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# **Boiler & Pressure Vessel**

**Syllabus**

**for**

**Boiler Safety Awareness**

**Certificate of Qualification Examination**

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Syllabus for the Boiler Safety Awareness Certificate Examination**

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**Prerequisites to obtain a Boiler Safety Awareness Certificate (BSA)**

An applicant for a boiler safety awareness certificate of qualification must

- (a) have passed the boiler safety awareness certificate examination,
- (b) have completed a basic boiler plant safety program or other technical course approved by a provincial safety manager, and
- (c) provide evidence, acceptable to a provincial safety manager, that the applicant has been instructed in safety procedures for the plant that the applicant wishes to work in.

**Scope of Boiler Safety Awareness Certificate (BSA)**

- (1) A boiler safety awareness certificate of qualification entitles the holder to monitor a boiler in any of the following kinds of plants named in the certificate:
  - (a) a power plant that has a boiler capacity that does not exceed 30 m<sup>2</sup>;
  - (b) a low pressure steam plant that does not exceed 200 m<sup>2</sup> boiler capacity;
  - (c) a low pressure fluid plant or low pressure thermal fluid plant that does not exceed 500 m<sup>2</sup> boiler capacity;
  - (d) a low temperature low pressure fluid plant that does not exceed 2 000 m<sup>2</sup> of boiler capacity;
  - (e) an unfired plant that does not exceed 1 000 m<sup>2</sup> boiler capacity.
- (2) For the purposes of subsection (1), the holder of a boiler safety awareness certificate of qualification must be in attendance at the plant in order to monitor the boiler.
- (3) The holder of a boiler safety awareness certificate of qualification is permitted to shut down the plant or initiate safety procedures only if specifically trained and assigned to perform those tasks.

**Subject Areas of study**

Each of the four subsections is weighted at approximately 25%.

- 1. B.C. Boiler and Pressure Vessel Safety Legislation:
  - 1.1 *Safety Standards Act* and applicable regulation;
  - 1.2 Responsibilities of a safety awareness certified person;
  - 1.3 Responsibilities of a plant safety committee;
  - 1.4 Reporting of accidents and incidents;
  - 1.5 CSA B51 general code knowledge; and
  - 1.6 Log books and records, why signed and dated, and their use.

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2. Boiler and Pressure Vessel Systems:
  - 2.1 History of safety codes and legislation;
  - 2.2 Steam boiler;
  - 2.3 Low pressure hot water, organic and unfired plants;
  - 2.4 Steam and or hot water use, properties and dangers;
  - 2.5 Pressure vessels and heat exchangers;
  - 2.6 Location of safety valves, discharge piping and their purpose;
  - 2.7 Location of low water cut out and purpose; and
  - 2.8 Indications of gas, oil, or steam leaks, and water leaks in closed systems, their effects and dangers.
  
3. Safety Equipment:
  - 3.1 Types of accidents and accident prevention;
  - 3.2 Classes of fires and fire protection equipment; and
  - 3.3 Safety controls, their purpose and locations.
  
4. Safety Procedures:
  - 4.1 Safety alarms, shutdown devices and procedures;
  - 4.2 Emergency shutdowns;
  - 4.3 Evacuation procedures; and
  - 4.4 Safe work practices.

***Note: Provision of appropriate WCB & WHMIS training is the responsibility of the employer.***