# Welding Inspector Application Guide

CSA Standard W178.2

"Certification of Welding Inspectors"



**April 2025** 

### **INTRODUCTION**

CSA Standard W178.2, "Certification of Welding Inspectors" was first published by the Canadian Standards Association in 1982. This Standard assist inspection companies and industry in assessing the skills of employees or prospective employees, specifically for the visual inspection of welding and welded components.

There are three levels of Certification for visual welding inspectors with Level 3 being the most senior.

### EXPERIENCE AND EDUCATION REQUIREMENTS FOR LEVEL 1, 2 & 3 WELDING INSPECTORS

To be eligible for certification as a Level 1 welding inspector, candidates must meet the requirements in either (a), (b), or (c) below:

- (a) Obtained at least one year of experience in one or more of the following areas:
  - layout and fitting.
  - manual, semi-automatic, or automatic welding.
  - welding inspection.
  - welding supervision.
  - weld testing; and
  - welding instruction.
- (b) Successfully completed recognized courses (minimum 2 years in length) in the fundamentals, principles and practices of welding and quality control and inspection of welding, with a large portion of the training based on practical applications.
- (c) Obtained at least six months of experience in one or more of the areas specified in (a) and successfully completed recognized courses in the fundamental principles and practices of welding, quality control, and welding inspection.

For certification as a Level 2 welding inspector, candidates must have at least 2 years of experience as a certified Level 1 welding inspector performing welding inspection under qualified supervision. The standard defines "Qualified Supervision" as: "The supervision of candidates by Level 2 or Level 3 personnel certified to this Standard, or by non-certified personnel who, in the opinion of the CWB, possess the knowledge, skills training, and experience required to perform such supervision." The supervisor shall be able to be in contact in person or electronically with his attending with a reasonable delay to protect the integrity of the work of his attendee.

For certification as a Level 3 welding inspector, candidates must have at least 4 years of experience as a certified Level 2 welding inspector.

Experience is calculated based on whole months only.

### THE CERTIFICATION PROCESS

1. Complete the application and visual acuity forms (CWB Forms 450 and 455). If you are not currently certified as a welding inspector, you must apply for certification in Level 1. To be eligible, candidates must have welding or inspection related experience and/or have completed recognized courses in the welding field as noted in CSA Standard W178.2. Persons who were previously certified but whose certification has lapsed are eligible to apply for the level of certification they

previously held providing they meet the eligibility requirements of CSA Standard W178.2 and their past certification status can be verified by the CWB.

The personal information presented on the application form is strictly confidential. No information about an applicant will be given to any other person or organization without the consent of the applicant.

The application form must be <u>fully</u> completed. Incomplete applications can cause delays in processing and may be returned to the applicant. All official communication will be sent via electronic mail (email), so it is imperative that any change in an email address be reported to the CWB Group. **Résumés will not be accepted.** The following provides guidance to several specific parts of the application form:

**Level of Certification Desired:** If you are eligible for a specific level, your choice will be recognized. If you are not currently certified, you must start at Level 1 unless you are eligible to apply for certification at a higher level as permitted by Clause 8.1.1(d) and (e) of CSA Standard W178.2. This clause permits practicing welding inspectors, in exceptional cases, to qualify in Level 2 or Level 3 and Instructors to qualify in Level 2. Refer to page 3 of this Guide for details to review the experience and exam requirements. Reciprocity may be granted through recognition of qualifications through other organizations. Reger to page 11 of this Guide for details of experience and exam requirements.

**Training Courses:** This is significant to determine eligibility and any applicable examination exemptions. Visit our website at <u>Recognized Training Courses for Visual Welding Inspectors | CWB Group</u> to view the list of accepted courses.

**Standard/Code:** Ensure that you have indicated the standard/code to which your certification will apply. The open book examination that you will be required to write will be based on the chosen standard/code. Candidates are to select one standard/code for their initial certification in the Level chosen. Other standards/codes may be added after certification has been obtained. A fee plus applicable taxes is charged for each additional standard/code examination. Examination requirements are specified in CSA Standard W178.2.

