



Province of Alberta

## SAFETY CODES ACT

# POWER ENGINEERS REGULATION

### **Alberta Regulation 85/2003**

With amendments up to and including Alberta Regulation 20/2018

Current as of April 30, 2018

### Office Consolidation

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(Consolidated up to 20/2018)

**ALBERTA REGULATION 85/2003**

**Safety Codes Act**

**POWER ENGINEERS REGULATION**

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#### **Definitions**

- 1 In this Regulation,
  - (a) "Act" means the *Safety Codes Act*;
  - (b) "Administrator" means the Administrator with respect to the pressure equipment discipline appointed under the Act;
  - (b.1) "ASME" means the American Society of Mechanical Engineers;
  - (c) "assistant engineer" means a person who
    - (i) holds a certificate of competency of a classification that meets or exceeds the requirements under this Regulation respecting supervision for that plant type and capacity, and
    - (ii) is assigned responsibility for the supervision of a specific section of a power plant by a shift engineer;

- (d) “assistant shift engineer” means a power engineer who is appointed by the owner of a power plant to provide assistance to a shift engineer with respect to the continuous supervision of the power plant;
- (e) “boiler” means a vessel in which steam or other vapour can be generated under pressure or in which a liquid can be put under pressure by the direct application of a heat source;
- (f) “capacity” means
  - (i) the boiler rating as expressed in units of kilowatts, or
  - (ii) the aggregate volume contained by the pressure envelopment as expressed in units of cubic metres;
- (g) “chief power engineer” means a person who
  - (i) holds a certificate of competency of a classification that meets or exceeds the requirements under this Regulation respecting supervision for that plant type and capacity, and
  - (ii) has been designated by the owner of a power plant to fulfill the responsibilities of the chief power engineer;
- (g.1) “competent”, in relation to a person, means possessing the appropriate qualifications, knowledge, skills and experience to supervise or perform work safely and in accordance with the Act;
- (h) “continuous supervision” means uninterrupted supervision of a power plant by a shift engineer who is assigned responsibility for supervising the safe operation of that plant;
- (h.1) “CSA” means the Canadian Standards Association;
- (h.2) “fitting” means a valve, gauge, regulating or controlling device, flange, pipe fitting or any other appurtenance that is attached to, or forms part of, a boiler, pressure vessel, fired-heater pressure coil, thermal liquid heating system or pressure piping system;
- (i) “general supervision” means the duties of a power engineer as set out in sections 2(9), 3(4) and (5) and 4(3);
- (j) “heating plant” means

- (i) a boiler in which steam or other vapour can be generated at a pressure not exceeding 103 kPa and a temperature not exceeding 121°C,
  - (ii) a boiler in which liquid can be heated to a pressure not exceeding 1100 kPa and a temperature not exceeding 121°C at or near the outlet of the boiler, or
  - (iii) a system or arrangement of interconnected boilers described in subclause (i) or (ii),  
  
and the engines, turbines, pressure vessels, pressure piping systems, fittings, machinery and ancillary equipment used in connection with one or more of the boilers;
- (k) “heating surface” means any part of the surface of a boiler or thermal liquid heating system that is in contact with fluid under pressure on one side and the products of combustion on the other side;
  - (k.1) “historic boiler” means a boiler forming part of a traction engine, threshing machine, steam locomotive or other power plant of historic interest;
  - (k.2) “instrumentation alternative” means a technology designed to ensure the safe operation of pressure equipment without the level of supervision by a power engineer or other competent operator that would otherwise be required, specifically,
    - (i) a power plant or thermal liquid heating system designed to operate with reduced supervision, or
    - (ii) a remote monitoring system for heating plants;
  - (k.3) “integrity management system” means a system by which an owner ensures that pressure equipment is designed, constructed, installed, commissioned, operated, inspected, maintained and decommissioned in accordance with the Act and regulations;
  - (l) “oilfield once-through boiler” means a coil type, drumless boiler designed for once-through water usage that is used only for underground heating in oilfields;
  - (l.1) “organic fluid” means a hydrocarbon-based fluid used in a thermodynamic cycle in a waste heat recovery plant referred to in section 2.1(3);

- (m) “overall supervision” means the duties of a chief power engineer as set out in section 2(6) and (7);
- (n) “power engineer” means a person who holds a certificate of competency referred to in section 7;
- (o) “power plant” means
  - (i) a boiler in which steam or other vapour can be generated at a pressure exceeding 103 kPa or a temperature exceeding 121°C,
  - (ii) a boiler in which liquid can be heated to a pressure exceeding 1100 kPa or a temperature exceeding 121°C, or both, or
  - (iii) a system or arrangement of interconnected boilers described in subclause (i) or (ii),  
  
and the engines, turbines, pressure vessels, pressure piping systems, fittings, machinery and ancillary equipment used in connection with one or more of the boilers;
- (p) “pressure plant” means a pressure vessel or a system or arrangement of pressure vessels and the pressure piping system used in connection with the pressure vessel or the system or arrangement of pressure vessels;
- (p.1) “remotely located facility” means a facility at which any danger to persons possibly affected by a failure of pressure equipment is significantly reduced because of the distance of the facility from other areas of human habitation or use;
- (q) “shift engineer” means a person who
  - (i) holds a certificate of competency permitting that person to take responsibility for the continuous supervision of a shift in a power plant under the supervision of a chief power engineer, and
  - (ii) is assigned the responsibility to carry out the powers and duties of a shift engineer by the owner of a power plant;
- (r) “shift operator” means a person who
  - (i) holds a certificate of competency authorizing that person to take responsibility for the general supervision of a shift of a thermal liquid heating

system under the supervision of a power engineer in charge of that system, and

- (ii) is assigned the responsibility to carry out the duties of a shift operator by the owner of a thermal liquid heating system;
- (s) “thermal liquid heating system” means one or more thermal liquid heaters in which a thermal liquid that is not pressurized by the application of a heat source is used as the heat transfer medium, and includes any connected piping system or vessel;
- (t) “thermal liquid” means a non-expansible fluid, other than water or a mixture of water and glycol, that is used as a heat transfer medium without vaporization at the maximum design temperature and atmospheric pressure.

AR 85/2003 s1;218/2013

## Supervision

### Power plants

**2(1)** A power plant may not be operated unless it is

- (a) under the overall supervision of a chief power engineer who holds a certificate of competency that meets or exceeds the requirements of the Schedule for a power plant of that type and capacity and who is not a shift engineer for that power plant, and
- (b) under the continuous supervision of a shift engineer who holds a certificate of competency that meets or exceeds the requirements of the Schedule for a power plant of that type and capacity.

**(2)** Subsection (1) does not apply to a power plant that

- (a) has an aggregate capacity not exceeding 250 kW or 0.085m<sup>3</sup>,
- (b) is used for a heating process when the heat is generated inherently in the process, and the power plant does not generate steam, or
- (c) heats a fluid other than water in a process where heating the fluid is inherent in the process.

