



CSWIP 3.2 - CSWIP Senior Welding Inspector

Duration

5 days course and examination

Suitable for

The CSWIP Senior Welding Inspector course is designed for experienced welding inspectors and quality control staff, especially those who are proceeding to the CSWIP Senior Welding Inspector examination. It is essential that you have a knowledge of the subjects covered in the CSWIP Welding Inspector course before joining this senior welding inspector course. It is also advised that you do some home preparation ahead of this course as it covers a wide range of subject matter.

Course content

This course will teach you about QA and QC as well as destructive testing, heat treatments, welding procedures, welding dissimilar and residual stress and distortion. The programme will also cover weldability, weld fractures, weld repairs, welding consumables, and welding symbols. In addition, the Senior Welding Inspection course will look into non-destructive testing, specifications, joint design, HSLA and quenched tempered steels, arc energy, and heat input.

This course offers 16 different subjects, so good prior knowledge and preparation will offer you a significant advantage before attempting the course and examination. Since this course builds on the CSWIP Welding Inspector course, it is advised that applicants refresh their knowledge by revising the material from this course too. You may also wish to increase or revise your knowledge through reading one or more of these welding handbooks:

- Jeffus Welding Principles and applications
- A C Davies The science and Practice of Welding & The Practice of Welding
- drawing instructions and symbols to ensure that

Certification/Awarding Body:

CSWIP

Additional Information:

- Although this course covers most of the syllabus for the examination it does not include training in interpretation of radiographs and associated theory
- In addition, candidates can purchase TWI's online CSWIP Senior Welding Inspector Pre-Learning package which prepares them for the course

Entry Requirements

- To join this course you must have been a Certified Welding Inspector for a minimum of 2 years with job responsibilities in the areas listed in 1.2.1, 1.2.2 and 1.2.3 of CSWIP document WI-6-92.
- Alternatively, you should have 5 years' authenticated experience related to the duties and responsibilities listed in Clause 1.2.3 of CSWIP document WI-6-92, independently verified.
- All candidates must hold a valid CSWIP Welding Inspector certificate.
- In addition to the above, candidates must comply with Clause 1.3.4 of document WI-6-92 available at www.cswip.com.

CSWIP Senior Welding Inspector PLUS Theory Pre-course eLearning

This online pre-course learning will provide you with a thorough eLearning experience and an essential foundation of knowledge before attending the full, classroom based CSWIP Welding Inspection course. It will also allow you to identify areas of weakness or uncertainty that can be discussed with the lecturer during the full course delivery.

The pre-courses are also very effective as supplementary learning resources and visual revision tools to support the learning materials and course content from their full, classroom-based CSWIP Welding Inspection course. These packages provide comprehensive blended learning experiences that lend themselves to all types of learning preferences.

What will I learn?

The package consists of eleven modules:

- **Module 1:** Introduction to Metallurgy - General metallurgical principles, characteristics of hot and cold work, and the effects of heat treatment
- **Module 2:** Duties of a Senior Welding Inspector - Requirements of a senior welding inspector before, during, and after welding including signing off of a product and QA/QC
- **Module 3:** Weldability of Steels - Definition of the term weldability, characteristics of steel alloys and their cracking mechanisms
- **Module 4:** Non-Destructive Testing - Basic insight into the main NDT methods that welding inspectors will encounter
- **Module 5:** Destructive Testing/Quantitative and Qualitative - Destructive tests available to establish the mechanical properties and soundness of welded joints
- **Module 6:** Welding Processes - Main arc welding processes, the variables that affect them and their advantages and disadvantages.
- **Module 7:** Residual Stress and Distortion - Causes of residual stress and distortion and how to prevent them
- **Module 8:** Welding Symbols on Engineering Drawings - The different welding symbols that are used to symbolically represent weld joints
- **Module 9:** Welding Inspection Assessment - Test on knowledge acquired from all the Welding Inspection modules
- **Module 10:** NDT Reports - Various elements that should be included on different types of NDT reports
- **Module 11:** Fracture Assessment - Different fracture mechanisms that may occur in welded joints and how to prepare detailed reports
- **Module 12:** Welding Procedures - Outlining the process involved in qualifying welding procedures and approving welders

Specifications

So that your computer can run the Welding Inspector Pre-Learning package you will need the following basic systems:

Operating System

Windows Vista 7, 8 or 10

Browser

Internet Explorer 11 or higher (PC)

Plugin

Silverlight Plug-in

You can get the Silverlight Plug-in using the following link:

www.microsoft.com/getsilverlight/

Internet connection

2 MBIT/s