**Code of Ethics:** Sign and date the declaration signifying your acknowledgement of the CSA Standard W178.2 Code of Ethics. Only physical or digital signatures will be accepted.

**Qualifying Work Experience:** Provide details of your work experience and explain your duties. **Resumes will not be accepted.** All experience claims must be verified by your reference(s). Only physical or digital signatures will be accepted.

**Examination Accommodations:** Any candidate that may require accommodations of special needs should contact CWB directly at <a href="mailto:inspector@cwbgroup.org">inspector@cwbgroup.org</a> to discuss. CWB will strive to accommodate needs within reason.

2. Email the application form and the visual acuity record to <a href="inspector@cwbgroup.org">inspector@cwbgroup.org</a>,or if preferred, mail to the office location nearest you (addresses for each of the CWB offices are shown on the last page of this Guide). Applications received without the fee will not be processed. Fees are shown on Page 8 of this Guide. The fee, less a service charge, is refundable only within 30 days from receipt of payment. Acceptable forms of payment are Visa, Mastercard, American Express (Canada only), cheque, or money order. Visa Debit is not accepted. Include applicable supporting documentation for welding related work experience and training courses. Incomplete application

forms will be returned, which will delay the processing of your application.

- 3. Upon receipt of your application by the CWB, it will be reviewed, and you will be advised as to your eligibility to write the examinations for the level that you selected (See CSA Standard W178.2 for eligibility requirements). Examinations are held in the CWB offices across the country, however if a group is too large to handle locally, other arrangements may be made. If the examination date is unsuitable, advise the CWB as soon as possible so that other arrangements can be made. Examinations may also be completed remotely using an online proctor. Inspectors choosing this option must complete Form 196. Further information pertaining to this option can be found on our website using this link: <a href="Examination Centres">Examination Centres</a> | CWB Group
- 4. If the CWB determines that you are <u>not</u> eligible to write, your fee will be returned less a 25% service charge. Should you reapply later when the experience and/or educational requirements have been fulfilled, the full fee is payable. Eligibility requirements are specified in CSA Standard W178.2.
- 5. If you successfully complete the examinations, you will receive a Welding Inspector Certificate and a wallet certification card.
- 6. Upon request, the CWB will provide Level 2 and Level 3 certified welding inspectors with a personalized stamp, which may be used on reports and other inspection-related documents. The stamp shows the welding inspector's name, registration number and level and states that he or she is a certified welding inspector. Contact CWB for further information, including cost.

For additional information, please visit the CWB's website at <u>Visual Welding Inspector Certification</u> <u>CWB Group</u>.

### CANDIDATES APPLYING FOR CERTIFICATION VIA CLAUSE 8.1.1(d) & (e) - SPECIAL ROUTE

### Clause 8.1.1(d) - Special Route

This clause allows practicing welding inspectors to qualify directly in Level 2 or Level 3. In Clause 8.1.1(d), candidates seeking certification in Level 2 shall have at least 5 years of prior visual welding inspection experience and candidates seeking certification in Level 3 shall have at least 10 years of prior visual welding inspection experience.

Visual welding inspection must currently be or have been the candidate's primary day-to-day job function. Experience as a welder, fitter, welding supervisor, project manager, engineer, NDE operator for other inspection processes such as RT, UT, MT, PT etc., or NDT welding instructor is not considered as relevant experience.

Special route applicants must submit CWB Form 450, including the relevant experience page describing in detail their visual welding inspection experience. Applicants must also provide the name of at least one reference who can attest to their experience. CWB Form 451 must be submitted with the application.

Please note the following specific rules about application:

- Only one application per individual and only one application per Level
- Application will expire within two years of the application approval date
- Application fee is non-refundable

Candidates are not eligible for examination exemptions or reductions based on prior examinations, courses taken, or other certifications (i.e. AWS, API, CWB). Candidates must write the full set of examinations, including the long version of the applicable closed book examination.

