

NFPA 8506

Standard on Heat Recovery Steam Generator Systems

1998 Edition



National Fire Protection Association, 1 Batterymarch Park, PO Box 9101, Quincy, MA 02269-9101
An International Codes and Standards Organization

[This is a preview. Click here to purchase the full publication.](#)

Copyright ©
National Fire Protection Association, Inc.
One Batterymarch Park
Quincy, Massachusetts 02269

IMPORTANT NOTICE ABOUT THIS DOCUMENT

NFPA codes and standards, of which the document contained herein is one, are developed through a consensus standards development process approved by the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus on fire and other safety issues. While the NFPA administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy of any information or the soundness of any judgments contained in its codes and standards.

The NFPA disclaims liability for any personal injury, property or other damages of any nature whatsoever, whether special, indirect, consequential or compensatory, directly or indirectly resulting from the publication, use of, or reliance on this document. The NFPA also makes no guaranty or warranty as to the accuracy or completeness of any information published herein.

In issuing and making this document available, the NFPA is not undertaking to render professional or other services for or on behalf of any person or entity. Nor is the NFPA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances.

The NFPA has no power, nor does it undertake, to police or enforce compliance with the contents of this document. Nor does the NFPA list, certify, test or inspect products, designs, or installations for compliance with this document. Any certification or other statement of compliance with the requirements of this document shall not be attributable to the NFPA and is solely the responsibility of the certifier or maker of the statement.

NOTICES

All questions or other communications relating to this document and all requests for information on NFPA procedures governing its codes and standards development process, including information on the procedures for requesting Formal Interpretations, for proposing Tentative Interim Amendments, and for proposing revisions to NFPA documents during regular revision cycles, should be sent to NFPA headquarters, addressed to the attention of the Secretary, Standards Council, National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

Users of this document should be aware that this document may be amended from time to time through the issuance of Tentative Interim Amendments, and that an official NFPA document at any point in time consists of the current edition of the document together with any Tentative Interim Amendments then in effect. In order to determine whether this document is the current edition and whether it has been amended through the issuance of Tentative Interim Amendments, consult appropriate NFPA publications such as the *National Fire Codes*® Subscription Service, visit the NFPA website at www.nfpa.org, or contact the NFPA at the address listed above.

A statement, written or oral, that is not processed in accordance with Section 16 of the Regulations Governing Committee Projects shall not be considered the official position of NFPA or any of its Committees and shall not be considered to be, nor be relied upon as, a Formal Interpretation.

The NFPA does not take any position with respect to the validity of any patent rights asserted in connection with any items which are mentioned in or are the subject of this document, and the NFPA disclaims liability of the infringement of any patent resulting from the use of or reliance on this document. Users of this document are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.

Users of this document should consult applicable federal, state, and local laws and regulations. NFPA does not, by the publication of this document, intend to urge action that is not in compliance with applicable laws, and this document may not be construed as doing so.

Licensing Policy

This document is copyrighted by the National Fire Protection Association (NFPA). By making this document available for use and adoption by public authorities and others, the NFPA does not waive any rights in copyright to this document.

1. Adoption by Reference – Public authorities and others are urged to reference this document in laws, ordinances, regulations, administrative orders, or similar instruments. Any deletions, additions, and changes desired by the adopting authority must be noted separately. Those using this method are requested to notify the NFPA (Attention: Secretary, Standards Council) in writing of such use. The term “adoption by reference” means the citing of title and publishing information only.

2. Adoption by Transcription – **A.** Public authorities with lawmaking or rule-making powers only, upon written notice to the NFPA (Attention: Secretary, Standards Council), will be granted a royalty-free license to print and republish this document in whole or in part, with changes and additions, if any, noted separately, in laws, ordinances, regulations, administrative orders, or similar instruments having the force of law, provided that: (1) due notice of NFPA’s copyright is contained in each law and in each copy thereof; and (2) that such printing and republication is limited to numbers sufficient to satisfy the jurisdiction’s lawmaking or rule-making process. **B.** Once this NFPA Code or Standard has been adopted into law, all printings of this document by public authorities with lawmaking or rule-making powers or any other persons desiring to reproduce this document or its contents as adopted by the jurisdiction in whole or in part, in any form, upon written request to NFPA (Attention: Secretary, Standards Council), will be granted a nonexclusive license to print, republish, and vend this document in whole or in part, with changes and additions, if any, noted separately, provided that due notice of NFPA’s copyright is contained in each copy. Such license shall be granted only upon agreement to pay NFPA a royalty. This royalty is required to provide funds for the research and development necessary to continue the work of NFPA and its volunteers in continually updating and revising NFPA standards. Under certain circumstances, public authorities with lawmaking or rule-making powers may apply for and may receive a special royalty where the public interest will be served thereby.

3. Scope of License Grant – The terms and conditions set forth above do not extend to the index of this document.

(For further explanation, see the Policy Concerning the Adoption, Printing, and Publication of NFPA Documents, which is available upon request from the NFPA.)

