Frequently asked questions

Quick Facts About Canada’s CRN System

Do I Need a CRN?

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Provincial contacts to get a CRN

About this page

Author’s Opinion

CRN assistance provided by Pressure Vessel Engineering Ltd.

Legal Disclaimer

While every effort has been made to make the contents of this page accurate and current, the contents of this page are the opinion of the author and are provided for information purposes only. Pressure Vessel Registration in Canada is far too complicated to be covered in a write-up this brief. Please consider this the first 20% of the information you require.

This page has very little content on piping systems and fitting registration - both are difficult and complicated issues. Contact the appropriate organizations listed below for more information.

Pressure Vessel Engineering provides Canadian registration assistance - see the add at the bottom of this page.

Frequently Asked Questions

Frequently Asked Questions – ordered according to how often we get asked. Please note that the answers given below are opinions of Pressure Vessel Engineering Ltd. and should be used only as guidelines. While we make every effort to make this information accurate and understandable, only the provincial jurisdictions involved in your project can provide legally binding answers.

Does my product need a CRN? This is the most difficult question of all. It depends upon whether your product is a vessel, a fitting or a piping system. Then it depends on what it contains, at what pressure and temperature. Pressure vessels are the easiest to determine – check the charts below. Fittings and piping systems can be very difficult to determine. Requirements also vary from province to province. It is far too complicated to include a guide here.

What happens if I don’t get a CRN? There are a large number of fittings, piping systems and pressure vessels in use in Canada that require CRNs but do not carry them. These products are often uncovered during authorized inspector visits or insurance audits. Some
customers will require CRN on all vessels, piping and fittings before they will buy. If a product is discovered while it is in use, then someone has to go through the effort to get it registered at that point. If it cannot be registered then it must be replaced.

I cant get my jurisdiction to answer my questions – what should I do? Are you giving them all the information they need to answer your question? We suggest submitting the application in writing along with all required information. Include a purchase order and required up front fees the same as if the product is being registered. Ask for a response in writing. Having a letter on file stating that your vessel does not need registering is useful during an audit. Saying that you talked to someone and they said that your vessel was okay will not work.

What is the difference between a fitting a piping system and a pressure vessel? How does it affect how it is registered? A fitting can be a small pressure vessel, or a valve (of almost any size) or other items like flanges, expansion joints or hoses, strainers measuring devices, pressure relief devices or other miscellaneous components. For a fitting, the manufacturer can do their own inspection. For a pressure vessel, an authorized inspector needs to do the inspection. Fittings require statutory declarations and so can be more complicated and expensive to register. Fitting calculations and drawings do not need to be updated every year as code rules change but the CRN expires after 10 years.

What paper work do I need to get a CRN for a Vessel? A complete product drawing including operating conditions and materials. A set of code calculations done to ASME code. The application form from the province. Proof of quality control system. Up front application fees if required, Patience. You are registering the design, not the finished product. Your authorized inspector will be checking your weld procedures and material certs, not the jurisdiction providing the CRN. Note some provinces have special paper work (especially on piping) that has to be filled out and signed by the authorized inspector prior to shipping the finished product.

What paper work do I need to get a CRN for a Fitting? – Same list as above for a vessel, plus the required statutory declarations.

What provinces will I need to register my product in? Your product needs to be registered in all provinces where it will be used. (Common problem – the province where it is used might not be the province where it is first shipped to.)

Is my Quality Control system acceptable? ASME U stamps are required for pressure vessels. Various quality control systems are acceptable for fittings such as ASME U stamps and ISO 9001 certificates.

Do I need a professional engineers stamp on my submission? For fittings – no. For pressure vessels – depends on the province - see the provincial information below. Important: Ontario requires an Ontario engineers stamp on all submissions. All other submissions will be returned.

How long will it take to get a CRN? How much will it cost? Is it worthwhile? This varies with the jurisdiction, or if all jurisdictions are required. For single provinces with simple vessels or fittings, it can sometimes be done in a week (provincial expedited fees usually apply). For Canada wide registration of more complex products, ½ year is not unusual once the registration process is started.

How long can I manufacture Pressure Vessels to my CRN? The CRN for a pressure vessel is valid for the life of the vessel. For a manufacturer, the CRN can be used until the code changes enough to require the design to be changed. Do I need to update my Pressure Vessel calculations with each code revision? Manufacturers have to re-run or review the calculations each year to determine that the design is still valid. The authorized inspector confirms that the calculations are current or reviewed (This is the same requirement for National Board fabrication).

What Materials can my PRESSURE VESSEL be made from? Pressure vessel materials listed in ASME codes are made to published specifications (or recipes). The materials are shipped with material test reports guaranteeing that each batch complies physically and chemically to the specifications. These materials can be found listed in ASME IID (and some
other code locations). The listing provides the allowable stresses at various operating temperatures.

