ABSA the pressure equipment safety authority

In-Service Pressure Equipment Inspector Certification Requirements

AB–526

Edition 3, Revision 3 - Issued 2025-01-17

Table of Contents

FOREWORD ..... **ii**

1.0 INTRODUCTION **1**

2.0 DEFINITIONS AND REFERENCE DOCUMENTS **2**

3.0 IN-SERVICE PRESSURE EQUIPMENT INSPECTOR CERTIFICATES OF COMPETENCY **3**

4.0 REQUIREMENTS FOR INITIAL CERTIFICATION **5**

4.1 Certification without Examination 5
4.2 Certification by Examination 5
4.3 Qualifications, Education, and Experience 5
4.4 Eligibility Requirements for Certificate of Competency Examinations .. 6

5.0 APPLICATION PROCEDURE AND EXAMINATION PROCEDURE **7**

6.0 INITIAL CERTIFICATION EXAMINATION BODY OF KNOWLEDGE **8**

7.0 UPGRADING OF CERTIFICATION, RE-CERTIFICATION AND EXPIRED CERTIFICATION **11**

7.1 Upgrading of Certification 11
7.2 Re-Certification 11
7.3 Re-Certification Examination 12
7.4 Reinstatement of Certification 13

8.0 REVISION LOG **14**

FOREWORD

As provided for under Section 43 of the Pressure Equipment Safety Regulation (PESR), the Administrator in the pressure equipment discipline has established that ABSA document AB-526, "*In-Service Pressure Equipment Inspector Certification Requirements*," specifies the qualification and certification requirements for persons who conduct integrity assessments of pressure equipment installed in Alberta.

The next scheduled reaffirmation of AB-526 is in 2029.

1.0 INTRODUCTION

ABSA document AB-526 establishes requirements for certification of in-service pressure equipment inspectors (ISI).

A person who conducts integrity assessments of in-service pressure equipment certifies the inspection of in-service pressure equipment, or supervises persons who conduct integrity assessments of in-service pressure equipment must — unless otherwise provided for in AB-506 – *Inspection & Servicing Requirements for In-service Pressure Equipment* or AB-513 – *Pressure Equipment Repair and Alteration Requirements* — hold the appropriate Alberta In-service Pressure Equipment Inspector Certificate of Competency. The ISI must be employed by an owner-user organization or an integrity assessment organization that has the required *Alberta Certificate of Authorization Permit* issued under the Pressure Equipment Safety Regulation (PESR).

'In-service inspector' and 'in-service inspection' are used in AB-526 and other ABSA referenced documents, to ensure consistency with recognized in-service inspection publications. The PESR, uses the term integrity assessment of in-service pressure equipment as established in AB-506 and AB-513.This has specific meaning and requirements under the PESR, which includes inspection of in-service pressure equipment.

The requirements for ISI certification do not apply to ABSA Safety Codes Officers. They are subject to the certification requirements established by the Safety Codes Council under the Alberta Safety Codes Act (SCA) and are assigned specific responsibilities and powers under the SCA that do not apply to an ISI.

The Certification requirements established in AB-526 are limited to inspection of in-service pressure equipment. It does not apply to an owner's inspector who performs new construction inspection in accordance with ASME B31.3 and B31.1. The requirements for the owner's inspectors are defined in ASME B31.3 and B31.1 respectively.

The scope of integrity assessments that the ISI is authorized to perform is limited to the type of equipment that is identified on the In–Service Inspector Certificate of Competency, and to the inspection activities designated by their employer under their employer's Certificate of Authorization Permit issued under the PESR. ABSA document AB-527 "*Guideline for Competence Assessment of Inspectors*" establishes guidelines to assist the employer in ensuring their inspectors are competent to perform the assigned inspection activities.

ABSA policy documents are living documents that are reviewed periodically to ensure that they are aligned with current industry practices. We would welcome any suggestions you have to improve this document. Please provide your comments to the Manager of Inspections at prefumo@absa.ca.

2.0 DEFINITIONS AND REFERENCE DOCUMENTS

ABSA – is the organization delegated by the Government of Alberta to administer the pressure equipment safety legislation under the Safety Codes Act.

ABSA Safety Codes Officer (SCO) – means a safety codes officer, designated under the Act, in the pressure equipment discipline. [PESR 1(1)(ee)]

API – American Petroleum Institute

Certify pressure equipment – when the term is used in this document it means to authenticate— by signature or other means established in the employer's accepted quality management system—that the equipment has been inspected and appropriate inspection and servicing intervals have been assigned in accordance with AB-506.

Chief Inspector – means a person who meets the requirements to be in charge of an owner's pressure equipment integrity assessment program.