Copyright © 1998 NFPA, All Rights Reserved

NFPA 8506

Standard on

Heat Recovery Steam Generator Systems

1998 Edition

This edition of NFPA 8506, *Standard on Heat Recovery Steam Generator Systems*, was prepared by the Technical Committee on Heat Recovery Steam Generators, released by the Technical Correlating Committee on Boiler Combustion System Hazards, and acted on by the National Fire Protection Association, Inc., at its Annual Meeting held May 18–21, 1998, in Cincinnati, OH. It was issued by the Standards Council on July 16, 1998, with an effective date of August 5, 1998, and supersedes all previous editions.

Changes other than editorial are indicated by a vertical rule in the margin of the pages on which they appear. These lines are included as an aid to the user in identifying changes from the previous edition.

This edition of NFPA 8506 was approved as an American National Standard on August 6, 1998.

Origin and Development of NFPA 8506

With the increased use of heat recovery steam generators (HRSGs) in industry, a technical committee was formed in 1993 to prepare a standard covering heat recovery steam generators. This document is the result of the work of this committee. This is the second edition of NFPA 8506 and is similar in organization to the other documents in the 8500 series boiler combustion system hazards standards.

The 1998 edition has incorporated several major changes. Most notable are the revision of purge requirements, the addition of mandatory language for combustion turbine exhaust bypass systems for unfired HRSGs, the elimination of nonmandatory language, and the addition of new definitions.

Technical Correlating Committee on Boiler Combustion System Hazards

Dale E. Dressel, *Chair*
Solutia Inc., MO [U]

Merton W. Bunker, Jr., *Nonvoting Secretary*
Nat'l Fire Protection Assn., MA

Courtney D. Alvey, Baltimore, MD [SE]
Terry Michael Bartels, Kansas City Power & Light Co., MO [U]
Johnny W. (Bill) Bass, Forney Corp., TX [M]
James R. Bostick, Bailey Controls Co., OH [M]
Thaddeus Bukowski, Underwriters Laboratories Inc., IL [RT]
William E. Cunningham, Jr., Raytheon Engr & Constructors, MA [SE]
John C. deRuyter, The DuPont Company, DE [U]
Robert S. Elek, Kemper Insurance, OH [I]
Ronald E. Fringeli, J&H Marsh & McLennan, OH [I]
Steven K. Funk, The DuPont Co., TX [U] Rep. American Petroleum Inst.
Gordon G. Gaetke, Union Carbide Corp., WV [U]

Masaaki Kinoshita, Mitsubishi Heavy Industries Ltd, Japan [M]
Donald J. L. Lin, Qilin Inc., TX [SE]
Francis X. Maskol, Honeywell Inc., GA [M]
Russell N. Mosher, American Boiler Mfrs. Assn., VA [M]
Jerry J. Moskal, ABB Combustion Engr, Inc., CT [M]
Michael C. Polagye, Factory Mutual Research Corp., MA [I]
Nancy C. Polosky, Babcock & Wilcox, OH [M]
George P. Seroka, The Detroit Edison Co., MI [U]
James L. Sherman, Baltimore Gas & Electric Co., MD [U]
Peter J. Gore Willse, Industrial Risk Insurers, CT [I]
Henry K. Wong, Foster Wheeler Energy Corp., NJ [M]

Alternates

Tetsuya Fujino, Mitsubishi Heavy Industries America, Inc., CA [M]
(Alt. to M. Kinoshita)
Raymond J. Heitland, Solutia, Inc., FL [U]
(Alt. to D. E. Dressel)
Dennis P. Jenkins, Kemper Nat'l Insurance Cos., NC [I]
(Alt. to R. S. Elek)
Gerald E. McCullion, Honeywell Inc., GA [M]
(Alt. to F. X. Maskol)
John P. O'Rourke, ABB Combustion Engr, Inc., CT [M]
(Alt. to J. J. Moskal)

Richard J. Wachter, Industrial Risk Insurers, CT [I]
(Vot. Alt. to IRI Rep.)
J. C. Waung, Babcock & Wilcox Co., OH [M]
(Alt. to N. C. Polosky)
Harold R. Yates, The Detroit Edison Co., MI [U]
(Alt. to G. P. Seroka)
William G. Yeich, Exxon Research and Engr Co., NJ [U]
(Alt. to S. K. Funk)

Nonvoting

William H. Axtman, Gray Gull Assoc., Inc., VA
Shelton Ehrlich, Palo Alto, CA
Thomas B. Hamilton, Hamilton Consulting Services, NC

Robert P. Kaltenbach, Burns & McDonnell Engr, MO
Peter B. Matthews, Hartford Steam Boiler Insp & Ins Co., CT

Merton W. Bunker, Jr., NFPA Staff Liaison

This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of this document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for documents on the reduction of combustion system hazards in single- and multiple-burner boilers with a heat input rate of 12,500,000 Btu/hr and above. This includes all fuels. This Committee also is responsible for documents on the reduction of hazards in pulverized fuel systems, fluidized-bed boilers, heat recovery steam generators, and stoker-fired boilers, at any heat input rate.