

€ TRAINING

Welding Technology



29 September -
3 October 2024
Cairo (Egypt)



Welding Technology

REF: O411 DATE: 29 September - 3 October 2024 Venue: Cairo (Egypt) - Fee: 4465 Euro

Introduction:

The Welding Technology training program provides participants with comprehensive knowledge and practical skills in welding processes, techniques, and applications. This program focuses on imparting expertise in various welding methods, safety practices, and quality assurance measures essential for efficient and effective welding operations.

Program Objectives:

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

- Gain proficiency in different welding techniques.
- Understand welding metallurgy and materials.
- Learn safety procedures and standards in welding.
- Develop skills in quality control and inspection.
- Apply welding principles to real-world applications.

Target Audience:

- Welders and welding technicians.
- Engineers and quality assurance professionals.
- Manufacturing and construction personnel.
- Employees interested in advancing their welding skills.

Program Outline:

Unit 1:

Introduction to Welding:

- Overview of Welding Processes.
- Welding Safety and Personal Protective Equipment PPE.
- Welding Symbols and Codes.
- Welding Metallurgy Basics.

- Introduction to Welding Equipment.

Unit 2:

Welding Techniques:

- Gas Metal Arc Welding GMAW/MIG.
- Gas Tungsten Arc Welding GTAW/TIG.
- Shielded Metal Arc Welding SMAW/Stick.
- Flux-Cored Arc Welding FCAW.
- Submerged Arc Welding SAW.

Unit 3:

Welding Metallurgy and Materials:

- Properties of Metals and Alloys.
- Heat Affected Zone HAZ and Distortion.
- Welding Defects and Remedies.
- Material Selection for Welding Applications.
- Welding Dissimilar Metals.

Unit 4:

Welding Quality Control and Inspection:

- Non-Destructive Testing NDT Techniques.
- Visual Inspection and Welding Defects.
- Welding Procedure Specifications WPS.
- Quality Assurance in Welding Processes.
- Documentation and Reporting.

Unit 5:

Advanced Welding Applications:



- Automated and Robotic Welding Systems.
- Welding in Specialized Environments Underwater Welding.
- Welding for Aerospace and Automotive Industries.
- Welding for Structural Fabrication.
- Future Trends in Welding Technology.