

# Welding Inspector Application Guide

CSA Standard W178.2

“Certification of Welding Inspectors”



**April 2024**

## **INTRODUCTION**

CSA Standard W178.2, "Certification of Welding Inspectors" was first published by the Canadian Standards Association in 1982. This Standard assists 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 welding inspector 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 in order 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 fully 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 in 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. Refer to page 5 of this Guide for details.

**Training Courses:** This is significant to determine eligibility and any applicable examination exemptions.

**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 standard/code chosen. 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.

2. Email the application form and the visual acuity record to [inspector@cwbgroup.org](mailto:inspector@cwbgroup.org), 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 a Form 196. Further information pertaining to this option can be found on our website using this link: <https://www.cwbgroup.org/education/exams/online-exams>.
4. If the CWB determines that you are **not** 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 [www.cwbgroup.org](http://www.cwbgroup.org).

### **CANDIDATES APPLYING FOR CERTIFICATION VIA CLAUSE 8.1.1(d) & (e) – 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 welding inspection experience and candidates seeking certification in Level 3 shall have at least 10 years of prior welding inspection experience. 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 seeking certification must submit CWB Form 450 and must describe in detail and provide relevant documentation showing their visual welding inspection experience.

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

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 welding instructor is not considered as relevant experience.

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 must also provide the name of at least one reference who can attest to their experience.

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

There are five (5) examinations required to be successfully written for the granting of certification. The pass mark for these exams is 70%. If approved to challenge the Level 2 or Level 3 examinations, the candidate will have two (2) attempts to pass these certification examinations. If unsuccessful on any of the examinations on the first attempt, the candidate will be given 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 with 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. Any Level 2 or 3 examinations that were passed will 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 in 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 normally within 2 weeks of the examination day.

Level	Exam Type	Exam subject	Typical Number of Questions	Time Limit (hrs.)
1	Closed book	Basic Welding inspection and basic welding fundamentals	75 multiple choice questions	2
	Open book	Standard/Code	45 multiple choice questions	2
		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
2	Closed book	Basic materials science, advanced welding fundamentals and other welding inspection techniques	150 multiple choice questions - long ----- 75 multiple choice questions - short <sup>1</sup>	3.5 2
	Open book	Standard/Code**	45 multiple choice questions	2
		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
3	Closed book	Welding metallurgy, advanced materials science, QA/QC management systems	150 multiple choice questions - long ----- 75 multiple choice questions - short <sup>1</sup>	3.5 2
	Open book	Standard/Code***	45 multiple choice questions	2
		CSA Standard W178.2	15 multiple choice questions	.5

\* 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.

\*\* Not required if upgrading from Level 1 to Level 2.

\*\*\*Not required if upgrading from Level 2 to Level 3.

<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 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 via Clause 8.1.1(d), a closed book exam on descriptive report writing is required in addition to the four exams indicated above. This exam consists of five essay questions and has a one-hour time limit.

For candidates writing directly to Level 3 via Clause 8.1.1(d), a closed book exam on descriptive report writing

and the practical & reporting exam are required in addition to the three exams indicated above. The report writing exam consists of five essay questions and has a one-hour time limit. Please refer above for details on the practical & reporting exam.

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 in order to obtain certification. Examinations that were successfully completed from a prior application cannot be recognized.

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

<b><u>Product Category</u></b>	<b><u>Standard/Code</u></b>
Buildings, Bridges, Industrial Structures, Machinery, Cranes, Rail and Road Vehicles (Steel)	<b>CSA W47.1</b> Certification of Companies for Fusion Welding of Steel, <b>and</b> <b>CSA W59</b> Welded Steel Construction (Metal Arc Welding)
Buildings, Bridges, Industrial Structures, Machinery, Cranes, Rail and Road Vehicles (Aluminum)	<b>CSA W47.2</b> Certification of Companies for Fusion Welding of Aluminum, <b>and</b> <b>CSA W59.2</b> Welded Aluminum Construction (Welding)
Ships and Floating Marine Structures	ABS Rules for Materials & Welding Part 2 <b>And</b> ABS Guide for Nondestructive Inspection of Hull Welds
Fixed Steel Offshore Structures	<b>CSA W59 Annex U</b> Welding of Fixed Steel Offshore Structures
Power Piping	<b>ASME B31.1</b> Power Piping
Industrial Piping	<b>ASME B31.3</b> Process Piping
Hydrogen Piping & Pipelines	<b>ASME B31.12</b> Hydrogen Piping & Pipelines
Pipelines	<b>CSA Z662</b> Oil and Gas Pipeline Systems

Pressure Vessels, Boilers and Heat Exchangers	<b>ASME Boiler and Pressure Vessel Code, Sections VIII-Div.1 &amp; IX</b>
Storage Tanks	<b>API 650</b> Welded Tanks for Oil Storage
IACS Materials and Welding	<b>IACS Materials and Welding</b>

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:

- Identification;
- Standard or code for the open book examinations;
- Non-programmable calculator (the examination may involve a few basic calculations);
- Pens, pencils, eraser, sharpener, ruler as required.

