



Qualification of National Board Team Leaders

The National Board of Boiler and Pressure Vessel Inspectors

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Qualification of National Board Team Leaders

* 1.0 General

This procedure outlines the training, qualification, and maintenance of certification requirements for National Board Team Leaders. Any differences in qualification or training requirements are noted throughout this procedure.

1.1 National Board Team Leaders are qualified to perform reviews, audits, surveys, device selections, test witnessing, and similar activities, as applicable, for the following National Board accreditation programs:

- NB-360, *National Board Acceptance of Authorized Inspection Agencies (AIA) Accredited by the American Society of Mechanical Engineers (ASME)*;
- NB-369, *Accreditation of Authorized Inspection Agencies Performing Inservice Inspection Activities*;
- NB-371, *Accreditation of Owner-User Inspection Organizations (OUIO)*;
- NB-390, *Accreditation of Federal Inspection Agencies (FIA)*;
- NB-415, *Accreditation of Repair (“R”) Organizations*;
- NB-417, *Accreditation of “NR” Repair Organizations*;
- NB-514, *Accreditation of “VR” Repair Organizations*; and
- NB-528, *Accreditation of “T/O” Test Only Organizations*.

1.2 National Board Team Leaders performing functions for the American Society of Mechanical Engineers (ASME) shall meet the qualification and training requirements specified by ASME.

* 2.0 Qualification

To qualify as a National Board Team Leader, an individual shall meet the requirements of Sections 2.1 through 2.5 of this procedure, as applicable.

2.1 Education and Qualifying Work Experience

The prospective National Board Team Leader who will conduct reviews, audits, surveys, device selections, or test witnessing, shall have a minimum of 12 credits that have been accumulated through the following education and experience requirements.

2.1.1 Education (4 credits maximum)

Education (1 Credit Minimum, 6 Credits Maximum)	Credits
1. Bachelor’s degree in engineering	4
2. Associate degree in engineering	3
3. Bachelor’s degree in science or mathematics	3
4. Associate degree in science or mathematics	2

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<p>5. Examples of acceptable technical curriculum:</p> <ul style="list-style-type: none"> • Graduation from an accredited technical school in subjects that include, but are not limited to: <ul style="list-style-type: none"> ▪ manufacturing ▪ construction technology ▪ heating, ventilation, and air conditioning ▪ industrial technology • Successful completion of a power engineering certification program. • Successful completion of an accredited trade certification program in such skills as: boilermaker, boiler mechanic, steamfitter, machinist millwright, or welder. • Successful completion of a military or merchant marine training program in marine or stationary boilers, pressure vessels, or nuclear reactors. • Successful completion of the American Welding Society's Certified Welding Inspector certification program or an equivalent certification program. 	2
<p>6. Technical training in boiler, pressure vessel, or piping inspection:</p> <p>a) Completion of a course in at least one of the following (or related) subjects:</p> <ul style="list-style-type: none"> ▪ Quality Management Systems ▪ engineering ▪ fabrication methods ▪ nondestructive examinations ▪ inspection <p>b) Successful completion of a classroom course or seminar on knowledge, understanding, and general structure of the National Board Inspection Code (NBIC) or ASME Boiler and Pressure Vessel Code (ASME BPV Code).</p> <p>c) Successful completion of the National Board Review Team Leader training seminar</p> <p>d) Successful completion of the National Board Inservice Inspector Commission Course</p> <p>e) Successful completion of the National Board Authorized Inspector Commission Course</p> <p>f) Successful completion of the National Board Repair Inspector Course</p>	<p>1</p> <p>1</p> <p>1</p> <p>2</p> <p>2</p> <p>1</p>

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2.1.2 Qualifying Work Experience (10 credits maximum)

2.1.2.1 Qualifying work experience includes experience associated with boilers, pressure vessels, piping, and/or pressure relief devices in any of the following categories: design, manufacturing, construction, operation, maintenance, repair, alteration, quality control, nondestructive examination, or inspection.

- a) Each full year of experience: **score 1 credit per year.**
- b) If the experience described in Paragraph 2.1.2.1 a), above, has been working with ASME BPV Code: **score 1 additional credit per year** (2 credits maximum).
- c) If the experience described in Paragraph 2.1.2.1 a), above, has been as a quality assurance / control auditor: **score 1 additional credit per year** (2 credits maximum).

2.1.2.2 The sum of Paragraphs 2.1.2.1 a), 2.1.2.1 b), and 2.1.2.1 c) may be used towards the 10-credit maximum for qualifying work experience.

