BLACKBIRD FOR TRAINING

6-G Welding Certification

18 – 22 April 2027
Online



6-G Welding Certification

Ref: 3254973_183269 **Date:** 18 – 22 April 2027 **Location:** Online **Fees:** 2700 GBP

Introduction

The 6-G Welding Certification course is designed to provide intermediate-level mechanical professionals with a strong theoretical foundation in welding processes, safety standards, weld joint preparation, defect identification, and certification requirements, focusing specifically on the complex 6-G position. This theoretical course prepares participants for practical exams by covering all essential aspects of 6-G welding through structured modules, discussions, and interactive activities.

Course Objectives

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

- Understand the fundamentals and challenges of 6-G welding positions
- Identify different welding techniques and joint configurations used in 6-G
- Recognize common weld defects and understand inspection methods
- Apply safety standards and welding codes related to certification
- Prepare for the 6-G welding certification e.g., ASME Section IX or AWS standards

Course Outlines

Day 1: Introduction to Welding and 6-G Concepts

- Overview of welding processes SMAW, GTAW, GMAW, FCAW
- Definition and importance of the 6-G welding position inclined pipe joint
- Joint types and bevel preparations for pipe welding
- Tools and equipment used in pipe welding
- Welding codes and standards overview ASME, AWS, ISO

Day 2: Materials, Electrodes, and Welding Techniques

- Types of materials used in pipe welding carbon steel, stainless steel, etc.
- Electrode selection and classification
- Welding symbols and reading blueprints
- Heat-affected zones and metallurgy basics
- Preheating, interpass, and post-weld heat treatment PWHT



Day 3: Weld Defects, Quality Control, and Inspection Methods

- Common weld defects in 6-G positions cracks, porosity, undercut, etc.
- Causes and prevention of welding defects
- Non-destructive testing NDT methods: VT, RT, UT, PT, MT
- Understanding weld acceptance criteria
- Documentation and weld inspection reports

Day 4: Welding Safety, Procedures, and Certification Preparation

- Safety standards and PPE in welding environments
- Welding Procedure Specifications WPS and Procedure Qualification Records PQR
- Welder Performance Qualification WPQ process
- Review of certification requirements and assessment procedures
- Activity: Welding Blueprint Interpretation Challenge Participants work in small groups to interpret and analyze a complex welding drawing

Day 5: Review, Troubleshooting, and Q&A

- Troubleshooting weld issues specific to the 6-G position
- Review of key topics from Days 1-4
- Tips for passing the 6-G welding certification exam
- Open Q&A session with industry expert
- Course wrap-up and knowledge check short quiz or discussion

Why Attend this Course: Wins & Losses!

- Gain a complete understanding of the 6-G welding position — or continue struggling with the most technically challenging weld configuration in industry
- Learn how to identify and prevent common weld defects — or risk costly rework, failures, and rejected certifications
- Understand safety standards and certification codes — or face compliance issues and safety violations
- Prepare with confidence for ASME or AWS certification exams — or remain unqualified for key industry roles
- Enhance your credibility as a welder or inspector — or fall behind in a competitive job market

Conclusion

This course provides a thorough theoretical framework for professionals aiming to achieve 6-G welding certification. From foundational knowledge and inspection methods to safety practices and exam preparation, participants will leave fully equipped to approach certification with confidence and clarity.

Whether working in oil and gas, manufacturing, or construction, the course offers valuable insights and skills for advancing in welding-related careers.

