

WTIA OZWELD SCHOOL OF WELDING TECHNOLOGY MODULE SWT-73 TRAINING COURSES 2012

INTRODUCTION

With the increasing complex requirements by purchasers for suppliers to show that the welded products being manufactured, fabricated, constructed, repaired or maintained are compliant with required specifications, standards, codes, regulations etc., it is critical that the quality control activities related to this objective are coordinated effectively.

This applies irrespective of the industry applications where welding is being used, whether it is pressure equipment, structures, pipelines etc.

WELDING COORDINATORS (WC)

WTIA has been a catalyst in the use of AS/NZS ISO 3834 *Quality requirements for the fusion welding of metallic materials* by Australian industry. In conjunction with ISO 14731 *Welding coordination – Tasks and responsibilities*, WTIA has promoted the concept of the welding coordination team headed by the Responsible Welding Coordinator (RWC). See Figure 1 overleaf.

Welding Coordinators who are key members of this team could include the Work Health Safety WC, Environmental WC, Designers, Welding Inspectors, Welding Supervisors, NDT personnel amongst others. These may be individual job positions or combined together to suit the company. Companies therefore may need to have staff trained and qualified to ensure that welding and allied processes are undertaken in a compliant manner, safeguarding the workforce, the public and the environment, yet in a manner that also supports the company's need for profitability and competitiveness, in both the Australian and overseas markets.

EXPERT TECHNOLOGY TOOLS TO ASSIST INDUSTRY

The WTIA, as the peak National Australian Body for the Australian welding industry, represents Australia on the 55 member-country International Institute of Welding (IIW). WTIA links Australian industry to the work of IIW, its Commissions, Select Committees, ETQC Boards and Working Groups.

IIW outputs such as Best Practice documents and integrated management tools, from its Select Committee *Quality Management in welding and allied processes* lead to better quality, efficiency and productivity outcomes.

WTIA itself has also developed Welding Quality Management Systems and self audit tools, tailored to the needs of Australian industry and complemented by WTIA Technical Note 19 *Cost Effective Quality Management for Welding* and Technical Note 24 *Self Assessment of Welding Management and Coordination to AS/NZS ISO 3834 and ISO 14731* and other Technical Guidance Notes.

Further examples exist in the pressure equipment industry where WTIA is intimately involved in the revision of AS 3920 Assurance of Product Quality Part 1 Pressure Equipment Manufacture, the updating of a number of Australian Pressure Equipment standards and producing WTIA Technical Notes as commentaries on these PE standards as well as AS/NZS 1554.

WTIA QUALITY CONTROL WELDING COORDINATORS (QCWC)

In line with this concept, WTIA has introduced the WTIA Quality Control Welding Coordinator Certification for personnel such as AS1796 Certificate 10, AS2214 Welding supervisors, WTIA Certified Welding Inspectors, IIW International Welding Inspection personnel and other welding-related certified personnel who take on the duties of coordinating the quality control activities.

For example, in line with the requirement of the latest revision of AS/NZS 1554-Part 1: 2011 to manage welding under a suitable quality management system that should comply with AS/NZS ISO 3834 and its parts, the WTIA Quality Control Welding Coordinator would fulfil an important role in co-ordinating quality control activities to ensure compliance to product standards and client requirements. The same concept would be true for all industries, applications and products utilising welding.

TRAINING ONLY

People can undertake the training course only. No prerequisites are required, but people should have appropriate subject knowledge and experience. Prerequisites exist for those seeking certification.

TRAINING AND CERTIFICATION

To become certified as a WTIA QC Welding Coordinator however, a person must undergo the minimum 40 hours training course, successfully complete a 2-hour written and 2-hour practical examination and meet appropriate essential prerequisites, including three years appropriate experience, all to establish competence.