Candidates who are already certified to a lower level than applying for through special route may be eligible for an exemption from writing the open book codes that were previously written, if the exams were written within the past 6 months of the submission of the special route application.

The CWB reserves the right to conduct an interview should there be any reason to question the experience claims.

Candidates approved to challenge the Level 2 or Level 3 examinations must successfully complete five (5) exams to be granted certification, with a required pass mark of 70%. Each candidate will have two (2) attempts to pass these exams. If a candidate is unsuccessful on their first attempt, they will be allowed one (1) rewrite attempt for each failed exam. Any required rewrites will be at an additional cost.

All candidates applying for certification must complete all certification requirements within two years of the application approval date. If the certification is not completed within the two-year period, the application for certification will be terminated.

If the applicant fails any examination on the second attempt, their eligibility to progress through the special route process is terminated. However, the applicant is then eligible for certification in Level 1, if not already certified. Some Level 2 or 3 examinations that were passed may be credited towards meeting the requirements for Level 1 provided an application for Level 1 is submitted within 6 months of the Level 2 or 3 application being cancelled.

### Clause 8.1.1(e) - Instructor Applicants (level 2 only)

In Clause 8.1.1(e), candidates with at least two years of teaching experience related to welding fundamentals and welding inspection may apply directly for certification in Level 2. Candidates must provide the name of the teaching institute, course(s) taught including course content, and course schedule. At least one reference must verify the teaching experience.

Special route Instructor applicants must submit CWB Form 450, including the relevant experience page describing in detail their teaching experience related to welding fundamentals and welding inspection experience. Candidates must provide the name of the teaching institute, course(s) taught including course content, and course schedule. At least one reference must verify the teaching experience. CWB Form 451 must be submitted with the application.

Please note the following specific rules about application:

- Only one application per individual and only one application per Level
- Application will expire within two years of the application approval date
- Application fee is non-refundable

Candidates are not eligible for examination exemptions or reductions based on prior examinations, courses taken, or other certifications (i.e. AWS, API, CWB). Candidates must write the full set of examinations, including the long version of the applicable closed book examination.

Candidates who are already certified to a lower level than applying for through special route may be eligible for an exemption from writing the open book codes that were previously written, if the exams were written within the past 6 months of the submission of the special route application.

The CWB reserves the right to conduct an interview should there be any reason to question the experience claims.

Candidates approved to challenge the Level 2 or Level 3 examinations must successfully complete five (5) exams to be granted certification, with a required pass mark of 70%. Each candidate will have two (2) attempts to pass these exams. If a candidate is unsuccessful on their first attempt, they will be allowed one (1) rewrite attempt for each failed exam. Any required rewrites will be at an additional cost.

All candidates applying for certification must complete all certification requirements within two years of the application approval date. If the certification is not completed within the two-year period, the application for certification will be terminated.

If the applicant fails any examination on the second attempt, their eligibility to progress through the special route process is terminated. However, the applicant is then eligible for certification in Level 1, if not already certified. Some Level 2 or 3 examinations that were passed may be credited towards meeting the requirements for Level 1 provided an application for Level 1 is submitted within 6 months of the Level 2 or 3 application being cancelled.

### **EXAMINATIONS**

The examinations required for certification at each level are shown in the following tables. The passing grade is 70% for each examination. The number of questions may vary from time to time. Examination results are emailed to candidates within 2 weeks of the examination day.

Level	Exam Type	Exam subject	Typical Number of Questions	Time Limit (hrs.)
	Closed book	Basic Welding inspection and basic welding fundamentals	75 multiple choice questions <sup>1</sup>	2
	Open book	Standard/Code	45 multiple choice questions	2
1	Open book	CSA Standard W178.2	15 multiple choice questions	.5
	Practical & Reporting	Samples for Visual Detection and Identification, assessment and descriptive reporting of basic weld faults	5 Samples	.75
	Closed book	Basic materials science, advanced welding fundamentals and other welding inspection techniques	150 multiple choice questions - long 75 multiple choice questions - short <sup>2</sup>	3.5 2
	Open book	Standard/Code**	45 multiple choice questions	2
2	Open book	CSA Standard W178.2	15 multiple choice questions	.5

