

Boiler & Pressure Vessel Registration Requirements

This circular details the requirements for the registration of boilers and pressure vessels for use in British Columbia. **Boilers and pressure vessels shall be registered in accordance with CSA B51 “Boiler, Pressure Vessel and Pressure Piping Code.”** Registration submissions must be sent to the attention of Design Survey, Engineering & Research Operations.

The standards governing the design and construction of boilers and pressure vessels are the ASME Boiler and Pressure Vessel Codes except as otherwise detailed in CSA B51 or the regulation. Sufficient documentation to verify that the design conforms to the applicable code/requirement shall be submitted. As a minimum, **the following information and documentation are mandatory:**

- (a) A completed British Columbia [CRN Application Form 1171](#)
- (b) **Design data**
 - such as ASME code specification, material specifications, pressure ratings, temperature ratings and type of service
- (c) **Drawings**
 - showing dimensions, construction and welding details of the proposed vessel design
- (d) ASME code **calculations**
- (e) **For Reciprocals,**
 - proof of initial registration from one regulatory authority is required (acceptance letter)
 - a completed and signed [Supplemental Sheet](#) to qualify for our streamlined reciprocal registration process

DRAWINGS:

- number and revision and indicate ASME code of construction (edition and addenda),
- non-destructive examination requirements,
- maximum allowable working pressure,
- minimum and maximum design temperatures,
- service fluid specific gravity,
- heat treatment,
- impact testing,
- corrosion allowance,
- nozzle locations,
- reinforcement and dimensions,
- flange and fitting standards,
- ASME material specifications,
- bill of material and nameplate facsimile.

All design details and material specifications referenced in the calculations shall be included in the drawing. Conditions such as seismic or wind loadings, which may limit the vessel's location must be detailed on the drawing.

CALCULATIONS:

- Shall be to the **latest ASME Code edition** and addenda,
 - unless the submission details the reasons for using an earlier edition or addenda.
- Shall **contain sufficient information** to verify that all applicable requirements of the specified ASME code have been complied with.



- If **exemptions** from specific code requirements are utilized in the design, the specific code section and subsection permitting the exemption **must be identified and supported by an explanation** or reason detailing how the exemption applies to the design.
- Shall **show the formulas used and reference the appropriate code section.**
 - Where the ASME code does not cover all details of the vessel design and construction, the submission must provide details utilizing recognized engineering practices or proof test results to show that the design method is as safe as those of the applicable ASME code.
 - All UG-22 loadings must be considered in the design and, as a minimum, the submission must have a statement that all UG-22 loadings have been considered.
- **Vessels with an overall length of 20 feet or more must have detailed seismic and support loading calculations.**
- Shall be signed by the person responsible for that function in the manufacturer's quality control manual. The calculation package shall be numbered and have a method for revision control.

REGISTRATION PROCESS:

- The design registration submission will be reviewed to verify that all registration requirements have been met.
- **Upon satisfactory review of the registration documentation, the vessel design shall be assigned a Canadian Registration Number (CRN)** for those designs complying to CSA B51.
- A registration letter indicating the CRN, date of registration, manufacturer's name, description of the vessel, drawing numbers, conditions and any other pertinent information will be sent to the applicant.
- A separate invoice will be forwarded for the registration fee.
- No other documents will be stamped or returned to the applicant.

NOTE: CRN Application must include the following:

1. Paper copies required. For more than one design, please complete a separate application and collate documents by design.
2. Only one set of drawings, calculations & application form is required for each design submittal.
3. Please provide documents in smallest, legible size.
4. Only '**COMPLETE**' design registration packages will be accepted. Incomplete application packages will not be processed.

INTERNATIONAL CLIENTS:

Manufacturers of boilers and pressure vessels in countries other than Canada shall hold an ASME Certificate of Authorization and ensure that all boilers and pressure vessels are stamped with the appropriate ASME Code symbol and are registered with the National Board.

