



*THE NATIONAL BOARD
OF BOILER AND PRESSURE VESSEL INSPECTORS*

National Board Inspection Code Procedure

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1.0 Purpose

This procedure defines the organization, scope, duties, and responsibilities of the NBIC Committee, subcommittees, subgroups, and task groups. The NBIC Committee is established by the National Board of Boiler and Pressure Vessel Inspectors (NBBPVI) Board of Trustees for the purpose of maintaining the NBIC. NBBPVI is accredited by the American National Standards Institute (ANSI) as a “developer of American National Standards” in accordance with the ANSI Essential Requirements. This procedure also describes the administrative process for the publication of the National Board Inspection Code.

Revisions to this procedure must be approved by the NBIC Committee, the Board of Trustees, and ANSI.

A copy of this procedure or any referenced document is either available on the National Board’s website (nbbi.org) or may be obtained from the NBIC Secretary.

2.0 Responsibilities

The Executive Director of the National Board is responsible for ensuring that the requirements of this procedure are met. The Secretary of the NBIC Committee is responsible for the day-to-day implementation of this procedure. Other responsibilities are described throughout this procedure.

3.0 Definitions

The following are terms and their definitions used throughout this document.

ANSI	American National Standards Institute.
Authorized Inspection Agency	An authorized inspection agency recognized by the National Board.
Board	The Board of Trustees of the National Board.
Code	The National Board Inspection Code (NBIC).
Code Work	Performing a job that requires ASME BPVC or NBIC Certification.
Committee	The NBIC Committee and all subcommittees, subgroups, and standing task groups.
General Interest	Individuals who do not fall into the interest categories defined as Manufacturer, Authorized Inspection Agency, Jurisdictional Authority, National Board Certificate Holder, User, or Labor.

Jurisdictional Authority	A National Board member.
Labor	Individuals representing labor organizations whose members are skilled workers in boiler or pressure vessel manufacturing or repairing (e.g., the United Association of Journeymen and Apprentices of Plumbing and Pipe Fitting Industry of the United States and Canada or the International Brotherhood of Boilermakers, Ship Builders, Blacksmiths, Forgers and Helpers).
Manufacturers	Any organization holding a Certificate of Authorization by ASME.
Meeting Attendance	To be present at a meeting either in person or virtually via an online meeting platform approved by the Executive Director of the National Board.
National Board Certificate Holders	Repair organizations accredited by the National Board to hold a R , NR , or VR certification.
NBIC Committee	The NBIC Main Committee is the final consensus body for the purpose of approving American National Standards.
National Board	The National Board of Boiler and Pressure Vessel Inspectors (NBBPVI) is the ANSI-Accredited Standards Developer.
NBIC	The National Board Inspection Code, which was established to provide rules and guidelines for the repair, alteration, inspection, installation, maintenance, and testing of boilers, pressure vessels, and other pressure-retaining items.
Project Manager	Individual assigned the responsibility of developing, monitoring, and developing proposed responses to technical items.
Secretary	NBIC Committee, subcommittees, subgroups, and standing task group secretaries are appointed by the Executive Director of the National Board. All secretaries are considered non-voting members of the Committee, subcommittee, subgroup, or standing task group without any interest affiliation.
Standing Task Group	A unit established to address recurring topics dealing with one subject or type of pressure-retaining item. These topics may be specific to one or more subcommittees. A standing task group may be established by the NBIC Committee or subcommittee.

Subcommittee	A unit established to address recurring functions and specific issues, or to maintain specific sections of the NBIC. A subcommittee is established by the NBIC Committee. Each subcommittee will follow rules for consensus approval insofar as possible but is not considered the final consensus body for the purpose of approving American National Standards.
Subgroup	A unit established to address recurring topics or functions specific to a subcommittee. A subgroup is established by the NBIC Committee. Subgroup actions are reported to the subcommittee for approval.
Task Group	A unit established to address a specific topic. A task group may be established by the NBIC Committee, subcommittee, or subgroup.
Users	Owners or users of boilers/pressure vessels.

4.0 *Committee Structure*

The committee structure consists of the NBIC Committee, subcommittees, and subgroups appointed by the NBIC Committee and task groups appointed by the NBIC Committee, a subcommittee, or subgroup. The duties, responsibilities, and administration of each are described below.

4.1 *NBIC Committee*

4.1.1 *Responsibilities*

The NBIC Committee is responsible for:

- a. approving new rules and revising existing rules of the Code and voting on such additions and revisions;
- b. approving interpretations of the rules of the Code;
- c. hearing requests for reconsideration regarding interpretations and revisions to the Code; and
- d. acting on any matter related to the scope of the Code as may be assigned by the Board.

4.1.2 Membership

The NBIC Committee shall consist of not more than 26 voting members within the interest categories described in paragraph 4.6.

- a. At least one individual representing manufacturers shall be employed by a manufacturer of safety relief devices.
- b. At least one individual representing National Board Certificate Holders shall be employed by an organization holding a valid **R** Certificate of Authorization.
- c. At least one individual representing National Board Certificate Holders shall be employed by an organization holding a valid **VR** Certificate of Authorization.
- d. Not more than one-third of the total NBIC Committee membership shall represent any single category of interest. The chair and vice chair of the NBIC Committee are considered within this membership.
- e. Each member of the NBIC Committee may recommend a person, within the same interest category, as a representative to serve in the absence of the member at a specific meeting. Representatives have the same privileges and responsibilities as the member when serving in the member's capacity. The representative's involvement terminates at the conclusion of the specific meeting requested by the member.
- f. Upon change of employment status affecting the member's category of interest, NBIC Committee members shall notify the NBIC Committee Secretary and will be deemed to have submitted their resignations from the NBIC Committee. Reappointment to the NBIC Committee shall follow the requirements of paragraph 4.1.3.

