

WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #4

Do Not Mark In this Box

NOTICE OF RULE MODIFICATION OF A PROPOSED RULE

AGENCY: West Virginia Division of Labor TITLE NUMBER: 42

CITE AUTHORITY WV Code 21-3-7

AMENDMENT TO AN EXISTING RULE: YES X NO

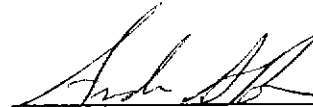
IF YES, SERIES NUMBER OF RULE BEING AMENDED: 3

TITLE OF RULE BEING AMENDED: Steam Boiler Inspection

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED:

TITLE OF RULE BEING PROPOSED:

THE ABOVE PROPOSED LEGISLATIVE RULE, FOLLOWING REVIEW BY THE LEGISLATIVE RULE
MAKING REVIEW COMMITTEE IS HEREBY MODIFIED AS A RESULT OF REVIEW AND COMMENT
BY THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE. THE ATTACHED MODIFICATIONS ARE
FILED WITH THE SECRETARY OF STATE.



58.60

WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #4

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AGENCY: West Virginia Division of Labor TITLE NUMBER: 42

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Andre AB

RECEIVED

24 JUN 1993

WEST VIRGINIA
SECRETARY OF STATE
KEN HECHLER
ADMINISTRATIVE LAW DIVISION

Form #3

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

AGENCY: West Virginia Division of Labor TITLE NUMBER: 42

CITE AUTHORITY WV Code 21-3-7

AMENDMENT TO AN EXISTING RULE: YES X NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 3

TITLE OF RULE BEING AMENDED: Steam Boiler Inspection

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED:

TITLE OF RULE BEING PROPOSED:

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC
COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH
THE SECRETARY OF STATE AND THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE FOR
THEIR REVIEW.


Authorized Signature

RECEIVED

AUG 04 1999

Legislative Rule making
Review Committee

DATE:

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: West Virginia Division of Labor

LEGISLATIVE RULE TITLE: Steam Boiler Inspection

1. Authorizing statute(s) citation WV Code 21-3-7

2. a. Date filed in State Register with Notice of Hearing

June 29, 1999 (Public Comment ONLY)

b. What other notice, including advertising, did you give of the hearing?

- None -

c. Date of Hearing(s) N/A

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached X No comments received

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

August 3, 1999

f. Name and phone number(s) of agency person(s) to contact for additional information:

Andrew A. Brown, Asst. to the Commissioner

(304). 558-7890

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations to be made as a condition precedent to their promulgation:

- a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

N/A

- b. Date of hearing: N/A

- c. On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

N/A

- d. Attach findings and determinations and reasons:

Attached None

WEST VIRGINIA DIVISION OF LABOR

319 Building Three, Capitol Complex • Charleston, West Virginia 25305
Phone (304) 558-7890 • Fax (304) 558-3797

CECIL H. UNDERWOOD
Governor



STEVEN A. ALLRED
Commissioner

RESPONSE TO PUBLIC COMMENTS

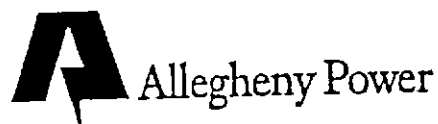
The agency received only one public comment – Gary A. Jack, representing Allegheny Power.

The agency agrees totally with the comments offered by Mr. Jack. However, the alterations noted will require code changes to exempt or modify the inspection requirements for supercritical power boilers. Present code does not contain such a variance or a definition of “supercritical” boiler.

The purpose of this rule change is to provide a clearer definition of an operating permit extension so as to permit a temporary relief for the owners of supercritical boilers.

The agency has prepared legislation to amend the code.

LEGAL SERVICES



1310 Fairmont Avenue
P.O. Box 1392
Fairmont, WV 26555-1392
Phone: (304) 366-3000
FAX: (304) 367-3157

Writer's Direct Dial No.
(304) 367-3423
July 29, 1999

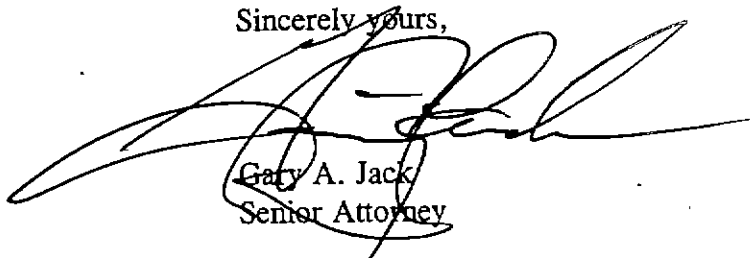
Mr. Andrew A. Brown
Assistant to the Commissioner
West Virginia Division of Labor
Room 319, Building #3
State Capitol Complex
Charleston, WV 25305

RE: Proposed Boiler Inspection Rule Revisions

Dear Mr. Brown:

Enclosed please find the *Comments To Proposed West Virginia Boiler Inspection Rules Revisions* by Monongahela Power Company, The Potomac Edison Company, and West Penn Power Company, dba Allegheny Energy Supply.

