



**WEST VIRGINIA SECRETARY OF STATE**

**MAC WARNER**

**ADMINISTRATIVE LAW DIVISION**

**eFILED**

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Office of West Virginia  
Secretary Of State

**NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE AND FILING WITH THE LEGISLATIVE RULE-  
MAKING REVIEW COMMITTEE**

AGENCY: Labor TITLE-SERIES: 42-03

RULE TYPE: Legislative Amendment to Existing Rule: Yes Repeal of existing rule: No

RULE NAME: Steam Boiler Inspection

**PRIMARY CONTACT**

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CITE STATUTORY AUTHORITY: W. Va. Code §21-3-7

EXPLANATION OF THE STATUTORY AUTHORITY FOR THE LEGISLATIVE RULE, INCLUDING A DETAILED SUMMARY OF THE EFFECT OF EACH PROVISION OF THE LEGISLATIVE RULE WITH CITATION TO THE SPECIFIC STATUTORY PROVISION WHICH EMPOWERS THE AGENCY TO ENACT SUCH RULE PROVISION:

The statutory authority for this rule is W. Va. Code §21-3-7, which is a general grant of authority to the Commissioner to prescribe rules to carry out the provisions of this section, including "rules and regulations under which boilers may be constructed and operated" and establishing fees for the inspection of boilers, for processing inspection reports from insurance companies, for the issuance of annual permits to operate boilers and for the commissioning of insurance company boiler inspectors.

IS THIS FILING SOLELY FOR THE SUNSET PROVISION REQUIREMENTS IN W. VA. CODE §29A-3-19(e)? No

IF YES, DO YOU CERTIFY THAT THE ONLY CHANGES TO THE RULE ARE THE FILING DATE, EFFECTIVE DATE AND AN EXTENSION OF THE SUNSET DATE? No

DATE eFiled FOR NOTICE OF HEARING OR PUBLIC COMMENT PERIOD: 7/16/2020

DATE OF PUBLIC HEARING(S) OR PUBLIC COMMENT PERIOD ENDED: 8/17/2020

COMMENTS RECEIVED: No

(IF YES, PLEASE UPLOAD IN THE COMMENTS RECEIVED FIELD COMMENTS RECEIVED AND RESPONSES TO COMMENTS)

PUBLIC HEARING: No

(IF YES, PLEASE UPLOAD IN THE PUBLIC HEARING FIELD PERSONS WHO APPEARED AT THE HEARING(S) AND TRANSCRIPTS)

RELEVANT FEDERAL STATUTES OR REGULATIONS: No

WHAT OTHER NOTICE, INCLUDING ADVERTISING, DID YOU GIVE OF THE HEARING?

N/A

SUMMARY OF THE CONTENT OF THE LEGISLATIVE RULE, AND A DETAILED DESCRIPTION OF THE RULE'S PURPOSE AND ALL PROPOSED CHANGES TO THE RULE:

This rule regulates the operation and inspection of high pressure steam boilers and forced flow steam generators in WV and the certification of inspectors and special inspectors of high pressure steam boilers and forced flow steam generators.

The proposed changes to the rule include the incorporation by reference of the National Board of Boiler and Pressure Vessel Inspectors Inspection Code, the National Board of Boiler and Pressure Vessel Inspectors Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations, and the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.

In addition, the proposed rule defines terms, establishes application requirements for permits to install and permits to operate a high pressure steam boiler or forced flow steam generator, establishes requirements for the issuance of permits to install and permits to operate a high pressure steam boiler or forced flow steam generator, establishes high pressure steam boiler and forced flow steam generator inspection requirements, provides for the commissioning of steam boiler inspectors and special inspectors, and establishes fees.

STATEMENT OF CIRCUMSTANCES WHICH REQUIRE THE RULE:

The current Steam Boiler Inspection Rule is antiquated. Other than minor periodic updates and revisions, the rule has remained largely unchanged since it was first adopted in 1945. A large portion of the rules provisions have been superceded by the three codes and rules and regulations noted above.

SUMMARIZE IN A CLEAR AND CONCISE MANNER THE OVERALL ECONOMIC IMPACT OF THE PROPOSED LEGISLATIVE RULE:

A. ECONOMIC IMPACT ON REVENUES OF STATE GOVERNMENT:

DOL estimates that the changes to the fees in the proposed rule will generate approximately \$20,000 in additional revenue per year.

B. ECONOMIC IMPACT ON SPECIAL REVENUE ACCOUNTS:

Same as above.

C. ECONOMIC IMPACT OF THE LEGISLATIVE RULE ON THE STATE OR ITS RESIDENTS:

There will be no economic impact related to the adoption of the National Board of Boiler and Pressure Vessel Inspectors Inspection Code, the National Board of Boiler and Pressure Vessel Inspectors Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations, and the American Society of Mechanical Engineers Boiler and Pressure Vessel Code because high pressure steam boilers and forced flow steam generators currently must already comply with these standards and requirements in order to operate in WV.

DOL is not proposing any increases to 5 fees and is proposing to reduce 1 fee.

DOL is proposing modest fee increases which would have an economic impact on the owners and operators of high pressure steam boilers and forced flow steam generators. The proposed fee for an annual permit to operate a high pressure steam boiler or forced flow steam generator will increase from \$50 to \$90. The proposed fee for an annual permit to operate a hobby boiler will increase from \$25 to \$50.

D. FISCAL NOTE DETAIL:

Effect of Proposal	Fiscal Year		
	2020 Increase/Decrease (use "-")	2021 Increase/Decrease (use "-")	Fiscal Year (Upon Full Implementation)
<b>1. Estimated Total Cost</b>	0	0	0
<b>Personal Services</b>	0	0	0
<b>Current Expenses</b>	0	0	0
<b>Repairs and Alterations</b>	0	0	0
<b>Assets</b>	0	0	0
<b>Other</b>	0	0	0
			+\$20,000

**2. Estimated Total Revenues**

**E. EXPLANATION OF ABOVE ESTIMATES (INCLUDING LONG-RANGE EFFECT):**

The proposed rule would not result in any additional costs to the Division of Labor.

DOL estimates that the proposed fee increases described above would generate an additional \$20,000 in revenue.

**BY CHOOSING 'YES', I ATTEST THAT THE PREVIOUS STATEMENT IS TRUE AND CORRECT.**

**Yes**  
**Mitchell E Woodrum -- By my signature, I certify that I am the person authorized to file legislative rules, in accordance with West Virginia Code §29A-3-11 and §39A-3-2.**

42 CSR 3

TITLE 42  
LEGISLATIVE RULE  
DIVISION OF LABOR

SERIES 3

HIGH PRESSURE STEAM BOILER AND FORCED FLOW STEAM GENERATOR INSPECTION REQUIREMENTS

**§42-3-1. General.**

1.1. Scope. -- This ~~Legislative rule is promulgated for~~ establishes the requirements for an application for a permit to install a high pressure steam boiler or a forced flow steam generator, the issuance of permits to operate a high pressure steam boiler or a forced flow steam generator, the inspection of high pressure steam boilers and forced flow steam generators, fees for inspections of and the issuance of permits for high pressure steam boilers and forced flow steam generators, the certification of inspectors and special inspectors, and grounds for the revocation of a permit to operate a high pressure steam boiler or a forced flow steam generator. enforcement of W. Va. Code §21-3-7 relating to Steam Boilers under authorization under that same section of the West Virginia Code.

1.2. Authority. -- W. Va. Code §21-3-7.

1.3. Filing Date. -- ~~April 21, 2008.~~

1.4. Effective Date. -- ~~July 1, 2008.~~

1.5. Sunset Date. This rule shall terminate and have no further force or effect upon the expiration of 10 years from its effective date.

**§42-3-2. Application and Enforcement.**

2.1. Application. This legislative rule applies to high pressure steam boiler and forced flow steam generator inspectors and special inspectors, to the installation, inspection, and operation of high pressure steam boilers and forced flow steam generators, and to any person responsible for the inspection or operation of a high pressure steam boiler or forced flow steam generator.