4.1.3 NBIC Committee Member Selection, Approval, and Term

- a. A candidate for appointment or reappointment as a voting member of the NBIC Committee is selected by a majority vote of the NBIC Committee membership. The candidate's name is then submitted to the Chair of the Board of Trustees for consideration. All voting members of the NBIC Committee must be appointed by the Chair of the Board of Trustees.
- b. A candidate for appointment or reappointment as the NBIC Committee Chair or Vice Chair is selected by a majority vote of the NBIC Committee membership. Only voting members with more than two years of service on the Committee are eligible to be appointed NBIC Committee Chair or Vice Chair. The candidate's name is then submitted to the Chair of the Board of Trustees for consideration. The Chair and Vice Chair must be appointed by the Chair of the Board of Trustees.

- c. A candidate for membership on the NBIC Committee must provide a work history/resume to the NBIC Committee Secretary.
- d. The term of all voting members is three years. Voting members are eligible for reappointment.
- e. NBIC Committee Chair and Vice Chair

Each term of office shall not exceed three years and no more than two consecutive three-year terms in each office may be served.

This limit can be exceeded for special circumstances, provided the candidate's name and an explanation of the special circumstances are submitted to the Board of Trustees for consideration. If approved by the Board of Trustees, the candidate will be appointed by the Chair of the Board of Trustees. An example of a special circumstance is that there is no other qualified candidate who is willing to serve.

At the time of appointment, the expiration date for the Chair's and Vice Chair's membership term shall be adjusted to match the term of office.

4.2 *Subcommittees*

4.2.1 *Responsibilities*

Subcommittees are responsible for:

- a. maintaining (e.g., adding new requirements, revising existing requirements) those sections of the NBIC that are assigned to the subcommittee;
- b. acting on requests for interpretations of the rules for those assigned sections of the NBIC;
- c. acting on any matter related to the scope of the NBIC as may be assigned by the NBIC Committee; and
- d. forwarding all subcommittee actions to the NBIC Committee.

4.2.2 *Membership*

- a. The number of members appointed to each subcommittee shall be as necessary to carry out the assigned responsibility. The size of subcommittees will be limited to numbers which will best serve operational needs, and shall be acceptable to the Chair of the NBIC Committee. Voting members must be within the interest categories described in paragraph 4.6.
- b. Not more than one-third of a total subcommittee's membership shall represent any single category of interest. The Chair and Vice Chair of a subcommittee are considered within this membership.

- c. Each member of the NBIC subcommittee may recommend a person, within the same interest category, as a representative to serve in the absence of the member at a specific meeting. Representatives shall have the same privileges and responsibilities as the member when serving in the member's capacity. The representative's involvement automatically terminates at the conclusion of the specific meeting requested by the member.
- d. Upon change of employment status affecting the member's category of interest, NBIC subcommittee members shall notify the NBIC Committee Secretary and will be deemed to have submitted their resignations from the subcommittee. Reappointment to the NBIC subcommittee shall follow the requirements of paragraph 4.2.3.

4.2.3 Subcommittee Member Selection, Approval, and Term

- a. A candidate for appointment or reappointment as a voting member of the subcommittee is selected by majority vote of the NBIC Committee membership. Subcommittee members need not necessarily be members of the NBIC Committee or subgroup. The candidate's name is then submitted to the Chair of the Board of Trustees for consideration. All voting members of the subcommittee must be appointed by the Chair of the Board of Trustees.
- b. Candidates for appointment or reappointment as the subcommittee Chair and Vice Chair are selected by a majority vote of the subcommittee membership. Only voting members with more than two years of service on the committee are eligible to be appointed subcommittee Chair or Vice Chair. The candidate's names are then submitted to the Chair of the Board of Trustees for consideration. The Chair and Vice Chair must be appointed by the Chair of the Board of Trustees.
- c. A candidate for membership on the subcommittee must provide a work history/resume to the NBIC Committee Secretary.
- d. The term for all voting members is three years. Voting members are eligible for reappointment.
- e. Subcommittee Chair and Vice Chair

Each term of office shall not exceed three years and no more than two consecutive three-year terms in each office may be served.

This limit can be exceeded for special circumstances, provided the candidate's name and an explanation of the special circumstances are submitted to the Board of Trustees for consideration. If approved by the Board of Trustees, the candidate will be appointed by the Chair of the Board of Trustees. An example of a special circumstance is that there is no other qualified candidate who is willing to serve.

At the time of appointment, the expiration date for the Chair's and Vice Chair's membership term shall be adjusted to match the term of office.

4.3 *Subgroups*

4.3.1 *Responsibilities*

Subgroups are responsible for:

- a. developing new rules and revising existing rules for specific Code sections or paragraphs;
- b. acting on requests for interpretations of the rules for specific Code sections or paragraphs;
- c. acting on any matter related to the scope of the Code as may be assigned by the Committee or subcommittee; and
- d. forwarding all subgroup actions to the subcommittee, as appropriate.

4.3.2 *Membership*

- a. The number of members appointed to each subgroup shall be as necessary to carry out the assigned work. The size of subgroups will be limited to numbers which best serve operational needs.
- b. Each member of a subgroup may recommend a person as a representative to serve in the absence of the member at a specific meeting. Representatives shall have the same privileges and responsibilities as the member when serving in the member's capacity. The representative's involvement automatically terminates at the conclusion of the specific meeting requested by the member.

4.3.3 *Subgroup Member Selection, Approval, and Term*

- a. A candidate for appointment or reappointment as a member of the subgroup is selected by the majority vote of the subcommittee membership. Subgroup members need not necessarily be members of the Committee or subcommittee. The candidate's name is then submitted to the Chair of the Board of Trustees for consideration. All voting members of the subgroup must be appointed by the Chair of the Board of Trustees.
- b. Candidates for appointment or reappointment as subgroup Chair and Vice Chair are selected by a majority vote of the subcommittee membership. Only voting members with more than two years of service on the committee are eligible to

be appointed Subgroup Chair or Vice Chair. The Chair and Vice Chair of each subgroup shall be appointed by the Chair of the Board of Trustees.

