

WTIA-Q&CB	 Welding Technology Institute of Australia ABN 69 003 696 526	MF:51 (IWI S)
	Management System Manual	QUALIFICATION & CERTIFICATION BOARD
		Date of Issue: 3 December 2009
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Self-Assessment checklist for claiming exemption from training through the Alternative Route for International Welding Inspector Standard Level (IWI S) and WTIA Certified Senior Welding Inspector (CSWI)		

1. INTRODUCTION TO THE ALTERNATIVE ROUTE

The WTIA welding inspector certification programmes are in accordance with those of the International Institute of Welding (IIW) guidelines. IIW and WTIA welding inspector qualification/certification requires people to have training, examination and experience in both "Welding Technology" and "Welding Inspection".

The Alternative Route allows those candidates who have gained the knowledge of the IWI S syllabus in full detail, and who can demonstrate their capability in all respects, to proceed to the IWI S examination without compulsory attendance at an IIW Approved Training Body (ATB).

The candidate will be required to provide evidence as per the WTIA Management Form MF:25 (IWI S) which contains a recommended checklist of documents to be submitted for assessment by the WTIA.

Diagram 1 shall be used in assessing the suitability of the candidate's application to sit for the IWI S examinations or to complete any necessary modules before sitting for these different parts of the examination. A successful assessment will not exempt a candidate from sitting any part of the IWI S examinations but will only provide exemption from attending training at an approved IIW ATB.

Diagram 1 shows the details of:

1. The Standard Route of training through an IIW ATB;
2. The criteria to be met for the Alternative Route;
3. The point at which the IIW ANB (WTIA) does the initial check of the application;
4. The point at which the detailed assessment of the application occurs.

Stage 1: Paper Assessment

The documents that you have submitted are assessed against the syllabus and other requirements

- Outcome 1: Your documents do not meet the requirements and you will be advised on the training that you need to do; or
- Outcome 2: Your documents meet the requirements and you undergo the next stage

Stage 2: Professional Interview

A half-hour professional interview is arranged with you either face-to-face or by telephone

- Outcome 3: Your interview is not successful and you need to take additional training; or
- Outcome 4: Your interview is successful and you need to do a project or technical interview

Stage 3: Project or Technical Interview

A project or technical interview (three hours) is arranged with you either face-to-face or by telephone or you submit a project to the Assessment Committee

- Outcome 5: Your interview or project is not successful and you need to take additional training; or
- Outcome 6: Your interview or project is successful and you are eligible to take the examinations without any further training

Stage 4: Undertake examinations

You enrol for the CSWI/IWI S examinations

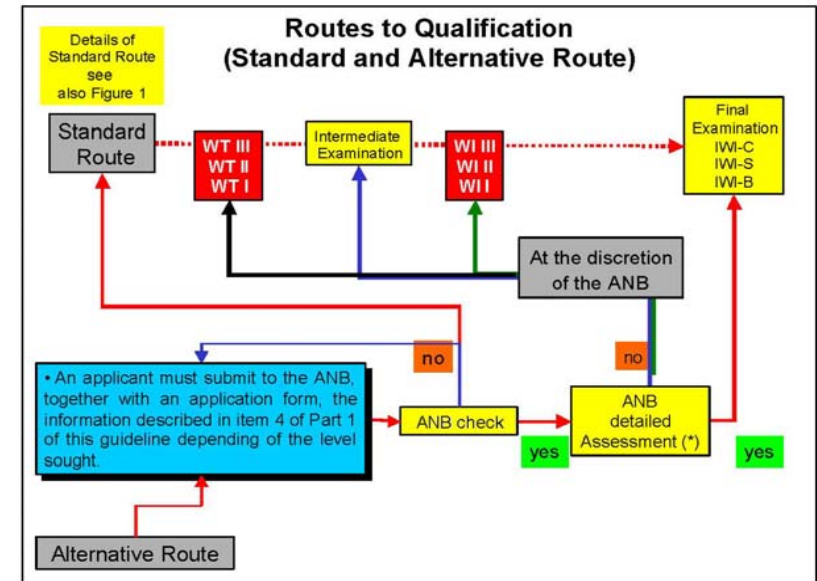


Diagram 1

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2. NOTES ON FORM MF:25 (IWI S)

This form can be used to guide applicants for the Alternative Route for IWI S in self-assessing their qualifications and experience. The following notes apply:

Note 1: Candidates may decide after self-assessment, on the basis of prior learning and/or experience, whether they should proceed to the Alternative Route or continue along the Standard Route.

Note 2: Approximate number of hours are indicated against each topic of the IWI S Welding Technology syllabus, in the table given below, for those applicants who may have taken an AS 1796 Certificate 10 or AS 2214 Welding Supervisor course.

Note 3: The WTIA has analysed the CSWIP 3.2, AWS CSWI, SAIW Level 2 and CWB Level 3 qualifications and certifications for welding inspectors.

Note 4: The WTIA has not analysed the syllabi of the multitude of Australian and overseas welding technology training courses and qualifications (e.g. AQF CSUs, City and Guilds UK etc). Candidates should use this form to self assess their training and qualifications.