Many other materials exist but they are not listed in the pressure vessel codes. They are Unlisted. Except in unusual circumstances, they cannot be used for a pressure vessel, even if they are built to a published specification and tested. An example is rectangular structural tubing. It is forbidden as a pressure vessel material even though it is built to a published specification complete with physical and chemical properties. Its shape would make it very useful. Instead we weld pieces of formed plate together.

**What Material can my FITTING be made from?** More freedom is available to a designer of fittings. There are more codes to choose the material from (IID, B31.1, B31.3 etc.) and there are also rules that allow unlisted materials made to published specifications with both physical and tensile specifications to be translated into code use (BS, EN, ASTM etc.). The translation process is easiest for use of materials at room temperature. At elevated temperatures, hard to find creep properties are required.

**Cautionary note on unlisted materials:** many CRNs exist for fittings that are made from unlisted materials that have no published chemical or physical specifications and the manufacturer is not obtaining material test reports on each batch of product produced. A few provinces are still accepting new registration for these products, sometimes depending upon who does the review. Others absolutely will not accept them.

**Can I make my FITTING from plastic?** Yes - the stresses in the part will need to be calculated and compared to a published HDB (Hydrostatic Design Basis) allowable stress. HDBs can be found for a few plastics in ASME B31.1 and B31.3. Other plastic materials not listed can be used if the HDB allowable stress is determined. The HDB test is long term (2 years) and expensive. Once the HDB for the material is known, any shape of product can be made. For complex shapes like valve bodies a process like finite element analysis will be required to determine the operating stresses and make sure that they are below the HDB allowable stress.

**Can I use Finite Element Analysis (FEA) to design to VIII-1 (Pressure Vessel Code)?** Important Note: FEA cannot be used to replace mandatory code rules (classical calculations) found in VIII-1. (The same comment applies to Roark’s formulas, you cannot use it to replace code rules.) It would be nice to use finite element analysis to calculate the stresses that are actually found in items like flanges, nozzles or heads. For these items there are mandatory code equations that are not based on actual stresses. These rules must be followed. Once the rules have been met it is acceptable to use FEA for additional analysis to determine actual stresses for reference use.

Example: the program Nozzle/Pro from Paulin Research Group ([www.paulin.com](http://www.paulin.com)) does an excellent job of calculating the actual stresses in a nozzle using FEA methods. It sometimes calculates that a nozzle can be built with smaller re-pads than the code area replacement rules allow (UG-40 etc.). However, the regular code area replacement rules must be followed. Using the reduced size re-pad is not allowed. Nozzle/Pro can be used to calculate the effect of added nozzle loads which the code can not do and WRC 107/297 can not do accurately.

FEA is indispensable for shapes that are not covered by the code. For VIII-1 vessels our office standard is to use the allowable stresses from IID table 1A and 1B for the stress limits instead of 2A and 2B which are specified by VIII-2. The code is not clear on this aspect - some people use the higher allowable stresses found in tables 2A and 2B (see VIII-1 U-2(g)).

Further point - a pressure vessel ends at the first welded joint in the nozzle or at the first threaded or flanged connection (see U-1(e)(1)). Covers and other attached items can be handled as parts of piping systems under B31.3 (see next question) with more design flexibility.

**Can I use FEA to design to B31.3 or B31.1 (Piping or Fittings)?** FEA is allowed under design code B31.3 section 304.7.2(d), but not to replace rules found in the B31.3 code (see VIII-1 above). There are fewer design rules in B31.3, so many common items can be designed by FEA. Note: B31.3 table 1A stresses are to be used, Not IID tables 1A, 1B, 2A or 2D.
For B31.1 refer to 104.7.2(D) - same idea as B31.3.

**What is required for a FEA submission?** FEA submission requirements have been clarified by an unpublished guideline created by ABSA. [ABSA Guideline](#) The requirements are not simple, but they are being adopted across Canada. See the sample job section on this web site for FEA reports that have been accepted across Canada.

**How long can I manufacture Fittings to my CRN?** The CRN for a fitting is valid for 10 years. After that time, the design must be re-registered. For a fitting registered across Canada, all the CRNs expire once the first CRN expires. The expiry date is written on the documentation you get back from your jurisdictions.

**Do I need to update my Fitting calculations with each code revision?** Calculations are not normally updated until it is time to re-register the design.

**I have a fitting that was made to a CRN but the manufacturer has not renewed it. Can I use the fitting?** If the CRN was valid for the date of manufacturing of the fitting, then the fitting can be used. The CRN expires for the manufacturer of the fitting, not for the user.

