



# **Advanced Onsite Welding Techniques and Inspection**



**AGILE LEADERS**  
Training Center



## **Advanced Onsite Welding Techniques and Inspection**

### **Course Overview**

The course aims to enhance the skills and knowledge of welders and engineers through hands-on, practical experience in various welding techniques. It covers essential topics such as welding training programs, welder improvement courses, and onsite welding workshops. Participants will gain in-depth knowledge of advanced welding techniques, safety protocols, and the latest industry standards. By attending this course, participants will learn to execute welding procedures precisely, ensuring compliance with welding standards and codes. The course also offers specialized welding seminars catering to specific industry needs, making it a valuable resource for professionals seeking welding certification training and industrial welding education. The combination of practical training, expert instruction, and real-world applications ensures that participants leave with the skills necessary to excel in their field.

### **Target Audience**

- Welding Engineers
- Maintenance Technicians
- Industrial Welders
- Production Supervisors
- Quality Control Inspectors
- Professionals seeking Welding Certification Training

### **Targeted Organizational Departments**

- Maintenance and Repair Departments
- Quality Assurance and Control
- Production and Manufacturing Units
- Engineering and Design Departments
- Health, Safety, and Environmental HSE Departments

## Targeted Industries

- Manufacturing
- Oil & Gas
- Construction
- Automotive
- Aerospace
- Shipbuilding
- Energy and Utilities

## Course Offerings

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

- Develop and apply advanced welding techniques and safety measures
- Perform welding procedure specifications with high accuracy
- Improve welding quality control processes
- Execute welding certification training for professional development
- Utilize welding technology training for better productivity
- Implement welding standards and codes compliance in daily operations
- Master practical welding skills development through onsite workshops

## Training Methodology

The course utilizes interactive training methods to ensure an engaging and effective learning experience. Participants will take part in hands-on practical workshops, case studies, and group work sessions designed to simulate real-world welding challenges. Specialized welding seminars will provide detailed instruction on topics such as welding stainless steel, aluminium, and advanced welding techniques. Regular feedback sessions will be conducted to assess progress and offer personalized guidance. The training also includes welding technology and welding quality control exercises to ensure that participants not only learn but also apply the knowledge gained in practical settings.

## Course Toolbox

- Comprehensive framework covering welding procedures and techniques
- Checklists for welding defect prevention and repair
- Templates for welding procedure specification and development



## Course Agenda

### Day 1: Introduction to Metalwork

- **Topic 1:** Overview of Metalwork: Concepts and Principles
- **Topic 2:** Introduction to Welding Engineering Services
- **Topic 3:** Understanding Metal Properties and Their Applications
- **Topic 4:** Introduction to Welding Standards and Codes Compliance
- **Topic 5:** Practical Session: Hands-on Training in Metalwork
- **Topic 6:** Basics of Metal Cutting Techniques
- **Reflection & Review:** Day 1 Learnings and Q&A

### Day 2: Metal Cutting and Shaping Techniques

- **Topic 1:** Metal Cutting Techniques: Tools and Methods
- **Topic 2:** Advanced Metal Shaping & Forming Techniques
- **Topic 3:** Welding Procedure Specification: Development and Implementation
- **Topic 4:** Selection and Application of Welding Consumables
- **Topic 5:** Practical Session: Metal Cutting and Shaping Techniques
- **Topic 6:** Practical Application: Metalwork in Welding Context
- **Reflection & Review:** Day 2 Learnings and Practical Feedback

### Day 3: Introduction to Welding

- **Topic 1:** Fundamentals of Welding: Techniques and Safety
- **Topic 2:** Shielded Metal Arc Welding SMAW: Basics and Applications
- **Topic 3:** Electrode Types and Standards in Welding
- **Topic 4:** Welding Carbon Steels and Cast Irons: Best Practices
- **Topic 5:** Practical Session: Introduction to Welding Techniques
- **Topic 6:** Welding Safety: Best Practices and Protocols
- **Reflection & Review:** Review of Welding Fundamentals



## Day 4: Advanced Welding Techniques

- **Topic 1:** Gas Metal Arc Welding GMAW: Parameters and Best Practices
- **Topic 2:** Gas Tungsten Arc Welding GTAW: Techniques and Safety
- **Topic 3:** Oxy-Gas Welding and Brazing: Processes and Applications
- **Topic 4:** Submerged Arc Welding SAW: Industrial Applications
- **Topic 5:** Practical Session: Advanced Welding Techniques
- **Topic 6:** Maintenance and Hardfacing Applications in Welding
- **Reflection & Review:** Advanced Techniques Summary and Q&A

## Day 5: Welding Applications

- **Topic 1:** Pipe Welding: Methods and Challenges
- **Topic 2:** Welding Stainless Steels: Techniques and Considerations
- **Topic 3:** Welding Aluminum and Its Alloys: Specific Techniques
- **Topic 4:** Welding Engineering Services: Real-World Applications
- **Topic 5:** All-Day Practical Session: Welding Applications
- **Topic 6:** Quality Control During Welding Projects
- **Reflection & Review:** Daily Practice and Key Takeaways

## Day 6: Advanced Welding Applications

- **Topic 1:** Pre-Heating and Post-Weld Heat Treatments: Procedures
- **Topic 2:** Welding Positions and Parameters: Optimizing Quality
- **Topic 3:** Onsite Welder Improvement Training: Practical Techniques
- **Topic 4:** Welding Defects Prevention and Repair: Techniques
- **Topic 5:** All-Day Practical Session: Advanced Welding Applications
- **Topic 6:** Maintenance of Welding Equipment and Power Sources
- **Reflection & Review:** Key Learnings from Advanced Applications

