

JOB DESCRIPTIONS

Boilermaker

Boilermakers build, erect, repair, test and maintain all types of boilers, tanks and pressure vessels, and perform all types of structural and plate work on dust, air, gas, steam, oil, water and other liquid-tight containers.

Boilermakers also erect and install boilers, sometimes working on scaffolds, and repair and maintain existing boilers and related metal products.

To fabricate and repair boilers, tanks, heat exchangers, fired heaters, reactors and other pressure vessels, boilermakers:

- Develop a layout and plan the sequence of work to be done
- Lay out plate, sheet steel or other heavy metal, and locate and mark bending and cutting lines
- Shape the metal using metalworking machines such as shears and drill presses
- Cut metal plate and brackets using an oxy-fuel torch, and chip and grind parts to shape for fitting together
- Fit and tack weld parts together using electric arc welding equipment

Working Conditions

Boilermakers generally work on construction sites. Working conditions are often cramped, dirty and involve exposure to chemical vapours, wetness or high noise levels. The normal work week is 40 hours, but some overtime may be required. Travelling may also be considered a necessary part of the job.

There is always some risk of injury involved in working with heavy equipment, especially when working at considerable heights.

Skills and Abilities

Successful boilermakers tend to enjoy:

- Working with tools, equipment and machinery
- Doing very precise work expertly
- Doing work that involves a degree of excitement and variety



To be successful in their trade, boilermakers need:

- The strength and stamina required to work with heavy parts and equipment weighing in excess of 25 kilograms
- Good coordination, mechanical aptitude and manual dexterity
- The ability to tolerate odours, noisy and dirty surroundings and heights
- The ability to work in close quarters

Working in Alberta

To work as a Boilermaker in Alberta, a person must be a registered apprentice or a certified journeyperson or hold a recognized trade certificate.

Boilermakers learn their skills by registering with Alberta Apprenticeship and Industry Training to participate in apprenticeship training and, upon successful completion, are awarded the Alberta Journeyman Certificate.

A boilermaker who holds a valid trade certificate from Alberta or from another Canadian province or territory may apply to write the Interprovincial Exam and, if successful, be granted a Red Seal under the Interprovincial Standards Program. The Red Seal is recognized throughout most of Canada.

A boilermaker who holds a certificate that was issued by another recognized apprenticeship authority in Canada (province, territory or federal jurisdiction) may apply for an Alberta Equivalency document under the Equivalency Program.

Boilermakers who:

- Hold a non-recognized Canadian credential in an Alberta-designated trade, OR
- Can demonstrate skills and experience in an Alberta-designated trade that meets standards set for journeypersons in Alberta may be eligible to apply for trade certification under the Qualification Certificate Program
- Individuals possessing a valid Alberta Journeyman Certificate, an Alberta Occupational Certificate, or a credential that is recognized as equivalent to an Alberta trade or occupational certificate are eligible to receive a Blue Seal business credential after completing the necessary requirements.

Apprenticeship Training

The term of apprenticeship for a boilermaker is 3 years (three 12-month periods) including a minimum of 1500 hours of on-the-job training each year and three 8 week blocks of technical training.

- An applicant who previously completed courses of study or work experience related to the Boilermaker trade or holds a related journeyperson certificate and



has the employer's recommendation, may qualify for credit that could reduce the term of apprenticeship

- A person who has previous training or work experience in the trade and wants to determine their level of skill and knowledge for entry or advanced standing in an apprenticeship program may apply for a Prior Learning Assessment
- A high school student can become an apprentice and gain credits toward apprenticeship training and a high school diploma at the same time under the Registered Apprenticeship Program (RAP)

To learn the skills required of a Boilermaker in Alberta and be issued an Alberta Journeyman Certificate, a person must:

- Satisfy the entrance requirements or pass the entrance exam
- Find a suitable employer who is willing to hire and train an apprentice

Most employers prefer to hire high school graduates and may select apprentices from among their current employees.

