



Designation: C 1283 – 03

Standard Practice for Installing Clay Flue Lining¹

This standard is issued under the fixed designation C 1283; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the minimum requirements for installing clay flue lining for residential concrete or masonry chimneys.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values stated in parentheses are for informational purposes only.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

- C 24 Test Method for Pyrometric Cone Equivalent (PCE) of Fireclay and High Alumina Refractory Materials²
- C 27 Classification of Fireclay and High-Alumina Refractory Brick²
- C 55 Specification for Concrete Brick³
- C 90 Specification for Loadbearing Concrete Masonry Units³
- C 99 Test Method for Modulus of Rupture of Dimension Stone⁴
- C 129 Specification for Nonloadbearing Concrete Masonry Units³
- C 170 Test Method for Compressive Strength of Dimension Stone⁴
- C 199 Test Method for Pier Test for Refractory Mortars²
- C 216 Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale)³
- C 270 Specification for Mortar for Unit Masonry³
- C 315 Specification for Clay Flue Linings³
- C 652 Specification for Hollow Brick (Hollow Masonry Units Made from Clay or Shale)³

¹ This practice is under the jurisdiction of ASTM Committee C04 on Vitrified Clay Pipe and is the direct responsibility of Subcommittee C04.20 on Methods of Test and Specifications.

Current edition approved February 10, 2003. Published June 2003. Originally approved in 1994. Last previous edition approved in 2002 as C 1283–02.

² *Annual Book of ASTM Standards*, Vol 15.01.

³ *Annual Book of ASTM Standards*, Vol 04.05.

⁴ *Annual Book of ASTM Standards*, Vol 04.07.

C 896 Terminology Relating to Clay Products³

C 1184 Specification for Structural Silicone Sealants⁴

3. Terminology

3.1 *General*—Terminology C 896 should be used for clarification of definitions in this practice.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *chimney connector*—tubular unit or pipe used to convey products of combustion from a heating or cooking appliance to the chimney.

3.2.2 *flue*—passageway within a chimney through which products of combustion are conveyed.

3.2.3 *flue liner*—manufactured tubular nonloadbearing fired clay unit, normally used for conveying hot gases in chimneys.

3.2.4 *masonry chimney*—vertical structure constructed of brick, concrete, concrete masonry units, or stone, which contains one or more flues, and conveys products of combustion from a heat source or cooking appliance.

3.2.5 *smoke chamber*—section of a fireplace above the throat and below the flue, which is an area of transition from the shape of the throat to the shape of the flue.

3.2.6 *thimble*—manufactured tubular nonloadbearing fired clay unit normally used to connect the chimney connector from an appliance through the wall of the chimney to the flue.

4. Footings and Foundations

4.1 Footings for masonry chimneys shall be constructed of concrete or solid masonry at least 12 in. (305 mm) thick, and it shall extend at least 6 in. (153 mm) beyond the face of the foundation or support wall on all sides. Footings shall be founded below frost depth on natural undisturbed earth or engineered fill. In areas not subjected to freezing, footings shall be founded at least 12 in. (305 mm) below finished grade.

4.2 The foundation shall be placed, with respect to adjacent structures existing or anticipated, to minimize the possibility of damage by construction operations or by transmission of additional loads to the supporting soils.

4.3 Concrete footings and foundations shall conform to local building codes.

4.3.1 In the absence of a local building code, concrete with a minimum 28 day compressive strength of 3000 psi (21 mPa) shall be used.