Date Distributed: June 19, 2012

THE NATIONAL BOARD OF BOILER AND PRESSURE VESSEL INSPECTORS

SUBCOMMITTEE REPAIRS and ALTERATIONS

AGENDA

Meeting of July 17, 2012
Columbus, Ohio

The National Board of Boiler & Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, Ohio 43229-1183
Phone: (614)888-8320
FAX: (614)847-1828

1. **Call to Order – 8:00 a.m.**

2. **Announcements**

3. **Adoption of the Agenda**

NB12-1101 ***Part 3, 5.13.1 SG R/A General*** - Revision of R forms. A task group consisting of M. Webb (Chair), G. Galanes, R. Pulliam, Nikki Estep (NB Staff), Deanna Mazik (NB Staff) and Donna Radcliff (NB Staff) will work on this action item.

January 2012
A detailed progress report and background documents in the form of (2) handouts were provided by Mike Webb.

July 2012
Mr. Webb is expected to report. (Attachment 3, pp. 128-131)

4. **Approval of Minutes of January 18, 2012**

5. **Review of the Roster (Attachment 1)**

Mr. Frank Johnson (User) would like to become a member of the subgroups Repair and Alteration General and Specific. Mr. Johnson is a current member of the Subgroup on Historical Boilers. Please see his attached resume. A vote will be taken. (Attachment 1, pp. 9-10)

Mr. Ray Miletti (Manufacturer) would like to become a member of the Subgroup on Repair and Alteration Specific. Please see his attached resume. A vote will be taken.(Attachment 1, pp. 11-12)

Mr. Chad Bryan (Jurisdictional Authority) would like to become a member of the Subgroup Repair and Alteration Specific. Please see his attached resume. A vote will be taken. (Attachment 1, pp. 13-17)

Messrs. Mike Webb, Paul Edwards, Jim Larson and Bryan Schulte are all eligible for reappointment to the SG on Repair and Alteration General. A vote will be taken.

Messrs. George Galanes, Frank Pavlovicz Jim Pillow and Jim Sekely are eligible for reappointment to the SG on Repair and Alteration Specific. A vote will be taken.

6. **Interpretations (Attachments 2)**

IN11-0903 ***Part 3, 4.4.4 SC Repairs and Alterations*****-** Question: If the installation of the new nozzles is considered an alteration(s) (in accordance with NBIC NB23, 2007 Edition, para. 3.4.4) is the R Certificate Holder required to prepare a detailed alteration plan covering the scope of the repair (3.4.4.1) prior to commencement of any work? Answer: Yes. (Attachment 2, p. 9-10)

January 2012
There was a motion to approve the proposed interpretation prepared by the task group that consisted of B. Wielgoszinski, B. Schaefer, B. Boseo and Philip W. Smith. The motion was unanimously approved.

The NBIC Committee decided that this interpretation needed more work at the Main Committee meeting.

July 2012
Mr. Wielgoszinski is expected to report.

IN11-0904 ***Part 3, 4.4.4.1 a) SC Repairs and Alterations***-Question: Does the R Certificate Holder have to have the detailed alteration plan and R-2 form reviewed and certified by an Engineer meeting the criteria of ASME VIII Div 2 or 3 prior to commencement of the work? Answer: Yes (Attachment 2, pp.18-20)

January 2012
There was a motion to approve the proposed interpretation prepared by the task group that consisted of B. Wielgoszinski, B. Schaefer, B. Boseo and Philip W. Smith. The motion was unanimously approved. (Attachment 2, pp. 1)

The NBIC Committee decided that this interpretation needed more work at the Main Committee meeting.

July 2012
Mr. Wielgoszinski is expected to report.

IN12-0401 ***Part 3, 4.4.2 SC Repairs and Alterations*** Question 1: In Part 3, 4.4.2 a) is it the purpose of the rule to require a liquid pressure test at a pressure less than 150% of the maximum allowable working pressure (MAWP) stamped on the pressure-retaining item, as adjusted for temperature? A1: No.

Question 2: In Part 3, 4.4.2 a) is it allowable to perform a liquid pressure test at a pressure less than 150% of the MAWP stamped on the pressure-retaining item to verify the leak tightness of the alteration? A2: Yes (Attachment 2, pp.21-22)

7. Action Items (Attachment 3)

NB08-0322 ***Part 3 3.2 SG R/A General*** Add a new paragraph to 3.2 General Requirements for Repairs and Alterations to address change of service for a pressure vessel. These requirements should caution inspectors, owners, repair organizations and jurisdictional authorities of the inherent dangers involved when changing service. A new supplement should be added to address the specific requirements for repairs and alterations of pressure vessels that have been converted from one service to another. A task group representing all three parts of the NBIC has been formed underthe leadership of Bob Wielgoszinski. Task group members from R & A are P. Edwards and B. Schulte. (Attachment 3, pp. 23- 25)

July 2008
A task group was assigned.

July 2011
A report was provided by Bob Wielgoszinski. The TG has made progress on this item and may provide a proposal before the January, 2012 NBIC meeting.

January 2012
A progress report was provided by B. Schulte and a goal of having a proposal for the July 2012 meeting was discussed.

July 2012
Mr. Schulte is expected to report.

NB10-0103 ***Part 3 Part 3 S2.13.9.2 SG Historical Boilers***- Resolve conflict of text and figure. S2.13.9.2. (No Attachment)

July 2011
A progress report was provided by Bob Reetz. The illustrator for the SG Historical boilers was unable to attend this meeting.

January 2012
A progress report was provided by B. Reetz and a goal of having a proposal to resolve the text and figure for the July 2012 meeting was discussed.

July 2012
Mr. Reetz is expected to report.

NB10-0110 ***Part 3 S6.19.1 TG DOT-*** Combine and clarify requirements within S6.15 for TR Forms, S6.18 Preparation of TR-Forms and S6.19 for Reports of Repairs, Alterations and Modifications. (Attachment 3, pp 26- 31)

July 2010
Mr. Stan Staniszewski presented a progress report. The task group of Stan and Jim Riley are aiming to present by the January 2011 meeting.

January 2011
No report was presented.

July 2011
No report was presented.

January 2012
A progress report was provided by S. Staniszewski and he indicated the DOT had a working draft and was restructuring Whole Forms, Section 6. A task group working on it consists of S. Staniszewski, Greg McRae and Jim Riley.

July 2012
Mr. Staniszewski is expected to report.

NB10-1004 ***Part3 S2 Fig. S2.13.13.1 SG Historical Boilers-*** Figure and title are incorrect. Figure should show caulking of seam and rivet heads. The title should reflect caulking of seam and rivet heads also. (No Attachment)

July 2010
Mr. Reetz gave a progress report.

January 2011
Mr. Robert Reetz presented a progress report. A proposal is expected to be ready to present with an improved picture and a changed title by the July 2011 meeting.

July 2011
Mr. Reetz reported there was no progress.

January 2012
A progress report was provided by B. Reetz and a goal of having a proposal for the July 2012 meeting was discussed.

July 2012
Mr. Reetz is expected to report.

NB11-0401 *SC PRD* The development of a possible fourth part of the NBIC. (Attachment 3, pp. 32-55)

July 2012
Review the proposed Part 3 without any reference to PRD.

NB11-0701 ***Part 3, S3 5.4 SG Graphite-*** Address Graphite Tube replacement. (No Attachment)

January 2011
Mr. Charles Withers presented a progress report.

July 2011
Mr. Galanes reported that Francis Brown reported that they should have something ready for the January 2012 meeting.

January 2012
A progress report was provided by C. Withers and a goal of having a proposal for the July 2012 meeting was discussed.

July 2012
Mr. Galanes is expected to report.

NB11-1001 ***Part 3, 3.3.4.9 SG R/A Specific-*** Tube plugging for fire tube boilers. (Attachment 3, pp. 56-57)

January 2011
Mr. James Pillow presented a progress report. The committee is in agreement that guidelines are needed in the code. More work regarding proposed guidelines will be done for the next meeting.

July 2011
A progress report was provided by George Galanes based on the SG meeting notes. It was recommended to continue working this item from the perspective of providing guidance to control installation versus design guidance.

January 2012
A progress report was provided by J. Pillow and a task group consisting of J. Pillow (Chair), Angelo Bramucci, W. Jones and R. Miletti was formed.

July 2012
Mr. Pillow is expected to report.

NB11-1201 ***Part 3, 1.8, SG R/A General-*** Revise Part 3, 1.8 "NR" Accreditation requirements to include repairs to ASME Section III stamped components. (Attachment 3, pp. 58-60)

January 2011
Mr. Charles Withers presented a progress report. A task group of C. Withers, P. Edwards, B. Schaefer, and B. Wielgoszinski (or a designated HSBCT Representative) and P. Nightengale was assigned to take a look at the NR Program.

July 2011
Mr. Withers gave a progress report.

January 2012
A progress report was provided by P. Edwards and a task group consisting of P. Edwards (Chair), B. Schaefer, B Wielgoszinski, P. Nightengale, Clay Smith, Rick Swain and C. Withers was formed.

July 2012
Mr. Edwards is expected to report.

NB12-0501 ***Part 3, 3.2.2 c) SG R/A General-*** Hydrostatic testing of pressure parts. (Attachment 3, pp. 61-62)

July 2011
A TG of R. Wielgoszinski (Chair) G. Galanes and B. Moore was formed.

January 2012
A progress report and handouts (2 ea.) with proposed revisions were provided by Bob Wielgoszinski.

The handouts consisted of Version 1 and Version 2 and were discussed by the subcommittee.

July 2012
Mr. Wielgoszinski is expected to report.

NB12-0603 ***Part 3, 1.5.1, 1.7.1, 1.8.1, SG R/A General*** **-** Removal of administrative requirements from Part 3. (Attachment 3, pp. 63-125)

January 2012
A progress report was provided by P. Edwards with a July 2012 goal for completion for inclusion in the 2013 NBIC. A task group was formed consisting of; Terry Parks (Chair), B. Boseo and R. Cauthon.

July 2012
Mr. Parks is expected to report.

NB12-0801 ***Part 3, SG R/A General*** Repair and Alteration of Gasketed PHE's in the field.(Attachment 3, pp. 126-127)

January 2012
A progress report was provided by J. Pillow and a task group consisting of E. Ortman (Chair), J. Pillow G. Galanes and B. Wielgoszinski was assigned.

July 2012
Mr. Ortman is expected to report.

NB12-1901 ***All three parts SC on Inspection*** This action item was opened as a result of NB11-1501 to address the usage of the words "metal" and "material". The task group of Venus Newton (Chair), Brian Moore and Jim Pillow has been assigned to examine their respective parts. (No Attachment)

July 2012
Mr. Pillow is expected to report.

NB12-2001 Part 3, 5.13.4.1 SG R/A General - Revise text in this section to address the inconsistent interpretations of item 12 of the R form. This item will be handled by the same TG handling NB12-1101. (Attachment 3, pp. 132-133

July 2012
Mr. Webb is expected to report.

NB12-2101 ***Part 3, 4.2 SG R/A General*** – A recommendation to change the reference in this section from 2001 to 2006. (Attachment 3, pp. 134-141)

July 2012
A report is expected.