2.2. Enforcement. The enforcement of this legislative rule is vested in the West Virginia Division of Labor.

**§42-3-~~2~~ 3. Definitions.**

The following definitions are in addition to the terms defined in the National Board's Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations (NB-132), Part 1, Definition of Terms," incorporated by reference in subsection 4.2. of this rule:

~~2.1.~~ 3.1. "Act" means W. Va. Code §21-3-7, "Regulation of operation of steam boilers."

3.2. "Appurtenance" means any control, fitting, appliance or device attached to or working in conjunction with a high pressure steam boiler.

3.3. “ASME” means the American Society of Mechanical Engineers, located at Two Park Avenue, New York, NY 10016-5990, and whose website is <https://www.asme.org/>.

3.4. “Certificate of Competency” means the document issued by the Commissioner to an inspector or special inspector who meets the commissioned inspector qualifications established by the National Board.

~~2.1.~~ ~~3.5.~~ Approved or special inspector” means an inspector certified by the Commissioner as having met the minimum qualifications for boiler inspectors established by the National Board. “Chief inspector” or “inspector” means the commissioned inspector employed by the Division of Labor.

3.6. “Commission Card” means the annual card issued to an inspector or special inspector by the National Board of Boiler and Pressure Vessel Inspectors.

3.7. “Commissioned inspector” means an inspector or special inspector who meets the education, experience, employment and examination requirements of the National Board, who is qualified to perform high pressure steam boiler or forced flow steam generator inspections, and who has a current Commission Card issued by the National Board.

~~2.3.~~ 3.8. “Commissioner” means the state Commissioner of the West Virginia Division of Labor, and his or her authorized representatives.

3.9. “Days” means calendar days unless otherwise specified.

~~2.4.~~ 3.10. “Division” means the West Virginia Division of Labor, and its authorized representatives.

~~2.5.~~ 3.11. “Forced flow steam generator” or “generator,” as used in this rule, means a boiler device that which has no fixed steam and water line uses a once-through, forced flow design to convert incoming water to steam during a single pass through a water coil.

3.12. “Hydrostatic pressure test” means an examination of a new or repaired high pressure steam boiler to ensure that the boiler is free from leakage conducted in accordance with the National Board Inspection Code, Part 4.3.1, “Pressure Testing.”

3.13. “Inspection” means the internal and external examination of a high pressure steam boiler or forced flow steam generator while the device is not under pressure and includes an examination of the boiler’s or generator’s design, construction, installation, condition, appurtenances, and operation. Inspection can also include the examination of a boiler or generator after repairs or alterations have been performed.

3.14. “Inspection report” means one of the National Board’s report forms, or a form that contains the same information as the appropriate National Board form, completed by an inspector or special inspector detailing the results of a high pressure steam boiler or forced flow steam generator inspection.

3.15. “Jurisdiction,” when used in the standards incorporated by reference in Section 4 of this rule, means the State of West Virginia.

3.16. “Manufacturer’s Data Report” or “MDR” means the report submitted by a high pressure steam boiler or forced flow steam generator manufacturer to the National Board that registers the

boiler's or generator's compliance with the design and construction specifications in the ASME Boiler and Pressure Vessel Code and that includes the inspection results of the boiler or generator by an inspector or special inspector.

~~2.2.~~ 3.17. "National Board" or "Board" means the National Board of Boiler and Pressure Vessel Inspectors, located at 1055 Crupper Avenue, Columbus, OH 43229, and whose website address is <https://www.nationalboard.org/>.

3.18. "National Board number" means the unique number assigned to a high pressure steam boiler or forced flow steam generator by the National Board.

~~2.6.~~ 3.19. "NBIC" means the National Board of Boiler and Pressure Vessel Inspectors Inspection Code.

3.20. "Owner" or "operator" means the person, firm, or corporation legally responsible for the safe installation, operation, and maintenance of a high pressure steam boiler or forced flow steam generator.

3.21. "Permit to install" means the document issued by the Commissioner to the owner or operator of a high pressure steam boiler or forced flow steam generator after receipt of a complete application for a permit to install a high pressure steam boiler or forced flow steam generator.

3.22. "Permit to operate" means the document issued by the Commissioner to the owner or operator of a high pressure steam boiler or forced flow steam generator after receipt of an inspection report confirming that the boiler or generator complies with the NBIC, Part 2, "Inspections."

3.23. "Repair" means the work necessary to restore a high pressure steam boiler or forced flow steam generator to a safe and satisfactory operating condition, or as further defined in the NBIC, Part 3, "Repairs and Alterations" and the ASME Boiler and Pressure Vessel Code, Section 1, "Power Boilers."

3.24. "Special inspector" means an inspector employed by or contracted with an insurance company to inspect the company's insured high pressure steam boilers and forced flow steam generators and who is certified by the Commissioner as having met the minimum qualifications for boiler inspectors established by the National Board.

3.25. "Temporary use" means an installation of a high pressure steam boiler or forced flow steam generator for a specified or limited amount of time and one that is not meant to become a permanent installation.

3.26. "WV Serial Number" means a unique identifying serial number assigned by the Division to a high pressure steam boiler or forced flow steam generator, denoted as "W-----W".

#### **§42-3-4. Adoption of Standards.**

~~3.10. The Commissioner has adopted the American Society of Mechanical Engineers (ASME) Boiler Code, Amendments, Addendums, and Interpretations thereto, and the National Board of Boiler and Pressure Vessel Inspectors Inspection Code (NBIC), Amendments, Addendums, and Interpretations thereto for both new and existing installations as the standards to be used by inspectors in the State of West Virginia.~~

The following codes and rules are incorporated herein by reference, including periodic updates and revisions:

4.1. ASME Boiler and Pressure Vessel Code, or "BPVC," Section 1, "Power Boilers."

4.2. The National Board's Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations (NB-132), Part I, "Definition of Terms," excluding the definitions of the Act, the Commissioner, the chief inspector, the deputy inspector, the special inspector and lined potable water heater, and all definition references to pressure vessels, nuclear components, nuclear power plants and nuclear systems, and repair or replacement of a nuclear component.

4.3. The following sections in the National Board's Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations (NB-132), Part II, "Administration:"

4.3.a. Section 1, "Minimum Construction Standards for Boilers or Other Pressure-Retaining Items," with the exception of all references to pressure vessels and nuclear components;

4.3.b. Section 2, "Frequency of Inspections of Boilers and Pressure Vessels," subsections A and G only, but substituting the reference to 3 years with 1 year;

4.3.c. Section 6, "Certificate of Competency and Identification Card," with the exception of the references to fees for the issuance of certificate and identification cards;

4.3.d. Section 7, "Conflict of Interest;"

4.3.e. Section 8, "Inspection Reports to Be Submitted by Inspectors," with the exception of subsection C and in subsection D, substitute "30 days" with 10 days;"

4.3.f. Section 9, "Notification to Chief Inspector," with the exception of references to pressure vessels and nuclear components;

4.3.g. Section 10, "Special Inspectors to Notify Chief Inspector of Unsafe Boilers," with the exception of references to pressure vessels and nuclear components;

4.3.h. Section 11, Owner-User Inspection Organizations;"

4.3.i. Section 12, "Defective Conditions Disclosed at Time of External Inspection," with the exception of references to pressure vessels and nuclear components;

4.3.j. Section 13, "Owner or User to Notify Chief Inspector of Accident," with the exception of references to pressure vessels and nuclear components;

4.3.k. Section 15, "Stamping/Restamping of Boilers, Pressure Vessels or Other Pressure-Retaining Items," with the exception of references to nuclear components;

4.3.l. Section 16, "Penalty for Operation of Unsafe Boilers, Pressure Vessels, or Nuclear Components," with the exception of references to nuclear components;

4.3.m. Section 17, "Condemned Boilers, Pressure Vessels and Nuclear Components," with the exception of references to nuclear components;

4.3.n. Section 18, "Reinstallation of Boilers, Pressure Vessels, or Nuclear Components Moved Outside the Jurisdiction," with the exception of references to pressure vessels and nuclear components;

4.3.o. Section 19, "Installation, Operation, Sale, or Offering for Sale of Nonstandard Boilers, Pressure Vessels, or Nuclear Components," with the exception of references to pressure vessels and nuclear components;

4.3.p. Section 20, "Installation of Used or Secondhand Boilers, Pressure Vessels, or Nuclear Components," with the exception of references to pressure vessels and nuclear components;

4.3.g. Section 21, "Reinstalled Boilers, Pressure Vessels, or Nuclear Components," with the exception of references to pressure vessels and nuclear components;

4.3.r. Section 22, "Working Pressure for Existing Installations," with the exception of references to pressure vessels and nuclear components;

4.3.s. Section 23, "Repairs and Alterations to Boilers and Pressure Vessels," with the exception of references to pressure vessels;"

4.3.t. Section 24, "Repairs to Pressure Relief Valves," subsection A only, with the exception of references to pressure vessels and nuclear components;

4.3.u. Section 26, "Riveted Patches," but replacing the reference to the 1973 edition of the National Board Inspection Code with the 2019 edition;

4.3.v. Section 27, "Safety Appliances;"

4.3.w. Section 28, "Application of Serial Numbers," subsection A only, with the exception of references to pressure vessels and nuclear components; and

4.3.x. Section 29, "Variations"."