	Practical & Reporting	Samples for Visual Detection and Identification, assessment and descriptive reporting of weld faults, dimensional faults, material deficiencies and structural discontinuities	5 Samples	.75
	Closed book	Welding metallurgy, advanced materials science, QA/QC management systems	150 multiple choice questions - long 75 multiple choice questions - short <sup>2</sup>	3.5 2
3		Standard/Code***	45 multiple choice questions	2
	Open book	CSA Standard W178.2	15 multiple choice questions	.5

<sup>\*</sup> All new candidates for certification to Level 1 must write the examination on CSA Standard W178.2 All candidates upgrading to a higher level must also write the examination on CSA Standard W178.2 unless it was written while qualifying at a lower level. The examination on CSA Standard W178.2 is only required to be written once.

2 Candidates who have successfully completed an acceptable training course in the Fundamental Principles and Practices of Welding and Quality Control and Inspection of Welding as stated in CSA Standard W178.2 are entitled to write a shorter version of the Closed Book Examination. This exemption *does not* apply to candidates who are eligible to challenge the higher-level exams under clause 8.1.1(d) and (e) of CSA Standard W178.2. All other examinations remain as noted above. Courses from other organizations, which are comparable to the CWB modular program, will qualify candidates for writing the shorter exam versions.

For candidates writing directly to Level 2 or Level 3 via Clause 8.1.1(d) & (e), a closed book exam on descriptive report writing and the practical & reporting exam are required in addition to the exams indicated above. The report writing exam consists of five essay questions on completing inspection report and has a one-hour time limit.

All candidates applying for certification must complete all certification requirements within two years of the application approval date. If the certification is not completed within the two-year period, the application for certification will be terminated.

Candidates who do not complete the certification requirements within this time may reapply for certification at any time. All examinations applicable to the Level sought must be successfully completed to obtain certification. Examinations that were successfully completed from a prior application cannot be recognized.

<sup>\*\*</sup> Not required if upgrading from Level 1 to Level 2.

<sup>\*\*\*</sup>Not required if upgrading from Level 2 to Level 3.

<sup>&</sup>lt;sup>1</sup> Candidates who have successfully completed an acceptable training course in the Fundamental Principles and Practices of Welding and Quality Control and Inspection of Welding as stated in CSA Standard W178.2 are entitled to an exemption of the Closed Book Examination.

The standards on which open book examinations may be written are as follows:

Product Category	Standard/Code
Buildings, Bridges, Industrial Structures, Machinery, Cranes, Rail and Road Vehicles (Steel)	CSA W47.1 Certification of Companies for Fusion Welding of Steel, and CSA W59 Welded Steel Construction (Metal Arc Welding)
Buildings, Bridges, Industrial Structures, Machinery, Cranes, Rail and Road Vehicles (Aluminum)	CSA W47.2 Certification of Companies for Fusion Welding of Aluminum, and CSA W59.2 Welded Aluminum Construction (Welding)
Ships and Floating Marine Structures	ABS Rules for Materials & Welding Part 2  And ABS Guide for Nondestructive Inspection of Hull Welds
Fixed Steel Offshore Structures	CSA W59 Annex U Welding of Fixed Steel Offshore Structures
Power Piping	ASME B31.1 Power Piping
Industrial Piping	ASME B31.3 Process Piping
Hydrogen Piping & Pipelines	ASME B31.12 Hydrogen Piping & Pipelines
Pipelines	CSA Z662 Oil and Gas Pipeline Systems
Pressure Vessels, Boilers and Heat Exchangers	ASME Boiler and Pressure Vessel Code, Sections VIII-Div.1 & IX
Storage Tanks	API 650
	Welded Tanks for Oil Storage
IACS Materials and Welding	IACS Materials and Welding

You must bring your own copy of the standard/code on which you intend to write the open book examination. Candidates frequently use earlier or later editions of the applicable standard/code for the open book examination, which is entirely their option. In most cases, examinations will be based on the most current edition of the code/standard. Individuals may contact the CWB Call Center to verify code/standard edition in use for specific code exam.

