



## \* ACCREDITATION OF VALVE REPAIR (“VR”) ORGANIZATIONS

**The National Board of Boiler and Pressure Vessel Inspectors**

1055 Crupper Avenue  
Columbus, Ohio 43229  
614.888.8320



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# ACCREDITATION OF VALVE REPAIR (“VR”) ORGANIZATIONS

## \* 1.0 Scope

This procedure establishes the requirements for organizations seeking a National Board “VR” *Certificate of Authorization*. This certificate authorizes the organization to use the “VR” Symbol stamp (*Certificate of Authorization*) for the repair of pressure relief valves.

- 1.1 Organizations seeking a *Certificate of Authorization* shall have a written Quality Management System (QMS), in the English language, that complies with the National Board Inspection Code (NBIC) and this procedure. The QMS shall include the expected scope of activities. An organization’s scope of activities includes the type of activity that will be performed (e.g., repairs) and the location of such activity (e.g., shop, field site(s), or both).
- 1.2 *Certificates of Authorization* may be issued to organizations whose business is to repair pressure relief valves, to manufacturers or assemblers of pressure relief valves, to owners and users of pressure relief valves, and to other organizations that qualify in accordance with these requirements.

## \* 2.0 General Requirements

The National Board “VR” Certification Program applies to the repair of National Board capacity-certified valves only, which are identified as follows:

- 2.1 American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC) Section I valves identified with the ASME Single Certification Mark with V Designator or the ASME BPVC V Symbol Stamp;
- 2.2 ASME BPVC Section IV or Section XIII valves with the ASME Single Certification Mark with HV Designator or the ASME BPVC HV Symbol Stamp; or
- 2.3 ASME BPVC Section VIII or Section XIII valves with the ASME Single Certification Mark with UV Designator or the ASME BPVC UV Symbol Stamp.
- 2.4 Repairs shall be required for pressure relief valves whose condition and performance are not equivalent to the original code of construction requirements. Repairs shall conform to the ASME Code section and edition most applicable to the work planned.

Such condition and performance may be a result of:

- exposure to environmental or other conditions that may adversely impact the valve’s performance;
- being in service for an extended period; or
- external adjustment seals have been broken, opened, or otherwise disturbed, regardless of the valve’s age or service status.

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### 3.0 Application

- 3.1 Organizations seeking to obtain a *Certificate of Authorization* shall apply to the National Board using the NB-550, *Application for the National Board “VR” and/or “T/O” Certificate of Authorization*, obtained from the National Board website ([www.nbbi.org](http://www.nbbi.org)) under the “Accreditation” tab.
- 3.2 Organizations seeking to renew their *Certificate of Authorization* shall apply for renewal at least eight months prior to the expiration date of the *Certificate of Authorization*. Renewal applications shall be accessed and submitted online through the Certificate Administrator account on the National Board Business Center ([buscenter.nationalboard.org](http://buscenter.nationalboard.org)).
- 3.3 When an organization has plants or shops in more than one location, they shall submit a separate application for each plant or shop.
- 3.4 For field-only scopes, the address of record shown on the *Certificate of Authorization* is the location from which the administrative, technical, and quality aspects of the business are controlled.

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### 4.0 Review of Applicant’s Facility

- 4.1 Prior to being issued a *Certificate of Authorization*, the organization’s facilities and QMS are subject to a review and verification of implementation by a National Board Team Leader. At the time of the review, the organization shall demonstrate to the latest mandatory edition of the NBIC or the latest permissive edition. The demonstration shall include, as a minimum, disassembly, inspection, repair, application of special processes, reassembly, setting, and testing of valves within the scope of the applicant’s QMS.
- 4.2 The review team shall consist of, at minimum, a Team Leader from the National Board Member Jurisdiction where the organization is located (or a National Board Team Leader). If the jurisdiction elects not to perform the review or there is no jurisdiction, the National Board will represent the jurisdiction.
- 4.3 The applicant shall repair and submit a minimum of two valves for verification testing to a National Board Accepted Testing Laboratory. The valve submission shall include at least one valve for each ASME BPVC section (except Section III) and test medium in the scope of the *Certificate of Authorization*.
  - 4.3.1 When an applicant is an owner or user repairing ASME BPVC UV-designated steam service valves for their own use and intends to set those valves using air (refer to NBIC Part 4), the applicant shall submit one additional UV-designated steam valve set on air for verification testing on steam.
  - 4.3.2 Verification testing of an ASME BPVC V-designated valve for liquid-only service is not required if verification testing of a UV-designated liquid service valve has been successfully completed.
- 4.4 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.