4.4. The National Boards' Recommended Administrative Boiler and Pressure Vessel Safety Rules and Regulations (NB-132), Part III, "Existing Installation," all of Section 1, "Power Boilers," but replacing references to the "Board" with the "Commissioner;"

4.5. The following Parts of the NBIC:

4.5.a. Part 1, "Installation;"

4.5.b. Part 2, "Inspection;"

4.5.c. Part 3, "Repairs and Alterations;" and

4.5.d. Part 4, "Pressure Relief Devices."

~~§42-3-3. Boilers Of All Types. Steam Boiler or Forced Flow Steam Generator Annual Internal and External Inspection.~~

~~3.1. All boilers operating in the State of West Virginia, except boilers on railroad locomotives subject to inspection under Federal laws, portable boilers used for agricultural purposes, boilers on automobiles; boiler of steam fire engines brought into the State for temporary use in times of emergency for the purpose of checking configurations; boilers used in private residences which are solely for residential purposes; sectional boilers; small portable boilers commonly used in the oil and gas industry around their wells and tool houses; boilers carrying not more than fifteen (15) pounds pressure per square inch, which are equipped with safety devices approved by the Commissioner, and boilers under the jurisdiction of the United States; are subject to an internal inspection by an approved inspector while not under pressure, and externally with at least the same frequency, and are required to have an annual permit to operate, except as may be otherwise required by subdivision a of this section subsection.~~

~~b. The Division shall accept insurance inspector's reports on insured boilers in lieu of inspection reports by an inspector of the Division of Labor.~~

~~c. Notice shall be given to the Division of Labor any time a boiler is moved from one location to another. The notice shall specify the boiler identification number, the original location and the new location.~~

~~d. The provisions of this rule do not apply to boilers exempt from inspection by the Commissioner under W. Va. Code §21-3-7.~~

**§42-3-4.5. New Installations. Application for a Permit to Install a High Pressure Steam Boiler; Issuance of a Permit to Install a High Pressure Steam Boiler or Forced Flow Steam Generator.**

~~All new steam boilers installed in this State except boilers exempt from inspection under W. Va. Code §21-3-7, shall be constructed and installed in accordance with the rules and regulations of the Power Boiler Code of the American Society of Mechanical Engineers, together with the Appendix and any amendments thereto. Also, the boilers shall be inspected by an approved inspector, holding a boiler inspector's Certificate of Competency, issued by the Commissioner of Labor, or issued by a state having rules and regulations the equivalent of the State of West Virginia or issued by the National Board of Boiler and Pressure Vessel Inspectors. Boilers to which this rule applies shall be stamped as provided by the Power Boiler Code of the American Society of Mechanical Engineers, the letters and figures of the stamp to be not less than 5/16 inches in height. Boilers having a standard stamping of a state requiring a standard of construction equivalent to the established standard of West Virginia may be accepted by the Division: The owner or operator desiring to install the boiler in this State, shall file with the application to the Division a manufacturer's data report covering the construction of the boiler in question.~~

5.1. Prior to the installation of a high pressure steam boiler or forced flow steam generator in West Virginia, the owner or operator shall submit an application for a permit to install at least 15 days before the intended date of installation and shall provide all information as the Commissioner may require on a form supplied by the Division.

5.2. If, upon review by the Commissioner, the application is complete and contains the required information, he or she shall issue a permit to install the high pressure steam boiler or forced flow steam generator.

5.3. If, upon review by the Commissioner, the application is incomplete, the Division shall notify the applicant and specify what information is still needed before a permit to install can be issued.

**§42-3-6. Application for a Permit to Install a High Pressure Steam Boiler or Forced Flow Steam Generator for Temporary Use; Issuance of a Permit to Install a High Pressure Steam Boiler or Forced Flow Steam Generator for Temporary Use.**

6.1. Prior to the installation of a high pressure steam boiler or forced flow steam generator for temporary use in West Virginia, the owner or operator shall submit an application for a permit to install at least 15 days before the intended date of installation and shall provide all information as the Commissioner may require on a form supplied by the Division.

6.2. If, upon review by the Commissioner, the application is complete and contains the required information, he or she shall issue a permit to install the high pressure steam boiler or forced flow steam generator for temporary use.

6.3. If, upon review by the Commissioner, the application is incomplete, the Division shall notify the applicant and specify what information is still needed before a permit to install can be issued.

**§42-3-7. West Virginia Serial Numbers; Condemned Boiler Serial Number.**

~~3.3. 7.1. After completion of a high pressure steam boiler's or forced flow steam generator's final inspection, the Division shall assign a unique ~~all boilers shall be stamped with a~~ West Virginia serial number to the boiler or generator, to be placed on the boiler or generator by an inspector or special inspector in the location specified by the ASME Boiler and Pressure Vessel Code. ~~WXXXW. The numbers and letters shall be not less than at least 5/16 inches high.~~~~

~~3.3.a The stamps shall be placed in the location specified by the rules of the American Society of Mechanical Engineers'. The stamps shall be placed in the location specified by the rules of the American Society of Mechanical Engineers' Boiler Code.~~

~~3.3.b 7.2. The high pressure steam ~~stamping~~ boiler or forced flow steam generator owner or operator shall ensure that the West Virginia serial number is visible at all times and is not ~~not~~ covered by insulating or other material.~~

~~3.3.d 7.3. Every steam boiler condemned in this State shall be stamped "WXXXW" placed across the registration mark or number. When an inspector or special inspector has condemned a high pressure steam boiler or forced flow steam generator, he or she shall place a condemnation mark, denoted as "WXXXW" over the West Virginia serial number. The inspector shall put beneath the mark the identification mark furnished his or her company, if an insurance company, or that provided by the Commissioner if condemned by the State. The Division shall provide identification marks to all companies insuring boilers within the state.~~

~~3.3.e The stamping shall be done with individual letters, driven into the plate so far as to thoroughly cancel any previous registration and shall be made with letters at least 5/16 inches high.~~

**§42-3-8. Inspection Reports; Issuance of an Annual Permit to Operate a High Pressure Steam Boiler; Issuance of a Permit to Operate a Forced Flow Steam Generator.**

~~3.2 8.1. Unless otherwise exempt under the Act, ~~Each~~ every high pressure steam boiler and forced flow steam generator used or proposed to be used within the in operation in this state, ~~except boilers exempt from inspection under W. Va. Code §21-3-7,~~ shall be thoroughly inspected internally and~~

externally while not under pressure by an inspector of the Division, or special inspector by approved inspectors provided for this rule, as to its design, construction, installation, condition and operation.

~~3.7~~ 8.1.a. An inspector or special inspector shall use the ~~The first internal inspection of each boiler to which this rule applies shall be reported on the National Board of Boiler and Pressure Vessel Inspectors Inspection Code (NBIC) National Board's "Report Of First Internal Inspection" form, or a substantially similar form, to document a high pressure steam boiler's or forced flow steam generator's initial or first internal inspection.~~

~~3.7~~ 8.1.b. On subsequent annual internal inspections after the first or initial inspection, an inspector or special inspector shall use the ~~Annually, thereafter, inspections shall be reported on the NBIC National Board's "Report of Inspection" form, or a substantially similar form, to document a high pressure steam boiler's or forced flow steam generator's internal inspection.~~

~~3.7~~ 8.1.c. An inspector or special inspector shall be forwarded promptly provide inspection reports to the Commissioner.