**I manufacture a fitting that will have my customer's name on it, not mine. How do I register it?** The logos that will be affixed to the product need to be indicated on the statutory declaration. Multiple logos can be registered. If the logos will not fit on the box on the statutory declaration page, put them on an additional page.

**My product has glass components - How do I register it?** There are no code rules for glass components (sight windows etc.). The manufacturer's temperature and pressure ratings will be used - they need to be included with the submission.

**How can I get my product registered across Canada? Which jurisdiction should I start at?** See the section below on how registration across Canada works. The choice of first province is important and can have a huge effect on the total cost and time of registration. The first reviewer takes the blame if any other jurisdiction complains about a product they feel should not be registered. Because of this, no-one wants to be first. Some have requested never to be used for a start to Canada wide registration. The work load of different jurisdictions also changes. Call us.

**I need to change the design of my vessel. Do I need to get it re-registered?** Typically the answer is yes if the design calcs change, no if they do not. For example, you add another nozzle to a vessel identical to one that already exists, and the nozzles are far enough apart that they do not interfere. No new CRN is normally required. If the nozzle requires new calculations, then normally the design will need registering. Enquire with your jurisdiction for more info.

**Can I change the operating conditions on my vessel without re-registering it?** Maybe – if the calculation set does not need to be re-run because of the change, then you will probably not need to re-register it. Call you jurisdiction. **I need to modify a registered vessel. Do I need to re-register it?** If the calculations do not need to be updated then the answer is probably no – example, addition of a nozzle identical to one already on the vessel that is not too close to another nozzle – then you will probably not need to re-register it. Call your jurisdiction.

**I have a used vessel that was registered in another province. Do I need to re-register it to move it to my province?** Yes – you need to submit the original calculations and drawings or re-create calculations and drawings if the originals can not be found. A photograph of the nameplate is required and the manufacturers data report is required. A used vessel might need some inspection like ultrasonic testing to prove that the vessel is still adequate. The installation location will be required to (People have been killed in Ontario importing used high pressure vessels and using them without registration or inspection).

**I have a new vessel from another country. Can I get it registered in Canada?** Maybe - are the calculations and drawings available? Is the code of construction acceptable? The worst vessels to register are done to codes other than ASME with non ASME materials.
I am designing a piping system that needs to be registered. What do I need to do to get it registered? Similar to a vessel, you need a calculation set, drawings and also a list of all components in your piping system, and their CRN numbers.

I am importing a machine from another country that has a piping system that needs registering. Can I do this or do I need to scrap and replace the piping system? The piping system will need to meet all the requirements of a Canadian registered piping system – acceptable quality control program, acceptable materials, CRNs on all the fittings, calculation set, drawing with identified code materials...

Do I need to label the CRN number on my vessel? Yes – stamp the CRN number on the code nameplate. **On my fitting?** No

Do I need a CRN for a pump? No.

Do I need a CRN for an air compressor? No - but volume bottles between compressor stages and air receiver cylinders need CRNs.

Do I need a CRN for hydraulic components? No - except in circumstances of high operating temperatures. This varies by province.

Do I need a CRN for pneumatic cylinders? No.

I can't get my product registered but my competitor who makes the same product the same way I do succeeded - is there anything I can do? Plan a) CRNs are not permanent - for a fitting it will expire after 10 years. You can wait until they try to renew and see if they get accepted. Renewal is not a rubber stamping process - full engineering documentation the same as an original submission is required. Plan b) document and complain. CRNs can be revoked if you prove that a manufacturer is not following the rules of the codes that they claimed when registering. Start with the first province of registration - if that province cancels then all the other provinces will automatically be cancelled. Because we at Pressure Vessel Engineering Ltd. believe that there already is enough pain built into the whole CRN system by its design, we will not help companies with this un-registering process.

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Some quick facts

--- Both Canada and the United States use the ASME VIII-1 pressure vessel code for construction - but -

--- Canada has a B51 standard that provides a more inclusive definition of what a pressure vessel is. Purchase the Canadian **B51** standard from CSA (1-800-463-6727 or 1-416-747-4044).

--- Canada has a FITTINGS category for items that that are not vessels but need to be built under a quality control program. **TSSA's guideline for non nuclear fittings**

--- Pressure Vessels and fittings installed/used in Canada need a CRN (Canadian Registration Number).

--- **The National Board registration is not used in Canada unless specified by the owner of a vessel.** However, for manufacturers located in the USA, vessels that are to be used in Canada, must carry a valid CRN for the province of destination AND be National Board Registered. Vessels fabricated outside of Canada and USA which are not fabricated in National Board facilities are subject to special review.