9. New Business

10. Future Meetings

January 14-18, 2013, Mobile, Alabama
July 15-19, 2013, Columbus, Ohio

11. Adjournment

Respectfully Submitted,

Jim McGimpsey, Secretary
:rh

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ATTACHMENT 1

SC on Repairs and Alteration

Member	Title	ExpirDate	Interest Category
Cameron, Stuart		8/17/2013	Manufacturer
Edwards, Paul D.		8/31/2012	NB Certificate Holders
Galanes, PE, George W.	Chairman	8/31/2012	Users
Jones, Wayne		1/31/2015	Auth Inpection Agencies
Larson, James P.		8/31/2012	Auth Inpection Agencies
McGimpsey, Jim	Secretary		
McManamon, Larry		1/31/2015	Organized Labor
Ortman, Edward		8/30/2013	Manufacturer
Pavlovicz, Frank		8/31/2012	Manufacturer
Pillow, James T.	Vice Chair	7/31/2013	General Interest
Schulte, Bryan		8/31/2012	Users
Sekely, James		8/31/2012	General Interest
Vallance, William		1/31/2015	Jurisdictional Authorities
Webb, Michael		8/31/2012	Users
Total Members:	**13**		

December 16, 2011

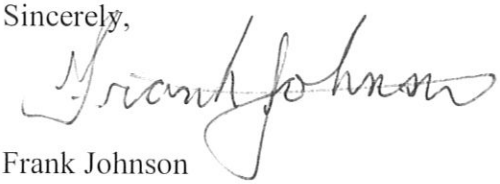
Mr. Chuck Withers
National Board of Boilers and Pressure Vessels
1055 Crupper Avenue
Columbus, Ohio 43229

Dear Chuck,

Please find enclosed my formal submittal of my credentials to be a member of the Repairs and Alterations, General and Specific Committees.

Looking forward to working with you,

Sincerely,



Frank Johnson

Frank Johnson
Toledo Refining Company, LLC
1819 Woodville Road
Oregon, Ohio 43616
419-386-8450

OBJECTIVE

To represent the Toledo Refining Company. I am formally submitting application to sit on the Repairs and Alterations Committee, General and Specific for the National Board.

EDUCATION

Journeyman Card – Pipefitters and Boilermakers

Certified Welding Inspector – Certified Welding Educator – Through AWS Certified Welder for the last 40 years in the Nuclear and Petrochemical industries.

WORK HISTORY

PBF Toledo Refining Company, LLC fka Sunoco, Inc.
Local 776 – Plumbers and Pipefitters
Local 85 – Boilermakers
CWI – Code Repairs for the Toledo Refinery
NCCER Welding Trainer for the Toledo Refining Company

ACTIVITIES

Sits on the Subcommittee for NBIC for Historical Boilers

Advisor to the Ohio Antique Boiler Board

Safety director for the National Thrashers Association

17 PQR's registered with the State of Ohio

babcock & wilcox power generation group
20 south van buren avenue • p.o. box 351 • barberton, oh 44203-0351 usa
phone 330.753.4511 • fax 330.860.1886 • www.babcock.com

February 14, 2012

The National Board
1055 Crupper Ave.
Columbus, OH 43229

To Whom It May Concern,

In support of any request by Ray Miletti, Quality Manager for Babcock & Wilcox Construction Co. Inc., to join Repair and Alteration Sub-Groups or Sub-Committees, this letter of support is provided.

The Babcock & Wilcox Power Generation Group fully supports Ray's activities relating to his potential volunteer work with the National Board, including the needed financial support to attend the scheduled meetings.

Our company continues to support the Code and its committees and volunteers.

Please feel free to contact me with any questions.

Sincerely,

Ronald L. Pulliam
Director, Group Quality
330-860-2856
rlpulliam@babcock.com

RAYMOND L. MILETTI
1776 Bent Bow
Akron, Ohio 44313
330 - 801 - 6996

OBJECTIVE

NBIC Subgroup Repair & Alteration (Specific) membership

CAREER SUMMARY

- Twenty Eight (28) years of experience working in various arenas of the Power Boiler / Power Generation industry, serving in a management role for 18 years.
- Have acquired a working knowledge of ISO, ASNT, API, AWS, ASME and NBIC quality programs / requirements.

PROFESSIONAL EXPERIENCE

MANAGER, QUALITY OPERATIONS – 07/10 – PRESENT
BABCOCK & WILCOX CONSTRUCTION COMPANY – BARBERTON, OHIO

- Responsible for the planning and development of programs and processes that ensure Code, company, and customer quality requirements are met for BWCC business units.
- Manage and support projects from proposal stage through project completion, assuming responsibility for all Code / Quality related issues during project execution.
- Manage the supplier base from evaluation through order execution.
- Responsible for Quality program development and maintenance to assure compliance with ISO, ASME and NBIC, in addition to internal procedures and practices.
- Responsible for the management of ASME/NBIC Code certification renewal activities and provide interpretation guidance when required.
- Directs in the defining and implementation of training programs of field personnel in areas such as welding, heat treatment and NDE for applicable Code of Construction.

MANAGER, QUALITY OPERATIONS & SUPPLIER CONTROL – 01/08 – 07/10
BABCOCK & WILCOX - BARBERTON, OHIO

- Manage the daily activities of 10 Quality Engineers and Source Inspectors.
- Responsible for the Supplier Control function for the company, including supplier evaluation/selection, inspection planning and quality cost evaluation.

QUALITY OPERATIONS MANAGER 01/00 - 01/08
BABCOCK & WILCOX - BARBERTON, OHIO

- Manage Quality Assurance engineers of various disciplines, responsible for product quality across all product lines (traditional and non-traditional) in support of all proposal and project teams.
- Interface with customer and supplier quality organizations.

QUALITY CONTROL MANAGER - B&W SERVICE COMPANY - 11/93 – 01/00
BABCOCK & WILCOX - BARBERTON, OHIO

QUALITY ASSURANCE ENGINEER - 4/89 - 11/93
BABCOCK & WILCOX - BARBERTON, OHIO

PROJECTS ENGINEER - 1/85 – 4/89
SHARON MANUFACTURING - SHARON CENTER., OHIO

EDUCATION / MEMBERSHIPS / CERTIFICATIONS

BS – Civil Engineering - THE UNIVERSITY OF AKRON – AKRON, OHIO
Member of the American Welding Society since 1993.(CWI – 1993)

Chad Wayne Bryan

924 House Court Circle * Centerville, TN 37033
E-Mail: chad.bryan@tn.gov
Telephone: Home - (931) 729-4498 Work – (931) 994-7189

Current Employment

Department of Labor Workforce and Development Boiler Division
220 French Landing Drive
Nashville TN. 37243-1002
615-741-2123

Chief Boiler Inspector for the State of Tennessee

(2010 – Present)

Daily Chief Boiler Inspector Duties consist of: *Reviewing Code and Laws of the State of Tennessee, budgeting, cost analysis, auditing of process and procedure, inventory. Working with office daily to improve report processes. Work With Asst. Administrator daily. Scheduling and instructing all required Educational updates for office and field inspectors. Implement new state programs to boiler staff. Set up and conduct meetings with Engineering Companies who wish to install or repair equipment in Tennessee. Answer questions, give guidance and help the public to better understand State laws and requirements. Work with the Tennessee Boiler Board to improve the Safety of Tennessee. Work in the Remote Operation Variance process, conduct audits of Variance Holders for proper use of process. Schedule all Team Leader Reviews of all ASME Stamp holders in the state of Tennessee. Review of all Repair Companies, Quality Program and Manuals for proper Code requirements, before issuing a Tennessee Repair Certificate. Perform a review of all Insurance Inspectors' qualifications before a Tennessee Commission is issued to work in the State. Work with Senior Staff at all times. Oversee the daily operation of repairs and new installation inspections as well as external inspections of high pressure and low pressure boilers, oil heating boilers, unfired vessel and lethal vessels, work with contractors, installers, and office staff in code, also keep reports, progress and repair. Schedule ASME Stamp reviews with Owner user, Manufacturing and Repair Shops as required. Work in all aspects of the ASME and National Boiler Board building Code Section ASME B31.1, B31.3, SECTION 1- 9 AWS D1.1, CSD 1 Fire Code, and applicable code while keeping up with ongoing code cases to better maintain better safety program. This in turn makes Tennessee a safer place for all Tennesseans.*

Professional Experience

Day & Zimmermann NPS .Inc
1324 Elm Hill Pike
Nashville TN. 37210-4509
(615-782-2967)
Regional Quality Manager TVA Contract Nuclear and Fossil Plants
(2007 –2010)

Daily Quality Management Duties consist of: *Updating and writing new quality programs, processes and procedures Conducting meetings regarding ongoing Boiler work, Quality issues and mediating any quality deviations that may arise, Schedule boiler shut-downs for maintenance, participating in bidding of future jobs, scheduling, budgeting, cost analysis, auditing of process and procedure, inventory, manpower allocation and application.*

Interviewing, hiring and retaining qualified knowledgeable people to support the Boiler quality program, Work with ISO Group to set all guidelines for Nondestructive examination of all boiler pressure parts as needed in the field, Work with engineering to resolve any questions that may arise throughout the course of a job.

Write rigging and lifting plans that may be needed to lift and place parts for boiler repairs, write field process reports for daily quality boiler reporting, and Write field welding procedures and guild lines for each boiler repair assignment. Develop inspection report spread sheets tracking boiler repairs, work in progress reports, foreign materials exclusion program for boiler proper work and punch list for all tasks, correspondence and interaction with suppliers, subcontractors, TVA and NPS personnel, start up through completion of large capital projects.

Oversee the daily operation of repairs and new installation inspections as well as external inspections of high pressure and low pressure boilers, oil heating boilers, unfired vessel and lethal vessels, work with contractors, installers, and office staff in code, also keep reports, progress and repair, using National Board Code, ASME B31.1, B31.3, SECTION 1- 9 AWS D1.1, CSD 1 Fire Code, and applicable code while keeping up with ongoing code cases to better maintain a sound quality program.

Deputy Boiler Inspector
State of Tennessee
710 James Robertson Parkway
Andrew Johnson Towers
Nashville, TN 37243-0663
(931)729-6879
(September 2005 to 2007)
Field Inspector,
National Board Commission
 # 13023

Duties included:

Internal inspections and external inspections of high pressure and low pressure boilers, oil heating boilers, unfired vessel and lethal vessels, work with public, contractors, installers, and office staff in code and state rules, also keep reports, progress and repair, using National Board Code, ASME B31.1, B31.3, SECTION 1- 9 AWS D1.1 and applicable code

Quality Control Field Manager

Day & Zimmerman NPS, Inc.,
Cumberland Fossil Plant
815 Cumberland City Rd.
Cumberland City, TN 37050
(615) 782-2954
(March 2001 to September 2005)

QA/QC SITE MANAGER,TVA Boiler Outages, Gallatin Fossil, Cumberland City Fossil, Bull Run Fossil and New Johnsonville Fossil Plants

QA/QC Site Manager, SCR Gas Path Tie In, Cumberland City Fossil Plant, TVA

Tracked and Inspected all demolition and modification of High Pressure Boilers, duct work and support structure

Worked in all aspects of boiler proper inspections of High Pressure Boilers and tracking of all High Pressure boiler components, using ASME B31.1 B31.3 Section 1-9, AWS D1.1, D1.14, and applicable codes.