Sincerely yours,



Gary A. Jack
Senior Attorney

GAJ:tmw

COMMENTS to PROPOSED WV BOILER INSPECTION RULE REVISIONS

Monongahela Power Company, The Potomac Edison Company and West Penn Power Company, dba Allegheny Energy Supply, operate six power stations in northern West Virginia. Within those six power stations, fourteen (14) boilers are used on a regular basis to produce steam necessary for the production of electricity. These rules are critical to Allegheny Energy Supply and to the production of cost efficient electricity to citizens in central and northern West Virginia

1. Sec. 2.2: Operating Permit Extensions

This proposed revision would allow a maximum operating permit extension of 120 days beyond the current 12 month period. As has been shown in the past, this can still force a unit out of service solely for the purpose of an inspection. Allegheny Energy would suggest that power boilers be exempted from this requirement. An alternative would be to institute an annual external inspection and a biennial internal inspection, with a 120 day extension period. Unlike most smaller boiler operators, the power industry has personnel and equipment in place for continual monitoring of boilers and water chemistry when the boilers are in operation. In addition, formal procedures are used to assure that the equipment is operated in a manner so as to protect personnel and equipment.

The subject of operating permit extensions was discussed at length with the WV Division of Labor prior to this revision. At that time they were in agreement that operating permits should only require an internal inspection every two years, as long as the insurance inspector was in agreement. It is Allegheny's belief that every effort should be made to have any revisions incorporate this principle.

Based on information provided by our insurance carrier, a one year external/two year internal inspection frequency is already in effect in Ohio, Pennsylvania, and Maryland, and is acceptable to our insurance carrier.

2. Sec. 2.13: Boiler Cleaning

Since this rule still addresses all boilers in the same manner as small boilers it does not take into account large, supercritical power boilers. This section requires that the boiler be thoroughly washed, all manhole and handhole plates and plugs be removed, and the steam gauge be tested for an operating permit inspection. Based on the arguments presented above, it should only be required to open the areas that the Inspector deems necessary on power boilers. Again, this would limit the out of service time required for a boiler permit inspection.

3. Sec. 2.2: Posting of Operating Permits

The current rules require that operating permits "shall be posted under glass in the engine or boiler room containing such boiler ...". Only permits for portable boilers can be posted in the office of the boiler location. The rules should be revised to eliminate posting all together for power boilers and allow the permits to be filed in the offices at the boiler location.

4. Sec. 2.13: Safety Valve Adjustment

This section refers to electric steam generators and the safety measures that must be taken. The way in which this section is written is very confusing as to whether it refers to the boiler (steam generator) or the electrical generator. The section should be rewritten to clarify which equipment is being addressed.

The section requires that when safety valves are being adjusted the power line must be open. Does this preclude on-line adjustments of safety valves? On-line adjustments can allow a malfunctioning safety valve to be corrected without the need to remove a unit from service. But this section appears to prohibit such a practice. If this is the case an exemption should again be made, or addressed on a site-specific basis for power boilers.

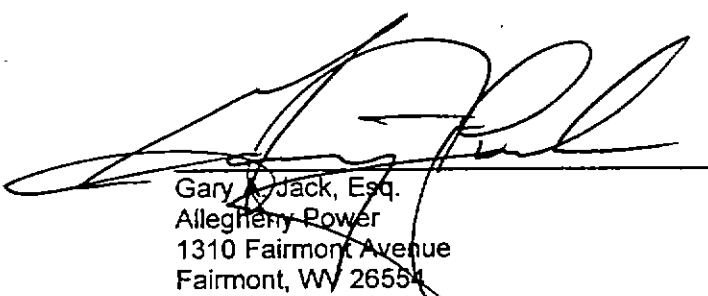
5. Sec. 4.19: Water Glasses and Gage Cocks

This section requires that "Each steam boiler shall have at least one (1) water glass ...". Supercritical units cannot meet this requirement simply due to the nature of their design.

Allegheny Energy Supply appreciates the opportunity to comment on these important rules.

Respectfully submitted,

MONONGAHELA POWER COMPANY
THE POTOMAC EDISON COMPANY
WEST PENN POWER COMPANY
dba ALLEGHENY ENERGY SUPPLY



Gary A. Jack, Esq.
Allegheny Power
1310 Fairmont Avenue
Fairmont, WV 26554

WEST VIRGINIA
SECRETARY OF STATE

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

Form #2

JUN 23 1 20 PM '99

OFFICE OF THE SECRETARY OF STATE
ADMINISTRATIVE LAW DIVISION

NOTICE OF A COMMENT PERIOD ON A PROPOSED RULE

AGENCY: West Virginia Division of Labor TITLE NUMBER: 42

RULE TYPE: Legislative; CITE AUTHORITY WV Code 21-3-7

AMENDMENT TO AN EXISTING RULE: YES X NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 3

TITLE OF RULE BEING AMENDED: Steam Boiler Inspection

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED:

TITLE OF RULE BEING PROPOSED:

IN LIEU OF A PUBLIC HEARING, A COMMENT PERIOD HAS BEEN ESTABLISHED DURING WHICH ANY INTERESTED PERSON MAY SEND COMMENTS CONCERNING THESE PROPOSED RULES. THIS COMMENT PERIOD WILL END ON July 30, 1999 AT 4:30 pm.

ONLY WRITTEN COMMENTS WILL BE ACCEPTED AND ARE TO BE MAILED TO THE FOLLOWING ADDRESS.

Andrew A. Brown, Asst. to the Commissioner

West Virginia Division of Labor

Room 319, Building #3

State Capitol Complex


Charleston, WV 25305

(304) 558-7890

RECEIVED

JUN 29 1999

Legislative Rule Making
Review Committee
THE ISSUES TO BE HEARD SHALL BE
LIMITED TO THIS PROPOSED RULE.