From B51-97 page 20 4.11 "Manufacturers in the USA who manufacture and export boilers of pressure vessels to Canada shall hold an ASME Certificate of Authorization and ensure that all boilers and pressure vessel are stamped with the appropriate ASME Symbol and registered with the National Board."

also from B51-97 4.12 "Manufacturers in countries other than Canada and the USA who do not have the appropriate ASME Certificate of Authorization shall, when submitting designs of
boilers and pressure vessels for registration, submit evidence acceptable to the regulatory authority that the quality control system for the manufacturing facilities and procedure is equivalent to that of the applicable ASME Code.

--- Each vessel/fitting must be registered in EACH province it will be used in.

--- Each province has its own registration requirements and fees. More information can be found below.

--- Some items required CRNs due to their use - ie compressed natural gas - even if it would not normally be a fitting or a pressure vessel. Consult with the jurisdiction where the item will be used.

--- A CRN can be applied for, even if it is not required.

--- The CRN should be applied for before construction begins.

The last point deserves comment, to quote B51 - "Acceptance and registration shall be obtained before construction is commenced". For a foreign manufacturer who has a finished vessel, and has been told on the shipping date that the vessel is bound for Canada, this can be a problem. In reality, this requirement varies by jurisdiction.

The Ontario vessel act offers this alternative: "4.(2) A person who submits a design submission for registration may commence construction of the boiler, pressure vessel, fitting or piping before the submission is registered if the person assumes all risks related to the construction, whether for an installation or alteration."

The CRN can usually be applied for at any point in the construction, the risk is that if any changes are required from the review, the vessel will need to be reworked or scrapped. The earlier the CRN can be applied for, the better. Where possible, I have included how long it takes to get a CRN in the contact information below (registration times vary a lot depending upon workloads and the jurisdiction doing the registration - some offer expedited reviews at higher charges). Many Canadian manufacturers really do not wait for their CRN before starting production - it takes too long.

(See the TSSA or Alberta Boilers Safety Association web site for more useful information.)

Do I need a CRN?

Use the following charts to determine if your vessel is classified as a Pressure Vessel, a Fitting, or if No CRN is required in Canada. Read the descriptions of what each classification requires. These charts are from the Canadian B51 standard and include more items as pressure vessels than the definition found in ASME VIII div 1 section U-1.

There is a grey area when it comes to determining if a vessels contents are not more hazardous than water or not. For assistance in deciding which chart to use, it is useful to have Material Safety Data Sheets (MSDS). The MSDS sheets will not specifically tell you which chart to use, but a review of the "Toxicity" and "Health Effects and First Aid" on the MSDS can help you decide. The jurisdictions are not responsible for classifying service, it is the responsibility of the owner/user to perform this evaluation.

Important note: These charts are from the Canadian B51 Standard. Each province also has a pressure vessel registration which modifies these charts. Be sure to check the regulation for the province that your product will be shipped to!
Vessel containing water or liquids not more hazardous than water

- > 15 psi
  - Yes
  - > 150°F
    - Yes
    - > 250 psi
      - Yes
      - > 6" dia
        - Yes
        - Pressure Vessel
          - No
          - Fitting
            - No
            - No CRN Required
        - No
    - No
  - No
- No

B51 Figure 1(a)

Vessel containing nonlethal gas, vapour or liquid not in Figure 1a

- > 15 psi
  - Yes
  - > 500 psi
    - Yes
    - > 1.5 cuft
      - Yes
      - > 6" dia
        - Yes
        - Pressure Vessel
          - No
          - Fitting
            - No
            - No CRN Required
        - No
      - No
    - No
  - No
- No

B51 Figure 1(b)
A Pressure Vessel (to ASME VIII-I, VIII-2 or VIII-3) must be built in a shop with an accredited quality control program, and the finished vessel inspected by an Authorized Inspector. For a pressure vessel built in the United States, the shop's National Board and U-stamp authorization would be proof of the quality control program. The manufacturer's data form signed by the National Board inspector would be proof that an authorized inspector has inspected the vessel. A CRN (Canadian Registration Number) is required, and is written on the manufacturer's data form. The CRN is stamped on the vessel nameplate. (The OIN number - only used in Ontario - is being phased out).

A Fitting (to VIII-1, B31.1, B31.3) has the same quality control requirements as a pressure vessel, except that the final inspection will be by the shop's own inspector instead of the National Board inspector (Except for fittings intended for lethal substances). A CRN (Canadian Registration Number) and a statutory declaration is required (Note: different statutory declarations are used by different provinces. The statutory declaration contained in the BS1 standard is not accepted anywhere.) One CRN number can be applied for a whole catalog of fittings. The Alberta web site has a guide to filling out Statutory Declarations.

If No CRN is required, please note that sometimes the intended service would require the item to be built as a pressure vessel or a fitting.

