



THE  
NATIONAL  
BOARD  
OF BOILER AND  
PRESSURE VESSEL  
INSPECTORS

**NATIONAL BOARD**  
**T/O QUALITY MANUAL REVIEW CHECKLIST**  
**NBIC 2015 Edition, NB-528 Rev. 0**

COMPANY: \_\_\_\_\_

LOCATION: \_\_\_\_\_

MANUAL REVISION LEVEL: \_\_\_\_\_ DATE: \_\_\_\_\_

This checklist is provided to applicants for NBBI T/O Certificates of Authorization to reference the applicable paragraphs in its written description and present this document to the National Board Representative during the entrance meeting. The NB Representative shall use this checklist to evaluate the acceptance of a written description in accordance with the NBIC, Parts 2 and 3, and NB-528. The specific requirements of Part 2 par. 2.5.7, Part 3 par. 4.5, and Supplement 7 must also be addressed in the applicable portions of the Q.C. Manual.

NB-528	Written Description Referenced Paragraph	Acceptable	Not Acceptable
<b>9.1 TITLE PAGE:</b>			
1. Company name, address where Certificate of Authorization will be issued			
Comments:			
<b>9.2 REVISION LOG:</b>			
1. Date, description, section of revision.			
2. Company approval & NB acceptance.			
Comments:			
<b>9.3 CONTENTS PAGE:</b>			
1. List subjects and exhibits.			
2. List by paragraph, page number, or section.			
Comments:			

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<b>9.4 STATEMENT OF AUTHORITY:</b>			
1. Signed and dated by an officer of the company.			
2. States T/O applied to only V, UV, HV, & NB Cap Cert Valves.			
3. States valves shall be inspected, tested, and restorative adjustments made. If disassembly or repairs are required valve shall be sent to VR organization or replaced.			
4. Title of person who is responsible to assure Quality System is followed and who has authority to affect the responsibility.			
5. Statement if disagreement in implementation, referred to higher authority.			
6. Title of individual who approves revisions.			
7. Revisions submitted to NB prior to implementation.			
Comments:			
<b>9.5 ORGANIZATION CHART</b>			
1. Chart showing relationship between management, purchasing, testing, inspection and QC people is required.			
2. Must reflect the organization in place.			
Comments:			
<b>9.6 SCOPE OF WORK</b>			
1. Indicate scope and type of valve testing.			
2. Location of where testing is performed (shop, shop & field, field only).			
3. Code Sections & Test media to which testing is performed.			
5. Valve types, sizes, pressure ranges for testing, and other limitations (test facilities, engineering, etc.)			
Comments:			

NB-528	Written Description Referenced Paragraph	Acceptable	Not Acceptable
<b>9.7 SPECIFICATION CONTROL</b>			
1. Procedures to assure that latest applicable specifications and instructions for inspection and testing. The QC Manual should address the following:			
a. State who is responsible for obtaining specifications.			
b. Describe how documents are retained, issued and retrieved.			
c. Describe how specifications and inspection instructions are verified to remain current.			
d. Describe means to acquire manufacturer's corrections for differential in set pressure between steam and air for ASME VIII steam valves tested by the test organization (Part 2, 2.5.7d)6).			
<b>9.8 INSPECTION AND TESTING PROGRAM</b>			
1. Shall reference a report, traveler or checklist which outlines and inspection procedures.			
2. Includes provisions to retain inspection and testing documents for at least 5 years.			
3. Each valve or group shall be accompanied by a traveler for processing thru plant.			
4. Each valve shall have a unique identifier (s/n, shop order, etc) on traveler and nameplate.			
5. Traveler shall describe the original nameplate info, ASME Stamp, and repair nameplate information.			
6. Traveler shall include sign-offs for and reference to test methods used.			
7. Documenting application of "T/O" mark.			
8. Personnel control to ensure use of trained and qualified personnel according to Part 3, Supplement 7.11.			
Comments:			
<b>9.9 VALVE TESTING, SETTING, &amp; SEALING</b>			
1. Statement that each valve shall be tested, set, and external adjustments sealed in accordance with ASME Code & NBIC. Seal shall identify T/O holder making the adjustment and seal identification shall be included in the manual.			
2. Requirements on test media per Part 2, 2.5.7d)			

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3. Requirements to test to demonstrate set pressure, response to blowdown and seat tightness (4.5.1 a)).			
4. State controls by test organization (if applicable) to test Section VIII steam valves using air (Part 2, 2.5.7d)6))			
5. Use and controls of Lift Assist Devices (4.5.3) (if applicable)			
a. Equipment is calibrated as required by quality system			
b. What are the device and test procedures used to give accurate results			
c. Static inlet pressure is applied with test medium in 4.5.1			
d. Adjustments are made per manufacturer's instructions to ensure proper lift and blowdown			
e. Does device require that correction factors be used in determining set after calibration?			
f. Provisions for qualification of lift assist devices (LAD) are included.			
g. Documentation of qualification record shall include: device description, model no., serial number, mfg.			
h. Provisions to requalify LAD when modifications, repairs, mfg. issues recall or modification are included.			
Comments:			
<b>9.10 TEST ONLY NAMEPLATES</b>			
1. Manual shall include a description or sample of the nameplate. (Specify use of metal)			
a) Name of T/O Certificate Holder, preceded by: "Tested by",			
b) T/O Symbol & Certificate Number,			
c) Unique Identifier (e.g. Serial No., or Shop Order No.)			
d) Date of test,			
e) Set pressure,			
2. State who is responsible for T/O mark and controls of its usage.			
Comments:			