- With their employer, complete the Apprenticeship Application and Contract and submit it to an Apprenticeship and Industry Training Office
- Pay the non-refundable application fee as identified on the application noted above
- Complete the required on-the-job training
 - during on-the-job training, apprentice boilermakers earn at least 60 percent of the journeyperson wage rate in their place of employment in the first year, 75 percent in the second, and 90 percent in the third year.
- Complete the required technical training each year
- Enroll in technical training
 - select an educational institution that offers training for Boilermaker apprentices, and a time to attend training
 - determine requirements for enrolling at the selected institution, and forward completed enrollment form to the selected institution
- Review books and materials required for training
- Successfully complete all required exams
 - review the Apprenticeship and Industry Training Policy on Cheating

Apprentices may attempt the Interprovincial Exam in the final period of their apprenticeship training and, if successful, be granted a Red Seal.



Review the Apprenticeship and Industry Training Policy on Cheating

When apprentices attend technical training, they are required to pay the applicable tuition fee and purchase course supplies.

Grants, scholarships and other financial assistance may be available. For more information contact an Apprenticeship and Industry Training Office.

Interprovincial Standards (Red Seal) Program

To qualify for a Red Seal, a person must:

Hold a valid trade certificate in a trade that participates in the Interprovincial Standards (Red Seal) Program:

- An Alberta trade certificate or completion of apprenticeship certificate, OR
- A journeyperson or completion of apprenticeship certificate issued by another Canadian province or territory

Or applications based on Alberta certificates:

- Complete the Interprovincial (Red Seal) Examination Application - Alberta Certified (no application fee is required)
- Submit the application to an Apprenticeship and Industry Training Office

For applications based on non-Alberta certificates:

- Complete the Interprovincial (Red Seal) Examination Application - Canadian Certified
- Submit the application to an Apprenticeship and Industry Training Office
- Pay the non-refundable application fee as identified on the application form

Prepare for the exam:

- Review the Apprenticeship and Industry Training Policy on Cheating
- Review available resource materials
- Successfully complete the required exam



Equivalency Program

To qualify for an Equivalency document based on a recognized credential, a person must:

- Have a valid trade credential issued by another Canadian province or territory or by the Department of National Defence
 - completion of apprenticeship certificate issued before the trade began participation in the Interprovincial Standards (Red Seal) Program, OR
 - completion of apprenticeship certificate issued in a trade that does not participate in the Interprovincial Standards (Red Seal) Program, OR
 - other recognized trade credential
- Complete the Equivalency Application and deliver it in person to an Apprenticeship and Industry Training Office. Government issued photo identification is required
- Pay the non-refundable application fee as identified on the application noted above

A person who has a recognized certificate, as described above, does not require an Alberta Equivalency document to work in the trade in Alberta. However, some employers may require an Alberta Equivalency document as proof that the certificate is equivalent to the requirements of the trade in Alberta.

Qualification Certificate Program

To qualify for a Qualification Certificate based on Canadian credentials, a person must:

- Have a valid trade credential issued by another Canadian province or territory or by the Department of National Defence, and the credential is NOT recognized as being equivalent to a trade certificate issued by Alberta
- Complete the Qualification Certificate – Canadian Credentials Application and submit it to an Apprenticeship and Industry Training Office.
- Pay the non-refundable application fee as identified on the application noted above
- Prepare for the exam(s)
 - review the Apprenticeship and Industry Training Policy on Cheating
 - review available resource materials
- Successfully complete the required exam(s)



To qualify for an Alberta Qualification Certificate *based on work experience*, a person must:

- Have at least 6,750 hours and 54 months of 'hands-on' work experience as a boilermaker
- There are exceptions if the applicant has a recognized journeyperson certificate in a related trade
 - a certified structural steel and plate fitter must have at least 4,500 hours and 36 months of 'hands-on' work experience as a boilermaker
 - a certified ironworker must have at least 4,500 hours and 36 months of 'hands-on' work experience as a boilermaker
 - a certified welder must have at least 4,500 hours and 36 months of 'hands-on' work experience as a boilermaker

Time spent on supervisory or foreman duties, counter work, heading the tool crib, or on a training course is NOT counted as 'hands-on' work experience

- Complete the Qualification Certificate - Work Experience Application and submit it to an Apprenticeship and Industry Training Office
- Pay the non-refundable fees as identified on the application noted above

This application fee covers the verification and assessment of the applicant's work experience hours/months as well as one attempt at the Qualification Certificate theory examination. The Qualification Certificate practical examination requires a separate fee as identified on the application noted above
- Prepare for the exam(s)
 - review the Apprenticeship and Industry Training Policy on Cheating
 - review available resource materials
- Successfully complete the required exam(s)