Once you have determined what classification your vessel falls under, check with the jurisdiction where the vessel will be installed to make sure that they agree. See the listings below for your contact information. Sometimes other standards will change the classification of the vessel. Some Jurisdictions have exemptions for some vessels - check the adoption regulations.
How do I apply for a CRN? You normally need to send the following to the local jurisdiction to get a CRN:

--- 2 copies of the vessel drawing, see below for provincial requirements for drawings to have a P. Eng. stamp

--- Vessel calculations (sometimes the number of copies of the drawing and calculations varies - see below).

--- Copies of your National Board and ASME U stamp authorization.

--- A submission form if the jurisdiction requires specific cover forms to be used.

--- Your statutory declaration form if it is a fitting.

--- If registering more than one category of fitting, separate statutory declarations will be required for each category.

--- The appropriate fees if the Jurisdiction requires payment up front.

--- Note: ACI central handles the registration for several regions. They review the design and recommend that the destination province/territory accept it. When "See ACI Central" is listed in the boxes below, send your design to them. They will handle the rest.

Do I need a Statutory Declaration?

--- Statutory Declarations are only required for fitting registrations. They are not required for pressure vessel registration.

--- The Alberta web site has a guide to filling out Statutory Declarations.

--- See the chart further down the page to find the statutory declaration for the jurisdiction you are applying to.

--- Your Statutory Declaration form must be notarized (As per TSSA, only a lawyer, notary or commissioner for oath can notarize the Statutory Declaration)

--- For Canada Wide registrations, you will need a full set of original Statutory Declarations. Usually two originals per jurisdiction.
### Table 1
**Categories of Fittings**

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of Fitting</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Pipe fittings, including couplings, tees, elbows, wyes, plugs, unions, nipples, pipe caps and reducers</td>
</tr>
<tr>
<td>B</td>
<td>All flanges</td>
</tr>
<tr>
<td>C</td>
<td>All line valves</td>
</tr>
<tr>
<td>D</td>
<td>All types of expansion joints, flexible connections, and hose assemblies</td>
</tr>
<tr>
<td>E</td>
<td>Strainers, filters, separators, and steam traps</td>
</tr>
<tr>
<td>F</td>
<td>Measuring devices, including pressure gauges, level gauges, sight glasses, levels, and pressure transmitters</td>
</tr>
<tr>
<td>G</td>
<td>Certified capacity-rated pressure-relief devices acceptable as primary overpressure protection on boilers, pressure vessels and pressure piping, and fusible plugs</td>
</tr>
<tr>
<td>H</td>
<td>Pressure-retaining components that do not fall into any of the above categories</td>
</tr>
</tbody>
</table>

**Notes:**
1.) These categories of fittings do not take into account size, material, end connections, rating, schedule, and method of fabrication.
2.) Category "H" may include a series of components (including piping components) joined together to form a single fitting, provided that the diameter of any component does not exceed 152 mm (6 in) and the total volume of the fitting does not exceed 42.5 L (1.5 cuft).

--- Remember, Statutory Declarations are only required for fitting registrations. They are not required for pressure vessel registration.

### More About CRN Numbers

The CRN system can best be understood as a regional registration system. Your design needs to be registered in each jurisdiction (province or territory) where it will be used.

The jurisdictions are (population in thousands):

1 - British Columbia (4,196.4)  
2 - Alberta (3,201.9)  
3 - Saskatchewan (995.4)  
4 - Manitoba (1,170.3)  
5 - Ontario (12,392.7)  
6 - Quebec (7,547.8)  
7 - New Brunswick (751.4)  
8 - Nova Scotia (937.0)  
9 - Prince Edward Island (137.9)  
0 - Newfoundland & Labrador (517.0)  
Y - Yukon Territory (31.2)  
T - Northwest Territories (42.8)  
N - Nunavut (29.6)
CRNs take various forms - 5AN0123.5, 357.1, M0123.2, OH9999.3 could all be legitimate CRNs registered in one jurisdiction only - the number after the decimal point. For example AN0123.5 is registered in Ontario (5).

A design can be registered in more than one jurisdiction - ie 357.12 - a design first registered in B.C. and then in Alberta. The first digit after the decimal is important. 357.21 would be a different vessel first registered in Alberta, then in B.C. A design can be registered in all the jurisdictions would look like this - 357.2134567890NYT, which can be shortened to 357.2C. The first jurisdiction of registration is always shown (2 or Alberta in this case). The C indicates that every jurisdiction has been registered.

Note: piping registration numbers do not always indicate which province they are registered in: P30337 is a piping system registered in Ontario.

**Applying for registration in one jurisdiction or more**

To register your design in one jurisdiction, determine where your product will be shipped to and submit all of the required information to the organization listed below. They will review your submission and return a CRN. If your product is a vessel, the CRN is stamped into the nameplate. Example CRN number 357.5 registered in Ontario.

