



BOILERMAKER

Occupation Description

A Boilermaker is a tradesperson who possesses the full range of knowledge, abilities and skills required to fabricate, construct, install, assemble, erect, demolish, repair and maintain a wide variety of vessels, tanks, towers, boilers, hoists and other structures, ancillary equipment and fixtures made of steel, other metals, fiberglass, and other materials. The broad scope of the boilermaker trade includes the construction and maintenance activities performed in the field and in industrial and commercial plants.

Optional Endorsement: “Marine Fitter” means a person who is a qualified Boilermaker and/or Metal Fabricator (Fitter) who is able to cut and fit metal plates and other components in the process of assembling, constructing and repairing large vessels in the shipbuilding and repair industry.

For detailed information on the scope of knowledge and skills taught and assessed in this program refer to the Program Outline, available on the SkilledTradesBC website.

Pathways to Certification

In BC, an individual can become certified as a Boilermaker by completing the Boilermaker program or by challenging the certification. Apprenticeship programs are for individuals who have an employer to sponsor them and challenge programs are for individuals who have extensive experience working in the occupation and wish to challenge the certification.

Youth can begin an apprenticeship in high school through the Youth Train in Trades or Youth Work in Trades programs. The Youth Work in Trades program is available for any trade if an employer is willing to sponsor the student. Trades offered through the Youth Train in Trades vary by region; contact your local school district to find out which technical training programs are being offered through the Youth Train in Trades program in your region.

Recommended Education

The following education is recommended for apprentices entering this occupation. These are not prerequisites, but rather a desired level of skill or knowledge that will contribute to success in the industry.

- Grade 10 or equivalent including English 10, Mathematics 10 and Science 10
- Preferred: Grade 12

SkilledTradesBC Registration

Individuals who wish to begin an apprenticeship in this program must register with SkilledTradesBC along with their sponsor. Application forms for all programs are available from SkilledTradesBC’s website. Online registration is also available for most programs through SkilledTradesBC’s website.

Those who wish to challenge the Boilermaker certification must complete the Boilermaker Challenge Application and submit it to SkilledTradesBC. Challenge applications are assessed for proof of workplace hours and scope of experience prior to acceptance of the individual into the Challenge pathway.