Authorized Signature

ATTACH A **BRIEF** SUMMARY OF YOUR PROPOSAL

WEST VIRGINIA DIVISION OF LABOR

319 Building Three, Capitol Complex • Charleston, West Virginia 25305

Phone (304) 558-7890 • Fax (304) 558-3797

CECIL H. UNDERWOOD
Governor



STEVEN A. ALLRED
Commissioner

Facts and Circumstances

Legislative rule 42CSR3, Steam Boiler Inspection, has not under-gone a substantive amendment since the 1960's. The only amendments to this rule have involved adjustments in the inspection and permit fees structure. Since the 1960's, the governing codes, American Society of Safety Engineers Code (ASME) and the National Board of Boiler and Pressure Vessel Inspectors Rules (NBIC), have been significantly modified. The primary purpose of this amendment is to bring the current rule into conformity with the national code which has been adopted and regulates this safety inspection activity. Because of an out dated legislative rule, this state is unable to address technological advances which have been incorporated into national coded and implemented by industry. It is therefore, imperative that this rule be modernized.

FISCAL NOTE FOR PROPOSED RULES

Rule Title: Steam Boiler Inspection

Type of Rule: X Legislative Interpretive Procedural

Agency West Virginia Division of Labor

Address Room 319, Building #3

State Capitol Complex

Charleston, WV 25305

1. Effect of Proposed Rule

	ANNUAL FISCAL YEAR				
	INCREASE	DECREASE	CURRENT	NEXT	THEREAFTER
<u>ESTIMATED TOTAL COST</u>	\$ -0-	\$ -0-	\$ 99,225	\$ 103,398	\$ 108,567
PERSONAL SERVICES	-0-	-0-	81,404	85,474	89,747
CURRENT EXPENSE	-0-	-0-	17,071	17,924	18,820
REPAIRS & ALTERNATIONS	-0-	-0-	-0-	-0-	-0-
EQUIPMENT	-0-	-0-	750	-0-	-0-
OTHER	-0-	-0-	-0-	-0-	-0-

2. **Explanation of above estimates:** The above estimates reflect current expenditure levels for two inspectors with a projected cost increase of five percent for future years. The adoption of this rule will not increase expenditures.
3. **Objectives of these rules:** With the exception of changes in fees authorized, this rule has not been amended since the 1960's. The rule is being amended to bring it into conformity with current national standards as adopted by this rule and WV Code.

Rule Title: Steam Boiler Inspection

4. Explanation of Overall Economic Impact of Proposed Rule.

A. Economic Impact on State Government.

- NONE -

B. Economic Impact on Political Subdivisions; Specific Industries; Specific groups of Citizens.

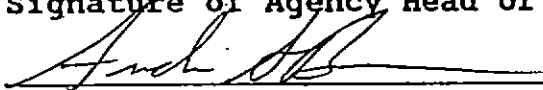
- NONE -

C. Economic Impact on Citizens/Public at Large.

- None _

Date: 6/30/99

Signature of Agency Head or Authorized Representative.



WEST VIRGINIA DIVISION OF LABOR

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CECIL H. UNDERWOOD
Governor



STEVEN A. ALLRED
Commissioner

Summary of Changes

General Changes. This amendment incorporates two changes which carry throughout the entire rule. These are:

1. The current rule references "Department of Labor". State government restructuring over the past several years resulted in an agency name change to "Division of Labor". This change appears throughout the rule.
2. The Code, §21-3-7 makes reference to "permit to operate" a boiler. While this reference is made in the rule, there are several references to "certificate to operate". All references to "certificate" have been changed to "permit" to be consistent with the Code.

Section 2.2. (dealing with permit extensions). During a recent legislative audit, the practice of issuing extensions to permits came under question. It was the auditor's interpretation that the Division could issue multiple extensions as long as no single extension exceeded sixty (60) days. This has been the practice for several years. However, the Division is of the opinion that the accumulative extension period is limited to sixty days. The National Board and our principal insurers agree that, where circumstances dictate, the extension period should be extended to but not exceed one hundred twenty (120) days.

All other changes. The remainder of the changes addressed in this amendment are technical in nature and directly related to the incorporation of the most current ASME and NBIC Codes. This is a modernization of the current rule and should have little or no impact upon current enforcement activities or compliance by industry.

TITLE 42
LEGISLATIVE RULES
DEPARTMENT DIVISION OF LABOR

SERIES 3
STEAM BOILER INSPECTION

§42-3-1. General.

1.1. Scope. – ~~This Legislative rules and regulations are~~ Legislative rule is promulgated for the enforcement of WV 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.

1.4. Effective Date.

§42-3-2. Definitions.

2.1. "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.

2.2. "Board or National Board" means the National Board of Boiler and Pressure Vessel Inspectors.

2.3. "Forced-flow steam generator" means a boiler which has no fixed steam and water line.

2.4. "NBIC" means the National board of Boiler and Pressure Vessel Inspectors Inspection Code.

§42-3-2. §42-3-3. Boilers Of All Types.

~~2.1. 3.1.~~ On and after July 1, 1945, all 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 ~~about~~ 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 of Labor, and boilers under the jurisdiction of the United States; are subject to an internal inspection annually by an approved inspector while not under pressure, and externally with at least the same frequency, and are required to have an annual ~~certificate permit~~ to operate, except as may be otherwise required by subdivision a of this section.

a. 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.

b. Insurance The division shall accept insurance inspector's reports on insured boilers ~~will be accepted~~ in lieu of inspection reports by an inspector of the ~~Department~~ Division of Labor.

c. In case a boiler, subject to the provision of this rule, When a boiler is moved from one location to another, notice shall be given the ~~Department~~ Division of Labor of such ~~the~~ removal and of the new location in which the boiler is to be set up.

d. The provisions of this rule do not apply to boilers exempt from inspection by the Commissioner of Labor under Section seven, Article three, Chapter twenty-one of the Code of West Virginia, 1931, amended 1937 and 1945. West Virginia Code.