COMPETENCIES OF QC WELDING COORDINATOR

Depending upon the structure of a company, the QC Welding Coordinator may be an independent position or part of the role of a person possibly entitled Quality Controller, Quality Officer, Quality Manager, Inspection Manager etc. The WTIA QC Welding Coordinator, with the combination of the training course, examination and experience, should be able to be certified with the following competencies

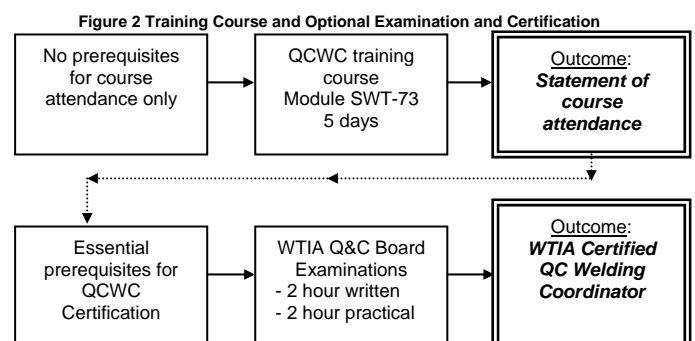
- Appreciate the importance, objectives, methods and principles of effective economic QC of welded manufacture and repair
- Understand the principles of quality management and risk management, uncertainty, quality control charts and measures, traceability and compliance, amongst others
- Establish, implement and manage controls and documentation for a welded product
- Ensure compliance with welding standards and fabrication drawings
- Understand, implement and control inspection test plans (ITPs)
- Verify that all relevant quality control activities and documentation are complete and correct e.g.
 - Review of sub-contractor compliance, including documentation
 - Material inspection certification: plate, bolts, welding consumables etc.
 - Visual inspection and reports
 - Cutting, dimensional checks
 - Welding procedure qualification and documentation
 - Welder qualification and documentation
 - Heat treatment procedures and records
 - NDT, procedures, reports and records
 - Mechanical/destructive testing, procedures, reports and records
 - Metallurgical/ Metallographic examination and reports
 - Replication examination, procedures and reports
 - Pressure and load testing, procedures and reports
 - Surface finishing; blasting, painting, pickling, passivating, coating
 - Welding and testing equipment compliance
 - Weld maps, manufacturer's data report (MDR) etc.
- Affirm compliance with product codes and standards and contract.

TRAINING

WTIA OzWeld School of Welding Technology (SWT) is delivering 5-day courses (SWT-73) for Quality Control Welding Coordinators around the country.

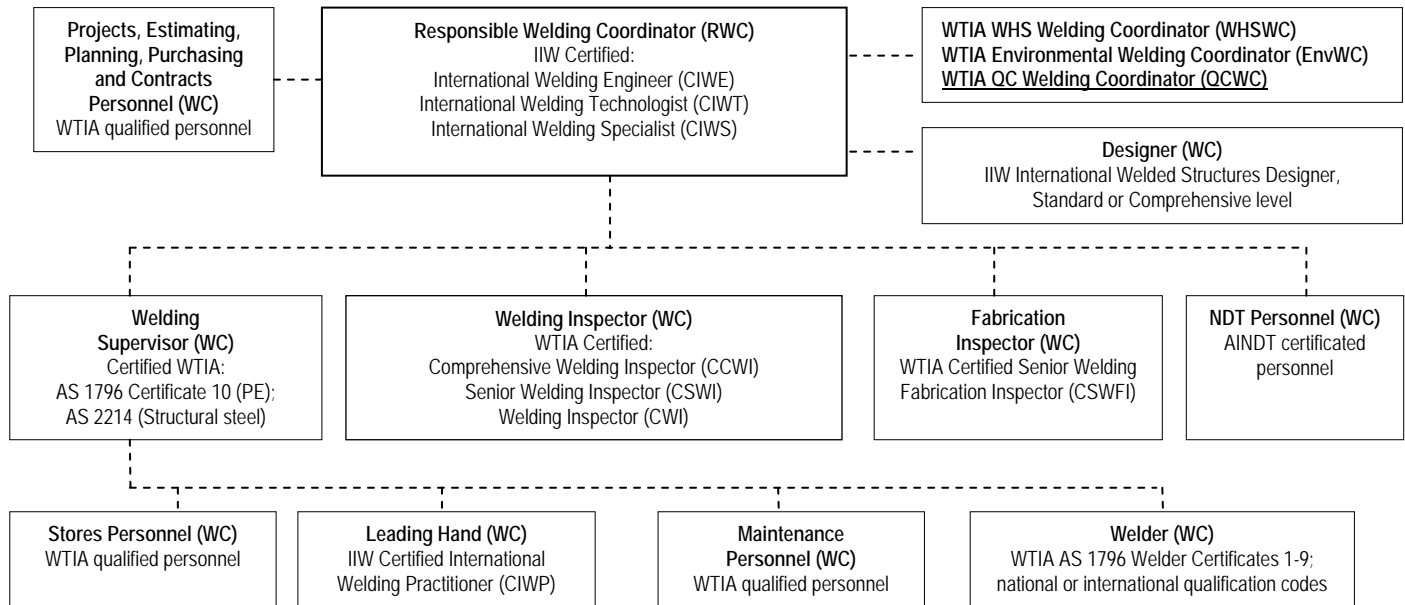
Any person may enrol to attend this training course without essential prerequisites and/or without sitting the examinations. If at a later stage they wish to undertake the examinations however, they must first meet all WTIA Q&C Board conditions.

