

CSWIP Plant Inspection - Levels 1,2 and 3

An internationally recognised certification of competence

INTRODUCTION

The **modular approach** of this internationally recognised **certification** of competence allows for a **clearly defined structured** career path.

The courses are aimed at plant engineers, integrity engineers welding/NDT inspectors/ practitioners, materials and corrosion engineers, plant inspectors responsible for managing the safety and integrity of ageing process equipment, pipelines, pressure vessels and storage tanks.

The scheme is designed to suit:

- plant inspectors working for manufacturing works (Vendor)
- inspection organisations
- equipment owners and operators
- classification societies
- insurance companies
- safety regulators

The courses have three goals:

- To ensure inspectors and engineers responsible for assessing plant integrity have the essential tools and skills necessary
- To recognise and certify plant inspector competence
- To provide a structured career path for continuing professional development of plant integrity practitioners through formal training/certification



Direct Entry Route Submit your CV for review. Ideally, you hold qualifications in NDE and weld inspection. However, some flexibility re entry requirements can be offered to students who hold **VIA Offshore Visual Inspector Course** academic qualifications and differing approvals/experience Supplementary S1 Module **NDT Route NDT Appreciation Course** Welding Inspector Route Supplementary S2 Module Mature Candidate Route Three years' Plant Inspection experience **LEVEL 1 ENTRY REQUIREMENTS Exam format** (Submit CV for approval) Level 1 examination for Module 1 Part A and B consist of two examination papers. **On successfull completion of Paper 1** – multiple choice questions the CSWIP examination **Paper 2** – extended case study **Plant Inspection CSWIP Scheme Document CSWIP-PI-11-01** 'Requirements for the Certification of Plant Level 1 is awarded Inspectors (Plant Integrity Management)' can be downloaded from: http://www.cswip.com/schemes/plant-inspection Module 2 Module 3 Module 4 **Damage Mechanism Assessment for RBI and FFS** Fitness-for-Service (FFS) Risk-Based Inspection (RBI) based based on API 579-1/ASME FFS-1 - 2007 based on API RP 571 on API and ASME LEVEL 2 and 3 3 days inc. examination 4 days inc. examination 2 days inc. examination Common damage mechanisms in oil and Risk-based inspection in accordance with API RP 581, • Introduction to fitness-for-service (FSS) **ENTRY REQUIREMENTS** gas production, refining and manufacturing API RP 580 and ASME • Material properties and API 579 annexes • Stress analysis for FFS • Reasons for implementing risk-based inspection processes and where they can be found (Submit CV for approval) Key process parameters affecting • Benefits of using risk-based inspection • Identification of damage mechanisms for FFS Practical planning and implementation of RBI damage mechanisms • Interaction with other assessment procedures Prevention and control of damage mechanisms • Preparing inspection plans • Most appropriate inspection and non-destructive testing methods **Exam format Exam format** Exam format **Direct Route Paper 1** – multiple choice questions **Paper 1** – multiple choice questions **Paper 1** – multiple choice questions Must hold a current CSWIP Plant **Paper 2** – essay questions, case studies. **Paper 2** – case studies questions (Open book API 579 - provided) (Open book – API RP 571 - provided) (Open book API RP 580/581 - provided) Inspector Level 1 qualification Module 6 Module 8 Module 7 **Academic Route* Pressure Vessel Inspection based on** Piping Inspector based on API 570 Aboveground Tank Inspector based • HNC or above qualification in a **API 510** on API Std 653 relevant engineering subject 5 days + 1 day examination 5 days + 1 day examination 5 days + 1 day examination Must meet CSWIP Plant Inspector • Extensive overview of API 510 • Extensive overview of API 570 • Extensive overview of API Std 653 Level 1 entry requirements "Body of Knowledge" "Body of Knowledge" "Body of Knowledge" Review of ASME welding requirements Pressure vessel materials and fabrication ASME welding requirements for for storage tanks section IX and API 650 • Corrosion allowances, inspection and pressure piping Mature Candidate Route* • AMSE NDT principles of Section V degradation mechanisms Corrosion allowances, inspection and Review of API Std 653 inspection, repair, • HNC or above qualification in degradation mechanisms Remaining life calculations • Static head pressure calculations Remaining life calculations alteration and construction of tanks a relevant engineering subject • Minimum of five years' Plant Exam format **Exam format** Exam format Inspector experience **Paper 1** – multiple choice questions **Paper 1** – multiple choice questions **Paper 1** – multiple choice questions (Open book API 570)** (Open book API 510)** (Open book API 653)**

** Candidates to bring relevant API standard

*Must gain CSWIP Plant Inspector Level 1 Part A to be awarded certification



Rules/Regulations and Duties of a Plant Inspector

5 Days Inc. examination

• Legislation, rules and regulations • An introduction to engineering materials, NDT, visual examination of welds • The Plant Inspector - roles and duties, works inspection/ISI/FFP, inspection safety, basic inspection skills, using codes and standards, inspection reports • ITPs

• Inspecting materials



Module 1 - Part B

Inspection Methods

5 Days Inc. examination

• Use of codes and standards • An introduction to: the inspection of pressure equipment, vessel, piping, storage tanks, coating and lining • An introduction to: risk-based inspection Inspection reports

Module 5 Weld Repair of Pressure Equipment and Piping

1 day inc. examination Selecting an appropriate repair method • Life of weld repair • Type of equipment and industry • Codes and standards to make weld repairs or alterations • Use of weld procedures and welder qualifications

Exam format Paper 1 – multiple choice questions

On successful completion of FOUR CSWIP modules CSWIP Plant Inspection Level 2 is awarded

On successful completion of six CSWIP modules CSWIP Plant Inspection Level 3 is awarded

Prospective eligibility for Professional Membership of The Welding Institute at Technician Level (TechWeldI) – application required

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