



British Columbia Institute of Power Engineers

6362 Thorne Avenue
Burnaby, B.C. V3N 2V1

Special Meeting

PART ONE

BCIT

April 18, 2004

Attendance: Ron Jones; Eric Steinson; Terry Connors; Dennis Hay; Steve McEwan;
Don Anderson; Art Smith; Jim Young; Doug Bramley.

A round table discussion was held to identify the BCPIPE concerns with the new Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulations.

Under Definitions and Interpretations for this regulation:

Ice facility plant (page 5) – The IPE feels there are too many certificates of qualification and that ice facility certificate should be plant specific.

Page 6 – “**Plant**” means a power plant, low pressure steam plant, low temperature low pressure fluid plant, low pressure thermal fluid plant, high pressure thermal fluid plant, refrigerator plant, oil well plant, greenhouse plant or pressure plant.

We feel ice facility should be added – add unfired plant.

Page 7 – There is no definition for “**Remote Control**” which should be included. We suggest the definition be equipment controlled from outside of the plant premises.

Part 1 – General Qualifications and Licensing Provisions

Exemption from authorization requirement to operate certain equipment

6 An individual is not required to hold a certificate of qualification to operate any of the following:

- (a) a power plant not exceeding 10 m² of boiler capacity;
- (b) a low pressure steam plant not exceeding 30 m² of boiler capacity;
- (c) a low pressure fluid plant not exceeding 150 m² of boiler capacity;
- (d) a low pressure thermal fluid plant not exceeding 150 m² of boiler capacity;
- (e) a low temperature low pressure fluid plant not exceeding 300 m² of boiler capacity;
- (f) an unfired plant not exceeding 150 m² of boiler capacity;

The BCIFE is concerned with the increased sizes of plants exempted in 1999.

As to:

- (g) a refrigeration plant with refrigerant groups A1, A2 or B1, as defined in CSA B52, not exceeding a total plant capacity of 200 kW prime mover nameplate rating.

Refrigeration plant capacity should be described as 200 tons at 0.7 kW per ton or equivalent.

Page 10 - **Division 2 – Certificates of Qualification**

Certificate of Qualification

7 (1) The following classes of certificates of qualification are established:

- (a) first class power engineer;
- (b) second class power engineer;
- (c) third class power engineer;
- (d) fourth class power engineer;
- (e) fifth class power engineer (boiler endorsement);
- (f) fifth class power engineer (refrigeration endorsement);
- (g) category "A" interim power engineer;
- (h) category "B" interim power engineer;
- (i) greenhouse boiler operator;
- (j) oil well boiler operator;
- (k) antique show boiler operator;
- (l) ice facility operator;
- (m) boiler safety awareness;
- (n) refrigeration safety awareness;
- (o) pressure welder.

The IPE feels that there is too many certificate classifications (l to n above) and that these certificates should be plant specific, non-transferable, and not issued for life.

Page 10 – 7 (3) For the purposes of subsection (2), if there is no chief engineer, the statement may be provided by the owner of the plant.

IPE suggests:....owner of the plant and verified by a safety officer.

Page 12 – **Restrictions on greenhouse boiler operator certificate of qualification**

12 A greenhouse boiler operator certificate of qualification is valid only for the time that the individual named on the certificate of qualification is employed at the plant named on the certificate of qualification and for the plant capacity stated on the certificate of qualification.

These restrictions must be site specific and non-transferable.

Refer to 1999 regulation – Section 4.

Application for second class power engineer's certificate of qualification

15 (1) An applicant for a second class power engineer's certificate of qualification must

- (a) hold a first class marine engineer (motor) certificate of competency, or
- (b) hold a third class power engineer's certificate of qualification or a third class power engineer's standardized certificate of competency and have
- (v) 60 months as an assistant chief engineer of a power plant that has a boiler capacity that exceeds 1 000 m² performing duties approved by a provincial safety manager as providing suitable experience, or

Strike the word chief, this should read 60 months as an assistant engineer of a power plant.....

Also:

17 (b) (v) 36 months of relevant experience as an assistant chief engineer of a power plant that has a boiler capacity that exceeds 500 m², or

This should read assistant engineer.

Page 15 – 19 (b) (iii) for a period of at least 18 months in the operation, design, construction, repair or maintenance of equipment to which this regulation applies, and have successfully completed a fourth class power engineering course that has been approved by a provincial safety manager or provide proof of having an equivalent technical educational background that is approved by a provincial safety manager.