Figure 2 below shows the arrangements for those people wishing to undertake the training and if desired followed by examination and certification. The examinations are offered by the WTIA Qualification and Certification Board at times and locations to service industry demand.



WTIA OZWELD SCHOOL OF WELDING TECHNOLOGY MODULE SWT-73 TRAINING COURSES 2012

Figure 1: The Welding Coordination Team concept



QC WELDING COORDINATOR MODULE SWT 73 (5 days 08.30 – 17.00 each day)

Shown below is the syllabus for the WTIA public course – this syllabus can be tailored, where practical, to suit specific in-house training or specific requirements for students attending the course.

Subject	Time
<p>1. Introduction, Objective, Basis and Principles of Quality Control with respect to Welding Fabrication, Construction, Repair and Maintenance</p> <ul style="list-style-type: none"> AS/NZS ISO 3834¹ (or an equivalent quality management system for welding fabrication) and AS/NZS 9001 – review of requirements Review of requirements for QC welding coordination in terms of ISO 14731², AS/NZS ISO 3834, specific Australian, US and European standards The role of the QC Welding Coordinator in different industry sectors e.g. pressure equipment, structures, pipelines Interpretation of AS/NZS ISO 3834 standard for internal auditing of the quality system implemented in a company Meeting requirements of product and method codes, standards, customer specifications and contracts, including risk management, traceability, compliance and assessment of sub-contractors Quality costs AS 2561-2010 <i>Guide to the determination and the use of quality costs</i> Uncertainty, ethics, risk 	8 hours Day 1
<p>2. Understand, interpret, construct, format, implement and control inspection test plans (ITPs) allied to technical review, welding fabrication drawings, specifications etc. <i>Session includes practical work</i></p>	6 hours Day 2
<p>3. Establish, implement and manage a documentation package for a welded product/application e.g. manufacturer's data report (MDR)</p> <ul style="list-style-type: none"> The documentation package for meeting compliance of welded products for Manufacturers/Maintainers QC activities that support the package with reference to welding fabrication, construction, repair, maintenance and allied processes Expected improvements in, and benefits from, the QC in a Company 	2 hours Day 2 2 hours Day 3
<p>4. Verify that all relevant elements in a documentation package are complete and correct. <i>Session includes practical work</i></p> <ul style="list-style-type: none"> Certificate of Conformance (COC) ITPs, Visual inspection reports Review of sub-contractor compliance, including documentation Material certification, plate, bolts, welding consumables etc. Welder qualification and documentation Welding procedure qualification and documentation Heat treatment procedures and records (including preheating) NDT procedures, test plans, reports and records Hydrostatic testing procedures and report Mechanical/destructive testing procedures, reports and records Metallurgical/ Metallographic examination and reports Replication examination, procedures and reports Weld maps, Engineering technical review form Dimensional control sheets Surface finishing; shot blasting, painting, pickling, passivating, coatings Welding and testing equipment compliance 	6 hours Day 3 8 hours Day 4
<p>5. Compliance with specific product codes, standards, customer specifications and contracts. <i>Session includes practical work</i></p> <ul style="list-style-type: none"> Practical examples/ case studies of QC activities tailored to specific applications Pre-determined product and method codes specific to course attendees Problems, pitfalls, common errors and questions to ask Feedback and open discussion on future needs Complete information package required for Manufacturer Complete information package required for customer Information retention including archiving 	8 hours Day 5

