NFPA® 82

Standard on Incinerators and Waste and Linen Handling Systems and Equipment

2009 Edition

NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471
An International Codes and Standards Organization

Documents
Document Sharing Hub

Full document details: NFPA 82 2009

IMPORTANT NOTICES AND DISCLAIMERS CONCERNING NFPA DOCUMENTS

NOTICE AND DISCLAIMER OF LIABILITY CONCERNING THE USE OF NFPA DOCUMENTS

NFPA codes, standards, recommended practices, and guides, 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.

AVA Documents
Document Sharing Hub

Full document details: NFPA 82 2009

ADDITIONAL NOTICES AND DISCLAIMERS

Updating of NFPA Documents

Users of NFPA codes, standards, recommended practices, and guides should be aware that these documents may be superseded at any time by the issuance of new editions or may be amended from time to time through the issuance of Tentative Interim Amendments. An official NFPA document at any point in time consists of the current edition of the document together with any Tentative Interim Amendments and any Errata then in effect. In order to determine whether a given document is the current edition and whether it has been amended through the issuance of Tentative Interim Amendments or corrected through the issuance of Errata, 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 below.

Interpretations of NFPA Documents

A statement, written or oral, that is not processed in accordance with Section 6 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.

Patents

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 NFPA codes, standards, recommended practices, and guides, and the NFPA disclaims liability for the infringement of any patent resulting from the use of or reliance on these documents. Users of these documents 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.

NFPA adheres to applicable policies of the American National Standards Institute with respect to patents. For further information contact the NFPA at the address listed below.

Law and Regulations

Users of these documents should consult applicable federal, state, and local laws and regulations. NFPA does not, by the publication of its codes, standards, recommended practices, and guides, intend to urge action that is not in compliance with applicable laws, and these documents may not be construed as doing so.

Copyrights

This document is copyrighted by the NFPA. It is made available for a wide variety of both public and private uses. These include both use, by reference, in laws and regulations, and use in private self-regulation, standardization, and the promotion of safe practices and methods. By making this document available for use and adoption by public authorities and private users, the NFPA does not waive any rights in copyright to this document.

Use of NFPA documents for regulatory purposes should be accomplished through adoption by reference. The term "adoption by reference" means the citing of title, edition, and publishing information only. Any deletions, additions, and changes desired by the adopting authority should be noted separately in the adopting instrument. In order to assist NFPA in following the uses made of its documents, adopting authorities are requested to notify the NFPA (Attention: Secretary, Standards Council) in writing of such use. For technical assistance and questions concerning adoption of NFPA documents, contact NFPA at the address below.

For Further Information

All questions or other communications relating to NFPA codes, standards, recommended practices, and guides 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, NFPA, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

For more information about NFPA, visit the NFPA website at www.nfpa.org.

Documents
Document Sharing Hub

Full document details: NFPA 82 2009

Copyright © 2008 National Fire Protection Association®. All Rights Reserved.

NFPA® 82

Standard on

Incinerators and Waste and Linen Handling Systems and Equipment

2009 Edition

This edition of NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment,* was prepared by the Technical Committee on Incinerators and Waste Handling Systems. It was issued by the Standards Council on December 9, 2008, with an effective date of December 29, 2008, and supersedes all previous editions.

This edition of NFPA 82 was approved as an American National Standard on December 29, 2008.

Origin and Development of NFPA 82

This standard was first adopted by the NFPA in 1948 on recommendation of the Committee on Field Practice. In 1953, a completely revised edition of the text on incinerators was prepared by a representative subcommittee and adopted by the NFPA on recommendation of the Committee on Building Construction. Responsibility for the subject of incinerators was turned over to the Committee on Chimneys and Heating Equipment in 1956. Revised editions were adopted in 1955, 1958, 1960, 1969, 1970, 1971, and 1972. The original 1948 text covered both rubbish handling and incinerators; the 1953, 1955, 1958, and 1960 revisions covered only incinerators. In the 1960 edition, incinerators and rubbish handling were covered by separate standards, NFPA 82, *Standard on Incinerators*, and NFPA 82A, *Standard for Rubbish Handling*, respectively, with NFPA 82A remaining unchanged from the 1948 edition. In the 1969 edition, the subject of rubbish handling was included with incinerators, and NFPA 82A was discontinued as a separate standard. The 1977 edition was expanded to include linen handling systems, and the 1983 edition represented a partial revision, which was mainly editorial.

The 1990 edition contained minor revisions to Chapters 1 and 2, including a minor change to the Scope section. Chapters 3 and 4 were completely revised, and a new Appendix A was added to provide technical information to facilitate the selection of chimney materials for handling saturated and corrosive gases. The entire section on domestic incinerators was deleted from the 1990 edition.

