



Implementation Guideline for Companies requesting TSSA Certificate of Authorization for the Repair of Pressure Relief Valves

1. SCOPE:

These administrative rules and procedures are provided for those who are applying for a Technical Standards and Safety Authority (TSSA) Certificate of Authorization for the repair of pressure relief valves. It should be noted that the issuance of this Certificate of Authorization is not restricted to companies whose primary business is the repair of pressure relief valves nor to manufactures or assemblers that hold on ASME “V”, “HV”, “UV” & “NV” Code symbol stamp. Owners and users of boilers and pressure vessels may also make applications to TSSA for this Certificate of Authorization.

Note: In accordance with CSA B51, Part 1, A Company wishing to set, service, or repair Category G fittings, except fittings of the non-reclosing type, shall first demonstrate to the authority having jurisdiction that it has proper repair facilities and a satisfactory quality control system, including a written manual, for the work to be carried out. A Company holding a National Board “VR” stamp is deemed to meet the Ontario requirements for repair of non-nuclear pressure relief valves provided that:

- a) The program is used strictly in accordance with the scope stated on the National Board Certificate of Authorization and,
- b) The “VR” stamp is applied to all repaired non-nuclear pressure relief devices and the repair is documented in accordance with the “VR” program.

Alternatively:

- c) A “VR” stamp holder not wishing to stamp every pressure relief device repair with the “VR” stamp or a company who is not a “VR” holder, may qualify a repair program for Ontario only by following the requirements detailed in this document.

2. ABBREVIATIONS:

ASME	American Society of Mechanical Engineers
CSA	Canadian Standards Association
TSSA	Technical Standards and Safety Authority
NB-23	National Board Inspection Code
NB-18	Pressure Relief Device Certifications

3. TSSA:

TSSA is responsible for the Certification of Companies in the Province of Ontario that repair Pressure Relief Valves for use on TSSA regulated equipment that do NOT currently hold a “VR” Certificate of Authorization from the National Board.

4. CONSTRUCTION STANDARDS FOR PRESSURE RELIEF VALVES:

For pressure relief devices, the applicable new construction standard to be used for reference during repairs is the applicable ASME Code.



Only valves that have been stamped with the applicable ASME “U”, “HV”, or “UV” designator including a CRN and certified by the National Board are acceptable for repair and use on TSSA regulated equipment.

5. REFERENCE DOCUMENTS:

- NBIC Part 4 Section 4 (Repair of Pressure Relief Valves)
- Quality Program Manual Checklist (Certification of Pressure Relief Valve Repair Organizations)
- NB-18 Pressure Relief Device Certifications
- Applicable Code(s) of Construction
- ASME PTC-25 Pressure Relief Valve (Performance Test Code)
- Application for Non-Nuclear Certificate of Authorization

6. APPLICATION FOR NON-NUCLEAR ONTARIO CERTIFICATE OF AUTHORIZATION:

The Company shall complete the *Application for Non-Nuclear Ontario Certificate of Authorization*. The Company shall submit the application with the required deposit as indicated on the application.

The Company shall indicate if there are additional repair shop locations and if field repair is applicable.

Once the application is received by TSSA, the BPV Administrative Assistant will contact the Company and forward the Quality Program Manual Checklist and audit instructions.

7. SCHEDULING THE AUDIT:

The TSSA BPV Administrative Assistant will schedule a mutually agreeable time and location with the Company for the audit. The Company is required to submit a copy of the completed Quality Program Manual, Quality Program Manual Checklist at least one week prior to the scheduled audit.

When the audit has been scheduled, the Company shall adhere to the scheduled time and date. Careful attention should be noted, as cancelling the audit less than fifteen (15) working days to the mutually agreed date may result in cancellation charges (see the *Application for Non-Nuclear Ontario Certificate of Authorization* notes).

8. THE QUALITY PROGRAM AND THE QUALITY MANUAL:

The Company shall implement a Quality Program and document it in a Quality Program Manual that describes how the Company will control the processes as outlined in the Quality Program Manual Checklist and as required by the NBIC Part 4 Section 4.8.

Note: The only exception to NBIC Part 4 Section 4.7.2 is that there is no “VR” stamp applied to the repair nameplate by the Certificate Holder.

The Company shall address all the elements as detailed in the *Certification of Pressure Relief Valve Repair Organization* checklist as applicable to the Company. The Company shall appoint personnel to fulfil the requirements of the Quality Program.



9. CODE BOOKS:

The Company shall maintain a copy of, or have direct access to the latest edition of the following Code books (as applicable):

- CSA B51 *Boiler, Pressure Vessel and Pressure Piping Code* (Latest accepted edition as required by the TSSA Code Adoption Document as a minimum)
- NBIC NB-23 *Part 4 Pressure Relief Devices*
- NB-18 *Pressure Relief Device Certifications*
- Applicable Code(s) of Construction

10. RELIEF VALVE MANUFACTURER MANUALS AND PARTS LIST:

The Company shall have a copy of the applicable Relief Valve Manufacturers Manuals and Parts lists. This may be digital or hard copy.