~~2.2.~~ 3.2. After July 1, 1937, each ~~Each~~ steam boiler used or proposed to be used within the state, except boilers exempt from inspection under ~~Section seven, Article three, Chapter twenty-one of the Code of West Virginia, WV Code §21-3-7,~~ shall be thoroughly inspected internally and externally while not under pressure by an inspector of the ~~Department~~ Division of Labor, or by ~~Special Inspectors~~ approved inspectors provided for ~~herein-in this rule,~~ as to its design, construction, installation, condition and operation; and if it ~~shall be~~ is found to be suitable and to conform to the rules of the ~~Department~~ Division of Labor, the Commissioner of Labor shall issue to ~~such the~~ owner or user a Permit to Operate for each ~~such~~ boiler. Permits to operate shall specify the maximum pressure that the boiler inspected ~~be~~ is allowed to carry. ~~Certificates of inspection~~ Permits to operate ~~will~~ shall be issued by the Commissioner of Labor and ~~will be~~ 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 thereof. Requests for an extension, not to exceed ~~sixty (60)~~ one hundred twenty (120) days beyond the expiration date of the ~~certificate permit,~~ may be considered where there are unusual circumstances or conditions: **Provided, however, That** ~~such the~~ request has the approval of the insurance company carrying the risk, in the case of insured boilers, and/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 ~~will~~ shall be considered unless ~~such~~ approval in writing accompanies the request for extension of time. The ~~certificate permit~~ shall be posted under glass in the engine or boiler room containing ~~such 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 ~~for the time being.~~ The Commissioner of Labor, or his or her authorized representative, may at any time suspend a Permit to Operate when, in ~~their~~ his or her opinion, the boiler for which it was issued may not continue to be operated without menace to the public safety, or when the boiler is found not to comply with ~~the rules herein provided for, this rule.~~ and a A Special Inspector shall have corresponding powers with respect to Permits to Operate for boilers insured by the company employing him or her. ~~Such~~ The suspension of a Permit to Operate ~~shall continue~~ continues in effect until said ~~the~~ boiler ~~shall have~~ has been made to conform to the rules of the ~~Department~~ Division of Labor and until said ~~the~~ Permit to Operate ~~shall have~~ has been reinstated by 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. Each such boiler shall also be inspected externally while under pressure with at least the same frequency and at no greater intervals.

~~2.3.~~ 3.3. All boilers shall be stamped with a West Virginia serial number, ~~thus:~~ WOOOW, at the first convenient opportunity after July 1, 1937, and not later than the first internal inspection.

The numbers and letters to shall be not less than 5/16 inches high.

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

b. The stamping shall not be covered by insulating or other material.

c. No steam boiler shall be operated in this state if the boiler ~~that has been condemned for further use in this or any other State by an authorized approved boiler inspector shall be operated in this State.~~

d. Every steam boiler so condemned in this State shall be stamped in the following manner: "WXXXW" placed ~~on condemned boilers shall be made across the registration mark or number, a stamp shall be placed in the location of this mark as determined by the rules of the American Society of Mechanical Engineers' Boiler Code.~~ 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 of Labor if condemned by the State. The Division of Labor shall provide identification marks to all companies insuring boilers within the state.

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.

2.4. 3.4. In addition to any boiler inspectors of the ~~Department~~ Division of Labor, the Commissioner of Labor 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 ~~such the~~ company a Certificate of ~~authority~~ Competency. ~~The commissioner shall issue a Certificate of Competency if the inspectors pass satisfactorily pass the examination provided for in Section subsection 2.10 3.6 of these rules this rule or, in lieu of such the examination, shall 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. Such 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 his their continuing in the employ of a boiler inspection and the insurance company imposed by their respective companies.~~

2.5. 3.5. a. ~~In case an insurance company cancels insurance upon any steam boiler carrying more than fifteen (15) pounds gauge pressure, or of more than 3 H.P., or the policy expires and is not renewed, notice shall immediately be given the Department of Labor. They shall likewise notify said Department immediately upon the placing of insurance on such boiler. An insurance company shall immediately notify the Division of Labor of all insurance policy of coverage changes to include expiration of policy, cancellation of policy or the initiating of a new policy of coverage.~~

b. If a Special Inspector, upon the first inspection of a new risk finds that the boiler or any of the appurtenances are in ~~such a~~ condition that his ~~or her~~ company refuses ~~insurance on the same coverage,~~ the company shall immediately notify the ~~Department~~ Division of Labor of that fact together with a list of the defects.

~~2.6.~~ 3.6. Examination for Inspectors of the ~~Department~~ Division of Labor and Special Inspectors shall be given by the Commissioner of Labor, or by at least two (2) examiners to be appointed by said the Commissioner of Labor. ~~Such examinations~~ Examinations ~~must shall~~ be written or part written and part oral, recorded in writing and ~~must 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 ~~must shall~~ be of uniform grade throughout the State. In case an applicant for an inspector's Certificate of Competency fails to pass this examination, he or she may appeal to the Commissioner of Labor for a second examination, which shall be given by the Commissioner of Labor, or by examiners other than those by whom the first examination was given, and these examiners shall be appointed ~~forthwith~~ immediately to give said a second examination. Upon the result of this examination, on appeal, the Commissioner shall determine whether the applicant ~~be~~ is qualified.

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. A Certificate of Competency may be revoked by the Commissioner of Labor for the incompetency or untrustworthiness of the holder ~~thereof~~ 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, ~~said board to which shall~~ consist of three (3) or more members to be appointed by the Commissioner, ~~which~~ The board shall hear the appeal and either set aside or affirm the revocation and its decision shall be final. The person whose certificate has been revoked ~~shall be~~ is entitled to 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, ~~shall be~~ is entitled to apply for a new examination and certificate after ninety (90) days from ~~such~~ the failure or revocation.