You must bring the following to the exam session:

- Government issued photo identification.
- Standard or code for the open book examinations.
- Non-programmable calculator (the examination may involve a few basic calculations).
- a ruler as required.
- Pens, pencils and scrap paper are not permitted in the exam rooms for most exams.

For the practical/reporting exam, candidates are supplied with a generic welding standard, fillet weld gauges, bridge cam gauge, cam gauge, v-wac gauge, and a ruler. Candidates are permitted to bring the following tools:

- magnifying glass
- depth gauge
- hi-lo gauge
- mirror
- flashlight

Prior to writing any examinations, candidates must review and sign CWB Form 696 "Academic Code of Conduct" to confirm that they will comply with all rules of the examination process.

If you fail an examination, there is no waiting period to rewrite. However, before rewriting an examination, it is strongly recommended that you take some additional time to re-study the subject material.

There is no restriction on the number of examination rewrite attempts permitted within the two-year time frame.

Two business days in advance notification must be provided to the CWB if you are going to miss an examination date on which you are scheduled to write. Failure to notify the CWB within this time will result in a late cancellation or no show service charges, which will be payable before you can write the examination.

### RENEWAL / RECERTIFICATION

The certification period for all welding inspectors is three years. To renew their certification, certified welding inspectors are required to apply on or before the expiry date of their certification. At that time, they must provide evidence of satisfactory vision (CWB Form 455) and their continuing involvement in welding examination or testing (CWB Form 457).

At six-year intervals, certified welding inspectors must be re-certified either by completing a practical and reporting examination or by successful completion of 40 hours of recognized courses in the previous three years. Refer to Clause 10 of CSA Standard W178.2 for the mandatory renewal and recertification requirements.

Welding inspectors who fail to renew and/or recertify by the expiry date will lose their certification. CWB will forward notices regarding renewals and six-year recertifications via email. Certified inspectors are responsible for informing the CWB of any change in their contact information.

Welding inspectors are responsible for ensuring the continuity of their certification. The CWB is not responsible for ensuring that inspectors meet the renewal and/or recertification requirements. Any notices sent are as a courtesy only and will be sent to the email address we have on file.

Certified inspectors may renew and recertify as early as six months prior to their expiry date, but not any earlier.

Successfully written practical examinations at a higher level will only be recognized towards recertification if completed within six months of the recertification expiry date.

Welding Inspectors who successfully upgrade their qualification from Level 1 to Level 2 and from Level 2 to Level 3 will have their renewal and recertification dates reset based on their new certification date and will be given 3 and 6 full years respectively, before needing to renew or recertify again.

### FEES (Add applicable tax)

	Level 1	Level 2	Level 3
Initial Application Fee	\$540.00	\$540.00	\$540.00
Open Book Code Exam (for additional standard/code endorsement)	\$96.00	\$96.00	\$96.00
Six-Year Recertification Fee -Practical examination	\$96.00	\$96.00	\$96.00
Renewal Fees (every 3 years) Recertification & Renewal Fee (every 6 years)	\$320.00 \$320.00	\$320.00 \$320.00	\$320.00 \$320.00
Stamp Plus shipping	N/A	\$96.00 \$31.00	\$96.00 \$31.00
Rewrite per exam of any type for any level	\$159.00	\$159.00	\$159.00
Upgrade Application	N/A	\$430.00	\$430.00
Special Route Application Fee	N/A	\$755.00	\$755.00

- Fees are subject to change without notice.
- Payment can be made by Visa (**Visa debit not accepted**), MasterCard, or American Express (Canadian funds only for AMEX), cheque or money order.
- Fees, less a service charge, are refundable only within 30 days from receipt of payment. The fees noted above apply to all candidates and may change from year to year. Please add applicable taxes to all the fees shown above. There is a bank service charge for NSF cheques.
- Prices noted above are in Canadian funds. International Applications will be charged in US funds.