- c. A candidate for membership on a subgroup must provide a work history/resume to the NBIC Committee Secretary.
- d. The term for all voting members is three years. Voting members are eligible for reappointment.
- e. Subgroup Chair and Vice Chair

Each term of office shall not exceed three years and no more than two consecutive three-year terms in each office may be served.

This limit can be exceeded for special circumstances, provided the candidate's name and an explanation of the special circumstances are submitted to the Board of Trustees for consideration. If approved by the Board of Trustees, the candidate will be appointed by the Chair of the Board of Trustees. An example of a special circumstance is that there is no other qualified candidate who is willing to serve.

At the time of appointment, the expiration date for the Chair's and Vice Chair's membership term shall be adjusted to match the term of office.

- f. The name of a National Board Member who is a candidate to serve on a subgroup but is not a member of the NBIC Committee or a subcommittee, must be submitted to the Chair of the Board of Trustees for approval.

4.4 Standing Task Groups

4.4.1 Responsibilities

Standing Task Groups are responsible for:

- a. developing new rules and revising existing rules for specific subjects or types of pressure-retaining items;
- b. acting on requests for interpretations of the rules for specific topics or Code sections; and/or
- c. acting on any matter related to the scope of the Code as may be assigned by the Committee or subcommittee Chair.

All standing task group actions shall be forwarded to the subcommittee, as appropriate.

4.4.2 Membership

- a. The number of members appointed to each standing task group shall be as necessary to carry out the assigned work. The size of a standing task group will be limited to numbers which best serve operational needs.
- b. Each member of a standing task group may recommend a person, as a representative to serve in the absence of the member at a specific meeting. Representatives shall have the same privileges and responsibilities as the member when serving in the member's capacity. The representative's involvement automatically terminates at the conclusion of the specific meeting requested by the member.

4.4.3 Standing Task Group Member Selection, Approval, and Term

- a. A candidate for appointment or reappointment as a member of the standing task group is selected by the majority vote of the NBIC Committee or appropriate subcommittee membership. Standing task group members need not necessarily be members of the NBIC Committee, subcommittee, or subgroup.
- b. Candidates for appointment or reappointment as standing task group Chair and Vice Chair are selected by a majority vote of the standing task group membership. The Chair and Vice Chair of each standing task group shall be appointed by the NBIC Committee Chair.
- c. The term for all voting members is three years. Voting members are eligible for reappointment.
- d. Task Group Chair and Vice Chair

Each term of office shall not exceed three years.

At the time of appointment, the expiration date for the Chair's and Vice Chair's membership term shall be adjusted to match the term of office.

- e. The name of a National Board Member who is a candidate to serve on a standing task group but is not a member of the NBIC Committee, subcommittee, or subgroup, must be submitted to the Chair of the Board of Trustees for approval.

4.5 Task Groups

4.5.1 Responsibilities

Task groups are responsible for:

- a. developing new rules and revising existing rules for specific Code topics or paragraphs;

- b. acting on requests for interpretations of the rules for specific Code topics or paragraphs; and/or
- c. acting on any matter related to the scope of the Code as may be assigned by committees.

All task group actions shall be forwarded to the committee as appropriate.

4.5.2 Membership

The number of members appointed to each task group shall be as necessary to carry out the assigned task. The size of task groups will be limited to numbers which will best serve operational needs.

4.5.3 Task Group Members Selection, Approval, and Term

- a. When the committee agrees on the need or at the discretion of the Chair of a committee, a task group, members, and Project Manager shall be appointed by the committee Chair. Task group members need not necessarily be members of a committee.
- b. The task group will be dismissed once the task has been completed or at the discretion of the Chair of the committee.

4.6 Interest Categories

NBIC Committee, subcommittee, subgroup, and standing task group members shall not be considered as representing any specific organization. Participation by individuals employed by governmental agencies or affiliated with industry is not to be interpreted as government or industry endorsement. Membership shall be selected from the categories of interest listed below:

- a. General Interest
- b. Manufacturers
- c. Authorized Inspection Agency
- d. Jurisdictional Authorities
- e. National Board Certificate Holders
- f. Users (This may include National Board Owner/User Certificate Holders.)
- g. Labor

Lack of representation within any interest category at a meeting shall not preclude the committee from conducting its business when a quorum is present.

Individuals selected for the Manufacturers or National Board Certificate Holders interest categories should be supported by an organization that performs at least 51% of their Code Work in said category.

5.0 Duties of NBIC Committee, Subcommittee, Subgroup, and Task Group Membership

5.1 Chair

The Chair shall preside at meetings of the committee and shall perform other duties as are customarily assigned to that position.

The Chair of the NBIC Committee shall make an annual review of the activity of each voting member of the NBIC Committee, subcommittees, subgroups, and standing task groups regarding the member's contribution to the work, attention to correspondence, attendance at meetings, and voting on pending letter ballots. Based on this review, if a consistent lack of attendance, voting, or participation within the past year is noted, the Chair may recommend to the Chair of the Board of Trustees that the member's appointment to the NBIC Committee, subcommittee, subgroup, or standing task group be terminated. The Chair's report of NBIC Committee, subcommittee, subgroup, or standing task group members' activities shall be sent to the Chair of the Board of Trustees and the Executive Director of the National Board.

5.2 Vice Chair

The Vice Chair shall, in the absence of the Chair, fulfill the duties of the Chair.