**(3)** Despite subsection (1), a power plant that consists of one or more oilfield once-through boilers that have an aggregate capacity not exceeding 5000 kW requires overall supervision but not



continuous supervision and it must be supervised by a person who holds a certificate of competency that meets or exceeds the authorized scope of practice in Table 2 of the Schedule.

(4) Repealed AR 20/2018 s2.

(5) Despite subsection (1), a stationary power plant that operates at a capacity exceeding 20 kW but not exceeding 250 kW requires general supervision but not continuous supervision or overall supervision and it must be supervised by a person who holds a certificate of competency that meets or exceeds the authorized scope of practice of a Special Boiler Operator's Certificate of Competency.

(6) If a power plant is required to have continuous supervision and overall supervision, the chief power engineer must

- (a) direct and supervise the shift engineers,
- (b) ensure that the log book is updated and maintained in accordance with section 6,
- (c) ensure that the power plant is supervised in accordance with the recommendations set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act,
- (d) ensure that an accurate record is kept of the power plant's checks as set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act,
- (e) ensure that checks are conducted at least every 2 hours while a boiler is in operation, and
- (f) notify the owner of the power plant and the Administrator of any unsafe condition, accident or fire involving the pressure equipment of that power plant.

(7) If a power plant is required to have overall supervision but is not required to have continuous supervision, the chief power engineer must

- (a) remain on the power plant site whenever a boiler is in operation,
- (b) put each boiler into a safe shutdown condition before leaving the power plant site,
- (c) update and maintain the log book in accordance with section 6,

- (d) supervise the power plant in accordance with the recommendations set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act,
- (e) conduct checks of the power plant's equipment at least every 2 hours while a boiler is in operation,
- (f) keep an accurate record of the power plant's checks as set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act, and
- (g) notify the owner of the power plant and the Administrator of any unsafe condition, accident or fire involving the pressure equipment of that power plant.

**(8)** Repealed AR 218/2013 s3.

**(9)** If a power plant is required to be under general supervision but not continuous supervision or overall supervision, the power engineer in charge of the power plant must

- (a) remain on the power plant site whenever a boiler is in operation,
- (b) put each boiler into a safe shutdown condition before leaving the power plant site,
- (c) update and maintain the log book in accordance with section 6,
- (d) supervise the power plant in accordance with recommendations set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act,
- (e) conduct checks of the power plant's equipment at least every 2 hours while a boiler is in operation,
- (f) keep an accurate record of the power plant's checks as set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act, and
- (g) notify the owner of the power plant and the Administrator of any unsafe condition, accident or fire that involves the pressure equipment of that power plant.

(10) During the operation of a historic boiler to which the Act applies that is a locomotive operating on a railroad, continuous and overall supervision must be provided by a person who holds a certificate of competency of a class that meets or exceeds the requirements shown in Table 1 of the Schedule for a power plant of that type and capacity.

(11) Despite subsection (1), a historic boiler other than a locomotive referred to in subsection (10) that is operating in a display or for the purpose of entertainment must be supervised by a person who holds a Special Steam-powered Traction Engine Operator's Certificate of Competency.

(12) During the operation of a historic boiler referred to in subsection (11), the Special Steam-powered Traction Engine Operator or a competent power engineer must

- (a) provide constant supervision of the boiler,
- (b) put the boiler into a safe shutdown condition before leaving it,
- (c) update and maintain the log book in accordance with section 6,
- (d) ensure that the boiler is supervised in accordance with the recommendations set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act,
- (e) ensure that an accurate record is kept of the boiler's checks as set out in the ASME Boiler and Pressure Vessel Code, Section VII, *Recommended Guidelines for the Care of Power Boilers*, as declared in force under the Act, and
- (f) notify the owner of the boiler and the Administrator of any unsafe condition, accident or fire involving the boiler.

AR 85/2003 s2;218/2013;20/2018

#### **Reduced supervision — power plants**

**2.1(1)** Despite section 2, a power plant that uses thermal liquid under pressure of a blanketing gas not exceeding 700 kPa must, except as provided in subsection (2), be supervised in accordance with section 3 by a power engineer who holds a certificate of competency that meets or exceeds the authorized scope of practice set out in Table 5 of the Schedule.

(2) Despite section 2, a power plant that does not produce steam and that uses thermal liquid under pressure of a blanketing gas not

exceeding 700 kPa or uses a water-glycol mixture with a minimum of 40% glycol may operate under a reduced level of supervision only if

- (a) it is situated at a remotely located facility,
- (b) a power engineer who holds a certificate of competency that meets or exceeds the authorized scope of practice set out in Table 1 of the Schedule is assigned the responsibility for supervising the safe operation of the power plant, and
- (c) the power plant meets the technical and supervision requirements established by the Administrator respecting the safe operation of the type of boiler, facility and instrumentation alternatives in question, including but not limited to
  - (i) instrumentation alternative requirements,
  - (ii) the reduced supervision, periodic monitoring, inspection, maintenance, incident response capacity, record keeping, restriction of access or other duties of an owner or a power engineer that will apply, and
  - (iii) integrity management system requirements.

**(3)** Despite section 2, a power plant operated for the purpose of recovering energy from waste heat may operate under a reduced level of supervision by a competent operator who does not hold a certificate of competency issued under this Regulation only if it

- (a) is situated at a remotely located facility,
- (b) uses a water-glycol or other organic fluid mixture with a reduced degree of expansion,
- (c) is designed so that fluid referred to in clause (b) is heated by waste heat with no secondary fuel input, and
- (d) meets the technical and supervision requirements established by the Administrator respecting the safe operation of the type of power plant, facility and instrumentation alternatives in question, including but not limited to
  - (i) instrumentation alternative requirements,
  - (ii) the reduced supervision, periodic monitoring, inspection, maintenance, incident response capacity, record keeping, restriction of access or other duties of an owner that will apply, and

- (iii) integrity management system requirements.

AR 218/2013 s4

### **Thermal liquid heating systems**

**3(1)** A thermal liquid heating system may not be operated unless it is under the general supervision of a person who holds a certificate of competency that meets or exceeds the requirements of Table 5 of the Schedule.

**(2)** Subsection (1) does not apply to a thermal liquid heating system that has a capacity not exceeding 250 kW.

**(3)** Repealed AR 218/2013 s5.

**(4)** If a thermal liquid heating system is required to be under general supervision, the power engineer in charge of the system or a shift operator must

- (a) remain on the system site whenever the system is in operation,
- (b) put the system into a safe shutdown condition before leaving the system site,
- (c) update and maintain the log book in accordance with section 6, and
- (d) conduct operational checks of the system's equipment at least every 4 hours while the system is in operation.

**(5)** If a thermal liquid heating system is operated under the general supervision of one or more shift operators, the power engineer in charge of the system must direct and supervise the shift operators on matters respecting its safe operation.