8.2. Upon receipt of an inspection report from an inspector or special inspector confirming the high pressure steam boiler's or forced flow steam generator's compliance with the Act and this rule, the Division shall issue an invoice to the boiler's or generator's owner or operator.

~~3.2~~ 8.3. and if it is found to be suitable and to conform to the rules of the Division, the Commissioner shall issue to the owner or user a Permit to Operate for each boiler. Permits to operate shall be issued by the Commissioner Upon receipt of payment of the invoice, the Division shall issue a permit to operate the high pressure steam boiler or forced flow steam generator.

~~3.2~~ 8.4. A permit Permits to operate shall specify the maximum pressure at which that the high pressure steam boiler or forced flow steam generator inspected is allowed to operate ~~carry~~.

8.5. A permit to operate shall include the high pressure steam boiler's or forced flow stream generator's West Virginia serial number assigned by the Division.

~~3.2~~ 8.6. permits are valid for a period of twelve (12) months from the date of issuance, except as otherwise specified by subsection 3.1 of this rule. A permit to operate a high pressure steam boiler shall be valid for a period of 12 months from the date of issuance.

~~3.1.a~~ 8.7. Force flow steam generators are subject to an inspection cycle as determined by the approved inspector, for both the internal and the external inspections. Under no circumstances shall the inspection cycle exceed twenty four (24) months. The permit to operate is valid for a period of time equal to the inspection cycle established by the approved inspector. A permit to operate a forced flow steam generator shall be valid for a period of time equal to the inspection schedule established by the inspector or special inspector, not to exceed 24 months.

~~3.2~~ 8.8. The permit shall be posted under glass in the engine or boiler room containing the boiler or an engine operated by it, or, in the case of portable boiler, in the office of the plant where it is located. A high pressure steam boiler or forced flow steam generator owner or operator shall post the permit to operate under glass in the engine or boiler room. In the case of portable boiler or generator, the owner or operator shall post the permit to operate in the office of the plant where it is located.

**§42-3-9. Application for a 60-Day Temporary Extension of a Permit to Operate a Boiler; Issuance of a Temporary Extension of a Permit to Operate.**

~~3.2. Requests for an extension, not to exceed one hundred twenty (120) days beyond the expiration date of the permit, may be considered where there are unusual circumstances or conditions: Provided, the request has the approval of the insurance company carrying the risk, in the case of insured boilers, or the approval of the State Inspector in the area in which the boilers are in operation, in the case of state inspected boilers. No request shall be considered unless approval in writing accompanies the request for extension of time. The permit shall be posted under glass in the engine or boiler room containing the boiler or an engine operated by it, or, in the case of portable boiler, in the office of the plant where it is located.~~

~~9.1. An Requests application for an extension of a permit's expiration date, not to exceed ~~one hundred twenty (120)~~ 60 days beyond the expiration date of the permit, shall be in writing and may be considered by the Commissioner for good cause, such as ~~where there are~~ unusual circumstances or conditions.~~

~~9.2. An application for one additional extension of a permit's expiration date shall be in writing and may be considered by the Commissioner, for a maximum temporary extension of 120 days per year, for good cause such as unusual circumstances or conditions.~~

~~5.5.b. 9.3. Provided, the The request shall include a statement from the inspector or special inspector and an authorized party of the insurance company that insured the high pressure steam boiler or forced flow steam generator has the approval of the insurance company carrying the risk, in the case of insured boilers, or the approval of the State Inspector in the area in which the boilers are in operation, in the case of state inspected boilers. in support of the extension.~~

~~9.4. The owner or operator of the high pressure steam boiler or forced flow steam generator shall post the temporary extension of a permit to operate under glass in the engine or boiler room containing where the boiler or generator is located. or an engine operated by it. or, in In the case of portable boiler or generator, the permit to operate shall be posted in the office of the plant where it is located.~~

**§42-3-10. Suspension or Revocation of a Permit to Operate; Condemnation of a High Pressure Steam Boiler or Forced Flow Steam Generator.**

~~3.2 10.1. The Commissioner, inspector or special inspector ~~, or his or her authorized representative,~~ may ~~at any time~~ suspend or revoke a permit to operate when, ~~in his or her opinion,~~ the high pressure steam boiler or forced flow steam generator for which it was issued ~~may not continue to~~ cannot be operated without menace to the public safety, or when the boiler or generator is ~~found to not comply in~~ compliance with the Act or this rule. ~~A Special Inspector shall have corresponding powers with respect to Permits to Operate for boilers insured by the company employing him or her.~~~~

~~3.2 10.2. The suspension or revocation of a permit to operate ~~Permit to Operate continues~~ shall continue in effect until an inspector or special inspector has determined that the high pressure steam boiler or forced flow steam generator has been ~~made to conform to~~ brought into compliance with the Act and this rule ~~rules of the Division~~ and until the Permit to Operate has been reinstated by the Commissioner. a State Inspector, if the Permit to Operate was suspended by a State Inspector, or by a Special Inspector if it was suspended by a special inspector. ~~if the Permit to Operate was suspended by a State Inspector, or by a Special Inspector if it was suspended by a special inspector. Each boiler shall~~~~

~~also be inspected externally while under pressure with at least the same frequency and at no greater intervals.~~

~~3.15~~ 10.3. The Commissioner, an inspector or special inspector A boiler shall condemn a high pressure steam boiler or forced flow steam generator be condemned by an approved inspector if, upon inspection, # the boiler or generator is found to be in a condition that it in which it is unsafe to operate. However, the owner or user may immediately appeal to the Commissioner, before the boiler is stamped as provided in subsection 2.3 of this rule. If an appeal is made, the boiler shall not be operated pending the decision of the Commissioner.

10.4. If the boiler or generator owner or operator contests the Commissioner's condemnation, he or she may, within 5 days of receipt of notification of the condemnation, file a written appeal to the Commissioner, setting forth the reasons for contesting or objecting to the condemnation.

10.5. If the high pressure steam boiler or forced flow steam generator owner or operator timely files an appeal, the boiler or generator shall not be operated pending the Commissioner's review of the appeal.

10.6. Upon receipt of an appeal filed by a high pressure steam boiler or forced flow steam generator owner or operator, the Commissioner may conduct the appeal hearing himself or herself or may designate or appoint a Division employee or a hearing examiner to conduct the appeal hearing.

10.7. The Commissioner shall cause a written Notice of Hearing to be served on the high pressure steam boiler or forced flow steam generator owner or operator by email, by certified mail, return receipt requested, or by personal service, at least 10 days prior to the date of the hearing. The Notice of Hearing shall include the following:

10.7.a. The date, time and location of the hearing;

10.7.b. A short and plain statement regarding the reasons for the condemnation;

10.7.c. The right of the high pressure steam boiler or forced flow steam generator owner or operator to be represented by an attorney at law licensed to practice in WV, at his or her own expense; and

10.7.d. The right to present evidence, and to examine and cross-examine witnesses.

10.8. The Commissioner shall cause the hearing to be recorded by electronic or other means so as to preserve the witnesses' testimony.

10.9. At the conclusion of the hearing, the Commissioner shall consider the testimony and evidence introduced at the hearing.

10.10. The Commissioner shall notify the high pressure steam boiler or forced flow steam generator owner or operator in writing within 15 days of the conclusion of the appeal hearing concerning his or her decision on the appeal of the condemnation, to be served by email by certified mail, return receipt requested, or by personal service, and shall notify the inspector regarding any appeal rights he or she may have concerning the Commissioner's decision.

~~3.3-ε~~ 10.11. No high pressure steam boiler or forced flow steam generator shall be operated in this state if the boiler or generator has been condemned for further use in this or any other State by an approved boiler inspector or special inspector.