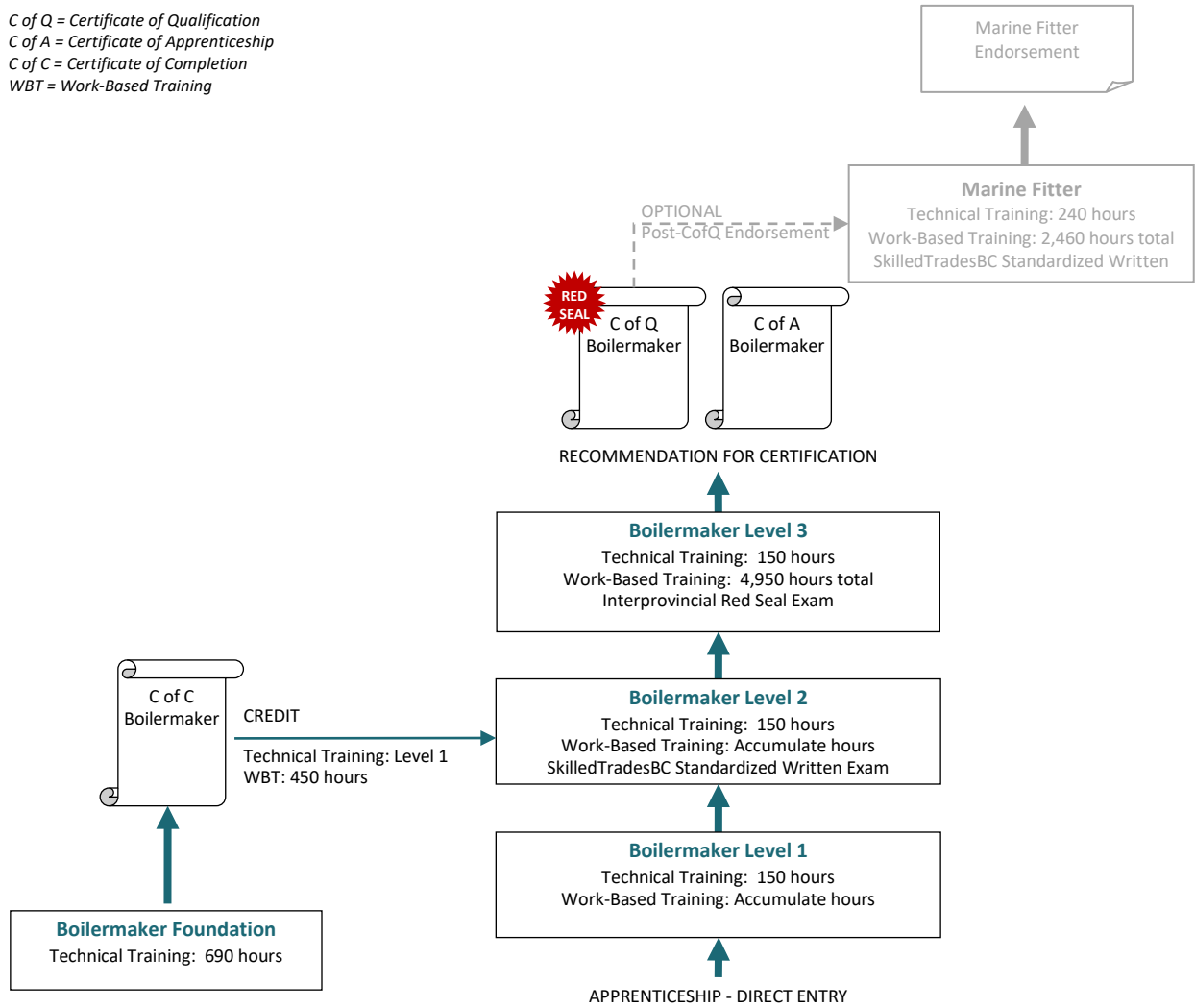
Those who wish to challenge the optional Marine Fitter Endorsement must complete the Marine Fitter Endorsement Challenge Application and submit it to SkilledTradesBC. Challenge applications are assessed for proof of workplace hours and scope of experience prior to acceptance of the individual into the Challenge pathway.



Apprenticeship Pathway with Optional Endorsement

This graphic provides an overview of the Boilermaker apprenticeship pathway.

*C of Q = Certificate of Qualification
C of A = Certificate of Apprenticeship
C of C = Certificate of Completion
WBT = Work-Based Training*



CROSS-PROGRAM CREDITS

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

None



Apprenticeship Program Standards

Credentials Awarded

- Boilermaker- Certificate of Qualification with Interprovincial Red Seal endorsement
- Boilermaker- Certificate of Apprenticeship

Note: Refer to the Marine Fitter Endorsement Program Standards below to see how this endorsement fits into the apprenticeship pathway for this occupation.

**SkilledTradesBC
Registration Prerequisites**

- Agreement signed by the employer to sponsor the apprentice
- Boilermaker Foundation – Certificate of Completion

Completion Requirements

Certification as a Boilermaker is awarded upon successful completion of:

| Requirement | Level of Achievement Required |
|----------------------------------|---|
| Technical Training | Minimum 70% in each level of technical training: <ul style="list-style-type: none"> ▪ Level 1: 150 hours ▪ Level 2: 150 hours and SkilledTradesBC standardized written exam ▪ Level 3: 150 hours |
| Interprovincial Red Seal Exam | <ul style="list-style-type: none"> ▪ Minimum 70% |
| Work-Based Training | <ul style="list-style-type: none"> ▪ 4,950 hours |
| Recommendation for Certification | <ul style="list-style-type: none"> ▪ Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority |

Program Duration

Duration varies depending on how training is delivered, but the program generally takes 3-5 years to complete.

The technical training requirement is typically met through block-release training (full-time, at school) delivered by a SkilledTradesBC-approved training provider. It can also be met through approved alternative training models (e.g., distance education, online, part-time) and/or level challenge where these options are available.