AR 85/2003 s3;218/2013

### **Reduced supervision — thermal liquid heating systems**

**3.1** Despite section 3, a thermal liquid heating system may operate under a reduced level of supervision only if it

- (a) is situated at a remotely located facility, and
- (b) meets the technical and supervision requirements established by the Administrator respecting the safe operation of the type of thermal liquid heating system, facility and instrumentation alternatives in question, including but not limited to
  - (i) instrumentation alternative requirements,

- (ii) the reduced supervision, periodic monitoring, inspection, maintenance, incident response capacity, record keeping, restriction of access or other duties of an owner or a power engineer that will apply, and
- (iii) integrity management system requirements.

AR 218/2013 s6

### Heating plants

**4(1)** A heating plant may not be operated unless it is under the general supervision of a person who holds a certificate of competency that meets or exceeds the requirements of Table 4 of the Schedule.

**(2)** Subsection (1) does not apply to a heating plant that has a capacity not exceeding 750 kW or 0.085 m<sup>3</sup>.

**(3)** If a heating plant is required to be under general supervision, the power engineer in charge of the plant

- (a) must supervise the heating plant in accordance with the recommendations set out in the ASME Boiler and Pressure Vessel Code, Section VI, *Recommended Rules for the Care and Operation of Heating Boilers*, as declared in force under the Act,
- (b) must conduct checks of the heating plant's equipment, twice within each 24-hour period and at least 7 hours apart, while the heating plant is in operation,
- (c) must update and maintain the log book in accordance with section 6,
- (d) must ensure that a competent person is on the heating plant site for start up of the heating plant, and
- (e) may provide supervision to no more than 2 heating plants unless authorized to do so by the Administrator.

**(4)** Despite subsection (3), general supervision of a heating plant may be suspended by the owner for a period not exceeding 96 consecutive hours if

- (a) the period is only on weekends or statutory holidays,
- (b) the heating plant is in good working order, and
- (c) the buildings served by the heating plant are unoccupied.

AR 85/2003 s4;218/2013

**Reduced supervision — heating plants**

**4.1** Despite section 4, a heating plant may operate under a reduced level of supervision outside normal Monday to Friday working hours only if

- (a) a power engineer who holds a certificate of competency that meets or exceeds the authorized scope of practice set out in Table 4 of the Schedule is assigned responsibility for supervising the safe operation of the plant,
- (b) the power engineer supervises no more than 5 hot water heating plants or 2 steam heating plants and conducts an operational check on each heating plant at least once daily, and
- (c) the heating plant meets the technical and supervision requirements established by the Administrator respecting the safe operation of the type of heating plant, facility and instrumentation alternatives in question, including but not limited to
  - (i) remote monitoring system requirements, and
  - (ii) the reduced supervision, periodic monitoring, inspection, maintenance, incident response capacity, record keeping, restriction of access or other duties of an owner or a power engineer that will apply.

AR 218/2013 s8

**Unsafe operation**

**5(1)** A power engineer

- (a) must take reasonable actions necessary to maintain a power plant, heating plant or thermal liquid heating system in a safe operating condition, and
- (b) shall not operate a boiler, pressure vessel, power plant, heating plant or thermal liquid heating system if that power engineer is of the opinion that it is unsafe to do so.

**(2)** A person shall not direct a power engineer to operate a boiler, pressure vessel, power plant, heating plant or thermal liquid heating system contrary to the Act or the regulations under the Act or any code, standard or body of rules declared to be in force pursuant to the Act.

**Log book**

**6** The chief power engineer of a power plant and the power engineer in charge of a heating plant or a thermal liquid heating

system must ensure that a log book is updated and maintained to record

- (a) matters relating to the operation and maintenance of that power plant, heating plant or thermal liquid heating system,
- (b) the testing and servicing of safety valves and other safety devices and controls, and
- (c) any other matter that may affect the safety of the power plant, heating plant or thermal liquid heating system.

### **Certificates of Competency**

#### **Types of certificates**

**7** The following certificates of competency are established:

- (a) 1st Class Power Engineer's Certificate of Competency;
- (b) 2nd Class Power Engineer's Certificate of Competency;
- (c) 3rd Class Power Engineer's Certificate of Competency;
- (d) 4th Class Power Engineer's Certificate of Competency;
- (e) Building Operator A Certificate of Competency;
- (f) 5th Class Power Engineer's Certificate of Competency;
- (g) Fireman's Certificate of Competency;
- (h) Building Operator B Certificate of Competency;
- (i) Special Oilwell Operator's Certificate of Competency;
- (j) Special Boiler Operator's Certificate of Competency;
- (k) Special Steam-powered Traction Engine Operator's Certificate of Competency;
- (l) Fired Process Heater Operator's Certificate of Competency.

AR 85/2003 s7;218/2013

#### **Authorized scope of practice**

**8(1)** A power engineer is authorized to supervise a power plant, heating plant or thermal heating system as set out in Tables 1 to 5 of the Schedule, and the Tables apply as follows:



- (a) Table 1 applies to power plants other than power plants described in clauses (b), (c) and (e);
- (b) Table 2 applies to power plants that are oilfield once-through boilers;
- (c) repealed AR 20/2018 s3;
- (d) Table 4 applies to heating plants;
- (e) Table 5 applies to thermal liquid heating systems and to power plants operating under reduced supervision in accordance with section 2.1(1).

**(2)** Despite subsection (1), a person who holds a 4th Class Power Engineer's Certificate of Competency issued before September 1, 1998 may not supervise a heating plant that is within the authorized scope of practice of a 5th Class Power Engineer's Certificate of Competency, Building Operator A Certificate of Competency or Building Operator B Certificate of Competency.

**(3)** The limitations on the authorized scope of practice of each certificate of competency listed in section 7 are those described in Tables 1 to 5 of the Schedule and in sections 9 and 10.

AR 85/2003 s8;218/2013;20/2018

#### **Authorization to supervise**

**9(1)** A person who holds a 1st Class Power Engineer's Certificate of Competency may supervise any type or capacity of power plant, heating plant or thermal liquid heating system.

**(2)** A person who holds a 2nd Class Power Engineer's Certificate of Competency may supervise any type or capacity of heating plant or thermal liquid heating system, and may supervise power plants as shown in Row 2 of Tables 1 and 2 of the Schedule.

**(3)** A person who holds a 3rd Class Power Engineer's Certificate of Competency may supervise power plants, heating plants or thermal liquid heating systems as shown in Row 3 of Tables 1 to 5 of the Schedule.

**(4)** A person who holds a 4th Class Power Engineer's Certificate of Competency issued on or after September 1, 1998 may supervise power plants, heating plants or thermal liquid heating systems as shown in Row 4 of Tables 1 to 5 of the Schedule.

**(5)** A person who holds a 4th Class Power Engineer's Certificate of Competency issued before September 1, 1998 may supervise power plants or thermal liquid heating systems as shown in Row 4 of Tables 1, 2 and 5 of the Schedule.