**§42-3-11. Inspector Qualifications; Issuance of a Certificate of Competency; Annual Renewal; Revocation of a Certificate of Competency.**

~~3.6. a. Examination for Inspectors of the Division and Special Inspectors shall be given by the Commissioner, or by at least two (2) examiners to be appointed by the Commissioner. Examinations shall be written or part written and part oral, recorded in writing and shall be confined to questions the answers of which will aid in determining the fitness and competency of the applicant for the intended service and shall be of uniform grade throughout the State. In case an applicant for an inspector's Certificate of Competency fails to pass the examination, he or she may appeal to the Commissioner for a second examination, which shall be given by the Commissioner, or by examiners other than those by whom the first examination was given, and these examiners shall be appointed immediately to give a second examination. Upon the result of this examination, on appeal, the Commissioner shall determine whether the applicant is qualified.~~

~~b. The record of an applicant's examination, whether original or on appeal, shall be accessible to him or her and to his or her employer.~~

~~3.6.b. A Certificate of Competency may be revoked by the Commissioner for the incompetency or untrustworthiness of the holder or for willful falsification of any matter or statement contained in his or her application or in a report of any inspection. A person whose certificate is revoked may appeal from the revocation to a board of hearing, which shall consist of three (3) or more members to be appointed by the Commissioner. The board shall hear the appeal and either set aside or affirm the revocation and its decision is final. The person whose certificate has been revoked may be present in person or by counsel on the hearing of the appeal. If a certificate is lost or destroyed, a new certificate shall be issued in its place without another examination. A person who has failed to pass the examination or whose Certificate of Competency has been revoked, may apply for a new examination and certificate after ninety (90) days from the failure or revocation.~~

11.1. No person may serve as an inspector unless he or she holds a certificate of competency issued by the Commissioner.

11.2. The inspector shall provide a copy of his or her current National Board Commission card to the Division.

11.3. An inspector shall renew his or her certificate of competency annually and provide a copy of his or her most recent National Board Commission card.

11.4. The Commissioner may revoke a certificate of competency for the following reasons:

11.4.a. the falsification of any report of any inspection;

11.4.b. the failure to renew his or her National Board Commission;

11.4.c. the revocation of his or her National Board Commission; or

11.4.d. other good cause concerning the inspector's competence or credibility.

11.5. The Commissioner shall notify the inspector in writing by email, by certified mail, return receipt requested, or by personal service concerning the effective date of the revocation of his or her certificate of competency, including the reasons for the revocation, and his or her right to appeal the revocation.

11.6. An inspector whose certificate of competency has been revoked may file a written appeal to the Commissioner within 15 days of receipt of the notice of revocation.

11.7. Upon receipt of an appeal filed by an inspector, the Commissioner may conduct the appeal hearing himself or herself or may designate or appoint a Division employee or a hearing examiner to conduct an appeal hearing.

11.8. The Commissioner shall cause a written Notice of Hearing to be served on the inspector by email, by certified mail, return receipt requested, or by personal service, at least 10 days prior to the date of the hearing. The Notice of Hearing shall include the following:

11.8.a. The date, time and location of the hearing;

11.8.b. A short and plain statement regarding the reasons for the revocation;

11.8.c. The right of the inspector to be represented by an attorney at law licensed to practice in WV, at his or her own expense; and

11.8.d. The right to present evidence, and to examine and cross-examine witnesses.

11.9. The Commissioner shall cause the hearing to be recorded by electronic or other means so as to preserve the witnesses' testimony.

11.10. At the conclusion of the hearing, the Commissioner shall consider the testimony and evidence introduced at the hearing.

11.11. The Commissioner shall notify the inspector in writing within 15 days of the conclusion of the appeal hearing concerning his or her decision on the appeal of the revocation, to be served by email by certified mail, return receipt requested, or by personal service, and shall notify the inspector regarding any appeal rights he or she may have concerning the Commissioner's decision.

**§42-3-12. Special Inspector Application for a Certificate of Competency; Issuance of a Certificate of Competency; Fees; Annual Renewal; Revocation of a Certificate of Competency.**

~~3.4. In addition to any boiler inspectors of the Division, the Commissioner shall, upon the request of any company authorized to insure against loss from explosion of steam boilers in this State, issue to the boiler inspectors of the company a Certificate of Competency. The commissioner shall issue a Certificate of Competency if the inspectors satisfactorily pass the examination provided for in subsection 3.6 of this rule or, in lieu of the examination, hold a certificate as an inspector of steam boilers for a state that has a standard of examination equal to that of the State of West Virginia or a certificate from the National Board of Boiler and Pressure Vessel Inspectors. The Special Inspectors shall receive no salary from, nor shall any of their expenses be paid by the State, and the continuance of a Special Inspector's certificate shall be conditioned upon their continuing in the employ of the insurance company.~~

12.1. No person may serve as a special inspector unless he or she holds a certificate of competency issued by the Division.

12.2. A person desiring to obtain a certificate of competency from the Division shall submit a written application on a form furnished by the Division, accompanied by a \$50 fee.

12.3. The applicant shall provide all information specified on the application form, and any failure to provide the required information shall cause the application to be rejected.

12.4. The applicant shall provide a copy of his or her current National Board Commission card with the application.

12.5. A special inspector shall renew his or her application for a certificate of competency annually, accompanied by a \$50 fee and his or her most recent National Board Commission card.

~~3.6.b~~ 12.6. A Certificate of Competency may be revoked by the Commissioner for the following reasons: incompetency or untrustworthiness of the holder or for willful falsification of any matter or statement contained in his or her application or in a report of any inspection. A person whose certificate is revoked may appeal from the revocation to a board of hearing, which shall consist of three (3) or more members to be appointed by the Commissioner. The board shall hear the appeal and either set aside or affirm the revocation and its decision is final. The person whose certificate has been revoked may be present in person or by counsel on the hearing of the appeal. If a certificate is lost or destroyed, a new certificate shall be issued in its place without another examination. A person who has failed to pass the examination or whose Certificate of Competency has been revoked, may apply for a new examination and certificate after ninety (90) days from the failure or revocation.

12.6.a. the falsification of any report of any inspection;

12.6.b. the failure to renew his or her National Board Commission;

12.6.c. the revocation of his or her National Board Commission; or

12.6.d. other good cause concerning the inspector's or special inspector's competence or credibility.

12.7. The Commissioner shall notify the special inspector in writing by email, by certified mail, return receipt requested, or by personal service concerning the effective date of the revocation of his or her certificate of competency, including the reasons for the revocation, and his or her right to appeal the revocation.

12.8. A special inspector whose certificate of competency has been revoked may file a written appeal to Commissioner within 15 days of receipt of the notice of revocation.

12.9. Upon receipt of an appeal filed by a special inspector, the Commissioner may conduct the appeal hearing himself or herself or may designate or appoint a Division employee or a hearing examiner to conduct an appeal hearing.

12.10. The Commissioner shall cause a written Notice of Hearing to be served on the special inspector by email, by certified mail, return receipt requested, or by personal service, at least 10 days prior to the date of the hearing. The Notice of Hearing shall include the following:

12.10.a. The date, time and location of the hearing;

12.10.b. A short and plain statement regarding the reasons for the revocation;

12.10.c. The right of the special inspector to be represented by an attorney at law licensed to practice in WV, at his or her own expense; and

12.10.d. The right to present evidence, and to examine and cross-examine witnesses.

12.11. The Commissioner shall cause the hearing to be recorded by electronic or other means so as to preserve the witnesses' testimony.

12.12. At the conclusion of the hearing, the Commissioner shall consider the testimony and evidence introduced at the hearing.

12.13. The Commissioner shall notify the special inspector in writing within 15 days of the conclusion of the appeal hearing concerning his or her decision on the appeal of the revocation, to be served by email by certified mail, return receipt requested, or by personal service, and shall notify the special inspector regarding any appeal rights he or she may have concerning the Commissioner's decision.

**§42-3-13. Owner or Operator Responsibilities; Insurance Company Responsibilities; Termination of Insurance Coverage.**

13.1. The owner or operator of a high pressure steam boiler or forced flow steam generator shall prepare the boiler or generator for an internal inspection or hydrostatic pressure test when necessary.

~~3.14.a.~~ 13.2. If the owner or operator of a high pressure steam boiler or forced flow steam generator a boiler has not been properly prepared the device for internal inspection as provided for in this section, the inspector or special inspector may decline to make perform the inspection and the Division may withhold the Permit to Operate permit to operate until the boiler or generator has been properly prepared and inspected.

