

**Education requirements**

**112(1)** There is a minimum education requirement of:

- (a) Grade 10 for the fourth and third class power engineer's examinations;
  - (b) Grade 11 for the second class power engineer's examination; and
  - (c) Grade 12 for the first class power engineer's examination.
- (2) A candidate for a first, second or third class power engineer's examination may write the Part A or Part B examination paper at any scheduled examination after the candidate has obtained the second, third or fourth class power engineer's certificate respectively.
- (3) A candidate for a fourth or fifth class power engineer's examination or a refrigeration engineer's examination may write the Part A or Part B examination without holding an operator's certificate of qualification of any class.
- (4) Notwithstanding subsection (2), a person who has passed all third class power engineering examination papers and who is enrolled in a 2-year power engineering technology program satisfactory to the chief inspector may write the Part A examination papers for a second class power engineering examination.

**First class power engineer's certificate**

**113(1)** A person may qualify for a certificate of qualification for a first class power engineer's certificate if the person is the holder of a valid second class power engineer's certificate and, since the issue of that certificate:

- (a) for at least 30 months, has operated as chief engineer an oilfield once-through boiler or an oilfield once-through boiler plant with a capacity greater than 10 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 5 000 kilowatts;
  - (b) for at least 30 months, has operated as shift engineer an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 15 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 10 000 kilowatts;
  - (c) for at least 42 months, has assisted in the operation of an oilfield once-through boiler or oilfield once-through boiler plan with a capacity greater than 15 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 10 000 kilowatts;
  - (d) for at least 15 months, has operated in the role described in clause (a), (b) or (c) and is a graduate engineer; or
  - (e) for at least one-half of the period mentioned in clause (a), (b) or (c), has operated in the role described in that clause and, for at least 36 months, has performed in a supervisory capacity acceptable to the chief inspector on the design, construction, installation, repair, maintenance or operation of pressure equipment.
- (2) Twelve months' credit will be granted towards the fulfilment of the operating experience requirement set out in clause (1)(a), (b) or (c) for the successful completion of an approved course in power engineering leading towards a first class power engineer's certificate.

**Second class power engineer's certificate**

**114(1)** A person may qualify for a certificate of qualification for a second class power engineer's certificate if the person is the holder of a valid third class power engineer's certificate and, since the issue of that certificate:

- (a) for at least 24 months, has operated as chief engineer an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 5 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 1 000 kilowatts;
  - (b) for at least 24 months, has operated as shift engineer an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 10 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 5 000 kilowatts;
  - (c) for at least 36 months, has operated as shift engineer an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 5 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 1 000 kilowatts;
  - (d) for at least 24 months, has assisted in the operation of an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 15 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 10 000 kilowatts;
  - (e) for at least 12 months, has operated in a role described in clause (a), (b), (c) or (d) and is a graduate engineer; or
  - (f) for at least one-half of the period mentioned in clause (a), (b), (c) or (d), has operated in the role described in that clause and, for at least 24 months, has performed in a supervisory capacity acceptable to the chief inspector on the design, construction, installation, repair, maintenance or operation of pressure equipment.
- (2) Nine months' credit will be granted towards the fulfilment of the operating experience requirement set out in clause (1)(a), (b), (c) or (d) for the successful completion of an approved course in power engineering leading towards a second class power engineer's certificate.

**Third class power engineer's certificate**

**115(1)** A person may qualify for a certificate of qualification for a third class power engineer's certificate if the person is the holder of a valid fourth class power engineer's certificate and, since the issue of that certificate:

- (a) for at least 12 months, has operated as a chief engineer an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 1 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 500 kilowatts;
- (b) for at least 12 months, has operated as a shift engineer an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 2 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 1 000 kilowatts;

- (c) for at least 12 months, has assisted in the operation of an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 10 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity greater than 5 000 kilowatts;
  - (d) for at least 18 months, has assisted in the operation of an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 5 000 kilowatts;
  - (e) for at least 24 months, has operated as chief engineer or shift engineer a low pressure boiler or low pressure boiler plant with a capacity greater than 3 000 kilowatts, with the capacity of the plant calculated as the aggregate capacity of all boilers installed in the plant;
  - (f) for at least one-half of the period mentioned in clause (a), (b), (c), (d) or (e), has operated in the role described in that clause and, for at least 12 months, has performed in a role acceptable to the chief inspector on the design, construction, installation, repair, maintenance or operation of pressure equipment;
  - (g) for at least 12 months, has operated as a process operator involving steam equipment in a role acceptable to the chief inspector and has completed an approved course in power engineering leading towards a third class power engineer's certificate; or
  - (h) for at least 6 months, has acquired experience in the operation of a high pressure boiler or high pressure boiler plant with a capacity greater than 1 000 kilowatts and is a graduate engineer.
- (2) Six months' credit will be granted towards the fulfilment of the operating experience requirement set out in clause (1)(a), (b), (c), (d) or (e) for the successful completion of an approved course in power engineering leading towards a third class power engineer's certificate.
- (3) Nine months' credit will be granted towards the fulfilment of the operating experience requirement set out in clause (1)(a), (b), (c), (d) or (e) for the successful completion of an approved 2-year power engineering program leading towards a third class power engineer's certificate and satisfactory to the chief inspector.