Getting your design registered in more than one jurisdiction is a bit more difficult. The above example first registered in Ontario could then be sent simultaneously to other regions, which would also review your design, and if all goes well, would also register it. If the design 357.5 was sent to B.C. and Alberta they would send back registration numbers 357.51 and 357.52. You combine the numbers to get CRN 357.512.

The process can get more difficult. Often the jurisdictions have questions which were not covered by the first review, and additional information is required (each jurisdiction has its own rules and requirements). If changes to the drawing or calculation are required, then the changes have to be sent back to the first jurisdiction to accept, and update the CRN number, then it has to be sent out to the other jurisdictions to accept.

A real example: a vessel was first registered in Ontario, (fictitious CRN 357.5), then submitted to all the other provinces and jurisdictions, and was registered in all but Alberta (357.51347890NYT), who required that the drawings be updated and the original CRN be revised before the design was acceptable for Alberta. Also Quebec would not register the design because it was exempt in Quebec due to their provincial rules - they provided this in writing. The drawing was updated and sent to Ontario, who accepted the change and re-issued the CRN (357.5R1). The updated proof of registration with new copies of the drawings and calculations was sent to all of the jurisdictions again. Some accepted the changes, and some declined to register the revisions because they were determined to be too trivial to be necessary (again received in writing). The CRN number became 357.512347890NYTR1 (it could not be shortened to 357.5CR1 because Quebec was not registered).

Note: A CRN can be withdrawn after it has been issued. A real case: A heat exchanger was registered in one province, then sent to two others for additional registration. One complained that a 22 inch flange in the design was not according to code (a legitimate complaint as there is no B16.5 22 inch flange) - they went back to the original province and suggested that the CRN be withdrawn, and it was. The "B16.5" flange had to be calculated to Appendix 2 rules and re-registered with all of the jurisdictions. (Technical note: it is difficult to get B16.5 flanges to pass Appendix 2 calculations as they have excessive bolt sizes - the seating stresses are large.). The important point to note is that the registration can be withdrawn at any time if there are problems with the design. Also note that this system makes the reviewers at the various jurisdictions nervous - no one wants to be the first to register a design, and then have the other jurisdictions complain about why they registered a design. The first reviews can take a long time, while getting other provinces to agree usually takes less time. The reviewer is often more worried about what others might complain about then whether the vessel is safe or not.

Further note: Just because one jurisdiction accepts a design, it can not be assumed that others will as well. It is not worthwhile looking for the "easiest" province to get a design
registered in first. It is more worthwhile to get the fussiest, pickiest province to register the
design first, then submit the design to other provinces who often will come back with fewer
questions about the design.

The whole Canada wide registration process can take a long time. We suggest budgeting for
1/2 a year. The quickest we ever managed was 3 1/2 months, the slowest 3/4 year. Have
lots of patience and be willing to handle a lot of questions and paper work.

## Provincial Contacts

<table>
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<th>Province</th>
<th>Contact Information</th>
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| British Columbia | BC Safety Authority  
Suite 400 - 88 6th Street  
88-6th Street  
New Westminster, BC  
V3L 5B3  
Contact: Maureen Gauthier  
Toll free: 1-866-566-SAFE (7233)  
Phone 604-660-6286  
Fax 604-660-6215  
BCSA web site  
Starting January 2006 B.C. registration fees are charged by the hour at $125 + 7%  
GST per hour and a cheque is no longer required up front.  
B.C. Fee Schedule  
B.C. application form must be used for all registrations.  
B.C. statutory declaration form must be used for fitting registrations.  
B.C. guide for filling out their statutory declaration form.  
British Columbia Act - revised April 2004  
Registration Requirements:  
Pressure Vessel - 1 set of drawings with P.Eng stamp, 1 set of design calculations  
Fitting - 1 set of drawings, 1 set of design calculations and 1 original notarized  
statutory declaration form. |
| Alberta        | Alberta Boilers and Safety Association  
9410-20 Avenue  
Edmonton, Alberta  
Canada, T6N 0A4  
Contact: Design Survey  
Phone 780-437-9100  
Fax 780-437-7787  
ABSA web site  
Fees vary by size and complexity of the vessel Fee Schedule  
Alberta application form must be used for all registrations.  
Alberta statutory declaration form must be used for fitting registrations.  
Alberta does not always require a P.Eng. stamp on submissions - call the above  
number for details.  
Alberta Act  
Registration Requirements:  
Pressure Vessel - 2 sets of drawings, 1 set of design calculations  
Fitting - 2 sets of drawings, 1 set of design calculations and 2 original notarized  
statutory declaration forms.  
Note: ABSA will accept drawings without a P.E. Stamp for fittings and U stamp  
vessels, however a stamp is required for Division 2 designs. Officially, if a stamp is  
required, vessel drawings must be stamped by an Alberta professional engineer. This  
rule is not enforced. |
| Government of Saskatchewan | Government of Saskatchewan  
Corrections and Public Safety  
Licensing and Inspections  
Boiler and Pressure Vessel Safety  
330-1855 Victoria Avenue |
### Saskatchewan