Sign-off Authority

Credentials eligible to sign-off on the Recommendation for Certification:

- Boilermaker – Certificate of Qualification
- Boilermaker- Interprovincial Red Seal endorsement
- SkilledTradesBC-issued letter authorizing supervision and sign-off of apprentices in this occupation

Challenging a Level

The following levels of technical training can be challenged for advanced placement in this program:

- Level 2

Cross-Program Credits

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

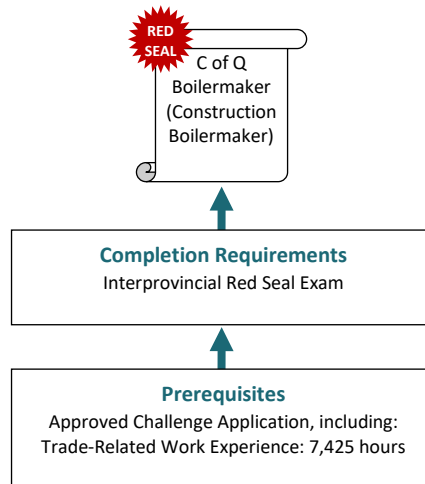
| Credential | Credit(s) Granted |
|--|---|
| <ul style="list-style-type: none"> ▪ None | <ul style="list-style-type: none"> ▪ N/A |



Challenge Pathway

This graphic provides an overview of the Boilermaker challenge pathway.

C of Q = Certificate of Qualification



CREDIT FOR PRIOR LEARNING

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

None

Challenge Program Standards

Credentials Awarded Boilermaker – Certificate of Qualification with Interprovincial Red Seal endorsement

SkilledTradesBC Registration Prerequisites An approved Challenge Application, which includes:

- 7,425 documented hours of directly related experience working in the occupation

Credit for Prior Learning Individuals who hold the credentials listed below are considered to have met the prerequisites for challenging this program:

| Credential | Credit(s) Granted |
|------------|-------------------|
| None | N/A |

Completion Requirements Certification as a Boilermaker is awarded upon successful completion of:

| Requirement | Level of Achievement Required |
|-------------------------------|-------------------------------|
| Interprovincial Red Seal Exam | Minimum 70% |



Foundation Program

Refer to the Apprenticeship pathway diagram for this program to see how the Boilermaker Foundation program leads to apprenticeship in this trade.

Foundation Program Standards

| Credentials Awarded | Boilermaker – Certificate of Completion | | | | |
|-------------------------------------|---|-------------|-------------------------------|--------------------|---|
| Enrollment Prerequisites | Contact training provider. Prerequisites vary between training institutions | | | | |
| Completion Requirements | A Certificate of Completion in this program is awarded upon successful completion of: <table border="1" data-bbox="506 646 1453 751"> <thead> <tr> <th>Requirement</th> <th>Level of Achievement Required</th> </tr> </thead> <tbody> <tr> <td>Technical Training</td> <td> <ul style="list-style-type: none"> Minimum 70% </td> </tr> </tbody> </table> | Requirement | Level of Achievement Required | Technical Training | <ul style="list-style-type: none"> Minimum 70% |
| Requirement | Level of Achievement Required | | | | |
| Technical Training | <ul style="list-style-type: none"> Minimum 70% | | | | |
| Program Duration | Duration varies depending on how training is delivered, but program generally takes 23 weeks to complete, assuming 30 hours in school per week | | | | |
| Credit toward Apprenticeship | <p>Successful completion of the Boilermaker Foundation program is a prerequisite to the Boilermaker apprentice program.</p> <p>Individuals who complete the Boilermaker Foundation program will receive the following credit toward completion of the Boilermaker apprenticeship program:</p> <ul style="list-style-type: none"> Technical Training: Level 1 Work-Based Training: 450 hours | | | | |



Marine Fitter Endorsement Program

Refer to the Apprenticeship pathway diagram for this program to see how the Marine Fitter Endorsement program fits into the apprenticeship pathway for this occupation.

Marine Fitter Endorsement Program Standards

Credentials Awarded

- Marine Fitter Endorsement

SkilledTradesBC

Registration Prerequisites

- Agreement signed by the employer to sponsor the apprentice
- Certification in a qualifying trade:
 - Boilermaker Certificate of Qualification with Red Seal Endorsement, OR
 - Metal Fabricator (Fitter) Certificate of Qualification

Completion Requirements

The Marine Fitter Endorsement will be awarded and included on the apprentice's original Boilermaker Certificate of Qualification with Red Seal Endorsement upon successful completion of:

Requirement

Level of Achievement Required

Technical Training

- Minimum 70% in technical training:
- Level 1: 240 hours

SkilledTradesBC Standardized Written Exam

- Minimum 70%

Work-Based Training

- 2,460 hours

Recommendation for Certification

- Recommendation for certification signed by the Sponsor and an individual holding credentials eligible for sign-off authority

Program Duration

Duration varies depending on how training is delivered, but the program generally takes 2 years to complete.