Duties Included:

Inspection of boiler repairs and components, seal welds, structural welds, bolt up erection or iron and mechanical piping. Coordinated and supervised Mag Particle, Dye penetrate, Ultrasonic and Radiographic testing, Hydrostatic testing, pneumatic and in-service testing of all high pressure boiler components, Initiated new procedures and inspection protocol for welding, bolt-up and post weld heat treatment. Developed inspection report spreadsheets, work in progress reports, foreign materials exclusion program for boiler proper work and punch list for all tasks, correspondence and interaction with suppliers, subcontractors, TVA and NPS personnel, start up through completion of a large capitol project, and schedule boiler shut-downs for maintenance.

W.M. White
PO Box 766
Columbia TN, 38402
(931)- 388-9644
(1999-2001)

Duties included:

Installed prefabricated conveyor systems for Union Carbide
Repaired carbon molds and built extraction presses
Rebuilt and installed ID fans in the carbon baking process
Installed ID fans used in waste heat recovery boiler system for manufacturing process
Installed compressed air systems
Involved in planning and execution of field fabrication

Tomlin Construction
Po Box 248
Mt Pleasant TN, 38474
(931)-379-5815
(1998-1999)

Installed new manufacturing process for Ford Glass

Project consisted of installation of new glass lamination and bending equipment, steam autoclave, boiler system, conveyors, control panels, transformers and air handling system Involved with start-up, adjustment and turn-over to plant, installation & removal of pressure vessels and incinerators rebuilds, adding new process's as needed for Zeneca Chemical Company.

Owner/Operator
B-Welding
1695 Highway 100
Centerville, TN 37033
(931) 729-6081
(1991-1998)

Coordination, quality control and profitability of all jobs

Coordinated marketing, design and take-off for all capitol projects
Duties included scheduling, budget, cost analysis, inventory, manpower allocation and application
Responsible for adherence to Federal Highway Safety Regulations and applicable codes
Hold a Worldwide Manufacturing and Identification code for VIN number assignment
Manufactured drop-deck, logging, flat-bed and dump trailers up to 48 feet in length
End manufacturer of truck bodies, hydraulic dump bodies

Serviced contracts
Maintenance, Fabrication and installation of equipment for manufacturing plants

Industrial Contractors
Po Box 997
Columbia TN 38402
(931)-698-2530
(313)-510-6242
(1986-1991)

Worked with team installing and maintaining industrial equipment, boiler piping, monitors, instrumentation, controls of boiler related equipment drives, motors and motor bases, conveyors, belts and material handling systems

Nissan Motor Company and General Motor Company
Installed E-Coat and Phosphate Washer in service parts and body systems

Saturn Motor Company
Erected overhead cranes, all compressed air holding tank, set in place boilers, installed dock levelers, production conveyors, skillet conveyors, machinery handling conveyors and computer robots

Stouffer Chemical Company
Rebuilt rotary kilns, installed and rebuilt ID fans, coal mills and smelter furnaces
Installed piping, maintained waste heat recovery boilers, duct work in all chemical handling processes, steam piping for handling process, removed and installed pressurized storage tanks

Education and Training

NATIONAL BOILER BOARD COMMISION (#13023)

American Welding Society API-1104 (CWI 9304090991)

Completed American Welding Society D 1.1

Completed six thousand hr fast track machinist training with General Electric

Certified in shielded arc welding, gas tungsten arc welding, and flux core arc welding

Boiler Maker Local 263 Memphis TN.

Completed three year working apprenticeship as an Iron Worker

OSHA 10 TRAINED

OSHA required rigging safety subpart R.

Graduated Hickman County High School 1986
3 years General Metal and Machine shop
Graduated with top honors for Vocational Achievement

References

Wayne Qualls
Former Commissioner of Education, State of Tennessee
2880 Dodd Hollow Rd
Centerville, TN 37033
(931) 729-4509

Steve E. Brewster
Project Manager over Cumberland SCR Project
Tennessee Valley Authority
1101 Market St.
Chattanooga, TN 37402
(423) 751-3643

Bryan S. Keel
Senior Site Manager, Alstom Power Inc.
1114 Davis Dr
Atmore, AL 36502
(251) 368-4145

Attachment 2

PROPOSED INTERPRETATION

Inquiry No.	IN11-0903				
Source	Philip Smith				
Subject	Part 3, 3.4.4				
Edition	2007 Edition				
Question	If the installation of the new nozzles is considered an alteration(s) (in accordance with NBIC NB23, 2007 Edition, para. 3.4.4) is the R Certificate Holder required to prepare a detailed alteration plan covering the scope of the repair (3.4.4.1) prior to commencement of any work?				
Reply	Yes				
Committee's Question					
Committee's Reply					
Rationale					
SC Vote	Unanimous	No. Affirmative	No. Negative	No. Abstain	No. Not Voting
NBIC Vote	Unanimous	No. Affirmative	No. Negative	No. Abstain	No. Not Voting
Negative Vote Comments					

Attachment 2

PROPOSED INTERPRETATION

Inquiry No.	IN11-0904				
Source	Philip Smith				
Subject	Part 3, 3.4.4.1 a)				
Edition	2007 Edition				
Question	Does the R Certificate Holder have to have the detailed alteration plan and R-2 form reviewed and certified by an Engineer meeting the criteria of ASME VIII Div 2 or 3 prior to commencement of the work?				
Reply	Yes				
Committee's Question					
Committee's Reply					
Rationale					
SC Vote	Unanimous	No. Affirmative	No. Negative	No. Abstain	No. Not Voting
NBIC Vote	Unanimous	No. Affirmative	No. Negative	No. Abstain	No. Not Voting
Negative Vote Comments					

IN11-0903 Committee's Proposed Question from January 2012 meeting

Question: May the R-Certificate holder employ an earlier edition of the Code of Construction than was recorded on the original Maunfacturer's Data Report (MDR) to execute any repairs or alterations?

Reply: No.

IN11-0904 Committee's Proposed Question from January 2012 meeting

Question: Is the additio of a nozzle to a vesasel that is not identical to a nozzle listed on the Manufacturer's Data Report considered an alteration?

Reply: Yes, unless the nozzle is exempt from reinforcement and strength calculation by the Original Code of Construction.

PROPOSED INTERPRETATION

Inquiry No.	IN12-0401				
Source	Tony Hardin				
Subject	Part 3, 4.4.2				
Edition	2011 Edition				
Question	Question 1: In Part 3, 4.4.2 a) is it the purpose of the rule to require a liquid pressure test at 150% of the maximum allowable working pressure (MAWP) stamped on the pressure retaining item, as adjusted for temperature? Question 2: In {art 3, 4.4.2 a) is it allowable to perform a liquid pressure test at a pressure less than 150% of the MAWP stamped on the pressure retaining item to verify the leak tightness of the alteration?				
Reply	Answer 1 : No Answer 2: Yes				
Committee's Question					
Committee's Reply					
Rationale					
SC Vote	Unanimous	No. Affirmative	No. Negative	No. Abstain	No. Not Voting
NBIC Vote	Unanimous	No. Affirmative	No. Negative	No. Abstain	No. Not Voting
Negative Vote Comments					

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2011 NBIC Part 3, 4.4.2, Liquid Pressure Test Requirements for Alterations
Hardin, Tony
to:
NBICinquiry@nationalboard.org
05/01/2012 04:02 PM
Show Details

History: This message has been replied to.
Purpose: Code Interpretation

Subject: Part 3, 4.4.2
Edition: 2011

Question: In Part 3, 4.4.2 a), is it the purpose of the rule to require a liquid pressure test at 150% of the maximum allowable working pressure (MAWP) stamped on the pressure-retaining item, as adjusted for temperature?

Reply: No

Question: In Part 3, 4.4.2 a), is it allowable to perform a liquid pressure test at a pressure less than 150% of the maximum allowable working pressure stamped on the pressure-retaining item to verify the leak tightness of the alteration?

Reply: Yes

Background Information: A plant installed blind inspection nipples on their lower waterwall inlet headers to allow easier inspection and clean-out access. These nipples were designed per ASME Section 1 by the boiler OEM and provided by the boiler OEM as code stamped parts. The nipples were installed during an outage by a contractor not normally used, but qualified, for code welding practices in that plant. Since the nipples were of a size that required reinforcement per the OEM provided calculations, the installation was considered an alteration. The contractor Authorized Inspector (AI) required a 150% (of the boiler MAWP) liquid pressure test stating that NBIC Part 3, 4.4.2 a) requires it since the installation is considered an alteration.

The plant stance is:

1. That, similar to Part 3, 4.4.1 a), the rule allows for liquid pressure testing at any pressure up to 150% of the pressure part MAWP in order to confirm the leak tightness of the alteration.
2. A 150% liquid pressure test can possibly, and unnecessarily, be damaging to boiler pressure parts that cannot be isolated from the new parts requiring the test.

Thank you,

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Attachment 3

NB08-0322

Secretary, NBIC Committee
The National Board of Boiler and
Pressure Vessel Inspectors
1055 Crupper Avenue
Columbus, OH 43229

The following addition to the NBIC is proposed;

Add requirements to change the service of pressure vessels in Part 1, Installation, Part 2, Inspection, and Part 3 Repairs and Alterations.

Statement of Need

The Federal Railroad Administration has a proposal out on railcars carrying Poison Inhalation Hazard (PIH) that will require a number of existing tank cars to be retired early. There is a potential that some of these tanks will be recycled into stationary tanks for service other then what they were design for.

Additionally, this practice already occurs in some industries without any consideration for any damage mechanisms that made have been present in the initial service. The NBIC does not currently address these types of events.

Background Information

Part 3 - Add a new paragraph to 3.2 General Requirements for Repairs and Alterations to address change of service for a pressure vessel. These requirements should caution inspectors, owners, repair organizations and jurisdictional authorities of the inherent dangers involved when changing service. A new supplement should be added to address the specific requirements for repairs and alterations of pressure vessels that have been converted from one service to another.

NB08-0322 Part 3 3.2 General Requirements for Repairs and Alterations to address change of service for a pressure retaining item (PRI)

Proposal: Add a new paragraph 3.2.6 to address change of service for a PRI.

Scope:
This section provides requirements for PRIs that will be converted from one service to another. Changes in service can be successfully accomplished provided there is an understanding of the effect on the PRI.

Definition:
Change in Service: A change in the contents or the environment of a PRI that is different from the original design or previous service conditions.

Requirements:

1. Determine if the change in service is a repair or alteration per NBIC.
2. Evaluate the PRI for the new service requirements of pressure, temperature, flow rates, etc.
3. Review existing documentation for this PRI (i.e. vessel drawings, manufacturer's data reports, material test reports, pressure test, NDE, repairs, alterations, etc.).
4. Evaluate the PRI using NDE methods for establishing current thickness, corrosion rate, weld quality, etc.
5. A review shall be completed and documented by a competent individual with experience in pressure vessel design, alteration, repair, etc. This review shall be approved by the Owner/User or designated agent.
6. Verify the maximum allowable working pressure (MAWP), maximum allowable working external pressure (MAWEP), maximum allowable temperature (MAT), minimum design metal temperature (MDMT) for the new service.
7. Verify the PRI supports are adequate for the new service conditions. Verify all new PRI loads for the new service.
8. Compare specific gravity of new service medium with existing PRI design.
9. The PRI materials of construction shall be evaluated for compatibility of the new service.
10. Determine the corrosion effects of the new service conditions and establish remaining life of the PRI per NBIC.
11. Evaluate the PRI for fatigue service and thermal gradients.