We wish to change this paragraph to read: for a period of at least 18 months in the operation, design, construction, repair or maintenance of equipment to which this regulation applies and is reviewed by a safety officer and has successfully completed a fourth class.....

Page 16 – Fourth Class or higher Engineer May do Limited Electrical Work

- 21 The holder of a valid power engineer's certificate of qualification of 4th class or higher issued under the Act may, while employed by a licensed boiler contractor or working under an operating permit and without requiring any additional authorization, do any of the following with respect to electrical equipment that is part of a boiler plant:

Should be changed to readelectrical equipment that is part of a plant:

Page 16 – Limited Regulated Gas Work by Power Engineers

- 22 (1) The chief power engineer of a first or second class plant may, for the purposes of carrying out maintenance and repairs on a boiler, shut off and place back into service the gas system of the plant including, but not limited to, downstream of the service meter up to and including the burners.
- (2) The chief power engineer of a third or fourth class plant may, for the purpose of carrying out maintenance on a boiler, disconnect the gas line to a boiler and reconnect the line once the maintenance is complete.

The IPE feels paragraph one should read: A power engineer with a fourth class certificate or higher may,.....

Paragraph (2) is not required.

Page 19 – Application procedure for an oil well boiler operator's certificate of qualification

31 An applicant for an oil well boiler operator certificate must

- (a) be employed at, and have experience in the operation of, an oil well plant for a period of not less than 30 days,
- (b) have successfully completed an oil well boiler operator's course that has been approved by a provincial safety manager, and
- (c) Have passed the oil well boiler operator certificate of qualification examination.

IPE suggests adding:

- (d) Demonstrate to a safety officer a thorough knowledge of the
 - (i) operation of the plant in which the applicant is employed, and
 - (ii) duties and responsibilities of a plant operator.

What an Oil Well Boiler Operator May do:

- 32 The holder of an oil well boiler operator certificate of qualification may operate an oil well boiler for the holder of a boiler operating permit.

Application for Antique Show Boiler Operator's Certificate of Qualification

- 33 An applicant for an antique show boiler operator's certificate of qualification must
- (a) be the owner of, or be designated in writing by the owner to be responsible for the operation and maintenance of, an antique show boiler,
 - (b) provide evidence, satisfactory to a provincial safety manager, that the applicant has experience with the construction, repair, operation and maintenance of antique show boilers, and

IPE suggests changing (c) to:

- (c) Demonstrate to a safety officer a thorough knowledge of the
 - (i) operation of the plant in which the applicant is employed, and
 - (ii) duties and responsibilities of a plant operator.

35 Page 20 — Application for Ice Facility Operator's Certificate of Qualification

An applicant for an ice facility operator's certificate of qualification must

- (a) be employed at, and have experience in the operation of, an ice facility plant for a period of not less than 30 days,
- (b) have successfully completed an ice facility operator's course that has been approved by a provincial safety manager, and
- (c) have passed the ice facility operator's certificate of qualification examination.
IPE suggests adding...
- (d) Demonstrate to a safety officer a thorough knowledge of the
 - (i) operation of the plant in which the applicant is employed, and
 - (ii) duties and responsibilities of a plant operator.

35. Change (a) to read....."for a period of not less than 120 days. Ice facilities are public assembly areas and the operator must be experienced."

36 – An ice facility operator's certificate of qualification entitles the holder to operate an ice facility plant that

Should read: An ice facility operator's certificate of qualification entitles the holder to operate an ice facility plant named on the certificate that:

Page 20 – What the holder of a boiler safety Awareness Certificate of Qualification May Do

38 (1) A boiler safety awareness certificate of qualification entitles the holder to monitor a boiler in any of the following kinds of plants names in the certificate:

Change to monitor a boiler in a plant named in the certificate, which may be one of the following types of plants.

Is this certificate site specific? If not, it should be named on the certificate.

Page 22 – 44 (2) – Plant Classifications

44(2) For the purposes of subsection (1), a plant is classified by the type and total capacity of the boiler or refrigeration equipment that is connected to the same header or refrigeration system, as the case may be, as detailed in sections 47 to 51.

Change to.....connected to the same header, as detailed in.....

Page 22 – Continuous Supervision Status Plant Operation

45 Unless a plant is registered under section 54 or is exempted under section 6, a power engineer or boiler operator with the appropriate class of certificate of qualification must be present at all times in the plant boiler room, refrigeration machinery room, engine turbine room or in the immediate vicinity within the plant premises while the plant is in operation.

Change toa power engineer or operator.....