In-Service inspection – a widely used term to describe activities associated with an item of pressure equipment after it has been installed but before it has been permanently retired from service.
Where the term "in-service inspection" is used, it shall mean integrity assessment of pressure equipment under the Pressure Equipment Safety Regulation.

In-Service Pressure Equipment Inspector (ISI) – means a person who holds the required Alberta in-service inspector certificate of competency, has the required competency, and is designated by their employer to perform integrity assessments of pressure equipment under their employer's quality management system Certificate of Authorization Permit.

Integrity assessment – means an examination of an item of pressure equipment, related processes and documentation to determine its conformity to the requirements established by the Safety Codes Act and the regulations [PESR 1(1)(q)].

National Board – National Board of Boiler and Pressure Vessel Inspectors

Pressure Equipment – means a boiler, a fired-heater pressure coil, a thermal liquid heating system and other equipment designed to contain expansible fluid under pressure, including, but not limited to, pressure vessels, pressure piping systems and fittings, as defined in the regulations. *[SCA 1(1)(y)]*

Reference Documents

- ***API-510*** – Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration
- ***API-570*** – Piping Inspection Code: In-Service Inspection, Rating, Repair, and Alteration of Piping Systems
- ***AB-506*** – Inspection & Servicing Requirements for In-Service Pressure Equipment
- ***AB-513*** – Pressure Equipment Repair and Alteration Requirements
- ***AB-527*** – Inspector Competence Management System Guidelines for In-Service Pressure Equipment Integrity Assessment Programs
- ***AB-88*** – Application for In-Service Pressure Equipment Inspector Certification

3.0 IN-SERVICE PRESSURE EQUIPMENT INSPECTOR CERTIFICATES OF COMPETENCY

An Alberta In-Service Pressure Equipment Inspector Certificate of Competency is required for any person who:

a) inspects and certifies the inspection of in-service pressure equipment as required per AB-506,
b) inspects and certifies the inspection of repairs to in-service pressure equipment per AB-513,
c) supervises persons who inspect and certify the inspection of in-service pressure equipment per AB-506 or AB-513.

The Administrator has established the following Alberta In-Service Pressure Equipment Inspector Certificates of Competency:

(i) In-Service Pressure Equipment Inspector Certificate of Competency (Pressure Piping).

(ii) In-Service Pressure Equipment Inspector Certificate of Competency (Pressure Vessels and Pressure Piping). This is equivalent to the Certificate of Competency titled *In-service Pressure Equipment Inspector (IPV*) that was previously issued.

(iii) In-Service Pressure Equipment Inspector Certificate of Competency This is equivalent to the Certificate of Competency titled *In-Service Boiler and Pressure Vessel Inspector (IBPV)* that was previously issued.

In-service Inspector Scope of Practice[1]				
Certificate Type ⇩	Type of pressure equipment included in scope ⇨	Pressure Piping	Pressure Vessels	Boilers
In-Service Pressure Equipment Inspector Certificate of Competency (Pressure Piping)		Yes	No	No
In-Service Pressure Equipment Inspector Certificate of Competency (Pressure Vessels and Pressure Piping)		Yes	Yes	No
In-Service Pressure Equipment Inspector Certificate of Competency		Yes	Yes	Yes
The holder of an In-service Inspector Certificate of Competency is authorized to perform integrity assessment of pressure equipment within the scope as described herein as designated by his/her employer under the employer's quality management system Certificate or Authorization Permit issued pursuant to the Pressure Equipment Safety Regulation.				

4.0 REQUIREMENTS FOR INITIAL CERTIFICATION

4.1 Certification without Examination

A person who held permanent certification as a Safety Codes Officer in the pressure equipment discipline may be eligible for initial certification without further examination once their employment with ABSA is terminated - if they meet the certification requirements. This provision is allowed only within one year of the person's employment termination with ABSA. The Safety Codes Officer may be required to produce evidence of suitable current inspection experience.

4.2 Certification by Examination

Candidates for certification as in-service pressure equipment inspectors must satisfy the following requirements:

(a) relevant post-secondary education/training (see table in 4.3 below),
(b) satisfactory pressure equipment experience (see table in 4.3 below),
(c) documented evidence of having passed the National Board In-service Commission examination, the API 510 authorized pressure vessel inspector certification examination, or the API 570 authorized piping inspector certification examination (see 4.4),
(d) successful completion of the In-service Pressure Equipment Inspector Certification examination.