~~2.7.~~ 3.7. ~~On and after July 1, 1937, the~~ The first internal inspection of each ~~insured~~ boiler to which this rule apply shall be reported on the A.S.M.E. "~~First Internal Inspection Report,~~" National Board of Boiler and Pressure Vessel Inspectors Inspection Code (NBIC) "Report Of First Internal Inspection" form, or a similar form and. Annually, thereafter, inspections shall be reported on A.S.M.E. "~~Internal Re-inspection Report.~~ NBIC "Report of Inspection" form or a similar form. Copies of internal inspection reports shall be forwarded to the Commissioner of Labor. ~~on A.S.M.E.—report forms.~~ Not more than twelve (12) months shall elapse between internal inspections unless requests for extensions are granted or the boiler is subject to the provisions of subdivision 3.1(a) of this rule. ~~Reports of external inspections are not required unless there are violations or dangerous conditions.~~

~~2.8.~~ 3.8. No used steam boiler ~~or boilers~~ for use under pressure shall be brought into this State after July 1, 1937, except boilers exempt under ~~Section seven, Article three, Chapter twenty one of the Code of West Virginia WV Code §21-3-7,~~ unless the ~~same comply~~ boiler complies with section two four of these Rules for New Installations this rule.

~~2.9.~~ Following internal inspection, if the condition of the boiler warrants, ~~an annual certificate shall be issued by the Commissioner of Labor without charge.~~

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

Department Division of Labor.

~~2.10.~~ **3.10.** The Commissioner of Labor has adopted the ~~1936 A.S.M.E. American Society of Mechanical Engineers (ASME) Boiler Construction Code, Amendments, Addendums, and Interpretations thereto, and the National Board of Boiler and Pressure Vessel Inspectors Inspection Code (NBIC), Amendments, Addendums, and Interpretations thereto~~ made and approved by the Council of the Society for both new and existing installations as the rules for the guidance of to be used by inspectors in the State of West Virginia.

~~2.11.~~ **3.11.** The Commissioner of Labor shall have free access for himself or herself, his or her authorized inspectors and special inspectors, during reasonable hours, to any premises in the state where a steam boiler is built or where a steam boiler or power plant apparatus is being installed or operated, for the purpose of ascertaining whether ~~such the~~ boiler is built, installed and operated in accordance with the provisions of ~~Section seven, Article three, Chapter twenty one of the Code of West Virginia, 1931, amended 1937 and 1945, WV Code §21-3-7.~~

~~2.12.~~ All boilers ~~used for generating steam which carry a gauge pressure of fifteen (15) pounds per square inch or over or more than 3 H.P., and subject to regular inspections shall be prepared for such inspections when the owners or users are notified by either the Department of Labor, or any authorized insurance company for such inspections or hydrostatic test, if necessary.~~

~~2.13.~~ **3.12.** The owner or user of ~~the a~~ boiler ~~or boilers herein required to be~~ to which this rule apply and which is required to be inspected annually on a date specified by the Commissioner of Labor or by Special Inspectors of any authorized insurance company, ~~which~~ The inspection date shall not be less than seven (7) days after the date of ~~such 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.

~~2.14.~~ **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, ~~furnace, mud drum heads or other parts of each annual inspection~~ when necessary. The steam gauge shall be removed for testing.

b. All gas or oil fired boilers that come under these rules which are equipped with a stack damper shall have such damper arranged so that it cannot be closed tight. The damper should have at least 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.

~~2.15.~~ **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 ~~such the~~ inspection and Permit to Operate shall be withheld until the boiler has been properly prepared and inspected.

b. When inspecting a boiler under ~~these rules~~ this rule (the State or Insurance Approved

Inspector), the 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. ~~such~~ The vessel may be a condensate return tank ~~of or~~ blow-off tank. The inspector shall report to ~~this office~~ the Commissioner of Labor any defects or sub-standard conditions he ~~or she~~ may note on appurtenances connected to the boiler.

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

~~All gas or oil fired boilers that come under these rules which are equipped with a stack damper shall have such damper arranged so that it cannot be closed tight. It should have at least 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 steam or hot water is leaking into the boiler, the source of such leakage shall be disconnected, if necessary, so as to cut out such steam or hot water from the boiler to be inspected.~~

~~2.16.~~ 3.15. A boiler shall be condemned by an approved inspector ~~If~~ if, upon inspection, a boiler ~~or boilers are~~ it is found to be in such condition that ~~they are~~ it is unsafe to operate, ~~they shall be condemned.~~ However, the owner or user may immediately appeal to the Commissioner of Labor, if he ~~or she~~ so desires, before the boiler is stamped as provided in ~~Section subsection 2.6:~~ 2.3 of this rule. If ~~an~~ appeal is made, the boiler shall not be operated pending the decision of the Commissioner of Labor.

~~2.17.~~ 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. ~~By~~ For the purposes of this subsection "lap seam crack" ~~is meant~~ 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.

~~2.18. When the boiler is stamped with the condemned mark, the inspector shall put underneath such mark the identification mark furnished his company, if an insurance company, or that provided by the Commissioner of Labor if condemned by the State, it being understood that identification marks shall be provided to all companies insuring boilers within the state by the of Labor.~~

~~2.19.~~ 3.18.a. ~~When insulating a boiler, provision shall be made~~ 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, ~~such~~ 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 ~~connection~~ connections to boiler.

