

# **Training Title**

# UNDERSTANDING AND APPLICATION OF ASME SECTION IX, (WELDING QUALIFICATIONS)

## **Training Duration**

5 days

**Training Dates & Venue** 

Understanding and Application of ASME Section IX, (Welding	5	22-26 March, 2021	\$6,500	Munich, Germany
Qualifications	4			

Will be conducted in a five star hotel to be finalized upon confirmation.

## **Training Fees**

• 6,500 US\$ per participant for Public Training includes Materials/Handouts, tea/coffee breaks, refreshments & Buffet Lunch

# **Training Certificate**

Define Management Consultancy & Training Certificate of course completion will be issued to all attendees.

## TRAINING DESCRIPTION

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 onwriting 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.

#### TRAINING OBJECTIVES

- **★** To introduce participants to the purpose and methodology of Welding Qualifications
- **★** To provide participants step-by step approach in Qualifying procedures and welders.

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- **★** To introduce participants with Concepts of Essential, Non-essential and Supplementary Essential Variables..
- **★** Emphasis is placed on review of writing Welding procedures (WPS and PQR)

#### WHO SHOULD ATTEND

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

#### TRAINING METHODOLOGY

A highly interactive combination of lectures and discussion sessions will be managed to maximize the amount and quality of information and knowledge transfer. The sessions will start by raising the most relevant questions, and motivate everybody find the right answers. 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. Very useful Course Materials will be given.

- 30% Lectures
- 30% Workshops and work presentation
- 20% Group Work& Practical Exercises
- 20% Videos& General Discussions

## **COURSE OUTLINE**

- **★** 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

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- **★** Usual pit-falls and mis-conceptions
- ★ 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;

#### Note:

Pre & Post Tests will be conducted

Case Studies, Group Exercises, Group Discussions, Last Day Review & Assessments will be carried out.



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