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- 4.5 The applicant shall have access to the National Board document/database NB-18, *Pressure Relief Device Certification* (available on the National Board website: [www.nbbi.org](http://www.nbbi.org)), all parts of the latest mandatory edition of the NBIC, and the latest mandatory edition of ASME BPVC sections included in the *Certificate of Authorization’s* scope and special processes.
- 4.6 Upon receiving the National Board’s notification of review dates, the organization shall make arrangements for the review. National Board reviews of valve repair organizations may be coordinated with other reviews when practical.
- 4.7 A recommendation to issue, renew, or withhold the *Certificate of Authorization* shall be included in a Qualification Review Report (QRR) prepared by the National Board Team Leader. The completed QRR shall be forwarded to the National Board.
- 4.8 A *Certificate of Authorization* will be issued when all requirements have been met. The *Certificate of Authorization* shall expire every three years following the date of issuance or renewal.

### 5.0 **Repairs by ASME Manufacturers**

- 5.1 A manufacturer holding an active ASME *Certificate of Authorization* for use of the ASME Single Certification Mark may obtain the “VR” *Certificate of Authorization* for the repair of pressure relief valves certified under the ASME *Certificate of Authorization*. This can be accomplished without a review of the manufacturer’s facilities, provided the organization’s QMS includes provisions that cover the scope of repairs to be performed. The QMS is subject to review by the National Board. The repairs shall be performed at the same location listed on the ASME *Certificate of Authorization*. Unless the repaired valves are tested in the same facilities and to the same procedures as new valves, repaired valves shall be selected for verification tests by a National Board Team Leader in accordance with Paragraph 4.3.
- 5.2 The initial “VR” *Certificate of Authorization* shall be issued to expire concurrently with the ASME *Certificate of Authorization*. Subsequent certificates shall be renewed upon the successful review and verification of QMS implementation. This review shall be performed concurrently with the ASME *Certificate of Authorization* renewal review.
- 5.3 A manufacturer may also perform field repairs of pressure relief valves certified under the ASME *Certificate of Authorization*, provided the provisions of NBIC Part 4, 4.8.6 are met.

### 6.0 **Jurisdictional Participation**

The National Board Member Jurisdiction in which the organization is located may participate in the organization’s review and demonstration of QMS implementation. They may also participate in the acceptance of the organization’s QMS Manual.

### 7.0 **Use of the “VR” Certificate of Authorization**

#### 7.1 “VR” Symbol Stamp Use

Each “VR” Symbol stamp shall be obtained from the National Board and shall be used

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only by the repair organization within the scope and limitations under which it was issued. The organization’s QMS shall provide for constant control of the “VR” Symbol stamp. The organization shall not permit others to use its assigned “VR” Symbol stamp.

### 7.2 Return of the “VR” Symbol Stamp

Each applicant shall agree the “VR” Symbol stamp is the property of the National Board, and that as such, it will be promptly returned upon demand. The “VR” Symbol stamp shall be returned to the National Board if the organization discontinues its use of the “VR” *Certificate of Authorization* or if the *Certificate of Authorization* has expired and a renewal application is not pending.

A Certificate Holder’s failure to comply with the requirements of this procedure or the NBIC may result in the suspension of their *Certificate of Authorization*. Upon suspension of their *Certificate of Authorization*, the organization shall return the “VR” Symbol stamp to the National Board.

### 7.3 *Certificate of Authorization* Contents

The following information is specified on the organization’s *Certificate of Authorization*:

- The company name and physical address of the organization;
- The certificate number, issue date, and expiration date; and
- The scope of the certificate:
  - Location: shop, field site(s), or both;
  - ASME BPVC Designator (herein, “designator”): V, NV, HV, and/or UV valves;
  - Test media; and when applicable,
  - Special NBIC provision(s) and/or any special processes.

### 7.4 Changes in Scope, Ownership, Company Name, Location, or Address

The *Certificate of Authorization* is valid only while the organization operates under the company name, address, and scope as shown on the *Certificate of Authorization*. Between renewal periods, any changes to the company name, address, or scope listed on the *Certificate of Authorization* shall be requested online through the Certificate Administrator account on the National Board Business Center ([buscenter.nationalboard.org](http://buscenter.nationalboard.org)). The National Board may require a re-review of the organization’s QMS and/or its implementation based on the changes requested. If a re-review is not required, the National Board will issue a revised *Certificate of Authorization*.