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

~~2.20.~~ 3.19. All appliances required for electric steam generators shall be attached in accordance with the following rules-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 so 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 adjusting 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 ~~to~~ shall be located near the boiler.

~~2.21.~~ 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.

~~2.22.~~ 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 as to the safety of the boiler; ~~or if the covering cannot be removed at that time, he or she may order the operation of the boiler stopped until such time as the covering can be removed and proper examination made.~~

~~2.23.~~ By "fusion welding" is meant a process of welding metals in a molten, or molten and vaporous state without the application of mechanical pressure or blows. Such welding may be accomplished by the oxy acetylene or oxy hydrogen flame or by the electric arc. Thermit welding is also classed as fusion welding.

~~2.24.~~ A major repair by fusion welding, such as the repair or making of a new seam, the

~~insertion of nozzles or any repair involving the safety of a boiler should be made in accordance with the section of A.S.M.E. code governing the particular kind of vessel or kind of work to be done.~~

3.22. No repairs or alterations shall be made to boilers or boiler appurtenances subject to this rule by individuals or repair organizations unless the individuals or repair organizations 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.

~~2.25,~~ 3.24. No repairs (including welding) shall be made without the approval of an authorized inspector and the method of such the repair shall be sanctioned by said the inspector. If, in the opinion of the inspector, a hydrostatic test is necessary, ~~such the~~ test shall be applied when the work is completed.

~~2.26.~~ Fusion welding on boilers by unqualified welding operators will not be acceptable except in the cases specified herein where the safety of the boiler does not depend upon the weld.

~~(a)~~ Fusion welds not exceeding three (3) feet in length will be permitted in a staybolted surface or one adequately stayed by other means so that, should the weld fail, the parts would be held together by the stays.

~~(b)~~ Cracks in girth seams extending from the edge of the plate to the rivet hole may be fusion welded. All cracks that may be welded shall be properly prepared to permit fusion through the entire thickness of the plate. Similar cracks in a longitudinal direction and located between the rivet holes may also be fusion welded: Provided, That the cracks do not extend more than (three) 3 inches beyond the edge of the lap of the inner plate. Cracks extending from rivet hole to rivet hole or girth seams shall not be welded.

~~(c)~~ Caulking edges of girth seams may be built up by fusion welding under the following conditions: The thickness of the original metal between rivet holes and caulking edge to be built up shall not be less than one fourth (1/4) of the diameter of the rivet hole and the portion of the caulking edge to be replaced shall not exceed thirty (30) inches in length in a girthwise direction.

~~(d)~~ Prior to making any repairs to girth seams by fusion welding the rivets shall be removed over the portions to be welded and for a distance of at least six (6) inches beyond each such portion. After repairs are made the rivet holes shall be reamed before the rivets are redriven.

~~(e)~~ When external corrosion has reduced the thickness of plate around handholes to an extent of not more than forty percent (40%) of the original thickness and for a distance not exceeding two (2) inches from the edge of the hole, the plate may be built up by fusion welding.

~~(f) Stayed sheets which have corroded to a depth of not more than forty percent (40%) of their original thickness may be reinforced or built up by fusion welding. In such cases the stays and staybolts shall come completely through the reinforcing metal and the original ends of the staybolts shall be plainly visible to the inspector. When necessary to replace stays and staybolts, they shall comply with the requirements of the A.S.M.E. Code.~~

~~(g) In fire tube boilers where tubes enter flat surfaces and the tube sheets have been corroded or where cracks exist in the ligaments, fusion welding may be used to reinforce or repair such defects. The ends of such tubes may be fusion welded to the tube sheets and the welding in of tubes of the sheets shall not be permitted where such sheets form the shell or drum of a water tube boiler.~~

~~(h) Unreinforced openings in the shells or drums of boilers: Provided, That they do not exceed in diameter the sizes of unreinforced openings permitted by the A.S.M.E. Code (Par. P-268a) may be closed by the use of a patch or plate, at least two (2) inches larger in diameter than the hole, placed on the inside of the drum or shell and sealed against leakage by fusion welding, preferably on both the inside and outside edges. Such patches shall not be set in the shell flush with the surrounding plate.~~

~~(i) Tubes of fire tube boilers may be re-ended or pierced by the fusion welding process provided, such tubes are well distributed and their number does not exceed fifty percent (50%) of the total and further that there are no more than two (2) circumferential welds in any one (1) tube: Provided, however, That in fire tube boilers tubes that have been re-ended by the fusion welding process may be used in excess of fifty percent (50%) of the full number of tubes: Provided, That such re-ended tubes have been welded by operators who have demonstrated their ability to obtain sound and ductile welds. Satisfactory evidence of a welding operator's ability in this connection shall be obtained by having the welding operator make several sample welds between two (2) pieces of boiler tubing, the welding to be done under the same conditions and by the same process as will be the case in the actual safe ending to tubes. After such samples have been welded they shall be cut into longitudinal strips about one (1) inch wide, the reinforcement of the weld on the outside, if any, ground off and the specimens then broken at the weld. This method of examination maybe accomplished by gripping the specimen at the weld in a vice, and the extended section driven backward with a hammer so that the weld will be opened at the root. To be satisfactory, welds broken in this manner shall be clean and properly fused through at least ninety percent (90%) of the thickness of the tube.~~

~~If more than fifty percent (50%) re-ended tubes are found in a boiler and it is impossible to have the welding operator who did the work make some sample welds for a test, three (3) tubes at various locations shall be removed from the boiler and the welds shall be subjected to the above test.~~

~~2.27. The repairing of tubes or headers in water tube boilers shall be governed by rules of the National Board of Fusion Welding. Any variation of the National Board rules shall be taken up with this for approval. All welding mechanics performing welding repair work on steam boilers in West Virginia in accordance with Paragraph P-112 of the A.S.M.E. Code, must be qualified by an authorized inspector and the qualification test records submitted to this Department for approval.~~

~~2.28. Cracks in the shells or drums of power boilers, except as otherwise specified herein, shall not be welded.~~

~~2.29.~~ The building up of grooved or corroded areas of unstayed internal surfaces, other than widely scattered pitholes, by means of deposited metal will not be permitted.