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 advance notification must be provided to the CWB if you are going to miss an examination date in which you are scheduled to write. Failure to notify the CWB within this time will result in a \$55.00 service charge, which will be payable before you can write the examination later.

## **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 expiry 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)**

	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>
<b>Initial Application Fee</b>	\$530.00	\$530.00	\$530.00
Open Book Code Exam (for additional standard/code endorsement)	\$94.00	\$94.00	\$94.00
Six-Year Recertification Fee -Practical examination	\$94.00	\$94.00	\$94.00
Renewal Fees (every 3 years) Recertification & Renewal Fee (every 6 years)	\$315.00 \$315.00	\$315.00 \$315.00	\$315.00 \$315.00
Stamp Plus shipping	N/A	94.00 \$30.00	\$94.00 \$30.00
Rewrite per exam of any type for any level	\$156.00	\$156.00	\$156.00
Upgrade Application	N/A	\$425.00	\$425.00
Special Route Application Fee	N/A	\$745.00	\$745.00

- 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 fees shown above. There is a bank service charge for NSF cheques.

## **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 unlikely 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 a technical justification where applicable and not be of a general nature.
- Any challenge must be made at the time of the examination.

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**

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

\*\*Candidate must provide proof of continuous AWS certification.

\*\*\*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 & 7 of this guide for a listing of available code endorsement exams.

Cert Type	Cert Currently Valid	Experience Required for Level Sought*		Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms & Other Documents Required for Initial Certification
		Level	Years				
API 510	Yes	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 CWB code endorsement.	Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Reporting, or CPD (Continuing Professional Development).	450, 455 + proof of API certification. Proof must show initial certification date.
		Level 2	3	Closed Book Practical & Reporting CSA W178.2			
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			
	No	Level 1	1	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 2	3	Closed Book Practical & Reporting CSA W178.2			

Cert Type	Cert Currently Valid	Experience Required for Level Sought*		Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms & Other Documents Required for Initial Certification
		Level	Years				
		Level 3	7				
API 570	Yes	Level 1	1	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 CWB code endorsement.	Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Report, or CPD	450, 455 + proof of API certification. Proof must show initial certification date.
		Level 2	3	Closed Book Practical & Reporting CSA W178.2			
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			
	No	Level 1	1	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 2	3	Closed Book Practical & Reporting CSA W178.2			
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			

Cert Type	Cert Currently Valid	Experience Required for Level Sought*		Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms and Other Documents Required for Initial Certification
		Level	Years				
API 653	Yes	Level 1	1	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	Renewal (3 yr.) CWB Form 455 & 457  Recertification (6 yr.) Practical & Report, or CPD	450, 455 + proof of API certification. Proof must show initial certification date.
		Level 2	3	Closed Book Practical & Reporting CSA W178.2			
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			
	No	Level 1	1	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 2	3	Closed Book Practical & Reporting CSA W178.2			
		Level 3	7	Closed Book Practical & Reporting CSA W178.2			

Cert Type	Cert Currently Valid	Experience Required for Level Sought*		Exams Required	Product/Standard Endorsement	Renewal / Recertification Requirements	Forms and Other Documents Required for Initial Certification
		Level	Years				
TWI Visual Welding Inspector	Yes or No	Level 1	1	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	450, 455 + copy of TWI Cert of Proficiency.
		Level 2	2	Closed Book Practical & Reporting CSA W178.2			
TWI Welding Inspector	Yes or No	Level 2	2	Closed Book Practical & Reporting CSA W178.2			
		Level 3	4	Closed Book Practical & Reporting CSA W178.2			
TWI Senior Welding Inspector	Yes or No	Level 2 or 3	2	Closed Book Practical & Reporting CSA W178.2			

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



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

<b>Western Operations:</b>	<b>206 – 19 Avenue, Nisku Industrial Park, Nisku, AB T9E 0W8</b> <b>203 – 1555 St. James Street, Winnipeg, MB R3H 1B5</b>
<b>Ontario Operations:</b>	<b>8260 Parkhill Drive, Milton, Ontario L9T 5V7</b>
<b>Québec Operations:</b>	<b>4430 Rue Garand, Laval, QC H7L 5Z6</b>