When a “VR” Certificate Holder changes their primary contact information (company’s primary contact name, phone, or email), ownership, or mailing address, they shall notify the National Board Pressure Relief Laboratory.

### 7.5 Issuance of Multiple “VR” Symbol Stamps

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A “VR” Certificate Holder may obtain more than one “VR” Symbol stamp, provided its QMS controls the use of such from the address of record shown on the *Certificate of Authorization*.

### \* 8.0 Quality Management System

A “VR” Certificate Holder shall have and maintain a QMS meeting the requirements of NBIC Part 4. It shall be treated confidentially by the National Board and Team Leader.

### 9.0 Repair of Nuclear Valves

The procedures to extend the “VR” *Certificate of Authorization* to include ASME BPVC Section III valves identified with the ASME Single Certification Mark with NV Designator, or those identified with the ASME NV Symbol Stamp, are described in the NBIC.

### \* 10.0 Verification Testing of Demonstration Valves

10.1 Capacity and operational verification tests of the demonstration valves shall be successfully completed at a National Board Accepted Testing Laboratory. Alternative verification testing described in Section 11.0 may also be applied. The valves shall be typical of those repaired by the organization and within the capabilities of the testing laboratory.

10.2 Tests conducted shall be witnessed by a National Board Team Leader. The purpose of the tests is to ensure that the repairs have been satisfactorily carried out and the function and operation of the valves meet the requirements of the designator to which they were manufactured.

10.3 Valves not meeting the functional or operational requirements of the designator 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 valves for each one that failed.

10.3.1 If any of these replacement valves fail to meet the above criteria, the applicant shall document the cause of the noted deficiencies and actions taken to guard against future occurrence. Upon the National Board’s acceptance of this information, the organization shall repair and test one additional valve for each replacement valve that failed. The valve(s) shall be of the same designator and test medium as the valve(s) previously failing to meet the test requirement.

10.3.2 Revocation of the *Certificate of Authorization* or acceptance of alternative corrective action will be considered if the valve(s) fails to meet the requirements of the ASME BPVC to which it was manufactured.

### \* 11.0 Alternative Verification Testing of Demonstration Valves

11.1 In such cases where all valves repaired by the applicant for a specified designator or test medium exceed the capabilities of the testing laboratory, valves for that designator or test medium shall be selected as specified in Section 4.0, and a demonstration test shall be successfully performed in lieu of the verification testing specified in Section 10.0. The demonstration tests shall be conducted at a facility mutually agreeable to the National

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Board Team Leader, facility owner, and applicant. The purpose of these tests is to demonstrate, in the presence of a National Board Team Leader, that the repaired valves have adequate seat tightness at the maximum expected operating pressure prior to lifting, open within the required set pressure tolerance, operate consistently without chatter, and reclose within the required blowdown.

- 11.2 If a valve lift assist device is used to establish set pressure after repairs, this device shall also be used to set the demonstration valves.
- 11.3 If any of these valves fail to meet the above criteria, then replacement valves shall be repaired and tested at a rate of two valves for each one that failed.
  - 11.3.1 If any of these replacement valves fail to meet the above criteria, the applicant shall document the cause of the noted deficiencies and actions taken to guard against future occurrence. Upon the National Board’s acceptance of this information, the organization shall repair and test one additional valve for each replacement valve that failed. The valve(s) shall be of the same designator and test medium as the valve(s) previously failing to meet the test requirement.
  - 11.3.2 Revocation of the *Certificate of Authorization* or acceptance of alternative corrective action will be considered if the valve(s) fails to meet the requirements of the designator to which it was manufactured.

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### 12.0 Due Process

- 12.1 The National Board provides procedural due process in connection with accreditation activities. There are several levels to which an aggrieved party may appeal. The process may be initiated by contacting the National Board’s Pressure Relief Laboratory.
- 12.2 All information necessary to determine that the QMS complies with the appropriate codes and/or standards (e.g., drawings, procedures, reports, etc.) shall be held in strict confidence by those participating in the review; such information shall not be discussed with anyone other than National Board staff.

The National Board will maintain information confidential to the extent permitted by the applicable jurisdiction.