- (6) A person who holds a Building Operator A Certificate of Competency may supervise heating plants as shown in Row 4 of Table 4 of the Schedule.
- (7) A person who holds a 5th Class Power Engineer's Certificate of Competency may supervise power plants and heating plants as shown in Row 5 of Table 1 and Row 5 of Table 4 of the Schedule.
- (8) A person who holds a Fireman's Certificate of Competency may supervise power plants as shown in Row 5 of Table 1 of the Schedule.
- (9) A person who holds a Building Operator B Certificate of Competency may supervise heating plants as shown in Row 5 of Table 4 of the Schedule.
- (10) A person who holds a Special Oilwell Operator's Certificate of Competency may supervise power plants as shown in Row 6 of Table 1 of the Schedule.
- (11) A person who holds a Special Boiler Operator's Certificate of Competency may supervise power plants of a capacity not exceeding 250 kW as shown in Row 6 of Table 1 of the Schedule if
- (a) a specified stationary power plant to be supervised is named on that certificate of competency, or
  - (b) the portable power plants owned by the same company that could be individually supervised at different times by that person are listed on that certificate of competency.
- (12) A person who holds a Special Steam-powered Traction Engine Operator's Certificate of Competency may, as shown in Row 8 of Table 1 of the Schedule, supervise a historic boiler referred to in section 2(11).
- (13) A person who holds a Fired Process Heater Operator's Certificate of Competency may supervise
- (a) a power plant referred to in section 2.1(1) as shown in Row 7 of Table 5 of the Schedule,
  - (b) a power plant referred to in section 2.1(2) as shown in Row 7 of Table 1 of the Schedule, and
  - (c) a thermal liquid heating system referred to in section 3 or 3.1 as shown in Row 7 of Table 5 of the Schedule.

AR 85/2003 s9;218/2013;20/2018

**Maintenance and repair authorization**

**10(1)** A person who holds a 1st Class Power Engineer's Certificate of Competency, 2nd Class Power Engineer's Certificate of Competency, 3rd Class Power Engineer's Certificate of Competency or 4th Class Power Engineer's Certificate of Competency may sketch, construct, install, operate, repair and give advice on all things pertaining to the power plant that the holder is given the responsibility to operate, maintain or supervise.

**(2)** A person who holds a 1st Class Power Engineer's Certificate of Competency, 2nd Class Power Engineer's Certificate of Competency, 3rd Class Power Engineer's Certificate of Competency, 4th Class Power Engineer's Certificate of Competency issued on or after September 1, 1998 or 5th Class Power Engineer's Certificate of Competency may sketch, construct, install, operate, repair and give advice on all things pertaining to the heating plant that the holder is given the responsibility to operate, maintain or supervise.

**Issuance of certificates**

**11(1)** Pursuant to section 42 of the Act, the following certificates of competency may be issued to a person who satisfies the requirements:

- (a) 1st Class Power Engineer's Certificate of Competency;
- (b) 2nd Class Power Engineer's Certificate of Competency;
- (c) 3rd Class Power Engineer's Certificate of Competency;
- (d) 4th Class Power Engineer's Certificate of Competency;
- (e) 5th Class Power Engineer's Certificate of Competency;
- (f) Special Oilwell Operator's Certificate of Competency;
- (g) Special Boiler Operator's Certificate of Competency;
- (h) Special Steam-powered Traction Engine Operator's Certificate of Competency;
- (i) Fired Process Heater Operator's Certificate of Competency.

**(2)** A Building Operator A Certificate of Competency, Building Operator B Certificate of Competency and Fireman's Certificate of Competency may not be issued but if such a certificate exists and has not expired it may be renewed in accordance with section 15 before the date specified under section 15(1).

AR 85/2003 s12;218/2013

**Display of certificates**

**12(1)** The owner of a power plant or thermal liquid heating system must

- (a) maintain and display the certificates of competency of the persons supervising the power plant or thermal liquid heating system in a conspicuous place on the premises or in a manner satisfactory to the Administrator, and
- (b) provide the certificates of competency of the persons supervising the power plant or thermal liquid heating system forthwith on request, if they are not conspicuously displayed.

**(1.1)** The owner of a heating plant must display in a conspicuous place on the premises the certificates of competency of the persons supervising the heating plant.

**(2)** For the purposes of this Regulation, the Administrator may maintain an information system in respect of persons who hold certificates of competency referred to in section 7.

**(3)** The information system may contain only the following information for each holder of a certificate of competency:

- (a) the name of the holder of the certificate of competency;
- (b) the file number of the holder of the certificate of competency;
- (c) the type and class of certificate of competency;
- (d) the expiry date of the certificate of competency.

**(4)** The Administrator may make all or some of the information contained in the information system available to the public.

AR 85/2003 s12;270/2004;218/2013

**Duplicate certificates**

**13(1)** If a person's certificate of competency must be displayed in more than one heating plant, that person may apply to the Administrator for a duplicate certificate of competency.

**(2)** A duplicate certificate of competency issued for the purposes of subsection (1)

- (a) must indicate on the duplicate certificate of competency that it is a duplicate and that it may be displayed in the building identified on its face, and

- (b) may only be displayed in the building identified on its face.

**(3)** If a certificate of competency is lost or destroyed, a duplicate certificate of competency may be issued on providing evidence, satisfactory to the Administrator, of the loss or destruction of the original certificate of competency.

#### **Temporary certificates**

**14(1)** A certificate of competency listed in section 11 may be issued to a person on a temporary basis, if

- (a) the chief power engineer in charge of a power plant, a power engineer in charge of a heating plant or thermal liquid heating system or an owner of a heating plant, power plant or thermal liquid heating system applies for the temporary certificate of competency on the person's behalf, and
- (b) the chief power engineer in charge of a power plant, a power engineer in charge of a heating plant or thermal liquid heating system or an owner of a heating plant, power plant or thermal liquid heating system certifies to the Administrator that
  - (i) the services of the holder of a certificate of competency as required by sections 2 to 4.1 for that power plant, heating plant or thermal liquid heating system cannot be obtained, or
  - (ii) the temporary certificate of competency is required
    - (A) for holiday, emergency or sick relief purposes, or
    - (B) to enable a person to operate under it for the purposes of training.

**(2)** The Administrator may require a person who wishes to be issued a temporary certificate of competency to pass a written examination before being issued the temporary certificate of competency.

**(3)** A temporary certificate of competency issued by the Administrator may not be more than one rank higher than the certificate of competency already held by the person who is to be issued the temporary certificate of competency.