### **EXAM APPEAL PROCESS**

All individuals completing written exams are welcome to provide feedback. Feedback is appreciated and is used for the main purpose of continuous improvement. Please do not call the CWB Group for a response regarding the feedback provided. Individuals will only receive a written response to submitted feedback in the event that there is a change in the mark, thus affecting the certification status.

Candidates will be advised of CWB Group's policies and procedures related to examination appeals and challenges at the time of booking examinations.

The passing grade for all exams is 70%.

Paper based exams with less than 70% will be remarked upon request.

Candidates completing an online examination at a CWB Group office or via ProctorU may challenge an exam regardless of the overall examination mark received.

- The candidate can challenge a specific question in the comment box provided. The challenge must provide a specific explanation of the concern, provide technical justification where applicable and not be of a general nature.
- Any challenge must be made at the time of the examination.
- Please advise CWB Staff if comments are made on exams once completed.

Candidates completing a paper-based exam at an offsite location may challenge an exam mark of less than 70%.

- The request for challenge must be made in writing within 90 days of exam completion and must provide a specific explanation of the concern, provide a technical justification where applicable and not be of a general nature.
- An examination may only be challenged once.
- Hand marked exams will be remarked upon request by an individual who did not complete the initial assessment.
- An examination question challenge can only be made once.
- A written response will be provided to the candidate if the appeal is deemed valid:
  - Confirming new mark, if warranted.
  - Providing high level overview of the issues (e.g. instructions not followed, incorrect technical response).

CWB Group staff are unable to provide responses to exam challenges via telephone or in person.

CWB Group will not accept challenges of actual examination scores and will not disclose or return the contents of a failed exam following the sitting of the examination, or the appeal/challenge process.

### RECOGNITION OF QUALIFICATIONS GRANTED BY OTHER ORGANIZATIONS

The CWB recognizes the welding inspector certifications granted by the American Welding Society (AWS) and The Welding Institute (TWI) and the American Petroleum Institute (API) Pressure Vessel and Piping Inspector certifications, subject to the following limitations.

The following table defines the experience requirements and reciprocity provided for each level of certification.

## **Welding Inspector Equivalency Requirements**

<sup>\*\*\*</sup>If unable to provide proof of continued AWS Certification, the candidate must write at least one CWB administered code exam to maintain certified status in accordance with CSA W178.2. See pages 6 of this guide for a listing of available code endorsement exams.

Cert Type	Cert Currently Valid	Requi	rience red for Sought*	Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms & Other Documents Required for Initial
	Valid	Level	Years				Certification
		Level 1	1	Closed Book Practical & Reporting CSA W178.2	ASME BPVC Sections VIII & IX  Candidates who have held API 510 certification for six (6) or more years are required to write	Renewal (3 yr.)	- 450 & 455 plus: - proof of API certification. Proof must show the initial certification date.
	Yes	Level 2	3	Closed Book Practical & Reporting CSA W178.2		CWB Form 455 & 457  Recertification (6 yr.) Practical & Reporting, or CPD (Continuing Professional Development).	
API 510		Level 3	7	Closed Book Practical & Reporting CSA W178.2	CWB code endorsement.		
	No	Level 1	1	Closed Book Practical & Reporting CSA W178.2	ractical & Reporting SA W178.2  Code endorsement as written	Renewal (3 yr.) CWB Form 455 & 457 Recertification (6 yr.)	
		Level 2	3	Closed Book Practical & Reporting CSA W178.2	anough OVVD	Practical & Reporting, or CPD	

<sup>\*</sup>Experience required means years of experience as a certified inspector under the applicable certification scheme.

<sup>\*\*</sup>Candidate must provide proof of continuous AWS certification.