4.3 Qualifications, Education, and Experience

Education / Training	Minimum Experience with Pressure Equipment	Acceptable Experience
Bachelor's Degree in Engineering (Metallurgical, Mechanical, Chemical, Materials), an associated degree in a comparable subject, or a First Class Power Engineer's Certificate of Competency	2 years	Must include a minimum of one year in-service pressure equipment inspection experience, obtained under and certified by a Chief Inspector who holds a valid Alberta In-service Pressure Equipment Inspector (ISI) Certificate of Competency. Additional experience may include design, manufacture, repair, maintenance, operation, and/or non-destructive examination of pressure equipment

Diploma or certificate in Mechanical Engineering Technology, Materials Engineering Technology, Welding Engineering Technology, Chemical Engineering Technology an associated degree in a comparable subject, or a Second Class Power Engineer's Certificate of Competency	3 years	Must include a minimum of one year in-service pressure equipment inspection experience, obtained under and certified by a Chief Inspector who holds a valid Alberta In-service Pressure Equipment Inspector (ISI) Certificate of Competency. Additional experience may include design, manufacture, repair, maintenance, operation, and/or non-destructive examination of pressure equipment
High School diploma or GED certificate plus technical training in pressure equipment inspection (including continuing education, correspondence, or code course(s) in the "acceptable pressure equipment experience")	4 years	Must include a minimum of one year in-service pressure equipment inspection experience, obtained under and certified by a Chief Inspector who holds a valid Alberta In-service Pressure Equipment Inspector (ISI) Certificate of Competency. Additional experience may include design, manufacture, repair, maintenance, operation, and/or non-destructive examination of pressure equipment

4.4 Eligibility Requirements for Certificate of Competency Examinations

A. In-service Pressure Equipment Inspector Certificate of Competency, (Pressure Piping)

To be eligible for certification, a candidate must:

- Hold an API 570 authorized piping inspector certification or
- Provide evidence of successful challenge of the API 570 authorized piping inspector certification examination within the previous five years.

B. In-service Pressure Equipment Inspector Certificate of Competency (Pressure Vessels and Pressure Piping)

To be eligible for certification, a candidate must:

- Hold an API 510 authorized pressure vessel inspector certification, or
- Provide evidence of successful challenge of the API 510 authorized pressure vessel inspector certification examination within the previous five years.

C. In-service Pressure Equipment Inspector Certificate of Competency

To be eligible for examination, a candidate must:

- Hold a National Board In-Service Commission or a National Board In-service Pressure Equipment Inspector Certificate or
- Provide evidence of successful challenge of National Board In-Service Commission Examination within the previous five years.

5.0 APPLICATION PROCEDURE AND EXAMINATION PROCEDURE

To apply for the In-Service Pressure Equipment Inspector Certification Examination, the candidate must:

A. Submit ABSA form AB-88 at least 21 days in advance of the requested examination date. The application form is available on the ABSA website, www.absa.ca,

B. Pay the application and examination fee (application fee is non-refundable),

C. Submit the education and technical training documentation required,

D. Submit a resume describing pressure equipment experience and inspection history that is validated by the candidate's employer.

Upon approval of the application, the candidate will be notified of the date, time and place of the examination by email or regular mail.

Examination Procedure

The candidate must provide a government-issued picture ID to the examiner when requested.

Candidates are responsible for bringing their own reference materials as permitted in the Body of Knowledge. **All reference materials must be free of any insert pages, notations, answers or crib sheets.** Sharing of reference materials with other candidates is not permitted. Candidates are permitted to bring pencils, erasers, and a printed dictionary.

Candidates are **not** permitted to bring writing or scratch paper or any published material in any form (other than the reference materials stated in the Body of Knowledge) into the examination room. The examination booklet provides blank pages for performing calculations. Cell phones, programmable calculators, computers, other electronic data storage devices, or other communication devices are **not** permitted in the examination room.

Note: Due to copyright concerns, reference materials used during the examination are to be official hard copy, paper versions **as published**. Printed copies with a

Company copyright printed on them are permitted. A photocopy of copyright material will **not** be allowed to be used.

The items referenced above must be available to the examiner for approval. **No other reference material is allowed.**

Examination Results

Candidates will be notified by mail or email of examination results approximately two weeks after the examination. No examination results will be provided by telephone, or fax.

6.0 INITIAL CERTIFICATION EXAMINATION BODY OF KNOWLEDGE

To be eligible to challenge the initial examination, a candidate must meet the experience, education, and qualifications defined in Section 4.0 of this document and must have passed the applicable National Board or API examination. The National Board and API examinations have been accepted as meeting the base technical knowledge that is required for the ISI to perform the type of inspections that are authorized under their Certificate of Competency.