3. SELF ASSESSMENT FOR WELDING TECHNOLOGY TRAINING FOR IWI S

Subject No	Course Subjects	IWI S (hrs)	AS 1796 (hrs)	AS 2214 (hrs)	Self Assessment (hrs)	Supporting evidence to meet each syllabus item eg. courses attended, work experience, qualifications
1	Welding Processes and Equipment	13	13	13		
1.1	General Introduction to Welding Technology	1	1	1		
1.2	Oxy-gas Welding and Related Processes	1	1	1		
1.4	The Arc	1	1	1		
1.5	Power Sources for Arc Welding	1	1	1		
1.6	Introduction to Gas-shielded Arc Welding	1	1	1		
1.7	Tungsten-inert Gas Welding	1	2	2		
1.8	MIG/MAG & Flux Cored Welding	2	2	2		
1.9	Manual Metal Arc Welding	2	2	2		
1.13	Cutting and Other Edge Preparation Processes	2	1	1		
1.16	Brazing and Soldering	1	1	1		
2	Materials and Their Behaviour During Welding	41	15.5	15.5		
2.1	Manufacture and Designation of Steels	1	0	0		
2.2	Testing Materials and the Weld Joint	7	4	3		
2.3	Structure and Properties of Pure Metals	1	0.5	0.5		
2.4	Alloys and Phase Diagrams	2	0.5	0.5		
2.5	Iron-Carbon Alloys	2	1	1		
2.6	Heat Treatments of Base Materials and Welded Joints	2	1	1		
2.7	Structure of the Welded Joints	2	0.5	0.5		
2.8	Plain Carbon and Carbon-Manganese Steels	2	1	1		

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Subject No	Course Subjects	IWI S (hrs)	AS 1796 (hrs)	AS 2214 (hrs)	Self Assessment (hrs)	Supporting evidence to meet each syllabus item eg. courses attended, work experience, qualifications
2.9	Fine-grained Steels	2	1	1		
2.10	Thermomechanically Treated Steels (TMCP-Steels)	1	0	0		
2.11	Cracking Phenomena in Steels	2	1	1		
2.13	Low Alloy Steels for very low temperature applications	1	0	0		
2.15	Introduction to Corrosion	2	1	1		
2.16	High-alloyed (Stainless Steel)	2	1	1		
2.18	Protective Layers	1	0.5	0.5		
2.19	High Alloy Creep Resistant and Heat Resistant Steels	2	0	0		
2.20	Cast Irons and Steels	1	0.5	0.5		
2.22	Nickel and Nickel Alloys	1	0	0		
2.23	Aluminium and Aluminium Alloys	3	1	1		
2.25	Joining Dissimilar Materials	2	0	0		
2.26	Metallographic examinations	2	1	1		
3	Construction and Design	17	8	8		
3.1	Fundamentals of the Strength of Materials	2	0.5	0.5		
3.2	Basics of Weld Design	1	0.5	0.5		
3.3	Design Principles of Welded Structures	1	1	1		
3.4	Joint Design	2	0.5	0.5		
3.5	Introduction to Fracture Mechanics	1	0	0		
3.6	Design of Welded Structures Under Different Types of Loading	2	1	1		
3.7	Design of Welded Structures with Predominantly Static Loading	1	0	0		
3.8	Behaviour of Welded Structures Under Dynamic Loading	2	0	0		
3.9	Design of Dynamically Loaded Welded Structures	1	0	0		
3.10	Design of Thermo-dynamically Loaded Welded Structures	1	1	1		
3.11	Design of Structures in Aluminium and its Alloys	1	0.5	0.5		
3.12	Reinforcing-steel Welded Joints	1	1	1		
4	Fabrication Applications Engineering	23	18	18		
4.1	Introduction to Quality Assurance in Welded Constructions	5	4	4		
4.2	Quality Control during Manufacture	6	5	5		
4.3	Welding Stresses and Distortion	2	2	2		
4.4	Plant Facilities, Welding Jigs and Fixtures	1	1	1		
4.5	Health and Safety	2	2	2		
4.6	Measurement, control and recording in welding	2	1	1		
4.7	Non-destructive Testing	1	1	1		
4.9	Repair Welding	2	1	1		
4.10	Fitness-for-Purpose	2	1	1		
	Course Totals	94	54.5	54.5		

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4. SELF ASSESSMENT FOR WELDING INSPECTION TRAINING FOR IWI S

Subject No	Course Subjects	IWI S (hrs)	AS 1796 (hrs)	AS 2214 (hrs)	Self Assessment (hrs)	Supporting evidence to meet each syllabus item eg. courses attended, work experience, qualifications
1	General introduction to welding inspection	3				
2	Mechanical tests on welds	1				
3	Weld Imperfections	5				
4	Testing methods: <ul style="list-style-type: none"> • Review of testing methods • Visual Inspection • Liquid penetrant testing • Magnetic particle testing • Radiographic testing • Ultrasonic testing • Other NDT methods • Critical review of selection of NDT methods • Other test methods • Reporting 	25				
5	Quality assurance, principles and levels	3				
6	Management of inspection function	3				
7	Practical work	23				
		63				

5. APPLICATIONS

This form MF:51 (IWI S) can be sent with your application form MF:25 (IWI S) to WTIA for assessment to obtain WTIA Certified Senior Welding Inspector (CSWI) and IIW International Welding Inspector Standard (IWI S) through the Alternative Route.

Post to:

Q&C Administrator
 WTIA
 PO Box 6165
 SILVERWATER NSW 1811