Cert Type	Cert Currently Valid	Requi	rience red for Sought*	Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms & Other Documents Required for Initial
	Valla	Level	Years				Certification
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			
	Level 1 1 Closed Book Practical & Reporting CSA W178.2						
	Yes	Level 2	3	Closed Book Practical & Reporting CSA W178.2	ASME B31.3  Candidates who have held API 570 certification for six (6) or more years are required to write	Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Report, or	
API 570	Level 3	7	Closed Book Practical & Reporting CSA W178.2	CWB code endorsement.	CPD	- 450 & 455 plus: - proof of API certification. Proof	
		Level 1	1	Closed Book Practical & Reporting CSA W178.2	Code endorsement as written through CWB	Renewal (3 yr.)	must show the initial certification date.
	No	Level 2	3	Closed Book Practical & Reporting CSA W178.2		CWB Form 455 & 457  Recertification (6 yr.)  Practical & Reporting, or	
		Level 3	7	Closed Book Practical & Reporting CSA W178.2		CPD	

Cert Type	Cert Currently Valid	Requi	rience red for Sought*	Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms and Other Documents Required for Initial
	Valid	Level	Years			-	Certification
		Level 1	1	Closed Book Practical & Reporting CSA W178.2			
	Yes	Level 2	3	Closed Book Practical & Reporting CSA W178.2	API 653 and API 650  Candidates who have held API 653 certification for six (6) or more years are required to write CWB code endorsement	CWB Form 455 & 457  Candidates who have held API 653 certification for six (6) or more years are required to write  CWB Form 455 & 457  Recertification (6 yr.) Practical & Report, or	- 450 & 455 plus: - proof of API certification. Proof must show the initial certification date.
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			
API 653		Level 1	1	Closed Book Practical & Reporting CSA W178.2	Code endorsement as written through CWB		
	No	Level 2	3	Closed Book Practical & Reporting CSA W178.2			
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			

Cert Type	Cert Currently Valid	Requi	rience red for Sought*	Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms and Other Documents Required for Initial
	Vallu	Level	Years			-	Certification
TWI Visual Welding	Yes or No	Level 1	1	Closed Book Practical & Reporting CSA W178.2			
Inspector		Level 2	2	Closed Book Practical & Reporting CSA W178.2			
TWI	VAS OF NO	Level 2	2	Closed Book Practical & Reporting CSA W178.2	Code endorsement as written through CWB	Renewal (3 yr.) . CWB Form 455 & 457 Recertification (6 yr.)	- 450 & 455 plus: - copy of TWI Cert of Proficiency.
Welding Inspector		Level 3 4 Closed Book Practical & Reporting CSA W178.2		Practical & Reporting, or CPD			
TWI Senior Welding Inspector	Yes or No	Level 2 or 3	2	Closed Book Practical & Reporting CSA W178.2			

Cert Type	Cert Currently	Requi	rience red for Sought*	Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms and Other Documents Required for Initial
<b>)</b>	Valid	Level	Years			1	Certification
AWS Certified Associate	Yes	Level 1	1	CSA W178.2	Code endorsement as written for AWS certification (AWS D1.1 or API 1104 only)	Renewal (3 yr.) CWB Form 455 & 457 Proof of continuous AWS certification***  Recertification (6 yr.) Proof of continuous AWS certification. Practical & Reporting and CPD waived. **	- 450 & 455 plus: - copy of certificate or wallet card; and - test score report showing the code written through AWS
		Level 2	2	Closed Book Practical & Reporting CSA W178.2		Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Proof of continuous AWS certification. Practical & Reporting and CPD waived. **	
Welding Inspector	No	Level 1	2	Closed Book Practical & Reporting CSA W178.2		Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Reporting or CPD	
		Level 2	2	Closed Book Practical & Reporting CSA W178.2	Code endorsement as written through CWB	Renewal (3 yr.) Same as any other welding inspector. CWB Form 455 & 457  Recertification (6 yr.) Practical & Reporting or CPD	

