

# **Summary of Modifications/Changes in this Update**

**This Summary of Changes is for information only.  
It is not a part of the referenced document, and should not be used for project documentation.**

U.S. Department of Veterans Affairs   ◆   Office of Construction & Facilities Management

**DATE OF THIS VERSION (new)**

May 1, 2024

**TITLE OF DOCUMENT (new title if applicable)**

Volume 1 STEAM BOILERS (Steam Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

April 1, 2024

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Volume 1 STEAM BOILERS (Steam Generating Systems)

**SUMMARY OF CHANGES IN THIS VERSION:**

1. 3.9 Revised sub-paragraphs to require written approval for use of propane as a main or secondary fuel source.

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## **DATE OF THIS VERSION (new)**

April 1, 2024

## **TITLE OF DOCUMENT (new title if applicable)**

Volume 1 STEAM BOILERS (Steam Generating Systems)

## **DATE OF VERSION BEING SUPERSEDED (old):**

October 1, 2022

## **DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Volume 1 STEAM BOILERS (Steam Generating Systems)

## **SUMMARY OF CHANGES IN THIS VERSION:**

1. 2.1.2 added isometric
2. Added 2.1.15 show tube pull area
3. Added 2.1.16 show rigging routes for future removal and replacement of equipment.
4. Added 2.1.17 show access routes for operation and maintenance of equipment requiring access.
5. 2.2.4 defined the VHA authority having jurisdiction as VHA Office of Healthcare Engineering
6. 3.2.1.7 added under all possible operational configurations
7. 3.7.1 defined stairway angle to a maximum of 45 degrees and recommend using switchback design to conserve floor space.
8. 4.1 Added and defined main aisle
9. 4.2 added the main
10. 4.8 defined the space between multiple to be 48 inches
11. 4.10 removed the term floor mounted
12. 4.15 remove a repeat line from 4.2. now 4.16 and 4.17 have moved up one line.
13. 4.16 added clear access to these valves shall be maintained.

14. 5.1.1.1 added Combustion air make-up heating and ventilating units shall have a secondary means or backup system for maintaining combustion air into the boiler plant.
15. 6.2.2.1.1 added fire tube boilers are the preferred type of boilers.
16. 6.2.2.2 Water tube boilers added require OHE concurrence
17. 6.5.4 added method to be used when sizing the water softeners for the plant.
18. 6.7.2.4 Added pumps shall have a manual run mode that is not dependent on a PLC.
19. 6.7.3.4 Added pumps shall have a manual run mode that is not dependent on a PLC.
20. 7.1.6 added the propane tank room and removed the tank pad from outside of the boiler plant.
21. 7.1.7.1 removed the backup coal storage amounts.
22. 7.1.7.2 added the use of propane as a backup fuel source requires prior approval from VHA Central Office of OHE.
23. 9.3 added sizing
24. 9.5 added fixed opened dampeners do not need to be interlocked with the burners.
25. 9.6 Added motorized dampeners and combustion air fans shall be interlocked with the burners. Combustion air shall be proven prior to and during operation of the burners.
26. 9.7 motorized dampeners and combustion air fans shall have a secondary mean of providing combustion air to the plant with an interlock that is parallel to the primary system. For example, a garage door in the open position.
27. 9.8.2.2 change atmospheric to power.
28. 9.8.4.7 added burner shall be manually restarted by an operator once the pressure drops.
29. 11.1.4 Added requirements for 3 levels of password protection for the burner control systems.
30. 11.3.3 deleted season operation moved everything up one number.
31. 14.0 corrected spelling error PLAN to PLANTS
32. 15 changed ASME section from IV heating Boilers to I Power Boilers
33. 15 added national Board of Boiler Inspectors Code Part 1

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**DATE OF THIS VERSION:**

October 1, 2022

**TITLE OF DOCUMENT:**

Revisions to Volume 1– Steam Boilers (Steam Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

August 1, 2022

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Added to paragraph 2.4.3.1 Life Cycle period, a new line iii) indicating Hot water/condensing boilers to have a useful life expectancy of 15 years. Existing line iii) becomes iv), and existing line iv) becomes line v).

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**DATE OF THIS VERSION:**

August 1, 2022

**TITLE OF DOCUMENT:**

Revisions to Volume 1– Steam Boilers (Steam Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

August 1, 2021

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Added paragraph 1.1.5 Emergency Temporary Rental Boiler Connections.

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**DATE OF THIS VERSION:**

August 1, 2021

**TITLE OF DOCUMENT:**

Revisions to Volume 1– Steam Boilers (Steam Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

June 1, 2021

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Removed section on Warranties

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**DATE OF THIS VERSION:**

June 1, 2021

**TITLE OF DOCUMENT:**

Revisions to Volume 1– Steam Boilers (Steam Generating Systems)

**DATE OF VERSION BEING SUPERSEDED (old):**

September 1, 2016

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Steam, Heating Hot Water, and Outside Distribution Systems Design Manual

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Changed OCAMES to new Title of Healthcare Environment & Facilities Programs (HEFP)
2. Combustion Air Opening calculations clarified.
3. Changed NFC to NFPA
4. Clarify pipe steam pipe design pressure and temperature so they match the steam tables.
5. Limit the directional changes of safety valve vent pipes to 90 degrees.
6. Water treatment arrangement for the chemical pumps and access
7. Additional Combustible gas detectors location if propane is the secondary fuel.
8. Remove natural gas compressors and piping for gas turbine co-gen.
9. Removed 110% from the safety relief valve requirements
10. Added a lift table for loading bags of salt into the brim tank.
11. Changed chemical feed pump arrangement doing away with the mixing tank.
12. Changed the firing mode from a 4 stage control to fully modulating with manual/auto control operations.
13. Defined a non-recycling low water cut out and manual restart of the boiler.

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**DATE OF THIS VERSION:**

September 1, 2016

**TITLE OF DOCUMENT:**

Steam, Heating Hot Water, and Outside Distribution System Design Manual

**DATE OF VERSION BEING SUPERSEDED (old):**

various

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

OUTSIDE STEAM DISTRIBUTION SYSTEMS DESIGN MANUAL, May 2006

STEAM GENERATION SYSTEMS DESIGN MANUAL, August 2012

**SUMMARY OF CHANGES IN THIS VERSION:**

1. The Steam, Heating Hot Water, and Outside Distribution System Design Manual is a consolidation and update of the existing OUTSIDE STEAM DISTRIBUTION SYSTEMS DESIGN MANUAL, May 2006 and STEAM GENERATION SYSTEMS DESIGN MANUAL, August 2012 into a new and comprehensive DM.