For the 1994 edition, Chapters 3 and 4 were combined into one chapter (new Chapter 3). Limited-combustible construction was recognized by a new definition and by a new exception that allowed limited-combustible construction for a gravity chute enclosure where a building is protected throughout by a supervised automatic sprinkler system. Also, new Chapters 4 and 7 were added to address waste handling systems other than chute systems and waste processing equipment other than compactors.

The 1999 edition clarified that NFPA 82 does not apply to one- and two-family residential structures. Chapter 3 was modified to allow for a maximum 45 degree chute offset above the top-loading door. Additionally, Chapter 3 was modified to reduce the minimum linen chute size to 20 in. and to reduce the termination height of chute venting to 3 ft above the roof of the building. Chapter 5 was also modified to delete the requirements associated with domestic compactors.

The 2004 edition was revised and restructured to conform to the *Manual of Style for NFPA Technical Committee Documents*. Technical changes included clarification of the difference between discharge doors serving waste chutes and those serving linen chutes and clarification of the dimensional requirements for service opening rooms.

The 2009 edition contains a revision to the scope to include maintenance requirements for incinerators and waste and linen handling systems and equipment. A new Chapter 10 has also been added to address the maintenance requirements spelled out in the scope. Chapter 8 has been revised to include recyclables storage rooms. New definitions for gravity chute intake door, pneumatic chute loading door, general access chute, and limited access chute were added to Chapter 3.

NFPA and National Fire Protection Association are registered trademarks of the National Fire Protection Association, Quincy, Massachusetts, 02169.

Documents
Document Sharing Hub

Full document details: NFPA 82 2009

Committee on Incinerators and Waste Handling Systems

Sharon S. Gilyeat, *Chair*
Koffel Associates, Inc., MD [SE]

Michael F. Bracken, Wilkinson Hi-Rise, LLC, FL [M]
Joseph M. DeRosier, U.S. Department of Veterans Affairs, MI [U]
Christopher R. Schulz, Van-Packer Company, Inc., IL [M]
Neil P. Wu, Exponent, Inc., MD [SE]

Alternates

Jennifer Frecker, Koffel Associates, Inc., MD [SE]
(Alt. to S. S. Gilyeat)

James W. Rice, U.S. Department of Veterans Affairs, MI [U]
(Alt. to J. M. DeRosier)

Jason Gamache, NFPA Staff Liaison

This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the 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 fire-safe installation and use of incinerators, compactors, converters, other waste handling systems, and laundry (linen) handling systems.

Documents
Document Sharing Hub
Full document details: NFPA 82 2009

Contents

Chapter 1 Administration 82– 4
1.1 Scope 82– 4
1.2 Purpose. (Reserved) 82– 4
1.3 Application 82– 4
1.4 Retroactivity 82– 4
1.5 Equivalency 82– 4

Chapter 2 Referenced Publications 82– 4
2.1 General 82– 4
2.2 NFPA Publications 82– 4
2.3 Other Publications 82– 4
2.4 References for Extracts in Mandatory Sections 82– 4

Chapter 3 Definitions 82– 4
3.1 General 82– 4
3.2 NFPA Official Definitions 82– 5
3.3 General Definitions 82– 5

Chapter 4 Incinerators 82– 5
4.1 General 82– 5
4.2 Incinerators 82– 6
4.3 Chimneys for Incinerators 82– 8
4.4 Outdoor Incinerators 82–10

Chapter 5 Waste and Linen Chutes and Transport Systems 82–10
5.1 General 82–10
5.2 Gravity Waste or Linen Chutes 82–11
5.3 Full Pneumatic Waste and Linen Conveying Systems 82–13
5.4 Gravity Pneumatic Trash or Linen Conveying System 82–14

Chapter 6 Other Waste Handling Systems 82–15
6.1 General 82–15
6.2 Waste Spillage Control 82–15
6.3 Enclosure Requirements 82–15
6.4 Automatic Sprinklers 82–15

Chapter 7 Waste Compactors 82–15
7.1 General 82–15
7.2 Automatic Sprinklers 82–15

Chapter 8 Waste and Recyclables Storage Rooms 82–16
8.1 General 82–16
8.2 Fire Separation 82–16
8.3 Automatic Sprinklers 82–16

Chapter 9 Other Waste Processing Equipment 82–16
9.1 General 82–16
9.2 Fire Separation 82–16
9.3 Explosion Protection 82–16
9.4 Automatic Sprinklers 82–16