- (4) A temporary certificate of competency authorizes the holder of the certificate to perform duties authorized by the scope of practice for the certificate of competency as set out in the Schedule.
- (5) An application for a temporary certificate of competency must be submitted on a form satisfactory to the Administrator and must contain a declaration that the person named in the application is, to the best of the applicant's knowledge, capable of acting in the capacity for which the temporary certificate of competency is being requested.
- (6) Except as authorized under section 2.1, a chief power engineer must be present at the power plant for which the chief power engineer is responsible during regular working hours, but if a chief power engineer is sick or is expected to be absent from that power plant for a period exceeding 96 hours and there is no power engineer of an equivalent class to replace him or her, then the chief power engineer or the owner must apply to the Administrator for a temporary certificate of competency authorizing a power engineer to provide supervision during the absence.
- (7) Except as authorized under section 3.1, a power engineer must be present at the thermal liquid heating system for which the power engineer is responsible during regular working hours, but if the power engineer in charge is sick or is expected to be absent from that thermal liquid heating system for a period exceeding 96 hours and there is no power engineer of an equivalent class to replace him or her, then the power engineer in charge or the owner must apply to the Administrator for a temporary certificate of competency authorizing another power engineer to provide supervision during the absence.
- (8) The duration of a temporary certificate of competency is the term specified on the certificate, up to a maximum of 6 months, and the Administrator may impose conditions on the holder of the certificate of competency.
- (9) Despite subsection (1)(b)(ii)(A), if a power engineer is sick or is expected to be absent from a power plant on an emergency basis, the chief power engineer
- (a) may, on a form acceptable to the Administrator,
    - (i) authorize a power engineer to provide supervision for a period not exceeding 96 hours, at a level not more than one rank higher than the certificate of competency held by the person, and
    - (ii) include the conditions that the chief power engineer considers to be appropriate, if any,

and

- (b) shall, within 96 hours, notify the owner of the power plant and the Administrator of the authorization given under clause (a).

AR 85/2003 s14;218/2013

#### **Renewal of certificates**

**15(1)** A certificate of competency remains valid so long as it is renewed on or before the date specified by the Administrator.

**(2)** To renew a certificate of competency, the person who holds the certificate of competency must apply to the Administrator.

**(3)** Despite subsection (1), if a certificate of competency has not been renewed for a period exceeding 3 years but less than 5 years after it expired, the Administrator may require the person who holds the expired certificate of competency to pass a written examination of the same classification as the expired certificate of competency before renewing the expired certificate of competency.

**(4)** Despite subsection (1), if a certificate of competency has not been renewed for a period 5 years or more after it expired, the Administrator must require the person who holds the expired certificate of competency to pass a written examination of the same classification as the expired certificate of competency before renewing the expired certificate of competency.

**(5)** Despite subsection (1), a Special Steam-powered Traction Engine Operator's Certificate of Competency must be renewed every 2 years, and to be eligible for renewal the applicant must pass a practical examination that is satisfactory to the Administrator regarding the safe operation of historic boilers referred to in section 2(11).

AR 85/2003 s15;218/2013

#### **Qualifications, Equivalencies and Applications for Certificates**

##### **1st Class Power Engineer's examination**

**16(1)** To qualify to take a 1st Class Power Engineer's Certificate of Competency examination, a candidate must hold a 2nd Class Power Engineer's Certificate of Competency.

**(2)** A 1st Class Power Engineer's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the 1st Class Power Engineer's Certificate of

Competency examination and must be divided into 2 parts, lettered A and B.

**(3)** To pass a 1st Class Power Engineer's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for each examination paper.

AR 85/2003 s16;218/2013

### **1st Class Power Engineer's Certificate of Competency**

**16.1(1)** To qualify for a 1st Class Power Engineer's Certificate of Competency, an applicant must

- (a) pass the 1st Class Power Engineer's Certificate of Competency examination, and
- (b) have been employed
  - (i) for a period of 30 months as a chief power engineer or as a shift engineer in a power plant that is required by this Regulation to employ a person holding at least a 2nd Class Power Engineer's certificate of competency in that position,
  - (ii) for a period of 45 months as an assistant shift engineer in a power plant that is required by this Regulation to employ a person holding at least a 3rd Class Power Engineer's Certificate of Competency in that position, or
  - (iii) for 1/2 the period of time specified in subclause (i) or (ii) and for either a period of
    - (A) 15 months in a pressure plant in an operating capacity satisfactory to the Administrator, or
    - (B) 36 months in a supervisory capacity satisfactory to the Administrator in the design, construction, commissioning, installation, repair, maintenance or operation of pressure equipment to which the Act applies.

**(2)** The Administrator may grant 12 months' credit towards the experience required by subsection (1)(b)(i) or (ii)

- (a) on successful completion of a course in power engineering satisfactory to the Administrator that leads towards a 1st Class Power Engineer's Certificate of Competency examination, or



- (b) to the holder of a degree in mechanical engineering from a university satisfactory to the Administrator.

AR 218/2013 s16

### **2nd Class Power Engineer's examination**

**17(1)** To qualify to take a 2nd Class Power Engineer's Certificate of Competency examination, a candidate must hold a 3rd Class Power Engineer's Certificate of Competency.

**(2)** A 2nd Class Power Engineer's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the 2nd Class Power Engineer's Certificate of Competency examination and must be divided into 2 parts, lettered A and B.

**(3)** To pass a 2nd Class Power Engineer's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for each examination paper.

AR 85/2003 s17;218/2013

### **2nd Class Power Engineer's Certificate of Competency**

**17.1(1)** To qualify for a 2nd Class Power Engineer's Certificate of Competency, an applicant must

- (a) pass the 2nd Class Power Engineer's Certificate of Competency examination, and
- (b) have been employed
  - (i) for a period of 24 months as a chief power engineer, shift engineer, assistant shift engineer or assistant engineer in a power plant that is required by this Regulation to employ a person holding at least a 3rd Class Power Engineer's Certificate of Competency in that position,
  - (ii) for a period of 36 months as a shift engineer in a power plant that has a capacity exceeding 1000 kW, or
  - (iii) for 1/2 of the period of time specified in subclause (i) or (ii) and for either a period of
    - (A) 12 months in a pressure plant in an operating capacity satisfactory to the Administrator, or
    - (B) 24 months in a supervisory capacity satisfactory to the Administrator in the design, construction,

commissioning, installation, repair, maintenance or operation of pressure equipment to which the Act applies.

(2) The Administrator may grant a credit equivalent to 9 months of the experience required by subsection (1)(b)(i) or (ii)

- (a) on successful completion of a course in power engineering satisfactory to the Administrator that leads towards a 2nd Class Power Engineer's Certificate of Competency examination, or
- (b) to the holder of a degree in mechanical engineering from a university satisfactory to the Administrator.

(3) The Administrator may grant a credit equivalent to 1/2 of the experience required by subsection (1)(b)(i) or (ii) to a candidate who holds a 3rd Class Power Engineer's Certificate of Competency and has successfully completed a 2-year power engineering technology program satisfactory to the Administrator.

AR 218/2013 s17

### **3rd Class Power Engineer's examination**

**18(1)** To qualify to take a 3rd Class Power Engineer's Certificate of Competency examination, a candidate must hold a 4th Class Power Engineer's Certificate of Competency.

(2) A 3rd Class Power Engineer's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the 3rd Class Power Engineer's Certificate of Competency examination and must be divided into 2 parts, lettered A and B.

(3) To pass a 3rd Class Power Engineer's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for each examination paper.