~~3.1.c~~ 13.3. The owner or operator shall promptly notify Notice shall be given to the Division of Labor any time when a high pressure steam boiler or forced flow steam generator is moved from one location to another. The notice notification shall specify include the boiler's or generator's identification West Virginia serial number, the original location and the new location.

~~3.5a.~~ 13.4. An insurance company shall immediately notify the Division of all insurance policy coverage changes to a high pressure steam boiler or forced flow steam generator, to include the policy number being changed, the policy's expiration or cancellation date, of the policy, cancellation of the policy or the initiating issuance of a new policy of coverage, including the new policy number and effective dates of the coverage.

~~3.5.b.~~ 13.5. If, after inspection by a Special Inspector special inspector, upon the first inspection of a new risk finds that the boiler or any of the appurtenances are in a condition that his or her an

~~insurance~~ company refuses coverage, the company shall immediately notify the Division of Labor of that fact together with a list of the defects.

~~3.9. 13.6. If an insurance company ceases or otherwise stops coverage on an insured high pressure steam boiler or forced flow steam generator, the company shall immediately notify the Commissioner and the owner or operator of the device. No permit to operate, issued on an insured boiler, is valid after the boiler for which it was issued ceases to be insured by a duly authorized insurance company. In that case, the owners or operator shall promptly notify the West Virginia Division of Labor.~~

~~3.8. No used steam boiler for use under pressure shall be brought into this State except boilers exempt under W. Va, Code §21-3-7, unless the boiler complies with section four of this rule.~~

~~3.9. No permit to operate, issued on an insured boiler, is valid after the boiler for which it was issued ceases to be insured by a duly authorized insurance company. In that case, the owners or operator shall promptly notify the West Virginia Division of Labor.~~

~~3.11 13.7. The Commissioner owner or operator of a high pressure steam boiler or forced flow steam generator shall have free access for himself or herself, his or her authorized permit inspectors and special inspectors to enter the premises, during reasonable hours, to any premises in the state where a steam boiler or generator is being built, or where a steam boiler or power plant apparatus is being installed or is being operated, for the purpose of ascertaining in order to ascertain whether the boiler or generator is being built, installed and operated in accordance with the provisions of W. Va. Code §21-3-7 the Act and this rule.~~

~~3.12. The owner or user of a boiler to which this rule applies is required to be inspected annually on a date specified by the Commissioner or by Special Inspectors of any authorized insurance company. The inspection date shall not be less than seven (7) days after the date of the notice, unless by consent of the boiler owner. The boiler owner shall prepare the boiler for internal inspection or hydrostatic pressure test when necessary.~~

~~3.13. a. To prepare a boiler for internal inspection, the water shall be drawn off and the boiler thoroughly washed. All manhole and handhole plates and washout plugs in boilers and plugs in water column connection, if any, shall be removed and the furnace and combustion chambers thoroughly cooled and cleaned. All grates of internally fired boilers shall be removed. Also enough of the brick work or insulating material of any type of boiler shall be removed to determine the condition of the boiler, when necessary. The steam gauge shall be removed for testing.~~

~~b. All gas or oil fired boilers that come under this rule which are equipped with a stack damper shall have the damper arranged so that it cannot be closed tight. The damper should have at least a twenty percent (20%) opening at all times. If necessary, a section of damper blade should be cut out to provide this minimum amount of opening to permit escape of any possible gas accumulation. If it is found that any steam or hot water is leaking into the boiler, the source of the leakage shall be disconnected, if necessary, so as to cut out the steam or hot water from the boiler to be inspected.~~

~~3.14.~~

~~a. If a boiler has not been properly prepared for internal inspection as provided for in this section, the inspector may decline to make the inspection and may withhold the Permit to Operate until the boiler has been properly prepared and inspected.~~

~~b. When inspecting a boiler under this rule the State or Approved Inspector shall observe if any appurtenances are connected to the boiler which are not a part of the boiler proper, but which may be subjected to boiler pressure. The vessel may be a condensate return tank or blow off tank. The inspector shall report to the Commissioner any defects or sub standard conditions he or she may note on appurtenances connected to the boiler.~~

~~3.15. A boiler shall be condemned by an approved inspector if, upon inspection, it is found to be in a condition that it is unsafe to operate. However, the owner or user may immediately appeal to the Commissioner, before the boiler is stamped as provided in subsection 2.3 of this rule. If an appeal is made, the boiler shall not be operated pending the decision of the Commissioner.~~

~~3.16. The shell or drum of a boiler in which a typical "lap seam crack" is discovered along a longitudinal riveted joint for either butt strap or lap joint shall be permanently discontinued for use under steam pressure. For the purposes of this subsection "lap seam crack" means the typical crack frequently found in lap seams extending parallel to the longitudinal joint and located either between or adjacent to rivet holes.~~

~~3.17. All automatically fired gas or oil boilers which come under this rule shall be equipped with a manual reset gas trip valve which functions in case of safety pilot light failure or the operation of the low water fuel cutout. This apparatus shall be designed so that the flow of gas or oil cannot be resumed without the service of the attendant.~~

~~3.18. 1a. Provisions shall be made when insulating a boiler so that the insulation covering the longitudinal seam may be removed, or a space not less than (ten) 10 inches wide shall be provided with removable insulation for taking measurements or inspection of the joint and shell. This requirement also applies to portable boilers which are jacketed with steel over the insulation.~~

~~b. When a boiler is covered with insulating materials, the materials shall be kept not less than (two) 2 inches away from edges of all handhole and manhole openings and not less than (one) 1 inch away from threaded pipe connections to boiler.~~

~~c. If the boiler is jacketed so that the longitudinal seams of the shells, drums or domes cannot be seen, or if the size and pitch of the rivets and other necessary data cannot be determined, the inspector may require that enough of the jacketing, setting wall or other covering be removed as is necessary to determine the safety of the boiler or appliance.~~

~~3.19. All appliances required for electric steam generators shall be attached in accordance with the following standards:~~

~~a. A cable at least as large as one of the incoming power lines to the generator shall be provided for grounding the generator shell. This cable shall be permanently fastened on some part of the generators and shall be grounded in an approved manner;~~

~~b. A suitable screen or guard shall be provided around high tension bushings and a sign posted warning of high voltage. This screen or guard shall be located in a manner that it will be impossible for anyone working around the generator to accidentally come in contact with the high tension circuits. When the operator adjusts safety valves, the power circuit to the generator shall be open. The~~

generator may be under steam pressure but the power line shall be open while the operator is making the necessary adjustments. A switch or circuit breaker of suitable rupturing capacity shall be installed in the power circuit together with disconnecting switches so that the power circuit may be opened and prevented from being accidentally closed during repairs to the boiler. One (1) switch shall be located near the boiler.

~~3.20. In all cases, where no mechanical feed is attached to a boiler, the safety valve shall be set at not less than six percent (6%) below the pressure of the main source of supply feeding the boiler. A return trap shall not be considered as a mechanical feeding device. A boiler having more than five hundred (500) square feet of water heating surface shall have at least two (2) means of feeding, one (1) of which shall be a pump, inspirator or injector. Where a source of feed is available at a sufficient pressure to feed the boiler against a pressure of six percent (6%) higher than, that at which the safety valve is set to blow, this may be considered one of the meanings. Where possible, feed water should have a temperature of not less than one hundred twenty (120) degrees Fahrenheit.~~

~~3.21. If upon an external inspection there is evidence of a leak or crack, enough of the covering of the boiler shall be removed to satisfy the inspector in order that he or she may determine the safety of the boiler. If the covering cannot be removed at that time, he or she may order the operation of the boiler stopped until the covering can be removed and proper examination made.~~

~~3.22. All repairs or alterations shall be made to boilers or boiler appurtenances subject to this rule by individuals or repair organizations who are accredited by and in accordance with the rules of the National Board of Boiler And Pressure Vessel Inspectors Inspection Code (NBIC).~~

### ~~3.23.~~

~~a. All repairs and alterations made to boilers and boiler appurtenances subject to this rule shall be made and tested in accordance with the rules of the National Board of Boiler And Pressure Vessel Inspectors Inspection Code (NBIC).~~

~~b. The American Society Of Mechanical Engineers Boiler Code applicable on the date of original construction of the boiler or boiler appurtenance shall be used as the minimum design standard in making the repairs and alterations.~~

