies

Day 5: Quality Control and Project Management

- Non-destructive testing methods for repair verification
- Documentation and reporting for piping repairs
- Project planning and execution for major repair operations
- Case studies and practical problem-solving exercises

Practical Wins for Participants

- Ability to perform a wide range of piping repairs using both welding and non-welding methods
- Improved troubleshooting skills for diagnosing and addressing piping system issues
- Enhanced safety awareness and ability to implement best practices in repair operations
- Increased efficiency in planning and executing piping system maintenance projects