(4), (5) Repealed AR 20/2018 s5.

AR 85/2003 s18;218/2013;20/2018

### **3rd Class Power Engineer's Certificate of Competency**

**18.1(1)** To qualify for a 3rd Class Power Engineer's Certificate of Competency, a candidate must

- (a) pass the 3rd Class Power Engineer's Certificate of Competency examination, and
- (b) have been employed

- (i) for a period of 12 months as a chief power engineer, shift engineer, assistant shift engineer or assistant engineer in a power plant that is required by this Regulation to employ a person holding at least a 4th Class Power Engineer's Certificate of Competency in that position,
  - (ii) for a period of 12 months as a chief power engineer in a power plant consisting of oilfield once-through boilers that have a capacity exceeding 1000 kW,
  - (iii) for a period of 48 months in a heating plant that has a capacity exceeding 3000 kW, while holding
    - (A) a valid Building Operator A Certificate of Competency, or
    - (B) a 4th Class Power Engineer's Certificate of Competency issued after September 1, 1998,
  - (iv) for 1/3 of the period of time specified in subclause (i) or (ii) and for a period of 8 months in a pressure plant in a position satisfactory to the Administrator, or
  - (v) for 1/2 of the period of time specified in subclause (i) or (ii) and for a period of 12 months in a position satisfactory to the Administrator in the design, construction, commissioning, installation, repair, maintenance or operation of pressure equipment to which the Act applies.
- (2) The Administrator may grant a credit equivalent to
- (a) 6 months of the experience required by subsection (1)(b)(i) or (ii)
    - (i) on successful completion of a course in power engineering satisfactory to the Administrator that leads towards a 3rd Class Power Engineer's Certificate of Competency examination, or
    - (ii) to the holder of a degree in mechanical engineering from a university satisfactory to the Administrator,

- (b) 9 months of the experience required by subsection (1)(b)(i) or (ii) to a candidate who has successfully completed a 2-year power engineering technology program satisfactory to the Administrator, or
- (c) 24 months of the experience required by subsection (1)(b)(iii) to a candidate who has successfully completed a course in power engineering that is satisfactory to the Administrator.

AR 218/2013 s18;20/2018

#### **4th Class Power Engineer's examination**

**19(1)** To qualify to take a 4th Class Power Engineer's Certificate of Competency examination, a candidate must

- (a) have successfully completed a course in power engineering satisfactory to the Administrator that leads towards a 4th Class Power Engineer's Certificate of Competency, or
- (b) hold a degree in mechanical engineering from a university satisfactory to the Administrator.

**(2)** Despite subsection (1), a candidate who has successfully completed the first full term of a 2-year power engineering technology program satisfactory to the Administrator is qualified to take a 4th Class Power Engineer's Certificate of Competency examination.

**(3)** Despite subsection (1)(a),

- (a) a candidate who has successfully completed part A of a course in power engineering satisfactory to the Administrator that leads towards a 4th Class Power Engineer's Certificate of Competency is qualified to take part A of the examination, and
- (b) a candidate who has successfully completed part B of a course in power engineering satisfactory to the Administrator that leads towards a 4th Class Power Engineer's Certificate of Competency is qualified to take part B of the examination.

**(4)** A 4th Class Power Engineer's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the 4th Class Power Engineer's Certificate of Competency examination and must be divided into 2 parts, lettered A and B.

(5) To pass a 4th Class Power Engineer's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for each examination paper.

AR 85/2003 s19;218/2013

#### **4th Class Power Engineer's Certificate of Competency**

**19.1** To qualify for a 4th Class Power Engineer's Certificate of Competency, a candidate must

- (a) pass the 4th Class Power Engineer's Certificate of Competency examination, and
- (b) have been employed for a period of
  - (i) 6 months
    - (A) assisting in the operation of a power plant that has a capacity exceeding 250 kW, or
    - (B) in a pressure plant that has an operating capacity satisfactory to the Administrator,
  - (ii) 3 months in a power plant described in subclause (i)(A) and 12 months in a position satisfactory to the Administrator in the design, construction, commissioning, installation, repair, maintenance or operation of pressure equipment to which the Act applies, or
  - (iii) 12 months in a heating plant that has a capacity exceeding 750 kW while holding a Building Operator A Certificate of Competency, a Building Operator B Certificate of Competency or a 5th Class Power Engineer's Certificate of Competency.

AR 218/2013 s19

#### **4th Class Power Engineer's special examinations**

**19.2(1)** Despite sections 19 and 19.1, a candidate who holds a 4th Class Power Engineer's Certificate of Competency that was issued before September 1, 1998 and that is still valid is eligible to write a special examination on the subject of heating plants after

- (a) having been employed for a period of 6 months in a heating plant that has a capacity exceeding 750 kW in a position satisfactory to the Administrator, or
- (b) successfully completing an upgrading course that is satisfactory to the Administrator.

(2) Despite sections 19 and 19.1, a candidate who holds a Building Operator A Certificate of Competency that is still valid is eligible to write a special examination on the subject of power plants after

- (a) having been employed for a period of 6 months in a power plant that has a capacity exceeding 250 kW in a position satisfactory to the Administrator, or
- (b) successfully completing an upgrading course that is satisfactory to the Administrator.

(3) To pass a special examination referred to in this section, a candidate must obtain at least 65% of the total marks allotted for the examination.

(4) A candidate who has passed a special examination in accordance with this section is qualified for a 4th Class Power Engineer's Certificate of Competency.

AR 218/2013 s19

#### **5th Class Power Engineer's examination**

**20(1)** To qualify to take a 5th Class Power Engineer's Certificate of Competency examination, a candidate must

- (a) have successfully completed a course in power plant and heating plant operation satisfactory to the Administrator that leads towards a 5th Class Power Engineer's Certificate of Competency examination,
- (b) have operated a power plant boiler for a period of 6 months and operated a heating plant boiler for a further period of 6 months, or
- (c) hold a degree in mechanical engineering from a university satisfactory to the Administrator.

(2) A 5th Class Power Engineer's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the 5th Class Power Engineer's Certificate of Competency examination.

(3) To pass a 5th Class Power Engineer's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for the examination.

(4) to (6) Repealed AR 218/2013 s20.

AR 85/2003 s20;218/2013

**5th Class Power Engineer's certificate of competency**

**20.1** To qualify for a 5th Class Power Engineer's Certificate of Competency, an applicant must

- (a) pass the 5th or 4th Class Power Engineer's Certificate of Competency examination, and
- (b) have assisted in the operation of a power plant or operated a heating plant boiler for a period of 6 months.

AR 218/2013 s21;20/2018

**5th Class Power Engineer's special examinations**

**20.2(1)** Despite section 20, a candidate who holds a Fireman's Certificate of Competency that was issued before September 1, 1998 and that is still valid is eligible to write a special examination on the subject of heating plants after

- (a) having been employed for a period of 3 months in a heating plant in a position satisfactory to the Administrator, or
- (b) successfully completing an upgrading course that is satisfactory to the Administrator.