Regina, SK  
Canada S4P 3V7

Contact: John Gosselink 306-787-4524  
Contact: Chris Selinger 306-787-5905  
Contact: Brian Krasien 306-787-4514  
Fax 306-787-9273

Fees vary by size of vessel or heat exchanger, typically $60-400 - [Fee Schedule](#)  
Allow one month for application  
Saskatchewan [statutory declaration form](#)  
[Saskatchewan Act](#)

Registration Requirements:  
Pressure Vessel - 2 sets of drawings with P.Eng stamp, 1 set of design calculations  
Fitting - 2 sets of drawings, 1 set of design calculations and 1 original notarized statutory declaration form.

### Manitoba

Manitoba Labour and Immigration  
Workplace Safety and Health Division  
500-401 York Avenue  
Winnipeg Manitoba  
Canada, R3C 0P8

Contact: Madhav Sinha 204-945-3446  
Fax 204-945-4556  
[Manitoba website](#)

Typical fees $100-125 - [Fee Schedule](#)  
Manitoba application form must be used for all registrations.  
Manitoba [statutory declaration form](#)  
[Manitoba Act](#)

Registration Requirements:  
Pressure Vessel - 2 sets of drawings with P.Eng stamp, 2 sets of design calculations  
Fitting - 2 sets of drawings, 2 sets of design calculations and 2 original notarized statutory declaration forms.

### Ontario

Technical Standards and Safety Authority  
14th Floor, Centre Tower  
3300 Bloor Street West  
Toronto, Ontario  
Canada, M8X 2X4

Phone: 416-325-2000  
Fax 416-231-5366  
Contact: Cathy Turylo 416-734-3440  
[TSSA website](#)

Fees $138/hour for regular service - 3-4 week turnaround - [Fee Schedule](#)  
Fees $276/hour for rush service - 1 week when available  
Ontario application form must be used for all registrations  
Ontario [statutory declaration form](#) must be used for all fitting registrations  
[Ontario Act](#)

Registration Requirements:  
Pressure Vessel - 2 sets of drawings with Ontario P.Eng stamp, 1 set of design calculations  
Fitting - 2 sets of drawings, 1 set of design calculations and 2 original notarized statutory declaration forms.

**Pressure vessel drawings must be stamped with an Ontario engineers stamp. This rule is enforced by the TSSA.**
<table>
<thead>
<tr>
<th>Province</th>
<th>Details</th>
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| Quebec            | 545, boulevard Crémazie est, 7 ème étage  
Montréal, Quebec  
Canada, H2M 2V2  
Phone: 514-873-6459  
Fax: 514-873-9936  
Contact: Rene Plante, Gilles Corbin, Christian Fortier  
Fees $132 up front for the first hour of review  
Pay $132/hour for each additional hour, payable after the job is done  
Allow 3-4 weeks for review  
Do not fear - English is not a problem! Many of the employees are bilingual.  
Registration Requirements:  
Pressure Vessel - 3 sets of drawings with P.Eng stamp, 1 set of design calculations  
Fitting - 3 sets of drawings with P.Eng stamp, 3 original notarized statutory declaration forms and 1 set of design calculations or test data.  
Note: officially, vessel drawings must be stamped by a Quebec professional engineer. This rule is not enforced. |
| New Brunswick     | See ACI Central  
$30 Provincial fee + ACI |
| Nova Scotia       | See ACI Central  
$30 Provincial fee + ACI  
Nova Scotia Act |
| Prince Edward Island | See ACI Central  
$40 Provincial fee + ACI  
Prince Edward Island Act |
| Newfoundland and Labrador | See ACI Central  
$50-350 Provincial fee depending on size of vessel + ACI  
Newfoundland and Labrador Act |
| Yukon             | See ACI Central  
$25 Territory fee + ACI |
| North West Territories | See ACI Central  
$50-150 Territory fee depending on vessel + ACI |
| Nunavut           | See ACI Central  
$30 Territory fee + ACI |

**ACI Central**  
ACI Central, Inc.  
20 McAuley Court  
Charlottetown, PE  
Canada C1A 9M7  
Contact: Krista Cudmore  
Phone: 902-566-1975  
Fax: 902-566-3133  
ACI website  
See Province or territory for fees  
Standard Review fee of $250 + provinces / territories fee  
Ask about review rates if your project is complicated.  
One review fee applies to all Provinces / Territories covered by ACI Central  
Allow 10 working days for review.  
A Professional Engineers stamp is required, but does not have to be Canadian.  
A purchase order and cover letter with contact information is required before review will start.  
ACI Pressure Vessel Application  
ACI Fitting Application  
ACI Statutory Declaration  
Registration Requirements:
Pressure Vessel - 2 sets of drawings with P.Eng stamp, 1 set of design calculations and 1 original notarized statutory declaration form.
Fitting - all except Newfoundland - 2 sets of drawings, 1 set of design calculations and 1 original notarized statutory declaration form.
Fitting - Newfoundland - 2 sets of drawings with P.Eng stamp, 1 set of design calculations and 2 original notarized statutory declaration forms.