~~3.24. No repairs (including welding) shall be made without the approval of an authorized inspector and the method of the repair shall be sanctioned by the inspector. If, in the opinion of the inspector, a hydrostatic test is necessary, the test shall be applied when the work is completed.~~

~~3.25. The Commissioner or his or her authorized representative or Special Inspectors may at any time call for an accumulation test to determine if a steam heating boiler is subject to or operated at a pressure in excess of fifteen (15) pounds.~~

## ~~§42-3-5. Existing Installations.~~

~~5.1. The following standards, formulated by the Commissioner, in accordance with W. Va. Code §21-3-7, apply to boilers installed previous to January 1, 1938. Form 104, "Affirmation of Previous Installation," shall be used to prove that a boiler which does not bear proper stamping was installed in West Virginia prior to that time.~~

~~5.2. The maximum allowable working pressure on the shell of a boiler or drum shall be determined by the strength of the weakest section of the boiler, computed from the thickness of the plate, the tensile strength of the plate, the efficiency of the longitudinal joint, or the tube ligament, the inside diameter of the course and the factor of safety allowed by these rules, according to the following formula:~~

$$\frac{TS \times t \times E}{R \times FS} = \text{maximum allowable working pressure per square inch}$$

The explanation for the formula is as follows:

TS = ultimate tensile strength of shell plates, lbs. per. sq. in.

t = minimum thickness of shell plate, in weakest course, in.

E = efficiency of longitudinal joint, method of determining which is given in the ASME Code Book. See note.

E for seamless boilers is 100%.

— E for tube ligaments between openings shall be calculated by the rules given in the ASME Boiler Code.

R = inside radius of the weakest course of the shell or drum, inches.

FS = factor of safety allowed by this rule.

Note: ~~To be used as given above for longitudinal joints, riveted construction or if for fusion welded joints, E shall be taken as per efficiency specified in the ASME Boiler Code.~~

In any case where there are both riveted joints and tube ligaments to consider, the weaker of these shall be used for E.

### ~~5.3.~~

~~a. Boilers of butt strap longitudinal seam construction shall be operated with a factor of safety of at least four and five tenths (4.5). This factor of safety may be increased by the inspector if the condition and safety of the boiler demands the action.~~

~~b. Ten (10) years after this rule becomes effective the factor of safety shall be at least five (5).~~

~~c. Boilers of lap seam longitudinal construction shall be operated with a factor of safety of at least five (5).~~

~~d. In no case shall the maximum allowable working pressure on old boilers be increased unless they are being operated at a lesser pressure than would be allowable for new boilers, in which case the changed pressure shall not exceed that allowable for new boilers of the same construction. The factor of safety may be increased by the inspector if the condition and safety of the boiler demands the action.~~

42 CSR 3

~~5.4. Tensile strength. When the tensile strength of steel or wrought iron shell plates is not known, it shall be taken as fifty five thousand (55,000) pounds per square inch for steel and forty five thousand (45,000) pounds per square inch for wrought iron.~~

~~5.5. Strength of rivets in shear. In computing the ultimate strength of rivets in shear, the following values in pounds per square inch of the cross sectional area of the rivet shank shall be used:~~

- ~~Iron rivets in single shear ..... 38,000~~
- ~~Iron rivets in double shear ..... 76,000~~
- ~~Steel rivets in single shear ..... 44,000~~
- ~~Steel rivets in double shear ..... 88,000~~

~~The cross sectional area used in the computations shall be that of the rivet shank after driving.~~

~~5.6. Crushing strength of mild steel. The resistance to crushing of mild steel shall be taken at ninety five thousand (95,000) pounds per square inch of cross sectional area.~~

~~5.7. Rivets. When the diameter of the rivet holes in the longitudinal joints of a boiler is not known, the diameter and cross sectional area of rivets, after driving, may be taken from the following table or ascertained by cutting out one (1) rivet in the body of the joint.~~

Table

Size of Rivets Based on Plate Thickness

~~Thickness of plate: 1/4" 9/32" 5/16" 11/32" 3/8" 13/32"~~

~~Diameter of rivet after driving: 11/16" 11/16" 3/4" 3/4" 13/16" 13/16"~~

Thickness of plate

~~7/16" 15/32" 1/2" 9/16" 5/8"~~

Diameter of rivet after driving

~~15/16" 15/16" 15/16" 1 1/16" 1 1/16"~~

~~5.8. The safety valve capacity of each boiler shall be such that the safety valve or valves will discharge all the steam that can be generated by the boiler without allowing the pressure to rise more than six percent (6%) above the maximum allowable working pressure or more than six percent (6%) above the highest pressure to which any valve is set.~~

~~5.9. One or more safety valves on every boiler shall be set at or below the maximum allowable working pressure. The remaining valves may be set within a range of three percent (3%) above the maximum allowable working pressure, but the range of setting of all the valves on a boiler shall not exceed ten percent (10%) of the highest pressure to which any valve is set. No valve of any description shall be placed between a safety valve escape pipe. It shall be located close to the safety valve outlet, or the escape pipe, shall be securely anchored and supported. When an escape pipe is used, it shall be full~~

~~size and fitted with an open drain to prevent water lodging in the upper part of the safety valve or escape pipe. Safety valves having either the seat or disc of cast iron shall not be used. Dead weight or lever weighted safety valves are prohibited.~~

~~5.10. All stationary reinstalled boilers for which ownership has not changed shall be inspected and subjected to a hydrostatic test before being placed in operation and shall be equipped with appurtenances conforming to the ASME Boiler Code applying to new installations.~~

~~5.11. The factor of safety for re installation shall be in accordance with the requirements of subsection 5.3 of this rule except that a factor of safety of not less than five and five tenths (5.5) shall be used when the boiler is of the lap seam type and a factor of safety of not less than five (5) shall be used when the boiler is of butt and double strap construction.~~

~~5.12. Second hand boilers which for the purposes of this subsection are meant boilers where both the ownership and location are changed, which are not constructed in accordance with the Code, and which have been installed or in use in this State previous to January 1, 1938, shall be inspected and subjected to a hydrostatic test and the factor of safety of not less than five and five tenths (5.5) shall be used.~~

~~5.13. The National Board of Boiler and Pressure Vessel Inspectors Inspection Code (NBIC) has been adopted as the repair standard of the Division.~~

~~5.14. Any boiler having a continuous lap seam more than twelve (12) feet in length and a diameter over 36 inches when removed from an existing setting shall not be reinstalled to operate at a pressure in excess of fifteen (15) pounds per square inch.~~

~~5.15. The maximum allowable working pressure shall not exceed one hundred sixty (160) pounds per square inch on a water tube boiler when the tubes of the boiler are secured to cast iron or malleable headers.~~

~~5.16. Fire actuated fusible plugs, when used, shall conform to the Rules and Regulations of the Boiler Code of the American Society of Mechanical Engineers, and shall be renewed when requested by the Commissioner or inspectors.~~

~~5.17. The least diameter of fusible metal in a fire actuated plug shall be not less than one half (1/2) inch, except for maximum allowable working pressures of over one hundred seventy five (175) pounds per square inch, or when it is necessary to place a fire actuated fusible plug in a tube, in which case the least diameter of fusible metal shall be not less than 3/8". If a fire actuated fusible plug is inserted in a tube, the tube wall shall be not less than 0.22 inch thick or sufficient to give four (4) threads.~~

~~5.18. Steam actuated fusible plugs, if used, shall be located so that they will operate when the water level is at the point where a fire actuated fusible plug would be located if installed under this rule. Fire actuated fusible plugs, if used, shall be located at the lowest permissible water level for different types of boilers as specified by the ASME Code.~~

~~5.19.a. Each steam boiler shall have at least one (1) water glass, the lowest visible part of which shall be not less than two (2) inches above the lowest permissible water level.~~

~~b. Each boiler shall have three (3) or more gauge cocks, located within the range of the visible length of the water glass, when the maximum allowable working pressures exceeds fifteen (15) pounds per square inch, except when the boiler has two (2) water glasses with independent connections to the boiler, located on the same horizontal line and not less than 2 feet apart.~~

