

## 6-G Welding Certification

UK Training

# PARTNER



## 6-G Welding Certification

### 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

UK Training

**PARTNER**

A graphic illustration of a chessboard with several chess pieces. A large gold king piece is in the foreground, with a silver pawn and a silver knight behind it. In the background, there are concentric circles emanating from a point, suggesting a signal or a strategic move.

### **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.**

UK Training

**PARTNER**