**(2)** Despite section 20, a candidate who holds a Building Operator B Certificate of Competency that is still valid is eligible to write a special examination on the subject of power plants after

- (a) having been employed for a period of 3 months in a power plant in a position satisfactory to the Administrator, or
- (b) successfully completing an upgrading course that is satisfactory to the Administrator.

**(3)** To pass a special examination referred to in subsection (1) or (2), a candidate must obtain at least 65% of the total marks allotted for the examination.

**(4)** Despite section 20.1, a candidate who has passed a special examination in accordance with this section is qualified for a 5th Class Power Engineer's Certificate of Competency.

AR 218/2013 s21

**Special Oilwell Operator's examination**

**21(1)** To qualify to take a Special Oilwell Operator's Certificate of Competency examination, a candidate must have

- (a) obtained 6 months' experience in an installation that involves a boiler or boilers operating as part of a

transportable power plant at a drilling or hydrocarbon production site, or

- (b) successfully completed a course in boiler operation that is satisfactory to the Administrator.

(2) A Special Oilwell Operator's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the Special Oilwell Operator's Certificate of Competency examination.

(3) To pass a Special Oilwell Operator's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for the examination.

(4) A candidate who has passed a Special Oilwell Operator's Certificate of Competency examination in accordance with this section is qualified for a Special Oilwell Operator's Certificate of Competency.

AR 85/2003 s21;218/2013

#### **Special Boiler Operator's examination**

**22(1)** To qualify to take a Special Boiler Operator's Certificate of Competency examination, a candidate must currently be employed in the operation of a power plant that has a capacity not exceeding 250 kW.

(2) A Special Boiler Operator's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus established by the Administrator for the Special Boiler Operator's Certificate of Competency examination.

(3) To pass a Special Boiler Operator's Certificate of Competency examination, a candidate must receive at least 65% of the total marks allotted for the examination.

(4) A candidate who has passed a Special Boiler Operator's Certificate of Competency examination in accordance with this section is qualified for a Special Boiler Operator's Certificate of Competency.

AR 85/2003 s22;218/2013

#### **Special Steam-powered Traction Engine Operator's examination**

**22.1(1)** To qualify to take a Special Steam-powered Traction Engine Operator's Certificate of Competency examination, a



candidate must have successfully completed a course satisfactory to the Administrator.

**(2)** A Special Steam-powered Traction Engine Operator's Certificate of Competency examination must consist of questions relating to the subjects contained in the current reference syllabus approved by the Administrator for the Special Steam-powered Traction Engine Operator's Certificate of Competency examination.

**(3)** To pass a Special Steam-powered Traction Engine Operator's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for the examination.

**(4)** A candidate is qualified for a Special Steam-powered Traction Engine Operator's Certificate of Competency after

- (a) passing the Special Steam-powered Traction Engine Operator's Certificate of Competency examination in accordance with this section,
- (b) completing 100 hours supervised operation experience, and
- (c) passing a practical examination that is satisfactory to the Administrator regarding the safe operation of historic boilers referred to in section 2(11).

**(5)** Repealed AR 20/2018 s8.

AR 218/2013 s24;20/2018

#### **Fired Process Heater Operator's examination**

**22.2(1)** To qualify to take a Fired Process Heater Operator's Certificate of Competency examination, a candidate must either

- (a) have successfully completed a course in fired process heater operation satisfactory to the Administrator, or
- (b) hold a degree in mechanical engineering from a university satisfactory to the Administrator.

**(2)** A Fired Process Heater Operator's Certificate of Competency examination must consist of questions satisfactory to the Administrator relating to the subjects contained in the current reference syllabus for the Fired Process Heater Operator's Certificate of Competency examination.

**(3)** To pass a Fired Process Heater Operator's Certificate of Competency examination, a candidate must obtain at least 65% of the total marks allotted for the examination.

- (4) A candidate is qualified for a Fired Process Heater Operator's Certificate of Competency after having
- (a) passed the Fired Process Heater Operator's Certificate of Competency examination in accordance with this section, and
  - (b) been employed for a period of
    - (i) 12 months assisting in the operation of a thermal liquid heating system, a power plant referred to in section 2.1(1) or an equivalent power plant that is satisfactory to the Administrator, or
    - (ii) 24 months assisting in the operation of a pressure plant that is satisfactory to the Administrator.

AR 218/2013 s24

**Equivalent qualifications or experience**

**23** The Administrator may assess courses in power engineering and heating plant operation that may be substituted in part for the requirements in sections 16 to 22.2.

AR 85/2003 s23;218/2013

**Equivalent education**

**24** The Administrator may determine the equivalent education for which credit may be granted by the Administrator and applied towards the educational requirements of this Regulation.

**Equivalent experience**

**25(1)** If a candidate has experience as a chief power engineer, shift engineer, assistant shift engineer, assistant engineer or Building Operator or other experience satisfactory to the Administrator, the Administrator may evaluate that experience to establish the appropriate credit to be granted and applied towards the experience requirements of sections 16 to 22.2.

**(2)** If a candidate has experience satisfactory to the Administrator with pressure equipment to which the Act applies, other than the experience described in sections 16 to 22.2, the Administrator may grant credit and apply it towards the experience requirements of sections 16 to 22.2.

**(3)** If a power plant is in operation for only part of a year and the power engineer is retained for the non-operational period and is employed for plant maintenance, the Administrator may grant a credit of 2/3 of the maintenance time towards experience required for a higher level of examination.

(4) Credit for experience previously used in qualifying for a certificate of competency examination shall not be used again in qualifying for a higher level of examination.

(5) If a facility consists of a combination of a power plant and a heating plant, the boiler rating of each must be considered separately when assessing the experience required to qualify to take a certificate of competency examination.

AR 85/2003 s25;218/2013

#### **Equivalent certificates**

**26(1)** If the Administrator determines that a person holds a certificate from a jurisdiction outside Alberta that is equivalent to a certificate of competency specified in this Regulation, the Administrator may, on application, issue an equivalent certificate of competency.

(2) A certificate of competency issued under this section may be issued subject to conditions imposed by the Administrator.

(3) The Administrator may require the submission of evidence of a candidate's identity, experience and qualifications.

(4) A candidate from a jurisdiction outside of Alberta who has passed any paper of an equivalent certificate of competency examination in that jurisdiction may be granted credit by the Administrator for having passed that paper.

(5) A person who holds both a 4th Class Power Engineer's Certificate of Competency issued before September 1, 1998 and a Building Operator A Certificate of Competency that are still valid may exchange those certificates for a 4th Class Power Engineer's Certificate of Competency that indicates that it was issued after the coming into force of this Regulation.

(6) A person who holds both a Fireman's Certificate of Competency and a Building Operator B Certificate of Competency that are still valid may exchange those certificates for a 5th Class Power Engineer's Certificate of Competency.