The Alberta In-Service Pressure Equipment Inspector Certification Examination does not include technical topics that are covered in the current API or National Board In-Service Pressure Equipment Inspector body of knowledge documents. The Alberta In-Service Pressure Equipment Inspector Certification Examination will be limited to confirming that the candidate has appropriate knowledge of the Alberta Legislation that governs pressure equipment, as well as a good understanding of supporting ABSA documents. The Alberta In-Service Pressure Equipment Inspector Certification Examination is comprised of both open-book and closed-book multiple-choice questions. The examination consists of 100 multiple-choice questions that include four possible answers. The time allowed for the examination is three (3) hours. The candidate must obtain a mark of at least **70 percent** to pass the examination.

Only the following reference materials may be brought to the examination:

1. Safety Codes Act,
2. Pressure Equipment Safety Regulation (AR 49/2006),
3. Pressure Welders Regulation (AR 169/2002),
4. Power Engineers Regulation (AR 85/2003),
5. Pressure Equipment Exemption Order (AR 56/2006),
6. CSA B51 Boiler, pressure vessel, and pressure piping code.

No other reference materials are allowed, including AB-506 Inspection and Servicing Requirements for In-Service Pressure Equipment, as well as AB-513 Pressure Equipment Repair and Alteration Requirements.

Only the topics listed hereunder will be covered in the examination:

1. Safety Codes Act (Open-Book)

Sections of the Safety Codes Act will be limited to the following:

1(1) Interpretation
(e) Administrator
(v) Owner
(y) Pressure Equipment
(aa) Quality Management System
(bb) Safety Codes Officer

1(2) This Act

2(1) Application of the Act

Part 1 Responsibilities
Sections 4 through 10

Part 2 Administration
31 Designation of Safety Codes Officer
32 Powers and Duties of the Safety Codes Officer
34 Inspections by Safety Codes Officers
35 Production of Documents
37 Officer Hindered

Part 3 Standards
41 Certificate required
42 Certificate issues
43 Permits required
44 Permit issues
46 Permit suspended, etc.

Part 4 Unusual Situations
47 Emergency
48 Investigation

Part 5 Orders / Appeals
49 Order

Part 6 Information
59 Accident notification

Part 7 General
67 Offences
68 Penalty

2. Power Engineers Regulation (Open-Book)

2(1) Power Plants
3(1) Thermal liquid heating systems
4(1) Heating Plants

3. Pressure Welders Regulation (Open-Book)

Scope and Sections 2 to 8, 18 & 23

4. Pressure Equipment Exemption Order (Open-Book)

All sections

5. The Pressure Equipment Safety Regulation (Open-Book)

The entire PESR may be subject to examination.

6. CSA B51 Boiler, pressure vessel, and pressure piping code (Open-book)

The following clauses may be subject to examination:

1.0 Scope B51
Clauses pertaining to Part 1 only

4.0 General requirements
4.3 Canadian Registration Numbers (CRNs)
4.13 Requalification of Vessels in Liquefied Petroleum Gas Service

5.0 Identification
5.1 Nameplates
5.2 Additional nameplates
5.3 Stamping
5.4 Fittings

6.0 Boilers and related components
All clauses

7.0 Pressure Vessels
7.2 Pressure Vessel Installations
7.4 Water Heaters and Hot Water Hydropneumatic, and Cushion Tanks
7.6 Anhydrous Ammonia Service
7.7 Liquefied Petroleum Gas and Natural Gas Liquids Service

10.0 Fired-Heater Pressure Coils in Petroleum and Chemical Plant Service

7. **AB-506 Inspection and Servicing Requirements for In-Service Pressure Equipment (Closed-Book)**

   The entire AB-506 document is subject to examination. Excerpts from the tables and supporting notes will be provided with the examination to assist in the answering of questions regarding the assignment of inspection and servicing intervals.

   AB-506 section 4.0 lists referenced documents. The examination does **not** cover these referenced documents, but the candidate must know the scope of these documents.

8. **AB-513 Pressure Equipment Repair and Alteration Requirements (Closed-Book)**

   The entire AB-513 document is subject to examination. AB-513 lists referenced documents and other publications. The examination does **not** cover these referenced documents and other publications. In-service inspectors must know the scope of these documents.

7.0 UPGRADING OF CERTIFICATION, RE-CERTIFICATION AND EXPIRED CERTIFICATION

7.1 Upgrading of Certification

To upgrade a Certificate of Competency (e.g. A to B or C as listed in section 4.4) the candidate must follow the application process for certification using ABSA form AB-88a. They will not be required to re-write the in-service inspector examination. The upgraded Certificate will be issued with the same expiry date as the Certificate currently held.

