

# Welding Inspection



## Welding Inspection:

Three levels of certification are available - CSWIP Visual Welding Inspector, Welding Inspector and Senior Welding Inspector.

CSWIP Welding Inspector certification is the scheme mostly widely used by industry.

## Course Objectives:

- To understand factors which influence the quality of fusion welds in steels
- To recognize characteristics of commonly used welding processes in relation to quality control
- To interpret drawing instructions and symbols to ensure that specifications are met
- To set up and report on inspection of welds, macro-sections and other mechanical tests
- To assess and report on welds to acceptance levels
- To confirm that incoming material meets stipulated requirements and recognize the effects on weld quality of departure from specification
- To be in a position to pass the Welding Inspector - Level 2 examinations

## Examination Procedure:

### Welding Inspector (Level 2) Certification:

- The examination procedure for the Welding Inspector (Level 2) consists of written and practical examinations.

### Written Examination :

- The written examination consists of multiple choice questions and is designed to test the candidate's knowledge of the syllabus.

### Practical Examination :

*Candidates will be required to inspect and report on the following:*

- a) At least two completed welds for compliance with stated requirements and, in addition, for the Welding Inspector grade only
- b) A set of destructive tests (two macros or two bends or two fractured fillets) for a welder or procedure approval test intended to comply with a stated specification.

## Course Contents:

- Typical Duties of welding Inspectors
- Terms and Definitions
- Welding Imperfections and Materials Inspection
- Destructive Testing
- Non-destructive Testing
- WPS/Welder qualifications
- Materials Inspection
- Welding Symbols
- Introduction to Welding Processes
- Shielded Metal Arc Welding
- TIG Welding
- MIG/MAG Welding
- Submerged Arc Welding
- Thermal Cutting Processes
- Welding Consumables
- Weldability of Steels
- Weld Repairs
- Residual Stresses and Distortions
- Heat Treatment
- Arc Welding Safety
- Calibration
- Application and Control of Preheat
- Gauges

## Eligibility Criteria:

Welding Inspector for a minimum of 3 years with experience related to the duties and responsibilities under qualified supervision, independently verified.

or

Certified Visual Welding Inspector (Level 1) for a minimum of 2 years with job responsibilities in

or

Welding Instructor or Welding Foreman / Supervisor for a minimum of 5 years.

**Course & Exam Duration - 05 days**