11. ADDITIONAL TEST BENCH REQUIREMENTS:

For the test benches or stands, any pressure vessels, piping or fittings that fall under the Ontario Boiler and Pressure Vessels Regulation 220/01 shall be registered by the TSSA with a valid CRN. Any piping installations as part of the test bench assembly will be required to be installed by a Certified Company for the work performed and inspected by the local TSSA Inspector (prior to the audit).

12. AUDIT DEMONSTRATION ITEM:

The Company shall demonstrate the Quality Program to the TSSA Quality Assessment Specialist.

The Company shall repair and submit for verification testing one (1) valve for each ASME Code section and test fluid applied for (steam, air/gas, liquid) which will appear on the Certificate of Authorization. A minimum of two (2) valves are required regardless of ASME BPV Code sections or test fluid.

When an applicant is an Owner/User repairing ASME BPV Code Section VIII steam service valves for their own use and intends to set those valves using air (refer to NBIC NB-23 Part 4), the applicant shall submit one additional ASME BPV Code, Section VIII steam valve set on air for verification testing on steam.

For field-only repair scopes, the review shall encompass both the applicant's address of record and a field repair demonstration site. The demonstration site shall be representative of that typically encountered by the applicant.

Note: Other than Owner/User setting valves on air to be used in steam service, a Company that does NOT have their own boiler to test the valves on steam shall document in their program how they will control the setting of the valves on a steam test bench, prior to the attaching the repair nameplate.

13. ADDITIONAL REQUIREMENTS FOR AUXILLARY LIFT ASSIST DEVICES:

If the Company is using an Auxiliary Lift Assist Device to determine set pressure after the repair, the set pressure shall also be demonstrated utilizing the Auxiliary Lift Assist Device on the demonstration valves that will be sent for verification testing.



14. VERIFICATION TESTING:

The applicant shall repair and submit for operational verification:

- a) One valve for each Code section and test fluid (steam, air/gas, liquid) which will appear on the Certificate of Authorization. A minimum of two valves are required regardless of the Code or test media. Before the Certificate of Authorization may be issued or renewed, the demonstration valves must successfully complete operational verification tests at the applicant's facility or a field site in the presence of the TSSA Quality Assessment Specialist during the Quality Program review. Additionally, the valves shall be verified on a separate test bench acceptable to the TSSA representative. The TSSA Quality Assessment Specialist may choose not to witness the separate bench verification but must review the testing documents from the Company performing the verification test, prior to the issuance of the Certificate of Authorization.

Valves not meeting the function or operational requirements of the ASME BPV Code Section to which they were manufactured shall be considered to have failed. Replacement valves shall be repaired and selected for testing as stated above, at a rate of two (2) valves for each one (1) that failed.

If either or both of these replacement valves fail to meet the above criteria, the Company shall document the cause of the deficiency and actions taken to guard against future occurrences. Upon acceptance by the TSSA Quality Assessment Specialist, one (1) additional valve for each replacement valve that failed shall be repaired and tested. The valve(s) shall be of the same ASME BPV Code Section, fluid, and set pressure as the valve previously failing to meet the test requirements.

NOTE: During the course of the implementation review, when an applicant is unable to test steam valves on steam (due to limitations of boiler size or availability), steam valves may initially be *COLD SET* on air/gas to the original manufacturers' specifications, when such information is available from the manufacturer. Necessary corrections for differentials in popping pressure between steam and air, as established by the manufacture, shall be applied to the popping point of air. A warning tag shall be attached and sealed on the valve stating: "*COLD SET ON AIR ONLY, FINAL PRESSURE SETTING ON STEAM REQUIRED*".

Additionally, the tag shall contain the following information:

- Repair Company name and address
- Work Order or Job Number.

The repair nameplate shall only be attached upon completion of the hot setting of the valve. It is the responsibility of the applicant to demonstrate the final pressure setting and sealing on the valve on steam. When the applicant is unable to perform the final setting on steam at their facility during the implementation review, the demonstration test shall be conducted at a facility mutually acceptable to the TSSA Quality Assessment Specialist.

15. ISSUANCE OF THE CERTIFICATE OF AUTHORIZATION:

Certificates of Authorization may be issued only after successful review of the Organizations Quality Program, demonstration and verification of demonstration valves.



16. CERTIFICATION RENEWAL:

The TSSA Certificate of Authorization expires every 3 years.

The Company will receive renewal notifications by the TSSA BPV Program prior to expiry of the Certificate. If a renewal package from TSSA has not been received by the Company 6 months prior to the expiration, the Company shall contact the TSSA BPV Administrative Assistant for guidance.

Renewals shall be completed the same way as the original certification audit.