7.2 Re-Certification

An In-Service Inspector's Certificate of Competency is issued for a period of five (5) years. Re-certification is required to maintain validity of the Certificate of Competency. A Certificate of Competency is no longer valid if it has expired.

There are three alternatives for re-certification:

1. The experience and training/education requirements defined in this section **must** be satisfied, and an online re-certification examination as defined in this section **must** be passed.
2. If all experience and training/education requirements are **not** met, the candidate must pass the Certification Examination as defined in section 5.0.
3. If a certificate is expired for more than one year, the candidate must pass the Inspector Certification Examination as defined in section 5.0.

It is the responsibility of the certificate holder to ensure their certificate remains valid. A person must not certify any item of pressure equipment without an appropriate and valid Certificate of Competency.

Table 7.5 establishes re-certification scenarios.

The Alberta Certified In-Service Inspectors Directory is available at www.absa.ca for the verification of valid inspector certification.

The requirements for re-certification include the following:

- current in-service pressure equipment inspection experience (at least 15 weeks in the last five years)
- minimum 80* hours technical training/education in pressure equipment integrity assessment in the last five years
- successfully passing a re-certification examination

**Up to 12 hours in-house training may be claimed towards the total of 80 hours.*

The certificate holder must submit the completed re-certification application form (AB-98) together with the renewal fee at least 21 days before expiry of the certificate to initiate the re-certification process.

Applicants who do **not** meet the re-certification experience and continuing education requirements may be required to successfully challenge the In-service Inspector Certification Examination (unless they have reasons and supporting documents that are satisfactory to the Administrator).

7.3 Re-Certification Examination

This examination is an online, open-book examination based on the Safety Codes Act and Regulations and applicable ABSA documents.

The topics listed in Section 6 of this AB-526 document, and the following ABSA documents posted on www.absa.ca are subject to the re-certification examination.

- AB-505 – Risk-Based Inspection Requirements for Pressure Equipment
- AB-506 – Inspection & Servicing Requirements for Pressure Equipment
- AB-507 – Guidelines for the Inspection of Installed Fired Heaters
- AB-513 – Pressure Equipment Repair and Alteration Requirements
- AB-519 – Pressure Piping Alternative Test Methods Procedure Requirements
- AB-521 – Requirements for Engineered Pressure Enclosures
- AB-522 – Standard Pneumatic Test Procedure Requirements for Piping Systems

- AB-526 – In-Service Pressure Equipment Inspector Certification Requirements
- AB-527 – Inspector Competence Management System Guidelines for In-Service Pressure Equipment Integrity Assessment Programs
- Information Bulletins issued by the Administrator

The examination consists of 25 multiple choice questions. The time allowed for examination is 3 hours within a 24-hour total time period.

The In-Service Inspector Re-Certification Examination will be scheduled on-line by ABSA and the applicant will be contacted by e-mail with the login instructions. The applicant **must** obtain 80 percent to pass the examination.

The In-Service Inspector Re-certification Examination is the same for the three certification categories listed in the introduction.

The fee for writing the re-certification examination is included in the renewal fee. However, if an applicant fails their examination, the applicant will be required to re-submit an application to write the Inspector Certification Examination and pay an examination fee as stated on the renewal application.

7.4 Reinstatement of Certification

Applicants who have their Certificate of Competency expired for over one (1) year will be required to successfully challenge the In-Service Inspector Certification Examination.

7.5 Summary of Renewal Outcomes

Situation	Examination	Fee Schedule
Certificate has not expired or has expired less than 1 year and meets all renewal requirements	Pass the online re-certification examination	Renewal fee
Failed to pass the first examination	Re-take the online re-certification examination	Renewal fee
Failed to pass second examination	Successfully pass the written Inspector Certification Examination	Examination fee
Certificate has not expired, or has expired less than 1 year, but fail to meet all re-certification requirements	Successfully pass the written Inspector Certification Examination	Examination fee
Certificate has expired over 1 year	Successfully pass the written Inspector Certification Examination	Examination fee

8.0 Revision Log

Edition #	Rev #	Date	Description
1	0	2013-08-02	New document
1	1	2014-04-10	Updated Re-Certification Section
1	2	2014-06-02	Minor formatting and grammatical updates
1	3	2014-10-09	Updated B51 Clause from 4.14 to 4.13
2	0	2018-02-28	Content & formatting updates throughout
3	0	2023-05-05	Reaffirmation – no content changes
3	1	2023-07-31	Editorials to provide clarity on qualification and accuracy
3	2	2024-05-23	Editorials as marked
3	3	2025-01-17	Editorial for clarity as marked