

**Case: BC12- 01**  
**Routine Repairs in Tennessee**  
**Extension to BC01-15**  
**Rule 0800-3-3.03**

*Statement of Need:* Boiler Supply Company is requesting approval from the Tennessee Board of Boiler Rules to allow use of section 3.3.2 of Part 3 of the NBIC to perform routine repairs by State of Tennessee licensed boiler repair companies that possess a valid National Board Certificate of Authorization to repair boilers and pressure vessels.

*Background:* Since its inclusion into the NBIC twenty years ago the allowance of routine repairs has been viewed with much concern and scrutiny by some jurisdictions, State of Tennessee included. Neither the National Board nor State of Tennessee has shown record of an incident or failure that can be directly attributed to the use of a routine repair.

In 2001, the Board made a ruling at that time that the State of Tennessee did not recognize "Routine Repairs". However, BC01-15 was ruled on following consideration of current & past allowances and a recommendation by the then Chief Inspector, which allowed replacement of non-welded firetubes without the need of in-process inspection of a commissioned boiler inspector (authorizing inspector).

Since the above mentioned Board Case was issued there has been over a decade of recorded routine repairs perform in accepting jurisdictions with no associated incidence.

The following is the definition and list of acceptable routine repairs that are authorized by the National Board Inspection Code (NBIC) Part 3, Section 3.3.2:

- a) *Routine repairs are repairs for which the requirements for in-process involvement by the Inspector and stamping by the "R" Certificate Holder may be waived as determined appropriate by the Jurisdiction and the Inspector. All other applicable requirements of this Code shall be met. Prior to performing routine repairs, the "R" Certificate Holder should determine that routine repairs are acceptable to the Jurisdiction where the pressure-retaining item is installed;*
- b) *The Inspector, with the knowledge and understanding of jurisdictional requirements, shall*

*be responsible for meeting jurisdictional requirements and the requirements of this Code;*

- c) *The "R" Certificate Holder's Quality System Program shall describe the process for identifying, controlling, and implementing routine repairs. Routine repairs shall be documented on Form R-1 with this statement in the Remarks section: "Routine Repair";*
- d) *Repairs falling within one or more of the following categories may be considered routine:*
  - 1) *Welded repairs or replacements of valves, fittings, tubes, or pipes NPS 5 (DN 125) in diameter and smaller, or sections thereof, where neither postweld heat treatment nor NDE other than visual is required by the original code of construction. This includes their attachments such as clips, lugs, skirts, etc., but does not include nozzles to pressure-retaining items;*
  - 2) *The addition or repair of nonload bearing attachments to pressure-retaining items where postweld heat treatment is not required;*
  - 3) *Weld buildup of wasted areas in heads and shells not exceeding an area of 100 sq. inches (64,520 sq. mm) or a thickness of 25% of nominal wall thickness or Y, inch (13 mm), whichever is less;*
  - 4) *Corrosion resistance weld overlay not exceeding 100 sq. in. (64,520 sq. mm).*

*Inquiry:* May a repair organization that possesses a State of Tennessee license to engage in the erection and repair of boilers and pressure vessels and a valid National Board Certificate of Authorization to repair boilers and pressure vessels be allowed to perform *Routine Repairs* as defined in section 3.3.2 of Part 3 of the NBIC (Repairs and Alterations) within the State of Tennessee?

*Reply:* Yes



**Case: BC01-15**  
**Routine Repairs in Tennessee**  
**Rule 0800-3-3-.03**

*Inquiry:* What is the position of the State of Tennessee Boiler Board regarding their acceptance of "Routine Repairs" per the NBIC?

*Reply:* It is the opinion of the Board that the State of Tennessee does not recognize Routine Repairs". However, the replacement of tubes (boiler and U.P.V.) may be replaced by mechanical means as long as there is no welding involved in the repair. These repairs will be handled in the same manner as welded repairs minus the in-process inspection by the inspector. The repair must be documented on a National Board R-1 form and must be signed by the authorizing inspector or an employee of his A.I.A.

*Inquiry:* What repairs are required to be documented on a Form R-1, "Report of Welded Repair"?

*Reply:* It is the opinion of the Board that the proper name of Form R-1 is "Report of Repair"; therefore all repairs (mechanical and welding) shall be documented on the Form R-1. For mechanical repairs, item 7 of the repair shall be left blank and "Mechanical Repair" shall be included under "Description of Work".

*Inquiry:* Where does the boundary of the NBIC start/stopped regarding repairs? Example: blow down line replacement; screwed piping connected to water controls, etc.

*Reply:* It is the opinion of the Board that it is not the Tennessee Board of Boiler Rules' position to determine the boundaries of where the NBIC starts and/or stops.

**HISTORICAL DOCUMENT**

## HISTORICAL DOCUMENT

The term "owner-used" was discussed at length in search of a definitive interpretation of the term. Since no conclusion was reached about whether it means "owner and user" or "owner or user", Board Chairman Elliott asked legal counsel to do further research and asked that this issue be scheduled for discussion at that meeting.

At this time, Chairman Elliott resumed the Chair and the following items were heard.

