



Canadian Pipeliner
Accreditation Council
Conseil Canadien
d'Accréditation Pipeliner

Are You Qualified?

Building Confidence and Trust through Competence

A practical guide to Certification of Personnel and Code Qualification requirements in a Pipeline Safety and Loss Management System

What is Competency?

The CSA Z662-15 defines Competent as: *“qualified, trained and experienced to perform the required duties”*

Under section 3 of the CSA Z662 and section 13 of the API 1173, companies working in the North American oil and gas sector have an obligation to verify the competence of personnel and contractors (CoP) for any work they assign. This requires a clear understanding of the specific education, knowledge, training and experience required to perform specific tasks.

The Canadian Pipeliner Accreditation Council (CPAC) provides industry resources to meet their CoP requirements with:

- Competency Guidelines
- Inspector Certifications
- Code Qualification Exams
- Fusion Technician Certifications

CPAC Certifications and Code Qualifications are based on specified editions of the ASME and CSA codes of construction. Certificates are valid for a period of 1 year after the publication of a new edition. Certificate holders can update by completing a code update exam within the 1-year grace period after which requalification is required. The average code validity period is 4 years.

Code Qualification Program

Level 1

Basic Concepts and Content

Pipeliner who have successfully achieved the CPAC Level 1 qualification are able to demonstrate a clear understanding of:

- The pipeline regulatory structure of both Canada and the US.
- How consensus codes and standards are developed.
- The proper identification and use of reference documents.
- The concepts and application of management systems identified in the CSA Z662 and the API 1173.
- The scope and application of technical requirements including the CSA Z662 and ASME B31.4 & B31.8 pipeline standards.
- Their roles and responsibilities under the mandatory requirements of a Safety Management System.
- This qualification is applicable to both Canadian and US pipeliner competency management requirements.

Level 2

Intermediate Concepts and Specific Content

After successful completion of the entry-level qualification, pipeliners typically choose a specialized career path. A CPAC Level 2 qualification provides evidence that the candidate understands the regulatory and code requirements specific to their function. CPAC Level 2 Intermediate qualifications are currently available in 8 categories. Examinations are available for either Canadian or US requirements.

- Level 2 : Pipeline Design and Material Concepts
- Level 2 : Pipeline Construction Concepts
- Level 2 : Pipeline Welding Concepts
- Level 2 : Pipeline Operation and Integrity Concepts
- Level 2 : Pipeline Management System Auditing Concepts
- Level 2 : Pipeline Distribution Systems
- Level 2 : Pipeline HazLoc and Electrical Concepts
- Level 2 : Oil and Gas Facility Concepts

Pipeliner carrying a CPAC Level 2 qualification are typically those individuals working under supervision in their subject area and are often referred to as “In Training” or “Junior”.

Level 3

Advanced Concepts and Subject Matter

A CPAC Level 3 qualification demonstrates the understanding required by pipeliners who are able to perform their roles and responsibilities without direct supervision.

CPAC level 3 qualifications are available in Canadian or US versions of 5 designations:

- Level 3 : Pipeline Designer
- Level 3 : Pipeline Constructor
- Level 3 : Pipeline Operator
- Level 3 : Pipeline Integrity Manager
- Level 3 : Pipeline Welder

Job descriptions requiring this level of qualification would have titles such as “Design Engineer” as opposed to “Design Engineer in Training”.

Level 4

Subject Matter Expert (SME)

A CPAC Level 4 SME qualification demonstrates the knowledge and understanding required by pipeliners in supervisory and specialty roles.

The CPAC Level 4 SME qualifications are currently being developed.

The following designations will be available in September of 2018:

- Level 4 : Project Manager
- Level 4 : Lead Auditor

Examples of job titles requiring this level of qualification would be “Manager”, or “Chief” Design Engineer as opposed to “Design Engineer”.

Written Examinations

A minimum 70% pass mark is required on the level 1 code concepts examination to earn a Certificate of Qualification. In accordance with Canadian competency management system practices, all level 2, 3 and 4 examinations require a minimum 80% pass mark on regulatory and code theory examinations in order to earn a Certificate of Qualification.

A Certificate of Qualification will identify the code edition for which the candidate has qualified.

Pipeline Inspector Certification Program

CPAC administers the Pipeline Inspector Certification program in accordance with the ISO 17024 requirements for bodies operating certification of persons programs. Three categories of certification are available.

Quality Control Inspector Certification

This certification provides the entry qualification for both Quality and Inspector career paths. Under a Quality Management career path, this Certification is used to provide evidence of qualification and minimum experience for those individuals performing onsite QC inspections as part of the pipeline construction process. For those following an Inspector career path, this certification provides individuals with appropriate evidence of qualification and minimum experience required to work competently as Junior Inspector, or Inspector in Training, under the supervision of an API 1169 inspector, to gain the necessary experience for advancement.

API 1169 General Pipeline Construction Inspector

This certification verifies training, experience and qualification, in accordance with the API 1169 recommended practice for pipeline inspection. Certification is available for either the Canadian or US code and regulatory requirements. Individuals with this certification are typically able to perform their assigned inspection duties with little or no supervision.

Inspection Specialties

These endorsements identify those individuals with special knowledge and skills beyond those of the general inspection practitioner. Endorsements include Chief, Welding, Fusion, Coating, Cathodic and Regulatory Inspector.

Certified Pipeline Fusion Technician Program

CPAC administers the Certified Pipeline Fusion Technician Program in accordance with the applicable requirements identified in the ASTM F2600 series, CSA Z662 and ISO 19480 standards. 2 levels of Certification are offered in addition to a Fusion Procedure registration service and individual qualification endorsements of procedures for Technicians. The program relies on a combination of CPAC code qualification and independent certificate assessments for regulatory, technical knowledge and practical skills verification.

Level 1 Fusion Technician

This entry level certificate verifies that the applicant has attained appropriate qualification of regulatory, theoretical and practical skills training, including:

- General and industry safety for the specified work and work environment,
- General concepts and content for the CSA Z662,
- Material, pipe size and equipment characteristics and handling for the desired fusion procedure endorsement.

* *This level 1 qualification provides specific limitations for the work that can be conducted.*

Level 2 Fusion Technician

This advanced level qualification verifies a Level 1 Fusion Technician has completed additional Regulatory standards training and gained sufficient experience with specified materials and equipment to be able to work independently, as well as to provide supervision to junior technicians when required. To obtain this level of qualification applicants must provide evidence of:

- A valid CPAC Level 1 Fusion Technician Certificate of Qualification,
- Acceptable evidence of the required number of joints for each requested endorsement,
- Code qualification for section 13 of the CSA Z662.

* *This level 2 qualification provides specific limitations for the work that can be conducted.*

* Limitations are based on the technicians endorsements for specific pipe materials, size and fusion equipment identified in operator certificates issued by the manufacturer or their representative. A CPAC Certificate of Qualification includes a listing of fusion procedure endorsements and a wallet card for site identification.