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12. Evaluate the new pressure and temperature relieving requirements for the new service conditions.
13. Verify that the proper nameplate(s) are attached per NBIC. Change in service could require additional information on the NBIC "R" nameplate.
14. Determine if jurisdictional rules have any effect on this change of service. Notify the jurisdiction as required.

Examples:
Put in example of repairs and alterations.

- If the PRI support is changed (i.e. from horizontal to vertical), the PRI should be evaluated for the new supports for new loadings such as hydrostatic loads, wind loads, seismic loading, nozzle loadings, etc.
- If the PRI was in hydrogen service, it shall be checked for hydrogen embrittlement prior to use in the new service.
- Addition of mechanical equipment such as agitators, instrumentation, spargers, etc shall be evaluated.

References:
B31.3 App F – Precautionary Considerations
API-510 8.2(c) Rerating
NFPA-58 para 5.2.8
OSHA Technical Manual, Sec 4, Ch 3. Pressure Vessel Guidelines
API RB 750 Process Safety Management
PCC-3 Risk Based Methods
API-579

S6.14 GENERAL STAMPING REQUIREMENTS

The stamping of or attaching of a nameplate to a pressure-retaining item shall indicate that the work was performed in accordance with the requirements of this Code and any requirements of the Competent Authority. Such stamping or attaching of a nameplate shall be done only with the knowledge and authorization of the Inspector and Competent Authority. The "TR" Certificate Holder responsible for the repair or the construction portion of the modification/alteration shall apply the stamping. For a re-rating where no physical changes are made to the pressure-retaining item, the "TR" Certificate Holder responsible for the design shall apply the stamping. Requirements for stamping and nameplate information are shown in NBIC Part 3, Section 5.

S6.14.1 SPECIFIC "TR" STAMPING AND NAMEPLATE REQUIREMENTS C

The holder of a "TR" *Certificate of Authorization* is required to affix a stamping or nameplate on the Transport Tank that indicates, as appropriate, that the repair, alteration, or modification has been performed in accordance with the requirements of NBIC Part 3, Supplement 6 and the additional requirements of the code of construction. All repairs, alterations, and modifications, after acceptance by the Registered Inspector, shall have the "TR"
Symbol affixed to the stamping or the nameplate.
The stamping or nameplate information shall satisfy the requirements of (a) thru (g) below:

a) The required data shall be in characters at least 4 mm (5/32 in.) high;

b) The markings may be produced by casting, etching, embossing, debossing, stamping, or engraving;

c) The selected method shall not result in any harmful contamination or sharp discontinuities to the pressure- retaining boundary of the Transport Tank;

d) Stamping directly on the Transport Tank, when used, shall be done with blunt-nose continuous or blunt- nose interrupted dot die stamps. If direct stamping would be detrimental to the item, required markings may appear on a nameplate affixed to the Transport Tank;

e) The "TR" Certificate Holder shall use its full name as shown on the *Certificate of Authorization* or an ab- breviation acceptable to the National Board;

f) The stamping, when directly on the item or when a nameplate is used shall be applied adjacent to the original manufacturer's stamping or nameplate. A single repair, alteration, or modification stamping or nameplate may be used for more than one repair to a Transport Tank, provided the repair, alteration, or modification activity is carried out by the same certificate holder;

g) The date of each repair, alteration, or modification corresponding with the date on the Form TR-1 shall be stamped on the nameplate.

S6.14.~~1~~2 REMOVAL OF ORIGINAL STAMPING OR NAMEPLATE

If it becomes necessary to remove the original stamping, the Inspector shall, subject to the approval of the Competent Authority, witness the making of a facsimile of the stamping, the obliteration of the old stamp-

ing, and the transfer of the stamping. When the stamping is on a nameplate, the Inspector shall witness the transfer of the nameplate to the new location. Any relocation shall be described on the applicable NBIC "TR" Form. The restamping or replacement of a code symbol stamp shall be performed only as permitted by the governing code of construction.

S6.15 "TR" FORMS

S6.~~17.3~~15.1
DOCUMENTATION

Repairs, alterations, or modifications that have been performed in accordance with the NBIC shall be docu- mented on Form TR-1, *Report of Repair, Alteration, or Modification*, as shown in NBIC Part 3, Section 5. Form TR-2, *Report Supplementary Sheet*, shall be used to record additional data when space is insufficient on Form TR-1.

S6.~~18~~15.2 PREPARATION OF TR FORMS

Preparation of "TR" Forms shall be the responsibility of the "TR" Certificate Holder performing the repairs,
alterations, or modifications. An Inspector shall indicate acceptance by signing the appropriate "TR" form.

S6.~~18.1~~15.3
DISTRIBUTION

a) Legible copies of the completed Form TR-1 together with attachments shall be distributed to the owner or user, the Inspector, and the Competent Authority, as required, and the Authorized Inspection Agency responsible for the inspection.

b) Distribution of the Form TR-1 and attachments shall be the responsibility of the organization performing the repair.

~~**S6.18.2**~~
~~**REGISTRATION**~~

~~Form, TR-1 and TR-2 shall be registered with the National Board.~~

S6.~~19.1~~15.4 REGISTRATION OF FORM TR-1 AND FORM TR-2

a) Organizations performing repairs, alterations, or modifications under the "TR" program must register such
repairs, alterations, or modifications with the National Board.
~~It is required by DOT that the Form TR-1 and, if applicable, Form TR-2 be registered with the National Board.~~

b) The repair organization shall maintain a sequential Form "TR" Log that shall identify the following:

1) Form number assigned for Form TR-1;

2) Identify if the activity was a repair, alteration, or modification; and

3) Date sent to the National Board

~~S6.15.1 REGISTRATION OF "TR" FORMS~~

~~Organizations performing repairs, alterations, or modifications under the "TR" program must register such repairs, alterations, or modifications with the National Board.~~

~~S6.15.2 FORM 'TR" LOG~~

~~The "TR" Certificate Holder shall maintain a single, sequential log of "TR"; form numbers assigned for NBIC forms (i.e., TR-1) that are registered with the National Board~~.

S6.16 ADDITIONAL REQUIREMENTS FOR REPAIRS, ALTERATIONS, OR MODIFICATIONS

S6.16.1 SCOPE

This section provides additional requirements for repairs, alterations, or modifications to DOT Transport Tank pressure-retaining items and shall be used in conjunction with NBIC Part 3.

S6.16.2 REPAIRS OF DEFECTS

Before a repair is made to a defect in a welded joint or base metal, care should be taken to investigate its cause and to determine its extent and likelihood of recurrence. This information shall be made available to the Inspector.

S6.16.3 MODIFICATIONS

All modifications to the pressure-retaining item shall meet the requirements of NBIC Part 3, Section 6.

S6.16.4 DRAWINGS

Drawings or instructions shall be prepared to describe the repair, alterations, or modification. Drawings shall include sufficient information to satisfactorily perform the activity.

S6.16.5 AUTHORIZATION

Repairs, alterations, or modifications to a pressure-retaining item shall not be initiated without the authorization of the Inspector, who shall determine that the repair methods are acceptable and subject to acceptance of the Competent Authority.

S6.17 EXAMINATION AND TEST

The following requirements shall apply to all repairs, alterations, or modifications to DOT Transport Tank pressure-retaining items:

a) The integrity of repairs and replacement parts used in repairs, alterations, or modifications shall be verified by examination and test;

b) The "TR" Certificate Holder is responsible for all activities relating to examination and test of repair, alterations, or modifications;

c) Examination and tests to be used shall be subject to acceptance of the Inspector and the Competent Authority.

S6.17.1 METHODS

One, or a combination of the following examination and methods, shall be applied to DOT Transport Tank pressure retaining itmes with the concurrence of the Inspector and the Competent Authority.

a) Liquid Pressure Test
Pressure testing of repairs shall meet the following requirements:

1) Pressure tests shall be conducted using water or other suitable liquid. The test pressure shall be the minimum required to verify the leak tightness integrity of the repair, but not more than 150% of the maximum allowable working pressure (MAWP) stamped on the pressure-retaining item, as adjusted for temperature. When original test pressure included consideration of corrosion allowance, the test pressure may be further adjusted based on the remaining corrosion allowance;

2) During a pressure test where the test pressure will exceed 90% of the set pressure of the pressure relief device, the device shall be removed whenever possible. If not possible, a test gag should be used using the valve manufacturer's instructions and recommendations;

3) Hold time for the pressure test shall be a minimum of 10 minutes prior to examination by the Inspec- tor. Where the test pressure exceeds the MAWP of the item, the test pressure shall be reduced to the MAWP for close examination by the Inspector. Hold time for close examination shall be as necessary for the Inspector to conduct the examination;

b) Pneumatic Test
A pneumatic test may be conducted. Concurrence of the owner shall be obtained in addition to that of the Inspector and the Competent Authority where required. The test pressure shall be the minimum required to verify leak tightness integrity of the repair, but shall not exceed the maximum pneumatic test pressure of the original code of construction. Precautionary requirements of the original code of construction shall be followed;

c) Nondestructive Examination
Nondestructive examination (NDE) may be conducted. NDE methods shall be suitable for providing mean- ingful results to verify the integrity of the repair.

~~**S6.17.2 STAMPING**~~

~~DOT Transport Tanks repaired in accordance with the NBIC shall be stamped as required by NBIC Part 3, Section 5.~~

~~**S6.17.3 DOCUMENTATION**~~

~~Repairs, alterations, or modifications that have been performed in accordance with the NBIC shall be docu- mented on Form TR-1, *Report of Repair, Alteration, or Modification*, as shown in NBIC Part 3, Section 5. Form TR-2, *Report Supplementary Sheet*, shall be used to record additional data when space is insufficient on Form TR-1.~~

~~**S6.18 PREPARATION OF TR FORMS**~~

~~Preparation of "TR" Forms shall be the responsibility of the "TR" Certificate Holder performing the repairs, alterations, or modifications. An Inspector shall indicate acceptance by signing the appropriate "TR" form.~~

~~S6.18.1~~
~~DISTRIBUTION~~

~~a) Legible copies of the completed Form TR-1 together with attachments shall be distributed to the owner or user, the Inspector, and the Competent Authority, as required, and the Authorized Inspection Agency responsible for the inspection.~~

~~b) Distribution of the Form TR-1 and attachments shall be the responsibility of the organization performing the repair.~~

~~S6.18.2~~
~~REGISTRATION~~

~~Form, TR-1 and TR-2 shall be registered with the National Board.~~

S6.198 REPAIRS, ALTERATIONS, OR MODIFICATION REPORTS

a) If repairs, alterations, or modifications are performed on a Transport Tank, i.e., cargo tank, portable tank, or ton tank, the Owner or User shall have the activity performed by a Repair Organization that has a valid "TR" *Certificate of Authorization* issued by the National Board.

b) The repair, alteration, or modification shall be recorded on the Form TR-1. If additional space is needed to properly record the repair, alteration, or modification, Form TR-2 shall be used.

c) It is the responsibility of the "TR" Symbol Stamp Holder to prepare, distribute, and maintain the Form TR-1 and, if required, Form TR-2. The Form(s) shall be distributed as follows:

1) Owner-User;

2) Registered Inspector;
3) Competent Authority (DOT); and
4) National Board.

d) The Form TR-1 shall be signed by a Registered Inspector as defined in NBIC Part 3, S6.7.1.