5.3 Secretary

In addition to the responsibilities required by this procedure, the Secretary shall prepare agendas and record minutes of meetings and shall perform such other duties as are customarily assigned to such an office.

In the absence of the Chair and Vice Chair at a meeting, the Secretary shall take the Chair for the purpose of receiving nominations from the members present for election of a Chair Pro Tem, who shall then preside at that meeting.

5.4 Members

Each member is expected to thoroughly consider each subject brought before the committee for action, vote on acceptance or rejection of each proposal, and assist generally in carrying out the assigned functions. Such duties may be carried out by attendance at meetings, by correspondence, by telephone, and by online ballot voting.

6.0 *Meetings*

6.1 *Scheduled Meetings*

NBIC Committee meetings shall be held at the call of the Chair, as decided upon by a majority of NBIC Committee members, or as directed by the Chair of the Board of Trustees. Subcommittee, subgroup, and standing task group meetings held at times and locations other than in conjunction with the NBIC Committee meeting shall require the approval of the National Board Executive Director. Meeting requests shall be submitted in writing along with the subcommittee, subgroup, or standing task group's roster to the Executive Director.

6.2 *Locations*

The NBIC Committee shall meet in National Board member jurisdictions.

6.3 *Meeting Notification*

All committee meeting schedules shall be posted on the National Board website. The National Board member in whose jurisdiction the NBIC Committee is meeting shall be invited to attend the meeting.

A meeting agenda shall be made available to the members prior to the meeting and shall be subject to approval at the commencement of each meeting.

6.4 *Public Meetings*

Meetings at which the committee considers proposed revisions to the NBIC, reaffirmation of previously considered revisions, or withdrawal of previously approved revisions shall be open to the general public. Unless matters to be discussed by the committee are deemed to be of a confidential nature by the Chair, committee meetings shall be open to any interested person who shall be given an opportunity to participate in the discussions on subjects of interest to them.

6.5 *Quorum*

Fifty-one percent of the NBIC Committee, subcommittee, or subgroup voting membership eligible to vote must be present to conduct committee business.

6.6 *Meeting Conduct*

The committee shall conduct meetings in accordance with the latest available edition of *Roberts Rules of Order (Revised)* unless rules to the contrary are specified in these procedures.

6.7 *Recording Meeting Proceedings*

Taping of committee meetings, other than by the Secretary, is prohibited.

6.8 *Minutes*

All meetings of the NBIC Committee, subcommittees, subgroups, and standing task groups shall be documented in minutes of the meeting. The minutes are not to be considered a verbatim record of the meeting but rather a record of the voted actions and highlights of significant discussions or conclusions.

The title page of committee minutes shall include the following statements:

“These minutes are subject to approval and are for committee use only. They are not to be duplicated or quoted for other than committee use.”

Minutes of committee meetings will be distributed to the members of the committees, the Executive Director, National Board members, and Advisory Committee members, as requested. Copies of committee minutes will be made available on the National Board’s website for review until the next scheduled meeting’s minutes are available.

7.0 *Voting*

7.1 *General*

7.1.1 Each committee member shall exercise their vote within the presented time limits. When a committee member fails to report when due, or consistently abstains from voting, the committee member’s appointment shall be subject to termination. The individual may appeal such action. Committee members are encouraged to vote as soon as possible.

7.1.2 Votes for committee actions may be obtained by recorded votes at meetings or electronic means. All committee members shall have an opportunity to vote. When recorded votes are taken at meetings, the committee members who are absent shall be given the opportunity to vote.

7.1.3 The vote of each committee member shall be in one of the following categories:

- ◆ Approved
- ◆ Disapproved
- ◆ Abstention
- ◆ Not voting (for possible conflict of interest)

A response of not voting signifies neither approval nor disapproval and should be executed only when the committee member believes that they have a conflict of interest or potential conflict of interest and is removing themselves from the voting process.

Committee members casting disapproved responses should include an alternate action that will resolve their disapproved vote.

Committee members casting abstained responses should include a reason for the abstention.

7.1.4 Approval of the following NBIC Committee or subcommittee actions shall require two-thirds of the committee membership voting affirmatively, excluding not voting responses:

- ◆ committee procedures and interest categories
- ◆ reaffirmation of the NBIC as an ANSI Standard
- ◆ NBIC revisions
- ◆ interpretation of the NBIC
- ◆ scope of the NBIC Committee or subcommittee
- ◆ New ANSI standard

Approval of all other committee actions shall be by a majority vote.

7.1.5 NBIC Committee members who are not present at a meeting shall be afforded the opportunity to submit their vote electronically within two weeks of the date of the NBIC Committee meeting.

7.2 *Voting at Meetings*

NBIC Committee members who are not present at a meeting for final approval of Code revisions shall be afforded the opportunity to submit their vote electronically within two weeks after the date of the NBIC Committee meeting.

It is the responsibility of the National Board to provide the information relating to the items prior to the meeting in the form of posted agendas. Disapproved actions at the meeting shall be placed on the subcommittee agenda for the next scheduled meeting.

7.3 *Voting by Letter Ballot*

Voting by letter ballot is performed using the National Board Letter Ballot System available on the National Board website.

7.3.1 A letter ballot on any subject requires a response of at least fifty-one percent of committee members eligible to vote and may be authorized by the Chair of the NBIC Committee, Chair of a subcommittee, subgroup, or standing task group, Chair of the Board of Trustees, or a majority vote of those present and voting at a NBIC Committee, subcommittee, subgroup, or standing task group meeting. The voting

period for a letter ballot may be four calendar weeks; however, to expedite the item, this period may be shortened to no less than two calendar weeks by the person authorizing the letter ballot. Voting periods shall be closed upon receipt of all responses, but not later than the established closing date. All letter ballots shall be coordinated by the NBIC Committee Secretary.