2.1.3 Professional Accomplishments (4 credits maximum)

2.1.3.1 Professional accomplishments include certification of competency in engineering, science, inspection, or quality assurance/control that is issued and approved by a government agency, the National Board, or other technical society. Examples of professional accomplishments include a National Board Commission or a certification from the American Petroleum Institute or American Welding Society: **score 1 credit.**

2.1.3.2 For registration as a Professional Engineer in one or more states: **score 1 credit.**

2.1.3.3 For holding certification as an Authorized Observer at the National Board Testing Laboratory for at least one year: **score 4 credits.**

2.1.4 Management Evaluation (2 credits maximum)

Upon recommendation from the individual's employer, the National Board may award up to two credits for performance factors not referenced in these criteria, but which are applicable to reviews, audits, inspections, and other activities. Performance factors may include skills in leadership, judgment, analysis, or communication. Performance factors may also include past performance or teaching experience (e.g., teaching seminars, courses, or at technical schools).

2.2 Training

2.2.1 A prospective National Board Team Leader shall have training sufficient to develop competency in reviews, audits, surveys, or similar activities in accordance with National Board policies and procedures. They shall also attend and pass the National Board Review Team Leader training seminar. Additionally, prospective National Board Team Leaders who will perform device selections

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and “VR” or “T/O” reviews shall attend and pass the National Board Pressure Relief Valve Repair seminar.

- 2.2.2 Training shall be based on the criteria described in Paragraphs 2.2.2.1 through 2.2.2.8, below, as applicable to the certification the prospective National Board Team Leader is seeking.
 - 2.2.2.1 Knowledge and understanding of the NBIC and ASME BPV Code Sections I, II, III, IV, VIII (Divisions 1, 2, and 3), IX, X, XII, and XIII.
 - 2.2.2.2 Knowledge and understanding of the NB-57, *The National Board and ASME Guide*.
 - 2.2.2.3 Knowledge and understanding of ASME procedure *Conduct of Conformity Assessment Activities*.
 - 2.2.2.4 Knowledge and understanding of ASME procedure *Standard Qualification Criteria for Designees for Accreditation and Product Certification Activities*.
 - 2.2.2.5 Knowledge and understanding of the American Society for Quality’s ISO-19011, *Guidelines for Auditing Management Systems*.
 - 2.2.2.6 Knowledge and understanding of the general structure and applicable elements of Quality Management Systems.
 - 2.2.2.7 Procedures and techniques of auditing, questioning, and identifying issues to evaluate Quality Management Systems.
 - 2.2.2.8 Reporting and follow-up methods, including closing out review findings.
 - 2.2.2.9 Training shall include the fundamentals for reviews, device selection, or test witnessing, as applicable.
- 2.3 Activity Participation
 - 2.3.1 Within one year of applying, the prospective National Board Team Leader shall be assigned with a National Board Team Leader to participate in a minimum of three reviews, surveys, or site visits, as applicable to the qualifications being sought.
 - 2.3.2 Additional requirements for specific qualifications:
 - 2.3.2.1 An individual seeking qualification to conduct testing laboratory reviews and Authorized Observer acceptance reviews shall be qualified as an ASME Designee. Additionally, they shall hold the ASME Authorized Observer certification at the National Board Testing Laboratory. The individual shall participate in at least one testing laboratory review with an ASME Designee.
 - 2.3.2.2 Prospective National Board Team Leaders performing test witnessing, device selections, or similar activities at facilities other than the National Board Testing Laboratory, shall meet one of the following criteria:

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- 2.3.2.2.1 Hold the ASME Authorized Observer certification at the National Board Testing Laboratory and participate in at least one site visit for test witnessing with a qualified National Board Team Leader at another ASME- / National Board-accepted testing laboratory.
- 2.3.2.2.2 Prospective National Board Team Leaders who are not qualified Authorized Observers shall participate in two site visits with a qualified National Board Team Leader. One site visit shall include test witnessing at another ASME- / National Board-accepted testing laboratory, and the other site visit shall be at the National Board Testing Laboratory for training by qualified Pressure Relief Laboratory staff.
- 2.3.2.3 Any National Board or ASME Team Leader qualified to perform reviews for applicants of National Board “VR” or “T/O” *Certificates of Authorization* or for applicants of ASME V, UV, UV3, UD, UD3, HV, TV, or TD *Certificates of Authorization* are qualified to perform device selections, provided all assigned reviews include device selections.
- 2.3.3 The prospective National Board Team Leader shall complete the applicable Qualification Review Report (QRR). The QRR shall be submitted to the qualified National Board Team Leader who shall review it for content, completeness, and accuracy.
- 2.3.4 The qualified National Board Team Leader shall appraise the prospective National Board Team Leader’s performance, including a review of the applicable QRR in accordance with Paragraph 2.3.3, above. Additionally, the qualified National Board Team Leader shall submit a written evaluation of the prospective National Board Team Leader’s performance and communication skills on the [NB-165, Reviewers / Surveyors / Auditors Evaluation](#). The qualified National Board Team Leader shall submit the completed NB-165 to the Manager of Technical Services.
- 2.4 Communication Skills
 - 2.4.1 The prospective National Board Team Leader shall be capable of communicating effectively orally and in writing.
- 2.5 Examinations
 - 2.5.1 The prospective National Board Team Leader shall pass the applicable National Board Review Team Leader examination(s) with a grade of at least 80%. Examinations shall evaluate the prospective National Board Team Leader’s comprehension and ability to apply the training fundamentals identified in Section 2.2 of this procedure.
 - 2.5.2 The development and administration of examinations shall be conducted in accordance with National Board General Procedure (GP)-402, *Qualification of Individuals Performing Reviews*.

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2.6 National Board Team Leader Application

2.6.1 The prospective National Board Team Leader shall submit the [NB-294, Application for New Issuance of National Board Review Team Leader](#) (available on the National Board [website](#)) within one year of passing the applicable National Board Review Team Leader examination(s). If the applicant does not apply for certification within the one-year period, they shall retake the examination(s).

2.6.2 The supervisor of the prospective National Board Team Leader shall sign the application to certify the applicant has met all certification requirements.

2.7 National Board Team Leader Certification

2.7.1 Certification of a National Board Team Leader will be valid for a five-year period from the time of issuance, provided qualification is maintained in accordance with Section 3.0 of this procedure.

* 3.0 Maintenance of Qualification

3.1 National Board Team Leaders shall maintain their proficiency by conducting at least one review, survey, or device selection or test witnessing site visit, as appropriate with their qualifications, every twelve months.

3.2 National Board Team Leaders shall attend the applicable National Board Review Team Leader training seminar at least once every two calendar years.

3.3 National Board Team Leaders shall be evaluated at least once every 36 months following their initial qualification date. The evaluation shall be performed by a National Board Team Leader through direct observation during a review, survey, or device selection or test witnessing site visit. After the National Board Team Leader and evaluator have reviewed and signed the NB-165, the evaluator shall submit the completed NB-165 to the Manager of Technical Services within 30 days of completing the evaluation.

3.4 For National Board Team Leaders employed by National Board Member Jurisdictions, the evaluation specified in Paragraph 3.3, above, may be performed by a National Board Team Leader employed by the jurisdiction. Alternatively, National Board Member Jurisdictions may request the National Board provide a National Board Team Leader to perform the required evaluation. Such requests shall be submitted in writing to the Manager of Technical Services at least 120 days prior to the end of the 36-month evaluation period.

* 4.0 Renewal

4.1 National Board Team Leaders shall complete the [NB-295, Application for Renewal of National Board Review Team Leader](#) (available on the National Board [website](#)). They shall submit the NB-295 to the Manager of Technical Services at least 60 days prior to the expiration of their certification.

4.2 The supervisor of the National Board Team Leader shall sign the application to certify the applicant has maintained their qualification in accordance with Section 3.0 of this procedure.

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* 5.0 Failure to Maintain Proficiency

5.1 National Board Team Leaders who fail to maintain their proficiency in accordance with Paragraph 3.1 of this procedure shall be required to undergo an evaluation by a National Board Team Leader. This evaluation shall be completed within six months following expiration of the twelve-month proficiency maintenance period.

5.2 National Board Team Leaders who fail to attend the National Board Review Team Leader training seminar in accordance with Paragraph 3.2 shall be required to attend the National Board Review Team Leader training seminar within six months following expiration of the two-year period.

* 6.0 Requalification

National Board Team Leaders who fail to maintain proficiency in accordance with Section 5.0, above, or whose certification has lapsed, shall require re-qualification. Re-qualification includes retraining in accordance with Sections 2.2 through 2.6 of this procedure.

7.0 Waivers and Exceptions

If the requirements of this procedure are impractical to implement, the Executive Director, with concurrence of the Chair of the National Board's Board of Trustees, may allow exceptions on a case-by-case basis.