~~S6.19.1 REGISTRATION OF FORM TR-1 AND FORM TR-2~~

~~a) It is required by DOT that the Form TR-1 and, if applicable, Form TR-2 be registered with the National Board.~~

~~b) The repair organization shall maintain a sequential Form "TR" Log that shall identify the following:~~

~~1) Form number assigned for Form TR-1;~~

~~2) Identify if the activity was a repair, alteration, or modification; and~~

~~3) Date sent to the National Board~~.

~~S6.19.2 GENERAL REQUIREMENTS "TR" STAMPING AND NAMEPLATES~~

~~The holder of a "TR" *Certificate of Authorization* is required to affix a stamping or nameplate on the Transport Tank that indicates, as appropriate, that the repair, alteration, or modification has been performed in accordance with the requirements of NBIC Part 3, Supplement 6 and the additional requirements of the code of construction. All repairs, alterations, and modifications, after acceptance by the Registered Inspector, shall have the "TR"~~

~~Symbol affixed to the stamping or the nameplate.~~
~~The stamping or nameplate information shall satisfy the requirements of (a) thru (g) below:~~

~~a) The required data shall be in characters at least 4 mm (5/32 in.) high;~~

~~b) The markings may be produced by casting, etching, embossing, debossing, stamping, or engraving;~~

~~c) The selected method shall not result in any harmful contamination or sharp discontinuities to the pressure- retaining boundary of the Transport Tank;~~

~~d) Stamping directly on the Transport Tank, when used, shall be done with blunt-nose continuous or blunt- nose interrupted dot die stamps. If direct stamping would be detrimental to the item, required markings may appear on a nameplate affixed to the Transport Tank;~~

~~e) The "TR" Certificate Holder shall use its full name as shown on the *Certificate of Authorization* or an ab- breviation acceptable to the National Board;~~

~~f) The stamping, when directly on the item or when a nameplate is used shall be applied adjacent to the original manufacturer's stamping or nameplate. A single repair, alteration, or modification stamping or nameplate may be used for more than one repair to a Transport Tank, provided the repair, alteration, or modification activity is carried out by the same certificate holder;~~

~~g) The date of each repair, alteration, or modification corresponding with the date on the Form TR-1 shall be stamped on the nameplate.~~

~~S6.19.3 STAMPING OF THE "TR" SYMBOL~~

~~All repairs, alterations, and modifications, after acceptance by the Registered Inspector, shall have the "TR" Symbol affixed to the stamping or the nameplate.~~

Ballot Comments NB11-0401 R&A

Name	Document	Comment	Date Created	Is Active
William Vallance		I have no comments	05/23/2012	☑ True
Wayne Jones		No comment	05/23/2012	☑ True
Michael Webb		No adverse comments. My apologies for my delayed response.	05/22/2012	☑ True
Joseph Ball		Voting to access public comments - not a member.	05/01/2012	☐ False
Joseph Ball		5.13.6 and 5.13.6.1 are a combination of VR and NR requirements, although the forms come from the NR program only (there is no VR data report form). I think this was actually missed during the Part 4 draft, but it appears that they might be better staying in Part 3 to stay tied to the rest of the NR program. We are certainly open to suggestions over this question.	05/01/2012	☑ True
George Galanes, PE		I do have a comment. There are some items that were not extracted on this first draft; 5.13.6, 5.13.6.1	05/01/2012	☑ True
Jim Sekely		No Comment Joe No way to submit comments without choosing a voting option - please disregard	04/29/2012	☑ True

NBIC PART 3 with Part 4 removed.docx
4-25-12
(NOTE: All general pressure relief device information that will be moved to part 4 is shown as strike through text.)

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PART 3 REPAIRS AND ALTERATIONS

1.7.5 ISSUANCE AND RENEWAL OF THE "VR" *CERTIFICATE OF AUTHORIZATION*

1.7.5.1 GENERAL

Authorization to use the stamp bearing the official National Board "VR" symbol as shown in NBIC Part 3, Section 5, will be granted by the National Board pursuant to the provisions of the following administrative rules and procedures. NBIC Part 3, Supplement 9, provides rules for the repair of ASME Section III, "NV" stamped pressure relief devices.

1.7.5.2 ISSUANCE OF CERTIFICATE

a) Repair organizations, manufacturers, assemblers, or users that make repairs to the American Society of Mechanical Engineers (ASME) Code symbol, stamped or marked (as applicable), and The National Board of Boiler and Pressure Vessel Inspectors (National Board) capacity certified pressure relief valves may apply to the National Board for a *Certificate of Authorization* to use the "VR" symbol. The National Board may at any time, through the NBIC Committee, modify the regulations concerning the issuance and use of such valve repair symbol. All such modified regulations shall become binding upon holders of valid Valve Repair *Certificates of Authorization*.

b) Authorization to use the "VR" stamp may be granted or withheld by the National Board in its absolute discretion. If authorization is granted and proper administrative fees paid, a *Certificate of Authorization* will be issued evidencing permission to use such a symbol, expiring on the triennial anniversary date. The certificate will be signed by the National Board Chairman of the National Board of Trustees, the Executive Director, or any other duly authorized officer.

c) The certificate shall list the physical, permanent address of record for the certificate holder's shop/plant. For field-only scopes, this address of record shown on the *Certificate of Authorization* is where administrative, technical, and quality aspects of the business are controlled.

1.7.5.3 RENEWAL OF CERTIFICATE

The *Certificate of Authorization* is renewable every three (3) years subject to a review of the Quality System by a representative of the National Board, review and acceptance of the representative's report by the National Board, and successful completion of capacity verification tests. See NBIC Part 3, 1.7.8 for exceptions. The applicant should apply to the National Board for renewal of authorization and re-issuance of the certificate prior to the date of expiration. The National Board reserves the absolute right to cancel, refuse to issue, or renew such authorization.

1.7.5.4 REVIEW OF APPLICANT'S FACILITY

a) Before issuance or renewal of pressure relief "VR" *Certificates of Authorization*, the repair organization, its written quality system, and its facilities are subject to a review and verification of implementation of its quality system by a representative of the National Board. The implementation 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 quality system.

b) The applicant shall repair and submit for verification testing one (1) valve for each ASME Code section (except Section III) and test fluid (steam, air/gas, liquid) which will appear on the *Certificate of Authorization*. A minimum of two (2) valves are required regardless of ASME Code sections or test fluid. The valves shall be within the capabilities of the National Board accepted laboratory. When an applicant is using the provisions of NBIC Part 3, 4.5.2, the applicant shall submit one additional ASME Section VIII steam valve set, on air, for verification testing on steam.

c) The applicant shall have a copy of the *National Board Pressure Relief Device Certifications* publication, NB-18, dated within one year (available from the National Board Web page), the latest Edition of the *National Board Inspection Code* (NBIC), all parts; and the ASME Code section(s) that the organization is including in its scope.

d) It is the responsibility of the valve repair organization to make arrangements for this review. Certificates cannot be issued or renewed until the National Board is in receipt of approval of this review. Wherever possible, National Board reviews of valve repair organizations shall be coordinated with ASME reviews, when applicable.

e) For field-only repair scopes, the review shall encompass both the applicant's address of record and field repair demonstration site. The demonstration site shall be representative of that typically encountered by the applicant (see NBIC Part 3, 1.7.5.6).

1.7.5.5 VERIFICATION TESTING

a) Before the "VR" *Certificate of Authorization* and stamps may be issued or renewed, the demonstration

PART 3, SECTION 1

PART 3, SECTION 1
REPAIRS AND ALTERATIONS — GENERAL AND ADMINISTRATIVE REQUIREMENTS
1.1 SCOPE

~~d) For pressure relieving devices the applicable standard for new valves to be used for reference during repairs is the ASME Code. ASME Code Cases shall be used for repairs when they were used in the original construction of the valve. ASME Code Cases may be used when they have been accepted for use by the NBIC committee and the Jurisdiction where the pressure-retaining item is installed.~~
~~1) For pressure relieving devices the code case number shall be noted on the repair document and, when required by the code case, stamped on the repair nameplate.~~
~~2) The Jurisdiction where the pressure-retaining item is installed shall be consulted for any unique requirements it may have established.~~

~~1.4 DEFINITIONS RELATING TO PRESSURE RELIEF DEVICES~~

~~Unless otherwise specified in these rules and procedures, the definitions relating to pressure relief devices in Section 2 of ANSI/ASME PTC 25-2001 shall apply.~~
is issued shall be included on the Title Page of the Quality System Manual.

SEE NBIC PART 4 for ACCREDITATION OF VALVE REPAIR (VR) ORGANIZATIONS

~~1.7 ACCREDITATION OF "VR" REPAIR ORGANIZATIONS~~
~~1.7.1 SCOPE~~

~~a) These administrative rules and procedures are provided for those who wish to obtain a National Board *Certificate of Authorization* for use of the "VR" (Repair of Pressure Relief Valves) symbol stamp. It should be noted that the issuance of the "VR" stamp is not restricted to companies whose primary business is the repair of pressure relief valves, nor to manufacturers or assemblers that hold an ASME "V," "HV," "UV," or "NV" Code Symbol Stamp. Owners and users of boilers and pressure vessels and other organizations that qualify in accordance with the National Board Rules and Regulations may also obtain the "VR" Certificate and stamp.~~
~~b) In order to provide due process in the issuance, renewal, and revocation of "VR" symbol stamps and certificates of authorization, the National Board Appeals Committee procedures provide an affected "VR" *Certificate of Authorization* applicant the right of appeal, or to provide additional information that may affect the Committee's decision.~~

~~1.7.2 JURISDICTIONAL PARTICIPATION~~

~~The National Board member jurisdiction in which the "VR" organization is located is encouraged to participate in the review and demonstration of the applicant's quality system. The Jurisdiction may require participation in the review of the repair organization and the demonstration and acceptance of the repair organization's quality system manual.~~

~~1.7.3 GENERAL RULES~~

~~The general rules of the National Board "VR" certification program apply only to the repair of National Board capacity certified ASME Code Section I, "V" stamped, Section IV, "HV" marked, and Section VIII, "UV" stamped pressure relief valves that:~~
~~a) Have been in service or have been exposed to environmental or other conditions such that there is reason to question their ability to perform equivalent to the standards for new valves; or~~
~~b) Any or all of the valve's external adjustment seals have been broken, opened, or otherwise disturbed, regardless of the valve's age or service status.~~

~~1.7.4 REPAIR OF NUCLEAR VALVES~~

~~Provided that the requirements of Supplement 9 and applicable requirements of these rules are met, the "VR" certificate may be extended to apply to the repair of any ASME Code Section III, Class 1, 2, or 3, pressure relief devices that have been capacity certified by the National Board and have been in service, regardless of their intended function, in a nuclear system.~~

valves must successfully complete capacity and operational verification tests at a National Board accepted testing laboratory. See NBIC Part 3, 1.7.5.6 and 1.7.8 for exceptions. The valves shall be typical of those repaired by the organization and within the capabilities of the testing laboratory.
b) Tests conducted at the accepted testing laboratory shall be witnessed by a representative of the National Board. 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 section of the ASME Code to which they were manufactured.
c) Valves not meeting the function or operational requirements of the section of the ASME Code to which they were manufactured shall be considered to have failed. Replacement valves shall be repaired and selected for testing as stated above, at a rate of two (2) valves for each one (1) that failed.
1) If either or both 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 acceptance of this information by the National Board, one (1) additional valve for each replacement valve that failed shall be repaired and tested. The valve(s) shall be of the same ASME Code Section, fluid and set pressure scope, as the valve previously failing to meet the test requirement.
2) Failure of this valve(s) to meet the ASME Code to which the valve was manufactured shall be cause for consideration by the National Board of revocation of the "VR" *Certificate of Authorization* or acceptance of alternative corrective action.