7.3.2 At the conclusion of the letter ballot period, the NBIC Committee or subcommittee Secretary shall tally the votes and report the results to the members. If the letter ballot is disapproved, the item shall be placed on the agenda for the next meeting. All comments may be reviewed electronically by the NBIC Committee, subcommittee, subgroup, or standing task group members during the letter ballot period.

The Project Manager shall respond in writing to all negative comments received. The response shall include a disposition to the comment, and reasons for that disposition. If a comment is submitted that does not pertain to the ballot under consideration, the comment shall be reviewed as a new revision request to the code. Upon Project Manager responses to negative comments, the letter ballot (with or without substantive revisions) and attempts at resolution shall be resubmitted for a two-week period for members to respond, reaffirm, or change their original vote. NBIC Committee members who voted in the previous ballot are not required to vote in the recirculation ballot to reaffirm their vote when the changes are non-substantive. At the conclusion of the letter ballot period, the NBIC Committee Secretary shall tally the votes and report the results to the members. The Project Manager shall communicate with negative commenters to resolve their concerns, whenever possible.

If the required vote approval percentage is affirmative after this time, the ballot shall be considered approved. Letter ballots not approved shall be placed on the agenda for the next scheduled meeting of the NBIC Committee, subcommittee, subgroup, or standing task group.

Letter ballots for review and comment only are not subject to the requirements of paragraphs 7.3.1 and 7.3.2 above.

7.4 Final Approval Vote

Prior to publication of a new edition of the NBIC, all substantive changes to the NBIC that have been approved by the NBIC Committee shall be gathered in a final draft standard document. A vote shall be taken by the NBIC Committee to approve the final draft standard document as the new edition of the NBIC. This vote serves as the final approval for all revisions to the NBIC. No substantive changes shall be made to the approved final draft standard unless the final draft standard is recirculated to the NBIC Committee to afford all members the opportunity to respond, reaffirm, or change their vote. The draft standard shall be submitted for an additional public review period if substantive changes are made to the document.

If an NBIC Committee member votes ‘Disapproved’ on the final vote, that member shall submit reasons for the ‘Disapproved’ vote in writing to the NBIC Secretary. The NBIC Secretary shall provide the member with a written disposition and reason therefore. If the member remains unresolved in their objection, the ballot and attempts at resolution of the negative shall be resubmitted for a two-week time period for members to respond, reaffirm, or change their original vote. If the member remains unresolved with their ‘Disapprove’ vote after the two-week recirculation period, the member shall be notified in writing of their right to appeal the final Committee decision.

8.0 National Board Inspection Code Publication Information

8.1 ANSI Approval Process

NBBPVI is accredited by ANSI as a developer of American National Standards. The NBIC Committee, subcommittees, subgroups, and standing task groups must conduct activities in accordance with this procedure and the current rules and procedures of ANSI.

8.1.1 Documentation

- a. The NBIC Committee approves individual revisions of NB-23 during multiple meeting votes and letter ballots instead of one vote or ballot before the BSR-8 form is submitted. After the NBIC Committee has approved the draft standard, the NBIC Committee Secretary shall prepare and submit a Standards Action Public Review Request (BSR-8) form. A notice of all revisions shall be posted on the National Board’s website for public review and comment. This notice shall be posted for a minimum of forty-five days, or a minimum of sixty days if requested by an interested party. If the text under public review is five pages in length or less at a minimum, a thirty-day public review period may be held.
- b. Any person wishing to submit a public review comment must do so on the National Board’s Submission of Public Review Comment form. The commenter must provide the date of the comment, all personal contact information, and their proposed comment or recommendation on the form. The Secretary will return incomplete forms to the commenter with written notice indicating what information is needed for the form to be considered complete.
- c. The Secretary shall coordinate the disposition of public review comments with the Project Manager.
- d. The disposition of all public review comments shall be approved by the NBIC Committee.
- e. The commenter shall be advised, in writing, of the disposition of the public review comment and the reasons for the disposition. The commenter shall be notified in writing of their right to appeal the NBIC Committee’s decision.

- f. All NBIC Committee members shall be notified of all unresolved public review comments and attempts at resolution to afford all members an opportunity to respond, reaffirm, or change their vote. Any commenter with unresolved comments shall be notified in writing of their right to appeal.
- g. Resolutions involving substantive changes to approved text shall be resubmitted for public review at the next scheduled public review and comment period or a new action shall be generated to address the commentor's recommended change as appropriate.
- h. When the disposition of all comments has been completed, or if no comments were submitted, the Secretary shall prepare and submit the Formal Submittal Checklist for approval or withdrawal as an American National Standard (BSR-9) Form.

8.1.2 Secretariat

- a. The National Board is the secretariat for the NBIC Committee. Its duties include:
 - 1. providing administrative support for the activities of the Secretary, and
 - 2. publishing and distributing the Code, minutes, and interpretations approved in accordance with these procedures.
- b. It shall be the responsibility of the Secretary to:
 - 1. ensure that the NBIC Committee adheres to these and other referenced or applicable procedures;
 - 2. apply to ANSI for accreditation of the NBIC Committee by that organization;
 - 3. maintain a committee roster of the members which shall include names of the officers, and members, their address, business affiliation, category of interest, and appointment expiration date;
 - 4. comply with ANSI requirements for the NBIC Committee administration; and
 - 5. submit proposed revisions to this procedure to ANSI for approval.

8.1.3 Internal Audits

At least once every three calendar years, the Executive Director of the National Board shall have an audit made of the NBIC Committee's activities to ensure these procedures are followed. The audit shall be conducted by person(s) who are not members of the NBIC Committee. The audit report and follow-up action of deficiencies uncovered by an audit shall be reported to the NBIC Committee and the Chair of the Board of Trustees.

