

CHIMNEYS, SMOKE-STACKS AND FLUES

1. CHIMNEYS

Construction

1.01 Chimneys should be constructed of approved masonry or reinforced concrete not less than 8 inches thick. This thickness may be reduced to not less than 3-3/4 inches for small buildings having ordinary stoves, ranges or furnaces. They should extend at least 3 feet above the highest point at which they come in contact with a roof of the building, and at least 2 feet higher than any ridge within 10 feet.

1.02 Chimneys should be properly capped with terra cotta, stone, or other approved incombustible, weatherproof material securely anchored. Chimneys should be wholly supported on approved masonry or self-supporting fireproof construction.

1.03 Clearances: Where chimneys pass through combustible floors or roofs or are enclosed by walls of combustible materials, there should be at least 2 inches clearance between the face of the chimney and any combustible material; except behind fireplaces, where this clearance should be increased to at least 4 inches. The space between the chimney and the floors or joists at each floor should be firestopped with incombustible material to prevent the passage of fire.

1.04 Chimneys should not be corbeled more than 6 inches from a wall, nor should they be corbeled from a wall less than 12 inches in thickness, unless the chimney projects equally on each side of the wall.

1.05 No change in the size or shape of a chimney, where the chimney passes through the roof should be made within a distance of 6 inches above or below the roof joists or rafters.

1.06 All chimneys should be lined with a flue lining conforming to the requirements of this practice.

Flues

1.07 All heating apparatus or heat-producing appliances, except electric heating appliances and certain gas appliances, as covered later, should be connected to a flue conforming to the requirements of this practice.

1.08 No flue should have smoke-pipe connections in more than one story of a building. Two or more smoke-pipes on one floor may be connected to the same flue and the venting of an automatic gas appliance into a flue serving other fuels is permissible providing the gas appliance connection

into such flue is made at a point not less than 12 inches above the connection for such other appliance. An automatic gas appliance is considered as one that is equipped with a safety pilot light, the extinguishment of which will automatically shut off the supply of gas.

Flue Linings

1.09 Flue linings should be made of fire clay tile or other refractory clay tile to withstand, without softening or disintegrating, the temperatures to which they will be subjected.

1.10 Clay Tile Flue Linings: Clay tile flue linings should not be less than 5/8 inch thick.

1.11 Flue linings should be built in solidly as the chimney construction is carried up, carefully bedded one on the other in mortar with close-fitting joints left smooth on the inside.

1.12 Cement mortar or cement lime mortar should be used in setting flue linings.

1.13 Flue linings should start from a point not less than 8 inches below the intake. They should extend as nearly vertical as possible for the entire height of the chimney. Where possible, it is recommended that flue linings be extended 4 inches above the top or cap of the chimney.

1.14 Clean-Outs: Clean-outs should be provided for all flues. They should be constructed the same as such flues and should be equipped with cast iron doors arranged to remain tightly closed when not necessarily opened for cleaning.

1.15 Size of Flues: Cross-sectional areas of smoke flues should be designed to accommodate all smoke-pipes or vents connected to such flues and should be proportioned to meet the conditions of temperatures within and without the flue, thickness of masonry, exposure, shape and material of flue. They should not be less than 70 square inches for warm air, hot water and low pressure steam heat appliances; and not less than 40 square inches for ordinary stoves, ranges and room heaters.

2. METAL SMOKE STACKS

Construction

2.01 Metal smoke stacks, unless structurally self-supporting, should be guyed securely or firmly anchored to, or otherwise supported by, the building served thereby.

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2.02 All metal work should be painted and clean-out openings should be provided at the base of every stack.

Exterior Stacks

2.03 Every such stack or part thereof erected on the exterior of a building should have a clearance from the wall of not less than 24 inches if the wall is of combustible construction, and not less than 4 inches if it is of any other type of construction.

2.04 No such stack should be nearer than 24 inches in any direction from a wall opening, exit or fire-escape.

2.05 When such stack is insulated on the exterior in some approved manner, the clearances prescribed may be reduced to two-thirds of those specified.

Interior Stacks

2.06 Every stack or part thereof erected within a building should be enclosed, above the story in which the appliance served thereby is located, in walls of approved masonry or fire partitions the equivalent of 8 inches of brick or 6 inches of two cell terra cotta. The masonry enclosure should extend up to and through the roof.

2.07 Height: Stacks should extend at least 3 feet above the level of that part of the roof nearest the stack and at least 2 feet higher than any ridge within 10 feet.

3. GAS APPLIANCES

3.01 Gas appliances (except domestic gas ranges) requiring a hood or using in excess of 50,000 B.T.U.'s per hour should be connected to a flue or stack constructed as required by this practice.

3.02 Automatically controlled gas appliances using more than 5,000 B.T.U.'s per hour and also automatically controlled appliances using less than 5,000 B.T.U.'s per hour which are not equipped with an effective device for shutting off the gas supply in the event that the constantly burning flame or pilot flame is extinguished should have flues. Appliances installed in the same room which have an aggregate demand at normal rating as great as 30 B.T.U. per hour per cubic foot of room content should have flues.

4. INCINERATORS

4.01 Chimneys or smoke stacks for incinerators require special treatment and reference should be made to the practice covering this equipment for the information.