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<u>9.11 CALIBRATION OF MEASUREMENT &amp; TEST EQUIPMENT</u>			
1. The manual shall describe a system for periodic calibration of measuring instruments, pressure gages and lift assist devices.			
2. Indicate calibration intervals for pressure gages, linear measuring equipment, lift assist devices (per 4.5.3) and other MTE as applicable			
a. Provide title of person authorized to perform calibrations.			
b. Documentation shall include standard used for calibrations and results obtained.			
3. All standards shall be calibrated against certified equipment having valid relationships to nationally recognized standards.			
Comments:			
<u>9.12 MANUAL CONTROL</u>			
1. Describe methods used to control the issuance and revisions to manuals.			
a. Describe the method of identifying controlled and uncontrolled copies.			
2. Periodic review and documentation of quality system in order to be current with NBIC and ASME Codes.			
3. Titles of person responsible for control, revisions, and review of manual.			
4. Indicates that a controlled copy of manual will be sent to National Board. (electronic version acceptable)			
5. Revisions to be submitted to National Board for acceptance prior to implementation.			
Comments:			
<u>9.13 NONCONFORMITIES</u>			
1. Establish measures for identification, documentation, evaluation, segregation, and disposition of Nonconformities. NOTE: Nonconformities include conditions such as deviations from Q.C. Manual, procedures, documents, drawings, etc.			
2. State title of person who is authorized to make evaluations, and process Non-conformities.			

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Comments:			
<u>9.15 EXHIBITS</u>			
1. Forms used in the quality system shall be included in manual.			
2. Forms should be marked "Sample" and completed in a manner typical of actual valve repair.			
3. A description of forms shall be included.			
Comments:			
<u>9.16 TESTING EQUIPMENT</u>			
1. Shall include means to control the development, addition, or modification of testing equipment to ensure the requirements of 4.5.1 b) are met.			
a. State who is responsible for control system.			
b. State individual responsible for final statement of qualification.			
c. Include provisions to contact NB when a system is revised if the system was used for verification testing.			
d. Describe means to requalify systems if revisions are made.			
e. Describe the documentation to be used to satisfy 4.5.1 b)			
f. Specify the retention of the qualification documentation package (5 years after equipment is retired).			
<u>9.17 FIELD TESTING</u>			
1. Describe scope of field testing			
2. Address differences or additions to shop requirements including the use of owner-user measuring and test equipment.			
a. Use of qualified personnel in the employ of Certificate Holder used for testing			
b. Provisions for annual field audits			
d. Quality functions are supervised from address of record.			

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Comments:			
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<p><b>SUPPLEMENT CHECKLIST FOR IMPLEMENTATION</b></p> <p>The following section of this checklist applies to the implementation of the quality system as it pertains to Testing Equipment &amp; Qualification (4.5.1 b) and Training &amp; Qualification of Personnel (S7.11). Applicants are suggested to examine documents in these areas to verify they address the following requirements. NB Representatives will use this checklist to evaluate compliance with the NBIC requirements.</p>	Notes:	Acceptable	Not Acceptable
<b>Testing Equipment &amp; Qualification (4.5.1 b))</b>			
1. Is the pressure vessel of adequate size, volume and pressure source capacity to ensure compliance with 4.5.1 b) 1), and cause disc to lift significantly and reclose?			
2. Are all performance equipment systems qualified by the Certificate Holder by benchmark, or comparison to verification testing equipment (including shop and mobile facilities and each test nozzle separately)?			
3. Has qualification documentation been retained for five years after equipment is retired?			
4. Does the documentation include a statement of qualification from the certificate holder who reviewed and accepted the testing equipment as described in the document which includes;			
a. Schematic of test equipment.			
1. Test pressure vessel with nozzles for attachment of the valves to be tested.			
2. Pressure source control valves.			
3. Isolation valves between the pressure vessel and pressure relief valve under test.			
4. Placement of pressure measuring equipment with approximate sensing line inside diameter and length.			
b. Size and pressure ranges of valves to be tested.			
c. Dimensions of vessel.			
d. Accuracy of pressure measuring equipment.			

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e. Size and design type of valves used to control flow.			
f. Method of qualifying should include a copy of the test result records (e.g. shop travelers, repair reports, accepted test laboratory results) used to support the qualification in addition to a.			
5. Prior to implementation of any addition and modification which could affect results, did the Certificate Holder re-qualify the performance test equipment in accordance with 4.5.1 b)2)?			
6. If the equipment changed was used to satisfy the requirements of the verification testing, did the Certificate Holder notify the NB?			
Comments:			
<b>Training &amp; Qualification of Personnel (S7.11)</b>			
1. Does the program describe the controls used to ensure personnel are trained and qualified to within the scope of repairs to be conducted?			
<b>Contents of Training Program (S7.11.2)</b>			
1. Does the program establish training objectives for knowledge in:			
a. ASME Codes & NBIC.			
b. Responsibilities within the quality system.			
c. Technical aspects and mechanical skills for the applicable position held.			
Comments:			
<b>Qualification of Personnel (S7.11.3)</b>			
1. Are the minimum qualification requirements established for positions held?			
2. Are the evaluations & acceptance of qualification documented?			
<b>Annual Review of Qualification (S7.11.4)</b>			
1. Did the repair organization annually review and document qualifications, verify proficiency, verify compliance with the Certificate Holder's quality system?			
2. Did the review include training records, documents of work performed, and job performance?			



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Comments:			

General Comments:

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National Board Representative

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Date

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