8.1.4 Patent Policy

The National Board shall comply with the ANSI patent policy as described in the most current version of the ANSI Essential Requirements.

8.1.5 Commercial Terms

The National Board shall comply with the ANSI Commercial Terms and Conditions Policy as described in the most current version of the ANSI Essential Requirements.

8.1.6 Withdrawal of American National Standard

When required by ANSI Essential Requirements or the National Board elects to withdraw or discontinue an American National Standard or portion thereof, the National Board shall immediately notify ANSI for announcement in ANSI Standards Action. The National Board shall comply with all ANSI Essential Requirements for withdrawal of an American National Standard.

8.2 Revisions to the NBIC

8.2.1 Any interested person may request consideration of a revision to the NBIC by submitting such request electronically through the National Board's Business Center. If deemed editorial as determined by the Secretary, requests will be incorporated into the NBIC draft edition for distribution and public review. Comments which are editorial in nature need not be submitted to the NBIC Committee or subcommittees for consideration prior to inclusion in the edition. Any public review comments associated with these editorial comments will be handled as such and will be considered by the NBIC Committee and subcommittee at the next scheduled meetings for final approval.

Requests which are technical in nature will be forwarded to the appropriate subcommittee for consideration and recommendations made to the NBIC Committee, for their approval. Once approved, these revisions will be incorporated into the next draft. If approval is not reached, the item will be returned to the subcommittee for further action.

8.2.2 Following approval of a revision by the NBIC Committee and acceptance under ANSI procedures, the approved revision shall be published in the next edition.

8.3 Interpretations of the NBIC

8.3.1 The NBIC Committee has the responsibility for interpreting and replying to questions concerning the application of NBIC rules or guidelines. Any interested person may request, in writing, an interpretation of a rule or guideline contained in the NBIC through the National Board Business Center.

8.3.2 Upon receipt of such a request the NBIC Committee Secretary determines which subcommittee should develop a technical response.

When responding to questions concerning the interpretation of a rule or guideline, the following is to be used as a response:

“The NBIC was developed under procedures approved by the American National Standards Institute. The NBIC Committee that approved the NBIC and revisions thereto is a consensus NBIC Committee balanced to assure that individuals from competent and concerned interests have been afforded the opportunity to participate. Further, all proposed revisions to the NBIC are made available for public review and comment which provides an opportunity for additional input from jurisdictions, industry, and the public at large.”

From time to time a request for interpretation regarding a superseded edition of the NBIC may be submitted to the NBIC Committee. If in the opinion of the members of the NBIC Committee, a response can be formulated, the NBIC Committee should respond to the inquirer's question. However, when it is the consensus of the NBIC Committee that a response cannot be formulated, the NBIC Committee should respond as follows:

“The [edition of the NBIC] has been superseded. The historical knowledge that the NBIC Committee feels is needed to respond to your request for interpretation is no longer available to the NBIC Committee.”

Intent interpretations are permitted only to resolve conflicting or incorrect wording. Intent interpretations shall not revise existing requirements or establish new requirements.

8.3.3 All interpretations of the NBIC shall be approved by the NBIC Committee.

8.3.4 Intent interpretations along with the revision(s) to the NBIC that corrects the conflicting or incorrect wording, shall be submitted to the NBIC Committee for approval. Both the intent interpretation and the revision(s) to the NBIC must be approved by the NBIC Committee for the interpretation to be issued.

8.3.5 All interpretations of the NBIC shall be posted on the National Board website. A written response will also be sent to the inquirer.

8.3.6 The National Board accepts responsibility for and recognizes only those interpretations approved by the NBIC Committee.

8.4 *Publications*

8.4.1 *NBIC*

The NBIC shall be identified as "An American National Standard" and "ANSI/NB-23" on the cover of all Parts of the NBIC in accordance with ANSI procedures.

A new edition of the NBIC shall be published every two years.

Each edition shall have a date of issue. The NBIC may be used beginning with the date of issue. Six months after the date of issue, the edition becomes the requirement for compliance with the NBIC.

Complimentary copies of the NBIC will be provided to the members of the NBIC Committee, subcommittees, and subgroups.

8.4.2 Discontinuance of the NBIC

The National Board reserves the right to abandon the process of a proposed new or revised NBIC or portion thereof at its own discretion and without a vote of the NBIC Committee. The National Board shall notify ANSI immediately of such actions which will be announced in Standard Action.

8.4.3 Forms

National Board forms are part of the standard and follow the same requirements for revision as outlined in this procedure.

8.5 General

8.5.1 Referencing Other Standards

When the NBIC Committee wishes to reference another code or standard, the date of the specific, referenced code or standard shall not be cited unless required.

8.5.2 Copyrights

Copyright and all rights in all materials produced by the Committee are owned by the National Board.

9.0 Due Process

The National Board provides due process for the impartial handling of complaints regarding procedural or technical issues for any action or inaction. As part of this due process there are several levels to which an aggrieved party may appeal. This section gives criteria regarding right to appeal, how appeals are made, and what may be appealed.

At any level of the appeal process, there shall be no informal discussions between the body hearing the appeal and representatives of the appellant.