~~c. Locomotive type boilers not over thirty six (36) inches in diameter, or any firebox or water leg boiler in which the heating surface does not exceed 50 square feet, shall have two (2) gauge cocks.~~

~~d. The water column shall be fitted with a drain cock or drain valve with a suitable connection to the ashpit, or other safe point of waste if the water connection has a rising bend or pocket, which cannot be drained by means of the water column drain, an additional drain shall be placed on this connection in order that it may be blown off to clear any sediment from the pipe. The water column blow off pipe shall be at least three fourths (3/4) inch pipe size.~~

~~5.20. a. No outlet connections, except for damper regulator, feed water regulator, low water cutouts, drains or steam gauges, shall be placed on the pipes connecting a water column to a power boiler.~~

~~b. When water level controls or low water cutouts are installed, the piping to the controls shall be independent of the regular water column piping.~~

~~c. The pipe connections to the apparatus shall be provided at each right angle turn with a cross fitting with a readily removable plug to permit inspection and cleaning in both directions.~~

~~5.21. a. Steam gauges.—Each boiler shall have a steam gauge connection to the steam space or to the water column or to its steam connection graduated to not less than one and one half (1 1/2) times the safe working pressure of the boiler. The steam gauge shall be connected to a siphon or equivalent device of sufficient capacity to keep the gauge tube filled with water and arranged so that the gauge cannot be shut off from the boiler except by a cock placed near the gauge and provided with a tee or lever handle arranged to be parallel to the pipe in which it is located when the cock is open. Where the pipe may be subject to freezing, a shut off cock may be placed close to the boiler for removal or draining. Connections to gauges shall be of brass, copper or bronze composition. One fourth (1/4) inch inspector's test gauge connection shall be fitted so that the gauge can be tested while the boiler is in operation.~~

~~b. Where the use of a pipe longer than ten (10) feet becomes necessary, an exception may be made to the rule that the gauge must be arranged so that it cannot be shut off except by a cock placed near the gauge. A shutoff valve or cock arranged so that it can be locked or sealed open may be used near the boiler. The pipe shall be of ample size and arranged so that it may be cleared by blowing out.~~

~~5.22. a. Each steam outlet from a power boiler, except safety valve connections, shall be fitted with a stop valve located as close as practicable to the boiler.~~

~~b. When a stop valve is located so that water can accumulate, ample drains shall be provided.~~

~~c. An ordinary cast pipe plug is not considered to be readily removable. A suggested improvement would be a plug made of a nipple and pipe cap or blind nipple.~~

~~5.23. a. Each boiler shall have a blow off pipe fitted with a valve or cock in direct connection with the lowest water space practicable. When cocks are used, they shall be of the gland or guard type and suitable for the pressure allowed. Boilers carrying over one hundred (100) pounds steam pressure shall have two (2) valves or a valve and cock on the blow off line.~~

~~b. The bottom blow off of every traction and/or portable boiler shall have at least one blow off valve, conforming to the requirements of the ASME Code for the pressure allowed.~~

~~5.24. When any changes or repairs are made in the blow off pipe for existing installations:~~

~~a. The blow off valve or valves and the pipe between them and the boiler shall be of the same size except where a larger pipe for the return of condensate is used;~~

~~b. All fittings between the boiler and valves shall be steel for pressure over one hundred (100) pounds;~~

~~c. When the pressure does not exceed one hundred (100) pounds per square inch, the valves and fittings shall be equal at least to the requirements of the American Standards for one hundred twenty five (125) pounds per square inch;~~

~~d. For pressures exceeding one hundred (100) pounds per square inch, the valves, pipe and fittings shall be equal at least to the requirements of the American Standards for two hundred fifty (250) pounds per square inch; and~~

~~e. For pressures over two hundred fifty (250) pounds per square inch, the valves or cocks shall be of steel construction equal at least to the requirements of the ASME Code.~~

~~5.25.~~

~~a. A bottom blow off pipe when exposed to direct furnace heat shall be protected by firebrick or other heat resisting material arranged so that the pipe may be inspected.~~

~~b. An opening in the boiler setting for a blow off pipe shall be arranged to provide for free expansion and contraction.~~

~~5.26. The feed pipe of a steam boiler operated at more than fifteen (15) pounds per square inch maximum allowable working pressure, shall be provided with a check valve near the boiler and a valve or cock between the check valve and boiler, and when two (2) or more boilers are fed from a common source, there shall also be a stop valve on the branch to each boiler, between the check valve and the source of supply. When a globe valve is used on a feed pipe, the inlet shall be under the disc of the valve.~~

~~5.27. Each boiler fitted with a water jacket boiler furnace mouth protector, or similar appliance having valves on the pipes connecting them to the boiler, shall have these valves locked or sealed open. The valves, when used, shall be of the straightway type. Suitable means should be provided for blowing out this equipment.~~

~~5.28.~~

~~a. Test pressure. — When a hydrostatic test is applied, the required test pressure shall be in accordance with the rules of the NBIC.~~

~~b. During a hydrostatic test of a boiler, suitable provisions shall be made so that it will not be necessary to screw down the compression screw upon the spring of the safety valve. The temperature of water used during a hydrostatic test shall be in accordance with the rules of the NBIC.~~

~~5.29.~~

42 CSR 3

~~a. An approved inspector shall be called for consultation when repairs are necessary which in any way affect the working pressure or safety of a boiler. The repairs made are subject to the approval of an approved inspector.~~

~~b. When repairs or alterations are ordered by an inspector and a "Boiler Repair Report" is required, the Annual Inspection Certificate shall be withheld until the Boiler Repair Report, completed by the owner, is received by the Division showing that the repairs have been completed as required. Repairs to all boilers and their appurtenances shall conform to the requirements of the NBIC.~~

~~5.30. A boiler, except a self contained portable boiler used for purposes other than operating ground saw mills, cannot be moved from one location to another and legally operated at the new location until it has been inspected internally by an approved inspector and a permit to operate has been issued by the Commissioner.~~

**§42-3-6 14. Inspection Fees Schedule.**

~~6.1. General Purposes. The general purpose of this section is to formulate an inspection fee schedule. This rule establish fees:~~

- ~~a. for the inspection of boilers by those persons whom the Commissioner of Labor has authorized as inspectors;~~
- ~~b. for the processing of inspection reports from insurance companies;~~
- ~~c. for issuing annual permits to operate boilers;~~
- ~~d. for the commissioning of insurance company boiler inspectors; and,~~
- ~~e. emergency extension of operating permits.~~

~~6.2. 14.1. The Commissioner shall not issue a permit to operate or install a high pressure steam boiler or forced flow steam generator, or an extension of a permit to operate, until all applicable fees have been paid to the Division. All fees shall be paid by check or money order made payable to the West Virginia Division of Labor. The schedule of fees is as follows:~~

~~a. 14.2. Boiler Inspection Fees for the inspection by of Steam Boilers a high pressure steam boiler or forced flow steam generator by a Division inspector:~~

- ~~1. 14.2.a. Boilers with less than 100 square feet of heating surface: \$150.00~~
- ~~2. 14.2.b. Boilers with 101 to 500 square feet of heating surface: \$200.00~~
- ~~3. 14.2.c. Boilers with more than 500 square feet of heating surface: \$250.00~~
- ~~14.2.d. Forced flow steam generator: \$250.00~~

~~b. 14.3. Fee for the processing of an inspection reports for an insurance company: \$ 50.00~~

~~c. 14.4. Fee for issuing a permits to operate a steam boilers or generator: \$50.00 \$ 90.00~~

42 CSR 3

d. ~~14.5. Fee for issuing a Certificate of Competency for a commissioning insurance company boiler special inspector:~~ \$ 50.00

14.6. Fee for issuing an annual permit to operate a hobby boiler:     ~~\$25.00~~     \$50.00

e. ~~14.7. Fee for reviewing an application for an extension of a permit to operate a steam boiler and issuing an and emergency extension of the operating permit:~~ \$90.00.

14.8. Fee for reviewing an application for a permit to install a steam boiler or an application for permit to install a steam boiler for temporary use and issuing the permit to install: ~~\$100.00~~\$90.00.

f. ~~Hobby Boilers – operating permits only: \$25.00~~

g. ~~National Board Examinations \$25.00~~