

13 NCAC 13 .0214 EXTENDED PRESSURE EQUIPMENT OPERATING CERTIFICATES

(a) G.S. 95-69.16 and 13 NCAC 13 .0211(l) of this Chapter allows the Commissioner, as delegated to the Chief Inspector, to modify the inspection frequency for individual pressure equipment if it is determined that the new frequency will provide for the safety attained by the normal inspection frequency as defined in this Chapter. Maintenance programs, the condition of the pressure equipment, and a baseline inspection help to determine if the equipment is eligible for extended certification. The Chief Inspector may allow certificate renewal frequencies of up to three years. Companies wishing to have their pressure equipment given an extended certification must apply by letter to the Chief Inspector requesting extended certification.

(b) For a first time extended inspection frequency, the following shall apply to both new and existing equipment:

- (1) **Base Line Inspections:** At the outset of an extended inspection frequency, a base line inspection must be conducted of all inside and outside accessible pressure boundaries. The inspected area shall be examined visually by a North Carolina Department of Labor, Boiler Safety Bureau Inspector Supervisor along with a Deputy Inspector for evidence of cracking, discoloration, wear, pitting, bulging, blistering, corrosion and erosion, arc strikes, gouges, dents, and other signs of surface irregularities. Areas that are suspect shall be non-destructively examined, as defined in this Chapter, by a method acceptable to the Inspector Supervisor and Deputy Inspector. For areas that are still suspect after such examination, a more thorough supplemental examination and engineering evaluation of the discontinuities shall be conducted and discussed with the Chief Inspector or designee;
- (2) **Inspection Mapping and Records:** An inspection grid map shall be constructed for each pressure component detailing the areas found suspect. The grid shall not exceed four inch square. Suspect area shall be described in detail and photographs of such areas shall be taken. These records shall be kept and made available to the Deputy Inspector prior to the next required inspection;
- (3) **Base Line Inspection of Boiler Tubes:** The boiler tubes shall be examined by nondestructive examination. Tubes shall be examined for wear, corrosion, erosion, thinning, bulging, blistering, dents, discoloration, cracking and any other surface irregularities. Areas that are suspect shall be noted and discussed with the Inspector Supervisor and Deputy Inspector; and
- (4) **Boiler Tube Inspection Mapping and Record:** Where suspect tubes are identified, the boiler tubes shall be numbered in a logical sequence and the location of any suspect area shall be precisely defined and described in detail. Photographs of such areas shall be taken. These records shall be kept and made available to the Inspector Supervisor and Deputy Inspector prior to the next required inspection.

(c) **Scheduling of Inspections for Extended Certificate:** Approximately two months prior to a scheduled outage in which the boiler can be inspected, and prior to the current certificate expiration, the owner shall do the following in order to initiate the inspection process:

- (1) Send a letter addressed to the Chief Inspector requesting the extended certificate;
- (2) Contact the North Carolina Department of Labor, Boiler Safety Bureau at 919-707-7918 and request to speak with an Inspector Supervisor for the purpose of scheduling the inspections required for extending the boiler inspection certificate expiration for to up to 36 months; and
- (3) Agree with the Inspector Supervisor and Deputy Inspector on a date to meet for the external inspection of the boiler and to review reports. The boiler must be operating when the external inspection is done. Heat recovery boilers with less than one percent capacity factor per year may be excluded from the need to operate during the external inspection but a letter requesting the exclusion must be sent to the Chief Inspector stating the capacity factor for the year before such an exclusion request can be granted.

(d) **External Inspection:** All report forms may be obtained from either NBIC or ASME. The following reports must be available to the Inspector Supervisor and Deputy Inspector at the external inspection:

- (1) NBIC R1 forms for the past five years for initial inspections and since the previous inspection for renewals;
- (2) A list of alterations scheduled, and those alterations done since the last internal inspection with the NBIC R2 forms;
- (3) Safety valve testing and repair reports for the past five years for initial inspections and since the previous inspection for renewals;
- (4) Fitness for Service reports for headers for the past five years for initial inspections and since the previous inspection for renewals. All Fitness for Service reports shall be documented on the

National Board Form NB-403 or other created form that includes all information required on the Form NB-403;

- (5) Side elevation drawing of the boiler (8 ½ inches by 11 inches);
 - (6) Steam & Mud drums - Original drum thickness, drawings, and manufacturer's data reports if available;
 - (7) Copy of the last operating certificate and copies of the last three years of inspection reports;
 - (8) Reports of annual external inspections by owner's insurance company or a Boiler Safety Bureau Deputy Inspector.
- (e) Equipment inspection requirements during outage or shut-down:
- (1) An operational test for all safety valves shall be conducted after the equipment has been restarted. After the operational test, the organization performing the test shall affix an updated inspection tag to the valve. The Deputy Inspector shall verify the updated inspection tag and review any associated test report. In lieu of operational tests, it is acceptable to replace safety valves with new valves or valves reworked by a National Board "VR" or "NVR" authorized company;
 - (2) Inspect the pressure equipment internally; and
 - (3) Inspect the drums and shells using the following methods:
 - (A) Examine penetrations into the drum or shell wall for cracking: if the nozzles are visible from inside the drum or shell, then a visual examination is satisfactory; otherwise ultrasonically examine the nozzles, from the outside surface, of at least 20 percent of the pressure equipment nozzles;
 - (B) Visually examine inside the heads; and
 - (C) When access permits, crawl through the drum or shell for a visual examination.
- (f) Setting the Certificate Interval: If the requirements of this Rule are met, the Deputy Inspector shall submit an inspection report to the Chief Inspector with the recommendation for the extended certificate.
- (g) Follow-up and Interim Inspections: External inspections of high pressure boilers are required six months after the certificate renewal, and then annually thereafter. The external inspections may be performed by the Boiler Safety Bureau Deputy Inspectors or by the owner's insurance inspector. The results of the inspection shall be documented on an inspection report and submitted to the Chief Inspector, North Carolina Department of Labor, Boiler Safety Bureau.

*History Note: Authority G.S. 95-69.11; 95-69.14; 95-69.16;
Eff. July 1, 2011;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 22, 2018;
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