Page 23 – Determination of Boiler Capacity

46 (5) For the purposes of sections 51 (f), 55 (1)(b)(iv), 56 (1)(d) and 88, if two or more refrigeration systems are interconnected on the refrigerant side, the refrigeration plant capacity is the sum of the prime mover name plate rating capacities of each of the systems.

We suggest removing this section. It is very confusing. See definitions (1999 Reg.) for a refrigeration plant.

END OF PART ONE

PART TWO

Special Meeting
May 16, 2004

Attendance: Ron Jones; Eric Steinson; Dennis Hay; Art Smith; Jim Young; Doug Bramley; Wai Lam; Don Anderson.

Page 25 – **General Supervision Status Plant Registration and Operation**

55 (1) A provincial safety manager may register a plant a general supervision status plant operation if the plant
(a) is not located in an institution or public assembly occupancy premises,

We feel it should include residential premises. This would include apartment buildings, hotels, etc.

Page 25 – 26 – 56 (2)(b)

(b) inspects the plant in accordance with conditions established by a provincial safety manager as part of the registration under section 55.

Should read....."under section 54"

Page 27 – 62 (5) An owner may apply for an installation permit to perform an installation or repair of equipment to which this regulation applies that would otherwise require a licensed contractor to apply for the permit if
(a) the owner submits a written application to a provincial safety manager specifying the work to be done in the plant and the equipment and components to be used, and

Reminder: The owner must have a contractor's license to be able to perform an installation. See Section 57.

Page 27 – **Division 1 – Permit Requirements**

Permits 62 (1) A person must have an installation permit to install or alter any of the following:
(a) a boiler;
(b) a refrigeration system or part of a refrigeration system.

Reminder: Substitution of a refrigerant is the same as an alteration.

Page 28 – **When permit Not Required for Regulated Work**

63 (1) An installation permit is not required to install any of the following:
(a) a pressure vessel;
(b) a refrigeration plant of up to 5 kW prime mover nameplate rating.

- (2) In respect of a refrigeration equipment, a refrigeration mechanic may, without an installation permit,

63 (1) We suggest a permit be required, as a permit is a notification of an installation.

- (2) We suggest change to.....a refrigeration mechanic or power engineer may,

Page 29 65 (2) – **Requirements for a Certificate of Qualification as a Safety Officer**

65 (2) An individual who is issued a certificate of qualification under subsection (1)(b) must, as a condition of maintaining the certificate of qualification as a safety officer, obtain a certificate of qualification as a first class power engineer within 2 years of being issued a certificate of qualification as a safety officer.

The IPE feels 2 years is an unreasonably short period of time to obtain a first class certificate. Please revise.

Page 29 – **Part 4 – Incident Reporting**

Duty to report Incidents in Plants

66 (1) If an incident occurs in a plant and an injury of death has occurred as a result of the incident, the owner must isolate the equipment and prohibit any further use of the equipment until its use is approved by a provincial safety manager.

Refer to Safety Standards Act, section 36, also Safety Standards General Regulations, section 34.

Page 30 – **Division 2 – Obligations of Owners and Licensed Contractors**

Owner to Designate Shift Engineer During Temporary Absence of Chief Engineer

70 – When the chief engineer is away from the plant, the owner must ensure that a power engineer who holds a certificate of qualification of not less than one class lower than that required for chief engineer is designated to act as a shift engineer.

We feel this section is misworded. The owner should designate an acting chief engineer during temporary absences of chief engineer.

Owner Not to Require Power Engineers to Perform Dangerous Work

71 – The owner of a plant must not require a power engineer to perform a duty not related to the operation of the plant if a safety officer considers that the performance of that duty may endanger the safety of the plant or the people in the plant or both.

“Dangerous Work” in the title should be replaced by”Unrelated Work”.

Page 31 – **Owners and Licensed Contractors to Maintain Records**

72 – The owner of a plant or a licensed contractor must maintain or caused to be maintained, for a period of at least 7 years, any documentation required by a provincial safety manager.

We feel a log book should be a required document to be maintained for 7 years.

Page 33 – **Duties of Owners of Pressure Vessel Plants**

79 – The owner of a pressure vessel plant must designate individuals employed by the owner to be responsible for the operation and maintenance of the plant in a safe working condition.

This should be changed to: The owner of a pressure vessel plant or an unfired plant must designate individuals....

Page 34 – **Registration of Boiler, Pressure Vessel, Fitting and Pressure Piping Design**

84 (3) Subsection (2) does not apply to pressure piping that is

- (a) NPS3 or less, or
- (b) In a fluid plant.

3(a) Should read: less than NPS3

Ronald Jones, PE
BCIPE Secretary