

# **UNDERSTANDING & APPLICATION OF ASME IX (WELDING QUALIFICATIONS)**



**WE104  
Welding  
Engineering**

**COURSE TITLE**

**UNDERSTANDING & APPLICATION OF ASME IX (WELDING QUALIFICATIONS)**

**COURSE DATE/ VENUE**

05<sup>th</sup>-09<sup>th</sup> May

Madrid, Spain

**COURSE REFERENCE**

WE104

**COURSE DURATION**

05 Days

**DISCIPLINE**

Welding Engineering

**COURSE INTRODUCTION**

This 5 days course, focuses on imparting a comprehensive understanding of 'stated' and 'implied' requirements (i.e. Content and Intent) of the code. The participants would gain insight into Section IX to facilitate interpreting, understanding and complying with the Code rules. The program covers a quick review of common welding processes, their merits and demerits, detailed methodology of Procedure and Performance Qualifications, and step-by-step explanation for preparation of WPS, PQR and WPQ records. The course covers detailed Road-maps for the review of welding qualifications for different Processes, and extensive case studies for application of the Road Maps

Attendees will come away from this course with a clear understanding of the mechanics of using Section IX and how code requirements are to be addressed. Emphasis will be placed on writing welding procedures, prepare welding specifications and welder qualifications. Participants will also review Supplier made Procedures, scrutinize and audit sub-contractor procedures as well as the Welder Qualifications.

## **COURSE OBJECTIVE**

### **Upon successful completion of this course, the delegates will be able to:**

- ✓ Recognize the purpose and methodology of Welding Qualifications
- ✓ Identify step-by-step approach in Qualifying procedures and welders
- ✓ Discuss about the Concepts of Essential, Non-essential and Supplementary Essential Variables
- ✓ Perform writing Welding procedures (WPS and PQR)

## **COURSE AUDIENCE**

This course is intended for people who are involved in:

- Writing and qualifying welding procedure specifications, qualifying welders, and Welding operators,
- Reviewing of suppliers' procedures, auditing or reviewing in-house procedures and qualifications.
- This course will be highly beneficial for Welding Engineers, Quality Assurance and Inspection personnel,
- Ideally suited for all third party inspectors and shop inspectors, QA/QC personnel and inspection agencies

## **COURSE CONTENT**

- Development of ASME Section IX;
- Relationship of Section IX to Other Codes
- Brief review of Welding processes SMAW, SAW, GTAW, GMAW,
- Overview of ASME Section IX
- Requirements for Procedure Qualification
- Requirement of performance qualification
- Welding variables- Essential, non-essential, Supplementary
- Documentation of PQR tests
- Writing Welding procedure specifications on the basis of Qualified PQR.
- Scrutiny of WPS/PQR documents

- Usual pit-falls and misconceptions
- P- No, S- No, F- No and A- No
- Performance Qualification-tests and documentation
- Re-qualification of welders.
- Supplemental variables - special considerations for notch-toughness
- How welding influences toughness; toughness requirements of code
- Measuring and recording heat input data;
- Using heat input data for useful directions for a welder;
- Road map for WPS/PQR Review
- Case Studies covering scrutiny and review of WPS/PQR documents
- Brazing processes and variables;

### **COURSE CERTIFICATE**

**TRAINIT ACADEMY** will award an internationally recognized certificate(s) for each delegate on completion of training.

### **COURSE FEES**

£5,500 per Delegate. This rate includes participant's manual, Hand-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

### **COURSE METHODOLOGY**

The training course will be highly participatory and the course leader will present, guide and facilitate learning, using a range of methods including formal presentation, discussions, sector-specific case studies and exercises. Above all, the course leader will make extensive use of real-life case examples in which he has been personally involved. You will also be encouraged to raise your own questions and to share in the development of the right answers using your own analysis and experiences. Tests of multiple-choice type will be made available on daily basis to examine the effectiveness of delivering the course.

- 30% Lectures

- 30% Workshops and work presentation
- 20% Case studies & Practical Exercises
- 10% Role Play
- 10% Videos, Software or Simulators (as applicable) & General Discussions