1. AS/NZS 3834 Quality requirements for fusion welding and metallic materials
2. ISO 14731 Welding coordination - Tasks and responsibilities

WTIA OZWELD SCHOOL OF WELDING TECHNOLOGY MODULE SWT-73 TRAINING COURSES 2012

ENROLMENT FORM

Send to: WTIA OzWeld School of Welding Technology, Fax: (02) 9748 2858 Email: training@wtia.com.au

Title: _____ First Name: _____ Middle Name: _____ Last Name: _____			
Address _____			
			Postcode _____
Company: _____			
Phone () _____		Fax () _____	
		Mobile _____	
Date of birth _____		Email _____	
Specific products manufactured and codes used _____			

PREREQUISITES FOR CERTIFICATION

People intending to sit the examination should complete the appropriate examination form which can be found at www.wtiacertification.com.au or contact the WTIA Q&C Administrator on Tel: 02 9748 4443. Guidance on minimum prerequisites for undertaking the examinations and obtaining certification is as follows.

A person should have one of the following qualifications/certifications IWS, AS 1796 Certificate 10, AS 2214 Welding Supervisor or appropriate CSUs obtained from a Registered Training Organisation (RTO), IIW IWI P qualifications, WTIA Certified Senior Welding Fabrication Inspector, WTIA Certified Welding Inspector (or other similar qualifications e.g. CSWIP, AWS, CBIP, SAIW) AICIP, API, National Board of Boiler and Pressure Vessel Inspectors, satisfactory completion of the WTIA QC Welding Coordinator training course and a minimum three years appropriate experience.

SWT-73 TRAINING COURSE DATE AND LOCATION				Tick preferred location and date				
Location	SWT-73 (5 days)	✓	Location	SWT-73 (5 days)	✓	Location	SWT-73 (5 days)	✓
Brisbane, Qld	6 – 10 February		Melbourne, Vic	20 – 24 February		Adelaide, SA	5 – 9 March	
Perth, WA	12 – 16 March		Sydney, NSW	19 – 23 March		Melbourne, Vic	18 – 22 June	
Perth, WA	2 – 6 July		Brisbane, Qld	23 – 27 July		Gladstone, Qld	13 – 17 August	
Sydney, NSW	3 – 7 September		Mackay, Qld	5 – 9 November				

I am interested in this course being held in-house in my organisation

Course Fees per person

SWT-73

WTIA Members \$1,650

Member Number: please state member number to claim discounted rate.

Non-WTIA Members \$1,870

Course enrolment will be acknowledged and venue details provided on receipt of completed enrolment form, supporting documentation and full payment for the training to be undertaken. Fees include a comprehensive set of course notes, tea & coffee and statement of attendance.

Method of Payment:

tick Cheque or Money Order payable to WTIA MasterCard Visa Funds Transfer

Cardholder: _____ Amount: \$ _____

Card No: _____ / _____ / _____ / _____ Expiry: _____ / _____

Signature: _____ Date: _____

Please invoice company for payment

Contact Person for payment: _____ Purchase Order Number _____

Company _____

Mailing address: _____

Ph: _____ Fax: _____ Email: _____

Funds may be transferred to the following account details. Please return a remittance advice to fax: 02 9748 2858 or email training@wtia.com.au.

National Australia Bank, BSB No:- 082 330. Account No: 047162875. Branch: 28 George Street, Parramatta, NSW

Account Name: Welding Technology Institute of Australia.

I do not wish any photograph taken of me during the course to be published

CANCELLATIONS AND REFUNDS:

For cancellations received within 10 working days of a course, 100% of the fees will be charged. Another eligible person may attend in lieu of the cancellation. The WTIA OzWeld School of Welding Technology reserves the right to cancel or change dates of any training course due to insufficient registrations or other reasons beyond its control, and also reserves the right to refuse enrolments.