**Fourth class power engineer's certificate**

**116(1)** A person may qualify for a certificate of qualification for a fourth class power engineer's certificate if the person:

- (a) is the holder of a valid fifth class power engineer's certificate and for at least 12 months, has operated as a chief engineer an oilfield once-through boiler or oilfield-once through boiler plant with a capacity greater than 250 kilowatts;
- (b) is the holder of a valid fifth class power engineer's certificate and for at least 12 months, has operated an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 1 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity of not less than 250 kilowatts;
- (c) for at least 12 months, has assisted in the operation of an oilfield once-through boiler or oilfield once-through boiler plant with a capacity greater than 2 000 kilowatts or any other high pressure boiler or high pressure boiler plant with a capacity of not less than 1 000 kilowatts;

- (d) is the holder of a valid fifth class power engineer's certificate and, for at least 24 months, has operated as chief engineer a low pressure boiler or low pressure boiler plant with a capacity greater than 750 kilowatts, with the capacity of the plant calculated as the aggregate capacity of all boilers installed in the plant;
  - (e) for at least 24 months, has assisted in the operation of a low pressure boiler or low pressure boiler plant with a capacity greater than 1 500 kilowatts, with the capacity of the plant calculated as the aggregate capacity of all boilers installed in the plant;
  - (f) has successfully completed an approved full-time course in power engineering that:
    - (i) includes operating experience; and
    - (ii) leads towards a fourth class power engineer's certificate;
  - (g) is a graduate engineer that:
    - (i) for at least 2 months, has acquired experience in the operation of a high pressure boiler or high pressure boiler plant with a capacity greater than 500 kilowatts;
    - (ii) for at least 2 months, has acquired experience in the operation of a low pressure boiler or low pressure boiler plant with a capacity greater than 1 000 kilowatts;
    - (iii) for at least 6 months, has performed in a role acceptable to the chief inspector on the design, construction, installation, repair, maintenance or operation of pressure equipment; or
    - (iv) has successfully completed an approved operating experience course lab leading towards the fourth class power engineer's certificate;
  - (h) for at least one-half of the period mentioned in clause (a), (b) or (c), has operated in the role described in that clause and, for at least 12 months, has performed in a role acceptable to the chief inspector on the design, construction, installation, repair, maintenance or operation of pressure equipment; or
  - (i) has at least 12 months' experience as a process operator in a role acceptable to the chief inspector and has completed an approved course in power engineering leading towards a fourth class power engineer's certificate.
- (2) Six months' credit will be granted towards fulfilment of the operating experience requirement set out in clause (1)(a), (b), (c), (d) or (e) for the successful completion of an approved course in power engineering leading towards a fourth class power engineer's certificate.

**Fifth class power engineer's certificate**

**117(1)** A person may qualify for a certificate of qualification for a fifth class power engineer's certificate if the person:

- (a) holds a valid fireman boiler operator certificate and, for at least 12 months since the issue of that certificate, has been in charge of a low pressure boiler or low pressure boiler plant with a capacity of not less than 300 kilowatts, with the capacity of the plant calculated as the aggregate capacity of all boilers installed in the plant;

- (b) for at least 12 months, has assisted in the operation and maintenance of a high pressure boiler with a capacity of not less than 30 kilowatts;
  - (c) for at least 12 months, has assisted in the operation and maintenance of a low pressure boiler or low pressure boiler plant with a capacity of not less than 1 000 kilowatts, with the capacity of the plant calculated as the aggregate capacity of all boilers installed in the plant;
  - (d) for at least 24 months, has assisted in the operation and maintenance of a low pressure boiler or low pressure boiler plant with a capacity of not less than 300 kilowatts, with the capacity of the plant calculated as the aggregate capacity of all boilers installed in the plant, and has successfully completed an approved course in power engineering leading towards a fifth class power engineer's certificate;
  - (e) for at least 36 months, has performed in a role acceptable to the chief inspector on the design, construction, installation, operation, maintenance or repair of any boiler plant or associated auxiliary equipment and has successfully completed an approved course in power engineering leading towards a fifth class power engineer's certificate; or
  - (f) has successfully completed an approved full-time course in power engineering that:
    - (i) includes operating experience; and
    - (ii) leads towards a fifth class power engineer's certificate.
- (2) Six months' credit will be granted towards the fulfilment of the operating experience requirement set out in clause (1)(a), (b) or (c) for the successful completion of an approved course in power engineering leading towards a fifth class power engineer's certificate.

**Boiler operator certificates**

**118** A person may qualify for a certificate of qualification for a boiler operator's certificate if the person satisfies the chief inspector that he or she has sufficient knowledge of and experience in the operation and maintenance of boilers and related equipment or has completed an approved course in power engineering specifically related to boilers and related equipment.

**Refrigeration engineer's certificate**

**119** A person may qualify for a certificate of qualification for a refrigeration engineer's certificate if the person:

- (a) for at least 12 months, has operated or assisted in the operation of a refrigeration plant with a capacity of not less than 20 tonnes of refrigeration;
- (b) is the holder of a first, second, third, fourth or fifth class engineer's certificate;
- (c) has completed an approved course related to refrigeration engineering; or
- (d) possesses a journeyperson's certificate in the refrigeration and air conditioning mechanic trade issued pursuant to *The Apprenticeship and Trade Certification Act, 1999* or an equivalent certificate pursuant to any predecessor Act respecting apprenticeship.