Cert Type	Cert Currently Valid	Requi	rience ired for Sought*	Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms and Other Documents Required for Initial Certification
		Level	Years			Renewal (3 yr.)	
		Level 1	1	CSA W178.2		CWB Form 455 & 457 Proof of continuous AWS certification***	
	Yes	Level 2	2	CSA W178.2	Code endorsement as written for AWS certification (AWS		
AWS		Level 3	7	Closed Book Practical & Reporting CSA W178.2 No reciprocity for Level 3.	D1.1 or API 1104 only)	Recertification (6 yr.) Proof of continuous AWS certification. Practical & Reporting and CPD waived. **	
Certified Welding Inspector		Level 1	1	Closed Book Practical & Reporting CSA W178.2		Renewal (3 yr.)	
	No	Level 2	2	Closed Book Practical & Reporting CSA W178.2	Code endorsement as written through CWB	CWB Form 455 & 457  Recertification (6 yr.)  Practical & Reporting, or CPD	<ul> <li>- 450 &amp; 455 plus:</li> <li>- copy of certificate or wallet card; and</li> <li>- test score report showing the code</li> </ul>
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			
		Level 2	2	W178.2			written through
AWS	Yes	Level 3	7	Closed Book Practical & Reporting CSA W178.2 No reciprocity for Level 3.	Code endorsement as written for AWS certification (AWS D1.1 or API 1104 only)  CWB Form 455 & 457  Recertification (6 yr.) Proof of continuous AWS certification. Practical &	CWB Form 455 & 457  Recertification (6 yr.)  Proof of continuous AWS	
Senior Certified Welding Inspector	No	Level 2	2	Closed Book Practical & Reporting CSA W178.2	Code endorsement as written through CWB	Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Reporting, or CPD	
		Level 3 7 Closed Book Practical & Reporting CSA W178.2		Practical & Reporting	Code endorsement as written through CWB	Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Reporting or CPD	

# BODY OF KNOWLEDGE

### CSA W178.2 Certified Welding Inspector – Closed Book Examinations

The following is an <u>approximate</u> breakdown of the examination categories and the number of questions drawn from each subject area in the closed book examination noted.

Level 1 Closed Book					
Design, Drawings and Weld Symbols	41%				
Welding Processes and Procedures	19%				
Quality Control	16%				
Welding Equipment and Consumables	13%				
Visual Inspection	10%				
NDT	1%				

Level 2 Closed Book					
NDT	40%				
Materials	27%				
Visual Inspection	11%				
Welding Processes and Procedures	9%				
Welding Equipment and Consumables	8%				
Quality Control	4%				
Design, Drawings and Weld Symbols	1%				

Level 3 Closed Book	
Welding Metallurgy	74%
Materials	26%

### RECOMMENDED SELF STUDY EXAMINATION PREPARATORY MATERIALS

Annex A of CSA Standard W178.2

CWB Learning - Welding Inspector Level 1 and Level 2 Textbook and study modules

AWS Society handbooks including Jefferson's Welding Encyclopedia.

American Society for Metals, Metals Handbook.

Modern Welding Technology, by Howard B. Cary.

Welding Principles and Applications, by Larry Jeffus.

Metallurgy for the Non-Metallurgist, by Harry Chander.

Training materials from the Codes and Standards Training Institute (CASTI)

The CWB, federally incorporated, "not-for-profit" organization is accredited by the Standards Council of Canada as a Certification Body for the administration of CSA Standards W47.1, W47.2, W48, W178.1 and W186.

Le CWB, un organisme fédéralement incorporé sans but lucratif est accrédité par le Conseil canadien des normes comme une organisme de certification pour l'administration des normes CSA W47.1, W47.2, W48, W178.1 et W186.



HEAD OFFICE / SIEGE SOCIAL 8260 Parkhill Drive, Milton, Ontario L9T 5V7 Telephone: 1-800-844-6790 Fax: (905) 542-1318

WEB: www.cwbgroup.org

### OFFICES ACROSS CANADA / BUREAUX À TRAVERS LE CANADA

Western Operations: 206 – 19 Avenue, Nisku Industrial Park, Nisku, AB T9E 0W8

203 – 1555 St. James Street, Winnipeg, MB R3H 1B5

Ontario Operations: 8260 Parkhill Drive, Milton, Ontario L9T 5V7

Québec Operations: 4430 Rue Garand, Laval, QC H7L 5Z6