Chapter 10 Maintenance of Incinerators and Waste and Linen Handling Systems and Equipment 82–16
10.1 Incinerators 82–16
10.2 Waste and Linen Chutes and Transport Systems 82–16
10.3 Waste Compactors 82–16
10.4 Waste Processing Equipment 82–16

Annex A Explanatory Material 82–16

Annex B Informational References 82–21

Index 82–22

Documents
Document Sharing Hub
Full document details: NFPA 82 2009

NFPA 82

Standard on

Incinerators and Waste and Linen Handling Systems and Equipment

2009 Edition

IMPORTANT NOTE: This NFPA document is made available for use subject to important notices and legal disclaimers. These notices and disclaimers appear in all publications containing this document and may be found under the heading "Important Notices and Disclaimers Concerning NFPA Documents." They can also be obtained on request from NFPA or viewed at www.nfpa.org/disclaimers.

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates that explanatory material on the paragraph can be found in Annex A.

Changes other than editorial are indicated by a vertical rule beside the paragraph, table, or figure in which the change occurred. These rules are included as an aid to the user in identifying changes from the previous edition. Where one or more complete paragraphs have been deleted, the deletion is indicated by a bullet (•) between the paragraphs that remain.

A reference in brackets [ ] following a section or paragraph indicates material that has been extracted from another NFPA document. As an aid to the user, the complete title and edition of the source documents for extracts in mandatory sections of the document are given in Chapter 2 and those for extracts in informational sections are given in Annex B. Extracted text may be edited for consistency and style and may include the revision of internal paragraph references and other references as appropriate. Requests for interpretations or revisions of extracted text shall be sent to the technical committee responsible for the source document.

Information on referenced publications can be found in Chapter 2 and Annex B.

Chapter 1 Administration

1.1 Scope.

1.1.1 This standard covers requirements for the installation, maintenance, and use of waste and recyclables storage rooms, containers, handling systems, incinerators, compactors, and linen and laundry handling systems.

1.1.2 This standard does not include design criteria for the purpose of reducing air pollution. For such criteria, consult the authorities having jurisdiction.

1.1.3 The requirements in this standard shall not apply to one- or two-family residential structures.

1.2 Purpose. (Reserved)

1.3* Application. This standard shall be applied to new construction and new equipment, as determined by the authority having jurisdiction.

1.4 Retroactivity. This standard shall not require the alteration or replacement of existing construction or equipment currently in use, provided that the owner establishes appropriate administrative, maintenance, and training programs that provide equivalent safety.

1.5 Equivalency. Nothing in this standard is intended to prevent the use of new methods or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety over those prescribed by this standard.

1.5.1 Technical documentation shall be submitted to the authority having jurisdiction to demonstrate equivalency.

1.5.2 The system, method, or device shall be approved for the intended purpose by the authority having jurisdiction.

Chapter 2 Referenced Publications

2.1 General. The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 13, *Standard for the Installation of Sprinkler Systems,* 2007 edition.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment,* 2006 edition.

NFPA 54, *National Fuel Gas Code,* 2009 edition.

NFPA 58, *Liquefied Petroleum Gas Code,* 2008 edition.

NFPA 70®, National Electrical Code®, 2008 edition.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems,* 2009 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances,* 2006 edition.

NFPA 259, *Standard Test Method for Potential Heat of Building Materials,* 2008 edition.

NFPA 5000®, Building Construction and Safety Code®, 2009 edition.

2.3 Other Publications.

2.3.1 ASTM Publications. ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASTM C 27, *Standard Classification for Fireclay and High-Alumina Refractory Brick,* 1993.

ASTM C 199, *Standard Test Method for Pier Test for Refractory Mortars,* 1994.

2.3.2 ASHRAE Publications. American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1791 Tullie Circle, N.E., Atlanta, GA 30329.

ASHRAE Handbook, *HVAC Systems and Equipment,* 2000.

2.3.3 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

2.4 References for Extracts in Mandatory Sections.

NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials,* 2007 edition.

Chapter 3 Definitions

3.1 General. The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster's Collegiate*

Documents Document Sharing Hub
Full document details: NFPA 82 2009

Dictionary, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 NFPA Official Definitions.

3.2.1* Approved. Acceptable to the authority having jurisdiction.

3.2.2* Authority Having Jurisdiction (AHJ). An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.

3.2.3 Labeled. Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

3.2.4* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.5 Shall. Indicates a mandatory requirement.