The technical training requirement is typically met through block-release training (full-time, at school) delivered by a SkilledTradesBC-approved training provider. It can also be met through approved alternative training models (e.g., distance education, online, part-time) and/or level challenge where these options are available.

Sign-off Authority

Credentials eligible to sign-off on the Recommendation for Certification:

- Marine Fitter Endorsement
- SkilledTradesBC-issued letter authorizing supervision and sign-off of apprentices in this occupation

Challenging a Level

The following levels of technical training can be challenged for advanced placement in this program:

- None

Cross-Program Credits

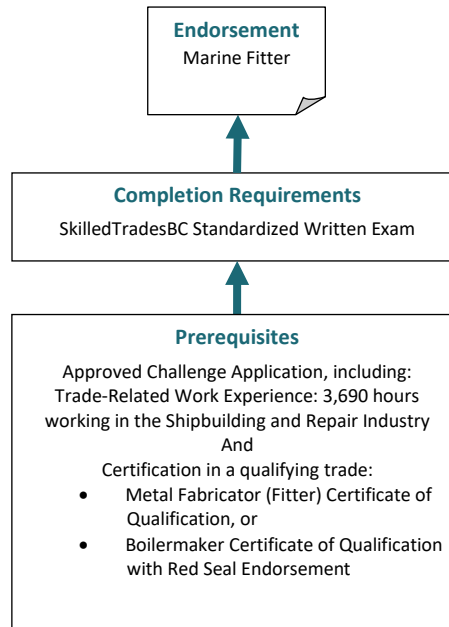
Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program

- None



Challenge Pathway – Marine Fitter Endorsement

This graphic provides an overview of the Marine Fitter challenge pathway.



CREDIT FOR PRIOR LEARNING

Individuals who hold the credential(s) listed below are considered to have met, or partially met, the prerequisites for challenging this program:

None



Challenge Program Standards – Marine Fitter Endorsement

Credentials Awarded ▪ Marine Fitter Endorsement

Registration Prerequisites An approved Challenge Application, which includes:

- 3,690 documented hours of directly related experience working in the Shipbuilding and Repair Industry
- And
- Certification in a qualifying trade:
 - Boilermaker Certificate of Qualification with Red Seal Endorsement
 - Or
 - Metal Fabricator Certificate of Qualification

Credit for Prior Learning Individuals who hold the credentials listed below are considered to have met, or partially met, the prerequisites for challenging this program:

| Credential | Credit(s) Granted |
|-------------------|--------------------------|
| ▪ None | ▪ None |

Completion Requirements A Marine Fitter Endorsement is awarded upon successful completion of:

| Requirement | Level of Achievement Required |
|---|--------------------------------------|
| SkilledTradesBC Standardized Written Exam | ▪ Minimum 70% |



Supporting Documents

Boilermaker Program Outline (2017) – Defines the full scope of knowledge and skills required to competently perform the occupation in BC. Available from SkilledTradesBC’s website.

Boilermaker (Red Seal Occupational Standard 2017) – Prepared by industry experts, under the guidance of the federal government, for Red Seal trades to define the national standard of competence for the trade. Available from the Red Seal website: www.red-seal.ca.

Contacts

SkilledTradesBC manages B.C.’s industry training and apprenticeship programs. Contact SkilledTradesBC Customer service if you have any questions regarding registration, examinations or certification for this program.

| | | | |
|------------------------|--|--------|--|
| Telephone: | 778-328-8700 | Fax: | 778-328-8701 |
| Toll Free (within BC): | 1-866-660-6011 | Email: | customerservice@skilledtradesbc.ca |
| Website: | www.skilledtradesbc.ca | | |

Revision History

The standards for this program were reviewed and/or updated on the dates below.

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|-----------------------------|---------------|
| Program Standards Approved: | March 2002 |
| Updated: | January 2006 |
| | December 2017 |
| | June 2019 |

Program Profiles are updated regularly. Visit www.skilledtradesbc.ca for the most current version.