
STEAMFITTER - PIPEFITTER

Credential Issued:

ITA Certificate of Qualification (Steamfitter - Pipefitter)
Inter-Provincial Red Seal Endorsement (Steamfitter - Pipefitter)
(Persons completing a formal apprenticeship also receive a Certificate of Apprenticeship)

Occupational Description:

“Steamfitter - Pipefitter” means a person who installs, alters or repairs steam and hot water boilers and system for the generation and conveyance of steam and hot water and process piping systems in industrial project or manufacturing plants.

Program Duration & Structure:

The program will be delivered in a variety of formats combining in-school and work-based training, all designed to meet the competency standards and profile defined by the industry, and will generally take 4 years to complete. The program includes:

- In-school: 26 weeks* (780 hours) (approximately 6 weeks for Levels 1, 2 and 3 and approximately 8 weeks for Level 4)
- Work-based: 5,620 hours

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

Program Completion Requirements:

Completion of 5,620 workplace hours:

- Recommendation for Certification signed by the Sponsor and a certified Steamfitter - Pipefitter or holder of an ITA-issued letter authorizing supervision and sign-off of apprentices in the trade.

Completion of technical training:

- Level 1 - in-school assessment and written level examination
- Level 2 - in-school assessment and written level examination
- Level 3 - in-school assessment and written level examination
- Level 4 - in-school assessment and written level examination

Inter-Provincial Red Seal Examination

Program Challenge Requirements:

- 8,430 documented hours of directly related work experience required to challenge Inter-Provincial Red Seal examination.
- 2,810 documented hours of directly related work experience for holders of a BC Certificate of Qualification with Inter-Provincial Red Seal Endorsement in Plumber or Sprinkler System Installer will be required to challenge the Inter-provincial Red Seal Examination.

Program Pre-requisites:

- Recommended Education: Grade 12 or equivalent including English 12, Algebra 11 or Trade Mathematics 11 & Physics 11 or Science and Technology 11.

Assessment Methods:

- In-school assessments (practical and written exams)
- Work-based assessments (practical)
- Final Assessment (Inter-Provincial Red Seal written examination)
- ITA Standardized Level Examinations by challenge

Linkages to Other Credentials:

Cross Program Credit

- Holders of a BC Certificate of Qualification with Inter-Provincial Red Seal Endorsement in Plumber or Sprinkler System Installer will be eligible to receive technical training credit for Level 1 Steamfitter-Pipefitter.

Prior Learning Assessment:

n/a

Program Standards Documentation:

- National Occupational Analysis (2008) www.red-seal.ca
- Program Outline

Industry Program Standards Mechanism:

Resource Industry Training Organization (RTO) info@rtobc.com

Program Providers:

Institution-based component of the program is delivered by public post-secondary institutions (see www.educationplanner.bc.ca/apprenticeship.cfm for a list of schools), private training institutions, and secondary schools that have been approved by ITA.

Technical Training Content:

Level 1

Mathematics
Science
Safety
Tools
Drafting and Blueprint Reading
Rigging
Pipes, Valves and Fittings
Soldering and Brazing
OXY-Acetylene Welding and Burning
Codes, Regulations and Standards
Ladders and Platforms
Methods for Penetrating Structures

Level 2

Hydronic Heating and Cooling
Pipe Fabrication
Pipe Erection
Pipe Bending
Pumps
Electricity
Codes, Regulations and Standards
Marine Piping
Hydraulic Piping
Pneumatic and Compressed Air Piping

Level 3

Water Supply
Fuel Oil Systems
Fluid Power, Hydraulics
Low Pressure Steam Heating
High Pressure Steam
Properties of Gas Supply System
Combustion
Read Drawings
Water Distribution Systems
Fire Protection Systems

Level 4

Air Conditioning
Instrumentation
Industrial Piping
Natural gas and Propane Systems
Gasfitting
Codes, Regulations and Standards
Venting and Air Supply
Special Application Systems

IP Examination Competencies: (NOA 2008)

1. Occupational Skills
2. Drawings & Specifications
3. Piping Layout and Common Installation
4. Rigging and Hoisting
5. Steam System Installation
6. Heating, Cooling and Process System Installation
7. Testing and Commissioning
8. Maintenance and Repair

Approved: March 2002 (ITAC)

Updated: January 2006 (ITA)

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