3.2.6 Should. Indicates a recommendation or that which is advised but not required.

3.2.7 Standard. A document, the main text of which contains only mandatory provisions using the word "shall" to indicate requirements and which is in a form generally suitable for mandatory reference by another standard or code or for adoption into law. Nonmandatory provisions shall be located in an appendix or annex, footnote, or fine-print note and are not to be considered a part of the requirements of a standard.

3.3 General Definitions.

3.3.1 Chute.

3.3.1.1 ***General Access Chute.*** Chute capable of being accessed by the general public with no restriction on use.

3.3.1.2* ***Gravity Waste or Linen Chute.*** An enclosed vertical passageway (riser) in a building, used for transferring trash or linen by gravity to a room at the bottom or to an interface to a compactor.

3.3.1.3 ***Limited Access Chute.*** Chute not capable of being accessed by the general public with a restriction on use to authorized personnel.

3.3.2 Combustible. Capable of undergoing combustion.

3.3.3 Door.

3.3.3.1 ***Gravity Chute Intake Door.*** The door used to deposit waste or linen directly into the chute of a gravity system.

3.3.3.2 ***Pneumatic Chute Loading Door.*** The door used to deposit waste or linen directly into the chute of a pneumatic system.

3.3.4 General Access Chute. See 3.3.1.1.

3.3.5 Gravity Chute Intake Door. See 3.3.3.1.

3.3.6 Gravity Waste or Linen Chute. See 3.3.1.2.

3.3.7* Incinerator. Equipment predominantly designed for burning solid waste.

3.3.8 Limited Access Chute. See 3.3.1.3.

3.3.9* Limited Combustible. A building construction material not complying with the definition of noncombustible material that, in the form in which it is used, has a potential heat value not exceeding 3500 Btu/lb (8141 kJ/kg), where tested in accordance with NFPA 259, *Standard Test Method for Potential Heat of Building Materials*, and complies with (a) or (b): (a) materials having a structural base of noncombustible material, with a surfacing not exceeding a thickness of ⅛ in. (3.2 mm) that has a flame spread index not greater than 50; and (b) materials, in the form and thickness used, other than as described in (a), having neither a flame spread index greater than 25 nor evidence of continued progressive combustion and of such composition that surfaces that would be exposed by cutting through the material on any plane would have neither a flame spread index greater than 25 nor evidence of continued progressive combustion. (Materials subject to increase in combustibility or flame spread index beyond the limits herein established through the effects of age, moisture, or other atmospheric condition shall be considered combustible.) [**33,** 2007]

3.3.10 Noncombustible. Not capable of supporting combustion.

3.3.11 Pneumatic Chute Loading Door. See 3.3.3.2.

3.3.12 Waste Compactor. A device using electro-mechanical-hydraulic means to reduce the volume of waste and to package it in the reduced condition.

3.3.13 Waste or Linen Conveying Systems.

3.3.13.1 ***Full Pneumatic.*** A closed system consisting of loading stations with inner doors and a fire-rated, normally locked, outer (intake) door; normally closed air damper above the topmost loading station; transport piping, both vertical and horizontal; waste or linen collector; fan with a fan damper; and a central process controller.

3.3.13.2 ***Gravity Pneumatic Transport System.*** A combination of a gravity chute and a horizontal pneumatic transport system. The gravity pneumatic system includes gravity chutes with a material discharge valve at the bottom, an air source at or near the bottom of the chute, air control dampers, horizontal piping with a pipe tee to connect to the chute, a collector, and a fan and fan damper.

3.3.14 Waste Processing Systems and Equipment. Devices and processes used to change the physical form or characteristics of waste.

Chapter 4 Incinerators

4.1 General.

4.1.1 Provision for Auxiliary Fuel.

4.1.1.1 Gas-burning installations shall be in accordance with the applicable provisions of NFPA 54, *National Fuel Gas Code*, and NFPA 58, *Liquefied Petroleum Gas Code*.

4.1.1.2 Oil-burning installations shall comply with NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

Documents Document Sharing Hub
Full document details: NFPA 82 2009

4.1.1.3 Fuel burners of all incinerators shall be equipped with safety controls that will automatically shut off the fuel supply to the burner in the event the burner fails to ignite or its flame becomes extinguished or in the event of insufficient draft.

4.1.2 Electrical Supply. The electrical supply to an incinerator shall be installed in accordance with *NFPA 70, National Electrical Code*.

4.1.3 Air for Combustion and Ventilation.

4.1.3.1 Provision shall be made for an adequate supply of air for combustion and ventilation to enter the room in which an incinerator is located.

4.1.3.2 Fans shall be permitted to be installed to deliver air to the incinerator room, provided they are in operation whenever the incinerator is in use.