AR 85/2003 s26;218/2013

#### **Application for examination**

**27(1)** To take an examination, a candidate for examination must apply to the Administrator on a form satisfactory to the Administrator at least 21 days before the date of examination.

(2) A candidate must provide evidence satisfactory to the Administrator of the candidate's experience, education and ability.

(3) Evidence of the qualifications of a candidate relating to a heating plant or power plant operation, power engineering experience and ability may be proved by references signed by the owner or the chief power engineer of the heating plant or power plant where the candidate was employed.

(4) If a candidate is required to provide evidence referred to in subsection (3) for a certificate of competency examination or to qualify for a certificate of competency but is unable to do so, the Administrator may accept a statutory declaration made by the candidate that states that the candidate has obtained the required operating experience.

(5) Documents issued by the institution from which the candidate received training must be submitted to the Administrator as proof of educational qualifications.

AR 85/2003 s27;218/2013

#### **Conduct of examination**

**28** With respect to any examination under this Regulation, the Administrator may do any or all of the following:

- (a) set the time and place of an examination;
- (b) administer an examination;
- (c) mark an examination;
- (d) establish policies regarding activities a candidate cannot undertake during an examination;
- (e) declare a candidate to have failed if the candidate undertakes a prohibited activity during an examination;
- (f) disqualify candidate who undertakes a prohibited activity during an examination from writing another examination for a period not exceeding 12 months after the date of the examination;
- (g) disqualify a candidate who consecutively fails 3 papers of any examination for any certificate of competency from writing another examination for a period not exceeding 12 months after the date of failed examination;
- (h) prohibit a candidate who fails any examination from applying to rewrite the failed examination or any other examination for a period not exceeding 30 days from the date of the failed examination.

## Miscellaneous

### Boiler rating

**29(1)** If calculations are made with respect to the application of the Act or this Regulation, a boiler rating must be determined on the basis that

- (a) one square metre of heating surface equals 10 kW,
- (b) if electric power is used as the heat source, the boiler rating is the maximum kilowatt capacity of the heating element, or
- (c) if neither clause (a) nor (b) is applicable, an hourly boiler output of 36 megajoules is equivalent to 10 kW.

**(2)** The heating surface of a boiler must be determined by computing the area of the surface involved in square metres and, if a computation is to be made of a curved surface, the surface having the greater radius must be used.

### Repeals, Expiry and Coming into Force

#### Repeal

**30** The *Engineers' Regulations* (AR 319/75) are repealed.

**31** Repealed AR 20/2018 s9.

#### Coming into force

**32** This Regulation comes into force on May 1, 2003.

## Schedule

### Notes (for all tables):

In all cases, the authorized scope of practice includes the indicated upper limit of plant capacity.

- (1) Applies to transportable power plants at drilling sites.
- (2) Stationary plants of this capacity or type require overall supervision only, rather than both overall and continuous supervision.
- (3) Used for the sole purpose of underground thermal flooding on oil fields.
- (4) Plants of this capacity or type are allowed general supervision.

- (5) Applies to power plants that are allowed reduced supervision under section 2.1(2). These power plants do not produce steam and use thermal liquid under pressure of a blanketing gas not exceeding 700 kPa or uses a water-glycol mixture with a minimum of 40% glycol.
- (6) Applies to power plants that are allowed reduced supervision under section 2.1(1).
- (7) Applies to historical boilers, excluding locomotives operating on a railroad.
- (8) Plants of this capacity or type are allowed reduced supervision.

**Table 1  
Power Plant (General)**

	Certificate of Competency not required		1st Class Power Engineer's Certificate required as Chief Power Engineer			2nd Class Power Engineer as Shift Engineer		
			2nd Class Power Engineer's Certificate of Competency required as Chief Power Engineer		3rd Class Power Engineer as Shift Engineer		3rd Class Power Engineer as Assistant Shift Engineer	
			3rd Class Power Engineer's Certificate of Competency required as Chief Power Engineer		4th Class Power Engineer as Shift Engineer		4th Class Power Engineer as Assistant Engineer	
			4th Class Power Engineer's Certificate of Competency required as Chief Power Engineer		4th Class Power Engineer as Shift Engineer		4th Class Power Engineer as Assistant Engineer	
			5th Class Power Engineer's or Fireman's Certificate of Competency required as Chief Power Engineer		5th Class Power Engineer as Shift Engineer			
			Special Boiler Operator's Certificate of Competency <sup>(1),(4)</sup>		Special Oilwell Operator's Certificate of Competency <sup>(1),(4)</sup>			
			Fired Process Heater Operator's Certificate of Competency <sup>(6)</sup>					
			Special Steam-powered Traction Engine Operator's Certificate of Competency <sup>(7)</sup>					
Row 1	0 kW	20 kW						
Row 2								
Row 3								
Row 4								
Row 5								
Row 6								
Row 7								
Row 8								
	0 kW	20 kW	250 kW	500 kW	1000 kW	5000 kW	10 000 kW	Plant Capacity Over 10 000 kW

**Table 2**  
**Power Plant (Oilfield Once-through Boiler)<sup>(3)</sup>**

0 kW	20 kW	5000 kW	10 000 kW	15 000 kW	Plant Capacity Over 15 000 kW
Certificate of Competency not required	1st Class Power Engineer's Certificate required as Chief Power Engineer	2nd Class Power Engineer as Shift Engineer	3rd Class Power Engineer as Shift Engineer	4th Class Power Engineer as Assistant Engineer	
	2nd Class Power Engineer's Certificate of Competency required as Chief Power Engineer	3rd Class Power Engineer as Shift Engineer	4th Class Power Engineer as Assistant Shift Engineer or Assistant Engineer		
	3rd Class Power Engineer's Certificate of Competency required as Chief Power Engineer	4th Class Power Engineer as Shift Engineer or Assistant Shift Engineer			
	4th Class Power Engineer's Certificate of Competency required as Chief Power Engineer				

Row 1

Row 2

Row 3

Row 4

**Table 3** Repealed AR 20/2018 s10.



**Table 4  
Heating Plants<sup>(8)</sup>**

Row 4	0 kW - 750 kW	4th Class Power Engineer's Certificate of Competency issued on or after September 1, 1998 or Building Operator A Certificate of Competency	3,000 kW Plant Capacity Over 3,000 kW
Row 5	750 kW - 3,000 kW	5th Class Power Engineer's Certificate of Competency or Building Operator B Certificate of Competency	

**Table 5  
Thermal Liquid Heating Systems<sup>(4)(6)(8)</sup>**

Row 3	0 kW - 250 kW	3rd Class Power Engineer's Certificate of Competency	1,000 kW System Capacity Over 1,000 kW
Row 4	250 kW - 1,000 kW	4th Class Power Engineer's Certificate of Competency required as Power Engineer in charge of the Thermal Liquid Heating System	
Row 5	1,000 kW - 3,000 kW	5th Class Power Engineer's Certificate of Competency required as Shift Operator	
Row 7	3,000 kW - 10,000 kW	Fired Process Heater Operator's Certificate of Competency	

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