~~2.30.~~ Leakage at riveted joints or connections must be carefully investigated to determine the cause of such leakage.

~~2.31.~~ Where boilers are patched and the patch affects the structure of the boiler, requiring a reduction of pressure in same, the inspector shall forward to the of Labor a new long form data report together with a sketch of the patch on the back of the report.

~~2.32.~~ The maximum allowable working pressure of steam heating boilers shall not exceed fifteen (15) pounds per square inch on a boiler built or used exclusively for low pressure steam heating. The maximum steam pressure on any boiler in which steam is generated, if constructed of cast iron, shall be fifteen (15) pounds per square inch.

~~2.33.~~ 3.25. The Commissioner of Labor or his or her authorized representative or Special Inspectors may at any time call for an accumulative accumulation test to determine if a steam heating boiler is subject to or operated at a pressure in excess of fifteen (15) pounds.

~~§42-3-3.~~ §42-3-4. New Installations.

~~4.1.~~ All new steam boilers installed in this State after January 1, 1938, except boilers exempt from inspection under Section seven, Article three, Chapter twenty one of the Code of West Virginia, 1931, amended 1937 and 1945 WV 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 said the boilers must shall be inspected by a qualified inspector, holding a boiler inspector's commission-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. and stamped as provided in Paragraph 332 of Boilers to which this rule applies shall be stamped as provided by the Power Boiler Code of the American Society of Mechanical Engineers, said the letters and figures of the stamp to be not less than 5/16 inches in height. Boiler or 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 this Department the Division: Provided, however, That the party or parties The owner or operator desiring to install such the boiler or boilers in this State, shall file with his the application to this Department the Division a manufacturer's data report covering the construction of the boiler or boilers in question.

~~§42-3-4.~~ §42-3-5. Existing Installations.

~~4.1.~~ 5.1. The following rules and regulations standards, formulated by the Commissioner of Labor, in accordance with Section seven, Article three, Chapter twenty one of the Code of West Virginia, 1931, amended 1937 and 1945 WV Code §21-3-7, shall apply to boilers installed previous to January 1, 1938. Form 104, "Affirmation of Previous Installation," must shall be used to prove that a boiler which does not bear proper stamping was installed in West Virginia prior to that time.

4.2. 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.

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

Where

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 ~~Par. P-181, Page 27,~~ the ASME Code Book. See note.

E for seamless boilers ~~shall be~~ is 100%.

E for tube ligaments between openings shall be calculated by the rules given in ~~Par. P-192 and P-193,~~ the ASME Boiler Code.

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

FS = factor of safety allowed by ~~these rules~~ 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 ~~Par. P-102,~~ the ASME Boiler Code.

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

4.3. 5.3.a. Boilers of butt strap longitudinal seam construction ~~in service when these rules become effective~~ shall be operated with a factor of safety of at least four and five tenths (4.5). The above factor of safety may be increased by the inspector if the condition and safety of the boiler demands ~~such~~ the action.

b. Ten (10) years after these rules become effective the factor of safety shall be at least five (5).

c. Boilers of lap seam longitudinal construction ~~in service when these rules become effective~~ shall be operated with a factor of safety of at least five (5).

d. ~~Five (5) years after these rules become effective, the factor of safety shall be five and five tenths (5.5). After ten (10) years it shall be five and seventy-five hundredths (5.75), and after fifteen (15) years it shall be not less than six (6). This does not apply to boilers constructed in conformity with the ASME Code and are so stamped.~~

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

above factor of safety may be increased by the inspector if the condition and safety of the boiler demands such the action.

~~4.4.~~ 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.

~~4.5.~~ 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.

~~4.6.~~ 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.

~~4.7.~~ 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
Sizes 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"

4.8. 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.

4.9. 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~~ 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 ~~after January 1, 1938.~~

4.10. 5.10. All stationary reinstalled boilers with ownership 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.

4.11. 5.11. The factor of safety for re-installation shall be in accordance with the requirements of ~~Section subsection 4.3 5.3 of these rules~~ 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.

4.12. 5.12. Second-hand boilers ~~by 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.

4.13. 5.13. The National Board ~~regulations~~ of Boiler and Pressure Vessel Inspectors Inspection Code (NBIC) has been adopted as the repair standard of this ~~Department~~ Division.

4.14. 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.

4.15. 5.15. ~~Cast iron headers and mud drums. — The maximum allowable working pressure on a water-tube boiler, the tubes of which are secured to cast iron or malleable iron headers, or which have cast iron mud drums, shall not exceed one hundred sixty (160) pounds per square inch. 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.~~

4.16. 5.16. Fire-actuated fusible plugs, when used shall conform to the Rules and Regulations of the Boiler Code Committee of the American Society of Mechanical Engineers, and shall be renewed when requested by the Commissioner of Labor or inspectors.

4.17. 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". ~~(For dimensions refer to Figure A-10 A.S.M.E. Code Book.)~~ 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.

4.18. 5.18. Steam-actuated fusible plugs, if used, shall be ~~so~~ 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 ~~these rules~~ 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.