4.1.3.3 Rooms in which incinerators are installed shall be furnished air for combustion and ventilation by one of the following means:

(1) A screened or louvered ventilator opening or other suitable air intake, which, if communicating to other parts of the building, is protected by an approved fire damper
(2) A duct leading from the incinerator room to the outdoors
(3) A duct leading to a boiler or furnace room cut off as prescribed in Section 4.3 and provided with sufficient air supply for both rooms

4.1.3.4 The opening or duct specified in 4.1.3.3 shall be sized so as to provide all air requirements, including those for waste combustion, auxiliary fuel combustion, room temperature control, and general area ventilation, where applicable.

4.1.3.5 Air ducts extending to or from an incinerator room through other parts of a building shall be constructed and installed in accordance with NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*.

4.1.4 Spark Arresters.

4.1.4.1 Where the nature of the waste being incinerated produces fly ash emissions, the incinerator stacks shall be protected by one of the following:

(1) Spark arresters installed on incinerator stacks
(2) A wet scrubber or other emission control system or component installed between the incinerator and the stack such that fly ash cannot pass directly from the incinerator to the stack
(3) Approved design and control features that prevent the entrainment of fly ash from the incinerator to the stack under all operating conditions

4.1.4.2 The net free area of the arrester shall be not less than four times the net free area of the outlet of the chimney flue it serves.

4.1.4.3 Arresters shall have a vertical height of not less than 1.3 times the minimum diameter of the chimney flue or the minimum horizontal dimension of a rectangular chimney flue.

4.1.4.4 Arresters, including bolts, rivets, screws, and supporting members, shall be made of heat- and corrosion-resistant materials.

4.1.4.5 Openings shall not permit the passage of spheres having a diameter larger than 12.7 mm (½ in.) or block the passage of spheres having a diameter of less than 9.5 mm (⅜ in.).

4.1.4.6 Means shall be provided for securely attaching the spark arresters to chimneys to provide adequate support and prevent movement of the arresters.

4.1.4.7 Spark screens shall be replaceable.

4.2 Incinerators.

4.2.1 Design and Construction. The design and construction of the incinerator and all associated components shall be such that, in service, they will not crack, warp, or otherwise fail structurally so as to permit flame passage or emission of combustion gases or sparks into the building.

4.2.1.1 Incinerators shall be built in accordance with the following requirements:

(1) All combustion shall take place within the combustion chamber designed for combustion temperatures.
(2) Combustion shall not take place in breaching or chimneys unless they are designed as combustion chambers.
(3) Incinerators designed for positive pressures shall be gastight.
(4) The combustion chamber, inner walls, roofs, bridges, walls, and curtain walls shall be constructed so as to withstand the combustion temperatures involved and shall maintain their integrity under all operating conditions.
(5) Metal stays, lintels, or other supports shall not be exposed to the interior of the combustion chamber.
(6) An exterior masonry casing shall be reinforced with structural steel framework, and an exterior steel casing shall be reinforced with structural steel members such that the casing will withstand interior thrusts from arches and be capable of supporting all doors and burner equipment.
(7) The steel casing or framework shall be erected and set plumb before any brickwork is done.
(8) Cylindrical outer casings made of steel not less than ¼ in. (6.4 mm) thick shall not be required to be reinforced.
(9) All incinerator structures shall be designed to comply with applicable building codes, and consideration shall be given to the most adverse conditions of seismic, wind, dead, live, moving, concentrated, erection, and thermal loadings; corrosion allowance; or combinations thereof.
(10) Openings shall be provided so that all parts of the incinerator can be cleaned, including the ash pit, the combustion chamber, the passes of separation chambers, and the incinerator flue.
(11) Cleanouts shall be closed by tight-fitting doors or covers, securely latched, or otherwise held in a closed position.
(12) Ash pit and combustion chamber closures and frames shall be of cast iron or equivalent, with the frames securely attached to the incinerator.

4.2.1.2 No part of an incinerator shall be used as a wall, roof, or floor of a building.

4.2.1.3 Incinerators shall be designed with internal insulation or refractory or shall be otherwise protected by location, guard rails, or shields such that all areas or surfaces normally accessible to personnel shall not exceed 71.1°C (160°F).

4.2.1.4 External insulation over incinerator shells shall not be utilized in achieving the temperature specified in 4.2.1.3, since severe thermal damage could result. Handles of operating doors shall not exceed a 4.4°C (40°F) rise for metallic handles and a 15.6°C (60°F) rise for nonmetallic handles.

Documents
Document Sharing Hub
Full document details: NFPA 82 2009