Item 01-14 – Presentation and discussion concerning upcoming legislation:

- 1) Require all newly installed boilers (High and Low Pressure) and second-hand boilers and pressure vessels be permitted prior to being installed in the State of Tennessee.
- 2) Require all installers of high pressure and low pressure boilers to be licensed with the Boiler and Elevator Division
- 3) Set requirements for enforcing monetary penalties of violations:
  - a) operating without permit
  - b) installing without permit
  - c) Authorized Inspection Agency failing to inspect or report inspections.

Chief Inspector Martin Toth presented a summary of Proposed Legislation regarding the above mentioned subjects. A copy of his report is attached to these minutes. No action is necessary for these proposals to be considered by the Commissioner, but Chairman Elliott asked that each member look at them with the idea of suggestions or changes and get them to Martin by next week.

Item 01-15 – Sidney F. Montgomery, Manager of Engineering Services, Hartford Steam Boiler, has requested, by letter, the Board's position on the following questions:

- 1) What is the position of the State of Tennessee Boiler Board regarding their acceptance of "Routine Repairs" per the NBIC?
- 2) What repairs are required to be documented on a Form R-1 Report of Welded Repair?
- 3) Where does the boundary of the NBIC start/stop regarding repairs? Example: blowdown line replacement, screwed piping connected to water controls, etc.?

Following discussion, the Chair ruled that we cannot interpret NBIC rules and regulations, however we can answer "what is a repair and how is it documented on R-1", and further that we need to:

- 1) Set an interpretation on paper that routine repairs be limited to non-welding replacement of tubes.
- 2) We are not authorized to interpret all code repairs.
- 3) Interpretation shall be by NBIC.

Dr. Canonico asked for a motion on these items, Mr. Lunn moved that Item #1 be approved, was seconded by Mr. Hiter and the ayes prevailed with one abstention. Mr. Hiter moved that item 2 be approved, was seconded by Dr. Canonico and it passed on a voice vote. Dr. Canonico moved that item 3 be approved, was seconded by Mr. Hiter and it also passed on a voice vote.

VII. The next Boiler Board meeting will be held in Nashville on December 5, 2001.

VIII. The meeting adjourned at 3:45PM.

Item 01-13 – It is requested that the Board rule and provide an interpretation of the term “Owner-User Inspection Agency”, in 0800-3-3.01 Definitions, items (26) and (27) with regard to “Owner or User” versus “Owner and User”. As a result of the split mentioned in item I above, Eastman will have two Accredited Owner-User Inspection Organizations with National Board Commissioned Inspectors in both organizations. Approximately 700 registered pressure vessels will be owned by the Acetate Fibers, PET and Plastics Company and operated by Eastman Company. No change in operation or location is involved, and in fact, there is no change in the operating personnel or current commissioned vessel inspectors at the Kingsport site. The user, Eastman Company, will be legally responsible for the safe installation, operation, maintenance, repair and alteration of these vessels. It is requested that the Board approve Eastman Inspectors continued in-service and acceptance inspection of these vessels under the provision of the Owner-User Inspection program. It is expected that an official interpretation from the NBIC Committee will be available to the Board concerning the definition of “Owner-User” in Appendix 4 of the NBIC. Mr. Gary Palmer, TED Inspector, Engineering Technologist, will present this item.

Item 01-14 – Presentation and discussion concerning upcoming <sup>Proposed</sup> legislation:

- 1) Require all newly installed boilers (High and Low Pressure) and second-hand boilers and pressure vessels be permitted prior to being installed in the State of Tennessee.
- 2) Require all installers of high-pressure and low-pressure boilers to be licenses with the Boiler and Elevator Division, to install high-pressure and low-pressure boilers in the State of Tennessee.
- 3) Set requirements for enforcing monetary penalties of violations:
  - a) operating without permit
  - b) installing without permit
  - c) Authorized Inspection Agency failing to inspect or report inspections

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- 3) Where does the boundary of the NBIC start/stop regarding repairs? Example: blowdown line replacement; screwed piping connected to water controls, etc.

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VII. THERE ARE FIVE (5) APPLICANTS SITTING FOR THE NATIONAL BOARD EXAMINATION ON SEPTMEBER 5 & 6, 2001

VIII. THE NEXT BOILER BOARD MEETING WILL BE HELD IN NASHVILLE ON DECEMBER 5, 2001.

IX. ADJOURNMENT.

HISTORICAL DOCUMENT

### RC-2031 ROUTINE REPAIRS

Prior to performing routine repairs the "R" Certificate Holder should determine that routine repairs are acceptable to the jurisdiction where the pressure retaining item is installed.

a. The four categories of routine repairs are:

1. Welded repairs or replacements of tubes or pipes, or sections thereof five (5) NPS in diameter and under, and their attachments.

2. The addition or repair of non-load bearing attachments to pressure retaining items where postweld heat treatment is not required.

3. Weld build-up of wasted areas in shells and heads not exceeding 100 sq. in. or 25% of nominal wall thickness or 1/2 inch, whichever is less.

4. Corrosion resistance weld overlay not exceeding 100 sq. in.

b. Routine repairs shall be performed under the "R" Certificate Holder's quality system program; however, the requirement for in-process involvement of the Inspector and stamping may be waived. See RC-2060.

c. The process of identifying, controlling and implementing routine repairs shall be documented in the "R" Certificate Holder's quality system program.

*we maintain forms*  
d. Routine repairs shall be documented on a Form R-1 with a statement on line 9, Remarks: "Routine Repair".

1-15  
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