4.19. 5.19.a. ~~Water glasses and gauge cocks.~~— 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 ~~such~~ 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, ~~need~~ shall have ~~but~~ 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 ~~and~~ if the water connection ~~thereto~~ 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.

4.20. 5.20.a. No outlet connections, except for damper regulator, feed-water regulator, low water cut-outs, 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 ~~such~~ the controls shall be independent of the regular water column piping.

c. The pipe connections to ~~such~~ 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.

4.21. 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 so 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. ~~Such a~~ The pipe shall be of ample size and arranged so that it may be cleared by blowing out.

~~4.22.~~ **5.22.a.** Stop valves.— 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 ~~so~~ 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.

~~4.23.~~ **5.23.a.** Bottom blow-off pipes.— 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. ~~Such boilers~~ 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.

4.24. **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.

~~Interpretation for Sections 4.23 and 4.24~~

~~It is the interpretation of the Commissioner of Labor that the requirements called for in Sections 4.23 and 4.24 of these rules shall apply only when repairs become necessary unless apparatus or fittings in present use are dangerous in the opinion of the inspector.~~

4.25. 5.25.a. A bottom blow-off pipe when exposed to direct furnace heat shall be protected by firebrick or other heat resisting material so 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.

4.26. 5.26. Feed piping.— 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.

4.27. 5.27. Water fronts.— 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. ~~Such~~ The valves, when used, shall be of the straightway type. Suitable means should be provided for blowing out this equipment.

4.28. 5.28.a. Test pressure. -- When a hydrostatic test is applied, the required test pressure shall be ~~one and one-half (1 1/2) times the maximum allowable working pressure~~ 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 ~~not exceed one hundred fifty (150) degrees Fahrenheit~~ be in accordance with the rules of the NBIC.

4.29. 5.29.a. An approved inspector shall be called for consultation ~~Where when~~ repairs are necessary which in any way affect the working pressure or safety of a boiler; ~~a certified inspector shall be called for consultation and advice as to the best method of making such repairs; after such~~ After the repairs are made they shall ~~be~~ are subject to the approval of ~~a certified~~ an approved inspector.

b. When repairs or ~~changes~~ alterations are ordered by an inspector and a ~~Form 101, "Boiler Repair Report"~~ is issued to the owner required, the Annual Inspection Certificate will be withheld until the ~~Form 101~~ Boiler Repair Report, completed by the owner, is received by the ~~Department~~

Division of Labor showing that the repairs have been completed as ~~ordered~~ required. Repairs to all boilers and their appurtenances shall conform to the requirements of the ~~ASME Boiler Code~~ NBIC.

~~4.30.~~ 5.30. A boiler, except self-contained portable boilers 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 ~~authorized~~ approved inspector and an ~~Annual Inspection a Certificate~~ a permit to operate has been issued by the Commissioner of Labor.

~~§42-3-5.~~ §42-3-6. **Inspection Fee Schedule.**

~~5.1.~~ 6.1. General Purposes. The general purpose of ~~these rules and regulations~~ this section is to formulate an inspection fee schedule. ~~These rules and regulations~~ This rule establish fees:

~~1.~~ a. for the inspection of boilers by those persons whom the Commissioner of Labor has authorized as inspectors;

~~2.~~ b. for the processing of inspection reports from insurance companies;

~~3.~~ c. for issuing annual permits to operate boilers;

~~4.~~ d. for the commissioning of insurance company boiler inspectors; and,

~~5.~~ e. emergency extension of operating permits.

~~5.2.~~ 6.2. ~~All fee charges shall be paid before issuing annual permits to operate a boiler. Checks and money orders for payment of all fees shall be made payable to the West Virginia Department Division of Labor. The Commissioner shall not issue a permit to operate a boiler until all applicable fees have been paid. All fees shall be paid by check or money order made payable to the West Virginia Division of Labor.~~

Boiler Inspection Fees for Steam Boilers:

Effective July 1, 1982

Internal	\$ 79.00
External	\$ 79.00

Increase effective July 1, 1983

Internal	\$ 82.50
External	\$ 82.50

Increase effective July 1, 1984

Internal	\$ 92.00
External	\$ 92.00

Increase effective July 1, 1985

Internal	\$ 97.00
External	\$ 97.00

Increase effective July 1, 1986

Internal	\$ 101.50
External	\$ 101.50

Increase effective July 1, 1987

Internal	\$ 106.00
External	\$ 106.00

Increase effective July 1, 1988

Internal	\$ 125.00
External	\$ 125.00

Fee for the processing of inspection reports for insurance companies:

Effective July 1, 1982	\$ 7.00
Increase effective July 1, 1983	\$ 7.50
Increase effective July 1, 1984	\$ 8.00
Increase effective July 1, 1986	\$ 8.50
Increase effective July 1, 1987	\$ 9.00
Increase effective July 1, 1988	\$10.00

Fee for issuing annual permits to operate boilers:

Effective July 1, 1982	\$ 8.00
Increase effective July 1, 1983	\$ 8.50
Increase effective July 1, 1984	\$ 9.00
Increase effective July 1, 1986	\$ 9.50
Increase effective July 1, 1987	\$10.00
Increase effective January 1, 1988	\$10.50

Fee for commissioning insurance company boiler inspectors:

Effective July 1, 1982	\$ 8.00
Increase effective July 1, 1985	\$ 9.00
Increase effective July 1, 1987	\$10.00
Increase effective July 1, 1988	\$15.00

Fee for emergency extension of operating permit:

Effective January 1, 1988	\$100.00
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Hobby Boilers - Certificates <u>operating permits</u> Only	\$ 10.50
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National Board Examinations	\$ 15.00
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