## Day 7: Welding Inspection and Quality Control 1

- **Topic 1:** Welding Inspection: Techniques and Standards
- **Topic 2:** Quality Control in Welding: Best Practices
- **Topic 3:** Welding Defects: Identification and Prevention
- **Topic 4:** Introduction to Welding Procedure Qualification Records PQR
- **Topic 5:** Practical Session: Welding Inspection and Quality Control
- **Topic 6:** Welding Engineering Services: Ensuring Compliance
- **Reflection & Review:** Inspection and Quality Control Summary



## Day 8: Welding Inspection and Quality Control 2

- **Topic 1:** Advanced Welding Inspection Techniques
- **Topic 2:** Certification Preparation for Welding Inspectors
- **Topic 3:** Welding Engineering Services: Testing Procedures
- **Topic 4:** Determination of Weld Groove Type and Parameters
- **Topic 5:** Practical Session: Advanced Quality Control Techniques
- **Topic 6:** Welding Standards and Codes Compliance in Practice
- **Reflection & Review:** Advanced Inspection and Quality Feedback

## Day 9: Project: Practical Welding Applications

- **Topic 1:** Project Planning: Welding Applications
- **Topic 2:** Execution of Welding Techniques: Onsite Applications
- **Topic 3:** Quality Control during Welding Projects
- **Topic 4:** Advanced Welding Techniques in Project Settings
- **Topic 5:** All-Day Practical Session: Welding Project Implementation
- **Topic 6:** Evaluation of Welding Project Outcomes
- **Reflection & Review:** Project Execution and Feedback

## Day 10: Final Assessment and Closing

- **Topic 1:** Review of Welding Techniques and Applications
- **Topic 2:** Final Theoretical Evaluation and Feedback
- **Topic 3:** Welding Certification Preparation
- **Topic 4:** Review of Welding Standards and Codes Compliance
- **Topic 5:** Course Conclusion: Certification and Next Steps
- **Reflection & Review:** Final Reflections and Course Wrap-Up



## **How This Course is Different from Other Welding Training Courses**

This welding course is unique because it takes a hands-on approach to welding training. Instead of just focusing on theory, the course includes practical workshops and onsite sessions, allowing participants to apply what they've learned right away. The course also covers advanced welding techniques, quality control, and specialized seminars tailored to industry needs. Additionally, participants receive personalized feedback and practical assessments, making it an immersive learning experience that prepares them for success in the welding industry.



# Training Course Categories



**Agile PM and Project Management Training Courses**



**Certified Courses By International Bodies**



**Communication and Public Relations Training Courses**



**Data Analytics Training and Data Science Courses**



**Environment & Sustainability Training Courses**



**Finance and Accounting Training Courses**



**Governance, Risk and Compliance Training Courses**



**Human Resources Training and Development Courses**



**IT Security Training & IT Training Courses**



**Leadership and Management Training Courses**



**Legal Training, Procurement and Contracting Courses**



**Maintenance Training and Engineering Training Courses**



# Training Course Categories



**Marketing, Customer Relations, and Sales Courses**



**Occupational Health, Safety and Security Training Courses**



**Personal & Self-Development Training Courses**



**Quality and Operations Management Training Courses**



**Secretarial and Administration Training Courses**



# Training Cities



**Abu Dhabi - UAE**



**Accra - Ghana**



**Al Jubail - Saudi Arabia**



**Amman - Jordan**



**Amsterdam - Netherlands**



**Athens - Greece**



**Baku - Azerbaijan**



**Bali - Indonesia**



**Bangkok - Thailand**



**Barcelona - Spain**



**Berlin - Germany**



**Cairo - Egypt**



**Cape town - South Africa**



**Casablanca - Morocco**



**Chicago - USA**



**Doha - Qatar**



# Training Cities



**Dubai - UAE**



**Frankfurt - Germany**



**Geneva - Switzerland**



**Istanbul - Turkey**



**Jakarta - Indonesia**



**Johannesburg - South Africa**



**Kuala Lumpur - Malaysia**



**Kuwait - Kuwait**



**Langkawi - Malaysia**



**Lisbon - Portugal**



**London - UK**



**Madrid - Spain**



**Manama - Bahrain**



**Marbella - Spain**



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**Munich - Germany**



**Muscat - Oman**



**Nairobi - Kenya**



**Nice - France**



**Paris - France**



**Phuket - Thailand**



**Porto - Portugal**



**Prague - Czech Republic**



**Riyadh - Saudi Arabia**



**Rome - Italy**



**San Diego - USA**



**Seoul - South Korea**



**Sharm El-Sheikh - Egypt**



**Singapore - Singapore**



**Tashkent - Uzbekistan**



**Tbilisi - Georgia**



# Training Cities



**Tokyo - Japan**



**Trabzon - Turkey**



**Vienna - Austria**



**Zanzibar - Tanzania**



**Zoom - Online  
Training**

# WHO WE ARE

Agile Leaders is a renowned training center with a team of experienced experts in vocational training and development. With 20 years of industry experience, we are committed to helping executives and managers replace traditional practices with more effective and agile approaches.

## OUR VISION

We aspire to be the top choice training provider for organizations seeking to embrace agile business practices. As we progress towards our vision, our focus becomes increasingly customer-centric and agile.

## OUR MISSION

We are dedicated to developing value-adding, customer-centric agile training courses that deliver a clear return on investment. Guided by our core agile values, we ensure our training is actionable and impactful.

## WHAT DO WE OFFER

At Agile Leaders, we offer agile, bite-sized training courses that provide a real-life return on investment. Our courses focus on enhancing knowledge, improving skills, and changing attitudes. We achieve this through engaging and interactive training techniques, including Q&As, live discussions, games, and puzzles.



**AGILE LEADERS**  
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