1.7.5.6 VERIFICATION TESTING ALTERNATIVES

a) In such cases where all valves repaired by the applicant for a specified ASME Code Section or test fluid exceed the capabilities of the accepted testing laboratory, valves for that ASME Code Section or test fluid shall be selected as specified in NBIC Part 3, 1.7.5.4, and a demonstration test shall be successfully performed in lieu of verification testing specified in NBIC Part 3, 1.7.5.5. The demonstration tests shall be conducted at a facility mutually agreeable to the National Board representative, the facility owner, and the applicant. The purpose of these tests is to demonstrate, in the presence of a National Board representative, that the repaired valves shall have adequate seat tightness at the maximum expected operating pressure prior to lifting, shall open within the required set pressure tolerance, operate consistently without chatter, and reclose within the required blowdown.
b) If a valve lift-assist device is used by the applicant to establish set pressure after repairs, this device must also be used to set the demonstration valves.
c) If either 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.
1) If either or both 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 acceptance of this information by the National Board, one (1) additional valve for each replacement valve that failed shall be repaired and tested. The valve(s) shall be of the same ASME Code section, fluid, and set pressure scope as the valve previously failing to meet the test requirement.
2) Failure of this valve(s) to meet the ASME Code to which the valve was manufactured shall be cause for consideration by the National Board of revocation of the "VR" *Certificate of Authorization* or acceptance of alternative corrective action.

1.7.6 USE OF THE "VR" AUTHORIZATION

1.7.6.1 TECHNICAL REQUIREMENTS

The administrative requirements of NBIC Part 3, 1.7 for use of the "VR" stamp shall be used in conjunction with the technical requirements for valve repair as described in NBIC Part 3, Supplement 7. Those requirements shall be mandatory when a "VR" repair is performed.

1.7.6.2 STAMP USE

Each "VR" symbol stamp shall be used only by the repair firm within the scope, limitations, and restrictions under which it was issued.

1.7.6.3 RETURN OF STAMP

Each applicant shall agree, if authorization to use the stamp is granted, that the stamp is at all times the property of the National Board and will be promptly returned upon demand. If the applicant discontinues the repair of such valves or if the "VR" *Certificate of Authorization* issued to such applicant has expired and no new certificate has been issued, the stamp will be returned to the National Board.

1.7.6.4 MULTIPLE LOCATIONS

A holder of a National Board "VR" stamp shall not permit any others to use the "VR" Symbol Stamp loaned to it by the National Board. When a repair organization, manufacturer, or user has a repair department and/or equipment in fixed plants or shops located in more than one geographical area, it must submit separate applications for each plant or shop with the addresses of all such repair locations.

1.7.6.5 *CERTIFICATE OF AUTHORIZATION* CONTENTS

Qualification for repair location (shop, shop and field, or field only), Code Section (Section I, III, IV, and/or VIII valves), Special Processes, and Test Media shall be specified on the repair organization's "VR" *Certificate of Authorization*.

1.7.6.6 CHANGES TO *CERTIFICATES OF AUTHORIZATION*

a) When a "VR" Certificate Holder intends to change the address of record (location), the certificate holder shall notify the National Board in writing prior to relocating. The new facilities and related quality system for the new location shall be reviewed in accordance with NBIC Part 3, 1.7.5.4. Issuance of a new *Certificate of Authorization* is subject to the procedures herein.

b) When a "VR" Certificate Holder intends to change ownership or scope, the certificate holder shall notify the National Board in writing prior to the change. A review, in accordance with NBIC Part 3, 1.7.5.4, may be required depending upon the nature and extent of the change to the quality system manual, repair procedures, or facilities. Issuance of a new *Certificate of Authorization* is subject to the procedures herein.

1.7.6.7 ISSUANCE OF MORE THAN ONE "VR" SYMBOL STAMP TO A *CERTIFICATE OF AUTHORIZATION* HOLDER

The holder of a *Certificate of Authorization* may obtain more than one "VR" Symbol Stamp provided its quality system manual controls the use of such stamps from the address of record shown on the *Certificate of Authorization*.

1.7.7 QUALITY SYSTEM

1.7.7.1 GENERAL

Each applicant for a new or renewed "VR" *Certificate of Authorization* shall have and maintain a quality system which shall establish that all of these rules and administrative procedures and applicable ASME Code requirements, including material control, fabrication, machining, welding, examination, setting, testing, inspection, sealing, and stamping will be met.

1.7.7.2 WRITTEN DESCRIPTION

A written description, in the English language, of the system the applicant will use shall be available for review and shall contain, as a minimum, the features set forth in NBIC Part 3, 1.7.7.5. This description may be brief or voluminous, depending upon the projected scope of work, and shall be treated confidentially. In general, the quality system shall describe and explain what documents and procedures the repair firm will use to validate a valve repair.

1.7.7.3 REVIEW

A review of the applicant's quality system will be performed by a representative of the National Board. The review will include a demonstration of the implementation of the provisions of the applicant's quality system.

1.7.7.4 MAINTENANCE OF CONTROLLED COPY

Each applicant to whom a "VR" *Certificate of Authorization* is issued shall maintain thereafter a controlled copy of the accepted quality system manual with the National Board. Except for changes that do not affect the quality system, revisions to the quality system manual shall not be implemented until such revisions are accepted by the National Board.

1.7.7.5 OUTLINE OF REQUIREMENTS FOR A QUALITY SYSTEM

The following establishes the minimum requirements of the written description of the quality system. It is required that each valve repair organization develop its own quality system that meets the requirements of its organization. For this reason it is not possible to develop one quality system that could apply to more than one organization. The written description shall include, as a minimum, the following features:

a) Title Page

~~The title page shall include the name and address of the company to which the National Board *Certificate of Authorization* is to be issued.~~
~~b) Revision Log~~
~~A revision log is required to ensure revision control of the quality system manual. The log should contain sufficient space for date, description and section of revision, company approval, and National Board acceptance.~~
~~c) Contents Page~~
~~The contents page should list and reference, by paragraph and page number, the subjects and exhibits contained therein.~~
~~d) Statement of Authority and Responsibility~~
~~A statement of authority and responsibility shall be dated and signed by an officer of the company. It shall include:~~
~~1) A statement that the "VR" stamp shall be applied only to pressure relief valves that meet both of the following conditions:~~
~~a. Are stamped with an ASME "V", "UV", or "NV" Code symbol or marked with an ASME "HV" symbol and have been capacity certified by the National Board; and~~
~~b. Have been disassembled, inspected, and repaired by the Certificate Holder such that the valves' condition and performance are equivalent to the standards for new valves.~~
~~2) The title of the individual responsible for ensuring that the quality system is followed and who has authority and freedom to affect the responsibility;~~
~~3) A statement that if there is a disagreement in the implementation of the written quality system, the matter is to be referred to a higher authority in the company for resolution; and~~
~~4) The title of the individual authorized to approve revisions to the written quality system and the method by which such revisions are to be submitted to the National Board for acceptance before implementation.~~
~~e) Organization Chart~~
~~A chart showing the relationship between management, purchasing, repairing, inspection, and quality control personnel is required and shall reflect the actual organization in place.~~
~~f) Scope of Work~~
~~1) The scope of work section shall indicate the scope and type of valve repairs, including conversions the organization is capable of and intends to perform. The location of repairs (shop, shop and field, or field only), ASME Code Section(s) to which the repairs apply, the test medium (air, gas, liquid, or steam, or combinations thereof), and special processes (machining, welding, postweld heat treatment, or nondestructive examination, or combinations thereof) shall be specifically addressed.~~
~~2) The types and sizes of valves to be repaired, pressure ranges and other limitations, such as engineering and test facilities, should also be addressed.~~
~~g) Drawings and Specification Control~~
~~The drawings and specification control system shall provide procedures assuring that the latest applicable drawings, specifications, and instructions required are used for valve repair, including conversions, inspection, and testing.~~
~~h) Material and Part Control~~
~~The material and part control section shall describe purchasing, receiving, storage, and issuing of parts.~~
~~1) State the title of the individual responsible for the purchasing of all material.~~
~~2) State the title of the individual responsible for certification and other records as required.~~
~~3) All incoming materials and parts shall be checked for conformance with the purchase order and, where applicable, the material specifications or drawings. Indicate how material or part is identified and how identity is maintained by the quality system.~~
~~i) Repair and Inspection Program~~
~~The repair and inspection program section shall include reference to a document (such as a report, traveler, or checklist) that outlines the specific repair and inspection procedures used in the repair of pressure relief valves. Repair procedures shall require verification that the critical parts meet the valve manufacturer's specification. Supplement S7.14 outlines recommended procedures covering some specific items. Provisions shall be made to retain this document for a period of at least five years.~~
~~1) Each valve or group of valves shall be accompanied by the document referred to above for processing through the plant. Each valve shall have a unique identifier (i.e., repair serial number, shop order number, etc.) appearing on the repair documentation and repair nameplate such that traceability is established.~~
~~2) The document referred to above shall describe the original nameplate information, including the~~

~~ASME Code symbol stamping and the repair nameplate information, if applicable. In addition, it shall include material checks, replacement parts, conversion parts (or both), reference to items such as the welding procedure specifications (WPS), fit-up, NDE technique, heat treatment, and pressure test methods to be used. Application of the "VR" stamp to the repair nameplate shall be recorded in this document. Specific conversions performed with the new Type/Model Number shall be recorded on the document. There shall be a space for "signoffs" at each operation to verify that each step has been properly performed.~~

~~3) The system shall include a method of controlling the repair or replacement of critical valve parts. The method of identifying each spring shall be indicated.~~

~~4) The system shall also describe the controls used to ensure that any personnel engaged in the repair of pressure relief valves are trained and qualified in accordance with NBIC Part 3, Supplement 7.~~

~~j) Welding, NDE, and Heat Treatment (when applicable)~~

~~The quality system manual shall indicate the title of the person(s) responsible for and describe the system used in the selection, development, approval, and qualification of welding procedure specifications, and the qualification of welders and welding operators in accordance with the provisions of NBIC Part 3, Supplement 7.~~