About This Web Page

This web page is primarily written by Laurence Brundrett at Pressure Vessel Engineering Ltd. The first edition only had a list of provincial contacts. Many people have assisted in expanding it. Special thanks go out to Burt Lux and Thomas Haley and also all of my co-workers at Pressure Vessel Engineering who said "You can't write that, we'll get sued!"

This web page is far from complete, and considering how complex vessel registration is in Canada, probably never can be. The laws governing pressure vessels in Canada are continually changing. It is up to you to contact the jurisdiction where the vessel will be registered to get the latest requirements.

Interesting facts for anyone thinking of writing a page like this: 1) The more information added to this page, the more business Pressure Vessel Engineering Ltd has got registering vessels. 2) We get twice as much business when the Author’s Opinions section is included. Why I do not know.

Author’s Opinion

Pressure Vessel Engineering Ltd. has been doing registration work in Canada for a number of years. It is obvious to someone that works in this field that the CRN system is not simple or logical. In my opinion three particular issues need to be addressed:

1 - the need to register vessels in each province/jurisdiction where they are used. It is my opinion that registering vessels in each jurisdiction is a waste of time and money. Proper respect is required for how dangerous a pressure vessel or piping system can be. However, registering the same vessel multiple times for each individual jurisdiction does not make them any safer.

2 - The need for Ontario P. Eng. stamps for vessels registered in Ontario works only as long as one province has this regulation. It has even brought more business to my company at the expense of those engineers not located in Ontario. However, if this is ever duplicated by other provinces, then engineers like myself will have to carry multiple stamps. Regulations like this just raise the cost for everyone. It is important to note that other provincial engineering associations have attempted to achieve what the Ontario engineers have succeeded at but so far have failed. Some are probably trying again right now.

3 - This is a system that only applies to Canada. In a world that is increasingly globalized, limiting the access to our markets for products that safely meet global standards only hurts Canadians through limiting the products we can use, and by increasing our costs. We can not say that we are building the worlds safest pressure vessels and piping systems if we can not use the best products that the world has to offer, with or without our CRNs. Our manufacturers tied up with illogical provincial regulations do not have time to seek out global markets for their products.

The Future

The CRN registration system has been around for many years. I do not know when it started, but I have seen vessels that were registered in Ontario in the 1950’s. It is clear that it will be around for a long time to come. The National Board system might be a lot simpler and more logical, but it just is not allowed here.

Due to long term complaining from industry groups including CHEVMA, CSA has been attempting to create one stop fittings registration. Their proposed process does not make sense to me - send the file to CSA, who will then send it to one jurisdiction who registers it and sends it back to CSA who provinces a CCRN number valid Canada Wide. This process has been written into the 2003 B51 standard, but has not been accepted by all of the member
jurisdictions and is currently stuck in the courts so it can not be implemented. Perhaps some year it will take effect. When it does, it will only effect fittings, not vessels. So far no one has convinced anyone on the committee to call the whole CRN system a bad idea and scrap it all.

Enough complaining. It is my hope that this page is useful and accurate. If you have information to add please or comments to make please contact me at the address below.

Laurence Brundrett

Advertisement

Pressure Vessel Engineering Ltd. has helped its customers obtain hundreds of CRN's - from simple jobs finished in less than a week to complex catalogs that have taken close to a year. Whether it's complete code calculations, drawings and finite element analysis or a review of existing drawings and calculations, PVE can help smooth out the registration process for you. After our review, an Ontario professional engineers stamp can be put on your design and the finished package will be sent out for registration with the required jurisdiction(s). All jurisdiction fees will be passed on to you at cost.

Pressure Vessel Engineering also provides complete vessel code calculations for ASME Section 1, 4 and 8 (Div 1 and 2) as well as B31.1 and 31.3. We can use finite element analysis to analyze pressure vessels or components and provide solid modeling services. PVE has designed vessels ranging from small filter vessels to large pressure treating cylinders.

Pressure Vessel Engineering Limited
120 Randall Drive, Suite B
Waterloo, Ontario, Canada
N2V 1C6

Phone - (519) 880-9808
Fax - (519) 880-9810
www.pveng.com
info@pveng.com