Persons who have directly and materially affected interests and who have been or will be adversely affected by any procedural or technical action or inaction regarding the development of a proposed American National Standard or the revision, reaffirmation, or withdrawal of the

NBIC, have the right to appeal. Appeals shall be addressed promptly, and a decision made expeditiously. The following process shall be followed:

- a. Any person aggrieved by an interpretation, disposition of comments, or procedural or technical issues, may appeal to the NBIC Committee.
- b. The aggrieved person shall first request a reconsideration hearing by the NBIC Committee. Such request shall be in writing, addressed to the NBIC Committee Secretary, and shall state the reasons for requesting reconsideration. Such request must be submitted within seven calendar days of the action of the NBIC Committee that aggrieved the person.
- c. The appellant shall be given written notice of the time, place, and date when the reconsideration hearing is to be heard by the NBIC Committee. The NBIC Committee may choose to hold the reconsideration hearing in person or on a social media platform approved by the Executive Director. The appellant shall have the right to appear in person and be heard, and to be represented by a person of the appellant's own choosing at the appellant's own expense. The appellant may request that a stenographic record of the proceedings be made and if such a stenographic record of the proceedings is made at the request of the appellant, it shall be at the appellant's expense. The appellant must provide the National Board with a copy of the stenographic record at no cost within seven days of the hearing.
- d. The NBIC Committee Secretary will notify the appellant of the NBIC Committee's decision in writing within 7 calendar days of the conclusion of the hearing.
- e. Should the person remain aggrieved following such reconsideration hearing by the NBIC Committee or should such reconsideration be denied, the aggrieved person then, in writing, addressed to the National Board's Executive Director, may request review by the National Board Appeals Committee (NBAC). Such request must be within 7 calendar days of the reconsideration or denied action of the NBIC Committee that aggrieved the person.
- f. The appellant shall be given written notice of the time, place, and date when such appeal is to be considered by NBAC. The appellant shall have the right to appear in person and be heard, and to be represented by a person of appellant's own choosing at the appellant's own expense. The appellant may request that a stenographic record of the proceedings be made and if such a stenographic record of the proceedings is made at the request of the appellant, it shall be at the appellant's expense. The appellant must provide the National Board with a copy of the stenographic record at no cost within seven days of the hearing.

The findings of the NBAC operating under these procedures, shall be binding on the NBIC Committee as to the specific item under appeal and it shall be incumbent upon the NBIC Committee to consider incorporating the NBAC findings.

- g. The NBAC Secretary will notify the appellant of the NBAC's decision in writing within 14 calendar days of the conclusion of the hearing.
- h. Should the person remain aggrieved following the NBAC's decision, further appeal may be taken to the Board. Such appeal is initiated by a written request within seven calendar days

of the written notice from the NBAC's decision. The written request must be addressed to the National Board's Executive Director setting forth the grounds for such appeal. The appeal shall be heard at the next regular or special meeting of the Board which is held at a time of sufficient duration following such request as to allow distribution of all relevant documents and materials to the Board members.

- i. The appellant shall be given written notice of the time, place, and date when such appeal is to be considered by Board. The appellant shall have the right to appear in person and be heard, and to be represented by a person of the appellant's own choosing at the appellant's own expense. The appellant may request that a stenographic record of the proceedings be made and if such a stenographic record of the proceedings is made at the request of the appellant, it shall be at the appellant's expense. The appellant must provide the National Board with a copy of the stenographic record at no cost within seven days of the hearing.
- j. The Board, upon considering such appeal, by affirmative majority vote of those present, may allow a variance, may direct the NBIC Committee to consider a revision, or may sustain the action of the NBAC. The decision of the Board on such appeal shall be final. The appellant will be notified in writing by the Board Secretary within 14 calendar days of the Board's decision.
- k. An appeal relating to the inaction relating to due process may be made at any time by the aggrieved person.

10.0 Conflict of Interest

It shall be the duty of any NBIC Committee member, NBAC member, or Board member having a potential conflict of interest related to any action before the NBIC Committee, to notify the other members of their committee. The committee member who has a potential conflict of interest to any action before their committee should be recused from all deliberations and votes relating to that action.

Any committee member who feels that they are or could be directly and materially affected by any decision made on the appeal should be considered to have a potential conflict of interest.

11.0 Records

Records shall be retained for a minimum of five years or until approval of the subsequent revision or reaffirmation of the complete standard.

Records for withdrawn standards shall be retained for a minimum of five years after withdrawal or until the next ANSI audit, whichever is longer.

12.0 Antitrust Policy

The National Board of Boiler and Pressure Vessel Inspectors shall comply with the ANSI Antitrust Policy as described in the most current version of the ANSI Essential Requirements.

13.0 Metrication Policy

13.1 General

This policy provides guidance for the use of US customary units and metric units. Throughout the NBIC, metric units are identified and placed in parentheses after the US customary units referenced in the text and associated tables. For each repair or alteration performed, selection of units shall be based on the units used in the original code of construction. For example, items constructed using US customary units shall be repaired or altered using US customary units. The same example applies to items constructed using metric units. Whichever units are selected, those units are to be used consistently throughout each repair or alteration. Consistent use of units includes all aspects of work required for repairs or alterations (e.g., materials, design, procedures, testing, documentation, stamping, etc.).

13.2 Equivalent Rationale

The rationale taken to convert metric units and US customary units involves knowing the difference between a *soft* conversion and a *hard* conversion. A soft conversion is an exact conversion. A hard conversion is simply performing a soft conversion and then rounding off within a range of intended precision. When values specified in the NBIC are intended to be approximate values, a hard conversion is provided. If an exact value is needed to maintain safety or required based on using good engineering judgment, then a soft conversion will be used. In general, approximate accuracy is acceptable for most repairs or alterations performed using the requirements of the NBIC. Therefore, within the NBIC, metric equivalent units are primarily hard conversions.

The following examples are provided for further clarification and understanding of soft conversions versus hard conversions:

Example 1: Using 1 in. = 25.4 mm;
12 in. = 304.8 mm (soft conversion)

Example 2: Using the above conversion, a hard conversion may be 300 mm or 305 mm depending on the degree of precision needed.

13.3 Procedure for Conversion

The following guidelines shall be used to convert between US customary units and metric units within the text of the NBIC:

- a) All US customary units will be converted using a soft conversion;
- b) Soft conversion calculations will be reviewed for accuracy;
- c) Based on specified value in the NBIC, an appropriate degree of precision shall be identified;
- d) Once the degree of precision is decided, rounding up or down may be applied to each

soft conversion in order to obtain a hard conversion; and

- e) Use of hard conversion units shall be used consistently throughout the NBIC wherever soft conversions are not required.