~~1) The quality system manual may include controls for the "VR" Certificate Holder to have the pressure relief valve part repaired by a National Board "R" Certificate Holder, per NBIC Part 3, Supplement 7.~~

~~2) The completed Form R-1 shall be noted on and attached to the "VR" Certificate Holder's document required in NBIC Part 3, 1.7.7.5 i). Similarly, NDE and heat treatment techniques must be covered in the quality system manual. When outside services are used for NDE and heat treatment, the quality system manual shall describe the system whereby the use of such services meet the requirements of the applicable section of the ASME Code.~~

~~k) Valve Testing, Setting, and Sealing~~

~~The system shall include provisions that each valve shall be tested, set, and all external adjustments sealed according to the requirements of the applicable ASME Code Section and the National Board. The seal shall identify the "VR" Certificate Holder making the repair. Abbreviations or initials shall be permitted, provided such identification is acceptable to the National Board.~~

~~l) Valve Repair Nameplates~~

~~An effective valve stamping system shall be established to ensure proper stamping of each valve as required by NBIC Part 3, 5.12.2. The manual shall include a description of a nameplate or a drawing.~~

~~m) Calibration~~

~~1) The manual shall describe a system for the calibration of examination, measuring, and test equipment used in the performance of repairs. Documentation of these calibrations shall include the standard used and the results.~~

~~2) All calibration standards shall be calibrated against certified equipment having known valid relationships to nationally recognized standards.~~

~~n) Manual Control~~

~~The quality system shall include:~~

~~1) Measures to control the issuance of and revisions to the quality system manual;~~

~~2) Provisions for a review of the system in order to maintain the manual current with these rules and the applicable sections of the ASME Code;~~

~~3) The title(s) of the individual(s) responsible for control, revisions, and review of the manual;~~

~~4) Provision of a controlled copy of the written quality system manual to be submitted to the National Board; and~~

~~5) Revisions shall be submitted for acceptance by the National Board prior to being implemented.~~

~~o) Nonconformities~~

~~The system shall establish measures for the identification, documentation, evaluation, segregation, and disposition of nonconformities. A nonconformity is a condition of any material, item, product, or process in which one or more characteristics do not conform to the established requirements. These may include, but are not limited to, data discrepancies, procedural and/or documentation deficiencies, or material defects. Also, the title(s) of the individual(s) involved in this process shall be included.~~

~~p) Exhibits~~

~~Forms used in the quality system shall be included in the manual with a written description. Forms exhibited should be marked SAMPLE and completed in a manner typical of actual valve repair procedures.~~

~~q) Testing Equipment (See NBIC Part 3, Supplement 8)~~

The system shall include a means to control the development, addition, or modification of testing equipment to ensure the requirements of NBIC Part 3, 4.5.1(b) are met.
r) Field Repairs (See NBIC Part 3, S7.7)
If field repairs are included in the scope of work, the system shall address any differences or additions to the quality system required to properly control this activity, including the following:
1) Provisions for annual audits of field activities shall be included;
2) Provisions for receipt and inspection of replacement parts, including parts received from the owneruser, shall be addressed;
3) If owner-user personnel will assist with repairs, provisions for the use of owner-user personnel shall be included; and
4) Provisions for use of owner-user measurement and test equipment, if applicable, shall be addressed.

1.7.8 ASME "V," "HV," OR "UV" CERTIFICATE HOLDERS

a) A manufacturer holding a valid ASME *Certificate of Authorization* for use of an ASME "V", "HV", or "UV" Code symbol stamp may obtain the "VR" *Certificate of Authorization* for the repair of pressure relief valves covered by the ASME *Certificate of Authorization* and that meet the requirements of NBIC Part 3, 1.7.3. This can be accomplished without a review of the facilities provided there is a written quality system to cover the scope of the repairs to be made and the repairs are carried out at the same location where the ASME valves are manufactured. Unless the repaired valves are tested on the same facilities and to the same procedures as new valves, two (2) repaired valves shall be selected by a National Board Representative for verification tests.
b) The initial *Certificate of Authorization* shall be issued to expire concurrent with the ASME *Certificate of Authorization*. Subsequent certificates shall be renewed upon a successful review and verification of implementation of its quality system by a National Board Representative. This review shall be performed concurrently with the ASME Certificate renewal review.
c) A manufacturer may also perform field repairs of pressure relief valves covered by the ASME *Certificate of Authorization* provided the provisions of NBIC Part 3, S7.7 are met.
d) Assemblers holding ASME *Certificates of Authorization* shall qualify for the "VR" *Certificate of Authorization* as required elsewhere in these rules.
e) The quality system manual shall be submitted for review and acceptance by the National Board.
f) In order for an ASME Code symbol stamp holder to qualify for the National Board "VR" stamp, the following areas to the written quality system usually require attention:
1) Statement of Authority and Responsibility
This should clearly indicate that valve repairs are carried out in accordance with the requirements and the rules of the National Board and the quality system manual. In addition, the scope and type of valve repairs covered by the manual should be indicated.
2) Organization
Unless the functions which affect the quality of valve repairs are carried out by individuals other than those responsible for manufacturing or assembly, it should not be necessary to revise the organization chart.
3) General Quality Functions
Usually quality system requirements regarding valve repairs may be controlled in the same manner as for ASME manufacturing or assembly provided applicable shop and/or field activities are covered. If this is the case, the applicant for the "VR" stamp should include in its quality system manual a separate section covering valve repairs that references the applicable section of the manual. For a more explicit explanation see NBIC Part 3, 1.7.7.5, *Outline of Requirements for a Quality System*.

4.5 PRESSURE RELIEF VALVE PERFORMANCE TESTING AND TESTING EQUIPMENT

Each pressure relief valve to which the "VR" repair symbol stamp is to be applied shall be subjected to the following
tests by the repair certificate holder.

4.5.1 TEST MEDIUM AND TESTING EQUIPMENT

~~Valves marked for steam service, or having special internal parts for steam service, shall be tested on steam. Valves marked for air, gas, or vapor service shall be tested with air or gas. Valves marked for liquid service shall be tested with water or other suitable liquid. ASME Code, Section IV hot-water valves, shall be tested on water, steam, or air.~~

~~a) Each valve shall be tested to demonstrate the following:~~

~~1) Set pressure (as defined by the valve manufacturer and as listed in NB-18, *Pressure Relief Device Certifications*);~~

~~2) Response to blowdown, when required by the original code of construction;~~

~~3) Seat tightness; and~~

~~4) For valves designed to discharge to a closed system, the tightness of the secondary pressure zone shall be tested as required by the original code of construction.~~

~~b) The equipment used for the performance testing prescribed above shall meet the following requirements:~~

~~1) The performance testing equipment shall include a pressure vessel of adequate volume and pressure source capacity to ensure compliance with NBIC Part 3, 4.5.1 a)1);~~

~~2) Prior to use, all performance testing equipment shall be qualified by the certificate holder to ensure that the equipment and testing procedures will provide accurate results when used within the ranges established for that equipment. This qualification may be accomplished by benchmark testing, comparisons to equipment used for verification testing as specified in the quality system, or comparisons to field performance. This qualification shall be documented and provisions made to retain such documentation for a period of at least five years after the testing equipment is retired. Documentation of this qualification shall include but not be limited to:~~

~~a. Schematic of the performance test equipment;~~

~~b. Size and pressure ranges of valves to be tested and the test fluid to be used;~~

~~c. Dimensions of test vessels;~~

~~d. Accuracy of pressure measuring equipment;~~

~~e. Size and design type of valves used to control flow; and~~

~~f. Method of qualifying.~~

~~3) Prior to the implementation of any addition or modification to the testing equipment that would alter the contents of the document required in NBIC Part 3, 4.5.1(b)(2), the certificate holder shall re-qualify the performance test equipment in accordance with NBIC Part 3, 4.5.1(b)(2). If the equipment changed was used to satisfy the requirements of verification testing, the certificate holder shall notify the National Board and additional verification testing, in accordance with the quality system, may be required.~~

~~4.5.2 OWNER-USER ASME CODE SECTION VIII STEAM TESTING~~

~~When ASME Code Section VIII valves are repaired by the owner for the owner's own use, valves for steam service may be tested on air for set pressure and, if possible, blowdown adjustment, provided the valve manufacturer's corrections for differential in set pressure between steam and air are applied to the set pressure.~~

~~4.5.3 LIFT ASSIST TESTING~~

~~a) A device may be used to apply an auxiliary lifting load on the spring of a repaired valve to establish the set pressure in lieu of the tests required in NBIC Part 3, 4.5.1a) 1) when such testing at full pressure:~~

~~1) may cause damage to the valve being tested; or~~

~~2) is impractical when system design considerations preclude testing at full pressure.~~

~~b) While actual valve blowdown and valve performance characteristics cannot be verified, valve set pressure may be determined to an acceptable degree of accuracy using this testing technique provided, as a minimum, that:~~

~~1) equipment utilized is calibrated as required in the quality system;~~

~~2) the device and test procedures that have proved to give accurate results are used and followed;~~

~~3) a static inlet pressure is applied with the test medium specified in NBIC Part 3, 4.5.1; and~~

~~4) adjustments are made in accordance with the valve manufacturer's recommendations to ensure proper lift and blowdown.~~

~~4.5.4 PRESSURE TEST OF PARTS~~

~~a) Parts used in repaired valves shall be pressure tested and documentation provided according to the following categories:~~

~~1) Replacement Parts~~

~~The "VR" Certificate Holder is responsible for documentation that the appropriate pressure test has been completed as required by the original code of construction.~~

2) Parts Repaired by Welding
These parts shall be subjected to a pressure test required by the original code of construction. The "VR" Certificate Holder shall be responsible for documentation of such test.
b) Parts repaired by re-machining within part specifications, lapping, or polishing do not require a pressure test.

FIGURE 5.7.5-e
Required markings for repair of ASME/National Board "V," "UV," and "HV" stamped pressure relief valves
®
REPAIRED BY CERTIFICATE HOLDER
(1)
TYPE/MODEL NUMBER
(1)
SET PRESSURE CAPACITY
(1) (1)
CDTP BP
REPAIR IDENTIFICATION
NATIONAL BOARD "VR" DATE REPAIRED
CERTIFICATE NUMBER

FIGURE 5.7.5-g
Required markings for repair or replacement of nuclear pressure relief valves
CERTIFICATE HOLDER
DATE OF REPAIR OR REPLACEMENT
NATIONAL BOARD
CERTIFICATE NOS.
COMPLETED IN ACCORDANCE WITH ASME SECTION XI
EDITION ADDENDA CODE CASE(S)
REPAIR
REPLACEMENT
®
NR VR
SET PRESSURE CAPACITY
(IF CHANGE IN
SET PRESSURE)

5.12 STAMPING REQUIREMENTS FOR PRESSURE RELIEF DEVICES

5.12.1 NAMEPLATES

Proper marking and identification of tested or repaired valves is critical to ensuring acceptance during subsequent inspections, and also provide for traceability and identification of any changes made to the valve. All operations that require the valve's seals to be replaced shall be identified by a nameplate as described in NBIC Part 3, 5.12.2 or 5.12.4.

