

Brickwork

Load-bearing exterior walls of brick – with facades facing the street and courtyard – are constructed with increasing thickness from top to bottom. However, this applies only to the sections between the windows – the piers – and above them.

Depending on local conditions (legislation) the thickness at the top floor is 1-1½ bricks. In the floors below, the thickness increases by one half-brick per one or two floors. As a rough outline, thickness increases per floor in smaller urban communities and every other floor in larger towns. Here, in buildings higher than five floors, the increase in thickness is one half-brick per extra floor over the fifth floor. (Apartment buildings of six ordinary floors and a basement can be found in the larger towns: in this case, the basement's exterior wall is of 3½-brick thickness.)

Facade walls on the outside of stair enclosures are thinner (locally determined) because the mid-landings are supported by transverse walls and therefore do not load the outer wall.

The sections below the windows and between the piers (window breasts) are between one half-brick to one-brick thickness depending on local conditions. In large towns the window breast masonry is one-brick thick, 1½-brick thick in any basement floors in earlier buildings and the same thickness as the rest of the basement wall in later ones.

Any half-timber constructions at the roof are generally of one-brick thickness, but may be stronger with large cornice structures, increasing in thickness upwards and inwards in order to counterbalance the cornice's discharge over the plane of the facade.

Exterior kitchen stair walls that protrude over the front of the facade predominantly have the same thickness over their entire height, this being 1½-brick thickness, although in high buildings this is often increased by one half-brick at the ground and basement levels. Walls such as these carry only their own weight.

Load-bearing brick exterior walls are also found at boundaries, and when acting as firewalls have no large door or window openings.

This type of exterior wall is commonly found in the earliest buildings at the sides and back of the house. Their thickness depends on local conditions (legislation) but they are at least 1-brick thick at the upper floor, increasing to 2-brick thickness at the basement in the tallest town buildings.

These walls are usually constructed with thinner sections (blinding walls/niches) where they are thicker than 1 brick.

Non-load-bearing exterior brick walls are typically end or gable walls. In earlier buildings they are placed at the boundary or so close that they function as firewalls; they have no large openings, doors or windows.

When constructed of solid brickwork, they are roughly the same thickness as the corresponding back wall. Depending on local conditions, the end or gable walls may be constructed as cavities with permanent ties, though usually only where they are smaller and an exemption has been granted.

Extensions (bays) on facades not at the ground floor are constructed on projected sections of storey partitions. Brick exterior wall sections in these bays are therefore rarely above one-brick thickness.

Basement walls of concrete can be found in buildings from the end of the 1800s but were not in common use until after 1900. Initially they were the same thickness as the brickwork they replaced, but later had the same thickness as those directly above.

Measures against moisture rising from the ground were initially justified by the use of timber work or clay bricks in internal walls. Towards the end of the 1800s, it also became more common – and in the large towns a legal requirement – to add a damp-proof layer to foundation walls; this was laid immediately above the foundations with a small section above the ground.

Closures over door and window cavities were managed in earlier buildings with brick or relieving arches to support the overlying section of window breast. The brickwork behind is supported by timber wall planks with a thickness of approximately 5 cm, corresponding to the height of a brick course.

In later buildings and for larger openings, (structural) iron beams are used, often included as a discharging element for the relieving arch.

Material shortages during the Second World War and thereafter saw a return to the use of timber for closing door and window cavities.

Note to illustration 2. "Brickwork" in the Gallery:

Brickwork at facade and gable in typical (Copenhagen) apartment building, and with internal timber walls in normal floors, maximum window openings in the facade and blinding wall at the gable. On the left we see foundation walls in the basement floor, and in the facade the brickwork that is supported by wall planks; to the right are the foundations, and the facade without the brickwork supported by wall planks. (Københavns etageboligbyggeri 1850-1900, Engelmark, 1983)



Fig. 3.07. Formur med maksimal gennembrydningsgrad.