NOTE: Care shall be taken to minimize percentage difference between units.

13.4 Referencing Tables

The following tables are provided for guidance and convenience when converting between US customary units and metric units.

SOFT CONVERSION FACTORS (US X FACTOR = METRIC)

US Customary	Metric	Factor
in.	mm	25.4
ft.	m	0.3048
in. ²	mm ²	645.16
ft. ²	m ²	0.09290304
in. ³	mm ³	16,387.064
ft. ³	m ³	0.02831685
US gal.	m ³	0.003785412
US gal.	liters	3.785412
psi	MPa	0.0068948
psi	kPa	6.894757
ft-lb	J	1.355818
°F	°C	5/9 x (°F-32)
R	K	5/9
lbm	kg	0.4535924
lbf	N	4.448222
in.-lb	N-mm	112.98484
ft.-lb	N-m	1.3558181
ksi√in	MPa√m	1.0988434
Btu/hr	W	0.2930711
lb/ft ³	kg/m ³	16.018463
in.-wc	kPa	0.249089

NOTE: The actual pressure corresponding to the height of a vertical column of fluid depends on the local gravitational field and the density of the fluid, which in turn, depends upon the temperature. This conversion factor is the conventional value adopted by ISO. The conversion assumes a standard gravitational field (gn – 9.80665 N/kg) and a density of water equal to 1,000 kg/m³. 12.4-a through 12.4-j.

Temperature shall be converted to within 1°C.

TEMPERATURE EQUIVALENTS

Temperature °F	Temperature °C
60	16
70	21
100	38
120	49
350	177
400	204
450	232
800	427
1,150	621

Fractions of an inch shall be converted to the following table. Even increments of inches are in even multiples of 25 mm. For example, 40 inches is equivalent to 1,000 mm. Intermediate values may be interpolated rather than converted and rounded to the nearest mm.

US FRACTIONS/METRIC EQUIVALENTS

Inches	Millimeters
1/32	0.8
3/64	1.2
1/16	1.5
3/32	2.5
1/8	3
5/32	4
3/16	5
7/32	5.5
1/4	6
5/16	8
3/8	10
7/16	11
1/2	13
9/16	14
5/8	16
11/16	17
3/4	19
7/8	22
1	25

For nominal pipe sizes, the following relationships were used:

PIPE SIZES/EQUIVALENT

US Customary Practice	Metric Practice
NPS 1/8	DN 6
NPS 1/4	DN 8
NPS 3/8	DN 10
NPS 1/2	DN 15
NPS 3/4	DN 20
NPS 1	DN 25
NPS 1-1/4	DN 32
NPS 1-1/2	DN 40
NPS 2	DN 50
NPS 2-1/2	DN 65
NPS 3	DN 80
NPS 3-1/2	DN 90
NPS 4	DN 100
NPS 5	DN125
NPS 6	DN 150
NPS 8	DN 200
NPS 10	DN 250
NPS 12	DN 300
NPS 14	DN 350
NPS 16	DN 400
NPS 18	DN 450
NPS 20	DN 500
NPS 22	DN 550
NPS 24	DN 600
NPS 26	DN 650
NPS 28	DN 700
NPS 30	DN 750
NPS 32	DN 800
NPS 34	DN 850
NPS 36	DN 900
NPS 38	DN 950
NPS 40	DN 1000
NPS 42	DN 1050
NPS 44	DN 1100
NPS 46	DN 1150
NPS 48	DN 1200
NPS 50	DN 1250
NPS 52	DN 1300
NPS 54	DN 1350
NPS 56	DN 1400
NPS 58	DN 1450
NPS 60	DN 1500

Areas in square inches (in²) were converted to square mm (mm²) and areas in square feet (ft²) were converted to square meters (m²).

Area (US)	Area
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Customary)	(Metric)
3 in ²	650 mm ²
6 in ²	3,900 mm ²
10 in ²	6,500 mm ²

Area (US Customary)	Area (Metric)
5 ft ²	0.46 m ²

Volumes in cubic inches (in.³) were converted to cubic mm (mm³) and volumes in cubic feet (ft³) were converted to cubic meters (m³).

Volume (US Customary)	Volume (Metric)
1 in ³	16,000 mm ³
6 in ³	96,000 mm ³
10 in ³	160,000 mm ³

Volume (US Customary)	Volume (Metric)
5 ft ³	0.14 m ³

Although the pressure should always be in MPa for calculations, there are cases where other units are used in the text. For example, kPa is used for small pressures. Also, rounding was to two significant figures. Note that 14.7 psi converts to 101 kPa, while 15 psi converts to 100 kPa. While this may seem at first glance to be an anomaly, it is consistent with the rounding philosophy.

PRESSURE/EQUIVALENTS

Pressure (US Customary)	Pressure (Metric)
0.5 psi	3 kPa
2 psi	15 kPa
3 psi	20 kPa
10 psi	70 kPa
15 psi	100 kPa
30 psi	200 kPa
50 psi	350 kPa
100 psi	700 kPa
150 psi	1.03 MPa
200 psi	1.38 MPa

250 psi	1.72 MPa
300 psi	2.10 MPa
350 psi	2.40 MPa
400 psi	2.8 MPa
500 psi	3.45 MPa
600 psi	4.14 MPa
1,200 psi	8.27 MPa
1,500 psi	10.34 MPa

Strength (US Customary)	Strength (Metric)
95,000 psi	655 MPa

Material properties that are expressed in psi or ksi (e.g., allowable stress, yield and tensile strength, elastic modulus) were generally converted to MPa to three significant figures.