5.12.2 REPAIR NAMEPLATE

When a pressure relief valve is repaired, a metal repair nameplate stamped with the information required below shall be securely attached to the valve adjacent to the original manufacturer's stamping or nameplate. If not mounted directly on the valve, the nameplate shall be securely attached so as not to interfere with valve operation and sealed in accordance with the quality system.
a) Prior to attachment of the repair nameplate, the previous repair nameplate, if applicable, shall be removed from the repaired valve.
b) As a minimum, the information on the valve repair nameplate (see NBIC Part 3, Figure 5.7.5-e) shall include:
1) The name of the repair organization preceded by the words "repaired by";
2) The "VR" repair symbol stamp and the "VR" certificate number;
3) Unique identifier (e.g., repair serial number, shop order number, etc.);

4) Date of repair;
5) Set pressure;
6) Capacity and capacity units (if changed from original nameplate due to set pressure or service fluid change);
7) Type/Model number (if changed from original nameplate by a conversion. See NBIC Part 3, S7.2); and
8) When an adjustment is made to correct for service conditions of superimposed back pressure and/or temperature or the differential between popping pressure between steam and air (see NBIC Part 3, 4.5.2), the information on the valve repair nameplate shall include the:
a. Cold Differential Test Pressure (CDTP); and
b. Superimposed Back Pressure (BP) (only when applicable).

5.12.3 CHANGES TO ORIGINAL PRESSURE RELIEF VALVE NAMEPLATE INFORMATION

a) If the set pressure is changed, the set pressure, capacity, and blowdown, if applicable, on the original nameplate or stamping shall be marked out, but left legible. The new capacity shall be based on that for which the valve was originally certified.
b) If service fluid is changed, the capacity, including units, on the original nameplate or stamping shall be marked out, but left legible. The new capacity shall be based on that for which the valve was originally certified, or if a conversion has been made, as described in NBIC Part 3, S7.2 on the capacity certification for the valve as converted.
c) If the Type/Model number is changed, the Type/Model number on the original nameplate shall be marked out, but left legible.
d) If the blowdown is changed, the blowdown on the original nameplate or stamping shall be marked out, but left legible. The new blowdown may be based on the current ASME Code requirements.
e) Incorrect information on the original manufacturer's nameplate shall be marked out, but left legible. Corrected information shall be indicated on the repair nameplate and noted on the document as required by the quality system.

5.12.4 TEST ONLY NAMEPLATE

a) Where a valve has been tested and adjusted, as permitted by NBIC Part 3, S7.10.1, but not otherwise repaired, a "Test Only" nameplate shall be applied that contains the following information:
1) Name of responsible organization;
2) Date of test;
3) Set Pressure; and
4) Identification, such as "Test Only."
b) A "Test Only" nameplate is also recommended when periodic testing has been performed, even when no adjustments have been made, for the purpose of identifying the date the valve was tested.
c) The existing repair nameplates, if applicable, shall not be removed during such testing.

5.12.5 REPLACEMENT OF ILLEGIBLE OR MISSING NAMEPLATES

a) Illegible Nameplates
When information on the original manufacturer's or assembler's nameplate or stamping is illegible, but traceability can be confirmed, the nameplate or stamping will be augmented by a nameplate furnished by the "VR" Stamp Holder stamped "Duplicate." It shall contain all information that originally appeared on the nameplate or valve, as required by the applicable section of the ASME Code, except the "V," "HV," or "UV" symbol and the National Board mark. The repair organization's nameplate, with the "VR" stamp and other required data specified in NBIC Part 3, 5.12.2, will make the repairer responsible to the owner and the Jurisdiction that the information on the duplicate nameplate is correct.
b) Missing Nameplates
When the original valve nameplate is missing, the repair organization is not authorized to perform repairs to the valve under the "VR" program, unless positive identification can be made to that specific valve and verification that the valve was originally stamped with an ASME "V" or "UV" symbol or marked with an ASME "HV" symbol. Valves that can be positively identified will be equipped with a duplicate nameplate, as described in this section, in addition to the repairer's "VR"-stamped nameplate. The repairer's responsibilities for accurate data, as defined in NBIC Part 3, 5.12.5 a) (Illegible Nameplates), shall apply.

PART 3 — REPAIRS AND ALTERATIONS
c) Marking of Original Code Stamp
When a duplicate nameplate is affixed to a valve, as required by this section, it shall be marked "Sec. I," "Sec. IV," or "Sec. VIII," as applicable, to indicate the original ASME Code stamping.

SUPPLEMENT 7
REQUIREMENTS FOR REPAIRS TO PRESSURE RELIEF DEVICES
S7.1 SCOPE

This Supplement provides general requirements that apply to repairs to pressure relief valves. Repairs may be required because of defects found during periodic inspections because testing has identified that valve performance does not meet the original code of construction requirements, failure during operation, or for routine preventative maintenance.

S7.2 GENERAL REQUIREMENTS

a) Repair of a pressure relief valve is considered to include the disassembly, replacement, re-machining, or cleaning of any critical part, lapping of a seat and disc, reassembly, adjustment, testing, or any other operation that may affect the flow passage, capacity, function, or pressure-retaining integrity.

b) Conversions, changes, or adjustments affecting critical parts are also considered repairs. The scope of conversions may include changes in service fluid and changes such as bellows, soft seats, and other changes that may affect Type/Model number provided such changes are recorded on the document as required for a quality system and the repair nameplate. (See NBIC Part 3, 5.12.1).

c) The scope of repair activities shall not include changes in ASME Code status.

d) When a repair is being performed under the administrative requirements for National Board Accreditation, a repair shall consist of the following operations as a minimum:

1) Complete disassembly, cleaning, and inspection of parts, repair or replacement of parts found to be defective, reassembly, testing as required by NBIC Part 3, 4.5, sealing and application of a repair nameplate. When completed, the valve's condition and performance shall be equivalent to the standards for new valves.

2) The administrative requirements for National Board Accreditation apply only to valves that are stamped with an ASME "V," "UV," or "NV" Code symbol or marked with an ASME "HV" symbol and have been capacity certified on the applicable fluid by the National Board.

S7.3 WELD REPAIRS TO PRESSURE RELIEF VALVE PARTS

a) The Quality System Manual may include controls for the "VR" Certificate Holder to have the pressure relief valve part repaired by a National Board "R" Certificate Holder, per this Supplement provided the following documentation is provided to the "R" Certificate Holder:

1) Code of Construction, year built;

2) Part identification;

3) Part material specified; and

4) "VR" Certificate Holder's unique identifier for traceability as required by the Repair Inspection Program.

PART 3 — REPAIRS AND ALTERATIONS

b) Prior to performing weld repairs to pressure relief valve (PRV) parts, the "R" Certificate Holder shall receive repair information required by NBIC Part 3, S7.3 a) from the "VR" Certificate Holder responsible for the pressure relief valve repair.

1) PRV part weld repairs shall be performed under the "R" Certificate Holder's quality system; however, the requirements for in-process involvement of the Inspector (see NBIC Part 3, 1.3.2) may be waived. The requirement for stamping is waived.

2) The process of identifying and controlling repairs shall be documented in the "R" Certificate Holder's quality system.

3) PRV part repairs shall be documented on a Form R-1 with a statement under Remarks "PRV Part Repair." The owner's name and location of installation shall be that of the "VR" Certificate Holder. The information received from the "VR" Certificate Holder as required in Supplement S7.3(a) shall be noted under "Description of Work."

4) Upon completion of the repair, the repaired part and completed Form R-1 shall be returned to the "VR" Certificate Holder responsible for completing the PRV repair.

S7.4 MATERIALS FOR PRESSURE RELIEF DEVICES

The materials used in making repairs shall conform to the requirements of the original code of construction. The "VR" Certificate Holder is responsible for verifying identification of existing materials from original data, drawings, or unit records and identification of the materials to be installed.

S7.5 REPLACEMENT PARTS FOR PRESSURE RELIEF DEVICES

a) Critical parts shall be fabricated by the valve manufacturer or to the manufacturer's specifications. Critical parts are those that may affect the valve flow passage, capacity, function, or pressure-retaining integrity.
b) Critical parts not fabricated by the valve manufacturer shall be supplied with material test certification for the material used to fabricate the part.
c) Replacement critical parts receiving records shall be attached or be traceable to the valve repair document (see NBIC Part 3, S7.3[a]). These records shall conform to at least one of the following.
1) Receiving records documenting the shipping origin of the part fabricated by the valve manufacturer (such as packing list) from the valve manufacturer or assembler of the valve type;
2) A document prepared by the "VR" Certificate Holder certifying that the replacement part used in the repair has the manufacturer's identification on the part or is otherwise labeled or tagged by the manufacturer and meets the manufacturer's acceptance criteria (e.g., critical dimensions found in maintenance manual);
3) Receiving records for replacement critical parts obtained from a source other than the valve manufacturer or assembler of the valve type shall include a *Certificate of Compliance* that provides as a minimum:
a. The part manufacturer and part designation;
b. A certifying statement that either:
1. The part was fabricated by the valve manufacturer and meets the manufacturer's acceptance criteria (e.g., critical dimensions found in maintenance manual), or
2. The part meets the manufacturer's specifications and was fabricated from material as identified by the attached material test report;
c. The signature of an authorized individual of the part source;
d. The name and address of the part source for whom the authorized individual is signing.
d) Material for bolting shall meet the manufacturer's specification, but does not require material test certification, if marked as required by the material specification.

S7.6 INITIAL ADJUSTMENTS TO PRESSURE RELIEF VALVES

The initial installation testing and adjustments of a new pressure relief valve on a boiler or pressure vessel are not considered a repair if made by the manufacturer or assembler of the valve.

S7.7 FIELD REPAIR

Repair organizations may obtain a "VR" *Certificate of Authorization* for field repair, either as an extension to their in-shop/plant scope, or as a field-only scope, provided that:
a) Qualified technicians in the employ of the certificate holder perform such repairs;
b) An acceptable quality system covering field repairs, including field audits, is maintained;
c) Functions affecting the quality of the repaired valves are supervised from the address of record where the "VR" certification is issued.

S7.8 AUDIT REQUIREMENTS

Upon issuance of a *Certificate of Authorization*, provided field repairs are performed, annual audits of the work carried out in the field shall be performed to ensure that the requirements of the certificate holder's quality system are met. The audit shall include, but not be limited to, performance testing, in accordance with NBIC Part 3, 4.5, of valve(s) that were repaired in the field. The audits shall be documented.

S7.9 USE OF OWNER-USER PERSONNEL

For the repair of pressure relief valves at an owner-user's facility for the owner-user's own use, the "VR" Certificate Holder may utilize owner-user personnel to assist certificate holder technician(s) in the performance of repairs provided:
a) The use of such personnel is addressed in the "VR" Certificate Holder's quality system;
b) The owner-user personnel are trained and qualified in accordance with NBIC Part 3, S7.10;
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c) Owner-user personnel work under direct supervision and control of the "VR" Certificate Holder's technician(s) during any stage of the repair when they are utilized;
d) The "VR" Certificate Holder shall have the authority to assign and remove owner-user personnel at its own discretion; and
e) The names of the owner-user personnel utilized are recorded on the document, as required, for a quality system.

S7.10 GUIDE TO JURISDICTIONS FOR AUTHORIZATION OF OWNERS-USERS TO MAKE ADJUSTMENTS TO PRESSURE RELIEF VALVES